

Gold

Thursday, September 1, 2016 12:37 PM

<https://www.thangamayil.com/lustrous-malai-19640.html> - lakshmi dollar haram - 153651Rs - 47gms - per gram - 2890 - making charges - 8% - VAT 1%
<https://www.thangamayil.com/elite-guccha-malai-19642.html> - mango haram - 185,992 Rs - 59gms - per gram - 2890 - making charges - 8% - VAT 1%

<http://www.22kgolddesigns.com/2015/06/lakshmi-devi-mango-haram.html>

paid for = 39.73758865248227gms

got = 35.07gms

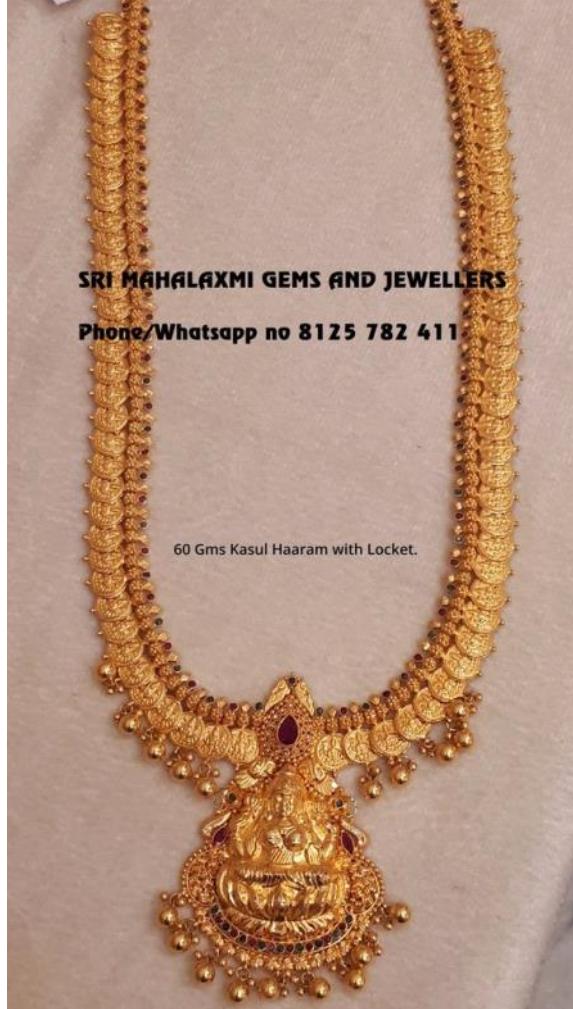
-15112.38Rs(4.66gms) - loss

bangles - 19.62 - 61865 = 3153.16004077472 - 2820

chain - 15.475 - 50195 = 3243.618739903069

ring - 6.861 - 22254 = 3243.550502842151

<http://www.jewellerywall.in/Photo.aspx?id=12328&user=mljgold>



Appliance - Kommuru

Wednesday, October 13, 2021 10:46 AM

13-Oct-21

LG AC

Primary Number - 7093343399

Secondary Number - 7093353399

RNP - 211013033330

13-Oct-21

Samsung Ac

nb

Thursday, September 22, 2016 6:14 PM

9866032978 - *121*11# - Lakshmi's spare number

[alternativeto.net](#)

[Wolframalpha.com](#)

[Hacksplaining.com](#)

[Accountkiller.com](#)

[Gourav.io](#)

Voter info

Wednesday, April 3, 2019 10:26 AM

<https://electoralsearch.in/#resultArea>

The screenshot shows a web browser window with two tabs open, both titled "ECI : Voter Information". The active tab displays the search results for voter information. The page header features the "राष्ट्रीय मतदाता सेवा पोर्टल" (National Voters' Service Portal) logo and the Indian national emblem. Navigation links include "Home", "About Us", and "Contact Us". A banner at the top right provides links to "Apply Online" and "Help". The main search form includes fields for "Name/EPIC No.", "Age/Dob", "State/District", and "Assembly Constituency". It also features a map search function labeled "Locate on Map". A CAPTCHA field contains the code "7Oxg4t". The status bar at the bottom indicates "1 record(s) found".

विवरण द्वारा खोज/Search by Details पहचान-पत्र क्र. द्वारा खोज/Search by EPIC No.

नाम/Name * Naagbaabu Panguluri

पिता / पति का नाम (Father's/Husband's Name)* Haribabu

उमेर/Age * 1985 Nov 21

रिंग/Gender पुरुष/Male

जन्म तिथि/DoB *

राज्य/State * Andhra Pradesh

ज़िला District * Guntur

नवक्षेत्र पर चुने
Locate on Map

विधानसभा निर्वाचन क्षेत्र Assembly Constituency Prathipadu (SC)

कोड / Code * 7Oxg4t

Captcha Text

खोज/Search

कुल परिणाम / Number of Record(s) Found: 1

<https://electoralsearch.in/Home/VoterInformation>

contacts

Sunday, December 11, 2016 2:53 PM

gangadhar - lawyer - 9395520071
manne haribabu - mehidipatnam - diwakar -
fast track courts ?

Bank

Monday, January 2, 2017 5:40 PM

Bank Details:

#####
SBI
#####

SBI Credit Card Details:

Primary Card No: 4377 4865 7566 4394

Account NO: 4377 4865 7153 8824

4377486575664394

4377486571538824

Exp Date: 07/20

CVC No: 260

PIN No: 4942

Name on the card: NAGABABU PANGULURI

Card Type: VISA(Platinum)

Credit Limit: 76000

Cash Limit: 15200

Statement Date : Every month 07th

IFSC CODE - SBIN000CARDS

#####

Online BillPay registration from SBI CC:

Url: <https://payments.billdesk.com/ubp/SBICustomerlogin>

email id: nagababu.panguluri@gmail.com

passowrd: software1

Alternative e-mail id: nb198421@gmail.com

security Q&A:

what is the name of your first school?

sps

Internet Banking CC Deatils:

Website: www.sbicard.com

Username: lakshmi@naga

Password: lucky@123#

Security Q&A's

Mother's Maiden Name: nannapaneni

First Employer: deloitte

Place of birth: cpt

Cancellation request placed on 29/mar/17 - ref no: - bal - 1406 paid today only.(Comments: Not done as the paid balance amount is not yet reflecting)
Cancellation request placed on 07/may/17 - req no: 120206972736 - bal - nill - (Comments: Done)

SBI Savings Account:

Account holder name: Naga babu Panguluri

Account No: 11622200582

CIF number: 81331383970

Branch Name: Sbi kakumanu branch

IFSC Code: SBIN0003120

SBI Debit Card Details:

Card No: 4591 5300 0132 3008

Name on the card: Naga babu Panguluri

CVC No: 261

Valid From: 03/14

Exp Date: 11/22

Card Type: Visa(Platinum)

Card pin: 4644

Mobile id: mg6362
Pass code: 601092/naga1234

SBI Savings account Internet - yono bank details:

Username - npanguluri
Password - Rithuhari@1
Transaction password - Rithuhari@2
MPIN - 211984
MMID - 9002919

ICICI
#####

Savings Account:

Account No: 630701517552
Account Holder Name : Naga Babu Panguluri
Branch Name: laxmipuram, guntur.
IFSC Code: ICIC0006307
MMID - 9229098

Internet Banking Details (Savings and Credit):

User id : 515223323
Login password : nagababu1
Transaction password : nagababu2

Debit Card Details:

Name on the Card: NAGABABU P
Card pin no: 3372
Card no : 5594 0463 0700 0467
Valid From ; 02/14
End Date : 01/19
CVC No: 582
Card Type: Mastercard

Credit Card Details:

Card no: 5239 5126 2841 8002/5241 9311 4329 6006
Pin no: 4942
Cvc: 569/850
Exp: 05/18--09/19
3d secure pin : 123456

LETTERS:

User id : C10333948

ref - sr388405071 - icici cc 2nd card 50% wavier

HDFC
#####

Savings Account:

Account No: 50100043449426
Account Name: Naga Babu Panguluri
Branch : Lakadikapul, HYD
IFSC : HDFC0000021

Internet Banking Details (Savings and Credit):

User id : 55216360
Login password : LD7L5C/nagababu1/Lakshmi@123/software1/Hari@123/Dollar@123/nagababu1/nagababu@1

Debit Card Details:

Card no : 5326 7601 2451 4238
End date : 04/24
Cvc : 206
Mobile pin no: 9514
Card pin no: 8482
MMID - 9240694
Card Type: mastercard

Credit Card Details:

Card no : 5459 6488 0072 8959
Name on the Card: NAGABABU PANGULURI
Valid From: 06/15
End date : 06/21
Cvc : 302
Card pin no: 4942
Card Type: mastercard

BAJAJ

Website:
ID:20888911
Software1

ADDRESS:

Flat No: 404
Amrutha Lakshmi Residency
Panchavathi Colony
Near Studio "N"
Manikonda - 500089

Flat No: 404, 5th Floor, Road No: 5L, Amrutha Lakshmi Residency, Panchavathi Colony Near Studio "N" Manikonda - 500089
#####

DADDY ICICI NET BANKING:

user id: 504456527
password: haribabu@1
a/c no: 630701505601

CITI
#####

Credit Card Details:

Card no : 4386 2800 2900 2601
Name on the Card: NAGABABU PANGULURI
Valid From: 16
End date : 11/19
Cvc : 270
Card pin no: 4942
Card Type: VISA Platinum

Internet Banking Deatils:

Website: <https://www.online.citibank.co.in>
Username: lakshmi@naga
Password: rithvika@123
1,54,813
7660092451 - k veera raghava reddy - cases against law

CITI Loan login:

CITI Loan pre closure link:

https://pgi.billdesk.com/pgidsk/pgijsp/citicardemi/citiemi_detail.jsp

AMEX:

3765-375187-71008 - 4869

Exp - 09/23

npanguluri1984/rithvika#123

PF:

<https://unifiedportal-mem.epfindia.gov.in/memberinterface/>

PF no: AP/HY/37885/019438

UAN No: 100697482080

Username - 100697482080

Password - IVMlep*\$*181/Rithvika@123

Passbook: http://www.epfindia.com/site_en/For_Employees.php?id=sm2_index

<https://passbook.epfindia.gov.in/MemberPassBook/Login.jsp>

PAYTM:

Account number: 917093343399

IFSC Code: PYTM0123456

punarvasu - second padam

kumba lagnam

midhuna rasi

ka

ke

ko

ha

hi

birthplacebackup fadec0eff

intimation number - 69929421

part A form - download claim form

adhar

pan

health id card

Address:

health admin team

bajaj allians general insurance

2nd floor

bajaj fin serv building

srv no - 208/1b

off nagar road

weikfield it park

viman nagar

pune - 411014

Sukanta samrudhi yogana:

<https://www.bankbazaar.com/saving-schemes/sukanya-samriddhi-account-calculator.html>

RITHVIKA PANGULURI

AC - 37443272988

IFSC - SBIN0013277

Pedanandipadu SBI

Income tax:

Username:ASNPP2517L
Password:Rithvika@1
2018-2019 - acknowledgment no - 169090140260818
<https://www.incometaxindiaefiling.gov.in/home>

www.bajajfinserv.in/finance

20888911
Software1

<http://www.esevaonline.telangana.gov.in/>

User - nb198421
Email - nb198421@gmail.com
Password -software1
What is your pet's name?
Rambo

Your PAYBACK Number: 9401160826297200
PIN : 6147
Your PAYBACK Account Number: 9401161096428608
PIN : 8177/1984
Your PAYBACK Account Number: 9401159356698001(Clubbed above two into this account)
PIN : 6178
Email ID: npanguluri@deloitte.com
Mobile: 7093343399
Name: Naga Babu Panguluri
Ref No: 012161880(06-Sep-2016:05:47PM IST)
Customer Care: 08040146468

Your PAYBACK Account Number(ICICI Sav/ac): 9401150761472108
PIN -

Your PAYBACK Account Number: 9401150761476307 - not mine

Gratuity amount = (Number of years of service rounded off) * (Last drawn monthly Basic and DA) *15/26.

Bajaj Health:
https://hcm.bajajallianz.com/BagicHCM/Health_Ecard/veryFyUsrDtls.do
XDRU3RXR
npanguluri@deloitte.com/Rithvika@1

App BRR
Tech

Loans

Tuesday, February 7, 2017 6:44 PM

IDFC - 11217 end date -

Total:-

IDFC + Rent + Maintenance

11217+14000+1200=26417

#

Sal = 105000

Int = 45000

Total: 105000+45000=150000

Bal: 150000-26417=123583 (from July 1st 2020)

#

Power - 1000

Milk - 2000

Watchman - 1000

Groceries - 2000

DTH - 400

ACT - 750

GAS - 700

Completion / Closed start

Chitty - 3 months left(as on 18 Jun 2020)

25000*3=75000

25000 - Naga will pay (10000 I have 15000 to pay from Jul 1st 2020 salary)

50000 - Satish will pay on 18 Aug 2020 and 18 Sep 2020.(need to collect docs after paying last EMI on 18 Sep 2020)

#####

Citi Loan

EMI - 21365 end date - 01 MAR 2021(Pre closed on 15 Jun 2020(paid-185286))

Principal outstanding amount - 182166

1% on principal amount + GST - 2150

15 days interest - 970

Total amount to close the account - 185286 + 65(extra day)

Ref No - 200623036(To get the amount for pre closure)

Customer ID - 7777 7010 7838 6503

Paid through ICICI NEFT:

Anna Sallie, Chennai

Name - Naga Babu Panguluri

IFSC CODE - CITI0000003

AC/No - LGGHA17357808

Account type - Loan

Paid - 185286(NEFT)

Ref No - 66540(Call after making the payment and they said it will be closed by Thu (18-jun-2020). If not call back on Fri and enquire)

Received SMS on confirmation of Loan closure on 18-Jun-20

***** loan closed *****

#####

Axis Loan Pre closure:

Loan No - PPR000802230282

EMI 1 - 5720

Loan No - PPR000803153500

EMI 2 - 10934

Customer No - 872555425(Same for both Loans)

Date of Initiation - 22-Jun-2020

Ref No -

Payment Date -

A/C No -

IFSC Code -

Name -

A/C Type -

Payment Type -

@@@If no Axis Loan center nearby. Then follow below steps:

Visit the nearest Axis bank and pay the 95% of the loan amount (principal amount). Remaining amount will be deducted as EMI and loan will get closed automatically. Find the amounts below :-

Docs Needed:

Pan Card (or any ID proof)

1 - 94858 - 90210

2 - 322398 - 306278

Ref No - (Syed)(22-Jun-2020 - 10:45 AM)

Can I pay this 95% amount through Net banking? - Not possible

#Ref : 6817440(called on 23-Jun-2020 and raised request to close loan ending with 282. Will be closed by 2-jul-2020 and excess amount(321814) will be refunded after 5 days of loan closure - waiting on refund status - received 321814 into HDFC on 29-Jun-2020)

Paid 94900+322400 through axis bank deposit.

Second loan - ending with 500

Closing amount - 324312 as of 24-jun-2020 - payed 325000 on 25-Jun-2020 and raised EMI stop and closure of account but the amount is not getting reflected and asked to call back on 26-Jun-2020

Raised SR(**6867578**) to close the Loan account ending with 500 and Rs.487 will be refunded in 5 days after the loan account closure.(will take seven days to close the loan account + 5 days to refund the excess amount - received a SMS saying loan account and processed and closed on 29-Jun-2020 - waiting on refund status -)

***** both loans closed *****

#####

HDFC CC Loan - 11091 end date - 03 DEC 2020

Requested for closer. Waiting for call back. - nobody called back. I called up customer care and routed to CC department. And they initiated for the closure for the jumbo loan account.

Amount to pay to close the account - 67245.96(paid - 67246)

Immediately reflected on the cards section in net banking. EMI won't get disconnected.

SR NO - mentioned that I will be receiving it through SMS after the call.()

Yet to receive message for the loan closing confirmation through mobile SMS -

***** loan closed *****

Bajaj EMI(AC) - 3750 end date - 05 FEB 2020 --- completed
Tv(HDFCCC) - 2809 end date - 14 Mar 2020 --- completed
Completion/Closed end #####
#

IDFC - 11217 end date -
HDFC CC Loan - 11091 end date - 03 DEC 2020
CITI - 21365 end date - 01 MAR 2021
AXIS 1 - 5720
AXIS 2 - 10934

Citi - 257782 (after paying Feb 2020)
Axis - 478334 (after paying Dec 19)
HDFC - 10500 (after paying Feb 20)
IDFC - 422739 (after paying Feb 20)
257782+478334+10500+422739=1169355

#

Actuals:

Loans + rent + maintenance + Naga Raju + milk + Power + maid + DTH + net + gas
88000+14000+1200+1000+2000+1000+2000+1000+750+700=111650

TO BE:

88000+30000=118000
149400-119850=29550

#

<https://emicalculator.net/>

#

IDFC:

Amount - 510000
Interest rate - 11.5 %
Tenure - 60 months
First EMI - 01 FEB 2019
Last EMI -
EMI Amount - 11217
0.5% processing fee + 0.5 % insurance - 5900

Credited Amount - 504100
Sravan kumar Aleti - relationship manager - 7406466517

#

TV(VU):

No	Statement Date	Principal Amount	EasyEMI Finance Charges on Reducing Balance	EMI Amount	Balance	No	Statement Date	Principal Amount	EasyEMI Finance Charges on Reducing Balance	EMI Amount	Balance
1	14-04-2019	2439.63	303.63	2743.26	28789.37	7	14-10-2019	2615.46	188.50	2803.96	13542.15
2	14-05-2019	2468.09	335.87	2803.96	26321.28	8	14-11-2019	2645.97	157.99	2803.96	10896.18
3	14-06-2019	2496.88	307.08	2803.96	23824.40	9	14-12-2019	2676.84	127.12	2803.96	8219.34
4	14-07-2019	2526.01	277.95	2803.96	21298.39	10	14-01-2020	2708.07	95.89	2803.96	5511.27
5	14-08-2019	2555.48	248.48	2803.96	18742.91	11	14-02-2020	2739.67	64.29	2803.96	2771.60
6	14-09-2019	2585.30	218.66	2803.96	16157.61	12	14-03-2020	2771.60	32.33	2803.93	0.00

#

HDFC BANK Ltd.	JUMBO LOAN					
Loan No	Loan Booked Date	Loan Booked Type	Principal Amount	Interest Rate	Tenure	OS Balance
000000000019154380	21 Nov 2015	JUM	500000.00	11.88	60	115063.80
Principal Amount	Interest Amount	EMI Date	Principal Amount	Interest Amount	EMI Date	
6141.93	4950.00	14 Dec 2015	8253.84	2838.09	14 Jun 2018	
6202.74	4889.19	14 Jan 2016	8335.56	2756.37	14 Jul 2018	
6264.15	4827.78	14 Feb 2016	8418.08	2673.85	14 Aug 2018	
6326.16	4765.77	14 Mar 2016	8501.42	2590.51	14 Sep 2018	
6388.79	4703.14	14 Apr 2016	8585.58	2506.35	14 Oct 2018	
6452.04	4639.89	14 May 2016	8670.58	2421.35	14 Nov 2018	
6515.92	4576.01	14 Jun 2016	8756.42	2335.51	14 Dec 2018	
6580.42	4511.51	14 Jul 2016	8843.11	2248.82	14 Jan 2019	
6645.57	4446.36	14 Aug 2016	8930.65	2161.28	14 Feb 2019	
6711.36	4380.57	14 Sep 2016	9019.07	2072.86	14 Mar 2019	
6777.80	4314.13	14 Oct 2016	9108.36	1983.57	14 Apr 2019	
6844.90	4247.03	14 Nov 2016	9198.53	1893.40	14 May 2019	
6912.67	4179.26	14 Dec 2016	9289.59	1802.34	14 Jun 2019	
6981.10	4110.83	14 Jan 2017	9381.56	1710.37	14 Jul 2019	
7050.22	4041.71	14 Feb 2017	9474.44	1617.49	14 Aug 2019	
7120.01	3971.92	14 Mar 2017	9568.24	1523.69	14 Sep 2019	

7190.50	3901.43	14 Apr 2017	9662.96	1428.97	14 Oct 2019	
7261.69	3830.24	14 May 2017	9758.62	1333.31	14 Nov 2019	
7333.58	3758.35	14 Jun 2017	9855.23	1236.70	14 Dec 2019	
7406.18	3685.75	14 Jul 2017	9952.80	1139.13	14 Jan 2020	
7479.50	3612.43	14 Aug 2017	10051.33	1040.60	14 Feb 2020	
7553.55	3538.38	14 Sep 2017	10150.84	941.09	14 Mar 2020	
7628.33	3463.60	14 Oct 2017	10251.34	840.59	14 Apr 2020	
7703.85	3388.08	14 Nov 2017	10352.82	739.11	14 May 2020	
7780.12	3311.81	14 Dec 2017	10455.32	636.61	14 Jun 2020	
7857.14	3234.79	14 Jan 2018	10558.82	533.11	14 Jul 2020	
7934.92	3157.01	14 Feb 2018	10663.36	428.57	14 Aug 2020	
8013.48	3078.45	14 Mar 2018	10768.92	323.01	14 Sep 2020	
8092.81	2999.12	14 Apr 2018	10875.54	216.39	14 Oct 2020	
8172.93	2919.00	14 May 2018	10982.71	108.73	14 Nov 2020	

Satti loan:

No	Statement Date	Principal Amount	Easy EMI Finance Charges on Reducing Balance	EMI Amount	Balance
1	14-04-2020	5602.35	290.71	5893.06	11415.65
2	14-05-2020	5672.38	142.69	5815.07	5743.27
3	14-06-2020	5743.27	71.79	5815.06	0.00

Axis cc - 02267987700

IDFC:

REPAYMENT SCHEDULE

Date : 21-Dec-2018

Customer ID : 1047960492

Naga Babu Panguluri

404,Amrutha Lakshmi Residency Panchavati Colony
Manikonda, N Studios Hyderabad - 500089 Telangana
India Phone No.

Mobile No. 917093343399

LOAN DETAILS						
Loan Account Number	Loan Amount Disbursed (`)	Rate Of Interest(%)	Loan Tenor (In Months)	Repayment Frequency	Loan Type	Rate Type
28020400125108	507,050.00	11.5	60	Monthly	Smart Personal Loans	Fixed

EMI SCHEDULE						
Installment Number	Due Date	Opening Principal (`)	Installment Amount (`)	Principal (`)	Interest (`)	Closing Principal (`)
0	01-Feb-2019	510,000.00	1,929.00	0.00	1,929.00	510,000.00
1	01-Feb-2019	510,000.00	11,217.00	6,235.00	4,982.00	503,765.00
2	01-Mar-2019	503,765.00	11,217.00	6,772.00	4,445.00	496,993.00
3	01-Apr-2019	496,993.00	11,217.00	6,362.00	4,855.00	490,631.00
4	01-May-2019	490,631.00	11,217.00	6,592.00	4,625.00	484,039.00
5	01-Jun-2019	484,039.00	11,217.00	6,502.00	4,715.00	477,537.00
6	01-Jul-2019	477,537.00	11,217.00	6,715.00	4,502.00	470,822.00
7	01-Aug-2019	470,822.00	11,217.00	6,630.00	4,587.00	464,192.00
8	01-Sep-2019	464,192.00	11,217.00	6,695.00	4,522.00	457,497.00
9	01-Oct-2019	457,497.00	11,217.00	6,904.00	4,313.00	450,593.00
10	01-Nov-2019	450,593.00	11,217.00	6,828.00	4,389.00	443,765.00
11	01-Dec-2019	443,765.00	11,217.00	7,033.00	4,184.00	436,732.00
12	01-Jan-2020	436,732.00	11,217.00	6,963.00	4,254.00	429,769.00
13	01-Feb-2020	429,769.00	11,217.00	7,030.00	4,187.00	422,739.00
14	01-Mar-2020	422,739.00	11,217.00	7,364.00	3,853.00	415,375.00
15	01-Apr-2020	415,375.00	11,217.00	7,171.00	4,046.00	408,204.00
16	01-May-2020	408,204.00	11,217.00	7,358.00	3,859.00	400,846.00
17	01-Jun-2020	400,846.00	11,217.00	7,301.00	3,916.00	393,545.00
18	01-Jul-2020	393,545.00	11,217.00	7,497.00	3,720.00	386,048.00
19	01-Aug-2020	386,048.00	11,217.00	7,446.00	3,771.00	378,602.00
20	01-Sep-2020	378,602.00	11,217.00	7,519.00	3,698.00	371,083.00
21	01-Oct-2020	371,083.00	11,217.00	7,709.00	3,508.00	363,374.00
22	01-Nov-2020	363,374.00	11,217.00	7,667.00	3,550.00	355,707.00
23	01-Dec-2020	355,707.00	11,217.00	7,854.00	3,363.00	347,853.00
24	01-Jan-2021	347,853.00	11,217.00	7,819.00	3,398.00	340,034.00
25	01-Feb-2021	340,034.00	11,217.00	7,895.00	3,322.00	332,139.00
26	01-Mar-2021	332,139.00	11,217.00	8,286.00	2,931.00	323,853.00
27	01-Apr-2021	323,853.00	11,217.00	8,053.00	3,164.00	315,800.00
28	01-May-2021	315,800.00	11,217.00	8,232.00	2,985.00	307,568.00
29	01-Jun-2021	307,568.00	11,217.00	8,212.00	3,005.00	299,356.00
30	01-Jul-2021	299,356.00	11,217.00	8,387.00	2,830.00	290,969.00
31	01-Aug-2021	290,969.00	11,217.00	8,375.00	2,842.00	282,594.00
32	01-Sep-2021	282,594.00	11,217.00	8,456.00	2,761.00	274,138.00
33	01-Oct-2021	274,138.00	11,217.00	8,625.00	2,592.00	265,513.00

34	01-Nov-2021	265,513.00	11,217.00	8,623.00	2,594.00	256,890.00
35	01-Dec-2021	256,890.00	11,217.00	8,788.00	2,429.00	248,102.00
36	01-Jan-2022	248,102.00	11,217.00	8,793.00	2,424.00	239,309.00
37	01-Feb-2022	239,309.00	11,217.00	8,879.00	2,338.00	230,430.00
38	01-Mar-2022	230,430.00	11,217.00	9,184.00	2,033.00	221,246.00
39	01-Apr-2022	221,246.00	11,217.00	9,056.00	2,161.00	212,190.00
40	01-May-2022	212,190.00	11,217.00	9,211.00	2,006.00	202,979.00
41	01-Jun-2022	202,979.00	11,217.00	9,234.00	1,983.00	193,745.00
42	01-Jul-2022	193,745.00	11,217.00	9,385.00	1,832.00	184,360.00
43	01-Aug-2022	184,360.00	11,217.00	9,416.00	1,801.00	174,944.00
44	01-Sep-2022	174,944.00	11,217.00	9,508.00	1,709.00	165,436.00
45	01-Oct-2022	165,436.00	11,217.00	9,653.00	1,564.00	155,783.00
46	01-Nov-2022	155,783.00	11,217.00	9,695.00	1,522.00	146,088.00
47	01-Dec-2022	146,088.00	11,217.00	9,836.00	1,381.00	136,252.00
48	01-Jan-2023	136,252.00	11,217.00	9,886.00	1,331.00	126,366.00
49	01-Feb-2023	126,366.00	11,217.00	9,982.00	1,235.00	116,384.00
50	01-Mar-2023	116,384.00	11,217.00	10,190.00	1,027.00	106,194.00
51	01-Apr-2023	106,194.00	11,217.00	10,179.00	1,038.00	96,015.00
52	01-May-2023	96,015.00	11,217.00	10,311.00	906.00	85,704.00
53	01-Jun-2023	85,704.00	11,217.00	10,382.00	835.00	75,322.00
54	01-Jul-2023	75,322.00	11,217.00	10,506.00	711.00	64,816.00
55	01-Aug-2023	64,816.00	11,217.00	10,585.00	632.00	54,231.00
56	01-Sep-2023	54,231.00	11,217.00	10,688.00	529.00	43,543.00
57	01-Oct-2023	43,543.00	11,217.00	10,806.00	411.00	32,737.00
58	01-Nov-2023	32,737.00	11,217.00	10,898.00	319.00	21,839.00
59	01-Dec-2023	21,839.00	11,217.00	11,011.00	206.00	10,828.00
60	01-Jan-2024	10,828.00	10,934.00	10,828.00	106.00	0.00

955555555 - WhatsApp no for loan enquiry

36 paid till now

23 yet to pay

11217*23=257991

As of now amount as per repayment schedule - 230430

Extra amount if any:

Pre close charges -

Interest amount for remaining days -

230430+

Total amount to pay as of 04Fed2022 -

How to pay online?

Certs

Thursday, September 23, 2021 2:46 PM

Chaudhary Charan Singh University Meerut

Shivaji university

dermatologist

Monday, January 16, 2017 9:47 PM

https://www.google.co.in/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=best%20dermatologist%20in%20hyderabad&tbs=lf_msr:-1,lf_od:-1,lf_oh:-1,lf_pqs:EA&lf:1,lf_ui:2&rflfq=1&rlha=0&rllag=17421922,78441831,3076&tbm=lcl&rldimm=14378110977638104325&rlfi=hd:;si:14378110977638104325;mv:!1m3!1d6811.626968051391!2d78.4412016508179!3d17.393912947058208!3m2!1i740!2i687!4f13.1

Sebamed SPF 50 Multiprotect lotion

From <<https://www.justanswer.com/dermatology/6ombc-hi-wanted-remove-tan-last-5-8-years.html>>

pp

Monday, March 6, 2017 10:58 PM

From : 2-may-2011 to 26-sep-2011 - through Money to India
1066484

As per mails:

6-Jan-2010	114915
10-Feb-2010	15830
2-Mar-2010	32583
17-mar-2010	20315
29-Mar-2010	19000
8-Sep-2010	21000
25-Nov-2010	35200
16-Dec-2011	12300
07-Jan-2011	53636
11-Feb-2011	40000
30-Mar-2011	45200

114915+15830+32583+20315+19000+21000+35200+12300+53636+40000+45200=409979

Movies

Friday, April 14, 2017 10:39 PM

<https://www4.1movies.se/movie/deadpool-2/114727-watch-online-free.html>

Maze runner - the death curse(2018)

Songs:

[Rihana, Ed Sheeran, Adele, Shawn Mendes, Taylor Swift, Sam Smith, Dua Lipa](#) Top Songs 2022



tax

Thursday, September 27, 2018 3:03 AM

FAQ's about refund status messages:

<https://moneyexcel.com/3467/tracking-of-your-income-tax-refund>

Or

<https://www.tin-nsdl.com/services/status-tax-refunds/refundstatuslogin.html>

To check status of tax refund:

<https://tin.tin.nsdl.com/oltas/refundstatuslogin.html>

airtel

Saturday, January 19, 2019 8:40 PM

Hdfc cc transaction number for airtel postpaid bill auto debit:

B53441

B53442

Deducted on : 18/jan/18

Interaction Id no - 2865189562.

Naresh - 8

call airtel - refund status - 48 days it will take. already credit amount is reflecting on the accounts

tips

Friday, March 22, 2019 11:56 PM

Marri chettu

<https://www.youtube.com/watch?v=wdAGE88h5II>

Lever home remedy

[Hepatitis || Natural Home remedies for Jaundice](#)



Doctor

Monday, August 19, 2019 5:07 PM

Doctor Appointment Booked Successfully, Reference No. :: APT050648

From <<https://sunshinehyd.mappingtag.in/Medipro4/onlineAppointment.do?subAction=onlineAppointmentAction&hdr=0>>

Dr Ratnakar Rao | Best Orthopedic Doctor in Hyderabad | Joint Replacement Surgeon

Plot No.3, Road No. 2, Lane next to Capgemini, Near Wipro Circle, Nanakramguda, Gachibowli, Hyderabad, Telangana 500035

From <[https://www.google.co.in/search?rlz=1C1GGRV_enIN778IN778&ei=xek4WpG8HYX0vATxiL6gDQ&q=best%20musculoskeletal%20doctor%20in%20hyderabad&oq=best+musculoskeletal+doctor+in+hyderabad&gs_l=psy-ab_3...7222.9707.0.10528.13.13.0.0.0.235.1492.8j4j1.13.0....0..1c1.64.psv-ab_0.11.1231...33j22j29j30k1j33j21k1.0.gWaY1gAoeSs&npsic=0&rflfo=1&rllha=0&rllag=17395222.78420348.8744&tbo=lcl&rldimm=14890386849338490838&ved=0ahUKEwiPgNCX-onaAhWFsl8KHdinD2QQv\\$4ITzAB&rldoc=1&tbs=lrf:12m1!1e2!2m1!1e3!3sIAE.lf:1,lf_u:2#rlfi=hd;si:14890386849338490838;mv:!1m3!1d5849.132798724695!2d78.34456155203281!3d17.416911742645595!3m2!1i571!2i590!4f13.1;tbs:lrf:12m1!1e2!2m1!1e3!3sIAE.lf:1,lf_u:2](https://www.google.co.in/search?rlz=1C1GGRV_enIN778IN778&ei=xek4WpG8HYX0vATxiL6gDQ&q=best%20musculoskeletal%20doctor%20in%20hyderabad&oq=best+musculoskeletal+doctor+in+hyderabad&gs_l=psy-ab_3...7222.9707.0.10528.13.13.0.0.0.235.1492.8j4j1.13.0....0..1c1.64.psv-ab_0.11.1231...33j22j29j30k1j33j21k1.0.gWaY1gAoeSs&npsic=0&rflfo=1&rllha=0&rllag=17395222.78420348.8744&tbo=lcl&rldimm=14890386849338490838&ved=0ahUKEwiPgNCX-onaAhWFsl8KHdinD2QQv$4ITzAB&rldoc=1&tbs=lrf:12m1!1e2!2m1!1e3!3sIAE.lf:1,lf_u:2#rlfi=hd;si:14890386849338490838;mv:!1m3!1d5849.132798724695!2d78.34456155203281!3d17.416911742645595!3m2!1i571!2i590!4f13.1;tbs:lrf:12m1!1e2!2m1!1e3!3sIAE.lf:1,lf_u:2)>

crypto

Wednesday, September 18, 2019 8:25 PM

<https://wazirx.com/exchange/BTC-USDT>

Rent

Monday, December 23, 2019 3:47 PM

Laxman Pan - AYJPC4507H

Electronics

Monday, December 23, 2019 3:53 PM

Sony a65

Monday, May 6, 2019 6:20 PM

<https://www.amazon.com/Sony-SLT-A65V-Digital-Translucent-Technology/dp/B005IHAIW?psc=1&SubscriptionId=AKIAJBX6LJVII7QNQNYQ&tag=imgr-reviews-price-page-new-20&linkCode=xm2&camp=2025&creative=165953&creativeASIN=B005IHAIW>

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\$1,531.49 \$1,531.49



[Sony A77II Digital SLR Camera - Body Only](#) [Sony A77II Digital SLR Camera - Body Only](#) 4.5 out of 5 stars 135
\$1,198.00 \$1,198.00



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by [Sony](#)

[4.1 out of 5 stars](#) 111 customer reviews

| [72 answered questions](#)

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We don't know when or if this item will be back in stock.

- ◆ 2nd Generation Translucent Mirror Technology camera
- ◆ 24.3 MP for superb detail and amazing enlargements
- ◆ Ultra-fast up to 10 fps continuous shooting with Auto Focus
- ◆ World's first OLED viewfinder; big and bright
- ◆ World's first HD Movie mode with AVCHD 60p/60i/24p

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	Add to Cart	Add to Cart	Add to Cart
Customer Rating	4 out of 5 stars (111)	4 out of 5 stars (33)	4 out of 5 stars (90)
Price	Unavailable	\$598.00-\$598.00	\$749.95-\$749.95
Sold By	—	Amazon.com	SSE Photo & Video
Color	Black	Black	Black
Continuous Shooting	10	8	7
Screen Size	3 in	2.7 in	3 in
Focus Type	automatic with manual	Includes Manual Focus	Includes Manual Focus
Image stabilization	Sensor-shift	Optical	Sensor-shift
ISO Range	Auto, 100, 200, 400, 800, 1600, 3200, 6400, 12800, (25600 with boost)	100-25600	Auto, 100 to 12800, in 1, 1/2, 1/3 EV steps (80 to 51200 Extended)
Item Dimensions	5.2 x 3.19 x 3.82 in	7.64 x 6.77 x 6.22 in	5.16 x 2.87 x 3.82 in
Item Weight	1.37 lbs	3.77 lbs	1.68 lbs
Megapixels	24.3	24.2 megapixels	16.3 megapixels
Optical Sensor Resolution	—	1 megapixels	—
Optical Zoom	10x	1x	1x
Photo Sensor Size	APS-C	APS-C	APS-C
Style Name	Body Only	Base	—
Video Capture Resolution	FHD 1080p	FHD 1080p	FHD 1080p
Viewfinder	LCD	LCD	Optical (pentaprism)
Wireless Technology	EyeFi	—	None
Product description			
Product Description			
Best of both worlds, 24.3 megapixel and up to 10 fps. Get action photos, HD Movies and Live View shots that other cameras miss, thanks to Sony's exclusive Translucent Mirror Technology. Enjoy smooth and creative HD video at full 1920 x 1080 resolution – at either 60p or 24p frame rate - plus the world's first OLED electronic viewfinder. ²			
From the Manufacturer			

α65

Best of both worlds, 24.3 megapixel and up to 10 fps. Get action photos, HD Movies and Live View shots that other cameras miss, thanks to Sony's exclusive Translucent Mirror Technology. Enjoy smooth and creative HD video at full 1920 x 1080 resolution – at either 60p or 24p frame rate - plus the world's first OLED electronic viewfinder.



2nd Generation Translucent Mirror Design



Other DSLRs can shoot. Or they can focus with the speed and precision of Phase Detection AF. They cannot do both at once. Sony changes all that with the award-winning Translucent Mirror Technology system. It directs light to both the image sensor and the Phase Detection AF sensor simultaneously.

24.3 MP; best-in-class resolution

You get incredible detail and gorgeous enlargements thanks to an APS-C sensor with 24.3 megapixels. It's the world's first 24.3MPAPS-C DSLR



Upgraded BIONZ image processor

The brain of the camera is a Sony's BIONZ image processor substantially upgraded for the demands of 24.3 megapixel photography. Chroma noise reduction delivers high-resolution, low-noise photos even at ISO 16000. Also enables fast processing for up to 10 fps continuous shooting of data-intensive 24.3 MP images, 2D/3D Sweep Panorama modes and 6-image layering.

Sony Exmor technology

Conventional image sensors use only a handful of analog-to-digital (A/D) converters, which can slow you down. The Exmor sensor provides more than 5,600 column-parallel A/D converters. This helps enable continuous shooting at up to 10 frames per second.

Ultra-fast up to 10 fps continuous

The translucent mirror makes it far easier to capture the decisive soccer kick or your baby at her absolute cutest. Shoots up to 10 frames per second at full-resolution 24.3 megapixels with continuous auto focus (AE locked after first frame).

World's first OLED viewfinder

There's never been anything quite like the Tru-Finder OLED electronic viewfinder. For size, speed and brightness even after sunset, this is a gem. It begins with 2359K dots for amazing resolution and high contrast ratio for incredible depth. OLED reduces motion blur to a bare minimum. You can also see the results of camera adjustments in real time with superb color and detail.

Full-Time Live View in LCD or EVF

You can use both the LCD monitor and OLED Electronic Viewfinder for composing shots in Live View. Both provide a what-you-see-is-what-you-get preview of white balance, focus, depth of field, exposure and 100% framing accuracy, plus informative on-screen displays.

Tilt/swivel LCD screen



Tilt it up or down to frame high- and low-angle shots that would otherwise be hit-or-miss. Tilt and swivel under the camera for self-portraits. Finally, the monitor folds flush to the camera with the LCD exposed for shooting or protected for travel.

921K dot TruBlack LCD screen

Sony's 3.0-inch Xtra Fine LCD monitor has 921K dots for superb resolution. The TruBlack screen includes a special resin layer to suppress internal reflections, increasing contrast compared to conventional LCDs. Sunny Weather mode boosts visibility even further.



Graphic Display

Clarifies the relationship between aperture and shutter speed, as well as the effect each has on photographic results.

HD Movies at 60p, 60i, or 24p



Capture spectacular HD Movies. This is the world's first DSLR to offer a choice of super-smooth 60p, standard 60i or cinematic 24p, all at Full HD 1920x1080 resolution. AVCHD Progressive codec delivers stunning picture quality. MP4 codec offers smaller files for easier upload to the web.

HD movies with full manual control

Now you don't need to surrender control when you shoot HD movies. Enjoy the full expressive potential of Program, Shutter Priority, Aperture Priority or Manual (P/A/S/M) control in HD movie mode.

Full-time Phase Detection AF



You get fast, accurate auto focus in every mode—even HD Movie and Live View—thanks to Sony's exclusive Translucent Mirror Technology. While Contrast Detection Auto Focus often hunts for correct focus, Phase Detection AF knows exactly where correct focus is, and goes straight for it.

HDMI output for HD viewing

Enjoy HD movies and stunning still images on a compatible HDTV. The camera includes an HDMI output. In addition, the BRAVIA Sync system works with compatible Sony BRAVIA HDTVs enabling you to control camera playback using the television's remote.



Object Tracking AF
Locks onto a specified object and maintains focus even as the subject moves. Unpredictable subjects stay in focus even while zooming. You can concentrate on composition without worrying about focus.

15-point Auto Focus

To maximize the value of Translucent Mirror Technology, Sony incorporates Phase Detection AF of great sophistication. 15 sensors with 3 cross sensors maximize precision for both vertical and horizontal subjects.

6-image layering

Leverages the fast BIONZ processor to capture six images in a fraction of a second, and then combine the data. The result is one incredible single image that gets a cleaner result in Multi-Frame NR mode or sharper nighttime pictures in Hand-held Twilight mode.

Multi-frame NR

Experience incredible low-light shooting without a flash. The camera captures six images in a fraction of a second. Combining the data from all six, it creates a single image with a reduction in noise equivalent to two additional steps of ISO sensitivity. Sensitivity selectable up to ISO 25600. (Recommended for still subjects.)

Handheld Twilight mode

Get gorgeous shots at night without a tripod. Combines six frames into a single image for smooth, low-noise evening shots. (Recommended for still subjects.)

Auto HDR built into camera

Captures more scene dynamic range than a single exposure can handle—and more range than photo film. Combines the best highlight detail from one shot, the best mid-tones from a second and the best shadow detail from a third for one incredible shot. (Recommended for still subjects.)

3D Sweep Panorama Mode

 Capture vast scenic vistas and 16:9 shots in spectacular 3D. As you sweep across the panorama, the camera records separate right-eye and left-eye images that make landscapes come alive on your 3D television. Records both JPEG and MPO file formats.

Sweep Panorama Mode

Capture expansive landscapes automatically. Press the shutter, sweep vertically or horizontally. The camera does the rest, continuously shooting images and stitching them together.

Shot Result Preview

See the results before you take the shot. This preview takes the guesswork out of camera settings by showing the effects of the aperture, shutter and DRO settings on the depth of field, motion and dynamic range.

Main Sensor Quick AF Live View

Combines the fast focus of Phase Detection AF with high quality Live View images right from the main sensor. This is made possible by Sony Translucent Mirror Technology. You get accurate images and 100% framing on the LCD monitor or eye-level viewfinder.

ISO 16000 sensitivity

Incredibly clear low-light pictures without sacrificing detail, made possible by the low-noise Exmor APS HD CMOS image sensor and refined BIONZ image processor.

AUTO+ (Advanced Auto) mode

Get cleaner, more dynamic pictures and fewer missed shots. Unifies and simplifies Sony intelligent technologies. The camera automatically recognizes the correct scene mode.

11 Picture Effect modes

Discover innovative ways to make your images and videos pop. These include Posterization (Color, B/W), Pop Color, Retro Photo, Partial Color (Red, Green, Blue, Yellow), Soft High-key, High Contrast Monochrome, Toy Camera, Soft Focus, HDR Painting, Rich-tone Monochrome, and Miniature.

Face Detection and Registration

The camera can automatically detect up to eight individual faces and adjust focus, exposure, white balance and flash to

help deliver crisp, properly lit images of people. Can prioritize children or adults. Face Registration can remember friends and family members and prioritize them.

1200-Zone exposure metering

Reads exposure directly from the main image sensor. Choice of Multi, Center and Spot metering accommodates a full range of shooting situations.

SteadyShot INSIDE stabilization



Image stabilization reduces blur by compensating for camera shake. Typical DSLR systems build image stabilization into selected lenses only. SteadyShot INSIDE image stabilization is built into the camera body itself. You'll reduce blur with every A Mount lens, including macro and wide-aperture standard zoom lenses.

Dynamic Range Optimizer (DRO)

Improves results with backlit subjects and recovers details hidden in shadows. Settings include Auto, Level with a choice of five operating levels and Off.

Smile Shutter technology

Captures a smile the moment it happens. Simply select the Smile Shutter mode and the camera takes the picture automatically. You can prioritize children or adults and adjust the smile sensitivity.

Up to 560 Shots of battery life

Take up to 560 shots on a single charge with Sony Stamina battery power. Sony's InfoLITHIUM battery system enables you to see the percent of power remaining, so you can keep shooting in confidence.

P/A/S/M exposure modes

The camera offers a full range of controls from the beginner's AUTO+ mode to P/A/S/M: Program, Aperture Priority, Shutter Priority and Manual. On-screen prompts help you refine your skills, build your confidence and exercise greater creative control.

Advanced Anti-Dust Technology

Anti-Dust Technology helps keep the CMOS sensor clean, resulting in consistently clear pictures. First a static-free coating on the sensor's low-pass filter helps repel dust. Then vibration automatically dislodges dust from the sensor.

Built-in Flash (GN12)

To help you shoot more effectively, the camera includes a built-in flash (Guide Number 12) that can also trigger a wireless accessory flash (sold separately). The integrated hot shoe enables you to expand your lighting options with a range of accessory flashes (sold separately).

Slot for two media types

For cost-effective, convenient storage and sharing of your images, the camera accepts Memory Stick PRO Duo/Memory Stick PRO-HG Duo and SD/SDHC/SDXC media (Class 4 or higher recommended, sold separately). (APS-C size HD CMOS image sensor With 19.5 times the area of the typical camcorder image sensor, APS-C makes the difference between amateur and professional-looking video, delivering an exceptional combination of high resolution, high sensitivity and gorgeous, blurred backgrounds.



Awards



Product information

Product Dimensions	5.2 x 3.2 x 3.8 inches
Item Weight	1.37 pounds
Shipping Weight	2.6 pounds
ASIN	B005IHAIW
Item model number	SLTA65V
Batteries	1 Lithium ion batteries required. (included)
Customer Reviews	4.1 out of 5 stars 111 customer reviews
	4.1 out of 5 stars
Best Sellers Rank	#30,474 in Camera & Photo (See Top 100 in Camera & Photo) #1,550 in DSLR Cameras
Date first listed on Amazon	August 23, 2011

Warranty & Support

Product Warranty: For warranty information about this product, please [click here](#)

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Customer questions & answers

- 2 votes

Question:

[Does the A65VL have an comparison to the SLT-A58?](#)

Answer:

The 65 has a larger viewfinder (just slightly), higher frame rate for motion filming, a lot less shutter lag, faster shooting and more features like GPS etc. The only advantages the 58 has over it is less noise shooting in low light and better battery performance. Price wise, I think you get a lot more for your money... [see more](#)

By Kezins on March 7, 2014

[See more answers \(7\)](#)

- 1 vote

Question:

[that is included in the box?](#)

Answer:

This camera/lens outfit comes packaged with the following accessories supplied by Sony:

NP-FM500H InfoLITHIUM Battery

Battery Charger... [see more](#)

By Cameta Camera [SELLER](#) on December 2, 2013

- 1 vote

Question:

[Does the pixel count affect video quality? I need a large sensor and 24p on a budget. Should I just get the cheaper a3000?](#)

Answer:

For a question of this type, we advise contacting our sales department directly as they can provide more information than can be explained here. They can be reached at 800-991-3350 EST.

By Cameta Camera [SELLER](#) on December 1, 2013

[See more answers \(1\)](#)

- 1 vote

Question:

[can you use minolta lens off a maxxum 5 on sony cameras?](#)

Answer:

My wife uses all her Minolta Maxxum 7000i A mount lenses on her Sony cameras including this A65. I can't say for sure about your Maxxum 5 lenses. If they are A mount they should work

By BCutter on January 20, 2014

[See more answers \(6\)](#)

[See more answered questions \(68\)](#)

111 customer reviews

4.1 out of 5 stars

4.1 out of 5 stars

<u>5 star</u>	<u>76%</u>
<u>4 star</u>	<u>11%</u>
<u>3 star</u>	<u>7%</u>
<u>2 star</u>	<u>3%</u>
<u>1 star</u>	<u>3%</u>

By customer groups & interests

Sony Pictures

3.7

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3.8

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3.7

Is this feature helpful?

Yes

3.7

No

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Chris Gersbeck

[5.0 out of 5 starsThe best camera I've ever owned](#)

March 28, 2013

Style: Body Only [Verified Purchase](#)

Photography has been a hobby of mine for the past three years, and I've been through several Sony alpha series cameras. I started with the a330, sold that to upgrade to the a550, and then sold that to upgrade to the a65. I also own the a37. More on that in a bit.

I primarily use this camera for concert photography, as live music is another hobby of mine. While the a550 was excellent at low-light photography, the a65 pretty much blows it out of the water in terms of shooting at high ISO (usually at 1600) and its super fast 10 shots per second feature. Even shooting at ISO 3200 will produce usable results.

The video feature, however, is where this camera truly shines. I've gotten more and more into video production in the past year, and the cinematic quality that this camera produces matches top tier Canon cameras at a much lower price. Seriously, if you are considering shooting video with a DSLR, this is the wisest and most affordable purchase you'll ever make. I highly suggest shooting in Manual mode with a shutter speed of 1/50, and shoot at 24p if you can. You will be blown away by how "filmic" the results are. This camera paired with my a37, has produced some pretty amazing footage.

The high resolution swivel screen is also a major plus. You can view the screen from any angle and it always looks beautiful. I suggest you keep the screen in its closed position (with the screen facing the camera) when you store it in your bag. The screen, although somewhat resistant to scratches, CAN get scratched, so be careful. Buy a screen protector if you don't think you can remember to close it every time you're done using the camera.

Some people don't like the electronic viewfinder. It's a matter of taste. I loved the optical viewfinder on my a550, but honestly the electronic viewfinder is pretty awesome. Get with the times, this is where photography is heading.

I can't recommend this camera more if you're very much into photography/video but don't want to spend thousands of dollars on pro equipment. It really isn't necessary when you can get a camera of this quality for under \$700.

[Read more](#)

11 people found this helpful

Helpful

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Philip

[5.0 out of 5 starsGreat camera, and consider me an EVF convert!](#)

January 27, 2014

Style: Body Only [Verified Purchase](#)

My previous camera was my first DSLR, a Sony A700. I always had to keep in mind that the viewfinder wasn't 100% accurate in terms of framing, but I loved that camera. It went around the world with me, and served me very well. When I started to hear about Sony's new prisms and electronic viewfinders (EVFs), I had my doubts. Call me old fashioned. I was particularly concerned about how it would perform in low light; photographing dance performances, for example.

But I recently got an A65 at work, and also received one as a gift, and it didn't take me long at all to become a total convert. This is a great camera. It's smaller and lighter than my A700 was, but it still fills my hands well. If you have really big hands, you might find it a bit cramped, but for medium/average hands it should feel good.

The sensor is fantastic. Doubling the megapixel count hits you in the hard drive, but you can crop the living daylights out of the image and still have fantastic quality. The focus performance is very good, and the button layout makes a lot of sense. It was a very smooth and easy transition from the older Sony. The autofocus speed is amazing; the prism is worth its weight in gold if you need fast autofocus in a moderately priced camera.

Now, on to the EVF. It's fantastic. The level is extremely useful to me; I don't know how much time I've spent straightening a photo by half a degree. No more. The best feature for me is focus peaking. I'd read about it, and it sounded interesting, but now that I've used it, it might be my favorite feature on this amazing camera. My right eye is a bit weak, and I never felt like I had the diopter set right on my A700, so I almost never used manual focus. Focus peaking, made possible by the EVF, shows you exactly which pixels are in focus. It's a fantastic feature. I'm using manual focus more than I even have, and getting great results. Yes, Sony has some of the best autofocus in the business, but there are times when manual focus is just faster, more intuitive, and more creative. And now, for me, it's very sharp and accurate too! I love sweep panorama and the tilting LCD, but focus peaking might just be my favorite feature on this camera. It's changed the way I shoot. Proofing photos without taking your eye away from the viewfinder (again, only possible with an EVF) is also great.

So, I'm thrilled with this camera. If you've been wondering, or maybe skeptical, about the latest generation of Sony SLTs, take the plunge. I'm really, really glad I did.

[Read more](#)

3 people found this helpful

Helpful

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HMH

[4.0 out of 5 starsSONY DID IT AGAIN](#)

January 1, 2014

Style: Body Only **Verified Purchase**

I consider myself a novice when it comes to photograph although I've been taking pictures as an amateur for decades now. So, I wanted a nice DSLR (smart) camera that can take nice pictures and videos without having to do too much in terms of adjustment in the process. After some extensive research, I decided to settle for the Sony A65V for a couple of reasons, first, the price has stabilized in the past year or so compared to other cameras on the market with the same features, second, it supports all my old Minolta lenses which means that I won't have to dish out hundreds of dollars more to buy lensessweet. When I received the camera I immediately charged the battery for about 6 hours straight, then affixed the a Minolta lens to it while I study the different features in the menu. Once I had enough knowledge of most of the features, I took it outside and started taking pictures using different settings including the use of the GPS which is a nice feature to have to impress your friends (lol). I found this camera to be light, easy to carry, and ergonomically fit for my big hands which means that I can reach any button of the camera while looking through the viewfinder. The pictures are crisp, colorful, vivid, one might say they are of Post Card quality. I also took a 30 minute video at Epcot Center of a Choir performance which turned out quite well. As we speak, I am still evaluating the camera, but as of now, I must stay that I am very pleased with its performance. I'll upgrade this review if I experience anything negative in the future. Would I recommend this camera to a friend? YES. Absolutely.

3 people found this helpful

Helpful
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\$579.00



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\$449.99



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\$549.99



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Service registered on 6Aug2019 - will take 2-3 days to visit
350 rs fee

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Monday, August 22, 2016 7:04 PM

Croma CC -
072076 66000
Samsung TV UHD
Purchased on - 14- march - 2015

Model No - **UA48HU8500R**

Model Code - UA48HU8500RMXL
cooling fan issue ref id - 4215778989(Sandhya)

Ecare electronics

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+91 40 33132799
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H.No. 5-9-171/8, Shop No. A-7, Boston House, Chapel Road, Abids, Hyderabad - 500001
- **Land Mark:** Opposite Stanley Women's College or Beside Ford Car Showroom
- **Email**
ecarehyd@gmail.com
- **Contact Person**
Mohammed Iqbal Khan
- Taken on 13-aug-2016
Received TV on 24-aug-2016 at 1:30 pm - issue is still like that only.
Asked to call up Samsung and resolve it.

Samsung customer care -
1800 3000 8282

Called Samsung on 24/Aug/2016 issue resolved as when I clicked on Featured and again featured. Then the smart hub is coming
Samsung account no: 8472718967

31-Aug-2016 @ 06:20PM - cooling fan or mother board issue - meena

Ref No : 4220699539

Technician number :

Samsung customer care -
1800 3000 8282 1800 0000 726

Called Samsung on **06/Nov/2016**

Samsung account no: 8472718967

Ref No: 8472718967 as per sms : **2143411089**

Issue: **Display issue**

Note: Samsung care informed to call up Croma care and register the issue. Did the same and they said the technician will call us by Monday.
Didn't get any reference number from Croma Care. - SR06111600043

<http://www.indiacitizen.org/post-complaints/>

05-dec-2015

Service No: 4226746617

24/Jan/2017

Remote - standby button issue
Wireless connectivity issue
Volume - automatically going low
Ref : SR15121600080

NOTE: Called up Croma and registered the compliant of above issues in the morning at 09:10AM on 24-Jan-2017

#####

- MarQ 43SAUHD

- Vu 43SU128_v1

#####

Gyser:

Morphy Richard

Salva 15ltr

S.No - Ge01wh02

Purchase Date -

Warranty Status:

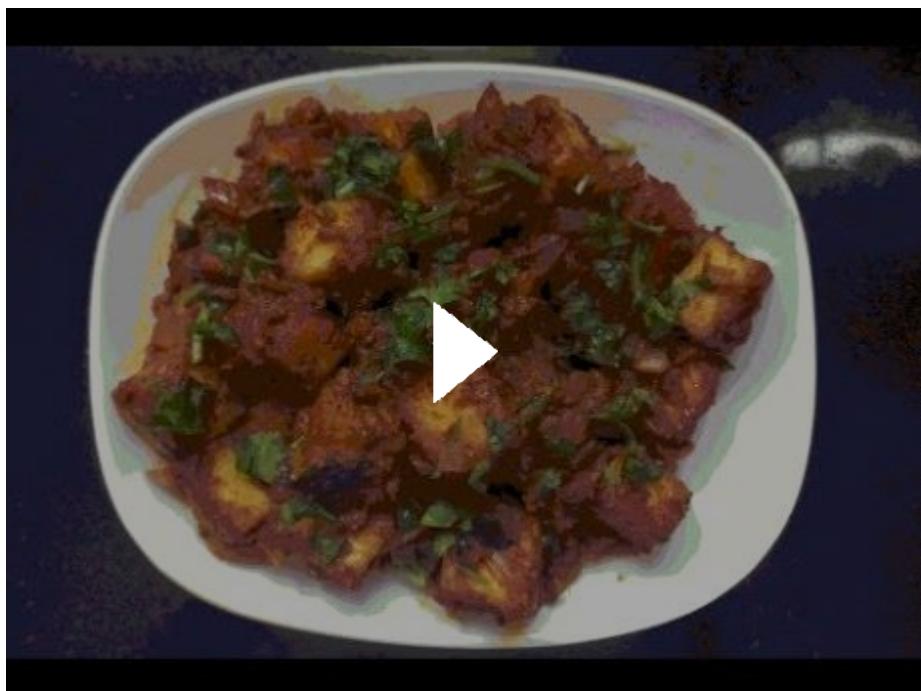
Diet plan

Sunday, November 18, 2018 6:41 PM

[Veeramachaneni ramakrishna one meal diet time table || Telugu Park ||](#)



[Veeramachaneni diet Panner Ghee roast/పన్నీర్ మీ రెస్ట్](#)



[Veeramachineni Ramakrishna Diet || Paneer Tikka \(Recipe 3\)](#)

వీరయాచనేని రామక్రిష్ణ డైట్ రెసిపీ - 3



పనీర్ టిక్కా

(Brain)మెదడు క్యాన్సర్ ఉన్నవారు తినవలసిన/త్రాగవలసిన సిరిదాన్యాలు, కాషాయాలు - Dr Khadar Vali

మెదడు క్యాన్సర్

సిలధాగ్నాలతో సంపూర్ణ ఆరంగ్యం

మార్క (దయాబెట్టిన), చిప్పి, భూరాయిడి, ఉపకాయం, కీళ్ళజీవ్యాలు, రక్తఖానిత
14 రకాల క్యాన్సర్లను దేశీ అపోరంతో బయంచే వద్దులు

మెదడు	1 వారం పాటు - పారిజాతం 2వ వారం - రావి 3వ వారం - జాము (ముక్కే ముక్కే లెగ్ తిరిగి పాచీంచాలి)	1 వారం -సెదాప ఆకు 2వ వారం - దాల్చిన చెక్కు (ముక్కే ముక్కే లెగ్ తిరిగి పాచీంచాలి)	అండు కొర్కులు - 2 రోజులు సౌమెలు - 2 రోజులు అలికులు - 2 రోజులు కొర్కు - 1 రోజు ఉండలు - 1 రోజు
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ఆత్మం ప్రార్థనలై త కుంపులు అప్పరం తేము....
ఆత్మం ప్రార్థనల కాకలై త కుంపులు ఏఱచేయులు....

కాక్కర్ భావర్ చెలు

A portrait of Dr. Khadar Vali, an elderly man with white hair and glasses, wearing a light blue shirt and a black tie, standing in front of a dark background.

Veeramachaneni Ramakrishna 4 Pillar Health Program (Diet Plan) Details

OILS

Don't Use Sunflower Refined Oil During this Program.

Use any or all of the below oil's

- Coconut oil (Yes) 100%
- Cow Ghee (Yes) 40% original.
- Olive Oil (Yes) 40%.
- Butter (Yes) 40% Amul, Vijaya
- Cheese (Yes) 40%.
- Venna on the curd.

SALT

- Salt- Kallu Uppu Only (Sea Salt)

EGG's

- Every day eat 1-6 Full Boiled Egg with White and Yellow. Omlette - Omlettes with Vegetable.

VEGETABLE CURRIES

- Only Eat Curries means Directly eat Curries. Don't eat with rice.

NON-VEGETARIANS

- Chicken, Mutton, Prawns, Fish etc...
- Any Non-Veg curry daily max. limit 300 Grams. Don't use Tamarind.
- Naatu Kodi, Naatu Kodi eggs very good for health.
- No Rice and No Chapathis.

Marination Procedure

- Add Salt, Chilli powder, Turmeric, Lemon, Ginger Garlic Paste
- Use, Home made garam masala.
- Keep in Deep fridge – min. 2 hrs.
- Fry in above-mentioned Oils only.
- Don't Use Curd, colour, cornflour, sauce, azinomoto etc.

Outside Food (Hotel)

Maximum avoid Outside food during this program period.If Necessary can take given food items Without Color and Don't Use Tasting Salt.

- Chicken Tandoori, Chicken Tikka, Chicken Kebab, Chicken Grilled.

How to Make Mutton Bones Soup For Veeramachaneni Ramakrishna Diet Plan

- Take 1kg mutton bones in a cooker.
- Add 2 litres of water and cook up to 12 whistles.
- Transfer mutton bones and Soup to a big vessel.
- Add 4 Ltrs of water.
- Cook that mutton bones Soup in the small burner of stove at sim heat, about 7 hours.
- Add vegetables if you want for Taste before last one hour i.e. 6th hour.
- Take out all the pulp and drink only soup.

If you are Non-Vegetarian, You have to definitely take vegetarian regularly.

Should not take:- Potato Chama dumpa Kanda Pendalam Chilakada dumpa or sweet potato BeetrootRaw

Banana Beans, Naatu

Chikkudu, Bataani.

Should take partially:-

Tomato

1 Onion

1 Carrot

Except this 11 vegetables you can take all other vegetables

If you want you Can also mix some milk in curries only.Munagaaku Should be taken Regularly.

How to Make Veg. Soup For Veeramachaneni Ramakrishna Diet Plan

- You can use all vegetables except the exempted.
 - Add 1/2 litre water in the cooker and place 7 whistles.
 - Remove pulp and drink only soup.
- Addthallimpu,gingergarlicpaste,etc.Panneer-100% protein. Take 100g paneer every day.No coconut water. Mudhuru kobbari, Daily eat endu kobbari half chippa. Milk - NoCoffee, Tea - No milk and sugar. Take decoction and cream. Bullet proof coffee. Green tea, white tea, Nosugar. Meegada on Milk Can dri nk soda. Ban all cool drinks and bad habits. Until this program complete.Curd- No But can drink Majjiga. Like Lemon Majjiga, Jeera Majjiga. 2 spoons in 1 lt r water.

NUTS

Badam-10 Pista - 10 (Salted, Normal) Wallnut/Ocrut - 15 (Spondilites relief) Soak overnight in water and takenext morningGummadi Ginjali, Poddu thirigudu ginjalu, Water melon seeds Each 5-6 spoons Daily.Tella Nuvvulu, Avisa Ginjalu, 1/4 kg each and fry in ghee and make powder.Take that powder 3-5 spoons a day.

Pillar 1- Every day (First 10 days) of the program.

Take 70-100g Fat For Sure. Not Cheese. Prefer soup with fat.

After 10 Day's

40-70g Fat for sure depends on the individual. If you feel weak, then add more 10g fat.

Pillar 2- Every day

Every individual should take 3 Lemons with Majjiga for sure. No salt in it.Take 2 Liters curd and add 3 Ltrs of water.Add mirchi, ginger, garlic etc and keep it in fridgeThen take only the top layer of it. Should not take the curd below.

Pillar 3- Every day

Every Person Daily should Drink Litres of water----- including majjiga in pillar 2

Pillar 3- Every day

Daily Take 1 Multi-Vitamin Tablet. Get it from a Generic Shop.

How to Eat During this program

- Eat as you wish when you feel hungry. Should not eat for every hour or two.
- Eat when you feel you are really hungry. No timings. When body asks you to eat.
- Eat only until your hunger feels satisfied not full stomach.
- Eat again when you feel hungry. Dont eat for satisfying desire.

Not to take this food:- (Upto Completion of this program)

Rice and related items. Dhanyalu like jonnalu, raagulu, sajjalu, etc all types of ginjalu should be banned. Nominapappu, chenagappappu in thaalimpu. No sweets and consolidates. Don't eat fruits and Don't Drink fruit juices.

From <<https://www.scribd.com/document/372767405/VRK-Diet-Plan>>

Oils

Thursday, January 3, 2019 8:41 PM

Ground nut oil - 5 liters

Sesame oil - 1liter

Verri nuvvula nune - 1 liter

Coconut oil for hair - 1liter

Maredaku/bilavaku - kasayam

Jelakarra kasayam

Sonti kasayam

Curry leaves kasayam

Small

Saturday, May 27, 2017 10:15 PM

<http://muvsi.in/100-profitable-small-business-manufacturing-ideas-low-cost/>

<https://myinvestmentideas.com/2012/11/20-good-small-business-ideas-with-low-investment/>

Rubber Conveyor Belt Market Potential

The demand for the conveyor belt is increasing steadily with the rapid industrialization in the Country. These belts are commonly used for industrial purposes in thermal plants, fertilizer plants, railways, chemical plant, etc. There has been increased the need for the conveyor belt servicing activities. The typical lifespan of a conveyor belt product varies from two to five years. After this, there is a need for replacement of or repair work on the conveyor belt or part of the conveyor belt.

The growth in production in the Coal Mining industry in India, which is a major end-user of conveyor belts, is expected to drive higher demand for conveyor belts during the period 2016-2020. India's Twelfth Five Year Plan (2012-2017) has projected better growth prospects in industries such as Cement, Steel, and Ports, which are some of the major end-users of conveyor belts in India. We expect the growth in these industries to drive higher demand for conveyor belts in India in the coming years. Rubber conveyor belt manufacturing is a techno-commercially profitable investment opportunity for the entrepreneurs.

Related: [Small Business Manufacturing | Things To Consider Before Starting](#)

Registration & License For Rubber Conveyor Belt Manufacturing

In starting a rubber conveyor belt manufacturing business, you will need to obtain different licenses and registrations in India. These are as follows:

1. Register your business with ROC according to your ownership and liability pattern.
2. Obtain Trade License from Municipal authority.
3. Apply for Udyog Aadhaar MSME registration. It is not mandatory. However, it will help you in getting finance from the bank.
4. Apply for VAT registration
5. Obtain NOC from the State Pollution Control Board.
6. Apply for BIS Certification. The specifications in conformation to IS: 1891.

Related: [8 Forms Of Business Organization India | How To Choose | Basic Guide](#)

[How To Get BIS Certification In India | Basic Guide](#)

Rubber Conveyor Belt Manufacturing Machinery

You will need to procure different machines for the manufacturing operation. Such as

1. Rubber mixing mill 16"x48" with chilled cast iron rolls and standard accessories
2. Rubber Dispersion Kneader
3. Calender machine 8"x26" with hollow rolls, duly ground, with gun metal bushes, gear box and other accessories
4. Farming table
5. Size cutting machine with electric motor
6. Wrapping machine
7. Hydraulic mixture machine
8. Hydraulic press with all accessories
9. Boiler
10. Generator
11. Testing equipment like Tensile Testing machine, Ageing Chamber, Ross Scoti flex test machine.

Rubber Conveyor Belt Manufacturing Process

Generally, you can produce rubber conveyor belts by two methods. One method involves rubberizing the cloth by calendar machine. And the second method involves rubberizing the cloth by spreading machine.

In the case of rubberizing by calendar machine, the production is very high. Additionally, there are no costs involved on account of solvent losses.

After rubberizing, transfer the cloth in the requisite number of layers to Hydraulic press for vulcanizing to achieve the desired thickness. Different types of conveyor belting cover composition are available for heavy duty, medium duty, light duty, heat resistant type of belts.

Raw Material For Rubber Conveyor Belt Manufacturing

In the manufacturing operation, you will need to procure different types of raw materials. Such as raw rubber, synthetic rubber, whiting, processing oil, zinc oxide, stearic acid, rosin, anti-oxidant, accelerator, sulphur, pine tar, carbon black, canvas/fabric, colour/paints, and pigments. You will also need to procure the packaging consumables. In rubber conveyor belt manufacturing, you will need to maintain the quality standards as per client's specifications.

From <<http://muvsi.in/rubber-conveyor-belt-manufacturing/>>

Bags manufacturing

Wednesday, March 3, 2021 9:10 PM

[Latest small scale manufacturing business ideas telugu | manufacturing business ideas telugu - 480](#)



[New Business Ideas In Telugu || Small Business IdeasIn Telugu || Manufacturing Business In Telugu](#)



Import china mobile products business

Tuesday, January 2, 2018 9:33 PM

Business under 5l

<http://www.expert-market.com/business-ideas-under-5-lakhs-investment/>

<http://www.expert-market.com/how-to-import-goods-from-china-to-india-steps-procedures/>

Packaging Box Manufacturing

Any individual can initiate packaging box manufacturing business as small scale basis. Packaging boxes are the item that is an essential item in the packaging system. Any product requires a packaging before going to the market. The demand is huge and it is increasing. Manufacturing process is also simple. In addition, you can start the business with small capital investment.

From <<http://muysi.in/100-profitable-small-business-manufacturing-ideas-low-cost/>>

20 small business

Saturday, August 19, 2017 3:35 PM

<http://monevexcel.com/15400/small-manufacturing-business-ideas>

first time in india best genuine earning opportunity without investment earn around 30k to 50k (based on your city) some marketing knowledge must is enough. mail me interested persons for life time earnings. people are welcome from all over india. we need one person in one city complete india for biggest business network. mail me for further details mohansai2014@gmail.com
mohansai2014

If you are new to importing and exporting,then consult with us we will guide you through the entire process from start to finish Our consulting services will help you set up your importing or exporting operation properly from the start, can help you avoid delay.We provide consultancy services connected with exports and imports and having 27 years experience in this field and has helped more than 136 companies to startup. Kindly contact me for more details. CONTACT B.RADHAKRISHNAN. INTERNATIONAL
palazhy

START ROBOT///ELECTRONICS MANUFACTURING COMPANY AND TRAINING INSTITUTE @ 3.5 LAKHS AND EARN EARN Rs 50,000 TO 150,000, LOW INVESTMENT HIGH RETURNS, INVEST IN PRACTICAL EDUCATION PROJECT, WE HAVE STARTED AMERICA/JAPAN EDUCATION SYSTEM IN INDIA,GET A FRANCHISEE OF PRACTICAL EDUCATION AND ROBOTICS INSTITUTE, IAR-INSTITUTE OF ADVANCED ROBOTICS,SEARCHING FOR FRANCHISEE PARTNER ALL OVER INDIA, A New Concept of Education, ..E-MAIL- iardehradun@gmail.com, CALL: 8755222935, www.starkindustries.in, facebo
iarinfraredrobots

Manufacturing of Sports related items

The next business idea is related to sports. It is about the manufacturing of sports related items such as a ball, bat, badminton racket, carrom etc. If Indoor and outdoor sports are popular in your country this business can lead to runaway success.

Capital required – Approx. 2 Lac to 5 Lac

Material required – Raw material, machinery

Manufacturing of Paper

Manufacturing of paper is a low-cost business idea. It is a known fact that paper market has huge potential. Papers are widely used in education and other industries. So, chances of getting success in a paper making business are very high. Before starting this business you need to decide paper size and volume, based on size and volume you need to select equipment and space for the manufacturing.

Capital required – 1 -2 Lac

Material required – Papermaking equipment, raw material, chemicals

Ball pen Refill making

Ball pen refill making is a simple business that can be started from home. Ball pen is an essential writing item that is required in education and in a corporate environment. The demand of ball pen is never ending. Thus starting a ball pen refilling is recommended business idea.

Capital required – Approx. Rs 50,000 to 2 Lac

Material required – Ink filling machine, Nozzle fixing machine, punching machine, hot sampling machine

Making of Fertilizer

It is good to start fertilizer business if you are living in a country that is highly dependent on agriculture products. It is advisable to start fertilizer manufacturing business at a smaller scale. If you are successful you can expand this business.

Capital required – Approx. Rs.25000 to 1 Lac

Material required – raw material, chemicals, fertilizer making machine

Automobile part manufacturing

Automobiles industry is growing rapidly everywhere. It is but obvious that auto part replacement is bound to happen regularly. So, if you have good finance capacity and business skills you should consider starting your own automobile part manufacturing business. It is not required to manufacture all parts and components. You should manufacture parts that are required on regular basis.

Capital required – Approx. 5 Lac to 15 Lac

Material required – raw material, design of part, part manufacturing machine

Manufacturing of Stationary items

Pencils, color, pen, eraser, sharpener, staplers, rulers, glue, notebook, compass are essential items requires by students and teachers. Apart from school and colleges this items are required in every small and big business. So, considering a demand of stationary items it is recommended to start stationary item manufacturing business.

Capital required – Approx. 1 Lac to 2 Lac

Material required – Depends upon stationary item

Thecybermaniac.com

Thursday, January 9, 2020 2:40 PM

DL

Tuesday, January 28, 2020 11:28 AM

Home | Parivahan x | Welcome To T x | G how to download driving licence x | Forms | Licence x | Welcome To A x | RTA Citizen APP x | Welcome To A x | RTA Citizen API x | YouTube (7) How to Do x | +

aprtacitizen.epragathi.org/#/vehicleRegistrationSearch

Helpdesk | Help Home | Help A+ A- | తెలుగు | English |

Government Of Andhra Pradesh Transport Department

Vehicle/Driving License Details

Check Post | Licence | Registration | Permits | Fitness | Representative | VCR | Tax/Fee Payments | Status | Downloads | e-Bidding

Vehicle Registration/Driving License Search

[« Back to List](#)

DL Number	DLFAP007147672004	Issued Date	14-05-2004
Name	NAGA BABU P	Hazardous Validity	
Son/Wife/Daughter of	HARI BABU	Badge No	
Date of Birth	21-11-1984	Reference No	DLFAP007147672004
Class of Vehicles		Old DL No	
Non Transport	Motor Cycle With Gear	Office Code	AP007
	Light Motor Vehicle Non Transport	Date of First Issue	14-05-2004
Non Transport Validity	13-05-2024	Present Address, KOMMURU, KAKUMANU, GUNTUR DIST, GUNTUR, Andhra Pradesh -
Transport			
Transport Validity			

Andhra Pradesh Transport Department Copyright © 2020 | All Rights Reserved | Powered by OTSI 11:27 AM 1/28/2020

Home | Parivahan Sewa | Ministry of Road Transport and Highways x | Welcome To TRANSPORT DEPARTMENT x | G how to download driving licence x | RTA Citizen APP x | +

aprtacitizen.epragathi.org/#/dlmodule

RI NB Broadcom BITCOIN udemy Jira SVN 30 Splunk SVNhooks GuestNet TIME Sonar envInfo Py-DataFlair Py-Doc py-DO WIKI Other bookmarks

Duplicate of Licence

Select Type Of Transactions Enter Details

Please enter the following information

DL Number * Aadhar Number *

DLFAP007147672004 4974 8476 1686 SEARCH

Forgot DL No.

Licence validities as per New MV Act (amendment) 2019 :

- 1) The validity of Transport license is 5 years and The validity of Hazardous license is 3 years.
- 2) For other licence,
 - a) If individual has not attained the age of thirty years on the date of issue or, renewal thereof, be effective until the date on which such person attains the age of forty years.
 - b) If the individual has attained the age of thirty years but has not attained the age of fifty years on the date of issue or, renewal thereof, be effective for a period of ten years from the date of such issue or renewal.
 - c) If individual has attained the age of fifty years but has not attained the age of fifty-five years on the date of issue or, renewal thereof, be effective until the date on which such person attains the age of sixty years.
 - d) If the individual has attained the age of fifty-five years on the date of issue or as the case may be, renewal thereof, be effective for a period of five years from the date of such issue or renewal.
- 3) Applying for renewal after one year from the date of expiry of driving license (Expiry DL), will require the applicant to pass the test of competence again.

Error Messages CLEAR

Matched Application no AP00720200003241DL has duplicate

Andhra Pradesh Transport Department Copyright © 2020 | All Rights Reserved | Powerd by OTSI 12:08 PM 1/28/2020

Monday, March 23, 2020 3:10 PM

17018 - charged from cc

Total amount 17288 + interest(428) = 17446

EMI per month - 5816

Symphony 27 L Room Personal Air Cooler ₹5,590
Color: White/Blue Seller: OnlineSewaNehru

Onida 6.2 kg Fully Automatic Top Load Gr.. ₹10,729
Color: Grey Seller: OmnitechRetail

Installation and Demo ₹0
Seller: OmnitechRetail

Complete Appliance Protection (3 Years) ₹699
Seller: Jeevan Consumer Services

HP 17 INCH 20 L Laptop Backpack ₹275
Color: Black Seller: AGILE

Update:

Symphony 27L:

[Shipment is cancelled](#)

[Refund Completed \(Refund ID: 10201836472015814415\)](#)

Your shipment has been cancelled. ₹5590.0 as refund will be added to your HDFC MASTERCARD Credit Card545964*****8959by Apr 21. For any questions, please contact your bank with reference number 034328.

But

14/04/2020 M-FLIPKART PAYMENTS ,P:01,0000565 (Ref# 0999999980414005257245) 5,602.35

14/04/2020 MER EMI ,INT NBR:01,0000000000565 (Ref# 0999999980414005257252) 290.71

In total 5,893.06 was deducted from HDFC CC which is supposed to be 5816.

Dairy

Wednesday, July 8, 2020 12:24 PM

Share's

Monday, July 13, 2020 2:22 PM

Dated - 13-July-2020

1200 - yes bank - @22 = 26400 (purchased) - NB(Paid to rachana)

1000 - yes bank - @22 = 22000 (purchased) - Rachana

Planning to sell @25+

Dated - 15-July-2020

500 - yes bank - @20.50 = 10250 (purchased) - NB(Paid to rachana)

500 - yes bank - @20.50 = 10250 (purchased) - Rachana

Planning to sell @25+

1000 - yes bank - @12 = 12000 (purchased) - NB(Paid to rachana)

1000 - yes bank - @12 = 12000 (purchased) - Rachana

Planning to sell @25

500 - yes bank - @17.05 = 8525 (purchased) - NB(From Zerodha)

Planning to sell @25

Sold venkys 70 shares @ 1470 purchased at 1449.75

Purchased century 250@263.05

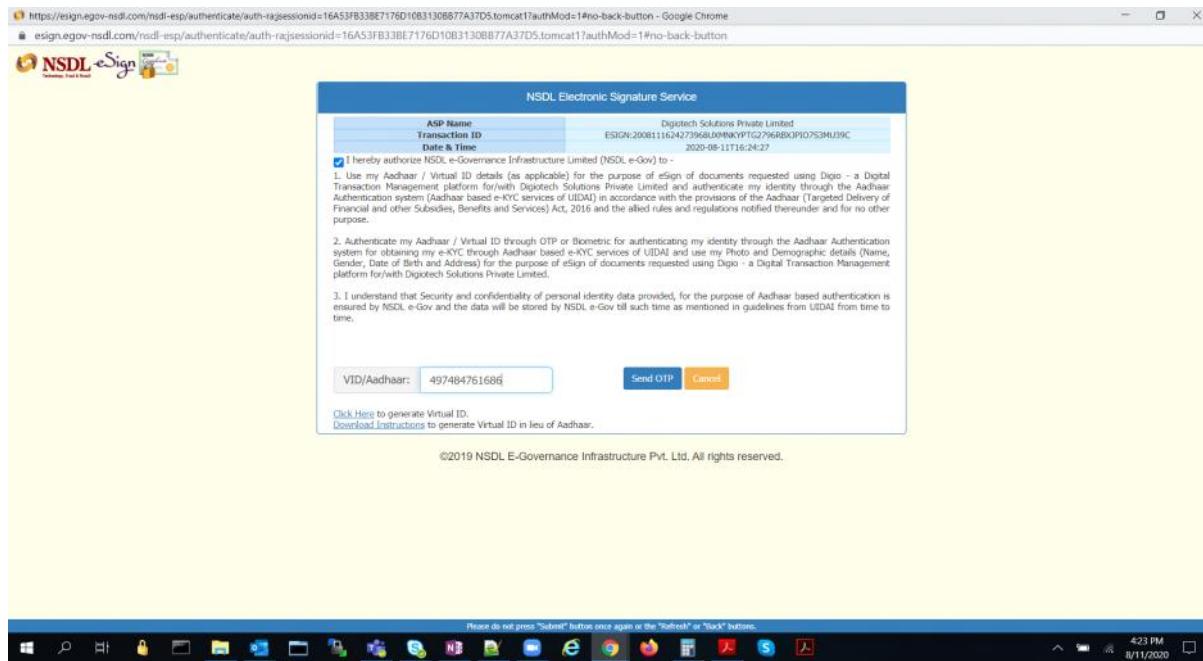
Axis - 207 purchased@493.51 and sold@508.05

BSNL complaint number - raised on 24oct2020 - 7:40AM for no internet issue

123808894322

Trading account

Tuesday, August 11, 2020 4:23 PM



Digilocker account:

ID - nb198421@gmail.com

Password - Rithvika@1/Rithuhari@123

Zerodha:

GV6363/Rithuhari@123(PIN - 211184)

TPIN - 537670

Support Code - 5572

12-Aug-2020

added 10000 to zerodha - NB

req raised for yes bank by NB - 16.25@500

65000 added to zerodha - for rachana

req raised for GATTI by Rachana -

42.90x750=32,175(Purchased)

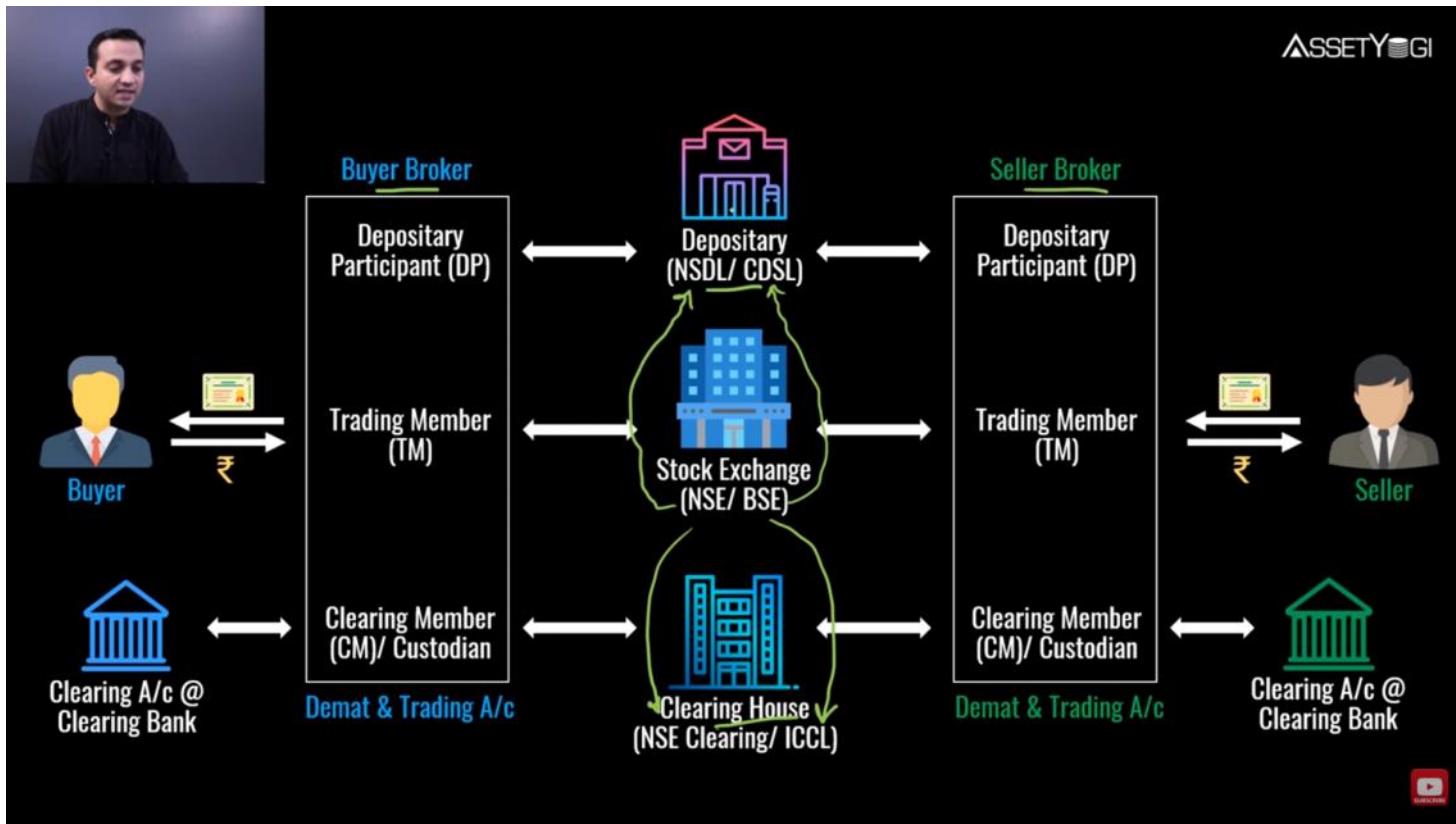
43.00*750=32,250(Purchased)

32175+32250=64425

IDFC @22

IDEA @8.10

<https://www.youtube.com/watch?v=5aIKOxm4j4w>



#Investments

AXIS

$$220 \times 125.36 = 27,579.2$$

INDUS

$$70 \times 700 = 49,000$$

$$70 \times 285 = 19,950$$

YES

$$1000 \times 16.02 = 16020$$

$$2700 \times 22.05 = 59535$$

CENTURYTEX

$$250 \times 363.05 = 90,762.5$$

SRADHACORP

$$658 \times 293.79 = 193,313.82$$

ITC

$$400 \times 196.46 = 78,584$$

Total:

$$27,579.2 + 49,000 + 19,950 + 16020 + 90,762.5 + 193,313.82 = 396,625.52$$

38800 - BAJJU zerodha

shares - Rachana

$$20000 + 30000 + 20000 + 30000 + 100000 + 100000 + 200000 = 500000$$

Zerodha:

$$1317869 + 150188 = 1468057$$

aadahar

Saturday, September 26, 2020 3:20 PM

Harish - New

Enrollement No - 20523120391445

Dated - 22sep2020

22/09/2020 09:39:54

Lakshmi - Update of Mobile no, Name and address

Aadhar no - 525473677664

Enrollement No - 20523120391595

Dated - 26sep2020

26/09/2020 12:42:10

Complaint no - 2020100505038201

Complaint no - 2020110604653501

CC No -1947

Get Aadhaar - Unique Identification | Home - Unique Identification A... +

residentpvc.uidai.gov.in/order-pvcreceipt.php?l=reprintSuccess

Shares Ball RI NB Python - ML BITCOIN udemy SVNhooks GuestNet TIME Py-DataFlair Py-Doc py-DO Magnet

Due to Covid-19 pandemic, delivery of Aadhaar PVC Cards through Speed Post may be delayed as per the guidelines of Department of Post from time to time.

ORDER AADHAAR PVC CARD RECEIPT

Transaction Successful

Payment Date & Time
02-Sep-2021 20:34:09

SRN
0209202108180119283768004498

Receipt Number
13903207040

Transaction ID
30a3e9f5aa21ea1564b8

Amount
Rupee 50.00

Aadhaar Number
xxxxxxxx1686

Transaction Status
success

Note : Signature not required as it is digitally signed document.

Check status
Check the status of your Aadhaar Card.
Check Status

Frequently Asked Questions

What is "Aadhaar Card" service

What are the securities features of "Aadhaar Card"

What are the charges to be paid for "Aadhaar Card"

How residents can raise the request for "Aadhaar Card"

How residents can raise the request for "Aadhaar Card"

How residents can raise the request for "Aadhaar Card"

View All

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Type here to search

24°C 9/2/2021 8:35 PM

Get Aadhaar - Unique Identification Authority of India | Home - Unique Identification Authority of India | +

residentpvc.uidai.gov.in/order-pvcprint.php?t=reprintSuccess

Shares Ball RI NB Python - ML BITCOIN udemy SVNhooks GuestNet TIME Py-DataFlair Py-Doc py-DO Magnet Other bookmarks Reading list

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My Aadhaar > Get Aadhaar > Order Aadhaar PVC Card

Due to Covid-19 pandemic, delivery of Aadhaar PVC Cards through Speed Post may be delayed as per the guidelines of Department of Post from time to time.

ORDER AADHAAR PVC CARD RECEIPT

 Transaction Successful

Payment Date & Time
02-Sep-2021 20:39:15

SRN
0209202108381619283793683729

Receipt Number
13903305188

Transaction ID
565fe523731f0c1df2b6

Amount
Rupee 50.00

Aadhaar Number
xxxxxxxx7664

Transaction Status
success

Note : Signature not required as it is digitally signed document.

[Download Payment Receipt](#)

Check status
Check the status of your Aadhaar Card.

Frequently Asked Questions

What is "Aadhaar Card" service

What are the securities features of "Aadhaar Card"

What are the charges to be paid for "Aadhaar Card"

How residents can raise the request for "Aadhaar Card"

How residents can raise the request for "Aadhaar Card"

How residents can raise the request for "Aadhaar Card"

[View All](#)

The new m Aadhaar app now available on  [INSTALL NOW](#)

Uninstall any previous version and install the new m Aadhaar App

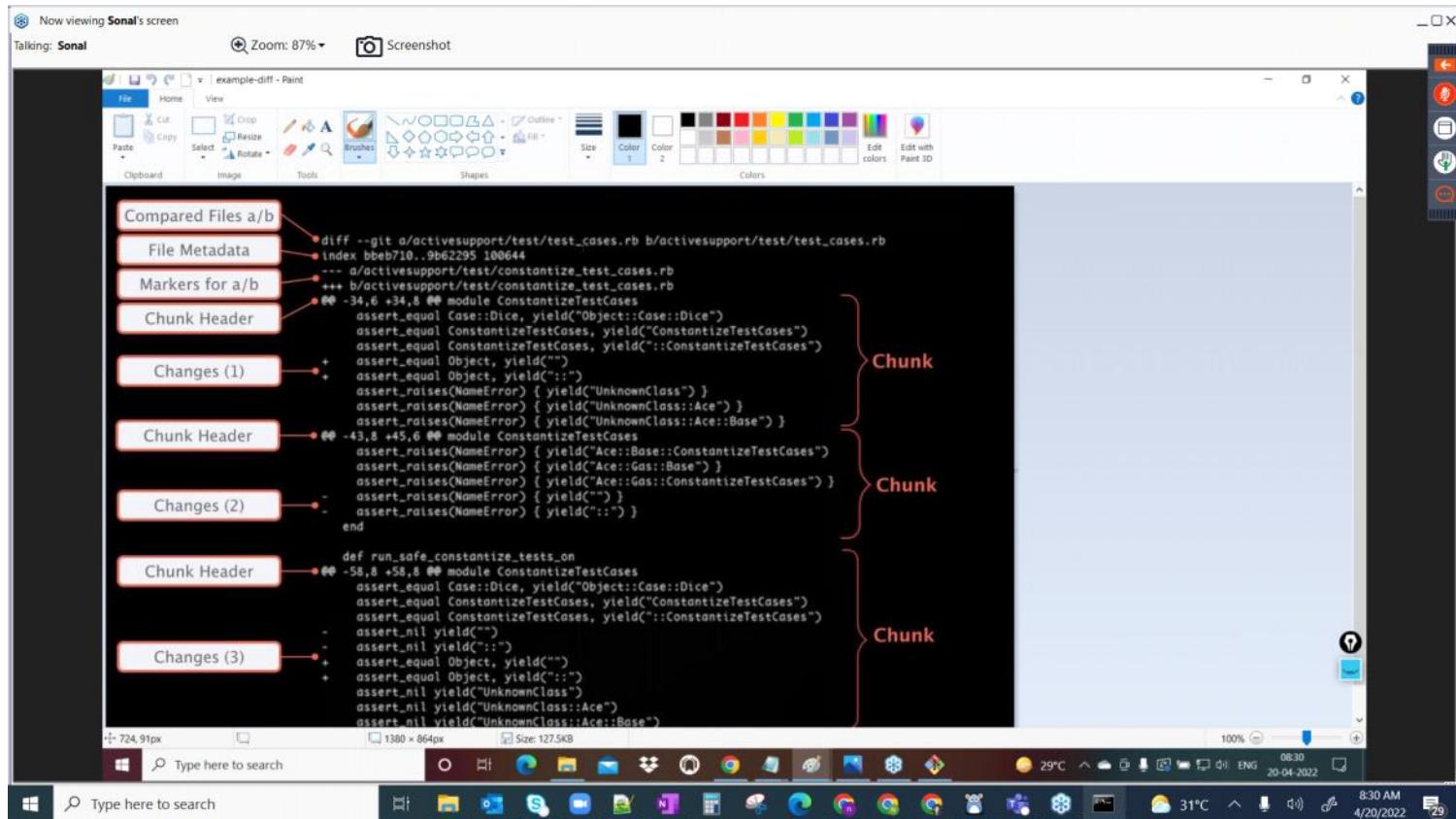
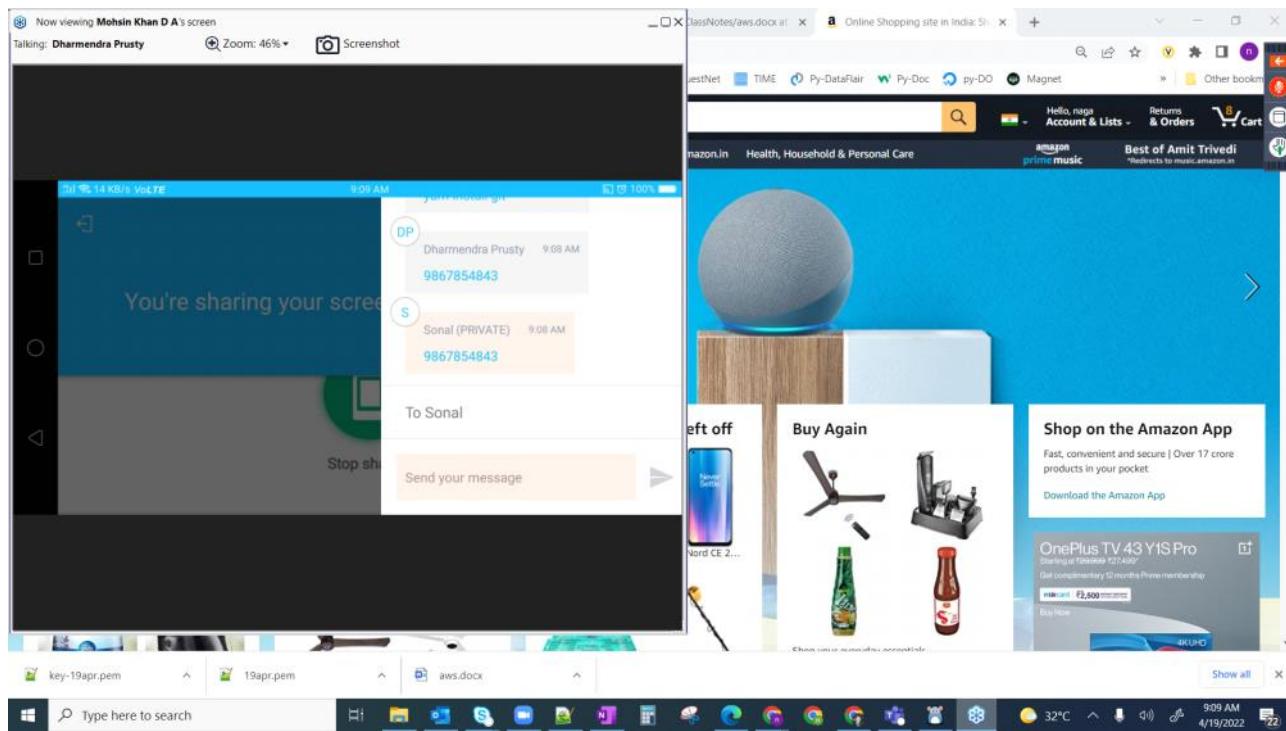
Type here to search

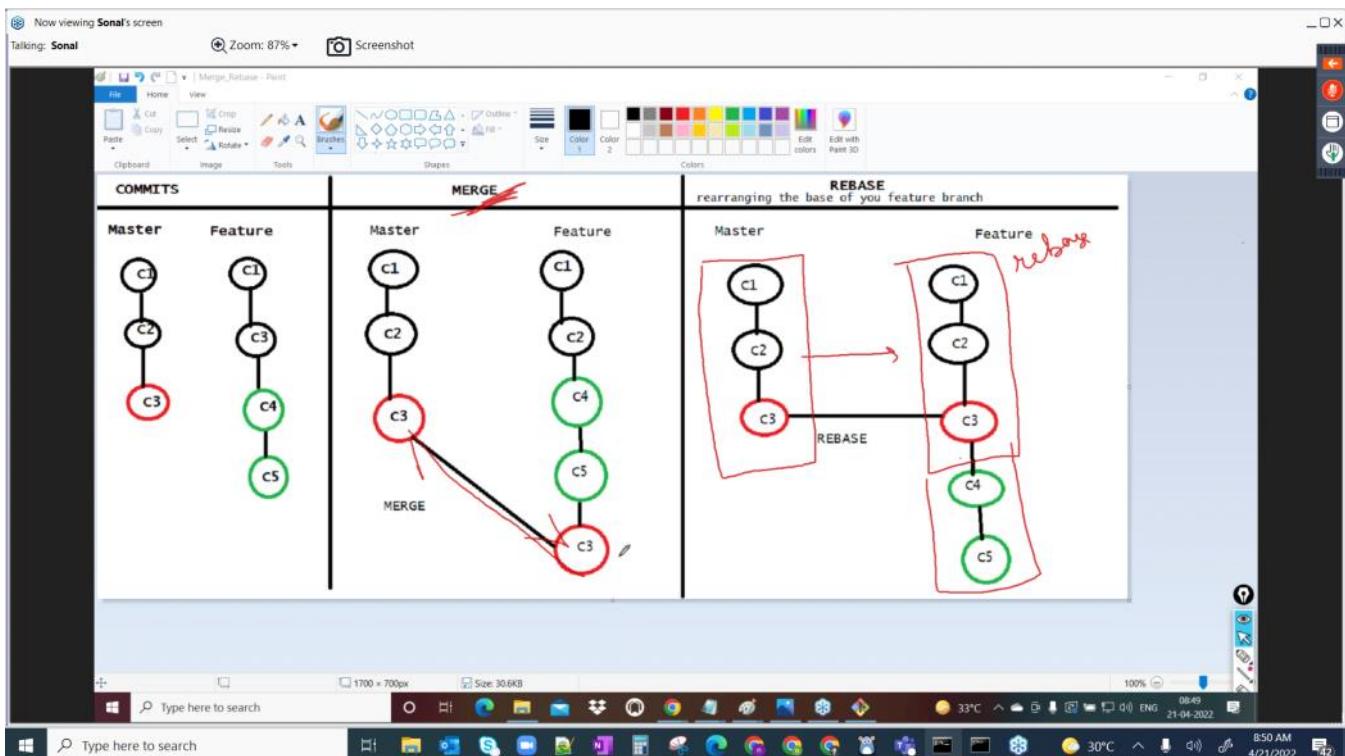
Windows Start button

24°C 8:39 PM 9/2/2021

junk

Wednesday, December 11, 2019 11:06 AM





Now viewing Sonal's screen

Talking: Sonal

Zoom: 87% Screenshot

Jenkins

Dashboard >

New Item People Build History Manage Jenkins My Views Lockable Resources New View

clonerepo

Name: clonerepo

Last Success: 21 hr ago

Last Failure: N/A

Last Duration: 0.25 sec

Build: 30001 Job executable/deployable unit

what are activities in build process

Developer: rishabh@ip-10-0-1-103

Build Queue

No builds in the queue.

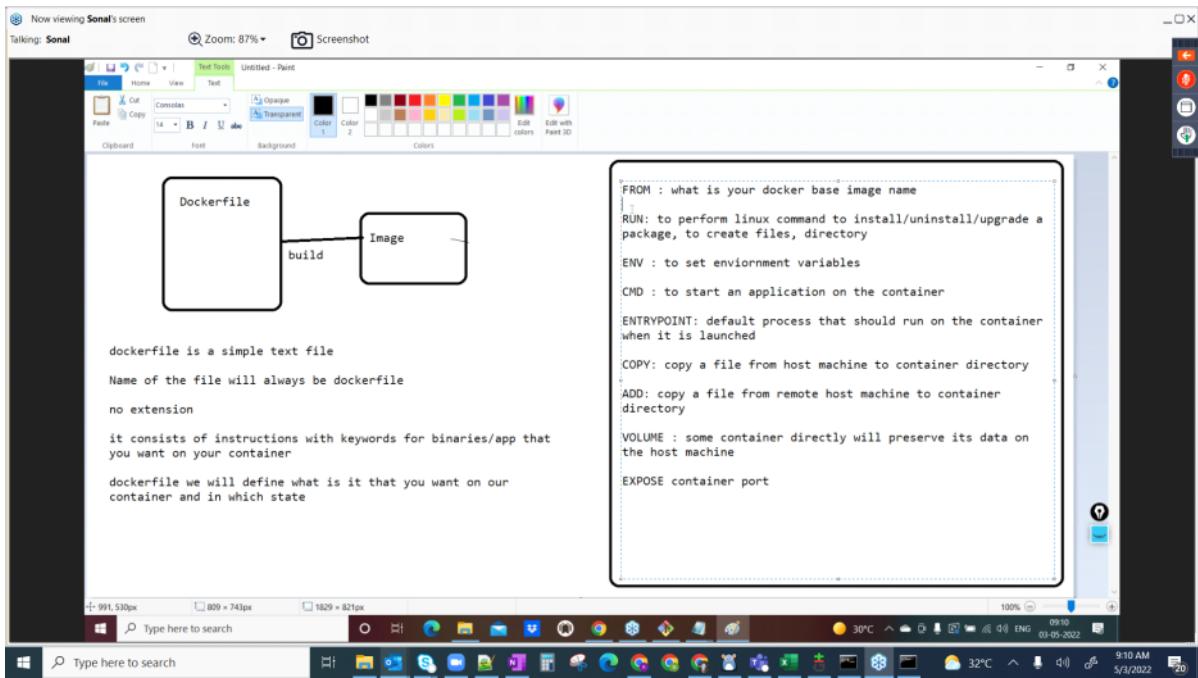
Build Executor Status

1. Idle

2. Idle

REST API Jenkins 2.332.2

Personal Page 67



car

Thursday, December 24, 2020 3:15 PM

https://www.hotcarshop.in/productdetails.aspx?_ctg=Armrests&_pc=PROD1

cube

Friday, February 12, 2021 5:16 PM

By putting white side as down(Make T before doing below and leave any cube havinf yellow as side color):

<https://ruwix.com/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/>

middle layer Right

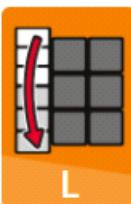
U(left) R(UP) U'(right) R'(Down) U'(right) F'(left) U(left) F(right)

middle layer Right

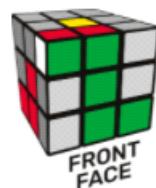
U'(right) L'(up) U(left) L(down) U(left) F(right) U'(right) F'(left)

Action 2 Moving Left

If you're moving the edge piece to the left, follow these moves:

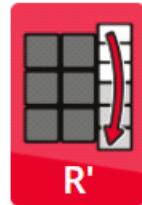


This algorithm places the edge piece next to its correct corner piece.



Action 2 Moving Right

If you're moving the edge piece to the right, follow these moves:



This algorithm places the edge piece next to its correct corner piece.



Yellow layer

OTA

Sunday, February 28, 2021 4:54 PM

Zee5:

7093343399

Rithvika@1

Amazon:

Nb198421@gmail.com/Rithuhari@1

Netflix:

suryagunupudi@yahoo.co.in/WeAreThree@3

Hotstar:

Jute

Thursday, May 6, 2021 10:06 AM

Kajol Medical

2 years ago

FOUAZ la Dear sir We are Raw jute seller. If you need Raw Jute for your factory feel free to contact Wechat: pijuce85 , whatapp +8801717939293

From <<https://www.youtube.com/watch?v=7UlumMPG5bk>>

Cost estimate:

<https://www.eiriindia.org/project-report-handbook-gunny-bag-plant-htm-with-formulation-technology-9168>

<http://365days365businessideas.blogspot.com/2012/02/start-jute-sacking-bags-manufacturing.html>

Project report analysis team:

<https://projectreportbank.com/product/gunny-bag-manufacturing/>

WES

Thursday, August 12, 2021 9:54 AM

Payment Information

\$230.00 CAD	7904380	
AMEX		
Naga Babu Panguluri		
376537518771008		
09	2023	4869

Billing Address

Naga Babu Panguluri	
nagababu.panguluri@gmail.com	7093343399
1-158 Kommuru Post	Kakumanu Mandal
Guntur	522235
India	



My Application (IRCC)

Return to My Account

English Français (beta)

Thank you for submitting your application.

A confirmation email has been sent to motupallilakshmi@gmail.com

Your WES Reference Number is **5181841**

Next Steps

- Send WES all required documents.
- Include your WES reference number on all envelopes, packages, and correspondence with WES.

Help

WES Reference No. 5181841

World Education Services
Attention: Documentation Center
102-2820 14th Avenue
Markham, ON L3R 0S9
Canada

From <<https://applications.wes.org/onlineapp/confirmation/confirmation?i=0E55005509550D550A5501550955>>

WES account details of mine:

Nagababu.panguluri@gmail.com/Rithuhari@1

Important Information

Before you review the list of documents to send to WES, please read this important information about specific requirements that may apply to you depending on the credentials you hold and the country or institution where you studied. This information will ensure that you send the right documents, which may help to expedite your evaluation.

IRCC asks applicants to submit **only their highest completed credential** for an **Educational Credential Assessment (ECA)**. Please review the notes below to determine which credentials you should send. To avoid delays, do not send additional documents unless they are requested by WES.

Learn what to send based on your highest completed credential:

If you have an Indian master's degree or an Indian postgraduate diploma...

You must also provide your bachelor's degree documents. WES cannot complete an evaluation without these documents.

- **Please note:** There are currently four exceptions. Those exceptions apply to people with a Master of Education, Master of Engineering, Master of Philosophy, or Master of Technology degree.

If you have a doctorate (PhD)...

You do not need to submit your bachelor's degree or master's degree for evaluation.

Your ECA report will not contain the following:

- Anything below secondary school education (such as primary and elementary school)
- Non-academic credentials (for example: Microsoft Office Training)
- Professional or career training qualifications

JNRNU

Wednesday, August 18, 2021 3:25 PM

<https://collegedunia.com/university/25813-janardan-rai-nagar-rajasthan-vidyapeeth-university-jnrnu-udaipur/admission>

<https://www.codeforbanks.com/banks/ifsc-code/of/indian-bank/udaipur-rajasthan-vidyapeeth/branch/udaipur/rajasthan/IDIB000R531/>

Bajaj

Friday, August 20, 2021 1:19 PM

Dear Customer,

Please use this link to login. - <https://bajajfinserv-direct.in/cust/>

Emandate link - <https://www.bajajfinserv.in/customer-portal>

Demo Link - <https://www.bajajfinservmarkets.in/discover/videos/featured-videos/service/>

The screenshot shows the BajajFinserv Markets website interface. On the left, there's a sidebar with links: ONE ACCOUNT, SELF-SERVICE (which is highlighted in orange), RAISE A REQUEST, MY ORDERS, and MY PROFILE. Below these, there's a section titled "Naga, we have some curated offers for you!" featuring a "Fresh Home Loan" offer of ₹42,75,000 with an "APPLY NOW" button, and a "Credit Card" offer of ₹1,35,000 with an "APPLY NOW" button.

The main content area displays a "Withdrawal successful" message. It states: "All done! We've accepted your Withdrawal request. *Withdrawal request submitted post Business Hours or on Bank Holiday, funds will be credited on next Working Day in your Bank account." Below this, it shows the transaction details: New loan amount ₹ 91,000, New EMI ₹ 462, and EMI due date 02/09/2021. It also provides a "revised repayment schedule" table:

Year	Principal	Interest	Total
2021	17,47,180	3,638	17,50,818
Jul	17,47,180	0	17,47,180
Aug	0	0	0
Sep	0	462	462
Oct	0	1,047	1,047
Nov	0	1,082	1,082
Dec	0	1,047	1,047
2022	17,47,180	16,377	17,63,557
2023	17,47,180	29,116	17,76,296
2024	17,47,180	41,854	17,89,034
2025	17,47,180	54,593	18,01,773
2026	18,38,180	62,694	19,00,874

A circular icon with a message icon is located in the bottom right corner of the main content area.

mails

Thursday, September 2, 2021 10:43 AM

Gmail

-- Created for Canada purpose
npangluri1984@gmail.com/Rithvika@123

nagababu.panguluri@gmail.com/Rithvika@123

nb198421@gmail.com/Rithvika@1

nagababu1985.p@gmail.com/

motupallilakshmi@gmail.com/wiseandwise

lakshmi.panguluri@gmail.com/Rithvika@1

The screenshot shows a web-based appointment booking system for VFS Global. At the top, there are three tabs: "VFS : Booking Appointment", "One-time Password (OTP) Confirm", and "covering letter for canada visitor". Below the tabs, the URL "vfsglobal.ca/IRCC-AppointmentWave1/Calendar/FinalCalendar" is visible. The main content area features a calendar for January 2022. The days of the week are labeled from Sunday to Saturday. Specific dates are color-coded: pink for holidays, green for availability, and red for selected dates. The 6th and 7th of January are highlighted in green, indicating they are available. To the right of the calendar is a vertical list of time slots from 11:15 to 16:30 in 15-minute increments. Below the calendar are two buttons: "Back" and "Cancel". At the bottom of the page, there is a footer with the text "© VFS Global 2018. All Rights Reserved" and "In Association With VFS GLOBAL". The Windows taskbar at the bottom of the screen shows various pinned icons and the date/time as 11/23/2021 5:36 PM.

VFS : Final Confirmation One-time Password (OTP) Confir... covering letter for canada visitor... New Tab

vfsglobal.ca/IRCC-AppointmentWave1/Calendar/FinalConfirmation

Apps Gmail YouTube Maps

Reading list

VFS.GLOBAL
EST. 2001

Apply for VISA to CANADA In INDIA

Welcome Naga Babu Panguluri !

Actions

- Schedule Appointment
- Reschedule Appointment
- Cancel Appointment
- Email Appointment Letter
- Retrieve Incomplete Appointments

Appointment Confirmation

Schedule Appointment > Select Centre > Applicant List > Appointment Booking > Appointment Confirmation

Reference Number: HYDE1210333177312

Your Appointment has been confirmed for 2022-01-06 date and time 1215 at Canada Visa Application Center - Hyderabad.

First Name	Last Name	Mobile Number	
NAGA BABU	PANGULURI	7093343399	Appointment Letter
NAGA LAKSHMI	PANGULURI	7093343399	Appointment Letter

Please note down this Reference number **HYDE1210333177312** for future use.

Yes, I agree to receive further communication on optional value added services offered by VFS Global

Close



PAN

Tuesday, September 14, 2021 1:59 PM

Pan card updated as per aadhar through online:

Site - <https://www.onlineservices.nsdl.com/paam/endUserRegisterContact.html>

Online PAN application
Application Type: Form CR

Payment Receipt

Transaction Status
SUCCESS

Transaction Reference Number
20210914111212800110168449241558628

Date & Time of Transaction
2021-09-14 13:58:20.0

Payment Amount
106.90

Bank Reference Number
125704420858

Continue ➔

Type here to search

28°C Light rain 1:59 PM 9/14/2021



PIN to open above PDF - 21111984

Java

Tuesday, December 14, 2021 7:04 PM

Durga soft - Durga sir - 10+ hours video on youtube

RI - Notes

Monday, April 5, 2021 11:54 AM

RI:

what do we have in Handoff?

Any other updates from anyone?

Transition related updates

Any PTO's/Compoft's?

Any escalations?

Any issues to be discussed?

Any upcoming activites?

Any timebound activites that needs to completed on today?

Env sheet update on Monday

env repointing and its status on releasing them (Only on Monday)

Any UAT defects raised?

repointing checklist after env repointing

#

Smoke test integration - Bhagath

Run books:-(Gayathri - consolidating the report from the team.)

Nihariks(1 topic)

Amrutha (tibco pattern and Directory search -2)

#

12-Mar

Smoke test integration - by EOD - Bhagath - Follow up with ITS. - nned to close it by Today

Splunk into Twilio - need to research. - Bhagath or Akhilesh

Opcon with Twilio - akhilesh will talk to Sandeep

Next Level Segregation of access :

POC is scheduled to happen in April Maintenance window and post that we will confirm on the approach and Plan.

<https://splunkbase.splunk.com/app/1765/#/details>

<https://splunkbase.splunk.com/app/2865/>

https://www.splunk.com/en_us/blog/tips-and-tricks/sms-alerting-from-splunk-with-twilio.html

Opcon into Twilio - already configured by onsite team (Sandeep) - Bhagath/Akhilesh

Pramod - to drop a email for the branch creation delay, which is suppose to be created this weekend.

Pramod to ask jaspeert to add me to the efficiency tracker Teams link.

#

15-Mar

Smoke test integration - by EOD - Bhagath - Follow up with ITS. - nned to close it by Today

Splunk into Twilio - need to research. - Bhagath or Akhilesh - both will get on to call and layout a plan by EOD.

Opcon with Twilio - akhilesh will talk to Sandeep

Ambica on Sick leave(12-9)

Fri, Mon and Tue - Akhilesh will be on off. Headsup

Purge script - Akhilesh to setup a meeting with Dev team with Niharika.

Staffing discussion - remind vijay after 3pm

#

17-Mar

RIBTEST-15771 - UATWT timeout issue(Slowness)

install python as ribapp user and clear the issue

work with Pramod to prepare release branch

Branch creation for Aug release(CP) - Ambica to work on it

DEVN repointing to Aug release(both the nodes on V12)

Pramod to drop mail for the delay in June branch creation as requested by Ravi in Monthly meeting call

Gatri's leave - talk with pramod

#

url bcds

cross portal/Certificates/

#

Webserver timeout setting

/opt/IBM/HTTPServer/conf/IES

#

18-mar

Prod time out seetings(App server and Webserver)

webserver to

servorio time is 900 - plugin file

transaction timeout is 900

httpd.conf

#####23 Mar #####

Track and send the repointing checklist by 4 PM - Ambica(Collect it from Amrutha and Niharika)

In next half an hour batches will be completed and can be released

Smoke test integration - collect the status from Bhagath - Ask Bhagath to attend the transition call and provide inputs.

Send an email requesting for SharePoint access related to transition items

request Noah to push todays call to tomorrow as

To have batches complete knowledge - (Prod and Non Prod) Akhilesh is on PTO.

#

list of all activities that falls after 10-7/8 and on weekends

#

BAL00210-01-01-1000

#

data fixes executions - fully automated

build and deployments -fully automated

Tech maintenance windows - patching

Dev operational hours

Model for NTT patching

#

Initiate a call to discuss below points with Akhilesh, Bhagath, Sabarish

PTO updates

transition calls and backups
 update to be shared to other on daily basis
 maintain one internal doc and add every day updates
 all 3 should be on the same page any given time
 #
 Splunk, BMC remedy, - Niharika to come up with a script.
 pull the phone numbers from the text file and send them to Twilio.
 #
 Smoke test integration
 Splunk opcon with Twilio updates
 ##### 29 Mar
 #####
 discuss on the activities (before 11 am and after 8pm and weekends) - setup a call
 shift allowance process and validation discussion - once Pramod sends it
 Evn refreshes come with a full automation plan - follow up with Pramod
 Akhilesh to check OPA eligibility run numbers after the change. As per 5:30pm call.
 #
 30-Mar
 Patching buy in from Mahesh
 Weekend patching support
 Deck preparation
 Talk to Chandu on Timeout issue
 Bhagath to get transition updates from Akhilesh
 Exit Deloitte - Niharika
 #
 05-April
 Approval authority for NTT.
 Loner list of activities and KT on it.
 Access to Loner
 mobile number integration with Twilio for alerts
 talk to team separately on resignations - as per Bala
 Bamboo upgrade done - History is not visible/lost/deleted. Inform US team - Akhilesh to drop a email with a screenshot.
 Perf1 deployment completed
 list of all activities before 11 am and 8 pm
 follow up with ITS :
 Vendor response on the quote - "Request for Quote."
 Access status - "Transferring Admin Access rights to Naga.P"
 Connect with Vijay -
 Tech upgrade and enhancements doc - from Jitin
 SNAPSHOTS -

STAFFING -

Name	Split	Email	Swimlane	USI	Scope	Function
Borugadda, Amrutha		aborugadda@deloitte.com	Steady State M&O	USI		Tech Ops
Adipudi, Karthik Pramod		padipudi@deloitte.com	Steady State M&O	USI		Tech Ops
Balu, Adersh		adbalu@deloitte.com	Ramp Down Staff	USI		Tech Ops
Durgambica, Chitiprolu Jaya		cdurgambica@deloitte.com	Ramp Down Staff	USI		Tech Ops
K N V, Siva Teja		sivaknv@deloitte.com	Steady State M&O	USI		Tech Ops
Naga Panguluri		npanguluri@deloitte.com	Steady State M&O	USI		Tech Ops
Gayathri, Kurumala N V S		kugayathri@deloitte.com	Steady State M&O	USI		Tech Ops
Mehar, Samreen		samehar@deloitte.com	Steady State M&O	USI		Tech Ops
Gupta, Niharika		nihargupta@deloitte.com	Steady State M&O	USI		Tech Ops
Akhilesh, Ganathe		gakhilesh@deloitte.com	Steady State M&O	USI		Tech Ops
Paravasthu, Sabarish		sparavasthu@deloitte.com	Steady State M&O	USI		Tech Ops
G., Bhagath		bhagg@deloitte.com	Hourly Overhead	USI		Tech Support

App - 2 (Akhilesh)
 DevOps - 2 ()
 DB - 2 (Gayathri and Pramod)
 Batch Ops - 2
 Enhancements - 1 (Bhagath)
 Lead - 1
 #
 06-Apr
 #
 07-Apr
 Niharika - retain her - talk to Surya
 LPE code - CTH
 coordinate with Sabarni and initiate the process for CTH LPE code

 12Apr
 OPA restore progress -
 Training plan to Siva -

 14Apr

Talk to Bala - related to Staffing count and CTH or FTE --> laptop renewal(Pending) ---> Niharika leave --> Sabarish demands
Talk to Neha on Lonaer admin access
Testing suit - update from Bhagath
Discuss with Sasi on work segregation between US and USI
Patching on Friday morning - 7:30 Am - 4:30 PM --> Bhagath and Gayathri/Pramod

15Apr
Talk to Bala - laptop renewal
Talk to Neha on Lonaer admin access
Testing suit - update from Bhagath
Patching on Friday morning - 7:30 Am - 4:30 PM --> Bhagath and Gayathri/Pramod
UATMP - any update - Dead lock seen in the websphere dumps
Prod instructions - final draft - Ambica
04/09 release - missed one uhipops due to no approvals -
Niharika - leave approved

19Apr
Follow up with Bala on Loaner and update on Sabarish
Follow up with Atul on Sabarish
AHM - slide review with in team and with Srinivas
Schedule call with Atul weekly on RI updates and with surya(optional as Atul) weekly with entire team
Weekly RI slide by Thursday morning call - recurring
Twilio opcon updates from Akhilesh

21Apr
Env renaming - effort estimate per environment
Repointing - effort estimate per environment
Prod issue - get updates on it till RCA is confirmed
Prep for today's meeting with Ryan
Shiva's email - talk to US team @5:30pm
Patching approvals - @5:30 pm

22Apr
Set up a call with Bala, Jitin, Ravi, Me, Akhilesh and Mahesh to discuss on weekend activities - completed
Set up a call with Atul on Friday "RI Weekly Connect" - recurring(Completed) (ppt slides should be ready by tomorrow EOD) - Bhagath
Setup call with Surya and the entire USI Tech team bi weekly - Wednesday 3PM? -
Connect with Sasi on Staffing, Env repointing effort estimate, Env renaming effort estimate
UATL repointing to OPA upgrade - Amrutha discuss the same with Pavan @5:30 PM on 2 days ETA

23 Apr
Setup call with Surya and the entire USI Tech team bi weekly - Wednesday 3PM? -
Connect with Sasi on Staffing, Env repointing effort estimate, Env renaming effort estimate
Set up a call with Bala, Mahesh, Ravi, Jitin, Akhilesh, Pramod and me for 15 min bi weekly
Env repointing Effort estimate - 2 hours/env (38 hrs. for DB)
Env renaming effort estimate - Akhilesh
Automation list preparation - Patching, Branch creation, Sonar, Diff reports, - Bhagath/Pramod
VDI discussion
Roaster for May month - Akhilesh / Pramod
Chef and Ruby - self learning
Interested in Certification - let me know
PUB only deployment - feasibility check on hot fix
Weekend activities schedule to fit on weekdays

27Apr
Automation list preparation - Bhagath / Pramod - by (4 PM)
Roaster - 4PM
Single click refresh - list of issues observed - Pramod
We need to pull Prod patching schedule and prepare NON prod patching schedule - Bhagath/ Pramod ()
Weekend activities - schedule on weekdays and send to meeting DL
Windows apache(EBT) and ActiveMQ - patching . Check with Sai and compare the version and if they are same come up with a patching plan with stable version -- bhagath

Check with Mahesh:
How many repointing we will get after July per month

Apache
Non-prod 8.5.61
PROD 8.5.37
Sai will connect with Pavan and will update on this

MQ
Non prod - 5.15.14
Prod - 5.15.14
Next available patch is 5.15.15 - Need to check with Pavan

29Apr
Sent allowance mail to HR for reimbursement
Production Draft version - to be sent by EOD(for dry run on PERF1)

#3May
Weekly status Deck preparation - Pramod/Akhilesh
Moving weekend activity to Weekdays and scheduling - Akhilesh
Repointing effort estimate -
Removing 7:30 am to 10am shift and preparing roaster (batches to be rechecked, Handoffs) -
Automation List and its timelines preparation
Transition activities list and its status from USI standpoint - Twilio with Opcon is complete.
Apache and MQ discussion @5:30 pm call
OU prod deployment this week- pre check, confirmation email(for properties ...etc.), Production instructions Etc. - Akhilesh
NFS storage will be retained or will revoked....
Tablespace monitoring and integrating with Twilio

#06May
Prod - proper check and Prod deployment instructions review
VDI - estimate analysis
Jacoco
TRNDEV
2PM interview

#10May
Deck for tomorrow
Timeline for Automations
Talk to Mahesh regarding Env's
Talk to Chandu on Sonar
With OU codebase?
Bamboo single click build and deployment stats? Success and failure rates? Issues seen?
Single click refresh ? Success and failure %? Issues seen

#11May
Loaner machine - breakup with current usages - Pramod
KT - updates, topics finalization

Property change on weekdays
18/20 env support discussion
Morning shift removal discussion
Batches over weekend

#12May
Review build and deployment failures on daily basis
Edrs and save password change doc and automate the entire process
UHIPOPS execution - status (Pending)
Branch creation automation - status (Today EOD)
Table space - status (Completed)
SVN cleanup logging part - status (Logging)
SVN Diff automation - Today EOD
SVN Log automation - Today EOD
Sonar report completion mail automation - Done need to review
Instead of weekly go to Monthly build and deployment schedule (on env info sheet) - FYI
Handoff call SPOC - Pramod
Friday (we need to bring servers after linux patching and on call support for Jitin's team) and weekend support - FYI
Need to send formal mail to Bala on assumptions in removing morning shift - Naga
Send a mail for Friday support - Pramod - completed
Password change document - Akhilesh/Bhagath
Roaster - Bhagath
This weekend support name - Bhagath

#13 May
Review build and deployment failures on daily basis
Roaster - Bhagath
Need to send formal mail to Bala on assumptions in removing morning shift - Naga
Get the build and deployment schedule for this entire month
Password change document - Akhilesh/Bhagath
EDRS and save password change doc and automate the entire process
UHIPOPS execution - status (Pending)
Branch creation automation - status (Today EOD)
SVN cleanup logging part - status (Logging)
SVN Diff automation - Today EOD
SVN Log automation - Today EOD
Feasibility study on profile creation without execution

#17May

URL cleanup - DEV's comment all unnecessary URL's - Amrutha
Summary mail to Bala regarding the morning shift removal and get it approved
Tech hours saves excel to be finalized
Weekly Deck
Setup a call with Ravi every week on Wed for Team connect.
Staffing risks
Niharika on PTO
Bhagath on PTO
Training to Siva and Balu
Netrics refresh plan not failing on issues -
Mule is going down
Automate post validations to trigger mails if successful
Patching schedule - publish along with build and deployment schedule
Amrutha to come up with points related to morning shift removal

18 May
Prepare batch doc related to GID change - Amrutha - completed
Antivirus IP change - Amrutha - completed
Bhagath - PTO
URL cleanup - DEV's comment all unnecessary URL's - Amrutha - done on DEVN - Akhilesh to verify

Installing IM on more environments. @5:30 pm
New mobile setup on more environments. @5:30 PM

Srini's mail for transition activities updates, @5:30 PM - completed
Send one email for 33.40 generic user - Akhilesh @5:30 PM

From Sasi and Noah:

Transition list walk through call with Sasi, Noah and me - next week

US to USI offload work list - discussion (To discuss on 9 AM - 10 AM EST meeting)

Repainting and its segregation between US and USI. Mail to Sasi cc'ing Surya (To discuss on 9 AM - 10 AM EST meeting)

Patching components list and waves - US and USI segregation - 9 AM - 10 AM EST |

Mobile and IM setup planning and publish it to Mahesh - Sasi to work with Pavan (To discuss on 9 AM - 10 AM EST meeting)

Patching components and their KT status excel/Doc - Akhilesh (Along with POST vendor patching activities (Like: Linux and Windows)) - By tomorrow EOD(19May21) - completed
Send mail to Mahesh for providing the dates to take up the env's for Mobile and IM setup and by when they need it. - completed

#19May

No SPOC names mentioned in the handoff mail -
Post validations check and send email - by tomorrow EOD

#20May

Post validations - updates - by today EOD - Akhilesh to give update on it and configure it on DEV/SIT
Build status plan issue - updates - completed
URL's cleanup - update - DEVN - by today EOD to all env's - UAT's completed - Completed except masked Env's
Netrics plan issue - updates - today EOD(24/May) - Niharika's
Exit 1 not working status - update - its worked when tested
Branch creation automation - update - today expect JIRA we will close it - completed (testing is in progress)
After 8 PM instructions to Team - FYI
Comprehensive training plan - updates -
Siva - to send email on what he is learning by every EOD
Balu - status on batches KT - asked him to do hands on
Morning call mandatory for all to attend
Tomorrow's patching plan - update from Pramod - Niharika is doing
Mobile and IM setup doc and plan to work on it - Akhilesh to send stats tp Pavan
Save and edrs password change doc - Friday EOD - EDRS completed, FIS and Save completed
Generic user on 33.40 machine - completed
Raise STAFFIT for one more CTH requirement - no need
Add Varun to DL's -
Add Bajju on Teams site - added

UATMP repointing -

Single click build and deployment failures -

Build and deployment - to run dependency plan even the parent fails - completed
Build and deployment - PV check and auto email - completed
Branch creation - completed - testing pending
Mobile and IM env stats to Pavan - Akhilesh
Password change automation -Niharika
Netrics issue - Niharika - completed -- integrated with Twilio - Ambica / Siva all masked - 5/26 EOD will be completed
Comprehensive KT plan - Akhilesh - completed

Daily activities list -
Activity doc preparation -
UiPath - for Sonar report mail
Allowance data - Samreen - completed
Bamboo plugin - Akhilesh to test and share the plan to propagate it - completed
SPOC names for morning handoff call - FYI
Long weekend support mail - on Fri
Post validation check and send deployment completion emails - completed
NTT approval list - follow up with Sasi.

#27May
Batches - weekend to weekdays -
Long weekend support mail -
Roaster review

Remove sabarish and niharika from Tech DL's - Done

List of IP where we need access for doing USI activities
Tuesday Deck

DL ownership

Friday, April 9, 2021 3:55 PM

<https://groups.aps.deloitteresources.com/IdentityManagement/aspx/groups/MyDLs.aspx>

The screenshot shows a Zoom meeting interface with four participants: Panguluri, Naga; Akhilesh, Ganath; Kumar, Vijay; and G. Bhagath. The title bar indicates "You are viewing Kumar, Vijay's screen". The main content area displays the "Deloitte Group Provisioning System" page, specifically the "My Distribution Groups" section. The left sidebar includes links for Home, Distribution Groups (DGs), Security Groups (SGs), and Requests & Approvals. The main table lists four distribution groups:

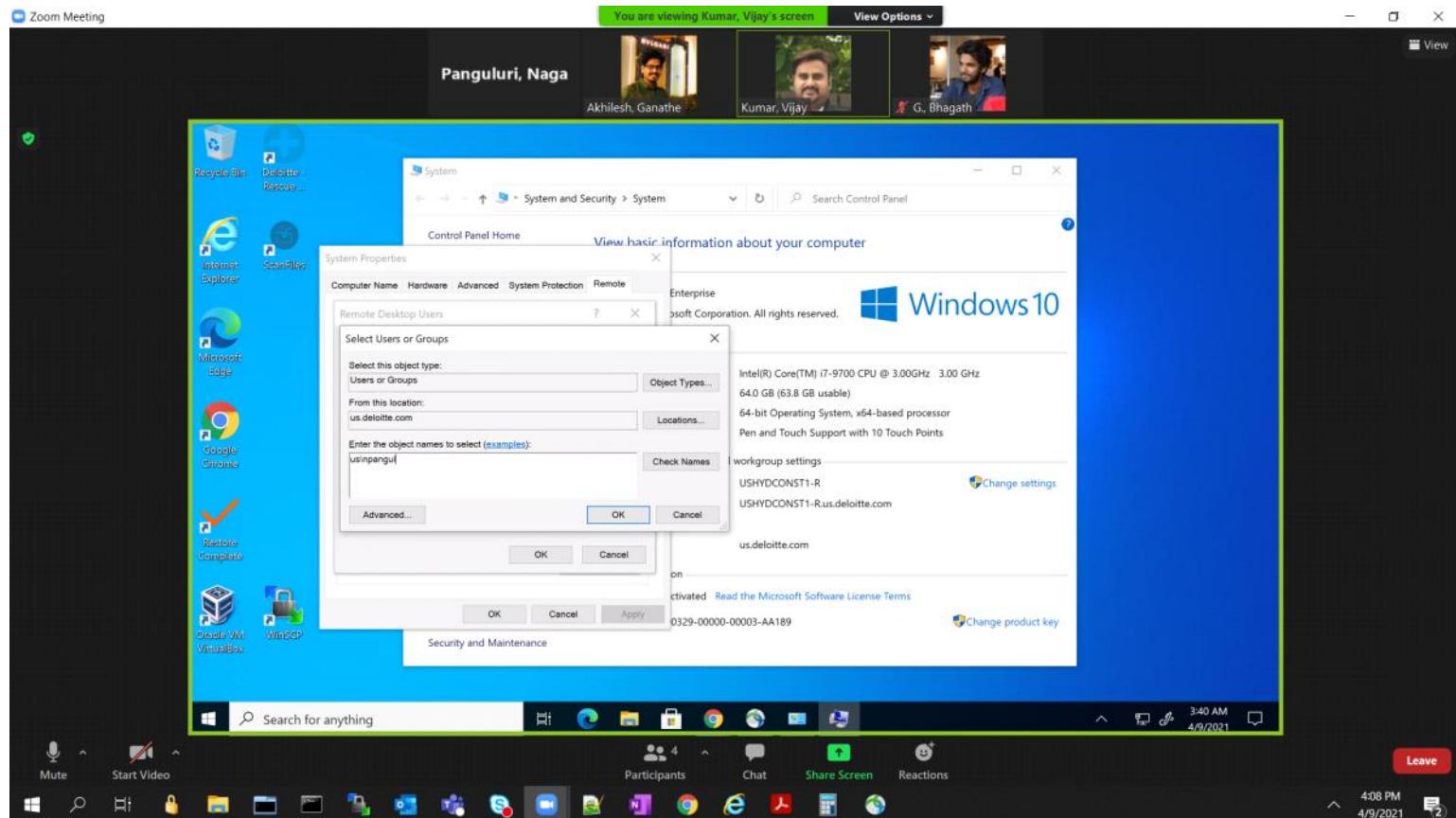
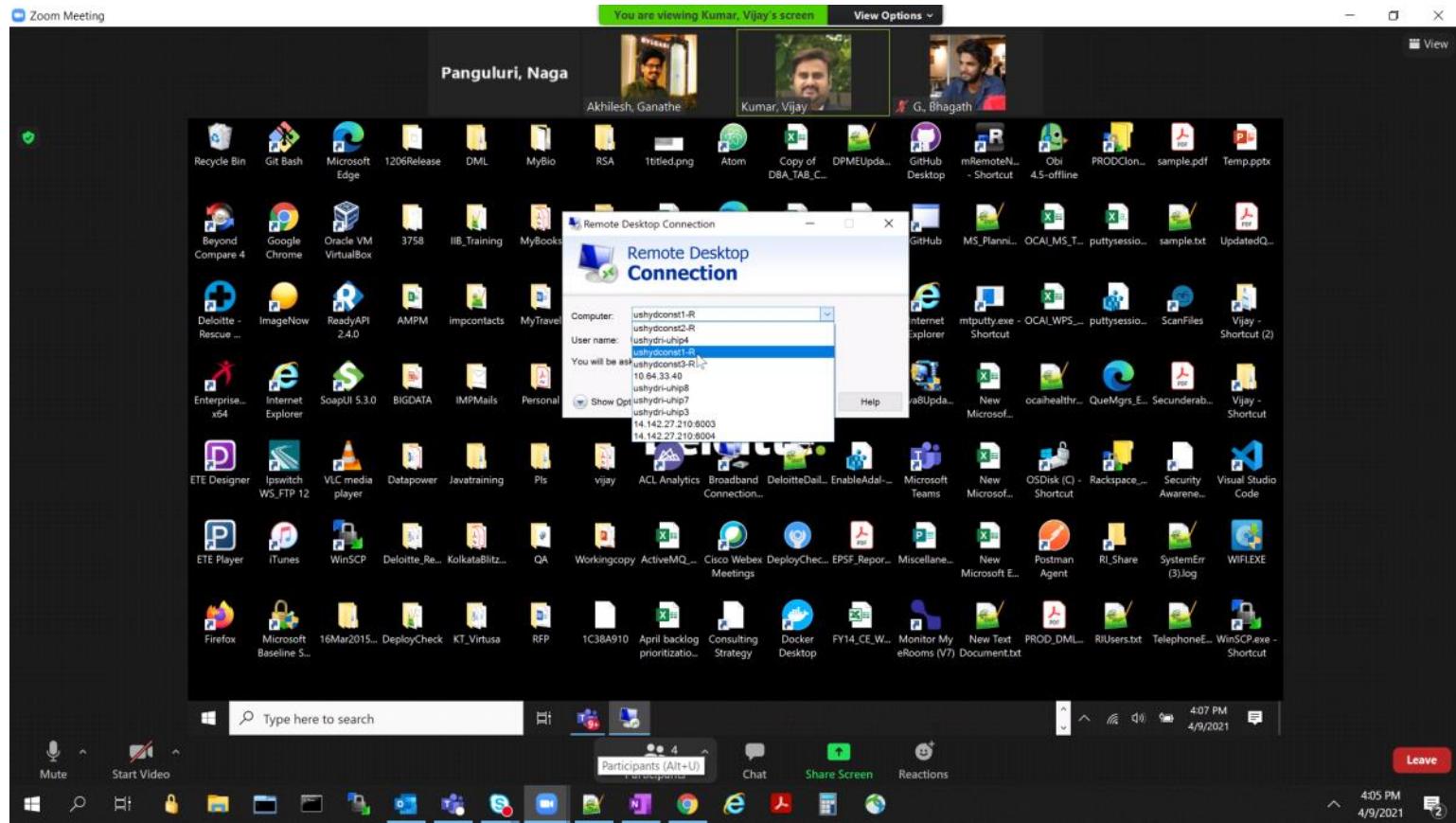
Display Name	Scope	Type	Location ID	Domain	Account Name	E-mail	Owning FIM Instance
US India RI Batches Team	Universal	Distribution Group	US.GRP	US	US India RI Batches Team	USIRIBatchesTeam@deloitte.com	GTSGroups
US India RI Non Prod Batches Team	Universal	Distribution Group	US.GRP	US	US India RI Non Prod Batches Team	usindiarionprodbatchesteam@deloitte.com	GTSGroups
USI IMS Delivery Pool	Universal	Distribution Group	US.GRP	US	USI IMS Delivery Pool	usimsdeliverypool2@deloitte.com	GTSGroups
USI RI-INFRA-INTERNAL	Universal	Distribution Group	US.GRP	US	USI RI-INFRA-INTERNAL	usiriinfrainternal@deloitte.com	GTSGroups

At the bottom of the page, there is a note: "Selected Items: 4 items total Page 1 of 1". The status bar at the bottom of the screen shows the date and time as 4/9/2021 3:55 PM.

New Loamer Server
2,3 - perf testing
1 - tech
Deloitte owned Loamer laptops
T2F- all details with Pramod and also listed on WIKI

Loner

Friday, April 9, 2021 4:05 PM



Staffing

Friday, April 9, 2021 5:59 PM

Steady state M&O					
Tower	Count	Old Plan		New Plan(Removing Niharika, Balu and Sabarish)	
		Names		Names	
App	2	Akhilesh	Amrutha	Amrutha	Siva(Have to Cross Train him)
DevOps	2	Niharika	Sabarish	Akhilesh	CTH - Cannot use Balu here as we need DevOps resource
Batch	2	Siva	Samreen	Ambika	Samreen
DBA	2	Pramod	Gayathri	Pramod	Gayathri
Enhancement	1	Bhagath		Bhagath	

Balu
Ambica
Niharika

App	2	Akhilesh	Bhagath
Batch	2	Siva	Samreen
DBA	2	Pramod	Gayathri
Enhancement	1	Amrutha	
DevOps	1	Sabarish	
Lead	1	Naga	
Total	9		

App	2	Akhilesh	Bhagath
Batch	2	Siva	Samreen
DBA	2	Pramod	Gayathri
Enhancement	1	Amrutha	
DevOps	1	Sabarish	
Lead	1	Naga	
Total	7		

Steady State:

G., Bhagath (CI Resource) - DevOps

Paravasthu, Sabarish -

K N V, Siva Teja

Gayathri, Kurumala N V S

Mehar, Samreen

Gupta, Niharika (To be replaced)

Akhilesh, Ganathe

Adipudi, Karthik Pramod

Panguluri, Naga

Durgambica, Chitiprolu Jaya

App BRR:

Amrutha Borugadda

Ramp Down

Balu

	USI	US
Steady State	10	12
App BRR	1	0
Tech BRR	1	2
CI	1	0
SNAP Reinvestment	0	1
	13	15

Batches - K N V, Siva Teja
 Batches - Mehar, Samreen
 DBA - Gayathri, Kurumala N V S
 DBA - Adipudi, Karthik Pramod
 WAS - Durgambica, Chitiprolu Jaya
 WAS - Akhilesh, Ganathe
 WAS - Gupta, Niharika (To be replaced) / Balu
 APP BRR - Amrutha - Jun 22
 DevOps - CI Resource - Bhagath
 DevOps - Paravasthu, Sabarish
 LEAD - Panguluri, Naga

FIRST YEAR:

Steady state	Lead	Vijay	Naga	
Steady state	WAS/DevOps	Bhagath	Bhagath	
Steady state	WAS	Ambica	Ambica	
Steady state	WAS	Siva	Siva	
Steady state	DevOps	Sandeep	Sandeep	
Steady state	DevOps	Babu	Babu	
Steady state	Batch	Samreen	Samreen	
Steady state	Batch	Balu	Balu	
Steady state	DBA	Pramod	Pramod	
Steady state	DBA	Gayathri	Gayathri	
Steady state	WAS	Akhilesh	Bajju	
App BRR	WAS	Amrutha	Amrutha	
Tech BRR	WAS/DevOps	Akhilesh	Harsha	

SECOND YEAR:

Steady State	Lead	Naga
Steady state	APP	Harsha
Steady state	APP	
Steady state	Batch	Siva
Steady state	Batch	
Steady state	DBA	Pramod
Steady state	DBA	Gayathri

160 hours per month for one FTE
 $700/160=4.375$

SNAPSHOTS:

Name	Promotion Year	Snapshot owner
Pramod	2022 - promoted	Naga
Gayathri	2023	Naga
Samreen	2022(2023) resigned	Naga
Siva	2024	Naga
Bhagath	2022 - resigned	Naga
Ambica	2023	Naga
Amrutha	2022 - promoted	Naga
Balu	2023	Naga
Sandeep	2023	Naga
Harsha	2023	Naga
Soumya		Naga
Aditya		Naga

Name	Primary	Secondary
Ambica	App	Batch
Amrutha	APP	Batch
Bhagath	App	Batch
Siva	App	DB
Pramod	DB	App(Deals patching and Release management)
Gayathri	DB	Batch
Samreen	DB	Batch

Adersh	Batch	DB
CTH	DevOps()	APP
CTH	DevOps(CI)	APP

13

31(9 NTT out of 31) should come down to 25. Meaning 31-9=22, 22 should go down by 6 (22-6=16) including both the shores.

From USI

M&O -

APP - 7 (Harsha, Bhagath, Siva, Sandeep, Saumya, Aditya(CI) and Naga)

DBA - 2 (Pramod and Gayathri)

Batches - 2 (Balu and Samreen)

App BRR - 1 (Amrutha)

Tech BRR - 1 (Ambica)

June/July' 22

Now below should come down to 6.5 as per Rakesh:

Does this 6.5 includes CI resource too?

Any designation limitations we have?

It should be 7 as per our discussions with Sasi and USI leadership?

M&O - 9+1 (2- DBA's; 2 - Batches; 5 - DevOps)

7

Reduce 3 people

2 - DBA's

1 - Batch

3 - DevOps (one will support Batches in case of any Batch person is unavailable)

1 - Lead

App BRR - 1

CI - 1

Tech BRR - 1

APP - 7 (Harsha, Bhagath, Siva, Sandeep, Saumya, Aditya and Naga).

DBA - 2 (Pramod and Gayathri) Pramod will become SC.

Batches - 2 (Balu and Samreen) Siva will replace Balu if he not available.

10-3=7 (CI resource discussion is parked aside).

#

App - Harsha, Siva and Sandeep/Soumya/Aditya

DB - Gayathri and backfill (Get a right DBA resource from the pool)

Lead - Pramod

Batch - Balu (only one resource as per the new contract)

#

Tech Upgrades - Ambica

App Upgrades /Troubleshooting's - Amrutha

Infra Tech/State of Rhode Island Working on --Taking care of daily Build and deployments for more than 10-12 ENV's and 4 branches. Env Repointing as per the request. Created ActiveMQ patching ,Repointing and Branch creation documents and verified by Team. Gave Sonar KT to Soumya and App team. Working on daily deliverable activity and updating activity tracker on teams for the same..Configuration of Sonar plans as per upcoming release and sending mails on daily basis.

creds

Monday, April 12, 2021 12:53 PM

All VM's:

Username : **npanguluri**
Password : **npanguluri_ri2021**

VPN:
Npanguluri
#4@n6_BAbU1!

#4@n6_BAbU1!

username : riprodsmokeuser
password : **Mbw)3B(ecAq&6ZM**
server : 10.64.33.40

Logserver and Test Jira server(sudo to root access)

Npanguluri/npanguluri@788

Test Bamboo server

NPDALMCI02-10.64.65.34
Username : npanguluri
Password : JaiBalayya@2021 / !QAZ@WSX3edc4rfv

Username : riuser
Password : riuser123

<http://10.64.65.34:9115/sonar/>

Username : admin
Password : sonaradmin

As discussed, we have created a new Sonar schema in the existing 19c DB. PFB connection details

Hostname – NPDORATX03-uhdbscan.uhip.ri.gov

Port no – 1521

Service Name – TRNDEV

Username – sonar89

Password – sonar89_123

Username: npanguluri
Password: W!nd0w\$@22

EWS:
10.64.65.62
10.64.65.63

EXstream Engine:
10.64.65.64
10.64.65.6

<10.64.65.210:8011/EnvInfo.htm>

Monday, April 12, 2021 1:04 PM

Partial DB refresh:

urls

Tuesday, April 13, 2021 6:27 PM

OPA property tracker - <https://10.64.65.20:18080/svn/HSRI-ENV-PROPS/PROPERTYCHANGETRACKER>

Transition Teams link :

<https://teams.microsoft.com/#/files/General?threadId=19%3A6885be7b8f5a4b00a169c84c17ae39eb%40thread.tacv2&ctx=channel&context=Transition%2520Plan&rootfolder=%252Fsites%252FUSTRUIHPTechnology%252FShared%2520Documents%252FGeneral%252FTransition%2520Plan>

junk

Tuesday, April 13, 2021 8:00 PM

ITS

Saturday, April 17, 2021 1:39 PM

Data Points

Tuesday, April 20, 2021 6:51 PM

ISSUE 1:(20 Apr 2021)



RE: PERF1 Web and Mobile Application restarts, Log level changes , update query execution and clearing space in DocStaging

Issue:

We observed that after submitting the application from CP, CDL dumped the data properly and invoked the Eligibility but we are no able to see any Eligibility Data from WP end. Also, there is no record present in the ED_ELIGIBILITY table.

Tech team: We have performed our check and informed that no exception. And asked developers to look into it.

Then developers started looking into it but they couldn't figure it out.

Later Ravi send a mail to Tech and what's the issue though the developers are checking.

Later he called me and said its very surprising that Tech team said it's not our issue.(Support point its working on SITNT(Same code) and not working on PERF1). He also said it is impacting the deliverables and env is not in working state from last one day.

Then tech, Dev, QA joined into a call and triaged and nothing was concluded.

Padma from Dev team said that she will check and come back in 10 min. And requested to drop off.

After some time she came up that Data is null in DB and it's the issue with the script being used by QA.

Ravi closed mail thanking Padma for leading the entire activity.

And no RCA was asked. No mention of deliverable impact.

Tech wasted almost one full resource on this to check and do follow ups.

Issue is testers :

RCA

They are using automated script to run the create the cases. Where the data is set as null. After finding the issue testers have created the case manually and the issue got resolved

ISSUE 2:

RE: Info required for build schedule 05/17 to 05/31

Build and deployment schedule conflict.

Innovation Hub

Friday, April 23, 2021 10:41 AM

=====

Splunk Integration with Twilio SMS

=====

We have configured all the app and infra related logs to Splunk to send alerts to our mail boxes. For this we need a resource to continuously monitor the emails for any critical failures/alerts. To minimize this, we have integrated Twilio API with Splunk to send out alert notifications as an SMS to all the required team members over the mobile.

With this integration, team members can get the alerts to their mobiles which will reduce the manual effort in monitoring the alerts especially in odd hours and weekends. This also helps team to respond to any critical alerts in short time.

=====

Single-Click Refresh & Deployment Process

=====

To achieve this activity we have developed a comprehensive shell script and it was integrated with Opcon which will take care of entire refresh activity in a single click starting from bringing down the application to upgrading the environment to the latest code. In case of any issues tech team will be notified with email and SMS alerts. There by eliminating constant monitoring and manual efforts.

=====

Single click build and deployment

=====

This is one of the Priority 1 as part of Transition list.

Why we need this?

Just to give a background on this:

Normally Tech team will log in from 7:30 AM IST to start the scheduled Builds and Deployments and deliver the environments with latest code before the QA and DEV teams log in (Which is 11 AM IST).

Who does it help and Benefits?

As per the new RFP Tech team should work only 9/5 so we will not be able to accommodate morning shift (7:30 AM IST).

In order to avoid this, we have come up with a plan to automate the entire Build and Deployment process.

This includes Build, Deployment, post validation after deployment and Smoke testing

With this automation all the build and deployments process will get triggered automatically as per the scheduled timings given by QA Team. And emails will be sent out upon completion.

This will also reduce the manual effort of Tech team.

Status? If implemented from when?

Already implemented and in place for all Non Prod environments from the month of Jan 2021.

How are we testing?

Initially we have implemented this on Dev environments and monitored it for one month. Upon successful testing we have moved it to all other environments.

=====

Run books

=====

Preparing detailed documentation and runbooks required for all the patching activities which ensures effective transition from US to USI tech and optimize the onboarding process.

Why we need this?

As part of transition list, patching activity will be handed over to USI from US Tech team. In order to support this activity, we have prepared a detailed documentation with step by step activities involved in it.

Who does it help and Benefits?

With the help of this runbooks any Tech member can do the any patching activity individually without any mistakes.

Status? If implemented from when?

As of now We have already prepared all the required documents related to all the patching components.

How are we testing?

From past one month USI Tech team is taking patching activities with the help of Runbooks prepared. Also we are updating them if required while doing the activity.

=====

=====

Staffing and env's

Friday, April 23, 2021 10:42 AM

shift time -

allowance -

feb and mar - approved

weekend -

weekend activites - list of activites (mahesh, Ravi, Bala, Jitin and me) schedule a call

10 FTE as Bala not 9 .. initiate the discussion with Sasi/Rakesh

list of activites that cannot be moved out of weekend and staffing for the same to be planned

can we remove weekends

monthly patching schedule for both App and DB

all evn, SVN ... other components down time schedule

cluster picture and breaking the cluster for patching

10 min touch point every bi weekly with this team

UATL - have IM

UATW - Mobile

DevOps JD

Friday, April 23, 2021 10:48 AM

Easily model the development and delivery workflow, including the entire build-deploy-test-release process?

Leverage existing scripts and add value around them?

Flexible to support for any language and methodology, such as Agile, waterfall, and others?

To provide out-of-the-box integration to many of the common tools in the organization's tool inventory, such as build, deploy, test, release, and so on?

Able to integrate to any infrastructure platform, including physical, virtual or cloud?

Can multiple tasks be run in parallel? Is it easy to model parallel jobs?

Can manual transition approval steps be configured?

Can it enforce role-based access control between teams?

Is the solution able to scale to the entire organization, with hundreds of users, resources and concurrent tasks/jobs?

Provide real-time and comprehensive visibility into the status of the workflow process and jobs?

Should have a good command over automation

capable of automating the entire DevOps pipeline, including CI/CD cycles, app performance monitoring, infrastructure and configurations, among others.

Welcome, Naga Panguluri Personnel Number: 00376218 Company Code: 1102 Cost Center: 0110258373

From <<https://dte.deloitte.com/te/ExpenseSummary.aspx>> \\

Recruitment charge code

- RECXXXXX-01-01-0000

Assumptions as per new RFP

Friday, April 23, 2021 10:50 AM

Assumption –

US support hours –

- M-F 10 am to 7 pm ET, production on-call during non-business hours, Deployment support on Thursday nights (8 per year for M&O) 7 pm to 11 pm, Tech maintenance window on Thursday night (1 per month) 7 pm to 11 pm
- Batch Operator support hours for production only – 3:00 pm to 11 pm ET, M-F
- Production deployments (code and DB) will be scheduled or executed by release management team and tech ops will be only be available for issues
- Prod Data fixes will be executed by Batch
- RPT will be refreshed nightly as a batch process
- PRDT will be refreshed once per week
- Support for enhancements releases is not part of M&O staffing (including performance testing support, security scan support, new tech/batch requests)
- Audit support is not included in M&O
- Governance – TCCB, OCC will be M&O
- ARB will be enhancements
- Patch and upgrades management – Annual plan, schedule, audits, prioritize → M&O
- Renewals & Procurements → M&O
- New infrastructure configurations such as firewall rules, LB VIP set up, tools integration will be enhancements

USI support hours

- M-F 11 am to 8 pm IST (excluded prod batch), No On-call during non-business hours (outside of 11 am to 8 pm)
- SIT/UAT batches will be executed by Testing teams
- Batch Operator Support for production – 8 am to 5 pm IST, Tue – Sat
- Special Batches like COLA, FPL will be executed over the weekend
- Builds and deployments to Dev/SIT/UAT environments will be scheduled and support will be only during the hours mentioned (11 am to 8 pm IST)
- Non-Prod data fixes will be executed by testing teams using data fix tool
- Non-Prod DB build Support (DDL) for dev environments will be done by DBAs but promotion will be part of the automated build
- 1 non-prod data refresh (SIT/UAT) and re-pointing in one week
- 1 prod support data refresh in one week
- Non-prod product/OS patching will occur between M-F 11 am to 8 pm IST (Waves – Dev/SIT, UAT/Prod Support) – Patching at least 4 to 8 hours in a week
- Support for enhancements releases is not part of M&O staffing (including performance testing support, security scan support, new tech/batch requests)
- Audit support is not included in M&O
- Quarterly releases will be enhancements release (4 releases per year)
- Performance testing will be done only for enhancements

Environments:

- How many non-prod environments out of 15 will be allocated for enhancements releases? No environment for patching.
 - M&O streams → 3 (parallel SDLC)
 - 2 Dev, 4 SIT, 1 UAT → 7 (1 unmasked environment, SIT/UAT will be prod size data)
 - Enhancements Stream → 2 (parallel SDLC)
 - 1 Dev, 2 SIT, 1 UAT → 4 (1 unmasked environment, 1 SIT/1 UAT will be prod size data)
 - PRDT (unmasked), SITW (masked) → Incident triage and data fix testing (prod size)
 - Perf1 → 1 → enhancements (will be shared between online and batch)
 - Training → 1 → enhancements (we need to cutdown to 1. The current contract has 2)
- Do the 15 environments include reporting? How many reporting environments?
 - 0.5 RPT, 0.5 Datamart – M&O
 - 0.5 RPT, 0.5 Datamart – Enhancements
 - Monthly releases only
 - 1 non-prod reporting environment
 - Refresh will be done once in a month, Masked data

M&O → 9 non-prod app environments

Enhancements → 6 non-prod app environments

1 reporting environment will be shared for M&O and enhancements.

11 Application environments in non-prod (3 out of 15 will be unmasked and supported)
1 Reporting environment in non-prod
Perf1 will be shared for load testing for app enhancements, tech enhancements and for batch dry runs, if any.
No prod patch or hotfix environment. PRDT and SITW will be used for patching
Total environments → 16 non-prod

- Continuous Improvements are not in scope and will have to be in transition
Non-prod environment requests (excluding UAT) will have a turn-around time of 24 hours or more based on priority and the type of request

Transition Plan

- Self-service batch schedules / execution / dummy files for UAT
- Production Batch Handoff Approach Plan
- No-touch build and deploy scheduling
- Automated validations
- Datafix transition to Testing Team
- DDL pipeline
- Single-click data refresh
- Patching to be automated through CHEF where possible
- Patch identification and planning process
- Performance test report automation
- Security scan report automation
- Audit finding support
- Testing team refresh schedule

- Single-click Deploy
- Single-click Batch schedule with automated error-detection
- SOP for patch identification / audits
- Splunk alert integration with Twilio

Repointing's:

HFX - SITW (Every Week) - PRDP (on demand)

M&O (per month) - 8+2+2

Major (per Quarter) - 7

27 - including deployment (repointing to be done in parallel to refresh)

24 hrs db refresh

4 hours - env repointing

Junk

Saturday, April 24, 2021 8:05 AM

Alerts

noreply@gainwelltechnologies.com; root@uhip.ri.gov; ftptransfer@uhip.ri.gov

<https://deloitte.zoom.us/j/91230040593?pwd=UHJ6WGII0HZiVjVVWFBIUU0rYXNoZz09>

sbi.08022@sbi.co.in
ac/no - 20080455080
banjarahills branch
balance - nil
landline number - After sending mail. call them and in form - 040-23392274
transfer of account.

13277 - pnppadu branch code

SR10154871904112

Assumptions:

DB

there should not be more than 2 DB refreshes per week and should be on weekdays apart from DB refreshes

All the other teams should be request tech between 11-8 only

Data fixes will be handled by QA teams

DL's permissions

July 1st can we do 9/5 from 16/7

what needs to happen and what it takes to get in to 9/5

Enhancement

5000 hours / year(2.5 years) - 5000

sasi - for us to plan resources , what are the type activity

shared pool - any bench

1500 - BSNL

Horizon VDI

Publish the automation plan

Re check the Staffit ID for RM name

Send the Transition list to Atul/Surya

Schedule calls between offshore and onshore

ENV Details

Wednesday, April 28, 2021 5:28 PM

Environments	DB Type	PII	Mobile	IM
DEVW	Partial DB(Last 6 months data)	MASKED	N/A	N/A
SITW	FULL	MASKED	N/A	Yes
SITWT	Partial DB(Last 6 months data)	MASKED	N/A	N/A
UATW	FULL	MASKED	N/A	N/A
UATWT	FULL	MASKED	Yes	N/A
DEVTX (DEVM)	Partial DB(Last 6 months data)	MASKED	N/A	N/A
SITTX (SITM)	FULL	MASKED	N/A	N/A
SITMT	FULL	MASKED	N/A	N/A
UATMT	FULL	MASKED	N/A	N/A
DEVN	Synthetic	No PII data	Yes	N/A
SITN	Partial DB(Last 6 months data)	MASKED	Yes	N/A
SITNT	Partial DB(Last 6 months data)	MASKED	N/A	Yes
UATNT	FULL	MASKED	N/A	N/A
PRDP	FULL	MASKED	N/A	N/A
UATL	FULL	MASKED	N/A	Yes
PERF1	FULL	MASKED	Yes	N/A
PERF2	FULL	MASKED	N/A	N/A
UATMP	FULL	MASKED	N/A	N/A
TRNDEV	FULL	MASKED	N/A	N/A
TRNSBX	Partial DB(Last 6 months data)	MASKED	N/A	N/A
TRNDL1	Synthetic	No PII data	N/A	N/A
TRNDL2	Synthetic	No PII data	N/A	N/A
PRDT	FULL	UNMASKED	N/A	N/A
UATM	FULL	UNMASKED	N/A	N/A
UATN	FULL	UNMASKED	N/A	N/A

Automation and removing tech over head

Tuesday, May 4, 2021 8:11 AM

Sending mails even though we are sending Alrets and maintaining them on WIKI. Like:

SVN Diff reports

SVN logs

Sonar reports (Everyone have access to view reports on Sonar)

Build failures

Tasks

Monday, May 24, 2021 12:15 PM

Every Monday we need to prepare Deck for Tuesday's IMS call.

On every DEV exit we need to run Cast profile

Every Monday we need to consolidate utilization percentage and previous week worked hours from all the team members

Collect allowance data from the team by every month last week Monday

Expectation Framework

Monday, May 24, 2021 1:22 PM

Full App owner ship also identify one backup

- Adhere to the timelines for deliverables. All the activities to be completed within the time committed.
- Taking ownership of all the activities. If any individual acknowledge the activity, it's his/her responsibility to bring it to closure.
- Upskill your resume. Every resource to invest their time towards upskilling of technologies which helps project and respective career.
- Improve in troubleshooting. Should focus more on troubleshooting the issues without anyone's help. Should be able fix the issues independently.

Gayathri

Cross skilling on Batches

Look for any automation to smoothen the process and optimize the DB related activities

Complete ownership on DBA activities

Pro actively monitor all the mail and other DBA related activites to have minimal to none escalations

Make sure to be on top of all email communications w.r.t App, DBA and Batches accross the shores

Should become a backup to Pramod and actively take up all his activites on his absence

Pramod

Take end to end ownership on Patching related activites like Scheduling, email communications, tracking and getting required approvals and succesful executions

Should involve more into App related activities and provide updates over calls.

Actively coordinate between both the shores.

To have good understanding on all the activites which are going on Project level.

Should be able to lead the USI Tech team in absence of Leads.

feedbacks

Wednesday, June 9, 2021 12:49 PM

Samreen

=====

Strengths

=====

1. Actively takes up regular requests and finishes them within deadlines.
2. Easily grasps activities whenever any KT provided and finishes them without taking further help.
3. Whenever any tasks are assigned, she will be able to complete them quickly.

Areas of Improvement

=====

1. Need to actively participate in issue triaging.
2. Need to gain so much knowledge on Oracle concepts.
3. Should be flexible with regards to shifts.
4. Proactively come up with ideas on new automations which will help for the development of project as she has to step up for the next level.

NOV SNAPSHOT:

Samreen is DBA Admin and he actively takes up regular activities and finishes them within timelines. She is a quick learner. Though she is a DBA, she also learned Batch related activities. She is now actively working on both DBA and Batches on a Day-to-Day basis.

She needs to actively participate in issue triaging. Need to gain much knowledge on Oracle concepts. Should be flexible with regards to shifts.

Adersh

=====

Strengths

=====

1. Actively takes up regular requests and finishes them within deadlines.
2. Proactively comes up and asks if he can take a new type of request for DB so that he can get a hands on.
3. Easily grasps activities whenever any KT provided and finishes them without taking further help.
4. Flexible with regards to the shifts.
5. Completes assigned tasks within timelines and proactively reaches out to other DBA's in case of any doubts.

Areas of Improvement

=====

1. Should start gaining more knowledge on Oracle concepts as he has only 1 year of experience.
2. Should be more confident.

NOV SNAPSHOT:

Adersh is DBA Admin and he actively takes up regular activities and finishes them within timelines. He also proactively owns up to new tasks and is also a quick learner. He is Flexible. Though he is a DBA, he also learned Batch related activities. He is now actively working on Both DBA and Batches on a Day-to-Day basis. He should start gaining more knowledge on Oracle concepts.

Gayathri

=====

Strengths

=====

1. Flexible in working for all the shifts.
2. Played major contribution in developing python scripts for EBT automation, Post DB validations and for Datafix automations.
3. Actively involved in Issue triaging calls.
4. Good knowledge on Oracle Regular concepts.

Areas of Improvement

=====

1. Should Learn more Oracle DB restore and Recovery concepts which is required for the growth of career as an Oracle DBA.

Sandeep:

Need to be more focused on the tasks he is owning

Need to improve his knowledge on project related technologies

Need to be more flexible when project requires

Siva:

Amrutha:

Positive Areas

Amrutha has good understanding of project and deliverables and the process.

She is good in Day-to Day activities, Monthly activities(Branch Creation, patching, new services)

She has good knowledge in SVN, Bamboo, sonar.

She completes the assign tasks with accuracy and fast learner.

She manages the time wisely, initiator, helps the team members in KT and Task completion.

Need to improve:

WebSphere and WebLogic need to know in depth that helps in trouble shooting of issues
Scripting need to improve.

Comments:

if we support more definitely she will be good asset for the Team.

AMBICA

Positive Areas

Ambica has good understanding of project and deliverables.

She is good in Day-to Day activities, Monthly activities(Branch Creation, patching, new services)

She has good knowledge in Bamboo, sonar.

Delivered Kt to the Team on Bamboo.

Need to improve:

WebSphere and WebLogic need to know in depth that helps in trouble shooting of issues
Scripting need to improve.

Comments:

Need to improve in Technology and troubleshooting areas.

Harsha:

Very strong in middleware concepts. Mentored new joiners and brought them up to speed in a very short time.

Always proactive. Resolves any issues before hand. Proactively bring up any gaps and helps in avoiding major issues. Actively monitors his peers and guide them when needed along with giving the necessary tech knowledge.

Should start expanding his skills around DevOps areas.

NOV SNAPSHOT:

Harsha is one of the key resources in the team' Though he is new to the project he picked up well and started delivering the complicated tasks without any mistakes. He also mentors the team on middleware concepts when needed. He also led Framework and Mule upgrade activities. He is always proactive and on top of things.

	Amrutha	Ambica	Sandeep	Siva	Bhagath	
Daily Activities	Good	Good	need support	Good	Good	
Monthly Activities	Good	Good	need support	Good	Good	
Technology	Need to Improve Middleware (WAS, Weblogic)	Need to Improve Middleware (WAS, Weblogic)		need to improve	Good	
CI/CD	Good	Good	Need to improve	Medium	Good	
Trouble shooting	Medium	Medium	Need to improve	Need to improve	Good	
Scripting	Need to improve	Need to improve	Need to improve	Need to improve	Good	
Time availability	Good	Good	Good	ok	Medium	
Task completion	Good	Good	Need support	Good	Good	
Remarks	Fast and Accurate on the assigned task	Need to improve on Technology area	Need support everytime for all the tasks	Need support for some activities and also Technologies need to have better understanding	Time management need to improve.	

Sandeep:

NOV Snapshot:

Sandeep is much/equal to the fresher level he doesn't have much exposure to technology in the prior company

He is trying to understand the project and deliverables and the process.

He is in the learning phase of Day-to-Day activities, Monthly activities

He is in the learning phase of the technologies SVN, Bamboo, Sonar, he has a basic understanding of Linux.

He needs support to complete the assigned tasks.

He is punctual and has an eagerness to learn.

Pramod:

NOV SNAPSHOT:

Pramod is very strong at DBA(Oracle) administration, He is also overlooking DevOps and Bathces in making sure there are no escalations. Currently, he is leading Batches along with some of the App-related activities like Patching, Release management activities like Branch creations.. etc. He also proactively owns up the tasks and make sure it will be closed ahead of time irrespective of his Domain.

FY22

Thursday, April 14, 2022 3:40 PM

Final snapshot

Friday, January 7, 2022 5:50 PM

Team Member name	Team Lead	Current Level - FY22	Target Promotion Year	Compensation & Bonus	Always want this person in my Team	Operating at Next Level
Naga Panguluri	Ravi Domakonda	Senior Consultant	N			
Bharadwaj Gouripeddi	Ravi Domakonda	Senior Consultant	N			
Pramod Karthik Adipudi	Naga Panguluri	Consultant	Y	Very Strongly Agree	Strongly Agree	Yes
Gayathri Kurumala	Bharadwaj Gouripeddi	Consultant	Y	Strongly Agree	Strongly Agree	No
Harsha Kommanaboyina	Naga Panguluri	Consultant	N	Strongly Agree	Strongly Agree	No
Siva Teja KNV	Bharadwaj Gouripeddi	Consultant	N	Agree	Strongly Agree	No
Bhagath G	Bharadwaj Gouripeddi	Analyst	Y	Very Strongly Agree	Strongly Agree	Yes
Samreen Mehar	Naga Panguluri	Analyst	Y	Agree	Agree	No
Amrutha Borugadda	Bharadwaj Gouripeddi	Analyst	Y	Strongly Agree	Strongly Agree	Yes
Durgambica Chitiprolu	Naga Panguluri	Analyst	Y	Strongly Agree	Agree	No
Sandeep Kumar Giri	Naga Panguluri	Analyst	N	Agree	Agree	No
Soumya Mugala	Naga Panguluri	Consultant	N	Agree	Agree	No
Balu Adersh	Naga Panguluri	Associate Analyst	N	Agree	Strongly Agree	No

AMBICA:

Strengths:

Ambica has a good understanding of projects and deliverables.
 She is good in Day-to-Day activities, Monthly activities (Branch Creation, patching)
 She has good knowledge of Bamboo, sonar.
 Delivered Kt to the Team on Bamboo.
 She is involved/concentrating more in Troubleshooting
 Dev Needs:

1. WebSphere and WebLogic need to know in-depth that helps in trouble shooting of issues
2. Scripting needs to improve.
3. Involving in troubleshooting needs to improve more on this.

PRAMOD:

Pramod is a very strong technical resource in our team. Though he is part of the DBA team, he started involving himself in all the other areas like Infrastructure and Batches and leading them when needed. Always delivers on time and provides the right solutions in times of issue. He is also SPOC for all the Upgrades and Patching of all Software used in the project.

HARSHA

Harsha is a very strong technical resource, especially in middleware concepts. He mentored 4 new joiners and brought them up to speed in a very short time. He is always proactive. He also recognizes potential issues before and resolves them. Proactively bring up any gaps and help in avoiding major issues. Actively monitors his peers and guides them when needed along with giving them the necessary tech knowledge. In a very short period in the project, he became a single point of contact for any technical issues.

SOUMYA:

Strengths:

Soumya is new to the project, She completed her training and now she is concentrating on Day-to-Day activities. She has good knowledge of middleware.
 Dev Needs:

1. Need to focus more on learning in DevOps and Scripting areas.
2. Understanding Architecture wise and involved more in troubleshooting calls.

SNADEEP:

Strengths:

Sandeep has acquired a good understanding of the project, deliverables, and process.
 He handles the Day-to-Day activities without any dependency/shadowing.
 He is in the learning phase of the technologies SVN, Bamboo, Sonar, Middleware.
 He has a basic understanding of Linux.
 He is punctual and has an eagerness to learn.
 Dev Needs:

1. Need to focus more on Technology areas.
2. He is slowly improving his skills but Needs to improve in Technology and Troubleshooting areas to utilize him as a full-fledged Resource

BALU:

Strengths:

Balu actively takes up regular requests with regards to the database and finishes them within deadlines.
 He started working on daily batch sheets which are received from onshore along with working on DB requests.
 Easily grasps knowledge whenever any KT is provided
 Flexible with regards to the shifts.
 Completes assigned tasks within timelines and proactively reaches out to other DBAs in case of any doubts.
 Dev Needs:

Should start gaining more knowledge on Oracle concepts and he should be more confident.

Should be more interaction with the onshore team in taking the handoff items.

Should be more interaction with other DEV and QA teams with regards to issue triaging.

SAMREEN:

Strengths:

Actively takes up regular requests and finishes them within deadlines.

Easily grasps activities whenever any KT is provided and finishes them without taking further help.

Whenever any tasks are assigned, she will be able to complete them quickly.

Dev Needs:

Being in the project for more than 2 years she should learn more Oracle Concepts.

Should grow up in terms of technology.

Should be more flexible with regards to the shifts.

Should be more interactive in terms of following up with DEV and QA teams in terms of issue triaging.

Sep snapshot

Friday, September 17, 2021 10:30 AM

Ambica:

Ambica should concentrate more on the Technical areas with respect to the project and should start proactively taking up new technical tasks. She should also start understanding the automation that the project has in place and should be in a position to troubleshoot issues.

Agree/Agree

All NO's

Pramod:

Pramod is a very strong technical resource in our team. Though he is part of the DBA team, he started involving himself in all the other areas like Infrastructure and Batches and leading them when needed. Always delivers on time and provides the right solutions in times of issue.

VSA/SA

NO/YES/NO

Sandeep:

A/A

All No's

Though Sandeep is a lateral hire, he is much/equal to fresher level as he doesn't have much exposure to technology in the prior company. He is trying to understand the project and deliverables and the process and is currently at the learning phase of Day-to-Day activities, Monthly activities

Sandeep should focus more on the tasks he is owning and closing them in time.

He needs to improve his knowledge of project-related technologies and should start picking activities on his own.

Samreen:

A/A

All No's

Actively takes up regular requests and finishes them within deadlines.

Easily grasps activities whenever any KT is provided and finishes them without taking further help.

Whenever any tasks are assigned, she will be able to complete them quickly.

Areas of Improvement

=====

Need to actively participate in issue triaging.

Need to gain much knowledge on Oracle concepts.

Should be flexible with regards to shifts/availability.

Proactively should come up with ideas on new automation which will help for the development of the project as she has to step up for the next level.

Amrutha

Sa/SA

NO/Yes/No

Balu:

All No's

SA/A

Balu actively takes up regular requests and finishes them within deadlines. Proactively comes up and asks if he can take a new type of request for DB so that he can get hands-on. Easily grasps activities whenever any KT is provided and finishes them without taking further help. Flexible with regards to the shifts. Completes assigned tasks within timelines and proactively reaches out to other DBAs in case of any doubts.

Should start gaining more knowledge on Oracle concepts and he should be more confident.

Harsha:

SA/SA

All No's

Very strong in middleware concepts. Mentored new joiners and brought them up to speed in a very short time.

Always proactive. Resolves any issues before hand. Proactively brings up any gaps and helps in avoiding major issues. Actively monitors his peers and guides them when needed along with giving the necessary tech knowledge.

Should start expanding his skills around DevOps areas.

FY23

Thursday, April 14, 2022 3:40 PM

SNAPSHOTS: 1 (Time: 01/10/2022 - 03/31/2022)

Name	Promotion Year	Q1	Q2	ONL	Snapshot owner
Pramod	2022	SA	A		Naga
Gayathri	2023	SA	VSA		Naga
Samreen	2022(2023) resigned	A	A		Naga
Siva	2024	SA	SA		Naga
Ambica	2023	SA	A		Naga
Amrutha	2022	A	A		Naga
Balu	2023	SA	SA		Naga
Sandeep		A	SA		Naga
Harsha	2023	SA	SA		Naga
Soumya		A	A		Naga

First snapshot:

Harsha:

Very strong in middleware concepts. Mentored new joiners and brought them up to speed in a very short time. Always proactive. Resolves any issues before hand. Proactively bring up any gaps and helps in avoiding major issues. Actively monitors his peers and guide them when needed along with giving the necessary tech knowledge. He also worked on Mule Upgrade from 3.8 to 4.3 from Tech Team prospective. As part of this upgrade he worked on Maven Implementation to create new Builds and Deployment process. He also implemented TCPS successfully in lower ENV of online, mobile Applications and Batches which helps secure transmission of Data from APP to DB.

Second:

Soumya:

Sandeep/Aditya:

Need to focus more in getting Technical knowledge which are used in the project. Should also start troubleshooting independently.

Pramod:

Pramod is a very strong technical resource in our team. Though he is part of the DBA team, he also involves himself in all the other areas like Infrastructure and Batches and leading them in short time. Always delivers on time and provides the right solutions in times of issue.

Balu:

Balu actively takes up regular requests and finishes them within deadlines. Proactively comes up and asks if he can take a new type of request for DB so that he can get hands-on. Easily grasps activities whenever any KT is provided and finishes them without taking further help. Flexible with regards to the shifts. Completes assigned tasks within timelines and proactively reaches out to other DBAs in case of any doubts.

Amrutha:

Amrutha has good understanding of project, deliverables and the process. She is good in Day-to Day activities, Monthly activities. She completes the assigned tasks with accuracy and fast learner. She manages the time wisely, initiator, helps the team members in Task completion and Delivers KT. She is involving/concentrating more in Troubleshooting. She completed the Property Automation successfully.

Ambica:

Ambica has good understanding of project and deliverables. She is good in Day-to Day activities, Monthly activities. She has good knowledge in Bamboo, sonar. Delivered KT to the Team on Bamboo. She completes the assigned tasks with accuracy and fast learner. She is involving/concentrating more in Troubleshooting. She is working on Mule Upgrade from Mule3.8 to Mule4.3

Siva:

Siva has good understanding of project and deliverables. He is good in Day-to Day activities. He has good knowledge in Bamboo, Batches. Delivered KT to the Team on Batches. He is involving/concentrating more on learning Technology.

Gayathri:

Gayathri has done lot of Automations which helped the project reduce the manual time taking activities and human errors. Was involved in many issue triages required for Dev and QA teams. Have performed many patching activities on the database and made sure that all the patches are up to the date. Enthusiastic in learning new concepts. Technically strong and always a go to person for other teams in the project.

Harsha:

Always proactive. Resolves any issues before hand. Proactively bring up any gaps and helps in avoiding major issues. Actively monitors his peers and guide them when needed along with giving the necessary tech knowledge. Very strong in middleware concepts. He also worked on Mule Upgrade from 3.8 to 4.3 from Tech Team prospective and implemented it successfully on the project.

FIRST YEAR:

Steady state	Lead	Naga
Steady state	WAS/DevOps	Bhagath
Steady state	WAS	Ambica
Steady state	WAS	Siva
Steady state	DevOps	Sandeep
Steady state	DevOps	Babu
Steady state	Batch	Samreen
Steady state	Batch	Balu
Steady state	DBA	Pramod
Steady state	DBA	Gayathri
Steady state	WAS	Bajju
App BRR	WAS	Amrutha
Tech BRR	WAS/DevOps	Harsha

Lead - Naga

App - Bhagath/Harsha/Siva/Bajju

DB - Pramod/Gayathri

Batches - Balu/Samreen

DevOps - Babu

13 will go to 10 by the end of Nov

Super Heros

Monday, November 22, 2021 12:20 PM

December month:

Harsha K(THOR) – Despite of recent joining in the Organization & Project, Harsha picked up speed when comes to tech team deliverables and became a single point of contact for all the App admin team. He independently working on Mule upgrade and was POC for Framework upgrade from tech stand point.

Pramod K(Captain America) – Pramod manages all App/DB/Batch related activities. He manages & coordinates all upgrades & patching that occurs every Week/Month/Quarterly. He is also POC for other teams in the project for any kind of help/assistance.

#####
Gayathri - Captain Marvel

Description :-

Gayathri has created so many automation plans that has helped Tech team reduce the human effort just like captain Marvel creating a plan which helped hydra to take over the US. Hence she is the captain Marvel of Tech Team.

Ambica - Batman

Description :-

Applause

Monday, November 22, 2021 12:21 PM

Pramod and Harsha - Applause - Nov 21

Bhagath & Gayathri - Applause - Dec 21

Amrutha - Applause - Jan 22

21

Balu - Applause - Jan 22 (Requested for Applause but gave Spot)

LINUX 1

Friday, August 19, 2016 4:28 PM

LINUX

```
#####
# To know which bit linux is running
# uname -a
#####

To see if any mails are in queue:
mailq
#####

To open a html file on command line interface:
elinks SITWT.html
#####
history | tail -n 3000 > /opt/HSRI/history_output.txt
#####

To check firewall status
for redhat linux - sudo /sbin/iptables -L
for suse linux - sudo /sbin/rcSsUEfirewall2 status
#####
cd /home/pthadur
tar -czf pthadurHSRI.tgz --exclude='*.jar' --exclude='*.ear' --exclude='*.zip' --exclude='*.xml' --exclude='*.war' --exclude='*.csv' --exclude='*.class' HSRI
#####
/home/pthadur
du -sh --exclude='*.jar' --exclude='*.ear' --exclude='*.zip' --exclude='*.xml' --exclude='*.war' --exclude='*.csv' --exclude='*.properties' --exclude='*.log' --exclude='*.jsp' --exclude='*.pub' --exclude='*.java' --exclude='*.clas' --exclude='*.html' --exclude='*.xsd' HSRI
/home/pthadur
tar -czf /home/pthadur/pthadurHSRI.tgz --exclude='*.jar' --exclude='*.ear' --exclude='*.zip' --exclude='*.xml' --exclude='*.war' --exclude='*.csv' --exclude='*.class' --exclude='*.html' --exclude='*.xsd' HSRI
/opt
du -sh --exclude='*.jar' --exclude='*.ear' --exclude='*.zip' --exclude='*.xml' --exclude='*.war' --exclude='*.csv' --exclude='*.properties' --exclude='*.log' --exclude='*.jsp' --exclude='*.pub' --exclude='*.java' --exclude='bkp' --exclude='Backup' --exclude='OLD' --exclude='Branch-8.5.5.11' --exclude='Branch2_8.5.5.11' --exclude='OPA' --exclude='csvn' --exclude='*.class' --exclude='*.html' --exclude='*.xsd' --exclude='backup_06082018' --exclude='HOTFIX_PROD_bkp_June_29' --exclude='POCBranch' --exclude='TrunkOPAPOC' --exclude='Commons' --exclude='Branch' --exclude='HOTFIX' --exclude='WISBranch' --exclude='Branch2' --exclude='HOTFIX_8.5.5.11' --exclude='ReleaseBranch' --exclude='HotFixM' --exclude='ReleaseBranchTag' --exclude='Trunk' --exclude='temp' --exclude='*.tgz' HSRI
#####
To know all the defunct process on a VM:
ps axo stat,ppid,pid,comm | grep -w defunct
#####

To get the cpu utilization :
grep 'cpu' /proc/stat | awk '{usage=($2+$4)*100/($2+$4+$5)} END {print usage "%" }'
From <https://stackoverflow.com/questions/9229333/how-to-get-overall-cpu-usage-e-g-57-on-linux?utm\_medium=organic&utm\_source=google\_rich\_qa&utm\_campaign=google\_rich\_qa>
Output - 2.4%ip
#####
find . -type f -name "*.sh" -exec dos2unix {} \;
From <https://stackoverflow.com/questions/4712039/how-to-run-dos2unix-for-all-the-files-in-subfolders-in-bash>
#####
How to swap 1 and 2 columns in a csv file
awk -F;"'{ print $2","$1}' nb.csv > nb1.csv
#####
How to remove everything before last '/' in a file
sed 's@.*@nb2.csv
#####
How to replace a particular character in a file
sed 's/text/test1/g' nb.txt
#####
To kill all the PID's related to one process:
for pid in $(ps -ef | grep "MU-BEDBC-DLY" |grep -v grep | awk '{print $2}'); do kill -9 $pid; done
for port in {57135 57136}; do netstat -a | grep $port; done
#####
To replace blank line with space in notepad+
[\r\n]+
#####
# how to add the text of one file on the top of another file in linux
provided x.csv is having more than one line
sed -i -e "1{r x.csv" -e "N;}" deployment_logger.csv
provided x.csv is not empty
sed -i -e '1 e cat x.csv' deployment_logger.csv
#####
To get the diff between two folders
diff -rqil /opt/HSRI/Branch/ /opt/HSRI/bkp/Branch-23-Feb-2018-05.29.23/Branch/
#####
To print the only file names(latest 10) in a particular location
find . -type f -mtime -10 -name "*.sh"
Remove the oldest folder from a location:
ls -1t | tail -n +11 | xargs rm -f
From <https://www.ostechnix.com/find-delete-oldest-file-x-files-directory/>
#####
Unzip the zip file to a folder
unzip -o MPG_nmon_for_Linux_14a_binaries.zip -d MPG_nmon_for_Linux_14a_binaries
```

```
#####
# The 1st command will output the lines 16...80 from file1 to patch, while the 2nd will insert the contents of patch after line 18 to file2:
sed -n 16,80p file1>patch
sed -i 18patch file2
#####
# To print all the PID's in a line - only PID's
ps -ef|grep java | grep -vi mirth | awk -F " " '{print $2}'
#####
# Antivirus - rtvscand
#####
# To show all the ctrl+M character in file on linux
set list
#####
# find . -type f -printf "%f\n"
find -type f -print0 | xargs -r0 -- cksum
# To compare 2 folders in linux
diff -rqy1 <folder name> <folder name>
#####
# To know the status of a particular port.
netstat -na | find "8080"
From <https://stackoverflow.com/questions/12010631/command-line-for-looking-at-specific-port>
netstat -plnt | grep 6001
#####
rm -rf $(ls -1dt ReleaseBranch-* | tail -n +4)
#####
# To print the folders according to size
du -sk * | sort -n
#####
# set -o errexit
From <https://community.atlassian.com/t5/Bamboo-questions/What-exit-code-is-Bamboo-expecting-from-a-command-to-highlight/qao-p/456940>
#####
# Purging command:
find /path/to/base/dir/* -type d -ctime +10 | xargs rm -rf
:!/PERFM1-/PERFM2
#####
diff -rqyl ri-uhip-integration-esb-SAVEServices-SITM/ apps/ri-uhip-integration-esb-SAVEServices-SITM/
#####
ZIP
To compress
zip squash.zip file1 file2 file3
To zip a directory
zip -r squash.zip dir1
To uncompress
unzip squash.zip
#####
# TO count no of directories --> tree -i -L 1
#####
# To display all directories in a folder - ls -d /*
#####
# To connect to different server through another server: ssh tibcouser@10.64.33.146
#####
# To remove .svn files -
find . -name *.svn"!xargs rm -rf      ---- Not Working in some cases.
find . -name ".svn" -exec rm -rf "{}" \;  ---- Working but erroring out saying file or directory does not exit.
find . -name ".svn" -type d -exec rm -rf "{}" \; ---- Working but erroring out saying file or directory does not exit.

From <http://unix.stackexchange.com/questions/89925/how-to-delete-directories-based-on-find-output>

- working perfectly without any output

From <http://unix.stackexchange.com/questions/89925/how-to-delete-directories-based-on-find-output>
#####
Soft Link - ln -s /usr/local/wasp6.5/lib/libwasp_dii.so.6 libwasp_dii.so.6
#####
ln -s target linkname
From <http://www.computerhope.com/issues/ch001638.htm>
#####
# To run a local script on a remote server using arguments:
ssh username@host exec /bin/sh -s arg1 arg2 arg3 </path/to/script.sh
#####
# To print 2 line above and below for the word u r searching for:
grep -ir -A 2 -B 2 "Error" SystemOut.log
#####
# To copy a key to a target location from a build server:
ssh-copy-id tibco@ENT-TST-UHESB12
*****
To generate id-rsa.pub
-> go to cd .ssh/
-> Give below command:
ssh-keygen -t rsa

From <http://docs.oracle.com/cd/E19253\_01/816-4557/ssouser-33/index.html>
#####
```

```

cd /home/npanguluri/;du -sh
#####
To know the IP using Hostname: nslookup ENT-UT-UHSCH02
#####
ps -A --sort -rss -o pid ,pmem:40,cmd:500 | head -n 6 | tr -s " "
#####
to check all the process consumed memory:
mem()
{
ps -eo rss,pid,euser,args:100 --sort %mem | grep -v grep | grep -i $@ | awk '{printf $1/1024/1024 "GB"; $1=""; print }'
}

# mem muleuser
#####
sshpass -p
muleuser@123 scp /home/pthadur/MCI.zip muleuser@10.64.33.31:/opt/mule-standalone-3.4.0/apps/
#####
to clear cache memory - Sudo
sh -c "sync; echo 3 > /proc/sys/vm/drop_caches"
#####
To search a word in a particular file:
grep -R --include="*CCI_INDV_ALIAS*" "Eggs" *
Result 1:
CCI_INDV_ALIAS.csv:1169,1169,319311,111604982,01/10/1995,Scramble,Eggs,,M,N
Result 2:
[tibouser@ENT-TST-UHESB0 bin]$ grep -R --include="*CCI_INDV_ALIAS*" 1169,1169 *
CCI_INDV_ALIAS.csv:1169,1169,75056,01/01/1900,CABAEEDEDCFFD,DFFDAAAADAAAABFC,D,,N
CCI_INDV_ALIAS.csv:1169,1169,319311,111604982,01/10/1995,Scramble,Eggs,,M,N
July28/CCI_INDV_ALIAS.csv:1169,1169,75056,,CABAEEDEDCFFD,DFFDAAAADAAAABFC,D,,N
#####
discard changes and quit :q!
save changes :wq
to edit: press insert or i
#####
cd /opt/tibco/tps/5.0/bin
ls
head -1 CCI_INDV.csv
rm -rf CCI_INDV.csv
vi CCI_INDV.csv
vi CCI_INDV.csv
more dbps.txt
more dbtypes.txt
head -1 CCI_INDV_ALIAS.csv
rm -rf CCI_INDV_ALIAS.csv
vi CCI_INDV_ALIAS.csv
vi CCI_INDV_ALIAS.csv
more CCI_INDV_ALIAS.csv
more dbtypesalias.txt
head -1 CCI_INDV_LINK.csv
rm -rf CCI_INDV_LINK.csv
vi CCI_INDV_LINK.csv
more CCI_INDV_LINK.csv
more dblink.txt
head -1 CCI_INDV_PRGM_ST.csv
vi CCI_INDV_PRGM_ST.csv
rm -rf CCI_INDV_PRGM_ST.csv
vi CCI_INDV_PRGM_ST.csv
more CCI_INDV_PRGM_ST.csv
more dbtypesalias.txt
more dbps.txt
#####
The special ipcs command allows you to view the current shared memory pages on the system. Here's the output from a sample ipcs command:
ipcs -m

```

[to replace a particular sting in a particular location](#) - grep -rl '10.64.33.56' ./ | xargs sed -i 's/10.64.33.56/10.64.65.79/g'

[to replace a particular sting in a particular file using vi editor](#) - :%s/10.64.33.56/10.64.65.79/g (Ref: <http://www.thegeekstuff.com/2009/04/vi-vim-editor-search-and-replace-examples/>)

```

scp penri@10.64.65.18:/home/penri/IES/CCI-files/*.csv . - push

cat Cluster*/HIX-App/RIHIX.log | grep RERF_LOGGER | grep IntegrationServiceAction:callOPAService | grep '2016-04-18 11:
du -ch | grep total

cat RIHIX.log | grep 'Transaction rolled back because it has been marked as rollback-only'

mount -t nfs server:/directory/with/data on /mnt type nfs (rw,addr=192.168.254.196)
or
mount -t nfs 10.64.33.81:/opt /Mounted_Drive
ex:
mount -t nfs 10.64.33.81:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IES-MODEV on /home/logger/MO/MODEV/ServerLogs/IES/

```

[How to check no of CPU's in a Linux box:](#)

```

cat /proc/cpuinfo | grep processor | wc -l
cat /proc/cpuinfo

```

Pass the -T to find out file system type: df -T -h

to un zip a .tgz file to a particular location - tar -xvf apps_05172016.tgz -C /home/muleuser/MOSIT/

to create a ssh key:

```
ssh-keygen -t dsa  
ssh-keygen -t rsa
```

Lets say you want to copy between two hosts host_src and host_dest. host_src is the host where you would run the scp, ssh or rsync command, irrespective of the direction of the file copy!

On host_src, run this command as the user that runs scp/ssh/rsync

```
$ ssh-keygen -t rsa
```

This will prompt for a passphrase. Just press the enter key. It'll then generate an identification (private key) and a public key. Do not ever share the private key with anyone! ssh-keygen shows where it saved the public key. This is by default ~/.ssh/id_rsa.pub:

Your public key has been saved in <your_home_dir>/.ssh/id_rsa.pub

Transfer the id_rsa.pub file to host_dest by either ftp, scp, rsync or any other method.

On host_dest, login as the remote user which you plan to use when you run scp, ssh or rsync on host_src.

Copy the contents of id_rsa.pub to ~/.ssh/authorized_keys

```
#####
id_rsa.pub >> ~/.ssh/authorized_keys  
$ chmod 700 ~/.ssh/authorized_keys  
#####To know a particular port is listening or not: tested in windows - it worked  
netstat -ano | find /i "listening" | find "8880"  
#####To know all the prots that are listening: tested in windows - it worked  
netstat -abno  
#####  
clearcache.sh  
#!/bin/sh  
cd /home/wasadmin/crontab/  
sudo su -  
sh -c "sync; echo 3 > /proc/sys/vm/drop_caches"  
su wasadmin  
#####Create a User:  
To create user:  
/usr/sbin/useradd <username> or useradd <username>
```

#####Change password

To change for a your user:

```
passwd  
Current password  
New password  
Retype new password
```

To change for another user:

```
su to root  
passwd <username>  
Current password  
New password  
Retype new password
```

LINUX 2

Friday, August 3, 2018 10:08 PM

```
#####
⇒ If you need to empty multiple files at once with a single command: for I in `ls "/var/log/*.log";do >"$I";done
⇒ This command is also useful when you want to free up space, as it shows the largest files within a directory including all its subdirectories: du -k /var/log | sort -n | tail -5
⇒ To view the largest files in the dir(sub dir will be ignored): ls -lSr | tail -5
⇒ if you want to get the total size of only .log files in a directory use the following command: du -ch /var/log/*.log | grep total
⇒ To find the deleted files in linux: find / -iname "*trash*" -ls
```

From <<http://www.daniloaz.com/en/linux-most-useful-commands-for-file-system-maintenance/>>

```
#####
⇒ To check IP tables are enabled or not : iptables -L
```

```
#####
Getfacl
```

<https://www.zyxware.com/articles/2955/how-to-use-getfacl-and-setfacl-to-get-and-set-access-control-lists-acls-on-directories-in-linux>

```
#####
Touch
```

<https://www.fastwebhost.in/blog/11-examples-of-touch-command-in-linux/>
<https://www.shellhacks.com/fake-file-access-modify-change-timestamps-linux/>

```
#####
find all of the distinct file extensions in a folder hierarchy:
```

```
find . -type f ! -path "./SSP/MULE/*" ! -path "*svn*" ! -path "*project*" ! -path "*.wsdl*" ! -path "*xsd*" ! -path "*.mflow*" ! -path "*class*" | awk -F. 'la[$NF]++{print $NF}'
```

```
# tree -a /home/npanguluri/Downloads | tail -1
```

3 directories, 182 files

From <<https://www.2daygeek.com/how-to-count-files-by-extension-in-linux/>>

```
#####
find . -type f | sed -n 's/..*\//p' | sort | uniq -c
```

```
1 avi
1 docx
1 iso
10 jpg
17 mkv
2 mp4
30 pdf
71 png
1 sh
37 svg
5 torrent
1 txt
```

```
->find . -not -iwholename "*.svn*" -type f | sed -n 's/..*\//p' | sort | uniq -c ---ignoring .svn folder
```

```
#####

```

```
#####
To get the linux and other info:
```

```
lscpu
uname -a
```

```
#####
ssh penri@$10.64.65.18 </opt/HSRI/NetricsScripts/CSVGeneration.sh STAGING
ssh penri@10.64.65.18 exec /bin/bash -s STAGING </opt/HSRI/NetricsScripts/CSVGeneration.sh
ssh penri@$10.64.65.18 exec /bin/bash -s $DBName $SchemaName </opt/HSRI/NetricsScripts/DUPSQL.sh
```

```
#####
Changing time zone
cd /etc
```

```
rm localtime
ln -s /usr/share/zoneinfo/Asia/Kolkata localtime
```

```
Check the date by giving date command
```

```
Method 2
```

```
# cat /etc/timezone
America/New_York
```

To change this to US Pacific time (Los Angeles), modify the /etc/timezone file as shown below.

```
# vim /etc/timezone
America/Los_Angeles
Also, set the timezone from the command line using the TZ variable
```

```
# export TZ=America/Los_Angeles
```

From <<https://www.thegeekstuff.com/2010/09/change-timezone-in-linux/>>

To download a linux cert and register:

<https://access.redhat.com/labs/registrationassistant/rhel7/?tech=subscription&service=rhsm&process=offline&vdc=false>

Manual check Commands:

#top (or) #htop

Tips: basic troubleshooting commands:

Install: sar package

To report on previously captured data – type:

sar -u -f filename > file

View disk I/O and transfer rate stats:

sar -b 1 10

View memory and swap space stats:

sar -r 1 10

View swapping stats:

sar -W 1 10

View network stats:

sar -n DEV 3 10

View CPU stats:

sar -P ALL 1 5

Collect disk load for that install sysstat

#yum install sysstat

#iostat -d -x 5

Health Checkup:

H/W Check –

lshw (or) # lshw –short -> Print information about your Linux system hardware

lscpu (or) # cat /proc/cpuinfo -> View Linux CPU Information

lsblk -> Collect Linux Block Device

System Uptime – \$uptime (Shows when the system is started, update every 1, 5, 15 min intervals and which user are login.)

Finding all the files and folders names having whitespace in it":

find /tmp/ -depth -name "/* */"

From <<https://unix.stackexchange.com/questions/215124/remove-whitespace-from-all-items-in-a-directory-and-sub-directory>>

Calling local script and executed on remote server:

ssh \$Username@\$TibcoIP < /opt/NetricsReload.sh

ssh username@host exec /bin/sh -s arg1 arg2 arg3 < /path/to/script.sh

From <<http://stackoverflow.com/questions/1072643/how-can-i-make-grep-print-the-lines-below-and-above-each-matching-line>>

Mount

Monday, August 22, 2016 1:46 PM

Mount a particular path on a different server

Firstly check when the VM was bounced last time.

Give the below command to get the details:

```
[wasadmin@ENT-TST-UHAPP08 ~]$ uptime  
03:50:43 up 65 days, 11:29, 1 user, load average: 0.02, 0.03, 0.00
```

The above VM is last restarted 65 days back.

If the VM is bounced recently. Then check the nfs status:

Give the below command:

```
[wasadmin@ENT-TST-UHAPP08 init.d]$ pwd  
/etc/init.d  
[wasadmin@ENT-TST-UHAPP08 init.d]$ ./nfs status  
rpc.mountd (pid 10046) is running...  
nfsd (pid 10043 10042 10041 10040 10039 10038 10037 10036) is running...  
rpc.rquotad (pid 10030) is running...  
[wasadmin@ENT-TST-UHAPP08 init.d]$
```

Nfs is running. If nfs is stopped then use the below command to start the nfs:

```
./nfs start
```

Now to mount the a particular of X(10.64.65.12) server on Y(10.64.65.94) server. Then log into that Y server first.

Then get the both the location.

For example:

X server Path - /opt/IBM/HSRI/HIX-SITTT3/HIXLogs/

Y Server path - /home/loguser/SITTimeTravel/TT3/HIX/App

Step 1:

Log in to Y Server and switch to root account.

Check if above path is already mounted or not using below command:

```
mount -l
```

```
[loguser@ENT-TST-UHAPP08 ~]$ mount -l  
/dev/mapper/vg1-root on / type ext3 (rw)  
proc on /proc type proc (rw)  
sysfs on /sys type sysfs (rw)  
devpts on /dev/pts type devpts (rw,gid=5,mode=620)  
/dev/mapper/vg1-var on /var type ext3 (rw)  
/dev/mapper/vg1-opt on /opt type ext3 (rw)  
/dev/mapper/vg1-usr on /usr type ext3 (rw)  
/dev/sda1 on /boot type ext3 (rw) (/boot)  
tmpfs on /dev/shm type tmpfs (rw)  
none on /proc/sys/fs/nfsstat/misc type binfmt_misc (rw)  
sunrpc on /var/lib/nfs/rpc_pipefs type rpc_pipefs (rw)  
10.64.33.14:/opt/IBM/HSRI/IES-UATT/IEAppLogs/ on /home/loguser/HSRIUATT/IES/App type nfs (rw,addr=10.64.33.14)  
10.64.33.14:/opt/IBM/HSRI/SSP-UATT/SSPLogs/ on /home/loguser/HSRIUATT/SSP/App type nfs (rw,addr=10.64.33.14)  
10.64.33.14:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IES1/ on /home/loguser/HSRIUATT/IES/Server type nfs (rw,addr=10.64.33.14)  
10.64.33.14:/opt/IBM/HSRI/HIX-UATT/HIXLogs/ on /home/loguser/HSRIUATT/HIX/App type nfs (rw,addr=10.64.33.14)  
10.64.33.14:/opt/IBM/HSRI/CCAPP-UATT/Logs/ on /home/loguser/HSRIUATT/CCAPP/App type nfs (rw,addr=10.64.33.14)  
10.64.33.14:/opt/IBM/HSRI/CCAPP-UATT/Logs/ on /home/loguser/HSRIUATT/CCAPP/Server type nfs (rw,addr=10.64.33.14)  
10.64.33.56:/opt/mule-standalone-3.4.0/logs/ on /home/loguser/HSRIUATT/MULELogs type nfs (rw,addr=10.64.33.56)  
10.64.33.56:/home/apache/HSRI/UATT-Tomcat/apache-tomcat-7.0.37/logs/ on /home/loguser/HSRIUATT/TomcatLogs type nfs (rw,addr=10.64.33.56)  
10.64.65.94:/opt/IBM/HSRI/CCAPP-HSIROUATT2/Logs/ on /home/loguser/HSRIUATT2/CCAPP/App type nfs (rw,addr=10.64.65.94)
```

If it is there then un mount it using below command:

```
Unmount -l /home/loguser/SITTimeTravel/TT3/HIX/App/
```

Now give the below command to mount the X server path on Y server.

```
sudo mount -t nfs 10.64.33.12:/opt/IBM/HSRI/HIX-SITTT3/HIXLogs/ /home/loguser/SITTimeTravel/TT3/HIX/App/  
##### SITTT3#####
```

```
sudo mount -t nfs 10.64.33.12:/opt/IBM/HSRI/HIX-SITTT3/HIXLogs/ /home/loguser/SITTimeTravel/TT3/HIX/App/
```

```
sudo mount -t nfs 10.64.33.12:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/HIX1/ /home/loguser/SITTimeTravel/TT3/HIX/Server
```

```
sudo mount -t nfs 10.64.33.12:/opt/IBM/HSRI/IES-SITTT3/IEAppLogs/ /home/loguser/SITTimeTravel/TT3/IES/App/
```

```
sudo mount -t nfs 10.64.33.12:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IES1 /home/loguser/SITTimeTravel/TT3/IES/Server
```

```
sudo mount -t nfs 10.64.33.12:/opt/IBM/HSRI/SSP-SITTT3/SSPLogs/ /home/loguser/SITTimeTravel/TT3/SSP/App/
```

```
sudo mount -t nfs 10.64.33.12:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/SSP1/ /home/loguser/SITTimeTravel/TT3/SSP/Server
```

```
sudo mount -t nfs 10.64.33.15:/opt/mule-standalone-3.4.0/logs/ /home/loguser/SITTimeTravel/TT3/MULE/  
*****END*****
```

NOTE - On both the servers nfs should be up and running to mount. NFS can only be started with root access.

```
showmount -e <ip of server>  
rpcinfo -p <ip of server>
```

```
service nfs restart  
service portmap restart
```

RCA:

For permission denied, Please do below steps:

Go to /etc(ex: on 10.64.65.251)

Vi exports

Add the the path which you want to mount on to a remote server. Like below

```
/opt/IBM/HSRI/HIX-SITTT1/IAppLogs/ 10.64.65.94(no_root_squash)
```

crontab

Monday, August 22, 2016 1:47 PM

Crontab guru

<https://crontab.guru/>

```
#####
# crontab.txt
0 */2 * * * /home/wasadmin/crontab/clearcache.sh
now - give the below command:
crontab crontab.txt
#####
to check whether your job is scheduled or not. Run below command.
crontab -l
#####
To remove the crontab. give the below command:
crontab -r
#####
to set a crontab:
to run the job every 2 hours - 0 */2 * * *
#####
[root@ENT-TST-UHAPP06 ~]# crontab -l
*/30 * * * * /opt/clearcache.sh
#* * */3 * * /opt/tempDel.sh
[root@ENT-TST-UHAPP06 ~]# cat /opt/tempDel.sh
#!/bin/sh

# Clear cache for the linux machine
rm -rf /Mount_HPExstream/data/HPExstream/Work/*;
chmod -R 777 /Mount_HPExstream/data/HPExstream/Work;

rm -rf /tmp/*;
chmod -R 777 /tmp;
#####
```

mailx

Monday, August 22, 2016 1:47 PM

```
#####
To send an attachment and print the same in the mail body using mailx:  
cat /home/oracle/DBAUDIT/PRDT/DBunsuccessfulLoginAttempts.txt | mailx -s "[Tech Notification]:PRDT-DBSecurityAudit-DBunsuccessfulLoginAttempts`date`" -a /home/oracle/DBAUDIT/PRDT/DBunsuccessfulLoginAttempts.html `echo $MAIL_LIST`  
#####  
to send a mail - tail -22 clearcache-sitreg.log | mailx -s "SIT-REG clearcache log" npanguluri@deloitte.com,vijakumar@deloitte.com - worked  
#####To empty all the files in a particular folder:  
find /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/ffdc/ -type f -exec sh -c '{' \' ;  
find . -type f -exec sh -c '>{}' \' ;  
#####MAIL RELATED COMMANDS  
#####cat  
/home/wasadmin/cleanup.sh | mailx npanguluri@deloitte.com  
  
echo | mailx -a /home/wasadmin/cleanup.sh npanguluri@deloitte.com  
  
echo "Please find the attached file for SIT-REG cache cleanup activity" | mutt -s "SIT-REG clearcache log" -a "/home/wasadmin/crontab/clearcache.log" -- npanguluri@deloitte.com  
echo "Please find the attached file for SIT-REG cache cleanup activity" | mutt -s "SIT-REG clearcache log" -a "/home/wasadmin//cleanup.sh" -- npanguluri@deloitte.com  
echo "Please find the attached file for SIT-REG cache cleanup activity" | mailx -s "SIT-REG clearcache log" -a "/home/wasadmin/cleanup.sh" npanguluri@deloitte.com  
cat /home/wasadmin/message.txt | mailx -s "Cache clear log - SIT-REG" -a /home/wasadmin/cleanup.sh npanguluri@deloitte.com  
/usr/sbin/sendmail -f 10.64.65.12@uhip.ri.gov npanguluri@deloitte.com,vijakumar@deloitte.com  
cp /home/wasadmin/crontab/* /opt/  
  
cat samplmail.txt |/usr/sbin/sendmail -f 10.64.65.12@uhip.ri.gov /a "/home/wasadmin/samplmail.txt" vijakumar@deloitte.com  
cat samplmail.txt /a "/home/wasadmin/samplmail.txt" |/usr/sbin/sendmail -f 10.64.65.12@uhip.ri.gov npanguluri@deloitte.com  
mailx -s "SIT-REG clearcache log" npanguluri@deloitte.com </home/wasadmin/crontab/clearcache-sitreg.log  
tail -13 clearcache-sitreg.log | mailx -s "SIT-REG clearcache log" npanguluri@deloitte.com  
tail -22 clearcache-sitreg.log | mailx -s "SIT-REG clearcache log" npanguluri@deloitte.com,vijakumar@deloitte.com - worked
```

```
$SearchPath = "C:\Data\Faxes"  
$EmailTo = "specificperson@abc.com"  
$EmailFrom = "anotherperson@abc.com"  
$EmailSubject = "A new fax has arrived"  
$EmailBody = "A new fax was received. Please forward to the appropriate recipient."  
$IncomingFaxes = Get-ChildItem $SearchPath  
ForEach($NewFax in $IncomingFaxes)  
{  
    Send-MailMessage -To $EmailTo -From $EmailFrom -Attachments ($NewFax).FullName -Subject $EmailSubject -Body $EmailBody  
    Write-EventLog Application -Source Powershell -EventId 54321 -Message "A new fax has been received."  
    Remove-Item ($NewFax).FullName  
}
```

Send multiple file in a mail

Tuesday, March 19, 2019 3:44 PM

```
echo "sending email to the Batches Team"
CCLIST="-c sgunupudi@deloitte.com -c npanguluri@deloitte.com -c sparavasthu@deloitte.com"
TOLIST="cdurgambica@deloitte.com aborugadha@deloitte.com"
ATTACHMENTS="-a ${LOGPATH}/${FOLDERNAME}/ ${FOLDERNAME}_1A_dupli_sorted.txt -a ${LOGPATH}/${FOLDERNAME}/ ${FOLDERNAME}_1A_streetcheck.txt -a
${LOGPATH}/${FOLDERNAME}/ ${FOLDERNAME}_1B_dupli_sorted.txt"
SUBJEST="${FOLDERNAME} PROCESSED BATCH FILES"
BODY="Please find the attached processed Batch files.\n\nThanks\nTECHTEAM"
echo -e "${BODY}" | mutt ${ATTACHMENTS} -s "${SUBJEST}" ${CCLIST} ${TOLIST}
```

```
#####
#####
```

I want to send a dir as an attachment, i did like below,

```
illindva$ tar -cvf test.zip test
illindva$ gzip test.zip
illindva$ ( cat msg.txt ; uuencode test.zip.gz test.zip.gz ) | mailx -s 'testing' mail@gmail.com
```

I got an attachment with the body (msg.txt), i did unzip the folder test.zip.gz in GUI. Then I got 'test' folder. But it is also showing in zip format.

From <<https://www.unix.com/shell-programming-and-scripting/120679-how-send-directory-through-mail-many-mailists.html>>

```
#####
#####
```

You can use option -a of mailx several times, for example:

```
$ mailx -s 'Few files attached' -a file1.txt -a file2.txt someone@some.com
```

You can also use uuencode like this:

```
$ ( cat Mail_Report.txt; uuencode file1.txt file1.txt ; uuencode file2.txt file2.txt ) | mailx -s "SUBJECT" someone@some.com
```

From <<https://stackoverflow.com/questions/14473732/attaching-more-than-2-files-in-mail-in-unix>>

SFTP

Monday, August 22, 2016 1:49 PM

to copy a file through sftp:
get FEP* /home/sudeepg/CMS/

Windows Commands

Monday, August 22, 2016 1:51 PM

How to kill a PID on windows using cmd -
Taskkill /PID 2836 /F

```
icacls "C:\Program Files\Atlassian" /grant Users:F  
icacls "C:\Program Files\Atlassian\Application Data\JIRA" /grant npanguluri:F  
C:\Users\npanguluri>ping google.com >ping1.txt  
C:\Users\npanguluri>tracert google.com >tracert1.txt
```

USHYDNPANGULUR5.us.deloitte.com
npanguluri@USHYDNPANGULUR5

```
rdesktop -u npanguluri -p USHYDNPANGULUR5.us.deloitte.com -s "cmd.exe"  
"C:\WINDOWS\system32\cmd.exe"
```

```
rdesktop -u npanguluri -p USHYDNPANGULUR5.us.deloitte.com -s "C:\WINDOWS\system32\cmd.exe"
```

```
"C:\Users\npanguluri\Desktop\winscp.exe" /command "option batch abort" "option confirm off" "open pthadur:Econimic@10.64.65.20" "put C:\Users\npanguluri\Desktop\nb.txt /home/pthadur/" "exit"  
"C:\Users\npanguluri\Desktop\winscp.exe" /command "option batch abort" "option confirm off" "open opensrc:opensrc@10.64.65.20" "get /home/opensrc/test.sh C:\Users\npanguluri\Desktop\" "exit"  
start-process "cmd.exe" '/c C:\Users\npanguluri\Desktop\SVNDIFF-RB-CP\DS\svnCodeDisc.bat'
```

Converting Files from Linux/UNIX format to Windows Format

If you're using a UNIX based system to transfer the files to a [Windows](#) system, there are some commands that let you convert the text file(s) you are transferring to a format Windows can understand.

The dos2unix and unix2dos command

```
/var/root #  
/var/root #  
/var/root # unix2dos unix.txt windows.txt  
/var/root #  
/var/root #
```

You can use command line to safely convert files from UNIX to Windows and vice versa. To convert a Windows text file to a UNIX text file, enter this:

dos2unix windows.txt unix.txt

The above command converts and replaces "windows.txt" file to "unix.txt". To convert a UNIX text file to a Windows text file, enter this command:

unix2dos unix.txt windows.txt

The above command will convert a UNIX created text file called "unix.txt" to a Windows compatible text file called "windows.txt".

The awk command

The awk command also lets you convert a file from UNIX to Windows and vice versa. To convert a Windows file to a UNIX file, enter the following command:

```
awk '{ sub("\r$", ""); print }' windows.txt > unix.txt
```

To convert a UNIX text file called "unix.txt" to a Windows text file called "windows.txt", enter the following command:

```
awk 'sub("$", "\r")' unix.txt > windows.txt
```

The tr command

```
/var/root #  
/var/root # tr -d '\15\32' < windows.txt > unix.txt  
/var/root #  
/var/root #
```

The tr command (transliterate) can be used to remove the carriage return characters and the "Ctrl-Z" characters from a Windows file. This can only be done if you are converting a file from Windows to UNIX. The command will be written as follows:

```
tr -d '\15\32' < winfile.txt > unixfile.txt
```

The tr command transliterates one character with another. In this [case](#), it is helping you omit unnecessary characters.

Using the Visual Editor (Vi)

If you are using the Visual Editor to view a file created on a Windows system, you can remove the carriage return characters by typing the following command line:

```
:1,$s/^M//g
```

To get the computer to input the ^M character, you need to hit "Ctrl + v" and then [press Return](#).

From <<https://www.maketecheasier.com/convert-files-from-linux-format-windows/>>

Dos2unix using tr command:

```
tr -d '\r' < input.file > new.file
```

From <<https://www.linuxquestions.org/questions/linux-software-2/dos2unix-command-not-found-820134/>>

```
sed 's/$\r/' unix.txt > win.txt
```

From <<https://www.unix.com/aix/177774-using-mutt-command-line-script.html>>

Bamboo

Wednesday, March 14, 2018 2:44 PM

Task enable and disable

<https://confluence.atlassian.com/bamkb/how-to-disable-multiple-plans-or-plan-branches-in-batch-945107133.html>

```
curl -X GET --user admin:admin "http://10.64.65.20:8085/bamboo/rest/api/latest/result/PROJ2-STAGETEST-JOB1?buildstate"
```

<http://10.64.65.20:8085/browse/HSRI-BUILDHSRIIESRELEASEBRANCH-729/log>

```
curl -u npanguluri:2WrWitpi "http://10.64.65.20:8085/bamboo/rest/api/latest/result/HSRI-BUILDHSRIIESRELEASEBRANCH-JOB1-729?expand=testResults"
```

```
curl -u npanguluri:2WrWitpi "http://10.64.65.20:8085/bamboo/rest/api/latest/result/status/HSRI-BUILDHSRIIESRELEASEBRANCH-729?buildstate"
```

```
curl -u npanguluri:2WrWitpi "http://10.64.65.20:8085/bamboo/rest/api/latest/result/HSRI-BUILDHSRIIESRELEASEBRANCH-729?expand&favourite&start-index&max-results"
```

below are giving same output:

```
curl -u npanguluri:2WrWitpi "http://10.64.65.20:8085/rest/api/latest/result/\$PlanKey/\$BuildNumber?expand=testResults"
```

```
curl -u npanguluri:2WrWitpi "http://10.64.65.20:8085/rest/api/latest/result/HSRI-BUILDHSRIIESRELEASEBRANCH/729?expand=testResults.failed"
```

Output:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?><result restartable="false" onceOff="false" continuable="false" id="79403403" number="727" lifeCycleState="Finished" state="Successful" key="HSRI-BUILDHSRIIESRELEASEBRANCH-727" expand="changes,metadata,plan,vcsRevisions,artifacts,comments,labels,jiralssues,stages"><link rel="self" href="http://10.64.65.20:8085/rest/api/latest/result/HSRI-BUILDHSRIIESRELEASEBRANCH-727"/><plan enabled="true" type="chain" shortKey="BUILDHSRIIESRELEASEBRANCH" shortName="6-BUILD-HSRIIES-ReleaseBranch" name="HSRI - 6-BUILD-HSRIIES-ReleaseBranch" key="HSRI-BUILDHSRIIESRELEASEBRANCH"><link rel="self" href="http://10.64.65.20:8085/rest/api/latest/plan/HSRI-BUILDHSRIIESRELEASEBRANCH"/></plan><planName>6-BUILD-HSRIIES-ReleaseBranch</planName><projectName>HSRI</projectName><buildStartTime>2018-03-12T07:36:09.000-04:00</buildStartTime><prettyBuildStartTime>Mon, 12 Mar, 07:36 AM</prettyBuildStartTime><buildCompletedTime>2018-03-12T07:50:19.000-04:00</buildCompletedTime><prettyBuildCompletedTime>Mon, 12 Mar, 07:50 AM</prettyBuildCompletedTime><buildDurationInSeconds>850</buildDurationInSeconds><buildDuration>850377</buildDuration><buildDurationDescription>14 minutes</buildDurationDescription><buildRelativeTime>15 hours ago</buildRelativeTime><vcsRevisionKey>159006</vcsRevisionKey><vcsRevisions size="1" max-result="1" start-index="0"/><buildTestSummary>No tests found</buildTestSummary><successfulTestCount>0</successfulTestCount><failedTestCount>0</failedTestCount><quarantinedTestCount>0</quarantinedTestCount><buildReason>Manual run by &lt;a href=&quot;&quot;">http://10.64.65.20:8085/browse/user/sjangam&gt;&lt;/a&gt;</buildReason><artifacts size="0" max-result="0" start-index="0"/><comments size="0" max-result="0" start-index="0"/><labels size="0" max-result="0" start-index="0"/><jiralssues size="6" max-result="6" start-index="0"/><stages size="3" max-result="3" start-index="0"/><changes size="7" max-result="7" start-index="0"/><metadata size="2" max-result="2" start-index="0"/></result>
```

to get the value of state from the above xml

```
state=$(sed -n -e 's/.*/<result>\(.*)\|</result>.*\|1/p' <<< test.xml) - failed
```

```
title=$(grep -oPm1 "(?=<title>)\\[\\^<]\\+" <<< test.xml - failed
```

```
xmlstarlet sel -t -m '/>result[1]' -v . -n <test.xml - cmd not found
```

```
curl -u npanguluri:2WrWitpi "http://10.64.65.20:8085/bamboo/rest/api/latest/result/HSRI-BUILDHSRIIESRELEASEBRANCH-JOB1-729?expand=testResults"
```

```
echo 'cat //result/@state' | xmllint --shell "test.xml" > tmp.log - worked
```

```
grep '=tmp.log | cut -d\ -f 2 - worked
```

```
echo 'cat //result/@state' | xmllint --shell "test.xml"
```

```
echo 'cat //result/@state' | xmllint --shell "test.xml" > tmp.log
```

```
echo tmp.log | sed 's/.*=//'
```

```
cat tmp.log | sed 's/.*=//'
```

```
grep '=tmp.log | cut -d\ -f 3,4
```

```
grep '=tmp.log | cut -d\ -f 1
```

```
grep '=tmp.log | cut -d\ -f 1,2,3,4,5,
```

```
grep '=tmp.log | cut -d\ -f 1,2,3,
```

```
grep '=tmp.log | cut -d\ -f 1,2,
```

```
grep '=tmp.log | cut -d\ -f 1,
```

```
grep '=tmp.log | cut -d\ -f 2
```

```
cut -d "" -f2 < tmp.log - worked
```

```
sed -e :a -e 'N; s/\n/,/g; ta' tmp.log > tmp1.log
```

```
cut -d "" -f1 < tmp2.log
```

```
cut -d "" -f1 < tmp1.log
```

```
vi xyz.log
```

```
sed 's/.*/\\(...\\)\\|\\1/' xyz.log
```

```
cat xyz.log
```

```
sed 's/.*/\\(...\\)\\|\\1/' xyz.log
```

```
vi abc.log
```

```
paste -d ";" xyz.log abc.log
```

```
paste -d " " xyz.log abc.log
```

```
paste -d "" xyz.log abc.log
```

```
/usr/bin/mutt -s "[TECH Notification] :: [Deployment Logger]" -a /opt/HSRI/SVN/checkout/buildversions/versionlogger/deployment_logger.csv -c vijakumar@deloitte.com npanguluri@deloitte.com
```

```
usr/bin/mutt -s "Test Mail Attachment" -a /opt/HSRI/SVN/checkout/buildversions/versionlogger/deployment_logger.csv npanguluri@deloitte.com
```

Permissions

Tuesday, March 20, 2018 12:00 PM

Octal	Binary
0	0 0 0
1	0 0 1
2	0 1 0
3	0 1 1
4	1 0 0
5	1 0 1
6	1 1 0
7	1 1 1

From <<https://ryanstutorials.net/linuxtutorial/permissions.php>>

Mail

Monday, April 9, 2018 12:26 PM

```
echo "Please find the attached HTML for TT config in all UAT's - Report Date : `date`" | mutt -s "UAT's TT Config - `date`" -a /opt/HSRI/SVN/checkout/html/deployment_logger.csv `echo npanguluri@deloitte.com`
```

```
echo "cat /opt/HSRI/SVN/checkout/html/deployment_logger.csv" | mutt -s "[TECH Notification] :: [Deployment Logger]" -a /opt/HSRI/SVN/checkout/html/deployment_logger.csv `echo npanguluri@deloitte.com`
```

```
mutt -e "set content_type=text/html" -s "[TECH Notification] :: [Deployment Logger]" npanguluri@deloitte.com </opt/HSRI/SVN/checkout/html/deployment_logger.html
```

```
mutt -e "set content_type=text/html" Email address -s "subject" < test.html
```

```
mutt -a /opt/HSRI/SVN/checkout/html/deployment_logger.csv -e "my_hdr Content-Type: text/html/attachment" npanguluri@deloitte.com -s "[TECH Notification] :: [Deployment Logger]" </opt/HSRI/SVN/checkout/html/deployment_logger.html
```

```
mutt -e "set content_type=text/html" npanguluri@deloitte.com -s "[TECH Notification] :: [Deployment Logger]" -a /opt/HSRI/SVN/checkout/html/deployment_logger.csv </opt/HSRI/SVN/checkout/html/deployment_logger.html
```

To send multiple files in a mail --- working

```
echo Test | mutt -s Test $(printf -- '-a %q' *.html) -- npanguluri@deloitte.com
```

To see if any mails are in queue:

```
mailq
```

CURL

Monday, April 9, 2018 12:26 PM

```
curl --user admin:admin -d "url=http://10.64.65.20:9115/sonar/projects/favorite" \ -d "resolutions=[[1240,768],[640,1136]]" http://getscreenshots.io/api/ss -o /home/pthadur/sonar_nb.png
curl --user admin:admin -L "http://10.64.65.20:9115/sonar/projects/favorite?url=http://mobilito.net/&key=my\_api\_key&width=640&size=page" -o /home/pthadur/sonar.html
```

```
// Simple GET Request
curl https://jsonplaceholder.typicode.com/posts
curl https://jsonplaceholder.typicode.com/posts/1
// Include HTTP Header (-i)
curl --include https://jsonplaceholder.typicode.com/posts/1
// Header Only (-head, -l)
curl --head https://jsonplaceholder.typicode.com/posts/1
// Write output to file (-o, -output)
curl -o test.txt https://jsonplaceholder.typicode.com/posts/1
// Download File (-O, --remote-name)
curl -O http://i.imgur.com/QRIAg0b.png
// Limit Transfer Rate
curl -O --limit-rate 1000B http://i.imgur.com/QRIAg0b.png
// Spoof user agent
curl -O test.txt http://traversymedia.com/test.txt -A "Mozilla"
// POST Data (-d, --data)
curl -d "title=Hello&body=Hello World" https://jsonplaceholder.typicode.com/posts
// PUT Data (-X PUT -d)
curl -X PUT -d "title=Hello&body=Hello World" https://jsonplaceholder.typicode.com/posts/1
// Delete Data (-X DELETE)
curl -X DELETE https://jsonplaceholder.typicode.com/posts/1
// Secured Routes
curl -u brad:mypassword https://jsonplaceholder.typicode.com/posts/1
// Follow Redirection (-L)
curl http://google.com
curl -L http://google.com
// Download Files From FTP Server
$ curl -u ftpuser:ftppass -O ftp://x.x.x/public\_html/sopmefile.php
// Upload via FTP
curl -u test@traversymedia.com:123456! -T hello.txt ftp://ftp.traversymedia.com
// Download via FTP
curl -u test@traversymedia.com:123456! -O ftp://ftp.traversymedia.com/hello.txt
```

From <<http://traversymedia.com/downloads/curl-tutorial.txt>>

Curl videos

Friday, November 30, 2018 8:26 PM

LINUX: HTTP-Scripting-With-curl



Understanding HTTP Request Response Messages



powershell

Tuesday, June 5, 2018 3:27 PM

```
GrantEveryoneFullControlToFileOrFolder("C:\Program Files\Contoso");
```

From <https://stackoverflow.com/questions/39524492/run-executable-file-without-uac-popup-as-administrator?utm_medium=organic&utm_source=google_rich_qa&utm_campaign=google_rich_qa>

To disable UAC(user account access in windows)

```
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System
```

From <https://stackoverflow.com/questions/39524492/run-executable-file-without-uac-popup-as-administrator?utm_medium=organic&utm_source=google_rich_qa&utm_campaign=google_rich_qa>

du -sh * command in powershell

```
ls c:\Users\npanguluri | select Name, @{Name="Type";Expression={if($_.psIsContainer){"Directory"}else{"File"}}, @{Name="Size(GB)";Expression={[Math]::Round($($_.FullName -recurse| measure Length -sum).Sum/1GB, 3)}}}| sort -property "Size(GB)" -desc | Select -First 20
```

To get a single folder size:

```
PS C:\Users\npanguluri> ls -r | measure -s Length
```

Result:

```
Count : 58464
```

```
Average :
```

```
Sum : 261025998377
```

```
Maximum :
```

```
Minimum :
```

```
Property : Length
```

Vi shortcuts

Tuesday, July 10, 2018 4:36 PM

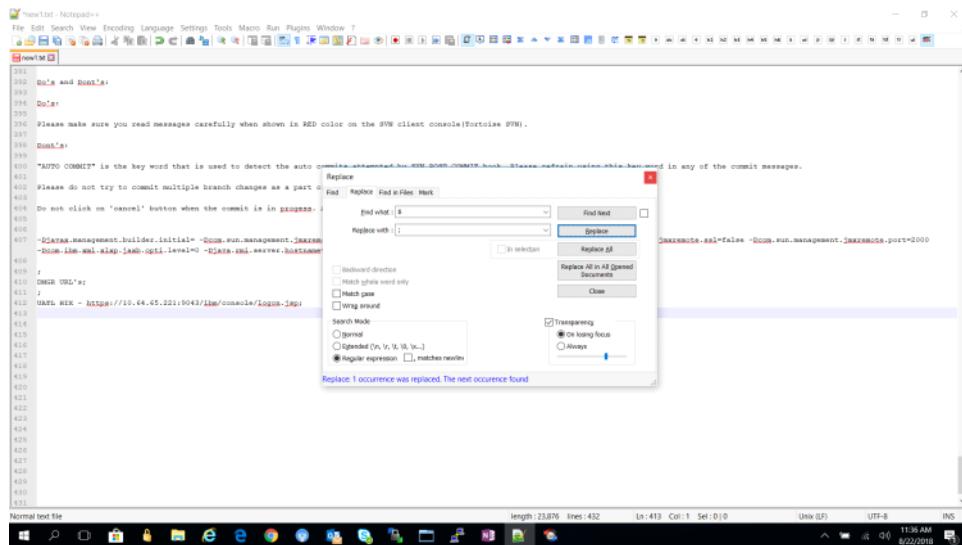
Insert:	
i	Inserts text to the left of the cursor.
I	Inserts text at the beginning of the line, no matter where the cursor is positioned on the current line.
Append:	
a	Begins inserting after the character (append) on which the cursor is positioned.
A	Begins inserting at the end of the current line, no matter where the cursor is positioned on that line.
Open:	
o	Begins inserting text on a new, empty line that is opened for you, below the current line. This is the only command that will allow you to insert text BELOW the LAST line of the file.
O	Begins inserting text on a new, empty line that is opened for you, above the current line. This is the only command that will allow you to insert text ABOVE the FIRST line of the file.
Deleting, Copying and Changing:	
d	Delete text.
y	Copy text (that is, yank it into a holding area for later use).
c	Change text from one thing to another, which you will type.
!	Filter text through a program.
<	Shift a region of text to the left.
Single Key Movements:	
h	Move cursor to the left one character.
l	Move cursor to the right one character.
j	Move cursor down one line.
k	Move cursor up one line.
^	Move cursor to the beginning of the line.
\$	Move cursor to the end of the current line.
1G	Move cursor to the first line of your document. Other numbers will move to the line specified by number (ex. 50G goes to the 50th line).
G	Move cursor to the last line of your file.
CTRL U	Move cursor up in file 12 lines. Hold down the key marked CTRL (stands for control) and type U. CTRL is like another shift key.
CTRL D	Move cursor down in file 15 lines.
w	Move cursor forward to the next word, stopping at punctuation.
W	Move cursor forward to the next word, ignoring punctuation.
e	Move cursor forward to the end of the word, stopping at punctuation.
E	Move cursor forward to the end of the word, ignores punctuation.
b	Move cursor backwards to the previous word, stopping at punctuation.
B	Move cursor backwards to the previous word, ignores punctuation.
H	Move cursor to the top line of the screen, (as opposed to the top of the document which may not be the same place).
M	Move cursor to the middle of the screen.
L	Move cursor to the last line on the screen.
%	Move cursor to the matching parenthesis, bracket or brace. Great for debugging programs.
(Move cursor to the beginning of the previous sentence (where a punctuation mark and two spaces define a sentence).
)	Move cursor to the beginning of the next sentence.
{	Move cursor to the beginning of the current paragraph.
}	Move cursor to the beginning of the next paragraph.
;	Repeat the last f or F command (see below).
Almost Single Key Movements:	
'	Move cursor to a previously marked location in the file. (ex. ma marks the location with the letter a, so a (apostrophe a) moves back to that location).
f	Find the character corresponding to the next keystroke typed. Move the cursor to the next occurrence of that character (on the current line only).
F	Same as f but movement is backwards.
Useful:	
x	Delete character(s) to the right of the cursor, starting with the one beneath it.
r	Replace the character under the cursor with the next character you type. This can be a very useful command. If you wanted to split up a line between two words, you might put the cursor on the blank space before the word you would like to go on the next line and type r . This would replace the space between the words with a carriage return and put the rest of the line onto a new line.
J	Join lines; the opposite of the line splitting operation above. This will join the current line with the next line in your file. Also very useful.
R	Replace lines; puts you in INSERT mode but types over the characters that are already on the current line.
p	Paste line(s) you deleted (or yanked) back into the file. This is an excellent command if you want to move a few lines somewhere else in your file. Just type 3dd to delete three lines, for example, and then move to where you want those lines to be and type p to paste the lines back into your file below the cursor.
.	The period . command repeats the last text modification command, whatever it may have been (insert, deletion, etc.).
:r filename RETURN	Read a file into the current file being edited. The file be added gets placed below the current cursor position. Please note the colon : before the r in this command.
CTRL L	Redraw the screen. If somebody writes to you while you are in the middle of vi and junk appears all over your screen, don't panic, it did not hurt your file, but you will have to

	hold down the CTRL key and type L to clean it up (CTRL L).
d\$	Delete (including the current character), to the end of the line.
d^	Delete (excluding the current character), to the beginning of the line.
dw	Delete a word(s), stops at punctuation.
dW	Delete a word(s), ignoring punctuation.
de	Delete to the end of next word.
dd	Delete a line(s).
dG	Delete from the current line to the end of the document. CAREFUL: Slightly dangerous.
dH	Delete from the current line to the line shown at the top of the screen.
Search and Replace:	
/the	Finds the next occurrence of the. This will also find their, them, another, etc.
?the	Finds the previous occurrence of the.
n	Repeats the last search command. Finds the Next occurrence.
d/the	Deletes until the next occurrence of the. This is to demonstrate how the delete prefix can be used with any cursor movement command.
:g/old word/s//new word/gc	This will find all occurrences of old word and replace them with new word. The optional c at the end of the command tells vi that you would like to confirm each change. Vi will want you to type in y to make the change or n to skip that replacement. Great for spelling fixes.
Exit:	
ESC :wq RETURN	Save and exit VI
ESC :q! RETURN	Exit WITHOUT saving changes
More:	
ESC D	Delete the line contents from cursor position till the end of the current line.
ESC ZZ	Save and exit current file (identical to ESC :wq RETURN)
ESC :w filename RETURN	write the contents of the current file into the file name
ESC :lineNumStart, lineNumEnd d RETURN	delete the lines from lineNumStart to lineNumEnd
ESC :lineNumStart, lineNumEnd w filename RETURN	write the lines from beginning at lineNumStart up to lineNumEnd into a new file with name filename
ESC ~ :	toggle the case of the character on which the cursor exists.

Notepad ++

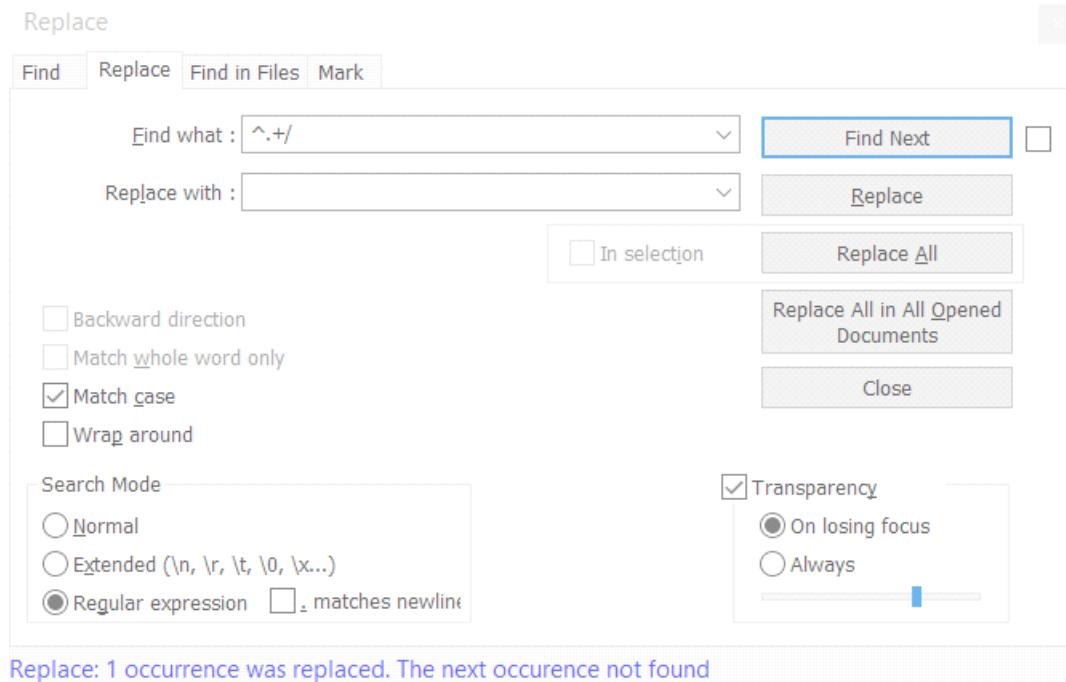
Wednesday, August 22, 2018 11:12 AM

To insert ';' at the end of each line



To remove everything before last / in a file

^.+/

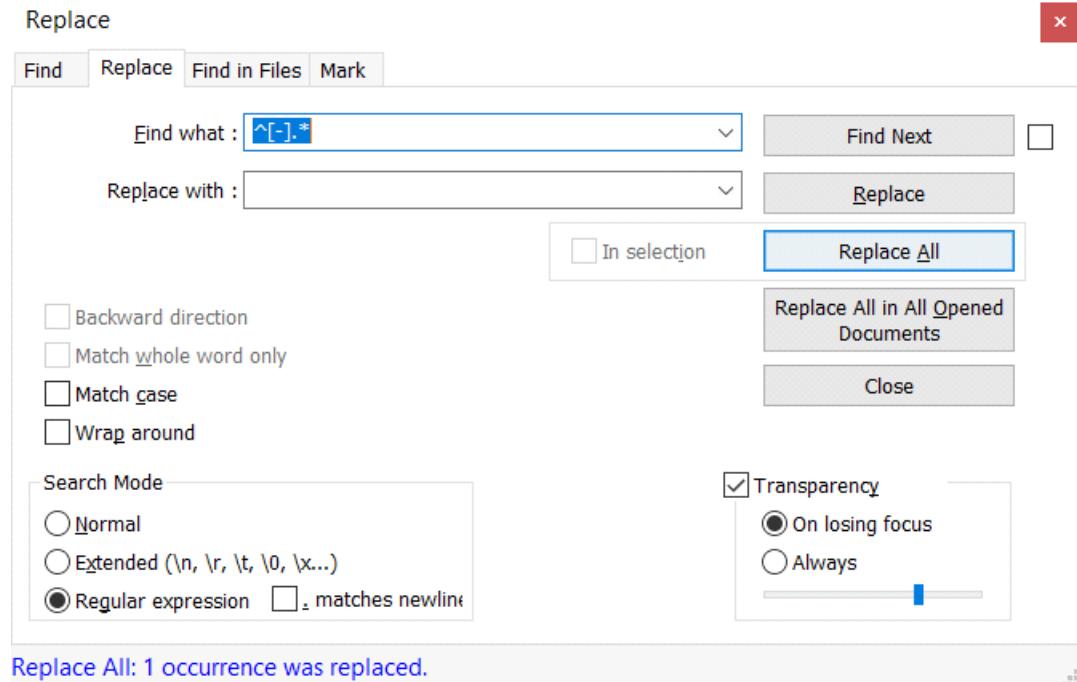


Sort and remove duplicates in a file:

<https://medium.com/@heitorhherzog/compare-sort-and-delete-duplicate-lines-in-notepad-2d1938ed7009>

To remove all the line starting with '-'

`^[-].*`



head

Friday, October 5, 2018 10:42 AM

To get the 4 th line in a file:

```
head -4 x.log | tail -1
```

Sed - Stream Editor(Text processing utility)

Friday, October 5, 2018 10:43 AM

To know the version of sed:

```
sed --version
#####
# Sed command to remove all the text until before last white space:
sed 's/.*/'
From <https://askubuntu.com/questions/592028/remove-all-text-before-last-space-in-text-file-from-cl>
#####
# To get the 4th line in a file:
sed -n '4p' x.log
#####
# To suffix at the end of every line in a file:
sed 's/$/g'
#####
# To prefix at the end of every line in a file:
sed 's/^/g'
#####
# To get the key value from a file and append some text to the existing value.
sed -i '/^RELEASESTATUS=/s/$/xyz/' keyvalue.txt
```

To get the key value from a file and append some text and replace full line.

```
sed -i 's/^RELEASESTATUS=.*$/xyz/' keyvalue.txt
```

From <<https://unix.stackexchange.com/questions/452587/how-to-append-text-for-value-in-key-value-pair-in-a-text-file-that-has-many-such>>

To find a string and replace the whole line using sed:

```
sed -i "$variable/c \\\$variable1"
```

Removing empty line from a file
sed -i '/^\$/d' discrepant.csv

To remove the 1st character of 1st line in a file:

```
sed -i.bak '1s//.' File
```

From <<https://it.toolbox.com/question/how-to-remove-first-character-from-a-unix-file-091908>>

To remove the 1st character of each line in a file:

```
sed "s/^./g" files
```

From <<https://www.commandlinefu.com/commands/view/11631/remove-the-first-character-of-each-line-in-a-file>>

Remove content from a file

```
sed '/.txt/d' d.txt
```

```
Sed -i '/.txt/d' d.txt
```

```
nohup /home/opensrc/nb/checkout.sh | sed -e "s/^/$(date +[%Y-%m-%d %H:%M:%S]) /" > /home/opensrc/nb/checkout.log &
```

SED:

To display system users & their default login shell, you will write:

```
sed -e 's/:.*:/ /etc/passwd
```

The substitution command will tell _sed_ to replace

any text between the first and the last colon of each line by a single

colon -- effectively removing any content between colons of the original file.

The original file remains unchanged, and the output is sent to the standard output
(the terminal)

To list last logged in users except for root, you will write:

```
last | sed '/^root /d'
```

A really common use of _sed_ in being part of a pipeline. Here I use
it to filter out -- using the (d)elete command -- all lines starting by
the word `root` (`^` means the start of the line).

To add C-style comments around some code snippet, you will write:

```
sed -i -e '1i/* -e '$a*/' code.snippet
```

or, using only the POSIX syntax:

```
sed -e '1\  
/* -e '$a'
```

```
/*' code.snippet > tmp.file
```

```
mv -f tmp.file code.snippet
```

The (i)insert command add text _above_ the selected line. And the (a)ppend command
adds text _after_ it. Among other improvements, GNU sed adds the '-i' option
to change files in place (instead of manually creating temporary files). And
the 'i' and 'a' commands can be written in only one line.

```
#####
$ sed 's/[:blank:]*//;s/[:blank:]*' $// < file
```

Example

```
$ echo -e "\t blahblah\t " | sed 's/[^[:blank:]]*//;s/[^[:blank:]]*' $//
```

Most of the GNU tools that make use of regular expressions (regex) support these classes.

```
[:alnum:] - [A-Za-z0-9] Alphanumeric characters
[:alpha:] - [A-Za-z] Alphabetic characters
[:blank:] - [ \x09] Space or tab characters only
[:cntrl:] - [\x00-\x19\x7F] Control characters
[:digit:] - [0-9] Numeric characters
[:graph:] - [!-~] Printable and visible characters
[:lower:] - [a-z] Lower-case alphabetic characters
[:print:] - [-~] Printable (non-Control) characters
[:punct:] - [!-/:-@[-{--]} Punctuation characters
[:space:] - [ \t\n\f] All whitespace chars
[:upper:] - [A-Z] Upper-case alphabetic characters
[:xdigit:] - [0-9a-fA-F] Hexadecimal digit characters
```

From <<https://unix.stackexchange.com/questions/102008/how-do-i-trim-leading-and-trailing-whitespace-from-each-line-of-some-output>>

To get the tag value from the XML.

#Text.xml content is like below:

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- a time instant -->
<time timezone="PST">
<hour>11</hour>
<minute>59</minute>
<second>59</second>
</time>
```

sed -n '/hour/{s/.*<hour>(.*)</hour>.*\1/p}' text.xml

<https://www.theunixschool.com/2012/11/howto-retrieve-extract-tag-value-xml-linux.html>

To get the tag value from the XML and replace it with another value.

sed "s/<hour>.*</hour>/<hour>15</hour>/" text.xml ---> This will replace 11 to 15.

Using xmlstrlet:

xmlstarlet ed -u /config/hour -v 192.168.1.6 -u /config/minute -v 9909 text.xml ---- not tested as xmlstrlet is not installed on 20 server.

```
#####
#####
```

tr

Friday, October 5, 2018 10:44 AM

```
#####
# To remove all tabs from a file:
tr -d '\t'
```

```
#####
# To remove all empty line
tr -d '\n'
```

Date formats

Thursday, November 8, 2018 12:50 PM

```
date '+%d-%b-%Y-%I-%M-%p'  
CurrentDate=$(date '+%d-%b-%Y-%I-%M-%p')  
https://www.computerhope.com/unix/udate.htm
```

```
ls -l --time-style=+"%Y-%m-%dT%H:%M:%S"
```

```
https://www.geeksforgeeks.org/date-command-linux-examples/
```

grep

Friday, November 16, 2018 1:32 PM

awk

Wednesday, November 28, 2018 12:02 PM

```
#####
#find all of the distinct file extensions in a folder hierarchy:
find . -type f !-path "*svn*" | awk -F '.'{a[$NF]++}{print $NF}
#####
Recursive version:
find . -type f | sed -e 's/.*\// | sed -e 's/.*\// | sort -u
If you want totals (how many times the extension was seen):
find . -type f | sed -e 's/.*\// | sed -e 's/.*\// | sort | uniq -c | sort -rn
Non-recursive (single folder):
for f in *.*; do printf "%s\n" "${f##*.}"; done | sort -u
From <https://stackoverflow.com/questions/1842254/how-can-i-find-all-of-the-distinct-file-extensions-in-a-folder-hierarchy>
#####
Remove the entire row if the the first column is having a null in a csv file:
awk -F ";" '!($1 == "null")' ${OUTPUTDIR}/temp/${BranchName}vs${ENV}_${component}_DIFFREPORT.csv > ${OUTPUTDIR}/temp/${BranchName}vs${ENV}_${component}_DIFFREPORT1.csv && mv ${OUTPUTDIR}/temp/${BranchName}vs${ENV}_${component}_DIFFREPORT1.csv ${OUTPUTDIR}/temp/${BranchName}vs${ENV}_${component}_DIFREPORT.csv
#####
Remove all the properties from a file
awk '/.txt/' filename
#####
To print custom message:
awk 'BEGIN { print "Month Crates"
          print "-----"
          { print $1, $2 }'
From <https://www.oreilly.com/library/view/effective-awk-programming/0596000707/ch04.html>
#####
To remove both leading and trailing spaces:
awk '{$1=$1}'
```

Zip commands

Tuesday, December 4, 2018 11:57 AM

<https://www.slashroot.in/linux-zip-command-examples-compressing-and-decompressing-files-securely>

Find all the files in all sub directories and zip them in to one single zip file.(orignal files will be moved)
zip -m name.zip `find . -name tmp.txt -print`

list

Wednesday, December 12, 2018 11:59 AM

```
FILENAMES=`ls -al | grep '^-' | awk '{print $9}' | sed 's/\.[a-z]*//g'`
```

sshpass

Saturday, December 15, 2018 7:01 AM

```
sshpass -p "password" scp -o UserKnownHostsFile=/dev/null -o StrictHostKeyChecking=no -r user@remote-machine:/home/QA.txt /home/faadmin/
```

From <<https://www.linuxquestions.org/questions/programming-9/scp-using-sshpass-4175496819/>>

```
sshpass -p 'muleuser@123' ssh muleuser@10.64.33.31 'tar -cvf /home/muleuser/Apps_09Aug2016.tar /home/muleuser/mule-standalone-3.4.0/apps'  
sshpass -p 'muleuser@123' ssh muleuser@10.64.33.31 'rm /home/muleuser/mule-standalone-3.4.0/apps/MCI-anchor.txt'  
sshpass -p 'muleuser@123' ssh muleuser@10.64.33.31 '/home/muleuser/mule-standalone-3.4.0/bin/mule stop'  
sshpass -p muleuser@123 scp /home/pthadur/MCI.zip muleuser@10.64.33.31:/opt/mule-standalone-3.4.0/apps/  
sshpass -p 'muleuser@123' ssh muleuser@10.64.33.31 '/home/muleuser/mule-standalone-3.4.0/bin/mule start'
```

Java install/upgrade

Monday, February 4, 2019 10:25 AM

Installation of the 64-bit JDK on RPM-based Linux Platforms

This procedure installs the Java Development Kit (JDK) for 64-bit RPM-based Linux platforms, such as Red Hat and SuSE, using an RPM binary file (.rpm) in the system location. You must be root to perform this installation.

These instructions use the following file:

```
jdk-8uversion-linux-x64.rpm
```

1. Download the file.
Before the file can be downloaded, you must accept the license agreement.
2. Become root by running `su` and entering the super-user password.
3. Uninstall any earlier installations of the JDK packages.
`# rpm -e package_name`

4. Install the package.
`# rpm -ivh jdk-8uversion-linux-x64.rpm`

To upgrade a package:
`# rpm -Uvh jdk-8uversion-linux-x64.rpm`

5. Delete the .rpm file if you want to save disk space.
6. Exit the root shell. No need to reboot.

Starting with version 8u40, the JDK installation is integrated with the *alternatives* framework and after installation, the *alternatives* framework is updated to reflect the binaries from the recently installed JDK. Java commands such as `java`, `javac`, `javadoc`, and `javap` can be invoked from the command line.

Using the `java -version` command, users can confirm the default (recently installed) JDK version.

In addition, users can now check which specific RPM package provides the java files:

```
rpm -q --whatprovides java
```

From <https://docs.oracle.com/javase/8/docs/technotes/guides/install/linux_jdk.html#BJFHFDG>

Installing Java related info - <https://developers.redhat.com/articles/using-java-rhel-7-openjdk-8/>

Rsync/xcopy

Thursday, March 14, 2019 10:18 PM

<https://www.tecmint.com/rsync-local-remote-file-synchronization-commands/>

<https://www.lifewire.com/xcopy-command-2618103>

Windows shortcuts

Monday, April 22, 2019 9:09 PM

<https://www.youtube.com/watch?v=VeAK7Bv4F1o>

security

Tuesday, June 11, 2019 12:54 PM

```
[pthadur@ENT-DV-UHBLD01 ~]$ echo "mypassword" | openssl enc -base64  
bXlwYXNzd29yZAo=  
[pthadur@ENT-DV-UHBLD01 ~]$ echo " bXlwYXNzd29yZAo=" | openssl enc -base64 -d  
Mypassword
```

Or

Since when encoding a password with plain base64 has been encryption without even having a password to encrypt it? It's just plain easy to guess "oh, let's try if that's base64 encoding."

```
echo "mypassword"|openssl enc -bf-cbc > password.dat  
openssl enc -bf-cbc -d < password.dat
```

This will ask for a password, uses Blowfish Cipher Block Chaining mode and the output is plain raw data.
And still after echoing you have to clear your buffer and delete that line from ~/.history or whatever.

From <<https://it.toolbox.com/question/hiding-password-in-shell-scripts-011513>>

To make shell script non readable but executable :

It is possible by using the suid bit. The script will be run under your id and not the user's one which might be risky though.
Code:

```
# cat hi.ksh  
#!/bin/ksh -p  
echo hello  
# chmod 04711 hi.ksh  
# ls -l hi.ksh  
-rws--x--x 1 jliagre root 25 janv 6 17:02 hi.ksh  
# su guest  
$ ./hi.ksh  
hello  
$ cat hi.ksh  
cat: cannot open hi.ksh: Permission denied
```

From <<https://www.unix.com/unix-for-advanced-and-expert-users/95779-script-without-read-permission-but-execute-script.html>>

Sudo

Friday, June 21, 2019 10:20 AM

Let us first list all users in the system. To do so, run: `$ awk -F':' '{ print $1}' /etc/passwd`
You can also use the following command to list all users: `$ compgen -u`

Among all users, let us only find the sudo or super users in our Linux system. `$ grep '^sudo:.*$' /etc/group | cut -d: -f4`
`sk,ostechnix`

Also, you can use “getent” command instead of “grep” to get the same result. `$ getent group sudo | cut -d: -f4`
`sk,ostechnix`

As you see in the above output, “sk” and “ostechnix” are the sudo users in my system.

In the above examples, we listed all sudo users. You might want to know whether a certain user has sudo privilege or not.
To do so, run: `$ sudo -l -U sk`

Sample output:

Matching Defaults entries for sk on ubuntuserver:

```
env_reset, mail_badpass,  
secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin\:/snap/bin
```

User sk may run the following commands on ubuntuserver:

(ALL : ALL) ALL

As you see, the user named “sk” can perform all commands. So, he is in the sudo group. Let us check another user.

`$ sudo -l -U senthil`

Sample output:

User senthil is not allowed to run sudo on ubuntuserver.

Oops! The user “senthil” is not allowed to run sudo, so he is just a normal user.

We can also find if an user has sudo access by running the following command: `$ sudo -nv`

If you get nothing as output, the user still has sudo access.

If you see an output like below, then the user doesn't have sudo access.

`$ sudo -nv`

Sorry, user senthil may not run sudo on ubuntuserver.

python

Wednesday, July 10, 2019 11:12 AM

```
stdbuf -oL python script.py > log
```

Or

```
python -u script.py >> log
```

From <<https://unix.stackexchange.com/questions/182537/write-python-stdout-to-file-immediately>>

```
#####
>>>s = 'https://docs.python.org/3.4/tutorial/interpreter.html'  
>>>re.search(r'(.*)/(.*)',s).group(2)  
'interpreter.html'
```

From <<https://stackoverflow.com/questions/29657384/remove-part-of-string-before-the-last-forward-slash>>

```
#####
# Python code to remove duplicate elements  
def Remove(duplicate):  
    final_list = []  
    for num in duplicate:  
        if num not in final_list:  
            final_list.append(num)  
    return final_list  
  
# Driver Code  
duplicate = [2, 4, 10, 20, 5, 2, 20, 4]  
print(Remove(duplicate))
```

From <<https://www.geeksforgeeks.org/python-remove-duplicates-list/>>

Ps -ef

Friday, August 23, 2019 12:19 PM

```
ps -eo pid,ppid,cmd,%mem,%cpu --sort=-%mem | head
```

From <<https://www.tecmint.com/find-linux-processes-memory-ram-cpu-usage/>>

```
ps -p 8299 -o etimes
```

From <<https://www.ostechnix.com/find-long-process-running-linux/>>

Cut

Friday, September 27, 2019 11:06 AM

```
rev | cut -d ' ' -f 1 | rev
```

From <<https://askubuntu.com/questions/592028/remove-all-text-before-last-space-in-text-file-from-cli>>

```
cut -c32-
```

To get the filenames from the absolute path:

```
c="tags/CriticalProjects-HSRIIESInternalLib/RI-UHIP-ResourcePool.jar"
```

```
echo $c | rev | cut -d"/" -f1 | rev
```

Result --> RI-UHIP-ResourcePool.jar

To remove the extension you can use, assuming the file name has only ONE dot (the extension dot):

```
cut -d"." -f1
```

Result --> tags/CriticalProjects-HSRIIESInternalLib/RI-UHIP-ResourcePool

From <<https://stackoverflow.com/questions/3362920/get-just-the-filename-from-a-path-in-a-bash-script/3362952>>

for

Monday, October 14, 2019 4:42 PM

```
for port in (57135 57136); do netstat -a | grep $port; done
```

3 WAYS TO GET THE NTH LINE OF A FILE IN LINUX

The need to get/print a particular line of a file on the Linux shell is a common task. Luckily there are various ways to do this. Below are three great ways to **get the nth line of a file in Linux**.

1. head / tail

Simply using the combination of the `head` and `tail` commands is probably the easiest approach. Below is an example using `head` and `tail` to read the 25th line of `sample_data_1.txt`:

```
1 cat sample_data_1.txt | head -25 | tail -1
```

2. sed

There are a couple of nice ways to do this with `sed`. The first is with the `p` (print) command, and the other is with the `d` (delete) command. The `n` option with the print command is used to only print lines explicitly indicated by the command. For example, `sed` will output the 25th line of `sample_data_1.txt` with each of the commands below:

```
1 #print/p command
2 cat sample_data_1.txt | sed -n '25p'
3
4 #delete/d command
5 cat sample_data_1.txt | sed '25d'
```

3. awk

`awk` has a built in variable `NR` that keeps track of file/stream row numbers. `awk` syntax and idioms can be hard to read, so below are three different ways to print line 25 of `sample_data_1.txt` file using `awk`.

```
1 #awk example 1
2 cat sample_data_1.txt | awk 'NR==25'
3 #awk example 2
4 cat sample_data_1.txt | awk 'NR==25{print}'
5 #awk example 3
6 cat sample_data_1.txt | awk '{if(NR==25) print}'
```

From <<http://bigdatums.net/2016/02/22/3-ways-to-get-the-nth-line-of-a-file-in-linux/>>

find

Thursday, October 24, 2019 11:08 AM

```
find /tmp/ -depth -name "* *"
```

From <<https://unix.stackexchange.com/questions/215124/remove-whitespace-from-all-items-in-a-directory-and-sub-directory>>

If

Monday, December 16, 2019 3:51 PM

Operator syntax	Description
-a <FILE>	True if <FILE> exists. ⚠ (not recommended, may collide with -a for AND, see below)
-e <FILE>	True if <FILE> exists.
-f <FILE>	True, if <FILE> exists and is a regular file.
-d <FILE>	True, if <FILE> exists and is a directory .
-c <FILE>	True, if <FILE> exists and is a character special file.
-b <FILE>	True, if <FILE> exists and is a block special file.
-p <FILE>	True, if <FILE> exists and is a named pipe (FIFO) .
-S <FILE>	True, if <FILE> exists and is a socket file.
-L <FILE>	True, if <FILE> exists and is a symbolic link .
-h <FILE>	True, if <FILE> exists and is a symbolic link .
-g <FILE>	True, if <FILE> exists and has sgid bit set.
-u <FILE>	True, if <FILE> exists and has suid bit set.
-r <FILE>	True, if <FILE> exists and is readable .
-w <FILE>	True, if <FILE> exists and is writable .
-x <FILE>	True, if <FILE> exists and is executable .
-s <FILE>	True, if <FILE> exists and has size bigger than 0 (not empty).
-t <fd>	True, if file descriptor <fd> is open and refers to a terminal.
<FILE1> -nt <FILE2>	True, if <FILE1> is newer than <FILE2> (mtime). ⚠
<FILE1> -ot <FILE2>	True, if <FILE1> is older than <FILE2> (mtime). ⚠
<FILE1> -ef <FILE2>	True, if <FILE1> and <FILE2> refer to the same device and inode numbers .

String tests

Operator syntax	Description
-z <STRING>	True, if <STRING> is empty .
-n <STRING>	True, if <STRING> is not empty (this is the default operation).
<STRING1> = <STRING2>	True, if the strings are equal .
<STRING1> != <STRING2>	True, if the strings are not equal .
<STRING1> < <STRING2>	True if <STRING1> sorts before <STRING2> lexicographically (pure ASCII, not current locale!). Remember to escape! Use \<
<STRING1> > <STRING2>	True if <STRING1> sorts after <STRING2> lexicographically (pure ASCII, not current locale!). Remember to escape! Use \>

Arithmetic tests

Operator syntax	Description
<INTEGER1> -eq <INTEGER2>	True, if the integers are equal .
<INTEGER1> -ne <INTEGER2>	True, if the integers are NOT equal .
<INTEGER1> -le <INTEGER2>	True, if the first integer is less than or equal second one.
<INTEGER1> -ge <INTEGER2>	True, if the first integer is greater than or equal second one.
<INTEGER1> -lt <INTEGER2>	True, if the first integer is less than second one.
<INTEGER1> -gt <INTEGER2>	True, if the first integer is greater than second one.

Misc syntax

Operator syntax	Description
<TEST1> -a <TEST2>	True, if <TEST1> and <TEST2> are true (AND). Note that -a also may be used as a file test (see above)
<TEST1> -o <TEST2>	True, if either <TEST1> or <TEST2> is true (OR).
! <TEST>	True, if <TEST> is false (NOT).
(<TEST>)	Group a test (for precedence). Attention: In normal shell-usage, the "(" and ")" must be escaped; use "\(" and "\)"!
-o <OPTION_NAME>	True, if the shell option <OPTION_NAME> is set.

-v <VARIABLENAME>	True if the variable <VARIABLENAME> has been set. Use var[n] for array elements.
-R <VARIABLENAME>	True if the variable <VARIABLENAME> has been set and is a nameref variable (since 4.3-alpha)

From <https://wiki.bash-hackers.org/commands/classictest>

Normal pattern language

Sequence	Description
*	Matches any string , including the null string (empty string)
?	Matches any single character
X	Matches the character X which can be any character that has no special meaning
\X	Matches the character X, where the character's special meaning is stripped by the backslash
\\	Matches a backslash
[...]	Defines a pattern bracket expression (see below). Matches any of the enclosed characters at this position.

Bracket expressions

The bracket expression [...] mentioned above has some useful applications:

Bracket expression	Description
[XYZ]	The "normal" bracket expression, matching either X, Y or Z
[X-Z]	A range expression: Matching all the characters from X to Y (your current locale , defines how the characters are sorted!)
[:class:]	Matches all the characters defined by a POSIX® character class: alnum, alpha, ascii, blank, cntrl, digit, graph, lower, print, punct, space, upper, word and xdigit
[^...]	A negating expression: It matches all the characters that are not in the bracket expression
[!...]	Equivalent to [^...]
[...] or [-...]	Used to include the characters] and - into the set, they need to be the first characters after the opening bracket
[=C=]	Matches any character that is equivalent to the collation weight of C (current locale!)
[,.SYMBOL.]	Matches the collating symbol SYMBOL

Examples

Some simple examples using normal pattern matching:

- Pattern "Hello world" matches
- Hello world
- Pattern [Hh]"ello world" matches
 - ⇒ Hello world
 - ⇒ hello world
- Pattern Hello* matches (for example)
 - ⇒ Hello world
 - ⇒ Helloworld
 - ⇒ HelloWoRID
 - ⇒ Hello
- Pattern Hello world[[:punct:]] matches (for example)
 - ⇒ Hello world!
 - ⇒ Hello world.
 - ⇒ Hello world+
 - ⇒ Hello world?
- Pattern [[.backslash.]]Hello[[.vertical-line.]]world[[.exclamation-mark.]] matches (using collation symbols)
 - ⇒ \Hello|world!

Extended pattern language

If you set the [shell option](#) extglob, Bash understands some powerful patterns. A < PATTERN-LIST > is one or more patterns, separated by the pipe-symbol (PATTERN|PATTERN).

?(<PATTERN-LIST>)	Matches zero or one occurrence of the given patterns
*(<PATTERN-LIST>)	Matches zero or more occurrences of the given patterns
+(<PATTERN-LIST>)	Matches one or more occurrences of the given patterns
@(<PATTERN-LIST>)	Matches one of the given patterns
!(<PATTERN-LIST>)	Matches anything except one of the given patterns

Examples

[Delete all but one specific file](#)

rm -f !(survivor.txt)

Pattern matching configuration

Related shell options

option	classification	description
dotglob	globbing	see Pathname expansion customization
extglob	global	enable/disable extended pattern matching language, as described above
failglob	globbing	see Pathname expansion customization
nocaseglob	globbing	see Pathname expansion customization
nocasematch	pattern/string matching	perform pattern matching without regarding the case of individual letters
nullglob	globbing	see Pathname expansion customization
globasciiranges	globbing	see Pathname expansion customization

Bugs and Portability considerations

* Counter-intuitively, only the `[!chars]` syntax for negating a character class is specified by POSIX for shell pattern matching. `[^chars]` is merely a commonly-supported extension. Even dash supports `[^chars]`, but not posh.

* All of the extglob quantifiers supported by bash were supported by ksh88. The set of extglob quantifiers supported by ksh88 are identical to those supported by Bash, mksh, ksh93, and zsh.

* mksh does not support POSIX character classes. Therefore, character ranges like `[0-9]` are somewhat more portable than an equivalent POSIX class like `[:digit:]`.

* Bash uses a custom runtime interpreter for pattern matching. (at least) ksh93 and zsh translate patterns into regexes and then use a regex compiler to emit and cache optimized pattern matching code. This means Bash may be an order of magnitude or more slower in cases that involve complex back-tracking (usually that means extglob quantifier nesting). You may wish to use Bash's regex support (the `=~` operator) if performance is a problem, because Bash will use your C library regex implementation rather than its own pattern matcher.

TODO: describe the pattern escape bug <https://gist.github.com/ormaai/6195070>

ksh93 extras

ksh93 supports some very powerful pattern matching features in addition to those described above.

* ksh93 supports arbitrary quantifiers just like ERE using the `{from,to}(pattern-list)` syntax. `{2,4}foo`bar matches between 2-4 "foo"s followed by "bar". `{2,}foo`bar matches 2 or more "foo"s followed by "bar". You can probably figure out the rest. So far, none of the other shells support this syntax.

* In ksh93, a pattern-list may be delimited by either `&` or `|`. `&` means "all patterns must be matched" instead of "any pattern". For example,

```
[[ foobar == @({fo[0-9]&+([[:alnum:]]})bar ]]  
would be true while
```

```
[[ foobar == @({fo[0-9]&+([[:alnum:]]})bar ]]  
is false, because all members of the and-list must be satisfied. No other shell supports this so far, but you can simulate some cases in other shells using double extglob negation. The aforementioned ksh93 pattern is equivalent in Bash to:
```

```
[[ foobar == !({fo[0-9]}|!{+([[:alnum:]]})bar ]]  
, which is technically more portable, but ugly.
```

* ksh93's `print` builtin can translate from shell patterns to ERE and back again using the `%R` and `%P` format specifiers respectively.

TODO: `-()` (and regex), `.sh.match`, `backrefs`, special `$(var/.../...)` behavior, `%()`

From <<https://wiki.bash-hackers.org/syntax/pattern>>

sendmail

Thursday, October 25, 2018 1:37 PM

```
tar -cvf attachments.tar.gz <directory>
uuencode /path/attachments.tar.gz | sendmail -s "subject" user@domain
```

From <<https://unix.stackexchange.com/questions/256072/sendmail-attach-all-files-in-directory>>

echo

Wednesday, February 12, 2020 12:23 PM

```
echo "100 - 50" | bc  
Output = 50
```

Excel

Monday, May 4, 2020 10:40 AM

time conversion in excel:

=A1+TIME(9,30,0)

ex - cst to MST

=C1-TIME(7,0,0)

=IF(AND(C2>=14),"Group3","")

=IF(OR(C2>=6,C2<=14),"Group1","")

=IF(C2 < 14, "Group1", "" IF(C2 < 14, "Group1", ""))

=IF(C2>=14&C2<=23,"Group2",IF(C2>=6&C2<=14,"Group1","Group3"))

=IF(C2>=14&C2<=23,"Group2",IF(C2>=6&C2<=14,"Group1","Group3"))

=VLOOKUP(D4,F4:G9,2)

=IF([J2]06=>14,"Group1","")

=IF(And([J2]06=>14,"","", [J2]14=<23), "", "")

Appcheck(DEVM) - type 1

Wednesday, November 29, 2017 4:33 PM

```
----> DEVM_IES_AppURL_Check.sh
#!/bin/bash
url=http://10.64.65.92:9085/SELoginAccess.jsp?fromIndex=true
if curl -s --head -request GET $url | grep "200 OK" > /dev/null;
then
echo "#####
echo "#####
echo "DEVM IES URL is UP"
echo "#####
echo "#####
else
echo "#####
echo "DEVM IES URL is DOWN"
echo "Starting DEVM IES App"
echo "#####
/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/wsadmin.sh -f /opt/IBM/HSRI/IES-Branch/Scripts/AppCheck/DEVM_IES_App_Start.py -lang jython -username wasadmin -password wasadmin;
fi
if curl -s --head -request GET $url | grep "200 OK" > /dev/null;
then
echo "#####
echo "#####
echo "DEVM IES URL is UP"
echo "#####
echo "#####
else
echo "#####
echo "DEVM IES URL is DOWN"
echo "Starting DEVM IES App"
echo "#####
/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/stopNode.sh -username wasadmin -password wasadmin
/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/stopServer.sh IES2 -username wasadmin -password wasadmin
/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/startNode.sh
/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/startServer.sh IES2
fi
```

----> DEVM_IES_App_Start.py

```
#IES Stop Cmd
#AdminControl.invoke('WebSphere:name=ApplicationManager,process=IES2,platform=proxy,node=ENT-DV-UHAPP03Node01,version=8.5.5.9,type=ApplicationManager,mbeanIdentifier=ApplicationManager,cell=ENT-DV-UHAPP03Cell01,spec=1.0','stopApplication', '[IESHSRIDEVBranch]')
#IES Start Cmd
AdminControl.invoke('WebSphere:name=ApplicationManager,process=IES2,platform=proxy,node=ENT-DV-UHAPP03Node01,version=8.5.5.9,type=ApplicationManager,mbeanIdentifier=ApplicationManager,cell=ENT-DV-UHAPP03Cell01,spec=1.0','startApplication', '[IESHSRIDEVBranch]')
```

AppCheck DEVN - type 1

Wednesday, November 29, 2017 4:36 PM

----> DEVN_IIS_AppURL_Check.sh

```
#!/bin/bash
url=http://10.64.65.92:9080/SELoginAccess.jsp?fromIndex=true
if curl -s --head --request GET $url | grep "200 OK" > /dev/null;
then
echo "#####
echo "#####
echo "DEVN IES URL is UP"
echo "#####
echo "#####
else
echo "#####
echo "DEVN IES URL is DOWN"
echo "Starting DEVN IES App"
echo "#####
/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/wsadmin.sh -f /opt/IBM/HSRI/IES-Trunk/Scripts/AppCheck/DEVN_IIS_App_Start.py -lang jython -username wasadmin -password wasadmin;
fi
if curl -s --head --request GET $url | grep "200 OK" > /dev/null;
then
echo "#####
echo "#####
echo "DEVN IES URL is UP"
echo "#####
echo "#####
else
echo "#####
echo "DEVN IES URL is DOWN"
echo "Starting DEVN IES App"
echo "#####
/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/stopNode.sh -username wasadmin -password wasadmin
/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/stopServer.sh IES1 -username wasadmin -password wasadmin
/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/startNode.sh
/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/startServer.sh IES1
/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/wsadmin.sh -f /opt/IBM/HSRI/IES-Trunk/Scripts/AppCheck/DEVN_IIS_App_Start.py -lang jython -username wasadmin -password wasadmin;
fi
```

--> DEVN_IIS_App_Start.py

```
#IES Stop Cmd
#AdminControl.invoke('WebSphere:name=ApplicationManager,process=SSP1,platform=proxy,node=ENT-DV-UHAPP03Node01,version=8.5.5.9,type=ApplicationManager,mbeanIdentifier=ApplicationManager,cell=ENT-DV-UHAPP03Cell01,spec=1.0','stopApplication', '[SSPHSRIDEVTrunk]')
#IES Start Cmd
AdminControl.invoke('WebSphere:name=ApplicationManager,process=SSP1,platform=proxy,node=ENT-DV-UHAPP03Node01,version=8.5.5.9,type=ApplicationManager,mbeanIdentifier=ApplicationManager,cell=ENT-DV-UHAPP03Cell01,spec=1.0','startApplication', '[SSPHSRIDEVTrunk]')
```

Type 2 - using loop

Wednesday, November 29, 2017 4:33 PM

```
#!/bin/bash
if curl -s --head --request GET $url | grep "200 OK" < /dev/null;
then
echo "DEVM IES URL is DOWN"
echo "Starting DEVM IES App"
/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/wsadmin.sh -f /opt/IBM/HSRI/IES-Branch/Scripts/AppCheck/DEVM_IIS_App_Start.py -lang jython -username wasadmin -password wasadmin;
elif curl -s --head --request GET $url | grep "200 OK" < /dev/null;
then
echo "DEVM IES URL IS STILL DOWN AFTER APP STARTUP"
echo "Restarting DEVM IES SERVER AND NODEAGNET"
/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/stopNode.sh -username wasadmin -password wasadmin
/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/stopServer.sh IES2 -username wasadmin -password wasadmin
/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/startNode.sh
/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/startServer.sh IES2
elif curl -s --head --request GET $url | grep "200 OK" < /dev/null;
then
echo "DEVM IES URL IS STILL DOWN EVEN AFTER SERVER AND NODE RESTARTS"
echo "STARTING DEVM IES APPLICATION AGAIN"
/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/wsadmin.sh -f /opt/IBM/HSRI/IES-Branch/Scripts/AppCheck/DEVM_IIS_App_Start.py -lang jython -username wasadmin -password wasadmin;
else
echo "DEVM IES URL is UP"
fi
```

jmeter

Friday, September 9, 2016 10:20 AM

loguser/loguser@123

CMDR*

```
nohup ./ServerAgent.jar stop &
/home/loguser/Jmeter/nohup ./ServerAgent.jar stop &
```

#10.64.33.59-IES1

```
sshpass -p 'loguser@123' ssh loguser@10.64.33.59 '/home/loguser/Jmeter/nohup ./ServerAgent.jar stop &
Sleep 30000
sshpass -p 'loguser@123' ssh loguser@10.64.33.59 '/home/loguser/Jmeter/nohup ./ServerAgent.jar start &
sshpass -p 'loguser@123' ssh loguser@10.64.33.59 'ps -ef|grep CMDR*'
```

#10.64.33.60-IES2

```
sshpass -p 'loguser@123' ssh loguser@10.64.33.60 '/home/loguser/Jmeter/nohup ./ServerAgent.jar stop &
Sleep 30000
sshpass -p 'loguser@123' ssh loguser@10.64.33.60 '/home/loguser/Jmeter/nohup ./ServerAgent.jar start &
sshpass -p 'loguser@123' ssh loguser@10.64.33.60 'ps -ef|grep CMDR*'
```

#10.64.33.61-IES3

```
sshpass -p 'loguser@123' ssh loguser@10.64.33.61 '/home/loguser/Jmeter/nohup ./ServerAgent.jar stop &
Sleep 30000
sshpass -p 'loguser@123' ssh loguser@10.64.33.61 '/home/loguser/Jmeter/nohup ./ServerAgent.jar start &
sshpass -p 'loguser@123' ssh loguser@10.64.33.61 'ps -ef|grep CMDR*'
```

#10.64.33.62-HIX1

```
sshpass -p 'loguser@123' ssh loguser@10.64.33.62 '/home/loguser/Jmeter/nohup ./ServerAgent.jar stop &
Sleep 30000
sshpass -p 'loguser@123' ssh loguser@10.64.33.62 '/home/loguser/Jmeter/nohup ./ServerAgent.jar start &
sshpass -p 'loguser@123' ssh loguser@10.64.33.62 'ps -ef|grep CMDR*'
```

#10.64.33.63-HIX2

```
sshpass -p 'loguser@123' ssh loguser@10.64.33.63 '/home/loguser/Jmeter/nohup ./ServerAgent.jar stop &
Sleep 30000
sshpass -p 'loguser@123' ssh loguser@10.64.33.63 '/home/loguser/Jmeter/nohup ./ServerAgent.jar start &
sshpass -p 'loguser@123' ssh loguser@10.64.33.63 'ps -ef|grep CMDR*'
```

#10.64.33.86-HIX3

```
sshpass -p 'loguser@123' ssh loguser@10.64.33.66 '/home/loguser/Jmeter/nohup ./ServerAgent.jar stop &
Sleep 30000
sshpass -p 'loguser@123' ssh loguser@10.64.33.66 '/home/loguser/Jmeter/nohup ./ServerAgent.jar start &
sshpass -p 'loguser@123' ssh loguser@10.64.33.66 'ps -ef|grep CMDR*'
```

#10.64.33.154-MULE1

```
sshpass -p 'loguser@123' ssh loguser@10.64.33.154 '/home/loguser/Jmeter/nohup ./ServerAgent.jar stop &
Sleep 30000
sshpass -p 'loguser@123' ssh loguser@10.64.33.154 '/home/loguser/Jmeter/nohup ./ServerAgent.jar start &'
```

```

sshpass -p 'loguser@123' ssh loguser@10.64.33.154 'ps -ef|grep CMDR*'

#10.64.33.155-MULE2
sshpass -p 'loguser@123' ssh loguser@10.64.33.155 '/home/loguser/Jmeter/nohup ./ServerAgent.jar stop &
Sleep 30000
sshpass -p 'loguser@123' ssh loguser@10.64.33.155 '/home/loguser/Jmeter/nohup ./ServerAgent.jar start &
sshpass -p 'loguser@123' ssh loguser@10.64.33.155 'ps -ef|grep CMDR*'

#10.64.33.27-MULE3
sshpass -p 'loguser@123' ssh loguser@10.64.33.27 '/home/loguser/Jmeter/nohup ./ServerAgent.jar stop &
Sleep 30000
sshpass -p 'loguser@123' ssh loguser@10.64.33.27 '/home/loguser/Jmeter/nohup ./ServerAgent.jar start &
sshpass -p 'loguser@123' ssh loguser@10.64.33.27 'ps -ef|grep CMDR*'

#10.64.33.45-MULE4
sshpass -p 'loguser@123' ssh loguser@10.64.33.45 '/home/loguser/Jmeter/nohup ./ServerAgent.jar stop &
Sleep 30000
sshpass -p 'loguser@123' ssh loguser@10.64.33.45 '/home/loguser/Jmeter/nohup ./ServerAgent.jar start &
sshpass -p 'loguser@123' ssh loguser@10.64.33.45 'ps -ef|grep CMDR*'

#10.64.33.71-OPA1
sshpass -p 'loguser@123' ssh loguser@10.64.33.71 '/home/loguser/Jmeter/nohup ./ServerAgent.jar stop &
Sleep 30000
sshpass -p 'loguser@123' ssh loguser@10.64.33.71 '/home/loguser/Jmeter/nohup ./ServerAgent.jar start &
sshpass -p 'loguser@123' ssh loguser@10.64.33.71 'ps -ef|grep CMDR*'

#10.64.33.72-OPA2
sshpass -p 'loguser@123' ssh loguser@10.64.33.72 '/home/loguser/Jmeter/nohup ./ServerAgent.jar stop &
Sleep 30000
sshpass -p 'loguser@123' ssh loguser@10.64.33.72 '/home/loguser/Jmeter/nohup ./ServerAgent.jar start &
sshpass -p 'loguser@123' ssh loguser@10.64.33.72 'ps -ef|grep CMDR*'

#10.64.33.143-OPA3
sshpass -p 'loguser@123' ssh loguser@10.64.33.143 '/home/loguser/Jmeter/nohup ./ServerAgent.jar stop &
Sleep 30000
sshpass -p 'loguser@123' ssh loguser@10.64.33.143 '/home/loguser/Jmeter/nohup ./ServerAgent.jar start &
sshpass -p 'loguser@123' ssh loguser@10.64.33.143 'ps -ef|grep CMDR*'

#10.64.33.144-OPA4
sshpass -p 'loguser@123' ssh loguser@10.64.33.144 '/home/loguser/Jmeter/nohup ./ServerAgent.jar stop &
Sleep 30000
sshpass -p 'loguser@123' ssh loguser@10.64.33.144 '/home/loguser/Jmeter/nohup ./ServerAgent.jar start &
sshpass -p 'loguser@123' ssh loguser@10.64.33.144 'ps -ef|grep CMDR*'

```

Automation of CCAP server setup:

Saturday, March 18, 2017 8:46 AM

Automation of CCAP server setup:

JVM setting:

```
AdminTask.setJVMProperties(['-nodeName ENT-DV-UHAPP05Node01 -serverName CCAP-MODEV -classpath [Path] -verboseModeClass false -verboseModeGarbageCollection false -verboseModeJNI false -initialHeapSize 512 -maximumHeapSize 1024 -runHProf false -hprofArguments -debugMode false -debugArgs "-agentlib:jdwp:transport=dt_socket,server=y,suspend=n,address=7777" -executableJarFileName -genericJvmArguments -disableJIT false'])
```

New Custom Properties:

```
AdminConfig.create('Property', '{cells/ENT-DV-UHAPP05Cell01/nodes/ENT-DV-UHAPP05Node01/servers/CCAP-MODEV|server.xml#JavaVirtualMachine_1464009892769}', '[{validationExpression ""} [name "com.ibm.websphere.webservices.DisableBMIAWXSEngine"] [description ""] [value "true"] [required "false"]])  
AdminConfig.list('Property', '{cells/ENT-DV-UHAPP05Cell01/nodes/ENT-DV-UHAPP05Node01/servers/CCAP-MODEV|server.xml#JavaVirtualMachine_1464009892769}')
```

Note:

You can get the JVM id from the below path:

/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/config/cells/ENT-DV-UHAPP05Cell01/nodes/ENT-DV-UHAPP05Node01/servers/CCAP-MODEV/server.xml

Creating Shared libraries:

```
AdminConfig.create('Library', AdminConfig.getid('/Cell:ENT-DV-UHAPP05Cell01/Node:ENT-DV-UHAPP05Node01/Server:CCAP-MODEV/'), '[{nativePath ""} [name "HSRIAppLib"] [isolatedClassLoader false] [description ""] [classPath "PATH"]])  
AdminConfig.list('Library', AdminConfig.getid('/Cell:ENT-DV-UHAPP05Cell01/Node:ENT-DV-UHAPP05Node01/Server:CCAP-MODEV/'))
```

Classloader:

```
AdminConfig.create('Classloader', '{cells/ENT-DV-UHAPP05Cell01/nodes/ENT-DV-UHAPP05Node01/servers/CCAP-MODEV|server.xml#ApplicationServer_1464009892769}', '[{mode PARENT_FIRST}])  
AdminConfig.list('Classloader', AdminConfig.getid('/Cell:ENT-DV-UHAPP05Cell01/Node:ENT-DV-UHAPP05Node01/Server:CCAP-MODEV/'))
```

Disk space check

Thursday, June 15, 2017 6:39 PM

```
df /opt /var | awk 'NR>1 {gsub(/%/,""); if ($5 > 80) {exit 1}}' || exit 1
```

df /abc /pgr: Get disk usage report for mounts /abc and /pgr
| awk: pipe to awk interpreter, awk script follows
NR>1 { ... }: execute this block for row numbers > 1 (i.e. ignore header row)
gsub(/%/,""): replace percent sign with nothing so that it does not ruin the numerical comparison
if (\$5 > 80) { ... }: if fifth field (\$5) on row is bigger than 80, execute this block of code
exit 1: exit awk with return value 1 to signal error
|| exit 1: propagate the exit value of awk to the exit value of the script

```
#!/bin/bash
PASSWORD="Wxxxx";
free -m;
read CACHED_MEM <<< $(free -m | grep -i Mem | awk '{print $7}');
##Check if cached memory is more than 1GB
if [ $CACHED_MEM -ge 1024 ]
then
    echo "drop caches command here, as cached memory is $CACHED_MEM";
    echo $PASSWORD | sudo -S sh -c "sync; echo 3 > /proc/sys/vm/drop_caches";
    free -m;
fi
#####
```

Send a mail if disk space is low

Thursday, June 15, 2017 6:40 PM

```
#!/bin/bash

LIMIT='80'

#Here we declare variable LIMIT with max of used spave

DIR='/var'

#Here we declare variable DIR with name of directory

MAILTO='

This e-mail address is being protected from spambots. You need JavaScript enabled to view it.

'

#Here we declare variable MAILTO with email address

SUBJECT="$DIR disk usage"

#Here we declare variable SUBJECT with subject of email

MAILX='mailx'

#Here we declare variable MAILX with mailx command that will send email

which $MAILX > /dev/null 2>&1

#Here we check if mailx command exist

if ! [ $? -eq 0 ]

#We check exit status of previous command if exit status not 0 this mean that mailx is not installed on system

then

    echo "Please install $MAILX"

#Here we warn user that mailx not installed

    exit 1

#Here we will exit from script

fi

cd $DIR

#To check real used size, we need to navigate to folder

USED=`df . | awk '{print $5}' | sed -ne 2p | cut -d "%" -f1`


#This line will get used space of partition where we currently, this will use df command, and get used space in %, and after cut % from value.
```

```

if [ $USED -gt $LIMIT ]
#If used space is bigger than LIMIT
then
    du -sh ${DIR}/* | $MAILX -s "$SUBJECT" "$MAILTO"
#This will print space usage by each directory inside directory $DIR, and after MAILX will send email with SUBJECT to MAILTO
fi

```

Sample Output

./check_var.sh

37M /var/cache

32K /var/db

8.0K /var/empty

4.0K /var/games

70M /var/lib

4.0K /var/local

8.0K /var/lock

38M /var/log

0 /var/mail

4.0K /var/nis

4.0K /var/opt

4.0K /var/preserve

88K /var/run

220K /var/spool

37M /var/tmp

24M /var/www

4.0K /var/yp

From <<https://www.linux.com/blog/linux-shell-script-monitor-space-usage-and-send-email>>

Disk

Thursday, June 15, 2017 6:41 PM

```
#!/bin/sh
df /* | awk 'NR>1 {gsub(/%/,""); if ($5 > 80) {exit 1}}' || exit 1

df /opt/Mount_WebSphere | awk 'NR>1 {gsub(/%/,""); if ($5 > 80) {exit 1}}'
```

Or

```
[pthadur@ENT-DV-UHBLD01 ~]$ df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/mapper/vg1-root 100G  84G  11G  89% /
/dev/mapper/vg1-var  9.6G  2.5G  6.7G  28% /var
/dev/mapper/vg1-opt  945G  829G  67G  93% /opt
/dev/mapper/vg1/usr  9.3G  4.4G  4.5G  50% /usr
/dev/sda1        99M  27M  68M  29% /boot
tmpfs          24G   0  24G  0% /dev/shm
10.64.65.12:/opt/IBM 30G  26G  2.4G  92% /opt/Mount_WebSphere
[pthadur@ENT-DV-UHBLD01 ~]$ (exit $(df -m / | awk 'END {print ($4>1024?-1:"0")}')); echo "$?"
255
[pthadur@ENT-DV-UHBLD01 ~]$ (exit $(df -m / | awk 'END {print ($4<1024?-1:"0")}')); echo "$?"
0
```

DISK CLEANUP

```
#####
not sure
#####
FILESYSTEM=/opt #
CAPACITY=95
CACHEDIR=/home/user/lotsa_cache_files/

# Proceed if filesystem capacity is over than the value of CAPACITY (using df POSIX syntax)
# using [ instead of [[ for better error handling.
if [ $(df -h $FILESYSTEM | awk '{gsub("%","",); capacity = $5 }; END { print capacity }') -gt $CAPACITY ]
then
    # lets do some secure removal (if $CACHEDIR is empty or is not a directory find will exit
    # with error which is quite safe for missruns.):
    find "$CACHEDIR" --maxdepth 1 --type f -exec rm -f {} \;
    # remove "maxdepth and type" if you want to do a recursive removal of files and dirs
    find "$CACHEDIR" -exec rm -f {} \;
fi
#####
not sure
#####
#!/bin/sh
df=`df -Pl | grep "/opt" | awk '{print $4, $5, $6}' | sed "s/%//"`
echo "$df" | while read percent fs
do
if [ $percent -ge 90 ] ; then
#Calling a perl file with parameters for sending an email.
`/opt/lampp/bin/perl DiskSpace_Alert.pl $fs is $percent percent full`
fi
done
#####
Worked
#####
(exit $(df -m /opt/IBM | awk 'END {if ($3<3000) then /opt/IBM/HSRI/xxx.sh elif{exit 1}}' || exit 1))
(exit $(df -m /opt/IBM | awk 'END {if ($3<3000) {exit 1}}' || exit 1))
#!/bin/sh
diskspace=`df -m | grep "/opt" | awk '{print $4}'
echo "$diskspace"
if [ diskspace<3000];
```

```
then
echo "Space is full"
else
echo "Space is good"
fi
done
#####
#####
```

RAM and Disk

Thursday, June 15, 2017 6:42 PM

```
#!/bin/bash
free -m
free -m | awk '{if ($7 > 500) print "cached-$1 " " $7}"
df -H
#df -H | grep -vE '^Filesystem|tmpfs|cdrom' | awk '{ print $5 " " }' | sed "s/\%//g"
df -H | awk '{if ($5 > 90) print $5 " " $1}'
df -H | awk 'NR>1 {gsub(/%/,""); if ($5 > 90) {exit 1}}' || exit 1
```

Archiving log older than a week

Wednesday, August 2, 2017 1:33 PM

```
#!/bin/bash
LOGS_DIRECTORY="/home/pthadur/keerthi"
ARCHIVE_DIRECTORY="/home/pthadur/keerthi/archive"
find $LOGS_DIRECTORY -type f -mtime +7 -print -exec gzip {} \;
cd $ARCHIVE_DIRECTORY;
mv *.gz $ARCHIVE_DIRECTORY;
```

Removing directories from a particular location leaving latest 3 folders:

```
#!/bin/bash
```

Linux to windows via bamboo

Thursday, September 21, 2017 5:52 PM

```
@echo on
for /F "tokens=1-3 delims=::." %%a in ("%time%") do (
    set Hour=%%a
    set Minute=%%b
    set Seconds=%%c
)
::Convert HH:MM to minutes + 2
set /A newTime=Hour*60 + Minute + 2
rem Convert new time back to HH:MM
set /A Hour=newTime/60, Minute=newTime%%60

::rem Adjust new hour and minute
if %Hour% gtr 23 (set Hour=0) ELSE (IF %Hour% lss 10 set Hour=0%Hour%
if %Minute% lss 10 set Minute=0%Minute%
Set TaskTime=%Hour%.%Minute%:%Seconds%
Echo %TaskTime%

SchTasks /Create /SC ONCE /TN sitm-mci /TR C:\\\\Infra_Smoke_Worksheets\\\\SITM_Infra_Smoke_Worksheets\\\\Automation_Framework\\\\Start_StandaloneExecution.bat /ST %TaskTime% /F
```

Wednesday, October 25, 2017 7:33 AM

[10/24/2017 6:11 PM] Ala, Sahithi Reddy (US - Hyderabad):
<C:\Program Files (x86)\WinSCP\winscp.com> /command "option batch abort" "option confirm off" "open oracle:local123@10.64.66.17" "put C:\Users\RIUHIP\Desktop\dbdump\network.log /home/oracle/network.log" "exit"

Bamboo sample automations script

Wednesday, November 29, 2017 4:40 PM

```
#!/bin/bash -u
# Deletes all disabled branches of a Bamboo build plan
# -----
# Syntax:
# $0 {planKey}
# -----
# Purpose: Bamboo does not automatically delete plan branches when the
# corresponding branch in the repository gets deleted. Because Bamboo fails
# to pull from it, it disables the branch but keep it around forever.
# This script goes through all branches of a build plan and delete the ones
# that are disabled.
#
# Notes:
# - Script depends on jq library: https://github.com/stedolan/jq
# - The script will prompt for Bamboo credentials. The corresponding
# account must have admin access to the given plan.
# - Before running the script, change the value of `BAMBOO_BASE_URL` to
# the correct url of the bamboo instance.
# -----
# Copyright 2014 Lixar I.T. Inc.
# Author: Sylvain Guillopé <sguilllope@lixar.com>
# -----
LC_COLLATE=C; export LC_COLLATE
LANG=C ; export LANG
umask 022

function die {
    [ -z "$1" ] || echo 1>&2 "[!] $1"
    exit 1
}

[ -z "$1" ] && die "Usage: ./$(basename $0) {planKey}"

readonly PLAN_KEY="$1"
readonly MAX_BRANCH_RESULT="500"
readonly BAMBOO_BASE_URL="https://mybamboo.net"
readonly BAMBOO_GET_PLAN_URL="$BAMBOO_BASE_URL/rest/api/latest/plan/$PLAN_KEY?os_authType=basic&expand=branches&maxResults=$MAX_BRANCH_RESULT"
readonly BAMBOO_DELETE_PLAN_URL="$BAMBOO_BASE_URL/chain/admin/deleteChain!doDelete.action?os_authType=basic"

# Ask for bamboo credentials
username=
password=
while [ -z "$username" ]; do
    read -p "Bamboo username: " -s username
done
while [ -z "$password" ]; do
    read -p "Bamboo password: " -s password
done

function fetch_plan {
    echo $(curl --silent --user "$username:$password" --header "Accept: application/json" --header "X-Atlassian-Token: no-check" "$BAMBOO_GET_PLAN_URL")
}

function get_branch_lines {
    echo "$1" | jq --compact-output '.branches.branch[]'
}

function delete_disabled_branches {
    while read -r branch_line; do
        if is_branch_disabled "$branch_line"; then
            local branch_key=$(get_branch_key "$branch_line")
            delete_branch "$branch_key"
        fi
    done <<< "$branch_lines"
}

function is_branch_disabled {
```

```

local enabled=$(echo $1 | jq '.enabled')
if [ "$enabled" == "false" ]; then
    return 0
else
    return 1
fi
}

function delete_branch {
    local branch_key=$1
    curl -qs --user "$username:$password" --header "X-Atlassian-Token: no-check" --data "buildKey=$branch_key" "$BAMBOO_DELETE_PLAN_URL"
}

function get_branch_key {
    echo $1 | jq --raw-output '.key'
}

function main {
    local plan_details=$(fetch_plan "$1")
    local branch_lines=$(get_branch_lines "$plan_details")
    delete_disabled_branches "$branch_lines"
}
main "$PLAN_KEY"

```

CSV TO HTML

Friday, December 1, 2017 5:55 PM

```
#!/bin/sh
#convert_2_html_table.sh
#Converts a delimited file to a HTML table
#Jadu Saikia http://unstableme.blogspot.in
NOARG=64
#usage function
f_Usage () {
echo "Usage: $(basename $0) -d <delimiter> -f <delimited-file>""
}
#command line args
while getopts d:f: OPTION
do
case $OPTION in
d) DELIMITER=$OPTARG ;;
f) INFILE=$OPTARG ;;
esac
done
#Less than 2 command line argument, throw Usage
[ "$#" -lt 2 ] && f_Usage && exit $NOARG
DEFAULTDELIMITER=","
#if no delimiter is supplied, default delimiter is comma i.e.,
SEPARATOR=${DELIMITER:-$DEFAULTDELIMITER}
if [ -f "${INFILE}" ]
then
printf "<table border=\"1\">"
sed "s/${SEPARATOR}/</td><td>/g" ${INFILE} | while read line
do
printf "<tr><td>${line}</td></tr>"
done
printf "</table>"
echo
fi
e.g. Input file:
$ cat data.txt
First Name:Last Name:Points
Alex:Hall:45
Niraj:Kumar:290
Brian:Smith:100
Executing it:
$ ./convert_2_html_table.sh -d ":" -f data.txt > data.html
```

First Name	Last Name	Points
Alex	Hall	45
Niraj	Kumar	290
Brian	Smith	100

From <<http://www.unixcl.com/2013/02/bash-convert-delimited-file-to-html.html>>

Generate an excel sheet with multiple csv in files in separate tabs using shell

Friday, December 15, 2017 5:35 PM

perl

You could write xls in perl, follow a [sample](#):

```
#!/usr/bin/perl
use Spreadsheet::WriteExcel;
my $workbook = Spreadsheet::WriteExcel->new("test.xls");
my $worksheet = $workbook->add_worksheet();
open(FH, "<file") or die "Cannot open file: $!\n";
my ($x,$y) = (0,0);
while (<FH>){
    chomp;
    @list = split /\s+/, $_;
    foreach my $c (@list){
        $worksheet->write($x, $y++, $c);
    }
    $x++;$y=0;
}
close(FH);
$workbook->close();
```

From <<https://stackoverflow.com/questions/11579008/writing-to-an-excel-sheet-using-bash>>

Batch processing

Friday, January 25, 2019 8:23 AM

```
#!/bin/sh
#printing the characters at the specific column in a line
awk '{print substr($0, 17, 9)}' nb.txt
cat 22012019211241_MAEeligibility.txt | sed 's/ */;/g' | sed 's/.&./&./28;s./&./&./12' | awk 'BEGIN{i=1}{printf "%d;%s\n", i,$0; i++}' > 22012019211241_MAEeligibility_tmp.txt
#Adding numbers to the lines
awk 'BEGIN{i=1}{printf "%d.%s\n", i,$0; i++}' 22012019211241_MAEeligibility_tmp.txt
#printing all the duplicate columns
awk -F";" 'FNR == NR { x[$3]++; next; } { if ($3 in x && x[$3] > 1) print; }' 22012019211241_MAEeligibility_tmp.txt 22012019211241_MAEeligibility_tmp.txt
#copying all the lines that starts with 1A and 1B
grep '^1A' 22012019211241_MAEeligibility_tmp.txt > 22012019211241_MAEeligibility_1A.txt
grep '^1B' 22012019211241_MAEeligibility_tmp.txt > 22012019211241_MAEeligibility_1B.txt
awk -F";" 'FNR == NR { x[$3]++; next; } { if ($3 in x && x[$3] > 1) print; }' 22012019211241_MAEeligibility_1A.txt 22012019211241_MAEeligibility_1A.txt > 22012019211241_MAEeligibility_1A_dupli.txt
awk -F";" 'FNR == NR { x[$3]++; next; } { if ($3 in x && x[$3] > 1) print; }' 22012019211241_MAEeligibility_1B.txt 22012019211241_MAEeligibility_1B.txt > 22012019211241_MAEeligibility_1B_dupli.txt
#Sorting the file based on 3rd column
sort -t $';' -k 3,3 22012019211241_MAEeligibility_1A_dupli.txt > 22012019211241_MAEeligibility_1A_dupli_sorted.txt
sort -t $';' -k 3,3 22012019211241_MAEeligibility_1B_dupli.txt > 22012019211241_MAEeligibility_1B_dupli_sorted.txt
```

Work:

```
cat ${LOGPATH}/${FOLDERNAME}/${FOLDERNAME}_tmp.txt | awk -F ";" '!/^$/ {if(-z "$4") then {print;}}' | sed 's/ //g' > ${LOGPATH}/${FOLDERNAME}/${FOLDERNAME}_Streetcheck.txt

if [ -z "$column" ]
then
    # do magic
fi
```

DTE

Monday, April 29, 2019 9:57 AM

Took sick leave on 26th april 2019(Fri) and missed to submit dte but staffit is done on Monday with no PTO. Hence marking 29 apr 2019 as a PTO on both DTE and STAFFIT.

DTE - RI
RHO07502-01-01-01-0067
BCP
GAA57258-01-01-01-0000

North carolina

Monday, April 29, 2019 12:58 PM

Hello All

Based on discussion today , please provide following information

1. Provide the total no. of batches to be supported
2. What is the frequency of the builds in different environments? (Development, testing, production, disaster recovery and training) ?How many builds have happened in the past year in different environment? Are there any off-hours/weekend/holiday builds anticipated?
3. What are the different platforms/software that went through version upgrade last year
 - a. Is there already a plan on what platforms/software that will go through version upgrade
 - b. What's the role of Deloitte in version upgrade activities?
4. Resource break down by team , eg. Each application team , Number of System administrators , DBA , batch support , build and deployment etc.
5. Organization structure of Help Desk , geographical locations, resource count by locations
6. Provide enhancement hours for last year for OPUS application

OUTLOOK

NTT:

@nttdata.com

cc

US RIBridges - Command Center Communication (US) <rribidgescommandcent@deloitte.com>
US RIBridges - Command Center Communication <rribidgescommandcent@deloitte.com>

Splunk:

[EXT] Splunk Alert:

TT Dates:

[EXT] Date Change

Deloitte:

US Trade Compliance; US Consulting Systems Engineering; US National Deloitte Cognitive Advantage; US Deloitte Center for Health Solutions; US Project Cura; Kelly Herod-US Consulting Technology Competency Area Leader; US Core Business Operations Practice Communication; USI Systems Design and Engineering Communication; US India Consulting Well-being; USI Consulting Learning; US INDIA CBO LEARNING AND DEVELOPMENT; US India News; Vishal Sharma - US India Consulting Offering Portfolios Leader; US India Analytics Summit; US Talent; US National STAFFIT Schedule Reminder; US India Talent; US India Consulting F.I.T - Fitness in Technology; US India Empowered Wellbeing; US India Corporate Citizenship; Ajit Nema - US India Consulting RMD; US India Hyd Consulting OMD; US India ITS Alerts; LSHC Daily; USI GPS Communication; US India Payroll; USI Core Business Operations Innovation; USI Total Rewards; Consulting Connect Weekly; USI CBO Inclusion; US India Deloitte Towers; US Life Sciences & Health Care; US Consulting Systems Design & Engineering; Haissam Issa- US Consulting Core Business Operations Leader; US India CBO Tech Week; USI Core Business Operation Offering Portfolio Leader; US Empowered Well-being; US India CBO Tech Week

US Delivery Excellence; Knowledge Exchange (KX); USI Techweek - OT; US India Workplace Experience Lead; US Consulting Tech Savvy; US India CBO Delivery Excellence; LSHC Knowledge Services; US Deloitte AI; US India Consulting Talent Leader; US ITS Digital Collaboration Program Office; US Ethics & Compliance; Cathy Engelbert - Deloitte US CEO; USI Core Business Operations Rewards and Recognition; US Health Care Leader; US HYD TPT Help Desk; Kelley Laird - US Core Business Operations COO; Joe Ucuzoglu - Deloitte US CEO; Helfrich, Daniel; US Mandatory Trainings - Do Not Reply; Nigam, Amiya; US Password Notification; US India Regional Technology Leader; Kristen Miller-US Consulting Systems Engineering Leader; Office of Doug Beaudoin; Anti-Corruption & Trade; From Larry Quinlan; Consulting Operate Champion; US India Ethics Communications; Independence (US); US Systems Engineering Learning & Development; Bruce Stewart - US India RMP; USI CBO SE Application Architecture; US India Office of Security; US India Sports; US India Consulting Inclusion; US Consulting HS Integrated Eligibility; US India ENCORE Event; US India CBO SE SDE Java; Office of Steve Burrill; US India Events; USI OBA Assignments; US GPS Learning & Development; no_reply@sspm.deloitte.com;

USI Consulting Offering Portfolios Leader's Office; US India Compliance Communication; US ELE Talent Compliance; Government & Public Services Daily; Deloitte Global GPS Monday Briefing; Global Government & Public Services; US India Inclusion; US India LSHC Talent Strategy Program; USIcompliance;Dan Helfrich US Consulting CEO;US India Talent Leader;US India Workplace Experience;USI CBO Practice Connects;info@excellityglobal.com;USI CBO Offbeat Hyderabad;Deloitte Mobile Threat Defense;Sandeep Kumar Sharma-US India Consulting OCTO;DTTL Life Sciences and Health Care;US India Consulting RMD;Spigit Innovation;US India Agile Bootcamp;Weber Thomas;Sandeep Kumar Sharma-US India Consulting OCTO;US Core Business Operations Talent and Inclusion;US India-AI Ideathon Mailbox;USI Core Business Operations Leadership Connect;USI GPS Trainings Inbox;Global Consulting Tech Savvy;Mike Canning, Government & Public Services Leader;US India Workplace Experience;US India Talent Leader;deloitteonlineserver@deloitte.com;USI GPS Trainings Inbox;Office of Glenn Stastny;USI CBO OFF BEAT; USI Systems Design and Engineering Communication; Deloitte (O365D) on Yammer; Deloitte Meeting & Event Services

Add in outlook rules

Thursday, February 27, 2020 11:38 AM

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USI Core Business Operations Practice Communication <USICBOPracticeCommunication@deloitte.com>

#####
Added all the above ones#####

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PMO

ITS:

CE:

nb
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Deloitte US Office of Security <securityoffice@deloitte.com>

pin

Monday, October 28, 2019 4:20 PM

TOD Pin - 201517/201715

Change today (02-Feb-22) - 211984

FI - 19-20

Thursday, October 31, 2019 10:26 AM

Liberty RFP - 16h

SVN branching structure proposal - 20h

Cigns project - sonar issue RCA and solution - 1hour

ISS RFP - Computer Lab - 20h

Urgent request for Quals.(For mithilesh) - 20h

DevOps Training - Batches Team - 20h

ISS Training Management and Scheduling - 10h

White Paper - 20h

Broadcom RFP - 20h

Single Skill Assessment Guidelines

Here is the information about the CE Single Skill assessment

1. Complete the entire Assessment -
2. Assessment duration – 1 hour
3. Focus on the Skill you have registered for, simultaneously attempt the other parts to complete the assessment
4. You will be evaluated on the skill you registered for only, and the others will be ignored
5. Refer to the table below to identify the parts you will need to focus on for the skill registered to assess
6. Take the assessment from anywhere (from your Deloitte laptop) provided you have a minimum of 1 mbps seamless internet connectivity
7. Use the firm provided Plantronics headset and a noise free surrounding while taking the test

Section wise distribution of Single Skill Assessment:

The new single skill assessment will be aligned to various skills as per the below table:

Skill Section No. of questions Time duration (In mts.)

Speaking - 10 mi

Part A Read Aloud 2

Part B Repeats 16

Part C Sentence builds 10

Reading - 25 min

Part A Read Aloud 2

Part F Sentence completion 20

Part I Summary & opinion 1

Listening - 10 min

Part D Conversations 12

Part G Dictation 16

Writing - 24 min

Part H Passage reconstruction 3

Part I Summary & opinion 1

Deloitte.

**New CE Baseline Assessment**

Help document

Introduction

The Current CE baseline format is being replaced with a new version

This guide covers the following sections

- The Assessment time reduces from 2 hours to 45 minutes
- The new assessment format is divided into 9 sections, details of which can be found in this document

- Structure of the assessment
- Types of questions to expect during the assessment

Overview

This test has multiple parts. In each part, you will perform a different task.

Part	Task	Questions
A	Read Aloud	2
B	Repeat	16
C	Sentence Builds	10
D	Conversations	12
E	Typing	1
F	Sentence Completion	20
G	Dictation	16
H	Passage Reconstruction	3
I	Summary and Opinion	1

To start the test, please click next.  Next

Part A: Read aloud

Task Description:

Read a passage aloud for 30 seconds.

Number of questions: 2

Time allotted: 2 minutes

Example

Australia is a very large country. It is the sixth largest country in the world. It is also a continent and is sometimes called the 'island continent'. It is surrounded by two oceans. Most of Australia is a desert so it is very flat and dry, but it also has rain forests and mountains. It is home to many different kinds of animals.

***Failure to complete the entire passage in 30 seconds will not be counted against you**

A Read Aloud

Instructions

Read the passage aloud smoothly and naturally in a clear voice. You will be stopped after 30 seconds. This is not a speed reading test. You may not be able to finish reading the entire passage, but that is okay. When your time is up, you will automatically move on to the next item.

 Replay  Next

Part B: Repeats

Task Description:

Listen to a sentence and repeat the sentence word-for-word. The sentences are presented in approximate order of increasing difficulty.

Number of questions: 16

Example

- He's a great teacher.
- It's not too late to change your mind.
- People know how easy it is to get lost in thought.

Time allotted: 5 minutes

B Repeat

Instructions

Please repeat each sentence that you hear.

You hear:

"Leave town on the next train."

You say:

"Leave town on the next train."



 Replay  Next

Part C: Sentence Builds

Task Description:

Listen to a group of three short phrases presented in random order and then rearrange the phrases to make a sentence.

Number of questions: 10

Example

1. my boss/to London/moved
2. of your family/any pictures/do you have
3. to their leader/listened carefully/the young men

Time allotted: 3 minutes

C Sentence Builds

Please rearrange the word groups into a sentence.

You hear: 

"was reading" .. "my mother" .. "her favorite magazine"

You say: 

"My mother was reading her favorite magazine."

Instructions

Replay Next

Part D: Conversations

Task Description:

Listen to a conversation between two speakers and then answer a comprehension question.

Number of questions: 12

Example

Speaker 1: Congratulations on graduating!
Speaker 2: Thanks! It was a lot of work.
Speaker 1: I know. You deserve a party.
Question: Why does the man deserve a party?

Time allotted: 2 minutes

D Conversations

You will hear a conversation between two people, followed by a question. Give a short, simple answer to the question.

You hear: 

Speaker 1: "Lucy, can you come to the office early tomorrow?"
Speaker 2: "Sure, what time?"
Speaker 1: "7:30 would be great."
Question: "What will Lucy have to do tomorrow morning?"

You say: 

"Go to the office early." or "She will go to the office at 7:30."

Instructions

Replay Next

Part E: Typing

Task Description:

Type a given passage exactly as displayed in 60 seconds. This is an assessment of typing speed and accuracy and allows you to familiarize yourself with the keyboard

Number of questions: 1

Example

Many people do not like public speaking. They are afraid to speak in front of a large group of people.
There are many ways to get better at public speaking. First, it is good to know the room. You should know where to stand and where to set up your computer...(etc.)

Time allotted: 1 minute

E Typing

Instructions

This section allows you to get used to the keyboard and also measures your typing speed. You will have 60 seconds to type as much as you can. Type quickly and accurately. Keep typing until your time is up. Your work will be saved automatically.

Text:

For over 50 years, a British car company has been making a classic English sports car. The car is mostly handmade in the company's factory in western England.



You type:

For over 50 years, a British.....



Replay

Next

Part F: Sentence Completion

Task Description :

Read a sentence that has a word missing, and then supply an appropriate word to complete the sentence.

You are given 25 seconds for each item.

Number of questions: 20

Example

1. Her favorite hobby is _____. She has so many books.
2. He arrives _____ and is often the first one here.
3. I asked a coworker to take over my _____ because I wasn't feeling well.

Time allotted: 8 minutes

F Sentence Completion

Instructions

Please type one word that best fits the meaning of the sentence. Type only one word. You will have 25 seconds for each sentence. Click "Next" when you are finished.

You see:

It's _____ tonight. Bring your sweater.



You type:

cold



Replay

Next

Part G: Dictation

Task Description:

Listen to a sentence and then type the sentence exactly as it is heard.

You are given 25 seconds for each item.

Number of questions: 16

Example

1. I'll see you on Thursday.
2. How long can I keep this book?
3. She apologized to all her friends several times.

Time allotted: 7 minutes

G Dictation

Instructions

Please type each sentence exactly as you hear it. You will have 25 seconds for each sentence. Pay attention to spelling and punctuation. Click "Next" when you are finished. After 25 seconds, your work will be saved automatically.

You hear:

Can you work on Monday?



You type:

Can you work on Monday?



Replay

Next

Part H: Passage reconstruction

Task Description:

Read a short paragraph for 30 seconds. After 30 seconds,

Example

Robert went to a nice restaurant for dinner. When the waiter brought the bill, Robert reached for his wallet, but it wasn't in his pocket.

the paragraph disappears.

Then, reconstruct the paragraph in 90 seconds, including the main points and as many details as possible.

Number of questions: 3

He remembered having his wallet when he came into the restaurant. The waiter looked around the floor near his table. He found the wallet under the table.

Time allotted: 6 minutes

H Passage Reconstruction

Instructions

You will have 30 seconds to read a paragraph. After 30 seconds, the paragraph will disappear from the screen. Then, you will have 90 seconds to reconstruct the paragraph. Show that you understood the passage by rewriting it in your own words. Your answer will be scored for clear and accurate content, not word-for-word memorization. After 90 seconds, your work will be saved automatically.

You read:

Mike went for ten job interviews. At the last interview, he finally received a job offer.



You type:

Mike had ten job interviews. He got an offer after the final interview.



 Replay  Next

Part I: Summary and opinion

Task Description:

Read a passage. Then, write a summary of the author's opinion in 25-50 words and give your own opinion on the topic presented in the passage in at least 50 words.

You are given 18 minutes to read the passage and write both responses.

Number of questions: 1

Example

Some children grow up in a big city while other children grow up in the countryside. Childhood experiences can be very different depending on where a person is raised.

Although the countryside can be more peaceful than a big city, it is better for children to grow up in a big city...(etc.)

Time allotted: 18 minutes

I Summary and Opinion

Instructions

Read the passage.

Then, in the first box, write a short summary of the author's opinion in 25-50 words.

In the second box, write your opinion on the topic. Do you agree or disagree with the author? Why? Try to use your own ideas. You must write at least 50 words.

You will have 18 minutes to read the passage and write both the summary and opinion. Write both the summary and the opinion before clicking, "Next". Write in complete sentences. After 18 minutes, your work will be saved automatically.

 Replay  Next



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FY19-20

Monday, January 13, 2020 10:13 AM

The screenshot shows a Microsoft Edge browser window with the following details:

- Title Bar:** Shows multiple tabs: Consulting Dev, My Compliance, LeapFrog, DeloitteNet, TalentOnDemand, Workbook: New, CE Offerings Cal, Saba: Grammar, and CE program.
- Address Bar:** https://deloittenet.deloitte.com/PC/PracticeComm/regions/India/SE/Pages/CE_program_calendar.aspx
- Header:** DeloitteNet United States, News, Tools, Work, Search, and a magnifying glass icon.
- Content:** A table listing various grammar and writing courses with their duration and career levels.

Course Title	Duration	Career Level
Grammar on the Go: Prepositions	1.5	Foundation in Speaking or Writing
Grammar on the Go: Subject Verb Agreement (eLearning)	1.5	Foundation in Speaking or Writing
Me Write Good (Avoiding Writing Errors)	2	Foundation in Writing
Organizational Communication	1.2	All career levels
Phone-Based Customer Service	0.52	Senior and above
Writing Formal Business Letters and Emails	0.37	All career levels
Writing Skills HMMv12 - Harvard	1.5	Advanced or Mastery in Writing
Writing a Business Report	1.57	Senior and above
Writing a proposal	2.17	Senior and above
Writing email	1.13	All career levels
Writing Under a Deadline	0.33	All career levels
Writing a Business Case	0.32	All career levels
Writing White Papers	0.33	All career levels
Writing with Impact	1:01	All career levels
Writing Case Studies	0:37	All career levels
Grammar Foundations	2:11	All career levels
Writing a Research Paper	1:56	All career levels
Communication Foundations	1:24	All career levels
Writing Speeches	1:53	All career levels
Business Writing Strategies	1:59	All career levels
Writing Under a Deadline	0:33	All career levels
Writing Articles	0:53	All career levels
Writing in Plain English	1:51	All career levels
Advanced Grammar	2:08	All career levels
- Right Sidebar:** Includes sections for "Chat with us" (with a link to "CE support team (Mon-Fri: 10:00 am to 7:00 pm)"), "Call us" (with a list of numbers for HYD B-block, HYD E-block, Bengaluru, Mumbai, and Delhi), and a "Feedback" button.
- Taskbar:** Shows the Windows taskbar with various pinned icons and the system clock indicating 11:41 AM on 1/13/2020.





After giving exam...

Doing below micro courses - Business English

(Top 5 Speed Reading Tips)Using the multiple-reading process - 6min 48s - completed - 05mar2020

Learning Study Skills - 1.36h - completed - 05mar2020

Running a Design Business: Self Promotion - 1h 23m - completed - 05mar2020

Doing below micro courses - [Workplace Effectiveness](#)

Communication Tips - 3.42 - completed - 05mar2020

Leading Productive Meetings - 1.4 - completed - 05mar2020

Building Trust - 58m 15s - completed - 05mar2020

Presenting as a Team - 58m - completed - 05mar2020

Doing below micro courses - social intelligence

Developing Your Emotional Intelligence - 1.8h - completed - 05mar2020

		Top 5 Speed Reading Tips	0.06	completed	05mar2020
		Learning Study Skills	1.36	completed	05mar2020
		Running a Design Business: Self Promotion	1.23	completed	05mar2020
		Communication Tips	3.42	completed	05mar2020
		Leading Productive Meetings	1.04	completed	05mar2020
		Building Trust	0.58	completed	05mar2020
		Presenting as a Team	0.58	completed	05mar2020
		Developing Your Emotional Intelligence	1.08	completed	05mar2021
			9.35		
Language Competency	eLearning	Writing: The Craft of Story	1.55	completed	02Feb2021
Language Competency	eLearning	Ninja Writing: The Four Levels of Writing Mastery	4.11	completed	02Feb2021
Language Competency	eLearning	Writing with Flair: How to Become an Exceptional Writer	5.08	completed	02Feb2021
			20.09		

FY21-22

Tuesday, November 30, 2021 1:01 PM

Name	Hrs	Section	Type	Date started	Date completed
Editing Mastery: How to Edit Writing to Perfection	4.49	Language competency	eLearning	30-Nov-21	30-Nov-21
Writing a Resume	2.27	Language competency	eLearning	30-Nov-21	30-Nov-21
Negotiation Skills	2.07	Global Curriculum	eLearning	30-Nov-21	30-Nov-21
Executive Leadership	1.19	Global Curriculum	eLearning	30-Nov-21	30-Nov-21
Problem Solving Techniques	1.32	Global Curriculum	eLearning	30-Nov-21	30-Nov-21
Grammar on the Go: Present Simple vs Present Continuous (eLearning)	1.50	Language competency	eLearning	30-Nov-21	30-Nov-21
Communication Foundations(Showing as completed on 1/13/2020?)	1.17	Language competency	eLearning	01-Dec-21	01-Dec-21
Getting Your Ideas Approved	1.59	Language competency	eLearning	01-Dec-21	01-Dec-21
Business Writing Principles	1.32	Language competency	eLearning	01-Dec-21	01-Dec-21
Learning Speed Reading (2014)	0.58	Language competency	eLearning	01-Dec-21	01-Dec-21
Tips for Better Business Writing	0.28	Language competency	eLearning	01-Dec-21	01-Dec-21
Organizing an Outline	0.46	Language competency	eLearning	01-Dec-21	01-Dec-21
TOTAL HOURS COMPLETED	20.19				

ISS

Wednesday, March 4, 2020 10:33 AM

what are all the guidelines that a project should go through to say that it is a shared services pool eligible
eligibility criteria
hand in hand requirement

eligible:
standalone
ams model

What is the scope of shared services?
reduces the dependency on a single professional
diversified/quick solutions due large pool of certified, experienced resources and SME's
cost reduction, pay as you go

eligibility for shared services?
simple/moderate architecture
less dependency on other tracks
eligible for both implementation and support/operate model, but highly recommended for support model
High availability across the support
client is not willing to afford more no of FTE's/budget

Guidelines for the eligibility

Team members

Friday, February 5, 2021 9:03 PM

Nomination Form submition

Wednesday, September 1, 2021 9:09 AM

pay

Monday, December 13, 2021 12:53 PM

19,51,644.00 till Nov 2021

2,329,164.00 as of dec 2021 effective.

The screenshot shows a web browser window for 'TalentOnDemand - Compensation' at the URL <http://talentondemand.deloitte.net/deloitte.com/apps/#/total-rewards>. The page has a green header bar with the title 'Compensation'. On the left, there's a sidebar with options like 'Change bank' and 'Generate employment verification letter'. The main content area displays 'My income' with a section for 'CURRENT BASE SALARY' showing the value '2,329,164.00'. Below this, there's a note about tax deduction rules and a statement about US assignments. At the bottom, there's a link to 'Review Deloitte's Personnel Privacy Statement'. The taskbar at the bottom of the screen shows various pinned icons and the system clock indicating it's 2:56 PM on 12/13/2021.

panelists

Monday, January 17, 2022 6:19 PM

Windows Admin

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goukumar@deloitte.com

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rfnu@deloitte.com

gururam@deloitte.com

sachin6@deloitte.com

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Redhat Openshift

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angunda@deloitte.com

VARMATHUR@DELOITTE.COM

VKESHRI@DELOITTE.COM

vrankasurender@deloitte.com

trajkumarbharam@deloitte.com

Jan 17th week and next week

Windows Admin:

bsatyabhargavkuma@deloitte.com - 18th, 19th, 20th --> 11 Am - 12 PM and 25th --> 11 Am - 12 PM.,

amajumder@deloitte.com - 24th-28th , 11am - 12 am, and 2pm - 3pm

rmanam@deloitte.com - not available

lkotta@deloitte.com - 4pm to 5 pm next week 2/day

syandrapati@deloitte.com - 12PM & 3PM for current and next week

abonu@deloitte.com -

subhan@deloitte.com

goukumar@deloitte.com

madhub8@deloitte.com - 25th and 28th - 2pm to 4pm

rfnu@deloitte.com

gururam@deloitte.com

sachin6@deloitte.com - Not Avail (From last 4 years I am working in AWS. As it is totally windows. As discussed with Mukesh he said this is final technical round, for now I can take only basic windows interviews.)

bsatyabhargavkuma@deloitte.com; amajumder@deloitte.com; rmanam@deloitte.com; lkotta@deloitte.com; syandrapati@deloitte.com; abonu@deloitte.com; subhan@deloitte.com; goukumar@deloitte.com; madhub8@deloitte.com; rfnu@deloitte.com; gururam@deloitte.com; sachin6@deloitte.com

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cjayakrishna@deloitte.com

atpandey@deloitte.com

GPS DevOps

Thursday, April 28, 2022 3:14 PM

Templates

Wednesday, April 3, 2019 6:06 PM



- Is practitioner gaining early traction? Anything leadership can do to facilitate onboarding?
- If the practitioner has not been staffed, does he/she need help getting staffed or plugged into anything?
- Based on early feedback (client and/or internal), what are the practitioner's strengths and how should we further develop them?
- How can firm leadership help the practitioner grow his/her network?
- How can firm leadership help the practitioner get plugged into non-chargeable work?
- What types of staffing opportunities would help the practitioner further grow his/her capabilities?
- In what specific/core areas does the practitioner need additional support (training or coaching) to get up to speed more quickly/build momentum for the remainder of the year?
- Does the practitioner fit his/her current talent model? Are there indicators that the practitioner may be a candidate for a talent model change, now or in the future?
- Do we have the right experiences and exposure lined up to be successful? Including why/why not? If having challenges, what are your recommendations?
- Are we positioning them correctly?
- What are their key strengths and skills? Are they utilizing them?
- How do we help this person expand his/her network?
- Has the practitioner been staffed? If so, how did they do on 1st project?
- How is the practitioner expanding his/her network?

Biswal, Akhay <abiswal@deloitte.com>; Venkateswara Rao, Mamidi <mvenkateswararao@deloitte.com>; Sravanti, Peddolla <psravanti@deloitte.com>; Tadimeti, Saketh Venkata Ragavendra <satadimeti@deloitte.com>; Moudgil, Dhruv <dmoudgil@deloitte.com>

Talent Review | Offline / Hybrid Cohorts

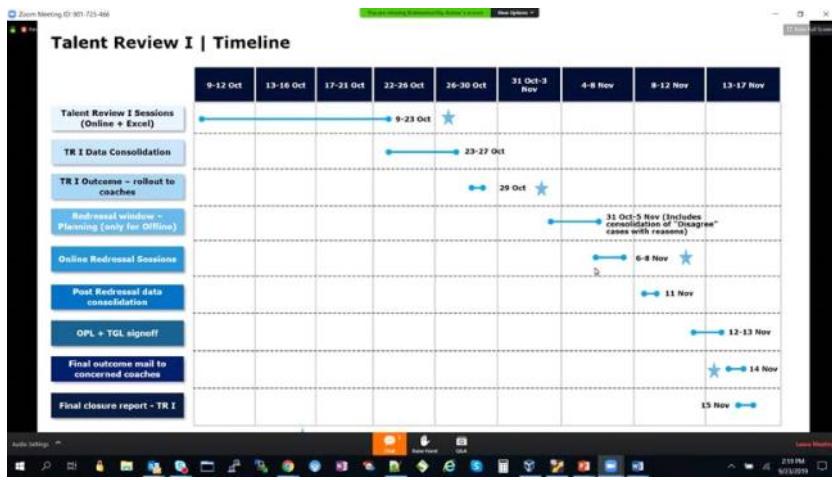
Milestone TBD- New hires

- **What can the Panel See:** Demographics, Historical + Current Performance Data points, YE19 + FY20 TR1 Impact Statements
- **Consideration during discussion with Business Leaders:**
 - DoJ
 - Year At Level
 - Current Role on the project and Impact Created
 - ONL / ARLP
 - Talent Model
 - Hire Source- Campus : Standard ML , Lateral- Based on multiple factors mentioned above
- **How is the outcome captures:**
 - Change the Milestone Tab based on Outcome discussed
 - Update Impact Statements (if Needed)
 - Track Changes (if needed)
 - Talent Notes (if needed/**Mandatory for exceptions**)

Promotion 2020 + Less than 60% ONL

- **What can the Panel See:** Demographics, Historical + Current Performance Data points, YE19 + FY20 TR1 Impact Statements
- **Consideration during discussion with Business Leaders:**
 - Utilization
 - Impact Client and Firm
 - ONL
 - ARLP
 - YAL/TIL
 - Additional support required (Network/Role/Project)
- **How is the outcome captures:**
 - Change the Milestone Tab (if needed)
 - Update Impact Statements (if Needed)
 - Track Changes (if needed)
 - Talent Notes (if needed/**Mandatory for exceptions**)

Onl – next level rediness



Zoom

Upload Process - Steps

Access the link* to view all your coachees to be discussed in the Talent Review.

Deloitte. Welcome to Deloitte Online

Offering name

Click here to edit Talent Review R_Sundar sundar@deloitte.com R_Sundar, Kishore, Srividya

Note:

- The link for each offering is different
- You shall be able to view only the list of Coachee(s) mapped to you, who are getting covered in the talent review.

Zoom

Upload Process - Steps

Click on "Click here to edit" against each coachee name to open the individual form for respective coachee.

Deloitte. Welcome to Deloitte Online

Offering name

Click here to edit R_Sundar sundar@deloitte.com R_Sundar, Kishore, Srividya

Coachee Details

Click here to edit

questions

Thursday, March 28, 2019 10:13 AM

how are communication skills
how is she at follow ups and completing the work
Is she a individual contributor for that activity, if not what's her role and impact if it and other persons level
impact at client/firm level
any change in the skill set, if yes how he/she is doing
on time delivering the tasks or not

name
office
service line
talent model

Action Items:

I,

- **Enter Impact Indicator:** Go to [iRPM](#) > Reports > Other > Dashboard > Select Coachee name - Impact Indicator.

1. Every Impact Indicator entry field (e.g., Client, People/Firm) will be displayed on the "Impact Indicator" tab.
2. Summarize (in 600 characters or less per text box) the impact your coachee made, using concrete examples.
3. Provide actionable, developmental feedback that your coachee can use to elevate their performance and professional growth.
4. In USI, during Year-end meetings, the panel will review Impact Indicators for each practitioner and may recommend changes based on the discussions. These changes will be made by the Talent during the meeting.
5. No changes can be made to the Impact Indicator by the coach post the YE discussion for the coachee.

II,

Complete due diligence with Team Leaders and document in SharePoint Tool.

III,

Tips

Monday, April 8, 2019 10:46 AM

[Gouripeddi, Bharadwaj (US - Hyderabad):

Bhargava has been an integral part of testing Interfaces and medical which are relatively complex modules across the application and executed a minimum of 70 test cases during each cycle of 5 weeks. Bhargava has worked on Partner based testing dealing with the real time client data and identified the defects which improved the quality of the application before the project going live. Executed the Batch Process test cases on a greater volume of data by writing complex SQL Queries which helped in identifying defects which were unnoticed earlier.

[Gouripeddi, Bharadwaj (US - Hyderabad):

Bhargava should pro actively participate in all kinds of Firm Initiative

Team players

Not stable

Stubborn

Not a good listener

Always Pro Active

Owns up task and completes on time

Quick Learner

Dev Need:

Need to learn networking concepts throughly

He is good at giving work arounds and analysis.

Good at problem analytics skills.

Technically he is better.

Able to understand complex networks.

Communication good.

He needs to be take more tickets.

He needs to proactively own up activites.

He should take more responsibilioty in handling tickets.

Should give prompt updates.

2018-2019 YE

Tuesday, April 9, 2019 11:39 AM

Kancharla Bhavana (US - Hyderabad)
bkhkancharla@deloitte.com

Tuesday, March 26, 2019 11:47 AM

Case Study 18-19 - Performance

Monday, April 1, 2019 9:14 AM

Practitioner Details

Employee Name	Bhavana Kancharla	Title	XIN-DC Consultant
Office	Hyderabad	Primary Industry	Life Sciences & Health Care
Coach Name	Naga Panguluri	Target Promotion Year	2020
Target Career Path	N/A	Talent Model	Traditional Model
Years in Level <small>ⓘ</small>	1.837		

MID YEAR:

Performance Scatterplot ⓘ

PMY19 Performance - Nov 2018 (3/11/18 – 10/5/18)

PMY19 Performance - Nov 2018 (3/11/18 – 10/5/18)



Team Leader Name <small>▼</small>	Description: e.g. Client/Internal Client, Engagement, Role <small>▼</small>	Hours	Start Date / End Date <small>▼</small>
Mukassir Ahmed Khan	Part of WGS Enrollment system, Currently working on PV 35143 for July Release for Online and Batch changes. Designed the action plans and being responsive to needed plan changes. Able to reassign and prioritize the workflow when required.	387	03/12/2018 - 05/11/2018
Mukassir Ahmed Khan	Part of WGS Enrollment system, currently working on PV31643 CDHP Project. Responsible for taking up whole project right from design and guiding team with right inputs, and delivery on time in spite of daily requirements change.	513	05/14/2018 - 08/03/2018
Mukassir Ahmed Khan	Part of WGS Enrollment system, currently working on Student Health Plan. Responsible for taking up whole project right from design and guiding team with right inputs, and delivery on time in spite of daily requirements change.	333	08/06/2018 - 09/28/2018

YEAR END:

Performance Scatterplot ?

PMY19 Performance - March 2019 (3/11/18 – 3/9/19)

PMY19 Performance - March 2019 (3/11/18 – 3/9/19)

USI_CBO_SE_Con Kancharla, Bhavana



1 Unique Team Leaders

6 Performance Snapshot(s)

1899 Total Hours

0 "Yes" Operating at Next Level ?
Visible to Coaches only

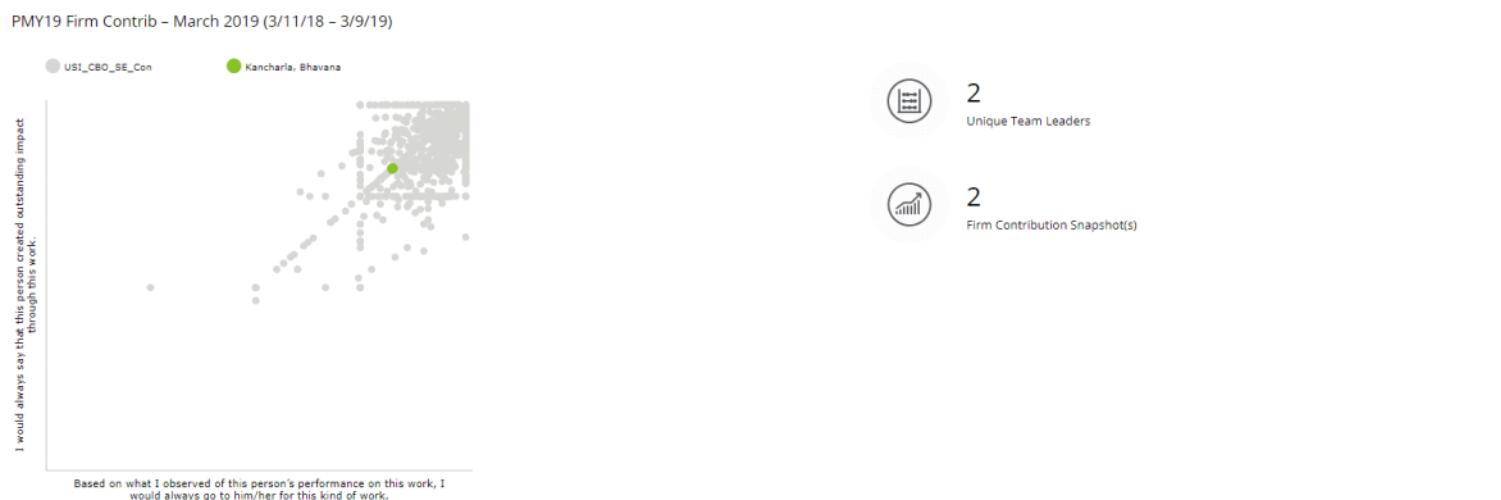
Team Leader Name ▾	Description: e.g. Client/Internal Client, Engagement, Role ▾	Hours	Start Date / End Date
Mukassir Ahmed Khan	Part of WGS Enrollment system. Currently working on PV 35143 for July Release for Online and Batch changes. Designed the action plans and being responsive to needed plan changes. Able to reassign and prioritize the workflow when required.	387	03/12/2018 - 05/11/2018
Mukassir Ahmed Khan	Part of WGS Enrollment system, currently working on PV31643 CDHP Project. Responsible for taking up whole project right from design and guiding team with right inputs, and delivery on time in spite of daily requirements change.	513	05/14/2018 - 08/03/2018
Mukassir Ahmed Khan	Part of WGS Enrollment system, currently working on Student Health Plan. Responsible for taking up whole project right from design and guiding team with right inputs, and delivery on time in spite of daily requirements change.	333	08/06/2018 - 09/28/2018
Mukassir Ahmed Khan	Part of WGS Enrollment system, currently working on Voyager project. Responsible for taking up project right from design and guiding team with right inputs, and delivery on time in spite of daily requirements change which is challenging.	144	10/01/2018 - 11/30/2018
Mukassir Ahmed Khan	Part of Voyager-2020 project. Highly demanding and challenging work with monthly deliverables and daily changing requirements. 0 defects till date and I own 2 Firm snapshots, of 15 tech hours for a brownbag session. Willing to do more.	225	12/03/2018 - 01/18/2019
Mukassir Ahmed Khan	Working on Voyager 2020, previously on Modular CDHP projects. Fulfilled project goals. Stabilized project. ZERO defects. Appreciated by client. On Time updates, query clarification. 100% in-time delivery. Adaptive and receptive to changes.	297	01/21/2019 - 03/01/2019

Case Study 18-19 - Firm

Monday, April 1, 2019 10:01 AM

Firm Contribution Scatterplot ?

PMY19 Firm Contrib – March 2019 (3/11/18 – 3/9/19)



Team Leader Name -	Description: e.g. Client/Internal Client, Engagement, Role -	Type of Contribution -	Type of Impact -	Start Date / End Date -
SARITA Mishra	Volunteered in DCEI event held on May 19, 2018	Recruiting	Contributor	05/19/2018 - 05/19/2018
Sambit Das	Delivered a presentation on one of the prototyping tool - Balsamiq for Brownbag sessions.	Training	Managed	09/05/2018 - 09/05/2018

Metrics

Tuesday, April 9, 2019 12:37 PM

My Metrics 2019 ▾

Financial/Operational Metrics ▾	As of Date ▾	Goal ▾	Goal, Self-Rep ▾	Actual PM YTD ▾	Actual PM YTD, Self-Rep ▾	Peer Group Range ▾	My Percentile ▾		
Standard Utilization	03/09/2019	95%		92%					
Adjusted Utilization	03/09/2019	95%		92%					
Other Metrics ▾	As of Date ▾			Details ▾					
CE Level	03/09/2019			Goal - Advanced ; Actual - Mastery					
CE Score	03/09/2019			Goal - ; Actual - 68					
CE Training Hours	03/09/2019			Goal - ; Actual PM YTD - 2 h					
Availability/StaffIT	03/09/2019			92%					
Late Time Reports	03/09/2019								
Resume Compliance	03/09/2019			Yes					

Script

Thursday, April 4, 2019 4:22 PM

Name Kancharla Bhavana
Office
Service line CBO (System Integration)
Talent model

Counselee Name	Bhavana Kancharla
DOJ - Deloitte	29th May,2017
DOJ – current project	1st June,2017
Skill/Technology	Mainframes
Total Experience	7
Current Experience in Firm	1 Year 9 Months(till 09 Mar 2019) (1.10 years till now)
Current Experience in Project	1 Year 9 Months
Total relevant years of experience	7
Current Project	Anthem WGS EBC_AMS
Previous Project	NA in Deloitte
Last Promoted Date	NA in Deloitte
Project Support	NA
Last Year Overall Rating	2
Total Firm Initiative Hours Current Year	23
CE Level	Mastery
Milestone year	2020
STAFFIT	92%
DTE Compliance	NIL
Utilization	92%
Adjusted	92%

From Previous Coach (Srikanth Kasturi):

Strengths of the Counselee as observed through your interaction and due diligence:

1. Dedicated and punctual throughout her tenure.
2. Technically well equipped
3. Very good at communication and receiving feedback or improvement points.
4. Great output while working under stressed and stringent timelines.
5. Ability to help/groom others.

Improvement Areas of the Counselee as given in your feedback periodically and specifically in your most recent interaction:

1. Need to showcase the work by her technical ability

Key Message about the Counselee (kindly summarize counselee's aspirations, progress against CDP, overall feedback, anything else you deem relevant):

She is very dedicated and serious about her work. She gives more than 100% effort for any task that will be given to her. Her milestone year is in 2020. Her aspiration is to get into a Lead role and groom others.

Year End (By me):

Strengths of the Counselee as observed through your interaction and due diligence

1. Very good at multi-tasking.
2. Independent contributor
3. Own tasks and complete on time
4. Though she is not an official lead, but was given some area where she can lead.
5. Good appreciations from onsite.

Dev needs:

1. Have to gain more knowledge at ID card area which is one of the area in application.(She is already working on some of the cases.)

Point to be noted:

1. Multi-tasking was one of her dev need for the last snapshot and she picked up very well by the year end.

Long Leave (Due to bone fracture):

From 8th Oct till 9th Nov - approx. 5 weeks

Impact indicators:

Client impact (600 Chars):

Bhavana has implemented critical migration project Voyager 2020, for lakhs of members of around 500K groups to undergo a significant pharmacy business change from ESI to the new CVS system. She has automated vendor process and applied code re-usability, drastically reducing manual intervention as well as time by 50% and increasing the no. of claims processed/day by 100. Led several key projects for Modular capabilities, substantially minimizing potential overhead of new contracts, leading to cost savings of around \$15600/year. NIL defects, 100% SLA compliant, Recipient of several R&R awards.

Firm/People Impact (600 Chars):

Bhavana ran a technical training session on prototyping tool, BALSAMIQ as a part of BA Community of Practice, with a target audience of 90. This session helped all ANTHEM BA audience to build Mock-ups for projects. She is building various REXX tools that would come at disposal for project optimization. She has volunteered to be part of the AMS Blitz

programs held this year, to assist HRs and Managers in the recruitment process, by coordinating with them, filtering resumes and directing the candidates through whole procedure.

AMS Blitz Program

1. Volunteered in the AMS Blitz event to help HRs and Managers in the recruitment process
2. Coordinated with HRs, filtered the resumes, and directed the candidates through the entire process
3. Conferencing candidates with telephonic interviews with the managers

Script:

Anthem:

Voyager - 10 nov 18 to till date (up to 2020)

Leave - 8 oct 2018 to 9 Nov 2018

Vendor automation - Jun 2018 - Sep 2018

WGS Enrollment Sys - Mar 2018 - June 2018

Awards:

R&R – Performer of the Month

R&R – Applause award for serving key role in the team and stabilizing the application

Couple of appreciation mails.

1.PV35604 – VOYAGER 2020 PROJECT

- ✓ Bhavana, as a lead developer, has handled migration of around three Lakhs members from ESI to CVS system across multiple releases (planned in three WAVES) for the project being one of the biggest initiative of FY19.
- ✓ Developed re-usable one-time programs for Termination of ACTIVE ESI vendors and activation of new ING vendors as per respective Migration dates.
- ✓ R&R – Performer of the Month
- ✓ R&R – Applause award for serving key role in the team and stabilizing the application.

2. PV31643 – CDHP Launch Project

- ✓ Bhavana developed a successful and optimized vendor AUTOMATION process to add ALEGUS vendor codes as part of the NEW CDH technology platform, which will offer market-leading product and account capabilities, bypassing the existing LITES system (third party), thereby reducing the operational costs by seamlessly and intuitively integrating into the Anthem consumer experience.
- ✓ The VALUE ADD of this project was being the same piece of code developed and further could be used by both Mainframe as well as JAVA front-end systems (BSP), thereby minimizing the coding effort.
- ✓ Devised effective system for a flexible banking network that gives choice to Anthem's customers to collaborate with multiple banks.
- ✓ Streamlined ALEGUS feed by including a field that identifies if a record is for a Hybrid or for a large group.

3. PV35143-Modular Project

- ✓ Bhavana served on two key teams this past year, one being WAVE 2 of Modular product capabilities, wherein she established effective system, to build a generic plan that can be re-used for both PY and CY contracts.
- ✓ This substantially reduced the potential overhead of number of contracts and plans that needs to be created, resulting in cost saving of around \$15600 per year

4. PV31428 – CR792 Benefit Accumulators Restart Project

- ✓ Bhavana improved existing WGS system, by addressing an issue that was discovered during migration of benefit year plans.
- ✓ Implemented better procedures to fix the Benefit Accumulations issues by housing PLAN year effective date within WGS Membership system so that CLAIMS adjudication process utilizes it to determine accumulation periods.

5. - PV 35359 Student Health Plan

- ✓ Bhavana has initiated the analysis and provided the team with the required resources to understand the scope and requirements where in the project aims at providing 14 Anthem states, the ability to develop and expand student health business.
- ✓ This project leverages new student health insurance plans implemented by Colorado.
- ✓ Bhavana has stabilized the unbalanced Voyager/Modular applications, by making the system resistant and spanning the platform across all impacted applications, and incorporating re-usable code and automation wherever possible.

Description:

Mainframes - IMSI screens (Front end screens)

JAVA - Java Screens (Front end screens)

Automated in 3 weeks including weekends.

Third Party vendor - ESI and CVS

CVS inhouse vendor

Use to process 20-50 claims per day, after automation ~100 claims per day.

Triggers(Batch jobs) was done by another resource in her team, which is part of the automation

Anthem voyager is biggest initiative from the client side, which involves moving from one vendor to another vendor.

They have every month releases where she involves in every prod release and also works on upcoming releases (like, design, code and unit testing). She is good at working both on current release and upcoming releases. Very good at multi-tasking.

As part of enrollment, they will enroll members and generate ID cards.

Shaik Mohammed Aarish (US - Hyderabad)
mohammshaik@deloitte.com

Tuesday, March 26, 2019 11:39 AM

syeleswarapu@DELOITTE.com - Agarwal Apurva Arjun - Lead

Case Study 18-19

Monday, April 1, 2019 8:35 AM

MID YEAR:

Practitioner Details

Employee Name	Aarish Shaik	Title	XIN-DC Consultant
Office	Hyderabad	Primary Industry	NT - Not Designated
Coach Name	Naga Panguluri	Target Promotion Year	2020
Target Career Path	N/A	Talent Model	Traditional Model
Years in Level	0.783		

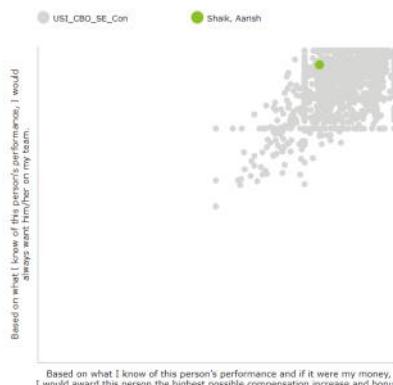
From <<https://rpm.deloitteresources.com/performancemanagement/#/dashboard/home>>

PMY19 Performance - Nov 2018 (3/11/18 – 10/5/18)



Team Leader Name ▾	Description: e.g. Client/Internal Client, Engagement, Role ▾	Hours	Start Date / End Date ▾
Sreedhar Yeleswarapu	Worked on the following 1.Converted and integrated Income eligibility, Adoption and Guardianship flow.Did my research on WebAPI integration with CRM and Field Service Module	333	08/03/2018 - 09/28/2018
Shree Kabra	Took lead in learning and explaining Investment Banking Functional training in team. Took a training and explained Splunk with the practical use case to the team. Worked in Asp.net POC and presented demo before team.	245	06/20/2018 - 08/20/2018

YEAR END



- 3 Unique Team Leaders
- 6 Performance Snapshot(s)
- 1411 Total Hours
- 0 "Yes" Operating at Next Level (Visible to Coaches only)

Team Leader Name	Description: e.g. Client/Internal Client, Engagement, Role	Hours	Start Date / End Date
Shree Kabra	Took lead in learning and explaining Investment Banking Functional training in team. Took a training and explained Splunk with the practical use case to the team. Worked in Asp.net POC and presented demo before team.	245	06/20/2018 - 08/20/2018
Sreedhar Yeleswarapu	Worked on the following 1. Converted and integrated Income eligibility, Adoption and Guardianship flow. Did my research on WebAPI integration with CRM and Field Service Module	333	08/03/2018 - 09/28/2018
Sreedhar Yeleswarapu	Ownership of Intake module. Helping new team mates technically and functionally by taking sessions on CRM. Being part of Idaho project discussions and roadmap. Helping team in technical aspects.	410	09/29/2018 - 11/30/2018
Sreedhar Yeleswarapu	Active part in code conversions. Trained the new CRs on Dynamics 365 and lead the team for code conversion. Took Technical KT sessions dialy to explain MS Dynamics 365. Worked during shutdown period on my intrest understanding work priorities.	144	12/01/2018 - 01/06/2019
Apurva Agarwal	Reviewing the User Stories for Idaho. Brainstorming technical and functional aspects of project. Provided technical KT sessions to team on MS Dyanmics 365.	81	01/07/2019 - 01/18/2019
Apurva Agarwal	Contributed in both technical and functional design clarification. Delivered high customizations User Stories. Contributed in code clean up.	198	01/29/2019 - 02/28/2019

My Metrics 2019 ▾

Financial/Operational Metrics	As of Date	Goal	Goal, Self-Rep	Actual PM YTD	Actual PM YTD, Self-Rep	Peer Group Range	My Percentile
Standard Utilization	03/09/2019	95%		26%			
Adjusted Utilization	03/09/2019	95%		81%			
Other Metrics	As of Date			Details			
CE Level	03/09/2019			Goal - Advanced ; Actual - Advanced			
CE Score	03/09/2019			Goal - ; Actual - 59			
CE Training Hours	03/09/2019			Goal - 7 h ; Actual PM YTD -			
Availability/StaffIT	03/09/2019			54%			
Late Time Reports	03/09/2019			1			
Resume Compliance	03/09/2019			Yes			

Script

Tuesday, April 2, 2019 4:47 PM

Name – Mohammed Aarish Shaik
Office - Deloitte Towers , Hyderabad
Service line - CBO (System Integration)
Talent model - Traditional.

Stats:

Counselee Name:	MOHAMMED AARISH SHAIK
DOJ - Deloitte:	18-JUNE-2018
DOJ - current project:	07-Jan-2019
Skill/Technology:	.net, MS Dynamics 365
Total Experience:	5 years 7 months
Current Experience in Firm	10 months
Current Experience in Project	3 months
Total relevant years of experience	8 months
Current Project	State of Idaho_C&M_CE&E
Previous Project	HHS Nextgen_CBO_SE
Last Promoted Date	NA
Project Support	NA
Last Year Overall Rating	NA
Total FI Hours Current Year	9 HOURS
CE Level	Advanced
Milestone year	2020
STAFFIT	54%
DTE Compliance	1 miss
Actual Utilization	26%
Adjusted Utilization	81%
MDP	
Bench	2 days

Summary:

Aarish joined Deloitte on 18-JUNE-2018 as a .NET resource. He got placed in **Credit Suisse** project. After working 2 month in the project, project has moved out of the Deloitte.

Later he was deployed on to internal Deloitte project which is HHS(Human and Health services) Nextgen on 06Aug18 which involves conversion of entire code from salesforce to CRM Dynamics 365 which is irrelevant to his skill set.

Being a quick learner, he came up to speed in less time and started working along bringing the other team members to speed by providing them necessary KT's and Technical presentation.

To sell the product, he contributed his part in developing a solution for purpose of client demo, which went good and won the client. After winning the project, he started converting the entire code of Sales Force to CRM Dynamics to make a concrete solution as per the client need.

He got the **Spot Award** for learning MS Dynamics 365 by himself and jump to work on Project in shorter duration
He got the **Applause Award** for the commitment at work.

DEV Needs:

Needs to enhance his technical skills on CRM Dynamics 365(end to end technical aspects).
He is expected to become a Go to Guy in the project related CRM Dynamics 365.

Strengths:

Positive attitude
Flexibility
Ready to pick any task
Leads team when needed
Coordinates with onsite counter parts

Client Impact: **1, Credit sussie**

2, HHS nextgen CBO_SE

- Contributed team by working on Case Module conversion from Sales Force to MS Dynamics 365 which helped the firm to win the first Child Welfare Dynamics 365 project for the State of Idaho.
- He has taken a complete ownership of Adoption and Guardianship module during code conversion from Sales force to Dynamics 365 which is currently used as a standard Child Welfare solution on MS Dynamics 365.

3,State of Idaho

Aarush actively worked on design and user story estimates along with delivering the complex user stories as part of Sprint 1. He also contributed his team by giving them design clarifications, Technical KT's and helped Campus recruits to understand the functional and technical aspects of project and MS Dynamics 365. Played a key role in coordinating between offshore and onshore.

- He was actively part of design and User Story estimates as part of Sprint 1.
- Contributed team with design clarifications before building the User Stories.
- Delivered successfully Complex User Stories as part of Sprint 1.
- I have taken complete responsibility of my User Stories and involved in the discussion with Onsite team for clarifications.
- Took multiple Technical KT's and helped the Campus Recruits to understand the functional and technical aspects of project and MS Dynamics 365.
- Led the team (CRs) for the code conversion from Sales Force to Dynamics 365 technology.

AWARDS:

- I got the Applause Award for my commitment at work.
- I got the Spot Award for mastering MS Dynamics 365 by myself and jump to work on Project in shorter duration.

Firm Impact:

Arish attended Blitz on 16-Feb-2019, for Dynamics 365 skill set. Initially , he accompanied [@Mohammed, Abu \(US - Hyderabad\)](#) as a panel member and took interview of 5 candidates , among which one candidate had cleared all the interview rounds.

Points to be noted:

His first Public sector project

Next level:

Not ready

Giving opportunities and coaching him

After couple of snapshots, they can assess more

Utilization adjustment:

Everyone working on Credit Suisse, the WBS code was a non-utilization WBS code. Bhaskar Ghosh who was the GDM on the project confirmed that Deloitte USI leadership is aware of it.

Due to independence requirements from Deloitte Audit, it was Deloitte leadership decision to not take up the consulting project.

You can mention your adjusted utilization to your coach if the Credit Suisse hours are included and he can also convey the same to panel during the year end representation.

STAFFIT:

He was not aware of the process of filling STAFFIT ,hence he missed filling STAFFIT at the initial times of Deloitte.

After knowing the process and its importance he is doing STAFFIT in timely manner.

Unofficial dev needs:

Delivery on time

Timely status updates

At time attention on details of user stories

Diligent and quality work

Frim initiative

USER STORY:

A user story is a narrative of what each key employee who will be using Salesforce does. Importantly, a user story does not include how they do it, or the technology they use; this comes later. A user story includes 3 key pieces of information: who (their role), what (they need to do), in order to support what function.

Final feedback to coaches:

From panel:

Need to improve at technical aspects and more If he needs to do.

Unofficial dev needs:

Delivery on time

Timely status updates

At time attention on details of user stories

Diligent and quality work

Frim initiative

2019-2020 YE - FY20

Tuesday, April 30, 2019 7:08 PM



Dear Practitioners,

Further to our message earlier with details announcing few enhancements to the performance management process this year, given below is a quick view on PMY20 year-end timelines, process and your responsibilities.

Every practitioner will be discussed at year-end, we will conduct two types of year-end discussions named **Hybrid** and **In-person** reviews.

1. In **Hybrid review process** the coach is not required to be present, panel of Business Leaders and Talent will review performance data to arrive at final outcome.
Typical cohorts covered during such discussion are AA to SCs non-milestone, with minor variations across OP's
To support the hybrid review process, coach will have to submit coach survey responses along with impact indicators to provide relevant performance information for their coachees.
Additionally coaches will have redressal window to meet in-person/skype to share additional perspective as needed.
2. **In-person** reviews are our traditional, 3-5 mins presentation-based discussions like previous years.
Typical cohorts covered during these discussions are milestone candidates and all categories for manager and above levels.

*Please note, in addition to the outlined approach, there will be few OP specific cohorts coverage.



What is evaluated during Year-end?

Performance will be evaluated based on impact across client, people/firm and metrics.

The performance indicators reviewed: performance & firm contribution scatterplot, target metrics, impact indicators and additional context provided by your coach based on the due diligence insights.



Performance Overview box :

Your year-end outcomes will be displayed in the new "Performance Overview" box in iRPM on whether you are

- Above
- Commensurate
- Below

Across Client, People/Firm, and Metrics (as applicable)

PMY20 Year-end timelines :

Activity Details	Applicable Dates
Eligible headcount for PMY20 yearend	February 28, 2020
Team Leaders to complete snapshot by	March 7, 2020
Coachee to enter the impact statements (New!!)	March 13 – March 20
Coach to submit the impact statements	March 23 – April 3
Coach conducts <u>due diligence</u>	March 13 – April 3
Year-end scatterplot release	March 26, 2020
Coachee(s) self-reports metrics on "My Metrics Application" (as applicable)	April 1 – April 8
Year-end review meetings timelines	April 7 – May 6
Debrief for coaches on year-end outcomes	May 18 – May 29
Green light for year-end discussions	Week of June 1 - 5
Year-end feedback conversations	Upon Green light

Coachee/Coach Action items:



Attend a year-end training session. Training for coaches and coachees will be offered during the first two weeks of March.



Provide your coach with performance details. Share a list of the team leaders , peers or team members you have worked with for client and firm contributions and provide additional context into your PMY20 performance.



Coachee will have to enter "Made impact this year by" in the Impact Indicator boxes in iRPM from **March 13 to 20th** . Coaches will review/edit the text coachee enters and will write the "Can enhance impact by" Impact Indicator boxes from **March 23rd to April 3rd**.



Self-reported metrics is between 1st April and 8th April. This is applicable only to Senior Managers/Specialist Leaders and Managers /Specialist Masters who are in a target promotion year. Self-reported validated sales, managed revenue, and managed hour.



Kindly refer to the PDF for YE preparedness resources

Additional Information

Is there any new information that is not captured in the questions above that the panel should know?

*Note: Only provide information if it differs from the information already provided above/Impact Statements.
Please do not include coachee personal or health information as part of your response.*

Answer: *none - PS*

Note: *Please answer the following questions based on your continued observations about your Coachee over their tenure at Deloitte*

In your view, is your coachee working in a critical business area across domain, industry, technology, or processes.
If yes, do mention the business area and contributions made by your coachee.

Answer: *None - PS*

Describe instances where your coachee has played diverse roles & has scaled up quickly to deliver with quality in the new role/s.

Answer: *None - PS*

Explain instanceswhere your coachee has demonstrated willingness & ownership to deliverhigher level responsibilities (beyond current career level)

Answer: *None - PS*

• Sravanthi, Peddolla

Tuesday, April 30, 2019 7:08 PM

- Name – Peddolla Sravanthi
- Job Title – XIN-DC Business Technology Analyst
- Start Date - 8/5/2019
- Office - Hyderabad
- Function/Service Line – Systems Engineering
- Contact Information – PSRAVANTHI@DELOITTE.COM

- Is practitioner gaining early traction? Anything leadership can do to facilitate onboarding?
- If the practitioner has not been staffed, does he/she need help getting staffed or plugged into anything?
- Based on early feedback (client and/or internal), what are the practitioner's strengths and how should we further develop them?
- How can firm leadership help the practitioner grow his/her network?
- How can firm leadership help the practitioner get plugged into non-chargeable work?
- What types of staffing opportunities would help the practitioner further grow his/her capabilities?
- In what specific/core areas does the practitioner need additional support (training or coaching) to get up to speed more quickly/build momentum for the remainder of the year?
- Does the practitioner fit his/her current talent model? Are there indicators that the practitioner may be a candidate for a talent model change, now or in the future?
- Do we have the right experiences and exposure lined up to be successful? Including why/why not? If having challenges, what are your recommendations?
- Are we positioning them correctly?
- What are their key strengths and skills? Are they utilizing them?
- How do we help this person expand his/her network?
- Has the practitioner been staffed? If so, how did they do on 1st project?
- How is the practitioner expanding his/her network?

Lead - Anil Marri

Midyear

Thursday, October 3, 2019 3:11 PM

Sravanthi

Feedback from Anil marri on Friday (27-Sep-2019)

Project name - Garnet under HCSC Keystone (ODC)
HCSC - Health Care Service Corporation
Joining Date - 05-Aug-2019
261 hours - from 08-Aug-2019 to 20-Sep-2019
3 weeks in project - scrum agile methodology (model).
Took 2 weeks to get access on the project

Performing well at current level
Owns task and completes them on time when assigned
Met expectations
UI screens(Front end) for search criteria - fetch data in the screens - 3-4 sprints went live internally

Points for each story:

Simple - 3
Moderate - 5
Complex - 8

Skill:

Java Spring boot and Spring

Dev Needs:

Take ownership individually
Should start grooming juniors

Next level: TBD

Strength:

Good in technology

Firm:

Planning to help in next 3 months to get some FI's

Dev Needs:

Should start building network
Should adopt to Deloitte culture

Share Point:

Impact Statement:

Sravanthi joined the project on 05-Aug-2019 and it took ~3 weeks to complete onboard and get required access to work upon. As of now she is working as expected and met expectations. As per the lead it is too early to judge as she was productive only from last 2 weeks.

Sravanthi joined the project on 05-Aug-2019 and it took ~3 weeks to complete onboard and get required access to work upon.

As of now she is working as expected and met expectations.

As per the lead it is too early to judge as she was productive only from last 2 weeks.

Dev Needs:

Sravanthi should proactively take ownership and start working individually
Sravanthi should proactively help and groom juniors.

Firm:

Sravanthi haven't started any Firm related initiatives yet.

Dev Needs:

Sravanthi should start picking up some Firm Initiatives and start working on them.

YE-FY20

Tuesday, March 24, 2020 10:22 AM

Requested	Completed	Type	Team Leader Name	Charge Code	Start Date	End Date	Hours
9/18/2019	9/27/2019	Performance Snapshot	Anil Marri (Hyderabad)	HEA00283-01-01-01-2000	8/8/2019	9/20/2019	261
11/15/2019	12/10/2019	Performance Snapshot	Anil Marri (Hyderabad)	HEA00283-01-01-01-2000	9/21/2019	11/15/2019	399
1/10/2020	2/4/2020	Performance Snapshot	Anil Marri (Hyderabad)	HEA00283-01-01-01-2000	11/18/2019	1/3/2020	222
2/28/2020	3/6/2020	Performance Snapshot	Anil Marri (Hyderabad)	HEA00408-01-01-01-1001	1/6/2020	2/28/2020	389

Practitioner Details:

Employee Name	Peddolla Sravanthi
Title	XIN-DC Business Technology Analyst
Office	Hyderabad
Primary Industry	NT - Not Designated
Coach Name	Naga Panguluri
Target Promotion Year	2021
Target Career Path	Managing Director
Talent Model	Traditional Model
Years in Level	0.657
Date Last Promoted	

From <<https://rpm.deloitteresources.com/performancemanagement/#/dashboard/home>>

My Metrics:

Financial/Operational Metrics	As of Date	Goal	Goal, Self-Rep	Actual PM YTD	Actual PM YTD, Self-Rep	Peer Group Range	My Percentile					
Standard Utilization	03/07/2020	95%		102%								
Adjusted Utilization	03/07/2020	95%		102%								
Other Metrics		As of Date	Details									
CE Level	03/07/2020	Goal - Advanced ; Actual - Foundation										
CE Score	03/07/2020	Goal - ; Actual - 36										
CE Training Hours	03/07/2020	Goal - 22 h ; Actual PM YTD - 2 h										
Availability/StaffIT	03/07/2020	80%										
Late Time Reports	03/07/2020	2										
Resume Compliance	03/07/2020	Yes										

From <<https://rpm.deloitteresources.com/performancemanagement/#/dashboard/metrics>>

Firm:

PMY20 Performance - March 2020 (3/10/19 - 3/7/20)



Updated in Share point for Mid Year:

Client:

Impact Statement:

Sravanthi joined the project on 05-Aug-2019 and it took ~3 weeks to complete onboard and get required access to work upon. As of now she is working as expected and met expectations. As per the lead it is too early to judge as she was productive only from last 2 weeks.

Sravanthi joined the project on 05-Aug-2019 and it took ~3 weeks to complete onboard and get required access to work upon.

As of now she is working as expected and met expectations.

As per the lead it is too early to judge as she was productive only from last 2 weeks.

Dev Needs:

Sravanthi should proactively take ownership and start working individually - she is doing it but not to the mark as expectations

Sravanthi should proactively help and groom juniors. - she started doing . She needs to pick up

-->

Firm:

Sravanthi haven't started any Firm related initiatives yet.

Dev Needs:

Sravanthi should start picking up some Firm Initiatives and start working on them.

-->

Year End:

Anil Marri:

Impact statement is good

7months tenure in Deloitte

Average for 9 sprints - regarding story

Migration project to modernization

Dev Need:

Delivering on time but timing are issue

Check ins - she always failed to come back

Deloitte culture needs to be adopted

She is faster/quick leaner than other team members

Code review comments - she is putting efforts not 100%

At her level she is good

Expectation-

Leading calls

Availability more on floor

Official:

Sravanti should proactively take additional task and should own them.

She needs to develop multitasking.

She needs to understand Deloitte's culture.

She should show case herself on the floor.

Submitted in the link::: --- Submitted both impact indicators and the survey link

Client Impact - Made impact this year by:::

I have worked in Claims UI project(HCSC-Keystone) as a java developer for 3 sprints and delivered 40 story points with minimal defects by writing effective JUnits and also worked ad hoc for team. And moved to Core-Adjudication, learned new tool(ODM) and started deliverables with less turnaround time from the first sprint.. Delivered 94 story points. Analyzed stories prior to development so that the impediments were identified before starting of the sprint. Played good role as a team member by helping team mates when ever need and took stories on ad hoc request and delivered them on time.

Client Impact - Can enhance your impact by taking the following actions:::

Sravanti should proactively take additional task and should own them towards completion.

Sravanti needs to develop doing multitasking.

Sravanti needs to understand Deloitte's culture.

Sravanti should show case herself on the floor.

People/Firm Impact - Made impact this year by:::

As I am working out of ODC and it was my first year in the firm , I was unable to get the contacts to do firm initiatives.

Firm Impact Dev Needs:::

Sravanti should start picking up some Firm Initiatives and start working on them. Also she needs to put her efforts in reaching out to the people/networking in terms of getting Firm Initiatives.

Performance Overview

Performance Overview:

The Performance Overview provides your leadership's assessment of your performance in each of the below performance dimensions, relative to your peers.

PMY20 YE Client Impact – Commensurate

PMY20 YE Firm/People Impact - Commensurate

PMY20 YE Metrics Impact – Above

PMY20 YE Promotion – No

YE dashboard

Monday, June 8, 2020 12:34 PM

Coachee Name - Sravanti, Peddolla | Coachee Email - PSRAVANTHI@DELOITTE.COM

Impact Indicators

Client Impact - Made impact this year by:

Client impact refers to impact made either with external or internal clients. This can also refer to product impact if applicable. Character maximum is 600 and minimum is 100.

I have worked in Claims UI project(HCSC-Keystone) as a java developer for 3 sprints and delivered 40 story points with minimal defects by writing effective JUnits and also worked ad hoc for team. And moved to Core-Adjudication Learned new tool(ODM) and started deliverables with less turnaround time from the first sprint. Delivered 94 story points. Analyzed stories prior to development so that the impediments were identified before starting of the sprint. Played good role as a team member by helping team mates when ever need and took stories on ad hoc request and delivered them on time.

7/600

Client Impact - Can enhance your impact by taking the following actions:

This should provide feedback with specific actions practitioners can take to enhance his/her client impact. Maximum limit is 600 characters per text box and minimum is 100 characters.

Sravanti should proactively take additional task and should own them towards completion.
Sravanti needs to develop doing multitasking.
Sravanti needs to understand Deloitte's culture.
Sravanti should show case herself on the floor.

365/600

People/Firm Impact - Made impact this year by:

For practitioners who do not have firm contributions expectations, People/Firm impact should focus on people impact only (ex: how practitioner collaborates, leads, helps, and develops our people). Maximum limit is 600 characters per text box and minimum is 100 characters.

As I am working out of ODC and it was my first year in the firm, I was unable to get the contacts to do firm initiatives.

12:38 PM
6/8/2020

Coachee Name - Sravanti, Peddolla | Coachee Email - PSRAVANTHI@DELOITTE.COM

People/Firm Impact - Made impact this year by:

For practitioners who do not have firm contributions expectations, People/Firm impact should focus on people impact only (ex: how practitioner collaborates, leads, helps, and develops our people). Maximum limit is 600 characters per text box and minimum is 100 characters.

As I am working out of ODC and it was my first year in the firm, I was unable to get the contacts to do firm initiatives.

478/600

People/Firm Impact - Can enhance your impact by taking the following actions:

This should provide feedback with specific actions practitioners can take to enhance his/her People/Firm impact. Maximum limit is 600 characters per text box and minimum is 100 characters.

Sravanti should start picking up some Firm Initiatives and start working on them. Also she needs to put her efforts in reaching out to the people/networking in terms of getting impactful Firm Initiatives.

395/600

Performance Overview

Performance Overview:

The Performance Overview provides your leadership's assessment of your performance in each of the below performance dimensions, relative to your peers.

PMY20 YE Client Impact – Commensurate
PMY20 YE Firm/People Impact - Commensurate
PMY20 YE Metrics Impact – Above
PMY20 YE Promotion – No

12:38 PM
6/8/2020

• Biswal, Akhay

Tuesday, April 30, 2019 7:08 PM

You have been assigned as a Coach:

- Name – Biswal, Akhay
- Job Title – Consultant
- Start Date - 7/22/2019
- Office - Hyderabad
- Function/Service Line – Systems Engineering

Contact Information – ABISWAL@DELOITTE.COM

- Is practitioner gaining early traction? Anything leadership can do to facilitate onboarding?
- If the practitioner has not been staffed, does he/she need help getting staffed or plugged into anything?
- Based on early feedback (client and/or internal), what are the practitioner's strengths and how should we further develop them?
- How can firm leadership help the practitioner grow his/her network?
- How can firm leadership help the practitioner get plugged into non-chargeable work?
- What types of staffing opportunities would help the practitioner further grow his/her capabilities?
- In what specific/core areas does the practitioner need additional support (training or coaching) to get up to speed more quickly/build momentum for the remainder of the year?
- Does the practitioner fit his/her current talent model? Are there indicators that the practitioner may be a candidate for a talent model change, now or in the future?
- Do we have the right experiences and exposure lined up to be successful? Including why/why not? If having challenges, what are your recommendations?
- Are we positioning them correctly?
- What are their key strengths and skills? Are they utilizing them?
- How do we help this person expand his/her network?
- Has the practitioner been staffed? If so, how did they do on 1st project?
- How is the practitioner expanding his/her network?

Midyear

Thursday, October 3, 2019 3:05 PM

dot net to java
RT table it convert into xml which can be used OPA testing ---

He developed a utility in java which converts the RT table into xml which can be used in OPA testing where the previous utility in not working properly which is developed in .net. This helped developers to do the unit testing related to ED module in 5min which normally take ~60min. And completely removed manual overhead. which in turn made the jobs easier for the team members

december 2 BRR's(each BRR takes how much time -->)
completely owning and also helping team members in understanding the BRR's
delivery on time with help because of the complexity of the module and also he is only 2 months experienced in this project.
perform good level of analysis on the tickets.

java resource and he is working currently to his level

not yet performing at next level
mile stone - TBD

utility
even he is new to the team he is helping team members to delivery with help.

dev:

learn the modules/functionality of RI
Leading team and able to help them with a support from the seniors.

Impact Statement:

Biswal developed a utility which will pull the data from RT tables and converts it into xml and feeds it to the OPA for processing as part of application flow, which helped in removing the manual effort for preparing xml files. This will save ~2 hours of a developer's time per table at the time of unit testing.(There are ~70 such tables)

Dev Needs:
Biswal needs to learn the other modules and their functionality related to IES.

Firm:
None as of now

Dev Needs:
Biswal should pick up some Firm Initiatives and start working on them.

YE - FY20

Tuesday, March 17, 2020 3:54 PM

Snapshots:

Requested	Completed	Type	Team Leader Name	Charge Code	Start Date	End Date	Hours
9/19/2019	9/27/2019	Performance Snapshot	Kant Bhashkar (Hyderabad)	RHO07502-01-02-01-0113	7/26/2019	9/20/2019	334
11/13/2019	12/12/2019	Performance Snapshot	Kant Bhashkar (Hyderabad)	RHO07502-01-02-01-0113	9/21/2019	11/15/2019	324
1/10/2020	2/10/2020	Performance Snapshot	Kant Bhashkar (Hyderabad)	RHO07502-01-02-01-0113	11/16/2019	1/10/2020	252
2/28/2020	3/6/2020	Performance Snapshot	Kant Bhashkar (Hyderabad)	RHO07502-01-02-01-0113	1/11/2020	3/7/2020	343

Practitioner Details:

Employee Name	Akhay Biswal
Title	XIN-DC Consultant
Office	Hyderabad
Primary Industry	NT - Not Designated
Coach Name	Naga Panguluri
Target Promotion Year	2022
Target Career Path	Managing Director
Talent Model	Traditional Model
Years in Level	0.695
Date Last Promoted	

From <<https://rpm.deloitteresources.com/performancemanagement/#/dashboard/home>>

My Metrics:

Financial/Operational Metrics	As of Date	Goal	Goal, Self-Rep	Actual PM YTD	Actual PM YTD, Self-Rep	Peer Group Range	My Percentile
Standard Utilization	03/07/2020	75%		95%			
Adjusted Utilization	03/07/2020	75%		95%			
Other Metrics							
CE Level	03/07/2020	Goal - Advanced ; Actual - Advanced					
CE Score	03/07/2020	Goal - ; Actual - 57					
CE Training Hours	03/07/2020	Goal - 6 h ; Actual PM YTD - 11 h					
Availability/StaffIT	03/07/2020	100%					
Late Time Reports	03/07/2020	1					
Resume Compliance	03/07/2020	No					

From <<https://rpm.deloitteresources.com/performancemanagement/#/dashboard/metrics>>

Client:

PMY20 Performance - March 2020 (3/10/19 - 3/7/20)



Firm:

Updated in Share point for Mid Year:

Client:

Impact Statement:

Biswal developed a utility which will pull the data from RT tables and converts it into xml and feeds it to the OPA for processing as part of application flow, which helped in removing the manual effort for preparing xml files. This will save ~2 hours of a developer's time per table at the time unit testing.(There are ~70 such tables)

Dev Needs:

Biswal needs to learn the other modules and their functionality related to IES. --- Improved a lot and learned new programs and he is going in a right trajectory.

Firm:

None as of now

Dev Needs:

Biswal should pick up some Firm Initiatives and start working on them.

YearEnd:

Bhashkar Kanth:

- 8 Months on the project
- Good and Quick Learner
- Technically very sound
- Learned OPA Oracle Policy Automation along with java coding
- Independently working on OPA rules and delivering them on time

Dev Need:

Bhashkar Kanth:

- He should be more vocal and improve his visibility.(offline - he should talk more, share his thoughts with the team and should gain more visibility)

Impact Statement:

- Improved the overall performance of the eligibility module by 10%.
- Over and above his responsibility

In Irpm:

Being completely new to this domain, Akhay started working on the critical defects and made impact by improving overall performance of the Eligibility module by 10%. He got a applause award for proactively taking up the tasks and helped on delivering SIT defects on time. He also worked on 2 BRR and took responsibility of delivering it on time. He have learned many technology in the process i.e., Oracle policy modeling, Fast4J etc. and started working independently on developing rules. Not only did he ramp-up quickly, but also played a prominent role in helping his peers to do the same.

Akhay is fairly new to firm and he had not filled any Firm initiative snapshot. Akhay has learned OPA, Fast4J, NextGen frameworks which is been used in the project and helping peers and new joiners to learn them. He is been very approachable. He also developed 2 small tools which automates day to day tasks.

In iRPM:--- Submitted both impact indicators and the**Client:**

He developed a utility in java which converts the RT table into xml which can be used in OPA testing where the previous utility in not working properly which is developed in .net. This helped developers to do the unit testing related to ED module in 5min which normally take ~60min. And completely removed manual overhead.

Being completely new to this domain, Akhay started working on the critical defects and made impact by improving overall performance of the Eligibility module by 10%.

Dev Need:

Akhay should be more vocal and visibility on the floor .

Akhay should start building his networking .

F1:

Akhay is fairly new to firm and he had not filled any Firm initiative snapshot. Akhay has learned OPA, Fast4J, NextGen frameworks which is been used in the project and helping peers and new joinees to learn them and helped them to come up to speed in short time.

He also developed 2 small tools which automates day to day tasks which consists of pulling Jira reports, this made job easier for the other team members to send the reports with less manual effort which is a daily activity.

Dev Need:

Biswal should start taking up more Firm Initiatives/activities and start working on them right from start of the year.

Survey:

Is there any new information that is not captured in the questions above that the panel should know?

*Note: Only provide information if it differs from the information already provided above/Impact Statements.
Please do not include coachee personal or health information as part of your response.*

>

8 Months on the project

Good and Quick Learner

Technically very sound

Learned OPA Oracle Policy Automation along with java coding

Independently working on OPA rules and delivering them on time

In your view, is your coachee working in a critical business area across domain, industry, technology, or processes.

If yes, do mention the business area and contributions made by your coachee.

>

Yes, he is part of a critical business area where eligibility is calculated for each individual based upon rules and accuracy should be always maintained at 99.9%. Not only involves in processing the eligibility with accuracy but also they should make sure the processing should take more time.

Describe instances where your coachee has played diverse roles & has scaled up quickly to deliver with quality in the new role/s.

>

He have learned many technology in the process i.e., Oracle policy modeling, Fast4J etc. and started working independently on developing rules. Not only did he ramp-up quickly, but also played a prominent role in helping his peers to do the same

Explain instanceswhere your coachee has demonstrated willingness & ownership to deliverhigher level responsibilities (beyond current career level)

>

Improved the overall performance of the eligibility module by 10% which is over and above his responsibility.

Performance Overview

Performance Overview:

The Performance Overview provides your leadership's assessment of your performance in each of the below performance dimensions, relative to your peers.

PMY20 YE Client Impact – Commensurate

PMY20 YE Firm/People Impact - Below

PMY20 YE Metrics Impact – Commensurate

PMY20 YE Promotion – No

script

Tuesday, March 24, 2020 10:21 AM

About your Project – **Akhay:** Rhode Island

Your skill set in current role – **Akhay:** Java EE, OPA developer

Explain your role in the project – **Akhay:** Currently working in ED-BRR team and my day to day task includes interaction with onsite for requirement gathering, solutioning and developing new module.
Does your role involves any Critical areas(in terms of client) – **Akhay:** Direct client interaction is not there. But currently working in Eligibility Determination BRR team.

YE dashboard

Monday, June 8, 2020 12:34 PM

Coachee Name - Biswal, Akhay | Coachee Email - ABISWAL@DELOTTE.COM

Impact Indicators

Client Impact - Made impact this year by:

Client impact refers to impact made either with external or internal clients. This can also refer to product impact if applicable. Character maximum is 600 and minimum is 100.

He developed a utility in java which converts the RT table into xml which can be used in QPA testing where the previous utility in not working properly which is developed in .net. This helped developers to do the unit testing related to ED module in 5min which normally take ~60min. And completely removed manual overhead. Being completely new to this domain, Akhay started working on the critical defects and made impact by improving overall performance of the Eligibility module by 10%.

112/600

Client Impact - Can enhance your impact by taking the following actions:

This should provide feedback with specific actions practitioners can take to enhance his/her client impact. Maximum limit is 600 characters per text box and minimum is 100 characters.

Akhay should be more vocal and start building relations with peers.

532/600

People/Firm Impact - Made impact this year by:

For practitioners who do not have firm contributions expectations, People/Firm impact should focus on people impact only (ex: how practitioner collaborates, leads, helps, and develops our people). Maximum limit is 600 characters per text box and minimum is 100 characters.

Akhay is fairly new to firm and he had not filled any Firm initiative snapshot. Akhay has learned QPA, Fast4, NextGen frameworks which is been used in the project and

12:34 PM
6/8/2020

People/Firm Impact - Made impact this year by:

For practitioners who do not have firm contributions expectations, People/Firm impact should focus on people impact only (ex: how practitioner collaborates, leads, helps, and develops our people). Maximum limit is 600 characters per text box and minimum is 100 characters.

Akhay is fairly new to firm and he had not filled any Firm initiative snapshot. Akhay has learned QPA, Fast4, NextGen frameworks which is been used in the project and helping peers and new joinees to learn them and helped them to come up to speed in short time. He also developed 2 small tools which automates day to day tasks which consists of pulling jira reports, this made job easier for the other team members to send the reports with less manual effort which is a daily activity.

113/600

People/Firm Impact - Can enhance your impact by taking the following actions:

This should provide feedback with specific actions practitioners can take to enhance his/her People/Firm impact. Maximum limit is 600 characters per text box and minimum is 100 characters.

Biswal should start taking up more Firm Initiatives/activities and start working on them right from start of the year.

482/600

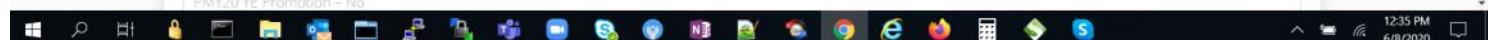
Performance Overview

Performance Overview:

The Performance Overview provides your leadership's assessment of your performance in each of the below performance dimensions, relative to your peers.

PMY20 YE Client Impact – Commensurate
PMY20 YE Firm/People Impact - Below
PMY20 YE Metrics Impact – Commensurate
PMY20 YE Promotion – No

12:35 PM
6/8/2020



Venkateshwarao Mamidi

Tuesday, April 30, 2019 7:08 PM

- Is practitioner gaining early traction? Anything leadership can do to facilitate onboarding?
- If the practitioner has not been staffed, does he/she need help getting staffed or plugged into anything?
- Based on early feedback (client and/or internal), what are the practitioner's strengths and how should we further develop them?
- How can firm leadership help the practitioner grow his/her network?
- How can firm leadership help the practitioner get plugged into non-chargeable work?
- What types of staffing opportunities would help the practitioner further grow his/her capabilities?
- In what specific/core areas does the practitioner need additional support (training or coaching) to get up to speed more quickly/build momentum for the remainder of the year?
- Does the practitioner fit his/her current talent model? Are there indicators that the practitioner may be a candidate for a talent model change, now or in the future?
- Do we have the right experiences and exposure lined up to be successful? Including why/why not? If having challenges, what are your recommendations?
- Are we positioning them correctly?
- What are their key strengths and skills? Are they utilizing them?
- How do we help this person expand his/her network?
- Has the practitioner been staffed? If so, how did they do on 1st project?
- How is the practitioner expanding his/her network?

Mid Year

Thursday, October 3, 2019 3:01 PM

Impact Statement:

Even though Venkateswara is new to the project, he started working and delivered 15 complex change problems with minimum SIT/UAT defects without any help. Venkateswara involved in doing RCA and solutioning on an average 2 per week. Out of 6 team members he is the only guy who is working on problem tickets(Prod issues).

delivered around 15 complex changes problems with minimum SIT/UAT defects.

He is doing RCA and solutioning of an average 2 per week. without any help

he is leading the CCAP onsite calls individually.

problem tickets.. BRR

6 team members - he is the

he is to understand more of IES w.r.t frame work and function. And should become SME on CCAP

need to adopt Deloitte culture and start networking

strengths:

Independent

Quick learner

Good technical skills

Helping other people even though he is new to the project

Updated in Share point for Mid Year:

Impact:

Even though Venkateswara is new to the project, he picked up very well and started working.

Venkateswara also involved in doing RCA's and solutioning on an average 2 per week.

Out of 6 team members Venkateswara is the only guy who is working on problem tickets(Prod issues).

Venkateswara is proactively leading the CCAP module related onsite calls individually.

Venkateswara delivered 15 complex change problems with minimum SIT/UAT defects without any help.

Dev Needs:

Venkateswara needs to understand more of IES with respect to frame work and functionality.

Venkateswara should become SME on CCAP module.

Firm:

Venkateswara haven't started any Firm related initiatives yet.

Dev Needs:

Venkateswara should start picking up some Firm Initiatives and start working on them.

YE-FY20

Tuesday, March 24, 2020 10:23 AM

Requested	Completed	Type	Team Leader Name	Charge Code	Start Date	End Date	Hours
5/10/2019	6/14/2019	Performance Snapshot	Indrajit Chakrabarti (Mumbai)	RHO07502-01-01-01-0012	4/17/2019	5/10/2019	145
7/30/2019	8/14/2019	Performance Snapshot	Indrajit Chakrabarti (Mumbai)	RHO07502-01-01-01-0012	5/13/2019	7/12/2019	306
9/30/2019	10/7/2019	Performance Snapshot	Indrajit Chakrabarti (Mumbai)	RHO07502-01-01-01-0012	7/15/2019	9/20/2019	405
11/15/2019	12/18/2019	Performance Snapshot	Vinod Gopishetty (Hyderabad)	RHO07502-01-01-01-0012	9/21/2019	11/15/2019	342
1/10/2020	3/6/2020	Performance Snapshot	Vinod Gopishetty (Hyderabad)	RHO07502-01-01-01-0012	11/18/2019	1/10/2020	270
2/28/2020	3/6/2020	Performance Snapshot	Vinod Gopishetty (Hyderabad)	RHO07502-01-01-01-0012	1/11/2020	3/7/2020	324
2/28/2020	3/6/2020	Firm Contribution Snapshot	Vinod Gopishetty (Hyderabad)		1/2/2020	1/10/2020	15
2/28/2020	3/6/2020	Firm Contribution Snapshot	Vinod Gopishetty (Hyderabad)		1/13/2020	2/14/2020	20

Practitioner Details

Employee Name	Mamidi Venkateswara Rao
Title	XIN-DC Consultant
Office	Hyderabad
Primary Industry	NT - Not Designated
Coach Name	Naga Panguluri
Target Promotion Year	2021
Target Career Path	Managing Director
Talent Model	Traditional Model
Years in Level	0.964
Date Last Promoted	

From <<https://rpm.deloitteresources.com/performancemanagement/#/dashboard/home>>

My Metrics

Financial/Operational Metrics	As of Date	Goal	Goal, Self-Rep	Actual PM YTD	Actual PM YTD, Self-Rep	Peer Group Range	My Percentile
Standard Utilization	03/07/2020	95%		95%			
Adjusted Utilization	03/07/2020	95%		95%			
Other Metrics	As of Date	Details					
CE Level	03/07/2020	Goal - Advanced ; Actual - Foundation					
CE Score	03/07/2020	Goal - ; Actual - 50					
CE Training Hours	03/07/2020	Goal - 34 h ; Actual PM YTD -					
Availability/StaffIT	03/07/2020	93%					
Late Time Reports	03/07/2020	3					
Resume Compliance	03/07/2020	Yes					

From <<https://rpm.deloitteresources.com/performancemanagement/#/dashboard/metrics>>

Performance:

PMY20 Performance - March 2020 (3/10/19 - 3/7/20)



Firm:

**Updated in Share point for MidYear:****Impact:**

Even though Venkateswara is new to the project, he picked up very well and started working. Venkateswara also involved in doing RCA's and solutioning on an average 2 per week. Out of 6 team members Venkateswara is the only guy who is working on problem tickets(Prod issues). Venkateswara is proactively leading the CCAP module related onsite calls individually. Venkateswara delivered 15 complex change problems with minimum SIT/UAT defects without any help.

Dev Needs:

Venkateswara needs to understand more of IES with respect to frame work and functionality. Venkateswara should become SME on CCAP module.

Firm:

Venkateswara haven't started any Firm related initiatives yet.

Dev Needs:

Venkateswara should start picking up some Firm Initiatives and start working on them.

YearEnd:**From:Vinod:**

One of the technical guy in the CCAP module.

Go to guy with respect to CCAP related tech.

All the Change Request / Problem Tickets he worked made the CCAP work flow smoother also made payment process easier related CCAP module.

Dev Need:

Take up additional tasks like reporting, sending metrics to team and few QA related activities.

FI:**DEV Need:**

Need to take up more Firm Initiatives.

Unofficial(for next level readiness):

Passive/calm

He should be more vocal

He should start working at next level.

FI:

Contribution is less in the FI which he mentioned, but as a benefit of doubt didn't ding him

Pavan is the guy who worked on it and also the updates were also given by him.

He asked for technical tasks but, when given he didn't showed that impact as expected.

From:Indrajit

He is did a very good job. He is part of childcare and works for Major releases. He is an Independent resource and dependable guy.

Though he is new to the project he picked up fast and starting helping and grooming other team members. Also he become a SME in that area.

DEV Need:

He is bit assertive and sometimes he is too soft. He needs to be little bit aggressive.

Indrajit Chakrabarti, Project Manager, ichakrabarti@deloitte.com

Vinod Gopishetty, Project Manager, vgpishetty@deloitte.com

In iRPM:--- Submitted both impact indicators and the**Client:**

All the Change Request / Problem Tickets he worked made the CCAP work flow smoother and also made payment process easier in C CAP module

Delivered problem tickets with zero SIT/UAT

Worked on complex functionality(provider ratings system) of September BRR and delivered successfully

Providing solutions to Problem tickets

Performed code review and suggesting change to team members to avoid SIT defects to attain quality

Attending Patch/BRR meetings and providing updates to leaders and team members

Grasped the CCAP knowledge in a short time

Grooming Deepthi and Akshay to get fast deliverables

Dev Need:

Should start taking up additional tasks like reporting, sending metrics to team and few other QA related activities.

FI:

Completed stage one POC on the lift framework, which will give Responsive structures and styles.

Completed the integration of the Lift framework with the Customer portal for "EBT card" search.

Given demo to leadership about how we can integrate with the existing framework with minimal changes.

Dev Need:

Venkateswara Rao should start taking up more Firm Initiatives/activities and start working on them right from start of the year.

For last 2 q&a in the survey link:

Even though Venkateswara is new to the project and CCAP module, he picked up very well and started working on the defects.

He also involved in doing RCA's and solutioning on an average 2 per week.

Out of 6 team members he is the only guy who is working on problem tickets(Prod issues).

Venkateswara is also leading the CCAP module along with onsite co-ordination individually.

Venkateswara delivered 15 complex change problems with minimum SIT/UAT defects without any help.

As of now Venkateswara is leading the CCAP team and he is also co-ordination between onsite and offshore handoff calls individually.

He is also representing CCAP module in all the offshore meetings with leadership and Leads/Managers

Performance Overview

Performance Overview:

The Performance Overview provides your leadership's assessment of your performance in each of the below performance dimensions, relative to your peers.

PMY20 YE Client Impact – Above

PMY20 YE Firm/People Impact - Commensurate

PMY20 YE Metrics Impact – Commensurate

PMY20 YE Promotion – No

YE dashboard

Monday, June 8, 2020 12:34 PM

Coachee Name - Venkateswara Rao, Mamidi | Coachee Email - MVENKATESWARAARAO@DELOITTE.COM

Impact Indicators

Client Impact - Made impact this year by:

Client impact refers to impact made either with external or internal clients. This can also refer to product impact if applicable. Character maximum is 600 and minimum is 100.

Worked on complex functionality/provider ratings system of September BRR and delivered successfully.
Providing solutions to Problem tickets
Performed code review and suggesting change to team members to avoid SIT defects to attain quality
Attending Patch/BRR meetings and providing updates to leaders and team members
Grasped the CCAP knowledge in a short time
Grooming Deepthi and Akshay to get fast deliverables

7/600

Client Impact - Can enhance your impact by taking the following actions:

This should provide feedback with specific actions practitioners can take to enhance his/her client impact. Maximum limit is 600 characters per text box and minimum is 100 characters.

Should start taking up additional tasks like reporting, sending metrics to team and few other QA related activities.

484/600

People/Firm Impact - Made impact this year by:

For practitioners who do not have firm contributions expectations, People/Firm impact should focus on people impact only (ex: how practitioner collaborates, leads, helps, and develops our people). Maximum limit is 600 characters per text box and minimum is 100 characters.

Completed stage one POC on the lift framework, which will give Responsive structures and styles.
Completed the integration of the Lift framework with the Customer portal for "EBT card" search.

12:37 PM
6/8/2020

Coachee Name - Venkateswara Rao, Mamidi | Coachee Email - MVENKATESWARAARAO@DELOITTE.COM

People/Firm Impact - Made impact this year by:

For practitioners who do not have firm contributions expectations, People/Firm impact should focus on people impact only (ex: how practitioner collaborates, leads, helps, and develops our people). Maximum limit is 600 characters per text box and minimum is 100 characters.

Completed stage one POC on the lift framework, which will give Responsive structures and styles.
Completed the integration of the Lift framework with the Customer portal for "EBT card" search.
Given demo to leadership about how we can integrate with the existing framework with minimal changes.

306/600

People/Firm Impact - Can enhance your impact by taking the following actions:

This should provide feedback with specific actions practitioners can take to enhance his/her People/Firm impact. Maximum limit is 600 characters per text box and minimum is 100 characters.

Venkateswara Rao should start taking up more Firm Initiatives/activities and start working on them right from start of the year.

472/600

Performance Overview

Performance Overview:

The Performance Overview provides your leadership's assessment of your performance in each of the below performance dimensions, relative to your peers.

PMY20 YE Client Impact – Above
PMY20 YE Firm/People Impact - Commensurate
PMY20 YE Metrics Impact – Commensurate
PMY20 YE Promotion – No

12:37 PM
6/8/2020

Moudgil, Dhruv

Tuesday, April 30, 2019 7:08 PM

YE - FY20

Thursday, March 19, 2020 12:20 PM

Midyear - N/A

Requested	Completed	Type	Team Leader Name	Charge Code	Start Date	End Date	Hours
5/10/2019	5/16/2019	Intern Fixed Term Snapshot	Honey Bhandari (Hyderabad)	AFL30171-01-02-01-1000	3/10/2019	5/10/2019	396
7/12/2019	7/17/2019	Intern Fixed Term Snapshot	Honey Bhandari (Hyderabad)	AFL30171-01-02-01-1000	5/12/2019	7/13/2019	360
9/20/2019	9/27/2019	Performance Snapshot	Honey Bhandari (Hyderabad)	AFL30171-01-02-01-1000	8/14/2019	9/20/2019	272
11/15/2019	11/28/2019	Performance Snapshot	Honey Bhandari (Hyderabad)	AFL00052-01-01-01-1000	9/22/2019	11/15/2019	261
1/10/2020	2/10/2020	Performance Snapshot	Honey Bhandari (Hyderabad)	AFL00052-01-01-01-1000	11/17/2019	1/11/2020	261
2/27/2020	3/6/2020	Firm Contribution Snapshot	Dhirendra Chouhan (Hyderabad)		2/7/2020	2/11/2020	15
2/28/2020	3/5/2020	Performance Snapshot	Satyajit Paul (Mumbai)	AFL30158-01-01-01-1000	1/12/2020	2/28/2020	297
2/28/2020	3/4/2020	Firm Contribution Snapshot	Vikram Krishna Jetty (Hyderabad)		3/18/2019	2/28/2020	27

Practitioner Details

Employee Name	Dhruv Moudgil
Title	XIN-DC Business Technology Analyst
Office	Hyderabad
Primary Industry	NT - Not Designated
Coach Name	Naga Panguluri
Target Promotion Year	
Target Career Path	
Talent Model	Traditional Model
Years in Level	0.638
Date Last Promoted	

From <<https://rpm.deloitteresources.com/performancemanagement/#/dashboard/home>>

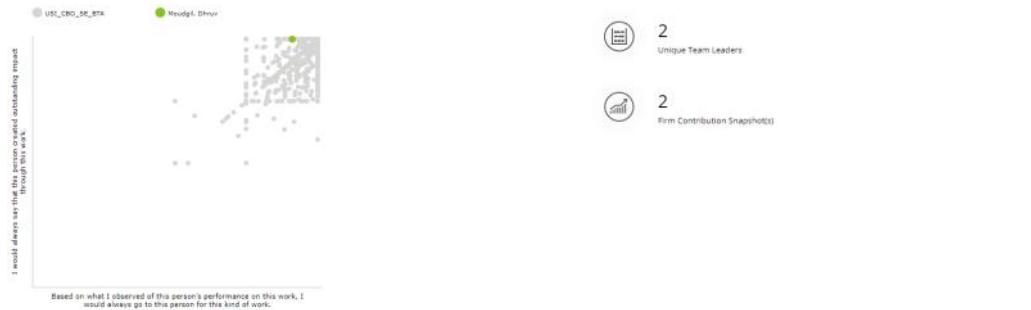
My Metrics

Financial/Operational Metrics	As of Date	Goal	Goal, Self-Rep	Actual PM YTD	Actual PM YTD, Self-Rep	Peer Group Range	My Percentile
Standard Utilization	03/07/2020	75%		97%			
Adjusted Utilization	03/07/2020	75%		97%			
Other Metrics							
CE Level	03/07/2020	Goal - Advanced ; Actual - Mastery					
CE Score	03/07/2020	Goal - ; Actual - 69					
CE Training Hours	03/07/2020	Goal - ; Actual PM YTD - 2 h					
Availability/StaffIT	03/07/2020	94%					
Late Time Reports	03/07/2020	1					
Resume Compliance	03/07/2020	Yes					

From <<https://rpm.deloitteresources.com/PerformanceManagement/#/dashboard/metrics>>

PMY20 Performance - March 2020 (3/10/19 - 3/7/20)



**Year End:****Client:****Honey Bhanda**

He is part of ETL, Reporting and Data as a SSIS Developer(An ETL tool).

He is technically not strong and not familiar with SQL when he joined.

Assessments were given to him on daily basis and he completed on time with handheld.

Slow learner.

Not showing his willingness and curiosity to learn and go further

Need to step up and should own up tasks independently and drive them to completion.

Completes the job in time when assigned.

Impact statement:

He worked as a ETL developer with other team members and supported 10 service requests or SCR's

He is responsible for converting the file which comes once a year into DB compatible and dump the data into Data Base by tweaking the current package little bit to accommodate the received file as the files won't be in the same format every year.

Dhruv ensured all the jobs to complete on time and within the SLA's and also proactively responded upon any failures occurred as part of his Production batch support.

Satyajit paul

He joined few months back and it took almost one month to get his access

He is still picking up on things

He is doing good job as of now

Dev Need:**Honey Bhanda**

He needs to work on his technical skills like SQL and other tools involved in the project.

He needs to deep dive to gain more insight of the project and domain knowledge to understand business requirement.

He should start exploring into project environment to gain more knowledge and understanding

Milestone year TBD(Honey):

2022 tentative. This is too early to decide on his milestone year and he completes one year after august this year.

Satyajit paul

He needs to improve his communication skills

He needs to invest lot of time on SSIS to gain more knowledge

FI:**Dhirendra**

Dhruv has given training session as part of L&D Monthly Trainings. He covered most unique skills like Data warehouse, ETL and SSIS Tool.

There were 37 participants in this training. He was very good and engaging the audience and also good at Q&A with little help from seniors.

Feedback from the audience is that the session is good and they were able to relate them with their project and are able to implement them.

Jetty Vikram krishna

His impact is fair enough

He attend 3 weekends, compromising his weekends

He job is to collect Resumes, pulling candidates and making them seated. Sending the candidates on right times

He did a very good job in represented Deloitte and he made his impact.

No wrong feedback on him.

He did his best in communication and coordination part.

Strongly agree and strongly agree

Dev Need:**Dhirendra**

Official - He should start involving more into such sessions as they are unique skills which in turn also helps to build eminence in CBO and across deloitte.

Unofficial - He should prepare for classroom sessions which will be more effective. He should able to lead the entire activity going forward without any help from seniors.

Jetty Vikram krishna

None. All good no dev needs

IRPM original:

- Aided in providing business reports to client by developing end to end model from development to deployment in all live environments in the form of 10 SCR's and 6 IR's.

- Highly masked and important financial data was made available for business reporting to Client Audit Team by developing and deploying SSIS packages.

- Built healthy relations with my current onsite Client Manager and got appreciation for my work as an individual contributor in his Team.

- Ensured the smooth run of daily jobs by being a part of the weekly production support and on-call job monitoring.

- Coordinated end to end with Senior Manager in onboarding of hundreds of RTMO candidates with the firm.

- Worked with Senior Leadership for recruitment across locations to help in Panel Participation, Logistics, Weekend Blitz Support and Onboard Consolidation.

- Cross trained CBO practitioners with training on various concepts; which participants were able to apply in their existing projects and understand the functional part of their projects better.

- Actively participated on Impact day and spread awareness for water harvesting activities to tackle city's existing water shortage problem.

In IRPM:-- Submitted both impact indicators and the**Client:**

He worked as a ETL developer with other team members and supported 10 service requests or SCR's

He is responsible for converting the file which comes once a year into DB compatible and dump the data into Data Base by tweaking the current package little bit to accommodate the received file as the files won't be in the same format every year.

Dhruv ensured all the jobs to complete on time and within the SLA's and also proactively responded upon any failures occurred as part of his Production batch support.

Dev Need:

He needs to work on his technical skills like SQL and other tools involved in the project.

He needs to deep dive to gain more insight of the project and domain knowledge to understand business requirement.

Fl:

- Coordinated end to end with Senior Manager in onboarding of hundreds of RTMO candidates with the firm.
- Worked with Senior Leadership for recruitment across locations to help in Panel Participation, Logistics, Weekend Blitz Support and Onboard Consolidation.
- Cross trained CBO practitioners with training on various concepts, which participants were able to apply in their existing projects and understand the functional part of their projects better.
- Actively participated on Impact day and spread awareness for water harvesting activities to tackle city's existing water shortage problem.

Dev Need:

He should start involving more into such sessions as they are unique skills which in turn also helps to build eminence in CBO and across deloitte.

Survey:

Additional Information

Is there any new information that is not captured in the questions above that the panel should know?

*Note: Only provide information if it differs from the information already provided above/Impact Statements.
Please do not include coachee personal or health information as part of your response.*

He is part of ETL, Reporting and Data as a SSIS Developer(An ETL tool). Though he is technically not strong and not familiar with SQL when he joined. He started working on them and delivering them on time. He always completes his job in time when assigned.

Performance Overview

Performance Overview:

The Performance Overview provides your leadership's assessment of your performance in each of the below performance dimensions, relative to your peers.

PMY20 YE Client Impact – Commensurate

PMY20 YE Firm/People Impact - Above

PMY20 YE Metrics Impact – Above

PMY20 YE Promotion – No

YE dashboard

Thursday, May 28, 2020 10:04 AM

Coachee Name - Moudgil, Dhruv | Coachee Email - DMOUDGIL@DELOITTE.COM

Impact Indicators

Client Impact - Made impact this year by:

Client impact refers to impact made either with external or internal clients. This can also refer to product impact if applicable. Character maximum is 600 and minimum is 100.

He worked as a ETL developer with other team members and supported 10 service requests or SCR's
He is responsible for converting the file which comes once a year into DB compatible and dump the data into Data Base by tweaking the current package little bit to accommodate the received file as the files won't be in the same format every year.
Dhruv ensured all the jobs to complete on time and within the SLA's and also proactively responded upon any failures occurred as part of his Production batch support.

90/600

Client Impact - Can enhance your impact by taking the following actions:

This should provide feedback with specific actions practitioners can take to enhance his/her client impact. Maximum limit is 600 characters per text box and minimum is 100 characters.

He needs to work on his technical skills like SQL and other tools involved in the project.
He needs to deep dive to gain more insight of the project and domain knowledge to understand business requirement.

395/600

People/Firm Impact - Made impact this year by:

For practitioners who do not have firm contributions expectations, People/Firm impact should focus on people impact only (ex: how practitioner collaborates, leads, helps, and develops our people). Maximum limit is 600 characters per text box and minimum is 100 characters.

- Coordinated end to end with Senior Manager in onboarding of hundreds of RTMO candidates with the firm.

12:32 PM 6/8/2020

Coachee Name - Moudgil, Dhruv | Coachee Email - DMOUDGIL@DELOITTE.COM

Impact Indicators

People/Firm Impact - Made impact this year by:

For practitioners who do not have firm contributions expectations, People/Firm impact should focus on people impact only (ex: how practitioner collaborates, leads, helps, and develops our people). Maximum limit is 600 characters per text box and minimum is 100 characters.

- Coordinated end to end with Senior Manager in onboarding of hundreds of RTMO candidates with the firm.
- Worked with Senior Leadership for recruitment across locations to help in Panel Participation, Logistics, Weekend Blitz Support and Onboard Consolidation.
- Cross trained CBO practitioners with training on various concepts, which participants were able to apply in their existing projects and understand the functional part of their projects better.
- Actively participated on Impact day and spread awareness for water harvesting activities to tackle city's existing water shortage problem.

3/600

People/Firm Impact - Can enhance your impact by taking the following actions:

This should provide feedback with specific actions practitioners can take to enhance his/her People/Firm impact. Maximum limit is 600 characters per text box and minimum is 100 characters.

He should start involving more into such sessions as they are unique skills which in turn also helps to build eminence in CBO and across Deloitte.

454/600

Performance Overview

Performance Overview:

The Performance Overview provides your leadership's assessment of your performance in each of the below performance dimensions, relative to your peers.

PMY20 YE Client Impact - Commensurate
PMY20 YE Firm/People Impact - Above
PMY20 YE Metrics Impact - Above
PMY20 YE Promotion - No

12:33 PM 6/8/2020

Tadimeti, Saketh Venkata Raghavendra

Tuesday, September 24, 2019 11:16 AM

Vakkala, Divya Dhatri - lead(scrum)

Kruger project

Automation Testing using Toska TOOL

Development Areas:

Needs to understand Deloitte culture

How Deloitte works

Short term change(for one week or two and then goes back old habits)

Coach - coaches relationship importance

Quick decision maker

Not good at closing his Task/job

Hesitate to put his thoughts in front of the forum

Always hesitant

Different Aspirations

Needs to be more flexible

Needs to take his tasks/job seriously

Punctual

From saketh: 05-mar-2020

Interested in development

6 months to development - but failed to get from the project

Dolby project: moved to Bangalore

YE -FY20

Tuesday, March 24, 2020 10:21 AM

Midyear - N/A

Requested	Completed	Type	Team Leader Name	Charge Code	Start Date	End Date	Hours
9/20/2019	9/27/2019	Intern Fixed Term Snapshot	Manmeet Singh Kalsi (Hyderabad)		2/28/2019	7/27/2019	890
9/20/2019	9/24/2019	Performance Snapshot	VIJAY Sindhu (Hyderabad)	KRO00063-01-01-01-1000	8/19/2019	9/20/2019	216
11/15/2019	11/22/2019	Performance Snapshot	Puneet Mehrotra (Hyderabad)	KRO00063-01-01-01-1000	9/23/2019	11/15/2019	345
1/10/2020	1/13/2020	Performance Snapshot	Puneet Mehrotra (Hyderabad)	KRO00063-01-01-01-1000	11/17/2019	1/10/2020	234

Practitioner Details

Employee Name	Saketh Raghavendra Saketh
Title	XIN-DC Business Technology Analyst
Office	Hyderabad
Primary Industry	NT - Not Designated
Coach Name	Naga Panguluri
Target Promotion Year	
Target Career Path	
Talent Model	Traditional Model
Years in Level	0.638
Date Last Promoted	

From <<https://rpm.deloitteresources.com/performancemanagement/#/dashboard/home>>

My Metrics

Financial/Operational Metrics	As of Date	Goal	Goal, Self-Rep	Actual PM YTD	Actual PM YTD, Self-Rep	Peer Group Range	My Percentile
Standard Utilization	03/07/2020	75%		86%			
Adjusted Utilization	03/07/2020	75%		86%			
Other Metrics							
CE Level	03/07/2020	Goal - Advanced ; Actual - Advanced					
CE Score	03/07/2020	Goal - ; Actual - 64					
CE Training Hours	03/07/2020	Goal - 5 h ; Actual PM YTD - 1 h					
Availability/Staff IT	03/07/2020	87%					
Late Time Reports	03/07/2020	9					
Resume Compliance	03/07/2020	Yes					

From <<https://rpm.deloitteresources.com/performancemanagement/#/dashboard/metrics>>

PMY20 Performance - March 2020 (3/10/19 - 3/7/20)



Year End Feedback:

Client:

Puneet Mehrotra/Vakkala Divya Dhatri

He did a good job in delivering the test cases using Toska Tool even though it is new to him

Delivered 12-15 test cases in time out of 30.

Received appreciations from the client at the time of client visit for giving good idea and also they were implemented.

Review comments are very less

When he joined he was a very shy person but eventually started giving some his ideas to the team along with good team bonding

He automated and delivered 10 test cases on time which in turn will have 50 test scripts per case.

He is a smart at doing job and also came to speed with minimum intervention

Being fresher he picked up very well

Independent resource and became a good performer in a short time

Always completes tasks on time

He is fast in R&D and RCA's when compared to other team members

He is the single POC for consolidating the daily status reports and sending it to entire team.

He is delivering the work on par with senior resources.

Kalsi Manmeet Singh/ latha Shailesh (Intern period)

Dev Needs:

Puneet Mehrotra/Vakkala Divya Dhatri

He needs to understand the work flows and Business requirements.

Needs to be more punctual in time and more disciplined

Kalsi Manmeet Singh/ Isha Shailesh (Intern period)

FI:

None

Dev Need:

He should pick up some Firm Initiatives and start working on them.

Puneet Mehrotra - Manager pumehrotra@deloitte.com

Vakkala Divya Dhatri - Lead dvakkala@deloitte.com

Kalsi Manmeet Singh - Manager makalsi@deloitte.com

Isha Shailesh - Lead Ishailesh@deloitte.com

iRPM original:

I have been involved in presenting new ideas to the client which optimize the project dependencies and make the application blockage time less.

I was involved in team building activities which increased the collaboration between the team members..

I participated in the cumulus challenge.

In iRPM:--- Submitted both impact indicators and the**Client:**

He did a good job in delivering the test cases using Toska Tool even though it is new to him

Delivered 12-15 test cases in time out of 30.

Received appreciations from the client at the time of client visit for giving good idea and also they were implemented.

Review comments are very less on his deliverables

He is fast in R&D and RCA's when compared to other team members

He is the single POC for consolidating the daily status reports and sending it to entire team.

He is delivering the work on par with senior resources being a fresher.

Dev Needs:

He needs to understand the work flows and Business requirements.

Needs to be more punctual in time and more disciplined.

FI:

He was involved in team building activities which increased the collaboration between the team members..

He participated in the cumulus challenge.

Dev Needs:

He should start taking up more Firm Initiatives/activities and start working on them right from start of the year.

Survey:

Additional Information

Is there any new information that is not captured in the questions above that the panel should know?

Note: Only provide information if it differs from the information already provided above/Impact Statements.

Please do not include coachee personal or health information as part of your response.

He is smart at doing job and also came to speed with minimum intervention

Being fresher he picked up very well

Independent resource and became a good performer in a short time

Performance Overview

Performance Overview:

The Performance Overview provides your leadership's assessment of your performance in each of the below performance dimensions, relative to your peers.

PMY20 YE Client Impact – Commensurate

PMY20 YE Firm/People Impact - Commensurate

PMY20 YE Metrics Impact – Above

PMY20 YE Promotion – No

YE dashboard

Monday, June 8, 2020 12:34 PM

Coachee Name - Raghavendra Saketh, Saketh | Coachee Email - SATADIMETI@DELOITTE.COM

Impact Indicators

Client Impact - Made impact this year by:

Client impact refers to impact made either with external or internal clients. This can also refer to product impact if applicable. Character maximum is 600 and minimum is 100.

He did a good job in reviewing the test cases using task force even though it's review to him. Delivered 12-15 test cases in time out of 30. Received appreciations from the client at the time of client visit for giving good idea and also they were implemented. Review comments are very less on his deliverables. He is fast in R&D and RCA's when compared to other team members. He is the single POC for consolidating the daily status reports and sending it to entire team. He is delivering the work on par with senior resources being a fresher.

61/600

Client Impact - Can enhance your impact by taking the following actions:

This should provide feedback with specific actions practitioners can take to enhance his/her client impact. Maximum limit is 600 characters per text box and minimum is 100 characters.

He needs to understand the work flows and Business requirements.
Needs to be more punctual in time and more disciplined.

480/600

People/Firm Impact - Made impact this year by:

For practitioners who do not have firm contributions expectations, People/Firm impact should focus on people impact only (ex: how practitioner collaborates, leads, helps, and develops our people). Maximum limit is 600 characters per text box and minimum is 100 characters.

He was involved in team building activities which increased the collaboration between the team members..

12:36 PM
6/8/2020

People/Firm Impact - Made impact this year by:

For practitioners who do not have firm contributions expectations, People/Firm impact should focus on people impact only (ex: how practitioner collaborates, leads, helps, and develops our people). Maximum limit is 600 characters per text box and minimum is 100 characters.

He was involved in team building activities which increased the collaboration between the team members,. He participated in the cumulus challenge.

454/600

People/Firm Impact - Can enhance your impact by taking the following actions:

This should provide feedback with specific actions practitioners can take to enhance his/her People/Firm impact. Maximum limit is 600 characters per text box and minimum is 100 characters.

He should start taking up more Firm initiatives/activities and start working on them right from start of the year.

486/600

Performance Overview

Performance Overview:

The Performance Overview provides your leadership's assessment of your performance in each of the below performance dimensions, relative to your peers.

PMY20 YE Client Impact – Commensurate

PMY20 YE Firm/People Impact - Commensurate

PMY20 YE Metrics Impact – Above

PMY20 YE Promotion – No

12:36 PM
6/8/2020

NB - FY20

Tuesday, March 17, 2020 4:59 PM

Client:

Leading both App and Batches teams

Managed resources and shifts to easing bottlenecks and improving workforce efficiency.

Mentored 2 junior resources on DevOps and middleware technologies and made them operational in 3 weeks

Responsible for day to day operational activities along with coordinating with both the shores

Developed and implemented SVN auto commit utility across all release branches. Impact - Reduced ~5 min/commit of each developer in propagating those changes to all the future release branches. On an average there will be ~3500-4000 commits per release, which sums up in reduction of ~200-250 hours of developer's effort per release/month.

Provided a solution for one of the critical production issue which requires PROD restarts by implementing few architectural related changes which helped not only resolving the issue but also helped in increasing the production environment uptime

Firm:

Contributed on an RFP related to EA Sports related DevOps capability and helped in successfully gaining a project to Deloitte .

Helped Cigna project to proceed with critical deployment being on hold by resolving the issue and provided RCA to them for future use.

Helped one of the projects in guiding and implementing best SVN strategy for branching related to add-ons.

Wrote a White Paper on "AUTO CODE COMMIT" utility which was developed by me and being used in the project from last 11 months with zero issues.

Worked on RFP related to Liberty client and successfully delivered the Quals.

Practitioner Details

Employee Name	Naga Panguluri
Title	XIN-DC Senior Consultant
Office	Hyderabad
Primary Industry	Government & Public Services
Coach Name	Srinivas Motamarri
Target Promotion Year	2022
Target Career Path	N/A
Talent Model	Traditional Model
Years in Level	1.577
Date Last Promoted	08/26/2018

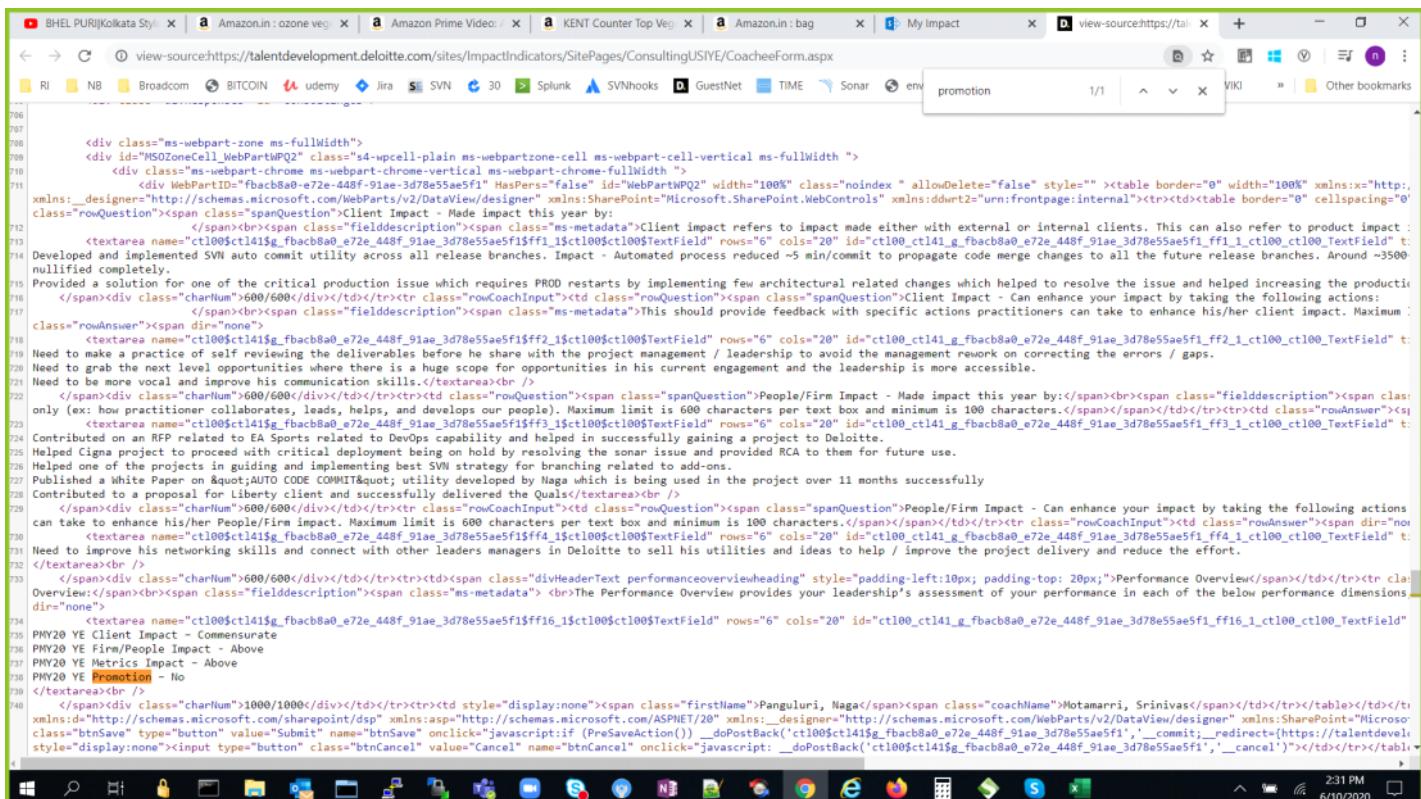
From <<https://rpm.deloitteresources.com/performancemanagement/#/myDashboard/home>>

My Metrics

Financial/Operational Metrics	As of Date	Goal	Goal, Self-Rep	Actual PM YTD	Actual PM YTD, Self-Rep	Peer Group Range	My Percentile
Standard Utilization	08/24/2019			98%			
Adjusted Utilization	08/24/2019	90%		98%			

Other Metrics	As of Date	Details
CE Level	08/24/2019	Goal - Mastery ; Actual - Advanced
CE Score	08/24/2019	Goal - ; Actual - 59
CE Training Hours	08/24/2019	Goal - ; Actual PM YTD -
Availability/StaffIT	08/24/2019	100%
Late Time Reports	08/24/2019	1
Resume Compliance	08/24/2019	Yes

From <<https://rpm.deloitteresources.com/performancemanagement/#/myDashboard/metrics>>



Nb - FY21

Wednesday, February 17, 2021 11:34 AM

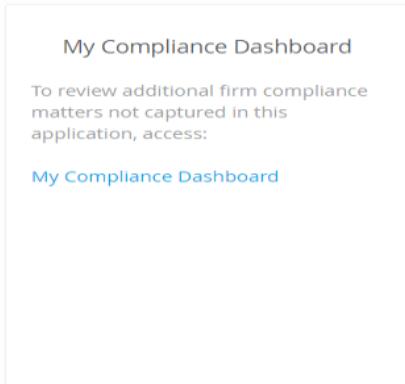
Business: CONSULTING Business Area: Core Business Operations Job Level: XIN-SENIOR/SENIOR CONSULTANT Employee Name : Naga Panguluri

My Metrics - Actuals



Business: CONSULTING Business Area: Core Business Operations Job Level: XIN-SENIOR/SENIOR CONSULTANT Employee Name : Naga Panguluri

My Metrics - Actuals



My Check-ins

Average frequency
Every two weeks

Did you know?

Research tells us that the more frequently you check-in with your Team Leader, the more likely you are to perform successfully in your role.



Responses to Team Pulse questions

[View Snapshots page](#)

Overview of responses I provided – this year



PY 21

My Snapshot statistics

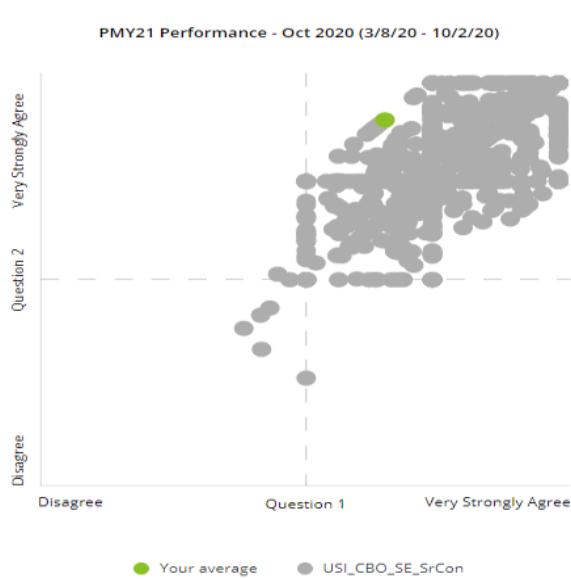
8 Snapshots in total

2 Unique Team Leaders

2049 Hours covered

My Performance Scatterplot

PMY21 Performance - Oct 2020 (3/8/20 - 10/2/20) ▾



General

2
Snapshots in total
[View all](#)

936
Hours

1
Unique Team Leaders

Question 1:
Based on what I know of this person's performance and if it were my money, I would award this person the highest possible compensation increase and bonus.

Question 2:
Based on what I know of this person's performance, I would always want this person on my team.

PY 21

My Performance Scatterplot

PMY21 Performance - Oct 2020 (3/8/20 - 10/2/20)

×

Team Leader	Project	Type	Hours	Start Date	End Date	
VH	Vijay Hejeeb XIN-DC Specialist Master	Rhode Island RHO07502-01-01-01-0067	Performance Snapshot	585	03/09/2020	06/12/2020
VH	Vijay Hejeeb XIN-DC Specialist Master	Rhode Island - WASDevOps Admin RHO07502-01-01-01-0067	Performance Snapshot	351	06/15/2020	08/07/2020

My Snapshots

[Export](#)

Team Leader	Project	Type	Hours	Request date	Status	⋮
SG	Surya Prakash Gunupudi XIN-DC Specialist Master	Apache and Tomcat Training ?	Firm Contribution Snapshot	16	02/04/2021	Completed on 02/04/2021
SG	Surya Prakash Gunupudi XIN-DC Specialist Master	RFPs ?	Firm Contribution Snapshot	35	02/04/2021	Completed on 02/04/2021
SG	Surya Prakash Gunupudi XIN-DC Specialist Master	Ball Corp ? BAL00210-01-01-1000	Performance Snapshot	162	02/01/2021	Completed on 02/04/2021
SG	Surya Prakash Gunupudi XIN-DC Specialist Master	Ball Corp ? BAL00210-01-01-1000	Performance Snapshot	297	01/14/2021	Completed on 01/22/2021
SG	Surya Prakash Gunupudi XIN-DC Specialist Master	Ball Corp ? BAL00210-01-01-1000	Performance Snapshot	288	11/13/2020	Completed on 11/23/2020
SG	Surya Prakash Gunupudi XIN-DC Specialist Master	Ball Corp ? BAL00210-01-01-1000	Performance Snapshot	315	09/28/2020	Completed on 10/07/2020
VH	Vijay Hejeeb XIN-DC Specialist Master	Rhode Island - WASDevOps Admin RHO07502-01-01-01-0067	?	351	08/07/2020	Completed on 09/03/2020
VH	Vijay Hejeeb XIN-DC Specialist Master	Rhode Island ? RHO07502-01-01-01-0067	Performance Snapshot	585	06/13/2020	Completed on 07/21/2020

Project 1 - Rhode Island

Responsible to delivery Production artifacts by doing multiple sanity checks to avoid Production issues related to Deployment and post production issues.
Successfully lead the team with no escalation.

Represented Infra team in multiple calls and helped other teams in understanding the issues to resolve in much lesser time.
Responsible for day to day operational activities along with coordinating with both the shores.

Project 2 - Ball Corporation - Ball Elevate

Represented Connectivity and Collaboration team on all Client calls.

Represented Connectivity and Collaboration team on all Major Incident calls and ensure the incidents were closed within the OLA/SLA timelines.

Monitoring teams performance and their daily deliverables on Daily basis and guided team on need basis to get them into the right direction.

Conducted Daily status calls within the team to address their concerns/problems and also to provide project related updates.

Worked on staffing plan based on the levels to have a smooth Business As Usual(BAU).

Work with Project Manager / Human Resources staff to recruit, interview, select, hire, and employ an appropriate number of employees.

Responsible for providing Team status to SM's and MD's from project stand point on Leadership calls.(Every alternative day)

Alerting the teams by sending reports on daily basis to avoid any OLA/SLA breaches as per the SOW.

FI:

Contributed my part in preparing "Ball Corporation - Ball Elevate", "Broadcom" and "Gallo" RFP's and successful gained projects to Deloitte. - Surya Gunupudi

Worked on "Brookshire" RFP.

Trained 28 resources who are from non IMS backgrounds on Tomcat and Apache for HPE project and made them operational in 2 weeks.

Helped HPE project couple of time to resolve critical production issues and provided RCA for future use. - Sumit Bhan

Helped RI project couple of time to resolve critical issues and provided steps for future use. - Vijay Kumar

Participated in Blitz and took 7 interviews. out of 7 candidates 5 were selected and joined Deloitte.

Participated in 2 Interviews and selected one and joined Deloitte.

Feedback:

Client:

Naga should focus on improving his communication and articulation skills, and should be more proactive during client meetings to provide crisp status updates rather than delegating to other junior resources and mentoring actively. ----- Examples emails were given to coach with single liner emails by Surya.

Need to gain the required technical skills that are required for the project to perform at a given role and should be flexible in taking any technical role as per the project demand.

Need to improve his email writing skills with detailed information.

Continue to improve on performing at next level and milestone readiness.

Firm:

Naga should improve his writing skills to develop high quality RFPs and presentation materials/decks and avoid rework.

He need to focus on leading the initiatives and drive to closure with good quality.

Continue to support the recruitment activities by taking more interviews in his area of expertise.

Commensurate/Commensurate/Strong

Team members

Thursday, June 18, 2020 6:55 PM

Akhilesh

Strengths:-

Good Technical skills

Proficient in all project related to Tech OPS and Batch OPS activities.

Mentors other members in the team

Proactive in all communications. Prompt in updating status updates.

Dev Needs:-

Learn OPA v12 along with WebLogic Administration which is required for project role.

Bhagath

Strengths:-

Good Technical skills

Proficient in all project related to Tech OPS and Batch OPS activities.

Mentors other members in the team

Proactive in all communications. Prompt in updating status updates.

Dev Needs:-

Learn OPA v12 along with WebLogic Administration which is required for project role.

Simitha

Strengths:-

Independent resource and became a good performer in a short time

Always completes tasks on time

Delivering the work on par with senior resources.

Quick learner

Took up Batch OPS activities and started delivering them with no mistakes in a short time.

Dev Needs:-

Need to expand her technical skills in DevOps area.

Amrutha

Strengths:-

Dev Needs:-

Ambica

Strengths:-

Dev Needs:-

2020-2021 - FY21

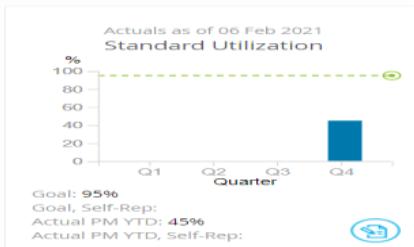
Tuesday, February 16, 2021 11:16 AM

Asish Pradhan

Tuesday, February 16, 2021 11:17 AM

Business: CONSULTING Business Area: Core Business Operations Job Level: XIN-JUNIOR STAFF/ANALYST Employee Name : Asish Kumar Pradhan

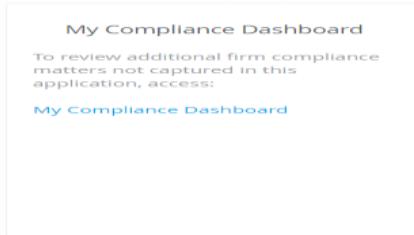
My Metrics - Actuals



DTE Time Report
To review details on hours charged through the DTE system, access:
[DTE Time Report](#)
Note: The DTE Time Report defaults to the fiscal year. To reconcile with the data displayed in My Metrics, change the Date Type dropdown and select the performance year dates of your business.

Business: CONSULTING Business Area: Core Business Operations Job Level: XIN-JUNIOR STAFF/ANALYST Employee Name : Asish Kumar Pradhan

My Metrics - Actuals



Asish Pradhan
XIN-DC Business Technology Analyst
CONSULTING

Office	Primary industry	Coach name	Target Promotion Year	Target Career Path
Hyderabad	NT - Not Designated	Naga Panguluri		
Talent Model	Years in Level (1) 0.194	Date Last Promoted		

Snapshot statistics

1 Snapshots in total

1 Unique Team Leaders

171 Hours covered

Feed Back:

Client:

Bommu Varun(On sick leave) - Back up lead - Nazar Mohammed(Spoke to him):

Strengths:

He recently joined the project

He is working on defects. He is doing good on defects.

All the defects he worked around 20 are error free. Which are basics ones.

Too early to judge his technical evaluation.

Dev Needs:

Needs to improve his Communication skills

Collaborate more and communicate better

Needs focus more on understanding the framework and functional knowledge of the Application software.

Manager - Asar Rahul:

Strengths:

He is setting in.

Setting up his work space

Understanding the system and Application

He is meeting expectations

Dev Needs:

Needs focus more on understanding the framework of Application software.

FI:

No FI's

He needs collaborate more and communicate better
Needs to focus more on understanding the framework and functional knowledge of the Application software.

Pradhan Asish haven't done any firm initiatives in this year. Hence don't have any inputs in this regards.

Completed

Asar Rahul; rasar@deloitte.com; **AHCT;** Full Stack Developer
Nazar Mohammed; munazar@deloitte.com ; **AHCT;** Full Stack Developer

Your client impact is COMMENSURATE, based on your work in this performance year including your performance scatterplot and due diligence feedback.
Your metrics is evaluated as COMMENSURATE against your goal

Venkateshwarao Mamidi

Tuesday, February 16, 2021 11:17 AM

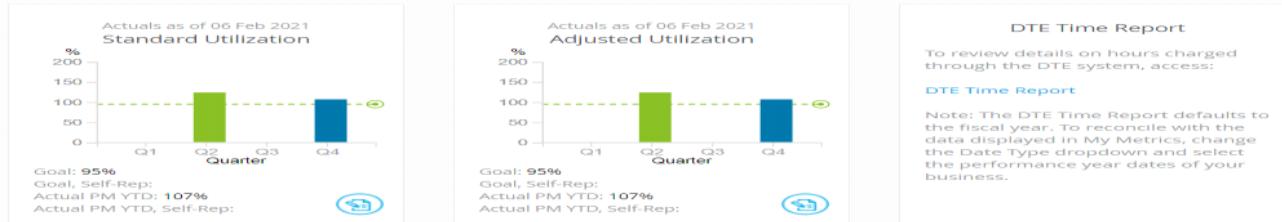
Business: CONSULTING Business Area: Core Business Operations Job Level: XIN-STAFF/CONSULTANT Employee Name : Mamidi Venkateswara Rao

My Metrics - Actuals



Business: CONSULTING Business Area: Core Business Operations Job Level: XIN-STAFF/CONSULTANT Employee Name : Mamidi Venkateswara Rao

My Metrics - Actuals



Mamidi Venkateswara Rao
XIN-DC Consultant
CONSULTING

Office Hyderabad	Primary industry NT - Not Designated	Coach name Naga Panguluri	Target Promotion Year 2021	Target Career Path
Talent Model Traditional Model	Years in Level 1,843	Date Last Promoted		

Snapshot statistics

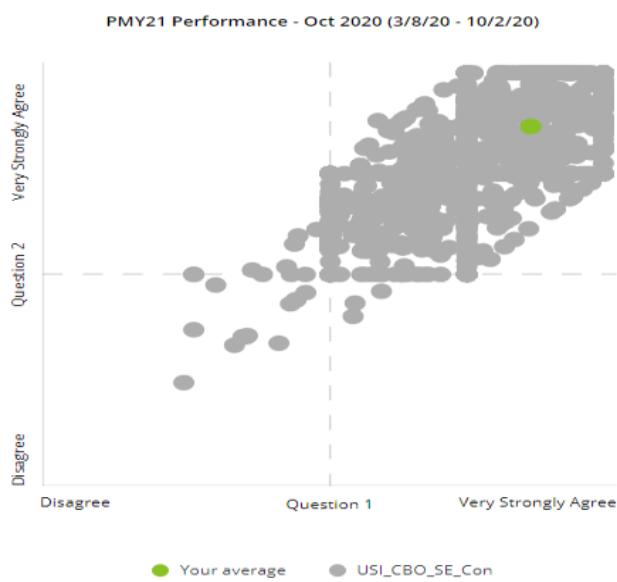
9 Snapshots in total

3 Unique Team Leaders

2114 Hours covered

Performance Scatterplot

PMY21 Performance - Oct 2020 (3/8/20 - 10/2/20) ▾



General

3 Snapshots in total
[View all](#)

1251 Hours

2 Unique Team Leaders

3 Operating at Next Level ⓘ
Visible to Coaches only

Question 1:
Based on what I know of this person's performance and if it were my money, I would award this person the highest possible compensation increase and bonus.

Question 2:
Based on what I know of this person's performance, I would always want this person on my team.

Performance Scatterplot

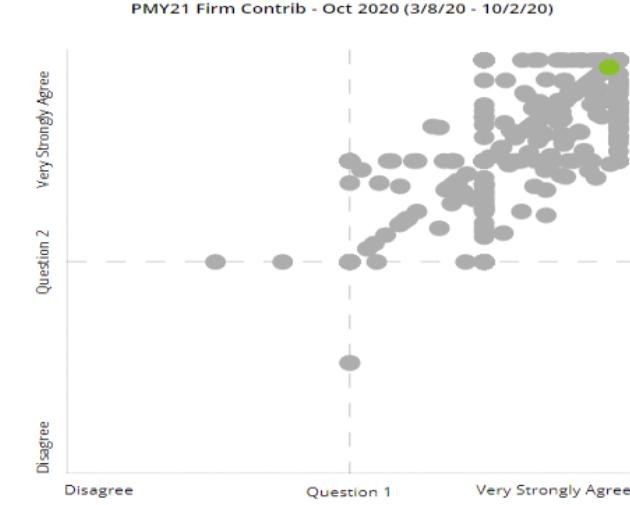
PMY21 Performance - Oct 2020 (3/8/20 - 10/2/20)

X

Team Leader ⚠	Project ⚠	Type ⚠	Hours ⚠	Start Date ⚠	End Date ⚠
NJ Neethu Jacob XIN-DC Senior Consultant	Rhode Island CCAP RHO07502-01-01-0012	Performance Snapshot	585	03/09/2020	06/12/2020
VG Vinod Gopishetty XIN-DC Manager	Rhode Island CCAP RHO07502-01-01-0012	Performance Snapshot	360	06/15/2020	08/07/2020
VG Vinod Gopishetty XIN-DC Manager	Rhode Island CCAP RHO07502-01-01-0012	Performance Snapshot	306	08/10/2020	09/25/2020

Firm Contribution Scatterplot

PMY21 Firm Contrib - Oct 2020 (3/8/20 - 10/2/20) ▾



General

3 Snapshots in total
[View all](#)

215 Hours

1 Unique Team Leaders

Question 1:
Based on what I observed of this person's performance on this work, I would always go to this person for this kind of work.

Question 2:
I would always say that this person created outstanding impact through this work.

Team Leader ▾	Project ▾	Type ▾	Hours ▾	Start Date ▾	End Date ▾
VG Vinod Gopishetty XIN-DC Manager	RI Mobile application	Firm Contribution Snapshot	51	05/07/2020	06/12/2020
VG Vinod Gopishetty XIN-DC Manager	RI Mobile application RHO07502-01-03-02-0340	Firm Contribution Snapshot	149	06/15/2020	08/07/2020
VG Vinod Gopishetty XIN-DC Manager	RI Mobile application RHO07502-01-03-02-0340	Firm Contribution Snapshot	15	08/10/2020	09/25/2020

PY 21

- Delivered **23** problem tickets with **zero SIT/UAT**.
- Suggested and implemented new functionality to update the child age group automatically which will affect payment to the child care providers from the state.
- Worked on the automatic transfer of the check print file to the external treasury (Bank of America).
- Worked on all critical functionalities like enrollments, attendance, and payments related issues.
- Provided fix on security issues like restricting the user to access other user documents that may have PII or other sensitive information in very little turnaround time (within 1 day including unit testing).
- Shared the analysis and release plan with the security team for **379** Static application security testing issues within **3 days** and **9** Dynamic application security testing within **2 days**.
- Provided solutions to **57** CCAP Problem tickets.
- Performed code review and suggesting changes to team members to avoid SIT defects to attain quality.
- Analyzing sonar reports and ensuring the quality of work by the team.
- Generating Theme metrics and business metrics and sharing with clients.
- Taking care of all lead activities like effort estimations and release scoping and assigning work to team members based on workload, coordinating with other teams for cross-track functionalities, attending Patch/Handoff meetings, and providing updates to the Manager/Sr manager from the CCAP team.
- Given 3 weeks KT on CCAP functionalities and other technologies like EJB, FAST4J, Jquery to (BTA's) Nandini and Akshay to get fast deliverables.

Feed Back:**Client:****Ravi Domakonda**

Sound

Technical

Lot of noise on CCAP portal . He resolved it

Appreciation from clients

USDC owns from onsite. Then it got transferred to India and he resolved it and left with one issue. Normally we will get 6 issues per month.

CCAP security vulnerability during wellbeing disconnect . He logged and solve the issues and it came from D.leadership on last minute. After no issue were seen

Very good composed, organized and planning

Raises risk at early stages to avoid issues

He closes on time and before team

He mentored his entire team. Even he is new. People came from us to us

Dev Need:

None

Neethu

He is doing very well

he is leading CCAP team

Initially neethu is doing the leading on CCAP

he is the one who talks with client and handles client calls

technically he is very good

he is guiding team members

2018 till end of May 2020 - he worked under me

new to firm at the start and he picked up very well

take ownership and take lead on the activities

minimum hand holding

RI client is difficult client. needs lots of patience and preparation

Dev Need-

client relationship skills - more prepared before client meetings - notes ready - prepare for counter points - unofficial

FI:

- Involved in Estimations and release plan activities.
- Created Architecture for the Mobile application with the latest technologies like JWT and Spring boot.
- Defined project structure and reviewed with ARB team for approval on the design.
 - Created a global response layer for all the web services.

- Created a new Exception framework to capture the exceptions for all the services.
 - Added filters to validate each request from the user.
 - Defined Project packages/folders to create service or helper classes or custom responses.
 - Worked on crucial user authentication functionality, which will validate the user to access the mobile application.
 - Implemented a two-layer security mechanism using ISAM and JWT.
 - Provided Refresh token mechanism to extend authentication based on secret encrypted key.
 - Integrated authentication for all microservices.
 - Also restricted concurrent login functionality in the Customer Portal and mobile application, so a user can access any one application (Web/Mobile) with the same credentials at the same time.
 - All functionalities are delivered to SIT without any defect.
 - Created FDD's and shared them with the client.
- Given demo to leadership about Authentication and application flow.

Vinod Gopisetty:

He did good job

JWT he played a skill role

Dev Need:

Build more confidence and more assertive(Dev Need)(unofficial)

As an add-on, he can expand his functional knowledge on eligibility side though his skill area is different. To diversify his skills.

He has done a tremendous job in completing the FI, which is Mobile technology and completely new to him. This is requested directly by Leadership and he received excellent feedback and appreciation from them. No enhancement inputs given.

Ravi Domakonda; radomakonda@deloitte.com; RI-UHIP; Developer
 Vinod kumar Gopishetty; vgopishetty@deloitte.com; RI-UHIP; Developer
 Neethu Jacob;

#

Additional Information

Is there any new information that is not captured in the questions above that the panel should know? Note: Only provide information if it differs from the information already provided above/ or in Impact Statements. Please do not include coachee personal or health information as part of your response. Is there any new information that is not captured in the questions above that the panel should know?

Note: Only provide information if it differs from the information already provided above/ or in Impact Statements.

Please do not include coachee personal or health information as part of your response.

=>
He is Sound and Technical strong

Appreciation from clients

Very good composed, organized and planning

Raises risk at early stages to avoid issues

He completes the tasks before time

Even he is new, he mentored his entire team who came from USA.

#Please answer the following questions based on your continued observations about your Coachee over their tenure at Deloitte.

In your view, is your coachee working in a critical business area across domain, industry, technology, or processes. If yes, do mention the business area and contributions made by your coachee. In your view, is your coachee working in a critical business area across domain, industry, technology, or processes.

If yes, do mention the business area and contributions made by your coachee.

=> CCAP is one of the critical area and have lot of noise from both client and Leadership. Normally they will have 6 defect per month. This module is actually owned by USDC(onsite) and then it got transferred to India. Then Venkateswara Rao owns this entire module and resolved it with no defects. Currently there no defect seen and CCAP module is stable.

#Describe instances where your coachee has played diverse roles & has scaled up quickly to deliver with quality in the new role/s.

=> Though he is new to JWT. He quickly up scaled himself and created Architecture for the Mobile application with the latest technologies like JWT and Spring boot.

#Explain instances where your coachee has demonstrated willingness & ownership to deliver higher level responsibilities (beyond current career level). Explain instances where your coachee has demonstrated willingness & ownership to deliver higher level responsibilities (beyond current career level).

=> There is one CCAP security vulnerability issue which raised just before the wellbeing disconnect. Leadership have request him to resolve it and he diligently logged in and worked on it during the wellbeing holidays and resolved it. After that no issue were seen with respect to security side.

Your client impact is **STRONG**, based on your work in this performance year including your performance scatterplot and due diligence feedback.
Your metrics is evaluated as **STRONG** against your goal

Promotion - YES

Biswal, Akhay

Tuesday, February 16, 2021 11:17 AM

Business: CONSULTING Business Area: Core Business Operations Job Level: XIN-STAFF/CONSULTANT Employee Name : Akhay Biswal

My Metrics - Actuals



[Privacy Policy](#)

Business: CONSULTING Business Area: Core Business Operations Job Level: XIN-STAFF/CONSULTANT Employee Name : Akhay Biswal

My Metrics - Actuals



AB

Akhay Biswal
XIN-DC Consultant
CONSULTING

Office
Hyderabad

Primary industry
NT - Not Designated

Coach name
Naga Panguluri

Target Promotion Year
2022

Target Career Path

Talent Model
Traditional Model

Years in Level [?](#)
1.574

Date Last Promoted

Snapshot statistics

7 Snapshots in total

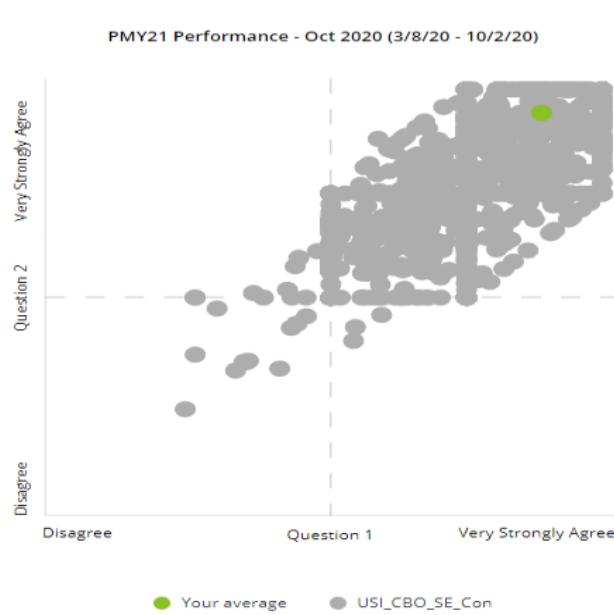
2 Unique Team Leaders

1773 Hours covered

PY 21

Performance Scatterplot

PMY21 Performance - Oct 2020 (3/8/20 - 10/2/20) ▾



General

2 Snapshots in total
[View all](#)

765 Hours

1 Unique Team Leaders

0 Operating at Next Level Visible to Coaches only

Question 1:

Based on what I know of this person's performance and if it were my money, I would award this person the highest possible compensation increase and bonus.

Question 2:

Based on what I know of this person's performance, I would always want this person on my team.

Performance Scatterplot

PMY21 Performance - Oct 2020 (3/8/20 - 10/2/20)

×

Team Leader	Project	Type	Hours	Start Date	End Date
AG Abhilash Gammanagari XIN-DC Senior Consultant	RI - UHIP RHO07502-01-03-02-A236	Performance Snapshot	594	03/09/2020	06/12/2020
AG Abhilash Gammanagari XIN-DC Senior Consultant	RI-UHIP RHO07502-01-03-02-0278	Performance Snapshot	171	06/15/2020	08/07/2020

My Snapshots

×

Team Leader	Project	Type	Hours	Request date	Status
AG Abhilash Gammanagari XIN-DC Senior Consultant	RI - UHIP RHO07502-01-03-02-A236	Performance Snapshot	594	06/12/2020	Completed on 06/26/2020
AG Abhilash Gammanagari XIN-DC Senior Consultant	RI-UHIP RHO07502-01-03-02-0278	Performance Snapshot	171	08/07/2020	Completed on 08/27/2020
AG Abhilash Gammanagari XIN-DC Senior Consultant	RI - UHIP RHO07502-01-03-02-A236	Performance Snapshot	261	09/28/2020	Completed on 10/05/2020
AG Abhilash Gammanagari XIN-DC Senior Consultant	RI-UHIP RHO07502-01-03-05-N039	Performance Snapshot	288	11/09/2020	Completed on 12/01/2020
AG Abhilash Gammanagari XIN-DC Senior Consultant	RI-UHIP RHO07502-01-03-05-N039	Performance Snapshot	135	01/08/2021	Completed on 01/25/2021
NJ Niraj Jani XIN-DC Manager	CalHEERS CAL00323-00-02-01-0117	Performance Snapshot	171	01/08/2021	Completed on 02/03/2021
NJ Niraj Jani XIN-DC Manager	CalHEERS CAL00323-00-02-01-0117	Performance Snapshot	153	01/28/2021	Completed on 02/03/2021

Feed Back:

Client:

From - Gammanagari, Abhilash Reddy(RI)

Worked on OPA upgrade development project and delivered 3-4 Modules with quality.

Developed 3-4 BRR's. Out of which I have taken responsibility on 2-3 BRR alone and delivered quality deliverable with 0 or minimum defects.

Worked on a very complex BRR and delivered successfully, which was delayed earlier 2 time because of its complexity.

Implemented 'junit' framework for disposition module. This helped developer to test disposition module more efficiently

Strengths

Always delivers ahead of time along with quality
Always understand the core and gives the fix in one go with no defects.
Technically he is very strong.

Dev Needs:

He need to work on to increase his domain knowledge which is a continuous process.

From - Niraj Jani (Calheers)

Strengths:

New to project

1.5 months given to learn the project. Too early to give inputs

He is dedicated.

Dev Needs:

He is slow

Still at the backbench in con

He should own things and should start taking tasks.

He should start reporting to his leads diligently.

Be more vocal on meetings.

FI:

No FI's

Biswal Akhay haven't done any firm initiatives in this year. Hence don't have any inputs in this regards.

Niraj Jani; njani@deloitte.com; CalHEERS; Java Developer

Gammanagari, Abhilash Reddy; agammanagari@deloitte.com; RI-UHIP; Java Developer

Your client impact is COMMENSURATE, based on your work in this performance year including your performance scatterplot and due diligence feedback.
Your metrics is evaluated as STRONG against your goal

Tadimeti, Saketh Venkata Raghavendra

Tuesday, February 16, 2021 11:17 AM

Business: CONSULTING Business Area: Core Business Operations Job Level: XIN-JUNIOR STAFF/ANALYST Employee Name: Tadimeti Venkata Raghavendra Saketh

My Metrics - Actuals

My Compliance Dashboard To review additional firm compliance matters not captured in this application, access: My Compliance Dashboard	Actuals as of 06 Feb 2021 Communication Excellence CE Level Goal Actual Advanced CE Score Goal Actual 64 CE Training Hours Goal Actual PM YTD	Actuals as of 06 Feb 2021 Compliance Availability/StaffIT 73% Late Time Reports 21 Resume Compliance Yes
---	--	---

Business: CONSULTING Business Area: Core Business Operations Job Level: XIN-JUNIOR STAFF/ANALYST Employee Name: Tadimeti Venkata Raghavendra Saketh

My Metrics - Actuals

Actuals as of 06 Feb 2021 Standard Utilization  Goal: 95% Goal, Self-Rep: Actual PM YTD: 98% Actual PM YTD, Self-Rep: 	Actuals as of 06 Feb 2021 Adjusted Utilization  Goal: 95% Goal, Self-Rep: Actual PM YTD: 98% Actual PM YTD, Self-Rep: 	DTE Time Report To review details on hours charged through the DTE system, access: DTE Time Report Note: The DTE Time Report defaults to the fiscal year. To reconcile with the data displayed in My Metrics, change the Date Type dropdown and select the performance year dates of your business.
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Saketh Raghavendra Saketh
XIN-DC Analyst
CONSULTING

Office	Primary industry	Coach name	Target Promotion Year	Target Career Path
Hyderabad	Technology, Media & Telecom	Naga Panguluri	2022	
Talent Model	Years in Level 	1.517	Date Last Promoted	

Snapshot statistics

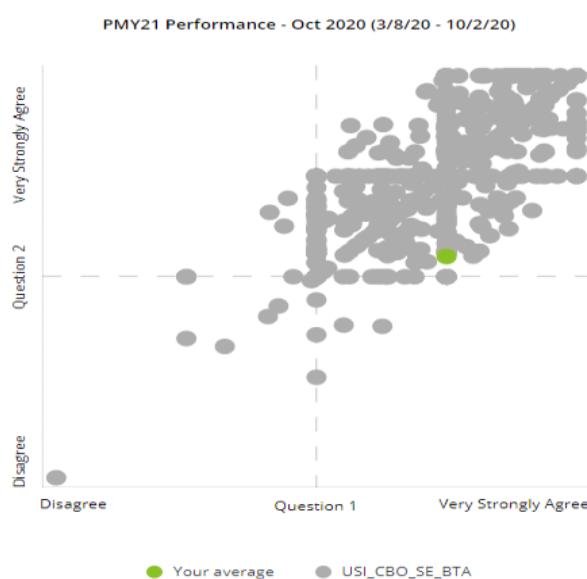
8 Snapshots in total

1 Unique Team Leaders

1926 Hours covered

Performance Scatterplot

PMY21 Performance - Oct 2020 (3/8/20 - 10/2/20) ▾



General

5
Snapshots in total
[View all](#)

1251
Hours

1
Unique Team Leaders

5
Operating at Next Level ⓘ
Visible to Coaches only

Question 1:

Based on what I know of this person's performance and if it were my money, I would award this person the highest possible compensation increase and bonus.

Question 2:

Based on what I know of this person's performance, I would always want this person on my team.

Performance Scatterplot | PMY21 Performance - Oct 2020 (3/8/20 - 10/2/20) X

Team Leader ⚠	Project ⚠	Type ⚠	Hours ⚠	Start Date ⚠	End Date ⚠
SD Suhas Deshmukh XIN-DC Senior Consultant	Dolby DOL30657-01-01-NB-9000	Performance Snapshot	90	03/09/2020	03/20/2020
SD Suhas Deshmukh XIN-DC Senior Consultant	Dolby DOL30657-01-01-01-2410	Performance Snapshot	405	03/23/2020	05/29/2020
SD Suhas Deshmukh XIN-DC Senior Consultant	Dolby DOL00124-01-01-01-1010	Performance Snapshot	72	06/01/2020	06/11/2020
SD Suhas Deshmukh XIN-DC Senior Consultant	Dolby DOL00124-01-01-01-1010	Performance Snapshot	432	06/12/2020	08/14/2020
SD Suhas Deshmukh XIN-DC Senior Consultant	Dolby DOL00124-01-01-01-1010	Performance Snapshot	252	08/15/2020	09/26/2020

Discussed and asked him to modify his impact statements and send the description of those activities. - He sent it

Feed Back:

Client:

Suhas Deshmukh

Strength's:

Nothing as of now.

Dev Needs: (unofficial)
issues with deliverables
tends to forget things
not serious about the work
not met expectation
struggling even for the day to day activities
have to follow for each every status of his work
not delivering on time
not pro active
always have to assign and track the status on daily basis
he won't read the emails
mostly away and not reachable
Need to improve a lot in terms of areas with respect to technical and due diligence
Never owns any activities
Not able to delivery due to Negligence not because of technical incapability
Always leads needs to review his work and always ends up with lot of mistakes
Needs to upgrade his skills in his own areas.

Official:

He needs take more responsibility on Day to Day activities

Needs to be more independent in completing the tasks. Rather than depending upon leads.

Between me and Lead not to Coachee:

Trying to replace him as it is not working out with him in the project. Due to lack skilled people they are having him.

FI:

NO FI's

Raghavendra Saketh actively participated and did a good job. No Dev Needs/Enhancements were required.

Suhas Deshmukh; sudeshmukh@deloitte.com; Dolby; Automation Tester

Your client impact is **STRONG**, based on your work in this performance year including your performance scatterplot and due diligence feedback.
Your metrics is evaluated as **STRONG** against your goal

Business: CONSULTING Business Area: Core Business Operations Job Level: XIN-JUNIOR STAFF/ANALYST Employee Name : Dhruv Moudgil

My Metrics - Actuals



Business: CONSULTING Business Area: Core Business Operations Job Level: XIN-JUNIOR STAFF/ANALYST Employee Name : Dhruv Moudgil

My Metrics - Actuals



Dhruv Moudgil

XIN-DC Analyst
CONSULTING

Office Hyderabad	Primary industry NT - Not Designated	Coach name Naga Panguluri	Target Promotion Year 2022	Target Career Path
Talent Model Traditional Model	Years in Level 1.517	Date Last Promoted		

Snapshot statistics

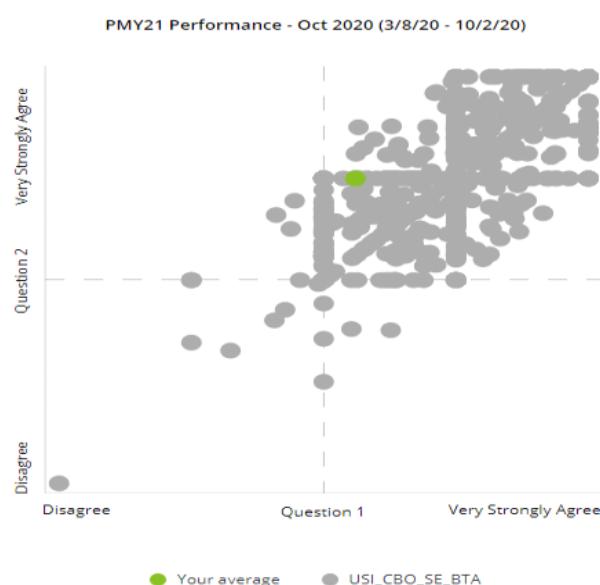
7 Snapshots in total

2 Unique Team Leaders

1939.5 Hours covered

Performance Scatterplot

PMY21 Performance - Oct 2020 (3/8/20 - 10/2/20) ▾



General

3
Snapshots in total
[View all](#)

1237.5
Hours

1
Unique Team Leaders

0
Operating at Next Level ?
Visible to Coaches only

Question 1:
Based on what I know of this person's performance and if it were my money, I would award this person the highest possible compensation increase and bonus.

Question 2:
Based on what I know of this person's performance, I would always want this person on my team.

Performance Scatterplot | PMY21 Performance - Oct 2020 (3/8/20 - 10/2/20) X

Team Leader	Project	Type	Hours	Start Date	End Date
SP Satyajit Paul XIN-DC Senior Consultant	Aflac Inc. AFL00076-01-01-01-2000	Performance Snapshot	585	03/09/2020	06/12/2020
SP Satyajit Paul XIN-DC Senior Consultant	Aflac Inc. AFL00076-01-01-01-2000	Performance Snapshot	355.5	06/13/2020	08/07/2020
SP Satyajit Paul XIN-DC Senior Consultant	Aflac Inc. AFL00076-01-01-01-2000	Performance Snapshot	297	08/08/2020	09/25/2020

NO FI's

Had a discussion and dhruv explained his scope of work and impact statements.
Asked him to come up with short description for impacts -
Scope of work/Daily acvtivites :

Feed Back:

Client:

Satyajit Paul

Client Impact:

Project	Role	Impact/Key Achievements (Client & People)	Lead Name, Email ID, Contact Number	Hours
		Mention the impact you had on the client & people reporting to you. Attach testimonials/appreciation emails, Awards if any #		
Aflac Inc	Developer	Automated data load activity and completed ETL process by developing structure of 5 SSIS packages & by scheduling jobs, saving client effort by at least 30 mins daily #true	Satyajit Paul, sapaul@deloitte.com , 9987251540	
Aflac Inc	Developer	Developed 15+ SSRS business reports and dashboards in the form of 5+ service requests/SCRs, helping 1000+ users to view data KPI's in meaningful graphical formats. #True Couple of them crucial and time bound.	Satyajit Paul, sapaul@deloitte.com , 9987251540	
Aflac Inc	Developer	Recognized by client Director and high-level leadership for doing major developmental changes in an important report for Compliance Team. #True for the above work	Satyajit Paul, sapaul@deloitte.com , 9987251540	
Aflac Inc	Developer	Lead the project activity for analysis/development & solution for a major client project for the balancing of financial data, this will help client significantly to find out of balance records.	Satyajit Paul, Prannoy Kumar, (9987251540),	

		#On going activity(Partially completed) He is not solutioning he is a just contributor. It's a reactive work not proactive	prannkumar@deloitte.com (8125793577)	
Aflac Inc	Developer	Monitored production jobs proactively, that ensured smooth operation and time bound response/resolution for client. #True	Satyajit Paul, sapaul@deloitte.com , 9987251540	
Aflac Inc	Developer	Upskilled & created a work bench for Power BI in the project to take up future complex reports which SSRS is not capable of and developed SLA tracker and incident management report for the project. #True Good upskilling here from him	Satyajit Paul, sapaul@deloitte.com , 9987251540	

Not steady. Sometimes really well sometimes lousy. He Needs to be more consistent.

Dev Needs:

Communication wise, he is getting confused and getting distracted
Whenever he faces a problem, he is not reaching out when needed. Sometimes
Not an individual performer

Needs to improve his communication standards. As he is getting confused and distracted sometimes.

He should start reaching out to his peers or Leads when needs help or faces any issues.

He should become more independent performer.

Strengths:

Always says yes for any type of activities
Good at learning new technologies and delivering the tasks
Good team player
He puts his 100% effort to complete

Fi:

Satyajit Paul
Part of project but can be used in the project too . And there are plans

Needs to improve his communication standards. As he is getting confused and distracted sometimes.

He should start reaching out to his peers or Leads when needs help or faces any issues.

He should become more independent performer.

He did a good job in completing the Firm initiatives in time and no dev needs/enhancements were given.

Satyajit Paul; sapaul@deloitte.com; Aflac; Developer

Your client impact is COMMENSURATE, based on your work in this performance year including your performance scatterplot and due diligence feedback.
Your metrics is evaluated as COMMENSURATE against your goal

2021-2022 - FY22

Monday, August 16, 2021 3:45 PM

VIKUMARSINGH@DELOITTE.COM; Ajay Kumar, Talluri <tajaykumar@deloitte.com>; Reddy, Danapana Puja <danreddy@deloitte.com>; Battala, Divya Madhuri <dbattala@deloitte.com>; GASAIKUMAR@DELOITTE.COM; Venkata Hem Charan, Pyda <pvenkatahemcharan@deloitte.com>

VIKUMARSINGH@DELOITTE.COM

Ajay Kumar, Talluri <tajaykumar@deloitte.com>

Reddy, Danapana Puja <danreddy@deloitte.com>

Battala, Divya Madhuri <dbattala@deloitte.com> --- krkommi@deloitte.com(Kommi Krishan)

GASAIKUMAR@DELOITTE.COM

Venkata Hem Charan, Pyda <pvenkatahemcharan@deloitte.com>

Coach fourm

Thursday, January 27, 2022 8:28 AM

Coach Due Diligence Input

Before completing this form, please review your Coachee's RPM Performance Dashboard in iRPM, (e.g., scatterplots, metrics, if applicable) and conduct due diligence with the relevant Team Leaders (and others as appropriate) to develop a comprehensive view of your Coachee's performance this performance year. Then, respond to the questions below. The remainder of your due diligence should be used to assist in developmental conversations with your Coachee regarding their performance.

Your responses will be provided to your Business leaders or delegates (e.g., Year-end Panel leaders, committees) and Talent as one input into the year-end process, along with other performance data. Your responses will not be shared with your Coachee.

Important: Please do not include personal or health information in your response.

Due Diligence*

Who did you speak with as you conducted your Coachee due diligence? Please include details such as name, feedback provider's job level and project/engagement name for each.

Client*

Based on your due diligence, how would you describe the complexity of your Coachee's client role(s) this year relative to their current level? (For non-client facing Coachees, please answer this question regarding their primary role)

Based on your due diligence, how would you describe your Coachee's overall client impact this year?

Based on your due diligence, please provide context (e.g. quality, project role/role complexity, special circumstances) that would help business leadership understand your responses above. Important: Please do not include personal or health information in your response.

People/Firm*

Guidance on People/Firm expectations is below.

- Milestone Senior Consultant/ Sp. Senior; all Managers/Sp. Masters and all Senior Managers/Sp. Leaders : Expected to deliver meaningful impact in the market, organization, and people initiatives
 - Associate Analyst, Analyst, Consultant & non-milestone Senior Consultant/Sp. Senior: Optional; Practitioners can choose to participate based on interests and gain from the learning, exposure, and associated recognition; Not evaluated in PMY22. People aspect will be discussed only for developmental feedback (if applicable)
- Are you a new Coach, or not sure if your Coachee contributed in prior years? Here are several ways to find out:
- Check prior years dashboards to see if they have a firm contribution snapshot/scatterplot
 - Look at prior years impact indicators to review contributions
 - Ask your Coachee as a part of due diligence and follow-up with Team Leaders

If your Coachee is a milestone Senior Consultant/Sp. Senior; all Managers/Sp. Masters and all Senior Managers/Sp. Leaders, has your Coachee met the People/Firm requirement?

Metrics

Metrics (Utilization, Managed Revenue, Primary Sales, Managed Hours, as applicable): Based on your due diligence, please provide any additional information of significance that would help business leadership understand your Coachee's metrics. If your Coachee did not meet their metric goals, please provide context as to why. If metrics expectations were met and you don't have additional information to provide, you can leave the text box blank. (Examples include: on the bench between billable projects, project/role was temporarily on hold, clearance or badging delays at start of project, training, etc.) Important: Please do not include personal or health information in your response.

Promotion*

Based on your due diligence and a review of operating at the next level flags, do you believe your Coachee is ready for promotion this year?

Please provide context that support your recommended promotion decision. Important: Please do not include personal or health information in your response.

- If ready, share examples of projects/engagements demonstrating next level performance, who supports promotion
- If not ready, share examples where further development is required and what feedback has been delivered

Submit

Ajay Kumar Talluri

Monday, August 16, 2021 3:47 PM

Spoke to Ajay firstly on 01-Dec-21

Assigned to me on Aug 5th 2020

No Mid-year review happened

Previous coach - Bhavani Shankar

Lead - Sumit Bhan

Project - Ball Corp

Joined Deloitte on 28-Oct-20

Joined Ball Corp on 02-Nov-20

He is part servers team and he is leading the team

He received 3 applause, 1 spot and 1 shoutout

Received many client appreciations:

Appreciation from both Client and PM - Being always Hero(Sumit Bhan) and Great job(Mike B)

Appreciation from client for solving p2 over Diwali holiday - For commitment and sacrifice

Kudos for your performance from _ Amiya Nigam

And lot other emails attached related to Thank you and Appreciations for him.....

Promotion target year - 2022

Project support - NO

Working on UCS/vnware/hyperware, Partial automation, Data migration, long pending issues, Ad, DNS/DHCP migrations.

#####
Year End survey Due diligence Start
#####SC
FEEDBACK:

Sumit Bhan:

Strengths:

Joined Oct 20

Dev Needs:

Impacts:

#####
Year End survey Due diligence End
#####

[Operational](#) Other [My Metrics Dashboard](#) Performance year [2022](#) [Talluri AjayKumar](#) [FAQ](#)

● Business: CONSULTING Talent Model: Traditional Model Business Area: Core Business Operations Job Level: XIN-STAFF/CONSULTANT Employee Name: Talluri Ajay Kumar

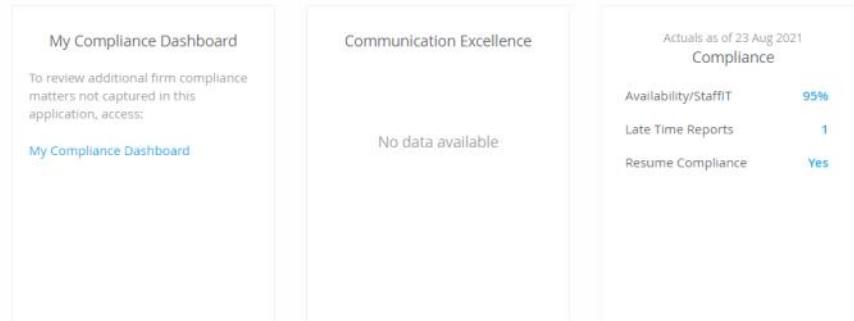
My Metrics - Actuals



Note: Self-reported metric values (goal OR actual) are displayed on the associated graphs when available. When self-reported values are not available, the system-reported goal OR actual values are displayed.

Business: CONSULTING Talent Model: Traditional Model Business Area: Core Business Operations Job Level: XIN-STAFF/CONSULTANT Employee Name : Talluri Ajay Kumar

My Metrics - Actuals



[Privacy Policy](#)

Performance Scatterplot | PMY22 Performance - Jan 2022 (2/7/21 - 1/8/22) X

Team Leader	Project	Type	Hours	Start Date	End Date
SB Sumit Bhan XIN-DC Manager	BALL CORPORATION BAL00210-01-01-1000	Performance Snapshot	360	02/07/2021	04/04/2021
SB Sumit Bhan XIN-DC Manager	BALL CORPORATION BAL00210-01-01-1000	Performance Snapshot	603	04/05/2021	07/16/2021
SB Sumit Bhan XIN-DC Manager	BALL CORPORATION BAL00210-01-01-1000	Performance Snapshot	360	07/19/2021	09/10/2021
SB Sumit Bhan XIN-DC Manager	BALL CORPORATION BAL00210-01-01-1000	Performance Snapshot	396	09/10/2021	11/05/2021
SB Sumit Bhan XIN-DC Manager	BALL CORPORATION BAL00210-01-01-1000	Performance Snapshot	340	11/08/2021	01/07/2022

PY 22



Talluri Ajay Kumar
XIN-DC Consultant
CONSULTING

Office	Primary Industry	Coach name	Target Promotion Year	Target Career Path
Hyderabad	NT - Not Designated	Naga Panguluri	2022	
Talent Model	Years in Level	Date Last Promoted		

Snapshot statistics

9 Snapshots in total

4 Snapshots with comments

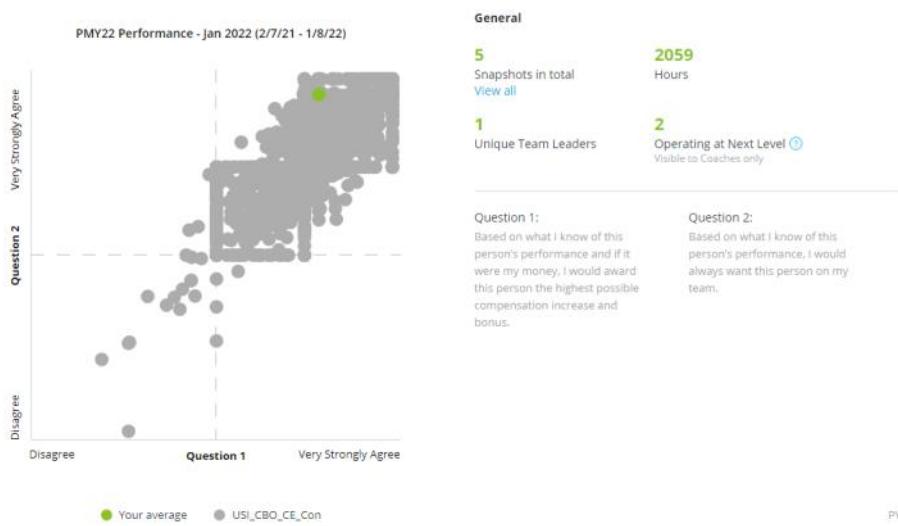
1 Unique Team Leaders

2101 Hours covered

PY 22

Performance Scatterplot

PMY22 Performance - Jan 2022 (2/7/21 - 1/8/22)



PY 22

Client: Made Client impact this year by (Coachee Entry):

Client impact refers to impact made either with external or internal clients. This can also refer to product impact if applicable. Maximum limit is 1,000 characters per text box and minimum is 100 characters.

Projects: AD cleanup(identified and deleted 2300 stale objects), Cyber-ark DNA scans for 2020 & 2021, DC upgrades, VMWare - Hyper-V & Hyper-V to VMWare,DHCP migrations, File share migrations, Storage reclamation for Nimble, Dell storage(Exchange & Backup server).Rome cups Firmware, BIOS upgrades& esxi patching, vmware tools & Hardware upgrades for the last two years. Block 64 inventory tool deployment, Veam migrations, CMDB updates, SFC scans, chkdsk on SFOL servers. Automations: Daily health checks, DC's Inventory, Disk space reports, account lockouts, AD cleanup, Replications ,robocopy, RV tools and vmware inventory. Issues:AD,DNS,DHCP,replication(sysvol,netlogon),Disk space, Server outages/hung, Failover clustering, Hyper-V, esxi host down , SCCM DP,OSD deployment, reverse lookup, Firmware and BIOS, patching and vulnerabilities, DHCP authorization, bad IP address. Major incidents,BAU,KPI,weekly,AD reports, meetings, Trained juniors, always worked in streamlining the project

People/Firm: Made People/Firm impact this year by (Coachee Entry):

For practitioners who have firm contributions/ people impact details should focus on both firm and people impact aspects. For practitioners who do not have firm contributions expectations, People/Firm impact should focus on people impact only (ex: how practitioner collaborates, leads, helps, and develops our people). Maximum limit is 1,000 characters per text box and minimum is 100 characters.

Interview Panel :I have taken interviews for vmware, windows, VDI profiles for multiple people - 14 hours
Provided Infra Microsoft windows 2016 concepts to other project resources - 2 hours
Technical Support: Supported D-NOW windows Team on certificate issues and DHCP migration - 6 hours
Interview Panel: Taken interviews for windows, vmware & VDI profiles - 14 hours (Infinite)
Trainings :Given training on windows for other projects new comers and senior associates -4 hours.
Presentation : Prepared prepared OS upgrades presentation for the upcoming client - 2 hours.

Coachee Name	AJAY KUMAR TALLURI
DOJ – Deloitte	27/10/2020
DOJ – current project	02/11/2020
Skill/Technology	Windows, AD , VMWare, UCS , Hyper-V & Powershell
Total Experience	8 years 4 months
Current Experience in Firm	1 year, 2 months
Current Experience in Project	1 year, 2 months
Total relevant years of experience	8 years 4 months
Current Project	BALL CORPORATION
Snapshot reviewer email id (if more than one person, please provide all of their names):	subhan@deloitte.com
How frequent you interact with your reviewer	Bi-weekly
Previous Project	BALL CORPORATION
Snapshot reviewer email id (if more than one person, please provide all of their names):	subhan@deloitte.com
How frequent you interact with your reviewer	Bi-weekly
Last Promoted Date	Joined Deloitte on 27 th October 2020
Project Support	

Metrics:

CE - Not yet given
late time reports - 4
Resume Compliance - No
Staffit - 93%

Firm: N/A

Promotion:

Ajay is one of the strong technical resources in the S&P team. He is one of the go-to guys for any kind of critical, new implementations and creating sops. Ball Corp S&P client manager is the most tuff and strong technical manager, Ajay became his favorite person in no time and received much appreciation from him. The project Senior manager(Surya Gunupudi) and project manager(Sumit Bhan) are supporting his promotion this year and receive d an email confirmation for the same by Surya Gunupudi (Senior manager).

Due Diligence form End

#####RESULTS#####

Client Impact : Your client impact is EXCEPTIONAL, based on your work in this performance year including your performance scatterplot and due diligence feedback.
Metrics : Your metrics is evaluated as STRONG against your goal.

Vivek Kumar Singh

Monday, August 16, 2021 3:47 PM

VK

Vivek Kumar Singh
XIN-DC Consultant
CONSULTING

Office	Primary industry	Coach name	Target Promotion Year	Target Career Path
Hyderabad	Technology, Media & Telecom	Naga Panguluri	2022	
Talent Model	Years in Level ⓘ Traditional Model	Date Last Promoted 08/25/2019		

Performance Scatterplot

PMY22 Performance - Jan 2022 (2/7/21 - 1/8/22) ▾

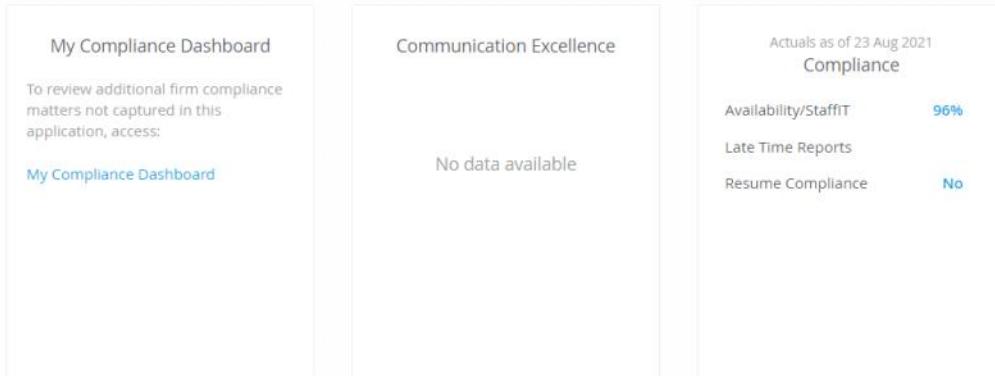


Performance Scatterplot | PMY22 Performance - Jan 2022 (2/7/21 - 1/8/22) X

Team Leader ⚠	Project ⚠	Type ⚠	Hours ⚠	Start Date ⚠	End Date ⚠
AD Anindyo Dutta XIN-DC Manager	Hux Legacy Operate TAL00148-YY-01-03-1000	Performance Snapshot	360	02/08/2021	04/09/2021
AD Anindyo Dutta XIN-DC Manager	Hux Legacy Operate TAL00148-YY-01-03-1000	Performance Snapshot	585	04/12/2021	07/09/2021
AD Anindyo Dutta XIN-DC Manager	Hux Legacy Operate TAL00148-YY-01-03-1000	Performance Snapshot	333	07/12/2021	09/10/2021
AD Anindyo Dutta XIN-DC Manager	Hux Legacy Operate TAL00148-YY-01-03-1000	Performance Snapshot	320	09/13/2021	11/05/2021
AD Anindyo Dutta XIN-DC Manager	Hux Legacy Operate TAL00148-YY-01-03-1000	Performance Snapshot	554	09/13/2021	12/23/2021

PY 22

My Metrics - Actuals



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My Metrics - Actuals



Note: Self-reported metric values (goal OR actual) are displayed on the associated graphs when available. When self-reported values are not available, the system-reported goal OR actual values are displayed.

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Kumar Singh, Vivek

Coachee name:
Kumar Singh, Vivek

Email:
VIKUMARSINGH@DELOITTE.COM

Job Level Desc:
XIN-STAFF/CONSULTANT

Talent model:
Traditional Model

00:07

Impact Indicators

Impact Indicators are brief statements that provide insight into your impact. The Coachee enters the "Made impact by" statements. The Coach enters the "Feedback on Coachee's Impact and How to Enhance Impact Next Year" statements. Impact indicators will be published to Coachees upon the green light.

Client: Made Client impact this year by (Coachee Entry):

Client impact refers to impact made either with external or internal clients. This can also refer to product impact if applicable. Maximum limit is 1,000 characters per text box and minimum is 100 characters.

- Modified many SQL Server stored procedures to enhance performance (as much as 50% increase).
- Handled archival of many huge tables effectively, with zero downtime to the client.
- Working on a GDPR compliance requirement by client which aims to process 10,000 records per day. Currently we are processing only 10 records per day, thus an increase of 1000% from current performance.
- Created internal auditing for our SQL Servers which allows capacity planning and space management well in advance.
- Converting current PowerShell scripts to Python, as it will be our go to scripting language, moving forward.
- Getting KT on LGE project which is on Google Cloud Platform. Provide DBA support for same.
- Work with INFRA team to move current on-premise servers to AWS, including data engine.
- Conducting internal USI status calls and provide timely update to leadership. Effectively taken up the tasks and daily activities, by a teammate (S.Con), who is currently on Maternity Leave.

Kumar Singh, Vivek

Coachee name:
Kumar Singh, Vivek

Email:
VIKUMARSINGH@DELOITTE.COM

Job Level Desc:
XIN-STAFF/CONSULTANT

Talent model:
Traditional Model

00:32

1200/1200

People/Firm: Made People/Firm impact this year by (Coachee Entry):

For practitioners who have firm contributions/ people impact details should focus on both firm and people impact aspects. For practitioners who do not have firm contributions expectations, People/Firm impact should focus on people impact only (ex: how practitioner collaborates, leads, helps, and develops our people). Maximum limit is 1,000 characters per text box and minimum is 100 characters.

- Conducted training for new hires in Hux, and familiarized them, with the project as well as SQL Server basics.
- Taken interviews for SQL Server R1, as part of IMS recruitment.
- Effectively assisted new hires on a smooth on-boarding to Deloitte, by acting as a BUDDY.

PROJECT:

Dutta, Anindyo adutta@deloitte.com; Hux Legacy Operate; Manager
Sadiqueen, Mohammad msadiqueen@deloitte.com; Hux Legacy Operate; Senior Consultant
Kumar, Sumanth Challapalli sumakumar@deloitte.com; Hux Legacy Operate; Manager
Kanupriya Chaturvedi; kachaturvedi@deloitte.com; IMS recruitment; Manager
Mukesh Patel;mukepatel ;IMS recruitment; Specialist Master

Anindyo:
Always says yes for any work
Only DBA with no back up
Committed
Dedicated
He is supporting multiple projects as part of DBA delivery pool with no issues
Technically strong
Matured
People can learn from him
He reaches out to the right people when needed as he knows all the delivery pool contacts
Whatever he mentioned is correct

Dev Need:

To build strong community for DBA team.

Sadiqueen

- What were the expectations from his role? How has he distinguished himself and/or examples of going above and beyond?

Expectations were to administer and manage all database servers across Hux Delivery Operate projects.

He has not only managed and administered database servers but also came up with automations and optimizations which were of next level.

How did he create an impact on your project?

He had created a huge impact across Hux Delivery operate projects with his DBA skills. He always comes up with suggestions and optimizations in order to improve the database and server performance which helped team to deliver all deliverables within SLA limits.

What is his strength/weakness especially on this project? Where do you see him playing to his strengths?

He has strong SQL, python and powershell scripting skills which helped him in showcasing his talent across the projects with the automations.

How would you rate his performance: Is he operating at the next level, exceeding expectations, meeting expectations or mixed performance?

Yes. He is operating at the next level.

Is he operating at the next level? (If yes any examples? if no any example?).

Yes. He is operating at the next level. He worked on many automations which helped team to complete the tasks faster.

For eg:

1. Vivek has worked on GDPR implementation and done performance tuning which has improved the overall GDPR process by 10 times faster and processed the records 1000 times than existing process which was appreciated by client as well.

2. He worked on archival automation using python script and archived the huge tables in very short duration which helped in speeding up the query performance and reclaimed overall disk space by 30%.

3. He worked on longer running queries and performed query optimizations by adding missing indexes and removing unused indexes on tables which improved query performance by 75%.

What do you think are his development needs and how can we help him?

He needs to focus on certifications and enhance his skills on cloud technologies.

Any other feedback you would like to provide about him?

Apart from client deliverables, He has also been involved in most of the PMO activities like hosting daily status calls, working on daily status reports and Updating smart pools.

Has he demonstrated willingness & ownership to deliver higher-level responsibilities (beyond current career level), any examples?

Yes. He has taken ownership and have always extended his bandwidth whenever there was need.

He also worked as a primary DBA independently in absence of US lead (Seth)

Further, He has vigilantly monitored the server and database performance post deployment and worked on all issues/incidents, troubleshooting, finding root cause and resolution.

Sumanth

FIRM:

Sumanth Kumar Challapalli (sumakumar@deloitte.com)

HUX training:

Kanupriya Chaturvedi (kachaturvedi@deloitte.com)

Client (Coach entry):

Kumar Singh Vivek is a strong Database Administrator. He worked on stored procedures and brought the run times from 3hrs to 1.5 hrs. This increased overall 50% of the performance. Not only does the performance increase, but it also reduces the AWS servers cost up to 15% per month. He also worked on a GDPR compliance requirement by the client to increase the performance of processing records. Currently is taking 3hrs to process 10 records. Vivek took this activity upon request and he analyzed the issue. After proper analysis, he changed the cursor codes, implemented a few SQL joins and did performance tuning by adding a few indexes to increase the performance. This has resulted from the Db processing 10000 thousand records per day which are a 1000% increase when compared to current performance.

Firm (Coach entry);

Hux Training:

He conducted Hux training for 50 + people across Deloitte. All the attendees gave good feedback. Data modelling is part of HUX training which is core to his practice.

IMS Recruitment:

Even though there is no compulsion for consultants he participated in recruitment drives and helped IMS to grow. He should ask his peers to help IMS capability in conducting more interviews which help IMS to grow as we are short of panel members.

Due diligence:

Dutta, Anindyo adutta@deloitte.com; Hux Legacy Operate; Manager

Sadiquddin, Mohammad msadiquddin@deloitte.com; Hux Legacy Operate; Senior Consultant

Kumar, Sumanth Challapalli sumakumar@deloitte.com; Hux Legacy Operate; Manager

Kanupriya Chaturvedi; kachaturvedi@deloitte.com; IMS recruitment; Manager

Mukesh Patel; mukepatel; IMS recruitment; Specialist Master

Client:

High complexity

Exceptional

Vivek Kumar is a very good technical resource he independently works on design-related activities. He is a core Database administrator. He always says yes to any work. He is the only DBA from USI and he has no backup for him. He is committed and dedicated. People can learn from him. He always contacts the

right person in the delivery pool when required and closes the task in time as knows everyone. Good networking skills. He proactively mentors the team and trains them. He should start building a strong community for DBAs.

Metrics: All good (Empty)

Firm: N/A

Promotion: Yes

Project is supporting his promotion this year due to his exceptional work towards his Technical and Architect/design level which he delivered in the Hux Legacy Operate project. He saved up to 15% of billing towards the Cloud ecosystem by reducing the run time of the system.

#####RESULTS#####

Client Impact : Your client impact is EXCEPTIONAL, based on your work in this performance year.

including your performance scatterplot and due diligence feedback.

Metrics : Your metrics is evaluated as STRONG against your goal.

Danapana Puja Reddy

Monday, August 16, 2021 3:45 PM

Abraham, Cinny ciabraham@deloitte.com (also coach of Soumya)

Mostly on patching both prod and non-prod

Good at all operational level activities

Completes all the tasks on time when assigned.

Dev need:

Need to proactively come up with some idea/automations to speed up the activities like DR Drill... etc

Ventrapati, Hemendra hventrapati@deloitte.com

Kottaru, Mahalakshmi mkottaru@deloitte.com

Puja worked with me for CMS SAP POD – NDCP & CBI client support operations projects.

However, please check the feedback in line below.

What were the expectations from his role? How has he distinguished himself and/or examples of going above and beyond?
Cloud Managed Services – Operations Engineer for NDCP & CBI clients on AWS cloud. There are multiple scenarios where Puja has scaled real quick and delivered good quality service on time.

How did he create an impact on your project?

Quick learner, ensured timely quality service and earned trust from the managers in SAP POD. She has learnt multiple technologies for daily operational activities on AWS infrastructure, Linux Administration, Commvault Backup in very less time.

What is his strength/weakness especially on this project? Where do you see him playing to his strengths?

Quick Learner and can utilize her skills aptly as per need.

How would you rate his performance: Is he operating at the next level, exceeding expectations, meeting expectations or mixed performance?
Exceeding expectations.

Is he operating at the next level? (If yes any examples? if no any example?).

No.

What do you think are his development needs and how can we help him?

Started in the team as pretty new to AWS, Linux. Can learn and get some AWS/Linux certifications will help her.

Any other feedback you would like to provide about him?

Can be more proactive in taking up the tasks.

Has she demonstrated willingness & ownership to deliver higher-level responsibilities (beyond current career level), any examples?

Yes, she has recently started with learning and dealing with Commvault Backup Solution operations for NDCP & CBI which is beyond her level.

Upadhyay, Supreet supupadhyay@deloitte.com

Puja has been supporting multiple operate projects and is able to delivery work with little to no supervision. She is also involved in multiple firm initiatives ,notably helping in developing multiple SNOW dashboards that have helped us optimize our operate processes. She has picked up AWS skills very well in the past 1 year and has been expanding to learn other cloud skills as well. Her performance has been very strong and she has been exceeding expectations. She has the capabilities of operating at the next level and the POD leadership will look at opportunities for her to get the exposure this year to operate at the next level. She has shown willingness to take additional responsibilities and will be given those this year.

pawkulkarni@deloitte.com

Sent email for feedback for above all

Impact indicator by coach:

Puja has been supporting multiple operate projects and is able to delivery work with little to no supervision. She has picked up AWS skills very well in the past 1 year and has been expanding to learn other cloud skills as well. Her performance has been very strong and she has been exceeding expectations. She has the capabilities of operating at the next level and the POD leadership will look at opportunities for her to get the exposure this year to operate at the next level. She has shown willingness to take additional responsibilities and will be given those this year. she has recently started with learning and dealing with Commvault Backup Solution operations for NDCP & CBI which is beyond her level.

Received 2 spot awards, 6 shout outs & appreciation mail from Amiya Nigam

Firm:

Reddy Puja haven't completed any People/Firm related activities. Hence there is no feedback on this regards. She unknowingly mentioned client

impact in the Firm as there is no enough space in the client impact text box.

Due diligence:

Abraham, Cinny; ciabraham@deloitte.com; Steri cycle; Senior Consultant
Ventrapati, Hemendra; hventrapati@deloitte.com; SAP POD; Ops Manager
Kottaru, Mahalakshmi; mkottaru@deloitte.com; CBI and NDCP; Senior Consultant
Upadhyay, Supreet; supupadhyay@deloitte.com; Sony; Manager

Client:

Highly complexity

Strong

Puja is always proactive and where ever she is placed, she worked really well. When given a new roles and she took them and delivered smoothly. She is good at all operational activities and completes all tasks in given time. She is a quick learner, ensured timely quality service and earned trust from the managers in SAP POD. She has learnt multiple technologies for daily operational activities on AWS infrastructure, Linux Administration, Commvault Backup in very less time. She has recently started with learning and dealing with Commvault Backup Solution operations for NDCP & CBI which is beyond her level. She also does patching for both Prod and Non Prod with no mistakes till date.

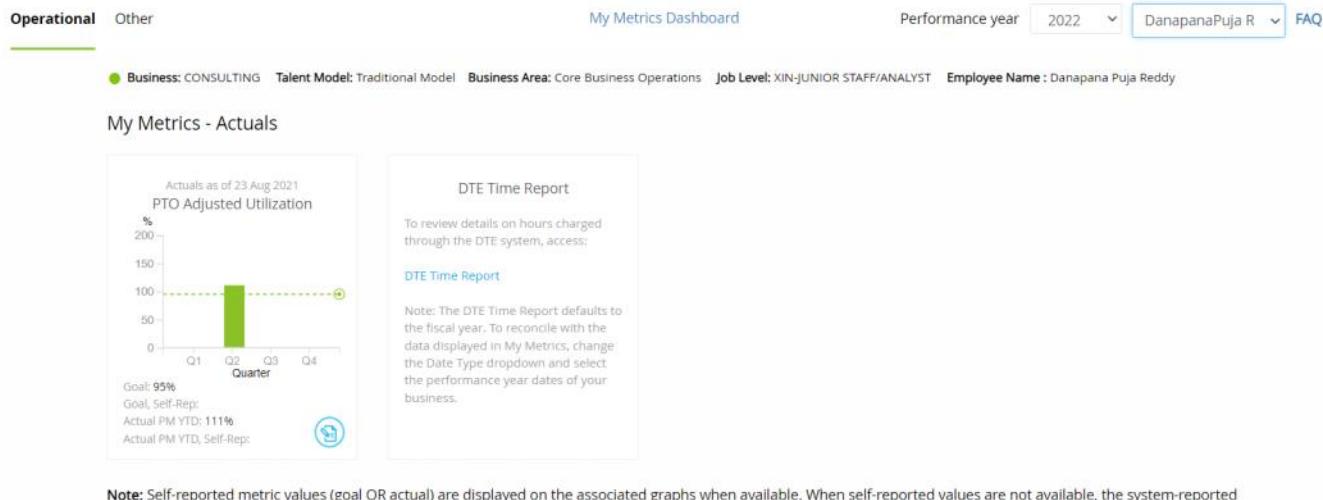
Firm - N/A

Metrics: empty(All good)

Promotion: No

She should speed up some of the activities by doing automations. Like DR drills.

Should get a good hold on CSP calculator which helps to give accurate pricing for new projects.(Only few in Deloitte have knowledge on it)



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Business: CONSULTING Talent Model: Traditional Model Business Area: Core Business Operations Job Level: XIN-JUNIOR STAFF/ANALYST Employee Name : Danapana Puja Reddy

My Metrics - Actuals


[Privacy Policy](#)

My Coachee's Dashboard

[Back to Coachee\(s\) list](#)

Reddy, Puja

Coachee name:
Reddy, Puja

Email:
DANREDDY@DELOITTE.COM

Job Level Desc:
XIN-JUNIOR
STAFF/ANALYST

Talent model:
Traditional Model

00:09

Impact Indicators

Impact Indicators are brief statements that provide insight into your impact. The Coachee enters the "Made impact by" statements. The Coach enters the "Feedback on Coachee's Impact and How to Enhance Impact Next Year" statements. Impact indicators will be published to Coachees upon the green light.

Client: Made Client impact this year by (Coachee Entry):

Client impact refers to impact made either with external or internal clients. This can also refer to product impact if applicable. Maximum limit is 1,000 characters per text box and minimum is 100 characters.

Within 2 months made myself business ready&took up technical,operational activities primarily on AWS,Commvault,Avantra supporting 6 clients
Handled over 40+ patching cycles,vulnerability analysis on weekends with 100% compliance
Configured Commvault(Cost effective backup tool) in all clients,performed Instance/DB Recovery &pro-actively resolved backup failure alerts
Successfully deployed&upgraded Servers across OS(rhel,suse,windows)including hardening.Undertook adhoc tasks like agent Installations,Log4j upgrades,IAM key rotations,Monthly reports,UAR,file transfers etc
Created cost analysis reports to identify cost incurred, thereby cleaned stagnant Snapshots, performed EBS reductions&conversion which reduced the monthly bills significantly
Been part of business critical tasks such as DR Drill,Account Decommission,Server Restores.Created client specific documentations such as DR Strategy,IaaS Architectures
Executed Awantra Agent Install/Config/Upgrade across Pod ensuring 24*7 monitoring

People/Firm: Made People/Firm impact this year by (Coachee Entry):

For practitioners who have firm contributions/ people impact details should focus on both firm and people impact aspects. For practitioners who do not have firm contributions expectations, People/Firm impact should focus on people impact only (ex: how practitioner collaborates, leads, helps, and develops our people). Maximum limit is 1,000 characters per text box and minimum is 100 characters.

Prepared &presented QBR for SAP Pod to CMS leadership. Worked on 450+ incidents & 80+ CR's with 0% violations.
Trained Newly Joined non-technical Teammates in Linux,AWS&helped them pick up things quickly. Also performing On-off Boarding for SAP till date.
Contributed my time in Creating Patching, Awantra Agent Upgrade, Commvault Build/Config, Backup recovery Guides for reference
Created ServiceNow Dashboards having centralized view of Incidents&CRs across all projects which helped the leadership in regulating SLA Violations
Collected Artifacts& prepared weekly leadership presentations, Performed UAT for client facing portal
Managed SAP Allowance Roster by aggregating & processing the Allowance data
Enlisted under buddy program& mentored 2 new hires with all the procedures of the firm&helped resolve their queries.
Hosted Wellbeing events by collaborating with other pods to revitalize the work atmosphere for entire CMS
Received 2 awards,6 shoutouts& appreciation mail from Amiya Nigam

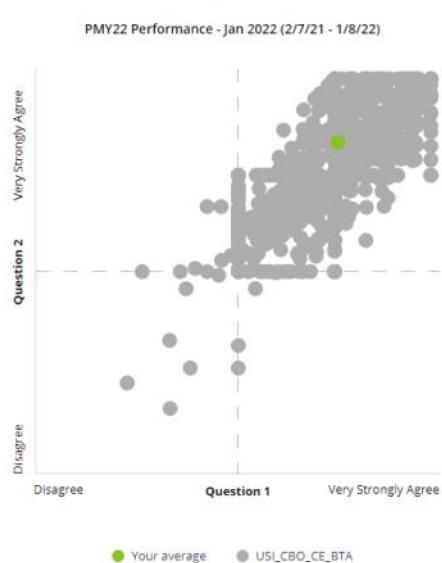
PR

Puja Reddy
XIN-DC Analyst
CONSULTING

Office Hyderabad	Primary industry NT - Not Designated	Coach name Naga Panguluri	Target Promotion Year 2024	Target Career Path
Talent Model Traditional Model	Years in Level ⓘ 0.739	Date Last Promoted 05/30/2021		

Performance Scatterplot

PMY22 Performance - Jan 2022 (2/7/21 - 1/8/22) ▾



General

19 Snapshots in total[View all](#)**1681** Hours**4** Unique Team Leaders**3** Operating at Next Level ⓘ

Visible to Coaches only

Question 1:

Based on what I know of this person's performance and if it were my money, I would award this person the highest possible compensation increase and bonus;

Question 2:

Based on what I know of this person's performance, I would always want this person on my team.

PY 22

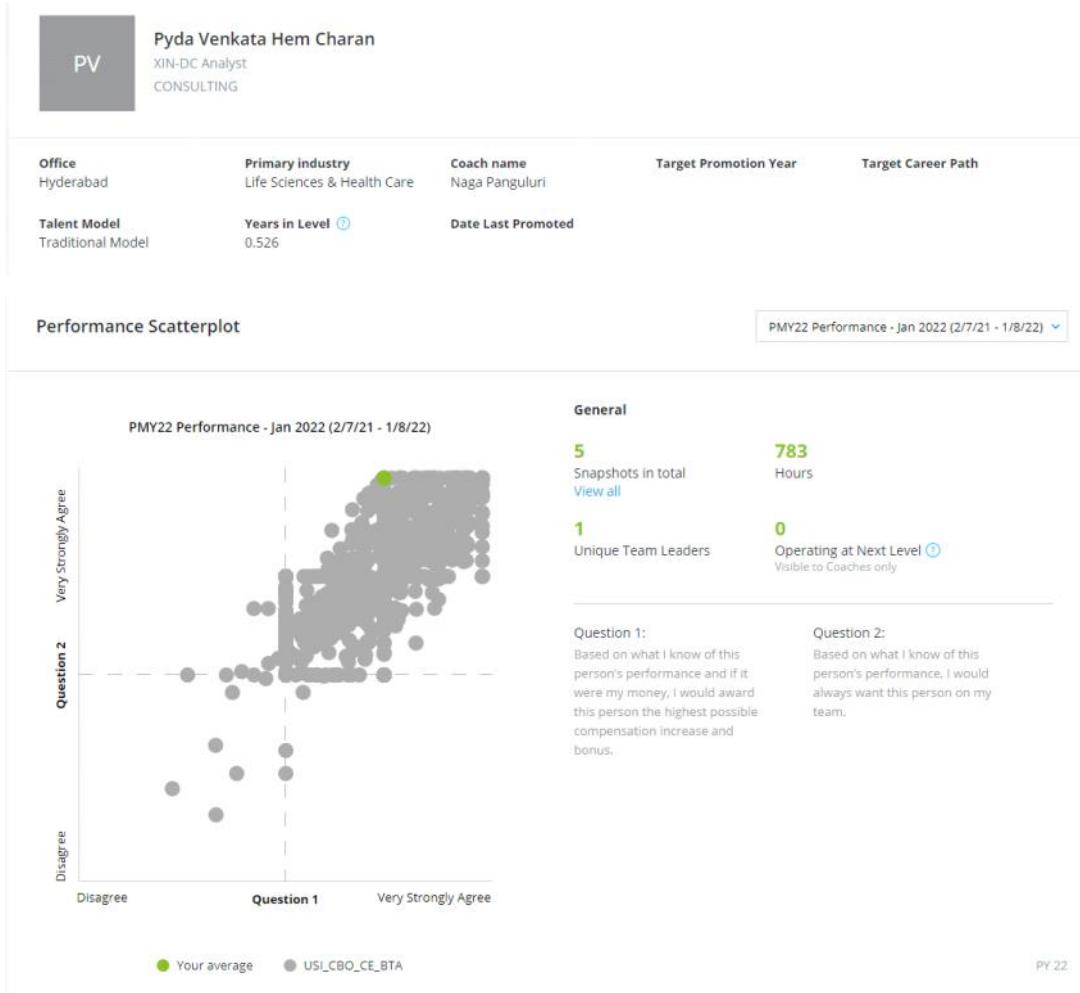
#RESULTS#####

Client Impact : Your client impact is **STRONG**, based on your work in this performance year including your performance scatterplot and due diligence feedback.

Metrics : Your metrics is evaluated as **STRONG** against your goal!

Pyda Venkata Hem Charan

Monday, August 16, 2021 3:47 PM



Performance Scatterplot | PMY22 Performance - Jan 2022 (2/7/21 - 1/8/22) X

PY 22

Team Leader ▲	Project ▲	Type ▲	Hours ▲	Start Date ▲	End Date ▲
SD Saravanan Dhayalarajan XIN-DC Manager	SunPharma DEL02057-01-01-01-1000	Performance Snapshot	48	10/11/2021	10/31/2021
SD Saravanan Dhayalarajan XIN-DC Manager	SunPharma DEL02057-01-01-01-1002	Performance Snapshot	501	08/02/2021	10/31/2021
SD Saravanan Dhayalarajan XIN-DC Manager	SunPharma DEL13433-01-01-01-3000	Performance Snapshot	104	11/15/2021	12/10/2021
SD Saravanan Dhayalarajan XIN-DC Manager	SunPharma DEL02054-01-01-01-NB13	Performance Snapshot	67	11/01/2021	12/10/2021
SD Saravanan Dhayalarajan XIN-DC Manager	SunPharma Project code unavailable	Performance Snapshot	63	11/01/2021	11/13/2021

My Metrics - Actuals

Actuals as of 23 Aug 2021
PTO Adjusted Utilization

Quarter	Actual (%)
Q1	75%
Q2	68%
Q3	68%
Q4	80%

Goal: 75%
Goal, Self-Rep:
Actual PM YTD: 68%
Actual PM YTD, Self-Rep:

DTE Time Report

To review details on hours charged through the DTE system, access:

[DTE Time Report](#)

Note: The DTE Time Report defaults to the fiscal year. To reconcile with the data displayed in My Metrics, change the Date Type dropdown and select the performance year dates of your business.

Note: Self-reported metric values (goal OR actual) are displayed on the associated graphs when available. When self-reported values are not available, the system-reported goal OR actual values are displayed.

[Privacy Policy](#)

My Metrics - Actuals

My Compliance Dashboard

To review additional firm compliance matters not captured in this application, access:

[My Compliance Dashboard](#)

Actuals as of 08 Jan 2022
Communication Excellence

CE Level	Goal	Actual	Advanced
CE Score	Goal	Actual	61
CE Training Hours	Goal	Actual PM YTD	

Actuals as of 08 Jan 2022
Compliance

Late Time Reports	Resume Compliance	Yes

My Metrics - Actuals

Actuals as of 08 Jan 2022
PTO Adjusted Utilization

Quarter	Actual (%)
Q1	75%
Q2	68%
Q3	92%
Q4	80%

Goal: 75%
Goal, Self-Rep:
Actual PM YTD: 92%
Actual PM YTD, Self-Rep:

DTE Time Report

To review details on hours charged through the DTE system, access:

[DTE Time Report](#)

Note: The DTE Time Report defaults to the fiscal year. To reconcile with the data displayed in My Metrics, change the Date Type dropdown and select the performance year dates of your business.

My Metrics - Actuals

My Compliance Dashboard	Communication Excellence	Actuals as of 23 Aug 2021 Compliance
To review additional firm compliance matters not captured in this application, access: My Compliance Dashboard	No data available	Late Time Reports Resume Compliance Yes

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Venkata Hem Charan, Pyda

Coachee name: Venkata Hem Charan, Pyda Email: PVENKATAHEMCHARAN@DELOITTE.COM Job Level Desc: XIN-JUNIOR STAFF/ANALYST Talent model: Traditional Model 00:39

Impact Indicators

Impact Indicators are brief statements that provide insight into your impact. The Coachee enters the "Made impact by" statements. The Coach enters the "Feedback on Coachee's Impact and How to Enhance Impact Next Year" statements. Impact indicators will be published to Coachees upon the green light.

Client: Made Client impact this year by (Coachee Entry):

Client impact refers to impact made either with external or internal clients. This can also refer to product impact if applicable. Maximum limit is 1,000 characters per text box and minimum is 100 characters.

Hem Charan started his journey as an analyst with CMS Life Science Pod where he provided AWS cloud infrastructure and DevOps support to clients. He also involved himself in project specifics like "Patching Automation" and troubleshoot the errors while running the automation. Also, created a complete patching automation schedule for the year 2022. In a duration of 3 months, he resolved 30+ tickets which include high priority incidents and architectural changes. He performed an architectural change request that involved integrating 3 services in AWS for which Hem Charan received a verbal appreciation from his Lead.

Venkata Hem Charan, Pyda

Coachee name: Venkata Hem Charan, Pyda Email: PVENKATAHEMCHARAN@DELOITTE.COM Job Level Desc: XIN-JUNIOR STAFF/ANALYST Talent model: Traditional Model 01:13

People/Firm: Made People/Firm impact this year by (Coachee Entry):

For practitioners who have firm contributions/ people impact details should focus on both firm and people impact aspects. For practitioners who do not have firm contributions expectations, People/Firm impact should focus on people impact only (ex: how practitioner collaborates, leads, helps, and develops our people). Maximum limit is 1,000 characters per text box and minimum is 100 characters.

The Firm/People is not applicable given the Talent Model expectation (not applicable for Enabling and Product talent models) and level expectation (not applicable for Associate Analyst/Analyst/Consultant/Non Milestone Senior Consultant), hence leaving it blank

Saravarani Manager

Performing at current level
Started to own things
He owns patching automation part for almost 40+ projects

Impact indicators filled by Coach:

CLIENT:

Hem Charan is part of CMS Pod and he mainly owns the patching automations. He is currently supporting 40+ projects related to Patching automations and other patching related activities. Though he is new to the project, he picked up well and started to own things and make sure it is closed/fixed in time. As of now he is currently performing at his current level.

74 AWS accounts

SunPharma 1 account for DEV, one for PROD, One for Stub(Shared services between client and Deloitte), one for POC's, one for shared ... etc

~30 projects

Firm:

Venkata Hem Charan Pyda haven't completed any People/Firm related activities. Hence there is no feedback on this regards

Coach due diligence:

Due diligence - Dhayalarajan, Saravanan; sdhayalarajan@deloitte.com; CMS Life Sciences Pod; Manager
Medium complexity

Strong

Client - Hem Charan overall experience is 6 months and in these six months, he learned the required skills related to AWS and DevOps. Within a month time after joining the CMS Life science Pod project, he learnt the process and required technical skills quickly to replace the existing resource. He was also involved in Team Specifics like Patching Automation and created a complete schedule/planning for FY 2022. Automation involves picking up all the servers in every AWS Account and running the security patches automatically. This follows a schedule that is now created by him and approved. It also involves good communication with all the members of the team.

FI - N/A

Metrics - All good

Promotion -

He should start gaining more knowledge towards cloud engineering side and continue the same what he is doing now.

#####RESULTS#####

#####Client Impact : Your client impact is STRONG, based on your work in this performance year including your performance scatterplot and due diligence feedback.#####

#####Metrics : Your metrics is evaluated as STRONG against your goal.#####

Battala Divya Madhuri

Monday, August 16, 2021 3:47 PM



Battala Divya Madhuri

XIN-FTH-Process Senior Analyst
CONSULTING

Office	Primary industry	Coach name	Target Promotion Year	Target Career Path
Hyderabad	NT - Not Designated	Naga Panguluri		
Talent Model	Years in Level <small>?</small>	Date Last Promoted		
Traditional Model	0.736			

Snapshot statistics

1 Snapshots in total

1 Unique Team Leaders

495 Hours covered

PY 22

No need of due diligence as she is FTH resource.

Sai Kumar Gajji

Monday, August 16, 2021 3:47 PM

Mid-year survey start

Lead Name - sujit Jha

Email ID - sujjha@deloitte.com

#

Mid-Year Due Diligence:

Who did you speak with as you conducted your coachee due diligence?

Note: Please include TL name, TL email address for each project, project name and Practitioner's role in project.

Format Eg: (TL Name); (TL Email Id); (Project Name); (Role of practitioner in project) Who did you speak with as you conducted your coachee due diligence?

====>

Sujit Jha; sujjha@deloitte.com; Kroger Harvester Project; Team Lead

Promotion Readiness

Based on your due diligence and feedback gathered, are you (as a coach) supportive of promotion in current performance year (PMY22)?

====>

No

Additional Information

Is there any new information that is not captured in the questions above that the panel should know?

Note: Only provide information if it differs from the information already provided above/ or in Impact Statements.

Please do not include coachee personal or health information as part of your response.

====> The tickets volume he mentioned in the Impact statement is of a Teams work in which he contributed his share in completing them.

In your view, is your coachee working in a critical business area across domain, industry, technology, or processes.

If yes, do mention the business area and contributions made by your coachee.

====> No

Describe instances where your coachee has played diverse roles & has scaled up quickly to deliver with quality in the new role/s.

====> None

Explain instances where your coachee has demonstrated willingness & ownership to deliver higher level responsibilities (beyond current career level).

====> None

Mid-year survey End

Year End survey Due diligence Start

FEEDBACK:

Kalyan Pedpalliwar(SC)

Primarily involved in Prod triaging

He will contact customers and fix the issues

He supports the lead who drive the client call in providing the necessary information.

Played a major role in providing KT's for new hires and make sure they are on par

He is the primary spoc when comes to any WAR room setups

He helps developers in triaging the issue

He is involved in client calls

Part of analysis team

He performs RCA to analyze the issue and route it to right teams for fixing the issue

2023 promotion is good

Strengths:

He improved a lot

Communication is good

He is taking ownership without being assigned by the lead and he also make sure to involve right team to bring to closure.

He is also guiding the other team members if they stuck in.

Dev Needs:

He should upskill his knowledge on React Plus.

He should start automating more activities to reduce man power

He should start talking to client on Client calls

Critical Project - As 50-60% ticket they receive will be P2's. It's a ecommerce site and they will lose money if the issue is not fixed in time .

Also they will lose the customer if there are any small delays.

All the tickets must be close within the SLA's.

Sujit Jha(SC):

Client: Feedback on Coachee's Client Impact and How to Enhance Impact (Coach Entry):

Sai Kumar is joined Deloitte 8 months back and being a Java developer, he successfully delivered 200+ tickets. Though he is new he quickly scaled up and started guiding other team members when needed. He is playing a key role at the time of critical issue in setting up the war rooms and coordinating with the other teams to bring them to closure. He also attends the client calls and provides necessary information to his leads who drives the call.

People/Firm: Feedback on Coachee's People/Firm Impact and How to Enhance Impact (Coach Entry):

Sai Kumar Gajji haven't completed any People/Firm related activities. Hence there is no feedback on this regards

Due diligence:

Kalyan Pedpalliwar; kpedpalliwar@deloitte.com; Kroger(ModFs - Harvester); Senior consultant;

Sujit jha; sujjha@deloitte.com; Kroger(ModFs - Harvester); Senior consultant;

Client:

High complex

Commensurate (Based upon the dot)

Sai Kumar is joined Deloitte 8 months back and being a Java developer, he successfully delivered 200+ tickets. Though he is new he quickly scaled up and started guiding other team members when needed. He is playing a key role at the time of critical issues in setting up the war rooms and coordinating with the other teams to bring them to closure. He also attends the client calls and provides the necessary information to his leads who drives the call. He played a major role in providing the KT's to the new members and helping them in gaining the necessary knowledge. As part of the Analysis team, he quickly jumps on to the new ticket to categorize the incident into the right bucket and fix them if it is within his reach. He also proactively owns up a task and completes them before it was assigned to him by his lead.

He received 2 SPOT Awards for the below work.

Message 1: Thank you very much Sai for ensuring that the daily incidents are resolved and ensuring that the backlog is current! Keep up the good work!

Message 2: Thank you Sai for closing 99 incidents in Nov 2021. You are the topmost productive team member in the ModFs Support team from USI. Keep rocking and keep contributing

Metrics -

He missed 12 DTE time reports. Reason Mentioned by him - "Being as new to Deloitte, he doesn't know the process of filling timesheets"

Resume Compliance - No

He missed giving his CE exam. After my discussion, he gave the exam immediately on 25/Jan/22 and scored 55.

Promotion - No

He should upskill his skills on React plus.

He should concentrate more on automating more activities to reduce manpower.

He should start talking on client calls.

- Involved in incident triaging and solving the issues with in the dead lines
- Guiding the new team members
- Involved in client calls
- Knowledge transfer regarding the project for new hires
- Proactively working on the emails and coordination with counter parts (Shift handover)
- Attentive to fulfilling the requirements (eg : war room pings) and quickly providing solutions.
- Being in role of Support Analyst for Kroger helped in designing, reporting of Defects and documenting them.
- Had knowledge on 6 different application under Kroger account, enabling me to train new team members and provide quick RCA.

Gained good knowledge on Java, Jira, postman, Github, PowerBI tool and Dynatrace tool etc.

#####
Year End survey Due diligence End#####

● Business: CONSULTING Talent Model: Traditional Model Business Area: Core Business Operations Job Level: XIN-JUNIOR STAFF/ANALYST Employee Name: Gajji Sai Kumar

My Metrics - Actuals



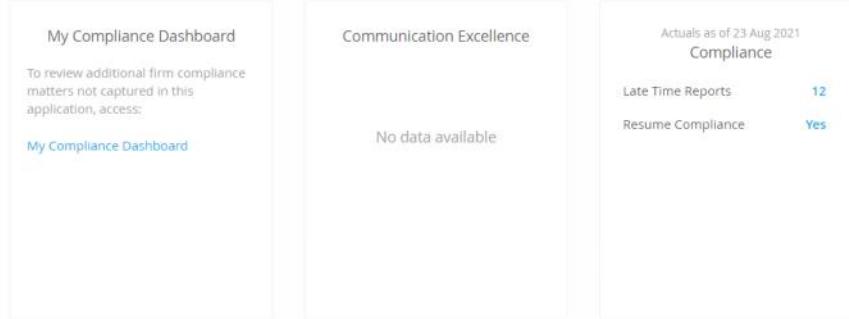
● Business: CONSULTING Talent Model: Traditional Model Business Area: Core Business Operations Job Level: XIN-JUNIOR STAFF/ANALYST Employee Name: Gajji Sai Kumar

My Metrics - Actuals



Business: CONSULTING Talent Model: Traditional Model Business Area: Core Business Operations Job Level: XIN-JUNIOR STAFF/ANALYST Employee Name: Gajji Sai Kumar

My Metrics - Actuals



[Privacy Policy](#)

Business: CONSULTING Talent Model: Traditional Model Business Area: Core Business Operations Job Level: XIN-JUNIOR STAFF/ANALYST Employee Name: Gajji Sai Kumar

My Metrics - Actuals



Note: Self-reported metric values (goal OR actual) are displayed on the associated graphs when available. When self-reported values are not available, the system-reported goal OR actual values are displayed.

[Privacy Policy](#)

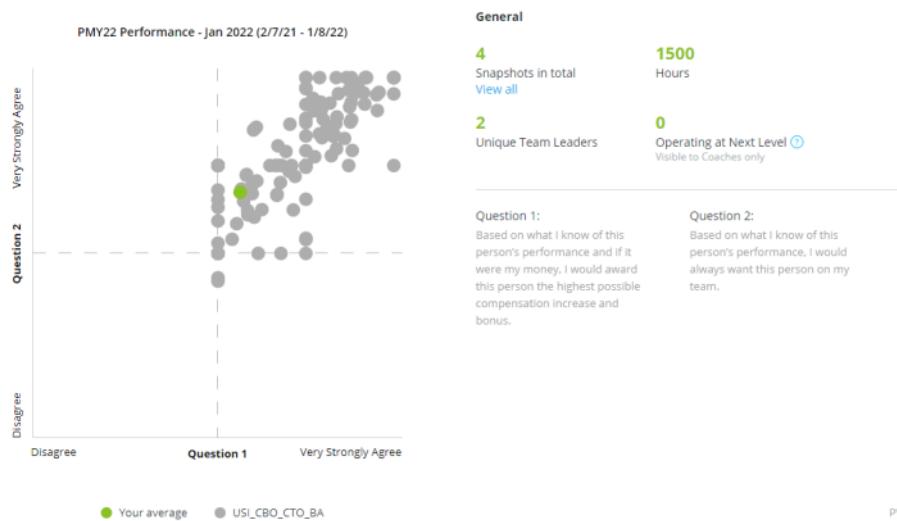


Gajji Sai Kumar
XIN-DC Analyst
CONSULTING

Office Hyderabad	Primary industry NT - Not Designated	Coach name Naga Panguluri	Target Promotion Year 2023	Target Career Path
Talent Model Traditional Model	Years in Level ⓘ 0.832	Date Last Promoted		

Performance Scatterplot

PMY22 Performance - Jan 2022 (2/7/21 - 1/8/22) ▾



NO FI

Sai Kumar, Gajji

Coachee name:
Sai Kumar, Gajji

Email:
GASAIKUMAR@DELOITTE.COM

Job Level Desc:
XIN-JUNIOR
STAFF/ANALYST

Talent model:
Traditional Model

00:22

Impact Indicators

Impact Indicators are brief statements that provide insight into your impact. The Coachee enters the "Made impact by" statements. The Coach enters the "Feedback on Coachee's Impact and How to Enhance Impact Next Year" statements. Impact indicators will be published to Coachees upon the green light.

Client: Made Client impact this year by (Coachee Entry):

Client impact refers to impact made either with external or internal clients. This can also refer to product impact if applicable. Maximum limit is 1,000 characters per text box and minimum is 100 characters.

Kroger: While working as Support Analyst worked on 200 + tickets which were reported by the store and resolved the issues with proper solution and delivered with Utmost Quality.

Helped the team in triaging the reported issues in production environment and resolved the reported issues.

Takes care of production issues and communicates with users to provide solution.

Being in role of Support Analyst for Kroger helped in designing, reporting of Defects and documenting them.

Had knowledge on 6 different application under Kroger account, enabling me to train new team members and provide quick RCA.

Gained good knowledge on Java, Jira, postman, GitHub, Power BI tool and Dynatrace tool etc.

People/Firm: Made People/Firm impact this year by (Coachee Entry):

For practitioners who have firm contributions/ people impact details should focus on both firm and people impact aspects. For practitioners who do not have firm contributions expectations, People/Firm impact should focus on people impact only (ex: how practitioner collaborates, leads, helps, and develops our people). Maximum limit is 1,000 characters per text box and minimum is 100 characters.

The Firm/People is not applicable given the Talent Model expectation (not applicable for Enabling and Product talent models) and level expectation (not applicable for Associate Analyst/Analyst/Consultant/Non Milestone Senior Consultant), hence leaving it blank.

Team Leader	Project	Type	Hours	Start Date	End Date
KP Kalyan Pedpalliwar XIN-DC Senior Consultant	Kroger KRO00148-01-01-01-1000	Performance Snapshot	333	07/17/2021	09/10/2021
KP Kalyan Pedpalliwar XIN-DC Senior Consultant	Kroger KRO00148-01-01-01-1000	Performance Snapshot	333	09/11/2021	11/05/2021
KP Kalyan Pedpalliwar XIN-DC Senior Consultant	Kroger KRO00148-01-01-01-1000	Performance Snapshot	378	11/05/2021	01/07/2022
SJ Sujit Jha XIN-DC Specialist Senior	Kroger KRO00148-01-01-01-1000	Performance Snapshot	456	04/07/2021	07/16/2021

PY 22

#RESULTS#####

Client Impact : Your client impact is COMMENSURATE, based on your work in this performance year including your performance scatterplot and due diligence feedback.

Metrics : Your metrics is evaluated as STRONG against your goal.

Sql connector

Tuesday, August 14, 2018 11:45 AM

```
#  
SELECT * FROM Customers;  
  
SELECT * FROM Customers WHERE Address IS "Obere Str. 57";  
  
INSERT INTO Customers (CustomerID, CustomerName, ContactName, Address, City, PostalCode, Country) VALUES ('92', 'Naga', '007', 'Manikonda', 'HYD', '500089', "IN");  
  
SELECT * FROM Customers WHERE CustomerName IS "Naga";  
  
UPDATE Customers SET CustomerName = 'Naga P' WHERE CustomerName = 'Naga';  
  
SELECT * FROM Customers WHERE CustomerID IS '92';  
  
#  
CREATE TABLE NAGA ( CustomerID VARCHAR2(30), CustomerName STRING, Country STRING, Registered_Time DATETIME(30));  
  
INSERT INTO NAGA(CustomerID, CustomerName, Country, Registered_Time) VALUES ('02', 'Naga', 'INDIA', systimestamp);  
  
UPDATE NAGA SET Registered_Time=SYSDATE WHERE CustomerName='Naga'  
  
#  
CREATE TABLE NAGA1(  
EMPNO NUMBER(4) NOT NULL,  
ENAME VARCHAR2(10),  
JOB VARCHAR2(9),  
);
```

DB

Tuesday, September 27, 2016 1:22 PM

PILOT 3: Date change to 08-oct-2016

1, TRUNCATE TABLE IE_APP_MRS_OWNER.FW_PARAMETERS;

2, INSERT INTO IE_APP_MRS_OWNER.FW_PARAMETERS (PARM_ID,
 PARM_NAME,
 PARM_VALUE,
 CREATE_USER_ID,
 UPDATE_USER_ID,
 CREATE_DT,
 UPDATE_DT,
 UNIQUE_TRANS_ID,
 ARCHIVE_DT)
VALUES (51,
 'APPLICATION_DATE',
 '08-OCT-2016',
 'DB_PROC',
 'USER01',
 TO_DATE ('10-JAN-12', 'DD-MON-RR'),
 TO_DATE ('01-JAN-12', 'DD-MON-RR'),
 1,
 TO_DATE ('31-DEC-2999', 'DD-MON-RRRR'));

3, commit;

4, ALTER SYSTEM SET FIXED_DATE='08-OCT-2016';

Toad

Tuesday, August 14, 2018 11:46 AM

To create a table HSRIDBA.CAPTURE_DATE

```
CREATE TABLE HSRIDBA.CAPTURE_DATE
(
    ENV      VARCHAR2(30 BYTE),
    SYSDATE_TT   DATE,
    FWPARAMETERS_TT VARCHAR2(30 BYTE),
    RECORD_TS    TIMESTAMP(6)        DEFAULT systimestamp
)
```

Info

Thursday, August 16, 2018 1:19 PM

In TOAD

F4 - Describes the object

F5 - Execution(Won't commit the changes)

Definitions:

DEFINITIONS

Thursday, August 16, 2018 1:22 PM

⇒ **SYNONYM:**

A synonym is an alias or alternate name for a [table](#), [view](#), [sequence](#), or other [schema](#) object. They are used mainly to make it easy for users to access database objects owned by other users. They hide the underlying object's identity and make it harder for a malicious program or user to target the underlying object.

⇒ **TRIGGERS:**

In a DBMS, a trigger is a [SQL procedure](#) that initiates an action (i.e., fires an action) when an [event](#) (INSERT, DELETE or UPDATE) occurs. Since triggers are event-driven specialized procedures, they are stored in and managed by the DBMS. A trigger cannot be [called](#) or [executed](#); the DBMS automatically fires the trigger as a result of a data modification to the associated table. Triggers are used to maintain the referential integrity of data by changing the data in a systematic fashion. Each trigger is attached to a single, specified [table](#) in the database.

⇒ **VIEW:**

A **database view** is a searchable object in a **database** that is defined by a query. Though a **view** doesn't store data, some refer to views as "virtual tables," you can query a **view** like you can a table. A **view** can combine data from two or more table, using joins, and also just contain a subset of information.

ACID - The acronym standing for the properties maintained by standard database management systems, standing for Atomicity, Consistency, Isolation, and Durability.

Application Server - A server that processes application-specific database operations made from application client programs. The DBMS is in-process with the application code for very fast internal access.

Atomicity - The property of a transaction that guarantees that either all or none of the changes made by the transaction are written to the database.

BLOB - An abbreviation for Binary Large OBject. In SQL, BLOB can be a general term for any data of type long varbinary, long varchar, or long wvarchar. It is also a specific term (and synonym) for data of type long varbinary.

B-tree - An indexing method in which the values of the columns used in the index are efficiently maintained in sorted order that also provides fast access (three or four additional disk accesses) to an individual index entry. See Wikipedia

Cache - The computer memory that is set aside to contain a portion of the database data that has most recently been accessed by the database application program. A cache is used to minimize the amount of physical disk I/O performed by the DBMS.

Cascade - A foreign key attribute that automatically migrates the changes made to a referenced (i.e., primary key) table to all of the referencing (foreign key) table rows.

Catalog - A repository for the computer-readable form of a database's data definition meta-data. Sometimes called the system catalog or just syscat.

Client - A client-side process, containing proxy functions, connecting to a server process that contains the actual database functions.

Client/Server - A server is a program that runs on a computer that directly manages the database. A client is a separate program (or process) that communicates with the database server through some kind of Remote Procedure Call (RPC) in order to perform application-specific database operations.

Cloud - Cloud is a recently coined term used to describe an execution model for computing systems where functions and data are invoked by a name that refers to a remote system whose location is irrelevant (hence the concept of it being "out there somewhere." like a cloud). Cloud-based systems allow thin-client interfaces to access this functionality through the internet, and frequently with wi-fi, reducing the power requirements of the client computers.

Column - A single unit of named data that has a particular data type (e.g., number, text, or date). Columns only exist in tables.

Commit - The action that causes the all of the changes made by a particular transaction to be reliably written to the database files and made visible to other users.

Concurrency - The property in which two or more computing processes are executing at the same time.

Connection - The means of communication between a client and a server. A process may have multiple connections opened, each in its own thread, to one or more databases at a time.

Consistency - The property of a transaction that guarantees that the state of the database both before and after execution of the transaction remains consistent (i.e., free of any data integrity errors) whether or not the transaction commits or is rolled back.

Core/Core-level - A lower-level set of database primitives in the form of a complete API, used by database processors such as SQL or Cursors.

Cost-based Optimization - The process where data distribution statistics (e.g., the number of rows in a table) are used to guide the SQL query optimizer's choice of the best way to retrieve the needed data from the database.

Cursor - A collection of rows grouped by common criteria (key sequence, set membership, SELECT result set) that can be navigated and updated.

Data Type - The basic kind of data that can be stored in a column. The data types that are available in RDM SQL are: char, wchar, varchar, wvarchar, binary, varbinary, boolean, tinyint, smallint, integer, bigint, real, float, double, date, time, timestamp, long varbinary, long varchar, and long wvarchar.

Database Instance - An independent database that shares the same schema as another database. Used only in RDM.

db_VISTA - Original name from 1984 for the Raima DBMS product now called RDM.

DBMS - An acronym for Database Management System.

DDL - Database Definition Language.

Deadlock - A situation in which resources (i.e. locks) are held by two or more connections that are each needed by the other connections so that they are stuck in an infinite wait loop. For example, connection 1 has a lock on table1 and is requesting a lock on table2 that is currently held by connection 2, which is also requesting a lock on table1. Programming practices can be used to prevent deadlocks from occurring.

Deterministic - An attribute of a section of code whereby the limit on the time required to execute the code is known, or determined, ahead of time. This is commonly associated with real-time software.

Distributed Database - A database in which data is distributed among multiple computers or devices (nodes), allowing multiple computers to simultaneously access data residing on separate nodes. The Internet of Things (IoT) is frequently considered a vast grid of data collection devices, requiring distributed database functionality to manage.

DLL - Dynamic Link Library. A library of related functions that are not loaded into memory until they are called by the application program. All RDM APIs are contained in DLLs on those operating systems that support them (e.g., MS-Windows). These are sometimes called shared libraries on some systems.

DML - Database Manipulation Language. In SQL, such statements as UPDATE, INSERT and DELETE are considered DML.

Documentation - All product-related materials, specifications, technical manuals, user manuals, flow diagrams, file descriptions, or other written information either included with products or otherwise. Raima's documentation is online.

Domain - An alternate name for a base data type that is defined using the RDM SQL create domain statement.

Durability - The property of a transaction in which the DBMS guarantees that all committed transactions will survive any kind of system failure.

Dynamic DDL - The ability to change the definition of a database (its schema) after data has been stored in the database without having to take the database off-line or restructure its files.

Edge Computing - Edge computing refers to the computing infrastructure at the edge of the network, close to the sources of data. Edge computing reduces the communications bandwidth needed between sensors and the datacenter. Databases with tiny footprints e.g RDM are optimized for edge computing.

Embedded Database - An embedded database is the combination of a database and the database software which typically resides within an application. The database holds information and the software control the database to access or store information. The application software, or the user-interface, then accesses the database and presents that information in a way which is easy for the user to interpret and understand.

Encryption - The encoding of data so that it cannot be understood by a human reader. This usually requires the use of an encryption key. A common encryption algorithm is called AES, which uses encryption keys of 128, 192 or 256 bits. See Wikipedia

End-User - An entity that licenses an Application for its own use from Licensee or its Additional Reseller.

Fog Computing - An architecture that distributes computing, storage, and networking closer to users, and anywhere along the Cloud-to-Thing continuum. Fog computing is necessary to run IoT, IIoT, 5G and AI applications.

Foreign Key - One or more columns in a table intended to contain only values that match the related primary/unique key column(s) in the referenced table. Foreign and primary keys explicitly define the direct relationships between tables. Referential Integrity is maintained when every foreign key refers to one and only one existing primary key.

Geospatial datatypes - Data types which are specifically optimized for storage of geographic coordinate based data.

Grouped Lock Request - A single operation that requests locks on more than one table or rows at a time. Either all or none of the requested locks will be granted. Issuing a grouped lock request at the beginning of a transaction that includes all of the tables/rows that can potentially be accessed by the transaction guarantees that a deadlock will not occur.

GUI - Graphical User Interface.

Handle - A software identification variable that is used to identify and manage the context associated with a particular computing process or thread. For example, SQL uses handles for each user connection (connection handle) and SQL statement (statement handle) among other things.

Hash - An indexing method that provides for a fast retrieval (usually in only one additional disk access) of the row that has a matching column value. See Wikipedia

Hierarchical Model - A special case of a network model database in which each record type can participate only as the member of one set.

Hot Spot - In a database, a hot spot is a single shared row of a table that is used and updated so often that it creates a performance bottleneck on the system.

I/O - Input/output. For a DBMS, this is normally a disk drive, used to create database durability.

IEC - International Electrotechnical Commission. Along with the ISO, the IEC controls the SQL standard (ISO/IEC 9075) and many others as well.

IIOT - Abbreviation of Industrial Internet of Things.

Implicit Locking - Done by SQL to automatically apply the locks needed to safely execute an SQL statement in a multiuser (i.e., shared database) operational environment.

Index - A separate structure that allows fast access to a table's rows based on the data values of the columns used in the index. RDM supports two indexing types: hash and b-tree. A SQL key (not foreign key) is implemented using an index.

In-memory (Inmemory) - A feature in which the DBMS keeps the entire contents of a database or table available in computer memory at all times while the database is opened. Frequently, in-memory databases are volatile, meaning that they have little or no durability if the computer malfunctions. Durability issues are frequently prioritized below performance, which increases substantially with memory as the storage media.

In-process - When referring to a DBMS, it is in-process when the DBMS code resides in the process space of the application program that is using it. If the process is single threaded, then this is a single-user usage of the database(s). A process may have multiple threads with individual connections to a shared database, making it a multi-user database. In-process uses Local Procedure Calls (LPC) vs Remote Procedure Calls (RPC) to a database server in a separate process.

Inner Join - A join between two tables where only the rows with matching foreign and primary key values are returned.

Internet of Things - A recently coined phrase describing the extended reach of connected devices. In particular, devices that use computing power to control or sense their environment and use wifi or wires to connect to the internet.

IoT - Abbreviation of Internet Of Things

IP Address - A numerical identification tag assigned to a computing device in a network. Originally, internet IP addresses consisted of 32 bits of data, displayed as a set of four 3-digit numbers separated by periods (e.g., 113.12.214.2). The number of available IP addresses is running out and a new standard, called IPv6, with 128 bits, will expand the address space for the foreseeable future.

ISO - International Organization for Standardization. Along with the IEC, the ISO controls the SQL standard (ISO/IEC 9075) and many others as well.

Isolation - The property of a transaction that guarantees that the changes made by a transaction are isolated from the rest of the system until after the transaction has committed.

Java - A multi-platform, object-oriented programming language, similar to C++, which is freely available to any and all software developers. It is particularly important in the development of internet/web and mobile applications.

JDBC - Java Database Connectivity API. JDBC provides a standard database access and manipulations API for Java programs. RDM supports JDBC.

Join - An operation in which the rows of one table are related to the rows of another through common column values.

JSON - A data representation offered as a more compact but still humanly readable alternative to XML. JSON is the acronym for JavaScript Object Notation, and is frequently utilized in web/cloud-based applications.

Key - A column or columns on which an index is constructed to allow rapid and/or sorted access to a table's row.

LAN - A Local Area Network is used to interconnect the computers in a single geographic location. Contrasted to Wide Area Networks (WAN). Bandwidth (speed) is a primary difference between local and wide-area networking.

Library - The container for a set of common software API functions. Frequently, a library is contained in a DLL or Shared Library.

Licensee - A customer that has obtained the right to use and/or distribute Raima Product(s).

Local Procedure Call - A software function call to a library function that exists in-process (same computer, same process space). This is in contrast to Remote Procedure Calls (RPC) which are to functions that reside in a different process, whether they are the same computer (using interprocess communication) or a remote computer (using networking). Local procedure calls are significantly faster than remote procedure calls, but require computing resources on the local (client) computer.

Locking - A method for safely protecting objects from being changed by two or more users (processes/threads) at the same time. A write (exclusive) lock allows access from only one user (process/thread) at a time. A read (shared) lock allows read-only access from multiple users (processes/threads).

Maintenance and Support - The maintenance and support services for a Product under an Agreement (Maintenance and Support Addendum).

Marks - Trademarks, trade names, service marks or logos identified on a company's website and/or printed material.

Meta-data - "Data about data." In a DBMS context, data stored in columns of a table have certain attributes, such as the type, length, description or other characteristics that allow the DBMS to process the data meaningfully, or allow the users to understand it better.

Mirroring - The ability to copy the changes each transaction made to the database from the master database to one or more slave databases so that exact copies of the master database are always available on the slaves.

Modification Stored Procedure - An SQL stored procedure that contains one or more INSERT, UPDATE, and/or DELETE statements.

Multi-platform - The ability for a software system to run on different computer hardware and operating systems with little or no change.

Multi-version Concurrency Control (MVCC) - MVCC is a concurrency control method which allows for multiple types of database access to occur simultaneously. RDM implements this through the use of database snapshots.

Natural Join - A join formed between two tables where the values of identically named and defined columns are equal.

Network Model - A database in which inter-record type relationships are organized using one-to-many sets. This differs from a Hierarchical Model in that it allows a record type to be a member of more than one set. Individual rows can be retrieved using API functions that allow an application to navigate through individual set instances.

Network - An inter-connection of computers and computing devices, all of which can send and receive messages from one another. The world's largest network is the internet, in which billions of computers are connected.

NoSQL - A classification of data storage systems that are not primarily designed to be relationally accessed through the common SQL language. NoSQL systems are characterized by dynamic creation and deletion of key/value pairs and are structured to be highly scalable to multiple computers.

Object-oriented - A computing programming paradigm that defines the computing problem to be solved as a set of objects that are members of various object classes each with its own set of data manipulation methods. Individual objects which have been instantiated (created) can be manipulated only using those prescribed methods.

Open Source Software (OSS) - Software that is released under a Software License that (1) permits each recipient of the software to copy and modify the software; (2) permits each recipient to distribute the software in modified or unmodified form; and (3) does not require recipients to pay a fee or royalty for the permission to copy, modify, or distribute the software.

Optimizer - A component of the SQL system that estimates the optimum (i.e., fastest) method to access the database data requested is by particular SQL SELECT, UPDATE, or DELETE statement.

Outer Join - A join formed between two tables that in addition to including the rows from the two tables with matching join column values will also include the values from one table that do not have matching rows in the other.

Page Size - The size in bytes of a database page.

Page - The basic unit of database file input/output. Database files may be organized into a set of fixed-sized pages containing data associated with one or more record occurrences (table rows).

Party - A party to an Agreement (between Raima and Customer)

PLC - Programmable Logic Controller.

Port - A network portal through which two computing processes can communicate. Where one IP Address typically identifies a device, a Port on that device identifies one of multiple potential communication channels.

Portable - Software that has been developed to be able to run on many different computer hardware and operating systems with little or no change.

Positioned Update/Delete - An SQL UPDATE or DELETE statement that modifies the current row of a cursor.

Primary Key - A column or group of columns in a given table that uniquely identifies each row of the table. The primary key is used in conjunction with a foreign key in another (or even the same) table to relate the two tables together. For example, the primary key in an author table would match the foreign key in a book table in order to relate a particular author to that author's books.

Process - An instance of the execution of a program on a single computer. A process can consist of one or more threads executing, more or less, concurrently. The private memory used by a process cannot be accessed by any other process.

Product - The Raima software product(s) licensed to Licensee under an Agreement, including all bug fixes, upgrades, updates, and releases. Product(s) does not include any Third Party Software or any OSS that may be included and distributed with the Product(s).

Protocol - A specific method in which messages are formulated, formatted, and passed between computers in a network. Internet messages are passed between computers using the TCP/IP protocol.

Query - A complete SELECT statement that specifies 1) the columns and tables from which data is to be retrieved; 2) optionally, conditions that the data must satisfy; 3) optionally, computations that are to be performed on the retrieved column values; and 4) optionally, a desired ordering of the result set.

RDM - Raima Database Manager.

RDM Server - Raima's client/server DBMS originally released in 1993, named RDS (Raima Database Server), Velocis, and finally RDM Server. Still supported for existing customers.

Read-only Transaction - A Multi-Version Concurrency Control (MVCC) feature that allows database data to be read by one process without blocking another process's modification of that same data. Frequently referred to as a "snapshot."

Real-time - A real-time environment is one in which specific tasks must be guaranteed to execute within a specified time interval. For a DBMS to be considered truly real-time, it must be able to perform specific database-related tasks in a time that can be deterministically demonstrated—i.e., the worst case execution time can be demonstrated. Because a general-purpose DBMS deals with dynamic data in which the sizes of tables vary over time, and since DBMS response times depend on the amount of data to be processed they can not be considered real-time. This is true also for RDM. It is real-time friendly, because it is fast, has a small footprint and has features (such as virtual tables and in-memory storage) that allow it to be used in beneficial ways in a real-time application.

Record Instance/Occurrence - One set of related data field values associated with a specific record type—equivalent to an SQL row.

Record Type - A collection of closely related data fields—equivalent to an SQL table. Similar to a C struct, a record type is defined by a set of closely related data fields.

Referential Integrity - A condition in which the foreign key column values in all of the rows in one table have matching rows in the referenced primary key table. Referential integrity is maintained by SQL during the processing of an INSERT and DELETE statement and any UPDATE statement that modifies a foreign or primary key value.

Relational Model - A database in which inter-table relationships are organized primarily through common data columns, which define a one-to-many relationship between a row of the primary key table and one or more rows of the matching foreign key table. Equi-joins relate tables that have matching primary/foreign key values, but other comparisons (relationships) may be defined. In addition to describing how the database tables are related, the relational model also defines how the related data can be accessed and manipulated. SQL is the most commonly used relational model database language. See Wikipedia

Remote Procedure Call - A method of interprocess communication where a function residing within another process is called as though it is a local (in-process) function. The method is implemented through a local proxy function and a remote stub function. Parameter values are marshalled into a block of data that can be transmitted from the proxy to the stub for demarshalling and calling the actual function. Return values are processed in the same way as input values.

Replication - A process where selected modifications in a master database are replicated (re-played) into another database.

Restriction Factor - Each relational expression specified in the WHERE clause of a query has an associated restriction factor that is estimated by the SQL optimizer, which specifies the fraction (or percentage) of the table for which the expression will be true. For example, in the query select * from book where bookid = 'austen013px' the relational expression bookid = 'austen013px' has a restriction factor equal to .003 (only one out of 3213px rows will satisfy this expression).

Result Set - The complete set of rows that is returned by a particular SELECT statement.

Rollback - An operation, usually performed by the SQL ROLLBACK statement, that discards all of the changes made by all INSERT, UPDATE and DELETE statements that have been executed since the most recently started transaction (e.g., START TRANSACTION statement).

Row - One set of related values for all of the columns declared in a given table. Also known as a record occurrence.

Royalty - A license fee set forth in an Agreement (Product and Pricing Addendum).

Runtime - A portion of a DBMS that is included within the process space of an application program.

Scalability - A software system is scalable when its performance and overall system throughput continues to improve as more computing resources are made available for its use. This usually comes in the form of the number of CPUs and cores available in the computer on which the software system is run.

Scalar Function - Either a built-in SQL function or a user-defined function that returns a single value computed only from the values of any required arguments at the time the function is called.

Schema - A representation of the structure of a database. It may be graphical or textual. Graphical representations typically involve the use of boxes that represent database tables and arrows that represent inter-table relationships. Textual schema representations utilize Database Definition Language (DDL) statements to describe a database design.

Searched Update/Delete - An SQL update or delete statement in which the rows to be updated/deleted are those for which the conditional expression specified in the WHERE clause is true.

Seat - A copy of a Product, or any of its components, installed on a single machine.

Semaphore - A primitive computing operation that is used to synchronize shared access to data. Sometimes called a "mutex" meaning a "mutually exclusive section." Semaphores control concurrent access to data by restricting access to critical sections of code that manipulate that data.

Server (Software) - A Seat that resides on a single Server machine and is capable of accepting connections from one or more Seats residing on Client machines.

Set - A method used to implement the one-to-many relationship formed between two tables based on their foreign and primary key declarations. The term "set" comes from the CODASYL Network Model definition. A set may be employed in a relational database when an owner (primary key) table and a member (foreign key) table where all of the member table rows that are related to the same owner table row are connected together with a linked list. See Wikipedia

Snapshot Isolation - When a snapshot of the database is taken, an instance of the database is frozen and concurrent reads are allowed to occur on that snapshot. Database writes are allowed to continue while reads on the snapshot are happening.

Source Code (Raima) - The English language source code version of a Product, and any accompanying comments or other programmer Documentation, provided by Raima to Licensee pursuant to the terms of an Agreement. The capitalized term Source Code as used in an Agreement does not include OSS.

SQL - The standardized and commonly accepted language used for defining, querying and manipulating a relational database. The etymology of "SQL" is unclear, possibly a progression from "Quel" (Query Language) to "SeQuel" to "SQL." However, some experts don't like the expansion "Structured Query Language" because its structure is inconsistent and a historical patchwork. See Wikipedia

SQL PL - A SQL based programming language. This allows for a SQL programmer to use programming constructs like variables, conditionals and loops purely through the use of SQL statements.

Stored Procedure - A named and optionally parameterized compiled set of SQL database access statements that can be executed as a unit through a call to the stored procedure.

Synchronization - The implementation method (frequently using semaphores) by which concurrently executing multiple computer threads or processes can safely access and update shared data.

System Catalog - See Catalog.

Table - A collection of closely related columns. A table consists of rows each of which shares the same columns but vary in the column values.

Third Party Software - Software that is licensed separately by a third party with the Product(s) or Documentation.

Thread - A single, sequential execution of a computer program or program segment. A program can consist of one or more concurrently executing threads. Where multiple threads access the same data, some kind of synchronization method needs to be employed to ensure that the data is accessed only by one thread at a time.

Timeout - Occurs when a lock request has waited longer than the prescribed wait time for the request to be granted.

Transaction Log - A sequential record of all of the database changes made by each transaction in the order they were issued. The transaction log is used to ensure that a database conforms to the ACID properties. Transaction logs are also used to mirror or replicate data to other databases.

Transaction - A set of logically related database modifications that is written to the database as a unit. The database changes associated with a given transaction are guaranteed by the DBMS to be written completely to the database; in the event of a system failure, none are written. The state of the database both before and after a transaction will be consistent with its design.

Transactional File Server (TFS) - An architectural piece of Raima's RDM system that may be linked in-process with application code or executed separately as a server process. Its responsibility is to perform all of the database file input and output, serving up database pages to the RDM Runtime library as requested, controlling read-only transactions, and committing all transaction change logs to the database.

Transactional Stored Procedure - A modification stored procedure in which the database changes made by the procedure are encapsulated in its own transaction.

Update (of Product) - A Product that has been modified in a minor way, including but not limited to bug fixes, and has been furnished to Licensee under this Agreement. An Update is represented by a Product version number that increments to the right of the decimal point.

Upgrade (of Product) - A Product that has been modified in a major way, and is released as a new version of the Product. An Upgrade is represented by a Product version number that increments to the left of the decimal point.

Use - Storing, loading, installing, and/or running a Product, or displaying screens generated by a Product.

User-defined Function - An application-specific SQL callable scalar or aggregate function written in C.

User-defined Procedure - An application-specific function written in C and invocable through use of the SQL call statement.

Vacuuming - Databases that use MVCC to isolate transactions from each other need to periodically scan the tables to delete outdated copies of rows. In MVCC, when a row is updated or deleted, it cannot be immediately recycled because there might be active transactions that can still see the old version of the row. Instead of checking if that is the case, which could be quite costly, old rows are assumed to stay relevant. Database Vacuuming - The process of reclaiming the space is deferred until the table is vacuumed which, depending on the database, can be initiated automatically or explicitly.

Velocis - Former name of a DBMS product, now called RDM Server.

Virtual Table - An SQL table that is defined through a set of application-specific C functions that conform to a particular interface specification, allowing a non-database data source (e.g., a device, etc.) to be accessed as if it were a conventional SQL table.

WAN - A Wide Area Network, as contrasted to Local Area Networks (LAN). Normally WAN refers to the internet. Bandwidth (speed) is a primary difference between local and wide-area networking.

Wi-Fi - The common name for standardized local-area wireless technology.

XML - Extensible Markup Language. XML documents are much used in the internet's World Wide Web but are also used in many computing contexts in which data needs to be shared.

Data Types

Thursday, August 16, 2018 2:03 PM

MySQL Data Types

In MySQL there are three main data types: text, number, and date.

Text data types:

Data type	Description
CHAR(size)	Holds a fixed length string (can contain letters, numbers, and special characters). The fixed size is specified in parenthesis. Can store up to 255 characters
VARCHAR(size)	Holds a variable length string (can contain letters, numbers, and special characters). The maximum size is specified in parenthesis. Can store up to 255 characters. Note: If you put a greater value than 255 it will be converted to a TEXT type
TINYTEXT	Holds a string with a maximum length of 255 characters
TEXT	Holds a string with a maximum length of 65,535 characters
BLOB	For BLOBs (Binary Large OBjects). Holds up to 65,535 bytes of data
MEDIUMTEXT	Holds a string with a maximum length of 16,777,215 characters
MEDIUMBLOB	For BLOBs (Binary Large OBjects). Holds up to 16,777,215 bytes of data
LONGTEXT	Holds a string with a maximum length of 4,294,967,295 characters
LONGBLOB	For BLOBs (Binary Large OBjects). Holds up to 4,294,967,295 bytes of data
ENUM(x,y,z,etc.)	Let you enter a list of possible values. You can list up to 65535 values in an ENUM list. If a value is inserted that is not in the list, a blank value will be inserted. Note: The values are sorted in the order you enter them. You enter the possible values in this format: ENUM('X','Y','Z')
SET	Similar to ENUM except that SET may contain up to 64 list items and can store more than one choice

Number data types:

Data type	Description
TINYINT(size)	-128 to 127 normal. 0 to 255 UNSIGNED*. The maximum number of digits may be specified in parenthesis
SMALLINT(size)	-32768 to 32767 normal. 0 to 65535 UNSIGNED*. The maximum number of digits may be specified in parenthesis
MEDIUMINT(size)	-8388608 to 8388607 normal. 0 to 16777215 UNSIGNED*. The maximum number of digits may be specified in parenthesis
INT(size)	-2147483648 to 2147483647 normal. 0 to 4294967295 UNSIGNED*. The maximum number of digits may be specified in parenthesis
BIGINT(size)	-9223372036854775808 to 9223372036854775807 normal. 0 to 18446744073709551615 UNSIGNED*. The maximum number of digits may be specified in parenthesis
FLOAT(size,d)	A small number with a floating decimal point. The maximum number of digits may be specified in the size parameter. The maximum number of digits to the right of the decimal point is specified in the d parameter
DOUBLE(size,d)	A large number with a floating decimal point. The maximum number of digits may be specified in the size parameter. The maximum number of digits to the right of the decimal point is specified in the d parameter
DECIMAL(size,d)	A DOUBLE stored as a string , allowing for a fixed decimal point. The maximum number of digits may be specified in the size parameter. The maximum number of digits to the right of the decimal point is specified in the d parameter

*The integer types have an extra option called UNSIGNED. Normally, the integer goes from a negative to positive value. Adding the UNSIGNED attribute will move that range up so it starts at zero instead of a negative number.

Date data types:

Data type	Description
DATE()	A date. Format: YYYY-MM-DD Note: The supported range is from '1000-01-01' to '9999-12-31'
DATETIME()	*A date and time combination. Format: YYYY-MM-DD HH:MI:SS Note: The supported range is from '1000-01-01 00:00:00' to '9999-12-31 23:59:59'
TIMESTAMP()	*A timestamp. TIMESTAMP values are stored as the number of seconds since the Unix epoch ('1970-01-01 00:00:00' UTC). Format: YYYY-MM-DD HH:MI:SS Note: The supported range is from '1970-01-01 00:00:01' UTC to '2038-01-09 03:14:07' UTC
TIME()	A time. Format: HH:MI:SS Note: The supported range is from '-838:59:59' to '838:59:59'
YEAR()	A year in two-digit or four-digit format. Note: Values allowed in four-digit format: 1901 to 2155. Values allowed in two-digit format: 70 to 69, representing years from 1970 to 2069

*Even if DATETIME and TIMESTAMP return the same format, they work very differently. In an INSERT or UPDATE query, the TIMESTAMP automatically set itself to the current date and time. TIMESTAMP also accepts various formats, like YYYYMMDDHHMISS, YYMMDDHHMISS, YYYYMMDD, or YYMMDD.

SQL Server Data Types

String data types:

Data type	Description	Max size	Storage
char(n)	Fixed width character string	8,000 characters	Defined width
varchar(n)	Variable width character string	8,000 characters	2 bytes + number of chars
varchar(max)	Variable width character string	1,073,741,824 characters	2 bytes + number of chars
text	Variable width character string	2GB of text data	4 bytes + number of chars

nchar	Fixed width Unicode string	4,000 characters	Defined width x 2
nvarchar	Variable width Unicode string	4,000 characters	
nvarchar(max)	Variable width Unicode string	536,870,912 characters	
ntext	Variable width Unicode string	2GB of text data	
binary(n)	Fixed width binary string	8,000 bytes	
varbinary	Variable width binary string	8,000 bytes	
varbinary(max)	Variable width binary string	2GB	
image	Variable width binary string	2GB	

Number data types:

Data type	Description	Storage
bit	Integer that can be 0, 1, or NULL	
tinyint	Allows whole numbers from 0 to 255	1 byte
smallint	Allows whole numbers between -32,768 and 32,767	2 bytes
int	Allows whole numbers between -2,147,483,648 and 2,147,483,647	4 bytes
bigin	Allows whole numbers between -9,223,372,036,854,775,808 and 9,223,372,036,854,775,807	8 bytes
decimal(p,s)	Fixed precision and scale numbers. Allows numbers from -10^38 +1 to 10^38 -1. The p parameter indicates the maximum total number of digits that can be stored (both to the left and to the right of the decimal point). p must be a value from 1 to 38. Default is 18. The s parameter indicates the maximum number of digits stored to the right of the decimal point. s must be a value from 0 to p. Default value is 0	5-17 bytes
numeric(p,s)	Fixed precision and scale numbers. Allows numbers from -10^38 +1 to 10^38 -1. The p parameter indicates the maximum total number of digits that can be stored (both to the left and to the right of the decimal point). p must be a value from 1 to 38. Default is 18. The s parameter indicates the maximum number of digits stored to the right of the decimal point. s must be a value from 0 to p. Default value is 0	5-17 bytes
smallmoney	Monetary data from -214,748.3648 to 214,748.3647	4 bytes
money	Monetary data from -922,337,203,685,477.5808 to 922,337,203,685,477.5807	8 bytes
float(n)	Floating precision number data from -1.79E + 308 to 1.79E + 308. The n parameter indicates whether the field should hold 4 or 8 bytes. float(24) holds a 4-byte field and float(53) holds an 8-byte field. Default value of n is 53.	4 or 8 bytes
real	Floating precision number data from -3.40E + 38 to 3.40E + 38	4 bytes

Date data types:

Data type	Description	Storage
datetime	From January 1, 1753 to December 31, 9999 with an accuracy of 3.33 milliseconds	8 bytes
datetime2	From January 1, 0001 to December 31, 9999 with an accuracy of 100 nanoseconds	6-8 bytes
smalldatetime	From January 1, 1900 to June 6, 2079 with an accuracy of 1 minute	4 bytes
date	Store a date only. From January 1, 0001 to December 31, 9999	3 bytes
time	Store a time only to an accuracy of 100 nanoseconds	3-5 bytes
datetimeoffset	The same as datetime2 with the addition of a time zone offset	8-10 bytes
timestamp	Stores a unique number that gets updated every time a row gets created or modified. The timestamp value is based upon an internal clock and does not correspond to real time. Each table may have only one timestamp variable	

Other data types:

Data type	Description
sql_variant	Stores up to 8,000 bytes of data of various data types, except text, ntext, and timestamp
uniqueidentifier	Stores a globally unique identifier (GUID)
xml	Stores XML formatted data. Maximum 2GB
cursor	Stores a reference to a cursor used for database operations
table	Stores a result-set for later processing

Microsoft Access Data Types

Data type	Description	Storage
Text	Use for text or combinations of text and numbers. 255 characters maximum	
Memo	Memo is used for larger amounts of text. Stores up to 65,536 characters. Note: You cannot sort a memo field. However, they are searchable	
Byte	Allows whole numbers from 0 to 255	1 byte
Integer	Allows whole numbers between -32,768 and 32,767	2 bytes
Long	Allows whole numbers between -2,147,483,648 and 2,147,483,647	4 bytes
Single	Single precision floating-point. Will handle most decimals	4 bytes
Double	Double precision floating-point. Will handle most decimals	8 bytes
Currency	Use for currency. Holds up to 15 digits of whole dollars, plus 4 decimal places. Tip: You can choose which country's currency to use	8 bytes
AutoNumber	AutoNumber fields automatically give each record its own number, usually starting at 1	4 bytes
Date/Time	Use for dates and times	8 bytes

Yes/No	A logical field can be displayed as Yes/No, True/False, or On/Off. In code, use the constants True and False (equivalent to -1 and 0). Note: Null values are not allowed in Yes/No fields	1 bit
Ole Object	Can store pictures, audio, video, or other BLOBs (Binary Large OBjects)	up to 1GB
Hyperlink	Contain links to other files, including web pages	
Lookup Wizard	Let you type a list of options, which can then be chosen from a drop-down list	4 bytes

Data Type Objects

Thursday, August 16, 2018 2:15 PM

What are different Oracle database objects?

A database object is any defined object in a database that is used to store or reference data. Oracle Database recognizes objects that are associated with a particular schema.

There are two types of database objects:

1. Schema Objects.
2. Non Schema Objects

⇒ **Schema :**

A schema is a collection of logical structures of data, or schema objects. A schema is owned by a database user and has the same name as that user. Each user owns a single schema. Schema objects can be created and manipulated with SQL and include the following types of objects:

- Clusters
- Database links
- Database triggers
- Dimensions
- External procedure libraries
- Indexes and index types
- Java classes, Java resources, and Java sources
- Materialized views and materialized view logs
- Object tables, object types, and object views
- Operators
- Sequences
- Stored functions, procedures, and packages
- Synonyms
- Tables and index-organized tables
- Views

⇒ **Non Schema Objects:**

- Contexts
- Directories
- Profiles
- Parameter files (PFILEs) and server parameter files (SPFILEs)
- Roles
- Tablespaces
- Users
- Rollback segments
- Restore Points

* For more details you can reference the below link :

3. [Database Objects](#)
4. [Schema Objects](#)

From <<https://www.quora.com/What-are-different-Oracle-database-objects>>

Sql Queries

Thursday, August 16, 2018 3:36 PM

SQL, Structured Query Language, is a programming language designed to manage data stored in relational databases. SQL operates through simple, declarative statements. This keeps data accurate and secure, and it helps maintain the integrity of databases, regardless of size.

Here's an appendix of commonly used commands.

- ⇒ **COMMANDS:**
- **ALTER TABLE**

```
ALTER TABLE table_name ADD column_name datatype;
```

Notes: ALTER TABLE lets you add columns to a table in a database.
- **AND**

```
SELECT column_name(s) FROM table_name WHERE column_1 = value_1 AND column_2 = value_2;
```

Notes: AND is an operator that combines two conditions. Both conditions must be true for the row to be included in the result set.
- **AS**

```
SELECT column_name AS 'Alias' FROM table_name;
```

Notes: AS is a keyword in SQL that allows you to rename a column or table using an alias.
- **AVG()**

```
SELECT AVG(column_name) FROM table_name;
```

Notes: AVG() is an aggregate function that returns the average value for a numeric column.
- **BETWEEN**

```
SELECT column_name(s) FROM table_name WHERE column_name BETWEEN value_1 AND value_2;
```

Notes: The BETWEEN operator is used to filter the result set within a certain range. The values can be numbers, text or dates.
- **CASE**

```
SELECT column_name,  
CASE  
    WHEN condition THEN 'Result_1'  
    WHEN condition THEN 'Result_2'  
    ELSE 'Result_3'  
END  
FROM table_name;
```

Notes: CASE statements are used to create different outputs (usually in the SELECT statement). It is SQL's way of handling if-then logic.
- **COUNT()**

```
SELECT COUNT(column_name)  
FROM table_name;
```

Notes: COUNT() is a function that takes the name of a column as an argument and counts the number of rows where the column is not NULL.
- **CREATE TABLE**

```
CREATE TABLE table_name (  
    column_1 datatype,  
    column_2 datatype,  
    column_3 datatype  
)
```

Notes: CREATE TABLE creates a new table in the database. It allows you to specify the name of the table and the name of each column in the table.
- **DELETE**

```
DELETE FROM table_name  
WHERE some_column = some_value;
```

Notes: DELETE statements are used to remove rows from a table.
- **GROUP BY**

```
SELECT column_name, COUNT(*)  
FROM table_name  
GROUP BY column_name;
```

Notes: GROUP BY is a clause in SQL that is only used with aggregate functions. It is used in collaboration with the SELECT statement to arrange identical data into groups.
- **HAVING**

```
SELECT column_name, COUNT(*)  
FROM table_name  
GROUP BY column_name  
HAVING COUNT(*) > value;
```

Notes: HAVING was added to SQL because the WHERE keyword could not be used with aggregate functions.
- **INNER JOIN**

```
SELECT column_name(s)  
FROM table_1  
JOIN table_2  
    ON table_1.column_name = table_2.column_name;
```

Notes: An inner join will combine rows from different tables if the join condition is true.
- **INSERT**

```
INSERT INTO table_name (column_1, column_2, column_3)  
VALUES (value_1, value_2, value_3);
```

Notes: INSERT statements are used to add a new row to a table.
- **IS NULL / IS NOT NULL**

```
SELECT column_name(s)  
FROM table_name  
WHERE column_name IS NULL;
```

Notes: IS NULL and IS NOT NULL are operators used with the WHERE clause to test for empty values.
- **LIKE**

```
SELECT column_name(s)  
FROM table_name  
WHERE column_name LIKE pattern;
```

Notes: LIKE is a special operator used with the WHERE clause to search for a specific pattern in a column.
- **LIMIT**

```
SELECT column_name(s)  
FROM table_name  
LIMIT number;
```

Notes: LIMIT is a clause that lets you specify the maximum number of rows the result set will have.
- **MAX()**

```
SELECT MAX(column_name)
```

```

FROM table_name;
Notes: MAX() is a function that takes the name of a column as an argument and returns the largest value in that column.
→ MIN()
SELECT MIN(column_name)
FROM table_name;
Notes: MIN() is a function that takes the name of a column as an argument and returns the smallest value in that column.
→ OR
SELECT column_name
FROM table_name
WHERE column_name = value_1
    OR column_name = value_2;
Notes: OR is an operator that filters the result set to only include rows where either condition is true.
→ ORDER BY
SELECT column_name
FROM table_name
ORDER BY column_name ASC | DESC;
Notes: ORDER BY is a clause that indicates you want to sort the result set by a particular column either alphabetically or numerically.
→ OUTER JOIN
SELECT column_name(s)
FROM table_1
LEFT JOIN table_2
    ON table_1.column_name = table_2.column_name;
Notes: An outer join will combine rows from different tables even if the join condition is not met. Every row in the left table is returned in the result set, and if the join condition is not met, then NULL values are used to fill in the columns from the right table.
→ ROUND()
SELECT ROUND(column_name, integer)
FROM table_name;
Notes: ROUND() is a function that takes a column name and an integer as an argument. It rounds the values in the column to the number of decimal places specified by the integer.
→ SELECT
SELECT column_name
FROM table_name;
Notes: SELECT statements are used to fetch data from a database. Every query will begin with SELECT.
→ SELECT DISTINCT
SELECT DISTINCT column_name
FROM table_name;
Notes: SELECT DISTINCT specifies that the statement is going to be a query that returns unique values in the specified column(s).
→ SUM
SELECT SUM(column_name)
FROM table_name;
Notes: SUM() is a function that takes the name of a column as an argument and returns the sum of all the values in that column.
→ UPDATE
UPDATE table_name
SET some_column = some_value
WHERE some_column = some_value;
Notes: UPDATE statements allow you to edit rows in a table.
→ WHERE
SELECT column_name(s)
FROM table_name
WHERE column_name operator value;
Notes: WHERE is a clause that indicates you want to filter the result set to include only rows where the following condition is true.
→ WITH
WITH temporary_name AS (
    SELECT *
    FROM table_name)
SELECT *
FROM temporary_name
WHERE column_name operator value;
Notes: WITH clause lets you store the result of a query in a temporary table using an alias. You can also define multiple temporary tables using a comma and with one instance of the WITH keyword. The WITH clause is also known as common table expression (CTE) and subquery factoring.

```

Session 1

Friday, August 17, 2018 3:37 PM

To create a new user/schema in UHIP3. Log in to UHIP3 as sys and give below query:

create user demo identified by demo123 default tablespace users;

To give grant for demo:

grant connect, resource to demo;

Now log in to DEMO:

Day to day tasks

Friday, August 17, 2018 3:44 PM

Killing locks(occurs when multiple people try to edit a table at a time)(row lock contention)

Go to new session and select the data base name

After logging in - click on session browser - then in click on locks tab in the left side panel - and go to blocking tab and select YES in the filter.

Now you will be seeing the list of all the blocking sessions.

Get all the SID numbers of all the blocked ones and then go to session tab on the left side panel and check those SID in the sql developer and kill them.(Do not kill anything in JDBC THIN CLIENT)

#

Creating backup table:

```
create table bkup_tables.EN_INDIVIDUAL_ENROLLMENT_17AUG as select * from IE_APP_ONLINE.EN_INDIVIDUAL_ENROLLMENT;
```

```
select count(*) from bkup_tables.EN_INDIVIDUAL_ENROLLMENT_17AUG;
```

```
select count(*) from IE_APP_ONLINE.EN_INDIVIDUAL_ENROLLMENT;
```

```
grant select on bkup_tables.EN_INDIVIDUAL_ENROLLMENT_17AUG to yatsharma;
```

#

Maintaining Spool log:

```
col spoolname new_value spoolname
```

```
select 'RIB-60410_'||to_char(systimestamp, 'mmddyyyy_hhmi') || '_DEVVW.log' spoolname from dual ;
```

```
spool C:\logs\08172018\&spoolname
```

```
select systimestamp from dual;
```

```
select name from v$database;
```

```
set echo on;
```

```
spool off;
```

#

To update a paramter:

```
Update IE_APP_MRS_OWNER/fw_batch_parameter_control set parameters = '05/01/2018' where job_id = 'FW-GLOBL-DLY';
```

#

Grant update permissions:

```
grant select,update on IE_APP_ONLINE.co_request_history to IES_RO_PRD_ITR7;
```

#

To update a paramter:

```
UPDATE HIX_PRD_ITR7.FW_BATCH_PARAMETER_CONTROL SET PARAMETERS = '10/02/2018' WHERE JOB_ID = 'CO-SHP-TR-01';
```

After updating to check if the changes are reflecting or not:

```
select * from HIX_PRD_ITR7.FW_BATCH_PARAMETER_CONTROL WHERE JOB_ID = 'CO-SHP-TR-01';
```

Things to do

Sunday, March 18, 2018 1:06 PM

Tools to learn and prepare

GIT - NB
CHEF - BG
ANSIBLE - NB
PUPPET - NB*
DOCKER - BG

To prepare:

SVN - NB
JIRA - BG
SPLUNK - NB
JENKINS - NB
BAMBOO - NB
ZABBIX - BG
NAGIOS - BG

Planning

Sunday, March 18, 2018 12:12 PM

SDLC process in detail

Issue Tracking

Sunday, March 18, 2018 12:21 PM

Jira



From <<http://www.softwaretestinghelp.com/popular-bug-tracking-software/>>

Details: Atlassian JIRA, primarily an incident management tool is also commonly used for bug-tracking. It provides the complete set of recording, reporting, workflow and other convenience-related features. It is a tool that integrates directly with the code development environments thus making it a perfect fit for developers as well. Also, due to its capability to track any and all kinds of issues, it is not necessarily concentrated to only software development industry and renders itself quite efficiently to help desks, leave management systems etc. It supports agile projects also. It is a commercially licensed product with many add-ins that support extensibility.

Download: A 7-day free trial can be obtained at [JIRA details](#).

From <<http://www.softwaretestinghelp.com/popular-bug-tracking-software/>>

Bugzilla



Details: Bugzilla has been a leading bug tracking tools widely used by many organizations for quite some time now. It is very simple to use, web-based interface. It has all the features of the essence, convenience, and assurance. It is completely open sourced and is free to use.

From <<http://www.softwaretestinghelp.com/popular-bug-tracking-software/>>

Plutora Test



Details: Plutora Test is a modern, enterprise test management tool that supports the complete software testing process across all types of development methodologies from traditional Waterfall to Continuous Delivery approaches. It uses a single instance for all projects consolidating testing design, planning, manual and automated execution, defect tracking and progress reporting and improves efficiency every step of the way. Integration is provided for all related tools and systems, such as Jira and Selenium. It engages stakeholders and drives collaboration between teams with analytics, metrics, and reporting capabilities not found in any other tool.

It is highly customizable adapting to individual teams while still providing a single view across all teams and has the only Quality Tester leaderboard available on the market.

Download: [Evaluate this cutting-edge tool here](#)

From <<http://www.softwaretestinghelp.com/popular-bug-tracking-software/>>

Mantis



Details: I have one thing to say about this tool – do not be deceived by its simple exterior. I mean, in terms of simplicity and ease of use, this tool wins the crown. It has every feature you can hope for and then some. To catch up with the changing times, Mantis not only comes as a web application but also has its own mobile version. It is implemented in PHP and is free for use. If you would like it to be hosted, they do charge a price, but quite affordable, I must say.

Download: Check out the site: [Mantis details](#) for more information.

From <<http://www.softwaretestinghelp.com/popular-bug-tracking-software/>>

IBM Rational ClearQuest



Details: Clear Quest is a client-server based web application that supports defect management process. It provides integration with various automation tools which can be considered an additional feature. Other than that, it has an end-to-end, customizable defect tracking systems. It is a commercial product and can seem a little costly. You can try it free for 30 days.

Download: For information and trial, check out: [IBM Rational ClearQuest details](#).

From <<http://www.softwaretestinghelp.com/popular-bug-tracking-software/>>

To be Prepared:

JIRA

Source Control

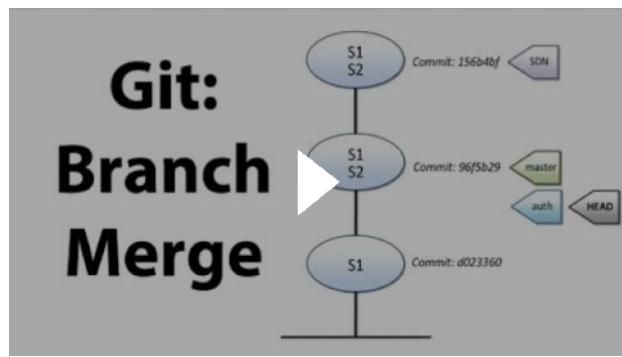
Sunday, March 18, 2018 12:21 PM

GIT
Apache Subversion
Team Foundation Server
Mercurial
Rational ClearCase
Perforce
Microsoft Visual Source
Monotone
Bitbucket Server
Team Forge
Bit keeper
CVS
Source Code control system(SCCS)
Vault

To be Prepared:

GIT(https://www.google.co.in/search?rlz=1C1CHZL_enIN723IN723&q=Git&stick=H4sIAAAAAAAAI2Rv07DMBCHyYDUpiChwtSpQkLAIRJnHRmRizsEXH-NYnjxnbjhoGH4DI4EfIAjAxsvAEjKfLBvbjd_f5d_bk8HxqUcv2u1bl6EywLSfpkrBGcIYvJW01Gly_DsO0InKlOfQ8JxqMyZ5XCYaWUOEED4a5Z8S7vKK6kBXIrcDTx49lsyeT0obhqvUb7SxEBqMrFOatZhzxEjt-v99PF9vn9c1g5vQ2pXHKxV02j03zhtVSusaNfn783pxYZhfA4un3VqMEOpjwTlpHrg6dB4tL8X-vRN1x1-QNHAgaAA&npsic=0&sa=X&ved=0ahUKEwj59pWnpvXZAhXCVY8KHeEbBh0Q-BYIJQ)

[Introduction to Git - Branching and Merging](#)



full

Apache SVN

Just overview and concepts and some commands

Continuous Integration

Sunday, March 18, 2018 12:21 PM

Bamboo

Jenkins

Travis

Team city

Code ship

GIT Lab CI

Buddy

To be Prepared:

Bamboo

Jenkins

Configuration Management

Sunday, March 18, 2018 12:22 PM

Chef
Puppet
Ansible
CS engine
Rudder
Salt
Smart Frog
Vagrant

To Be prepared:

Ansible
Chef
Puppet

Continuous Monitoring

Sunday, March 18, 2018 12:22 PM

- Splunk
- Nagios
- Zabbix
- Kibana
- Logstash
- Sensu
- Prometheus
- AWS cloud watch
- Google stack driver
- App dynamics
- Big panda

To be Prepared:

- Splunk
- Nagios
- Zabbix

Docker

Sunday, March 18, 2018 12:45 PM

<https://app.pluralsight.com/library/courses/docker-deep-dive-update/table-of-contents>

Course Overview

Course Overview

Containers are white-hot at the moment, especially Docker and Kubernetes. And in this course, Docker Deep Dive, is everything you need to get on the path to container mastery. On the Docker front, you will go from zero to Docker in a single course. I mean, by the end, you'll be brimming with confidence and raring to go. Now on the Kubernetes front, well, Docker and Kubernetes go together all the time, so you'll be primed and ready to crack on with Kubernetes if that's your plan. Anyway, I'm Nigel, I'm a Docker captain and a container addict. And I am really excited about the time we're about to spend together. You see, I'm confident you're about to give your career one of the biggest boosts it could ask for. Like I said, zero to Docker in a single course. So that'll be all the theory and the practical. On the theory front, we'll get down with the fundamentals: name spaces, control groups, union file systems, all the jazz that underpins a modern container. And we'll cover Linux and Windows. We'll also get deep with images, containers, swarms and services, secret stacks, the whole shebang. No stone left unturned. But theory's theory, so we'll be backing everything up with loads of hands-on labs and exercises. And by the end, you'll be skilled up and ready to take your career on to the next level. As well, while it's not an exam cram course, it will cover most of what you need to pass the Docker Certified Associate Exam. Man, I'm excited. So yeah, let's buckle up and let's do some serious Docker.

Course Intro

Course Introduction

Docker Deep Dive, I'll tell you what, if there was ever a course you should take, or ever a course you should be excited about, this is it. I mean, the potential for this to change your life and maybe put you onto a new trajectory. I am telling you, this is an exciting course. I mean, Docker's here, right, and it's disrupting. But there's Kubernetes as well. And there is no better way to prepare for Kubernetes, than by getting skilled up with Docker. So this is a win-win. Anyway, I'm excited for you. So I have put like a crap-ton of effort into making this great. It's going to be time well-spent. Speaking of time actually, we're about to spend a bunch of time together. So I think some intros are called for. I'll go first. I'm Nigel, I'm a content-a-holic and I'm a Docker Captain. So you what, from now on, if you call me Captain, I'd appreciate that. It's just out of respect, yeah? (laughing) I'm totally kidding. Don't you dare. Anyway, look, I'm a Brit, I love Docker and Kubernetes and oh yeah, I support a shocking football team and I like loud American muscle cars. That's me, now it's your turn. Reach out to me on Twitter and tell me who you are. Okay, so a few things about the course. First off, as the name suggests, we are Deep Diving. Now, I'm totally cool for you to be here, even if you're new. But, if that is you, just be aware, right, I've got a couple of starter courses that you might prefer to take before you enjoy this one. Your call though, just don't get sad if this is a bit too deep. Also, right, throughout the course, we're going to cover a bunch of stuff from the Docker-certified Associate Exam. Now, is this a Docker-certified Associate study course? No, it's not. But, are we going to cover a bunch of stuff that's included in the exam? Yeah, we are. So I think, long story short, the course is going to help you prepare for the exam. But in no way am I putting the course out there as an out-and-out exam prep course, I mean, there's probably going to be stuff on the exam we don't even cover. The aim of this course really is to be real-world. But you know what, for most modules, I'm going to call out the list of the exam stuff that we cover. So speaking of covering stuff, what are we going to cover? First up, we'll see some installs. But I promise you, this will be quick, just enough to get you started, right? I have absolutely no interest in spending, like, 35, 40 minutes walking through a bunch of installs. Check out my Getting Started with Docker course for that, or maybe check the Docks. All right, once we're done with the installs though, we'll do an Architecture Master class, proper solid theory, right? The kind of stuff that's going to make you feel like you're a maintainer. Then we'll get into images, how we build them and all of that stuff. Then we'll get down with containers. Now at this point, if you're following along in order, by the time we've covered all of this off, you have got the fundamentals. So, we'll start to switch gears and make things happen. We'll look at orchestration with Swarm, including using Swarm as a secure, cluster substrate for deploying apps, even Kubernetes apps. Then we'll look at networking, volumes and secrets. Then containerized apps. After that, we'll finish up some enterprise grade tools and a discussion on where to go next. Now then, that where to go next, is going to be important, cause it is a big old world out there, and you're going to want some pointers. Well, that's the course. Now, if you're looking at other courses as well, this is part of the container management learning path. So take the rest of the courses on there. But on its own, right, I reckon the course represents the ultimate in standalone courses. But the thing is, right, there's always more, so check out the library, right? The stuff that'll help prepare you for this course, and we've also got stuff that'll take you onto the next level. Ah, now, I've also got a companion book. The content's similar, it's all Docker, right? But the different delivery mechanisms, I think they compliment each other. So I recommend both, your call though. Well, that's it. So, make yourself comfortable and maybe grab a drink, and definitely get your notepad out. Oh, and you know what, if you're new to this, right, maybe give it a try at 1.4 or 1.5 speed. I hear really good things about that. All right then, let's do this.

Installing Docker

Module Intro

Alright then, we're deep-diving here, so we're not about to spend half an hour finding out how to do 50 types of install, but, I do want the course to be as useful as possible to as many of you as possible, so to help make it a bit of a one-stop shop for those of you who want to go from zero to Docker in a single course, we will take a look at a few installs, but the emphasis is going to be on doing this quickly right? If you need more, there's always the Docs and of course Google's your friend. Anyway, this is what we'll do: Play with Docker, without doubt, my favorite way to get my hands on Docker, we'll do Docker for Mac and Docker for Windows, then we'll do a Windows Server install, and then a Linux install, then once we're done with that, we are cracking on with the proper learning, so let's do it.

Play with Docker (PWD)

Okay, Play with Docker. I cannot tell you how much I love this, in fact, I don't know what I'd do without it these days. So, you point your browser at play-with-docker.com, hit Login here, and then Start, and we're in. We then just start adding instances here, and you know what, you can add a bunch, yeah, okay, it looks a bit better with a decent resolution, but never mind right, this is it, it's a playground. And each one of these nodes is a fully fledged Docker node, so we've got three here, and they can talk to each other, they can be clustered, whatever. For real right, fire up your browser and just start adding instances, we're playing with Docker, I just don't know what there is about this that is not to like. Okay, a couple of points to note are the timer up here, right now you only get four hours of playtime, definitely keep that in mind, this is not for production right? And then there's the version here as well, you can't really control that, but you know what? If you need a quick playground to mess around with something, this is as good as it gets. So that's Play with Docker, I love it.

Docker for Mac and Windows

Okay, Docker for Mac and Docker for Windows, these are a couple of really slick developer-focused tools from Docker, Inc. The big idea being to get you a slick development environment on your Mac or your Windows 10 laptop. No joke right, installation is a breeze, and I'm not about to show you some kind of Next, Next, Next install, just go to docker.com, hit Get Docker up here, and then click either of these, then it's just a case of following the breadcrumbs till you get a download link, after that it really is Next, Next, Next, and you know what? Before you know it, you've got Docker on your laptop. So, I've got it here on my Windows machine that I'm doing this session on, and we can see here right, look, it's fully integrated into the Windows experience, same goes for Mac right, open a terminal and just whack in Docker commands. As well as that, you get this kind of little GUI experience, I mean look, we can see my repos here, any swarms that I've got in Docker Cloud, you name it right, the idea is bringing that Docker experience to your laptop so you can develop locally, but then integrate seamlessly to the wider ecosystem. In fact, the version on my Mac's got Kubernetes integrations as well, these will come to Windows soon. But a couple of things I do want you to note right? First up, they're both about a local development environment, this is not production-grade stuff right, all you get is a single instance of the Docker engine no HA, nothing like that. Also, on Docker for Mac, you're getting Linux containers, 'cause everything's implemented in the background via a lightweight Linux VM, so that means all the integrations like the command line and stuff, are all talking to Docker, running inside of a Linux VM somewhere in the background. So don't be fooled right, just because it's Docker for Mac running on your Mac, you're still getting Linux containers. Windows is a bit different right, that can do native Win32 containers or it can do Linux containers, and it lets you flip between the two, though of course, your apps can't right, those are going to be either Linux or Windows, check the Docs though or maybe my Getting Started with Docker course for more detail. For us though, that's Docker for Mac and Docker for Windows a smooth, local development experience.

Docker on Windows Server 2016

Ah right then, Docker on Windows. What we're going to do here is show you a quick install on a Windows Server 2016 machine, and unlike what we just saw with Docker for Windows, this definitely can be production-grade. Anyway, I've got a brand new Windows Server 2016 machine here, and it's got the Windows Containers feature pre-installed, and that's important right, if you've not got Windows Containers installed, install it now, if you need the details, that's over in my Getting Started with Docker course. Anyway, guess what, this has already got Docker installed, yeah, you know what, I'm not a fan of that, I mean, I don't know, how old is that, it's like a dinosaur. So let's update it, and what we'll do here right, will work if you're doing a clean install or updating an existing version. And yeah, of course, there's other ways to do this, but what we're showing here will get you started. Anyway, as long as you've got the Windows Containers feature installed, these two commands here are all you're going to need. So let's have that first one, just give it a second, and then we'll have this one, and give that a second as well. And look, it's done right, so if we run this again, okay, client and server both updated, and the ee bit here, this little bit here, that means Enterprise Edition, so you're getting the full-on Enterprise Edition with Windows. But that's it right, that's Docker installed on Windows Server, easy.

Docker on Linux

Now then, Docker started on Linux, so it's only right that the Linux install should be the easiest. But, before I go any further, there are of course a million ways to install Docker on like a million different flavors of Linux, and I'm just showing you one, a scripted install on a clean installation of Ubuntu Linux. So, here's my Linux box right, Ubuntu 16.04. I take this command here, and I run it, that's it. Basically, the command's running a script from docker.com and piping it through a shell. Let me speed it up a bit, okay, that is it. Docker installed, then I just grab this little command here, put my user onto the end, and we're ready to go, that's just added my user account to the local Unix Docker group, so I can run Docker commands without using sudo. But look right, we have got Docker, hey. Now, remember, this was just one way to install Docker on Ubuntu Linux, there's a zillion other ways on a million Linux's right, and for those, the Docs are your friend, really, installing is easy these days. And that's us done with installs, short and sweet, time to crack on with the good stuff, so coming up next, oh yeah, a master class on Architecture and Theory, get your pencils out.

Architecture and Theory

Module Intro

Mastering something like Docker demands a lot more than just knowing the commands. Real expertise demands that you know how things fit together under the hood. Well, with that in mind, the plan for this module is pretty much like to waffle. It kind of is. So let me lay this down upfront, This is probably going to be pretty long module, and yeah, it's a bunch of theory, and yeah, I am probably going to waffle a bit more than normal, so, if that doesn't sound like your cup of tea, maybe you're happy not being an expert and are fine just getting by day to day, that's OK; just skip on over to the next module. But if you do want to know some of the internals, or if you're like me, and you need to know this stuff, then stick around. I mean, after all, this is a deep dive course, and I don't want to short-change you, and I reckon you'll love it. So here's the plan. Yeah, OK, just kidding, well, probably not, actually. But this actually is the plan. We'll be looking at two main things. First off, we're going to take a look at the stuff in the kernel that we used to build containers, and we're going to be doing Linux and Windows, by the way. Then, the other thing is the Docker engine, or Docker itself, the stuff that makes driving these kernel things nice and easy. Now, to do this, I'm thinking we'll start out with a bit of a big picture. So we'll talk about what a container actually is, which I think you'll find interesting, then we'll do a high-level view of the kernel internals, then a short description of the Docker engine itself. After that, we'll start drilling in. We'll do the kernel stuff first, because that's where the container building blocks live, then we'll do the Docker engine. OK, now, depending on how we get on the ones above, we might, or we might not, do this one. You see, the master plan is to cover Windows, as well as Linux, but if I get to this point, and I'm thinking, 'Eh, maybe we've been a bit heavy on Linux, and I don't know, a bit unfair to Windows,' then we'll take a step to the side and we'll dedicate a few minutes entirely to Windows. But let's see how things go. We may or may not do this one. Either way, though, we'll finish things up with a recap, which I'm thinking is going to be important, right, because I feel like we're going to cover a lot. Now then, as part of this module, we're going to come over a couple of Docker Certified Associate Exam Objectives, and both in Domain 3, Installation and Configuration, We'll show how the engine can be operated, without effecting running containers, and we'll explain name spaces and C-groups, and this is going to be huge, okay? Okay, now a final word, before we crack on, If you're thinking that maybe you might skip this module, just don't. I mean, look, if I had things my way, right, I'd make it mandatory, and I'd ban you from Docker until you passed a test on it. I just feel that this kind of stuff is that important, because I'm not interested, even in the slightest, in you guys walking away from this course, which you've paid good money for, remember, but I don't want you walking away from it with a few commands under your belt, and thinking you can take on the world, only to come undone at the first hurdle. That's not what we're after. I want to prepare you like you've never been prepared before, so yeah, this module is about helping you really get it. And yeah, I'm probably going to waffle a bit. But we're getting under the hood, right, and we're revealing the secrets, so grab your usual coffee or whatever, and let's crack on.

Architecture Big Picture

So, the Big Picture. This module's really about two things. The low-level kernel stuff that we used to build containers, and the Docker Engine stuff that makes it all easy. So, starting out with the kernel stuff, all a container really is, is this ring fenced area of an operating system, with some limits on how much system resources it can use, and that's it. And that is a container definition, right there. Okay, obviously, we can have more than one, and I know it's a really simplified definition. In fact, it's my own personal definition, I suppose, because the thing is, there's actually no official definition for a container, and you know what, you can even build all different types of them, but the popular containers that we always talk about today, the ones made popular by Docker and, I suppose, LXC before that, well, these pretty much fit our definition here. Now, to build them, we'll leverage a bunch of low-level kernel stuff, in particular we use namespaces and control groups, and these fit into our diagrams just like this. However, right, I know this picture makes it look really simple, but these are low-level kernel constructs, and out of the box, they are a pig to work with. In fact, so much so, that they've actually been around for ages, but they've remained obscure and esoteric, all because of how hard they are, and that is where Docker comes in to play. It's actually the Docker engine, that makes all of this really easy, and that's our two main topics. The kernel building blocks, and the Docker engine. Now, sticking with the big picture for another second, okay, the Docker engine is just like any other engine, and I don't just mean IT stuff, so even like a car or a motorbike engine, it is modular. So, although we might interface with it, through the CLI, directly to the API up here, a single endpoint here, under the covers, it's actually a bunch of smaller, moving parts. Now, don't worry too much about the names, right, we'll get into that later. But the workflow is pretty much like this. We used the command line to create a new container, the client takes the command and makes the appropriate API request to the container's create endpoint here in the engine, right? Create new container, yeah? And the engine here pulls together all of the required kernel stuff and out pops a container! It is a beautiful thing. But this is all big-picture stuff. Time to turn things up a notch, and take a look at the kernel stuff that underpins it all.

Kernel Internals

Now, I know the container's started on Linux, and I know that Linux and Windows are very different beasts, but Docker's multi-platform these days, so I'm going to try and be as fair to Windows as I am to Linux. Well, here goes, Linux containers have been around for ages, or at least, the kernel stuff that we've built them with has, and I guess there's been a few people out there using them for ages, but for most of us, they were just too hard. You pretty much had to be a kernel hacker to get them working, and I suppose that's why it was really only the likes of Google and maybe a handful of other companies that were using them, the kind of companies, you know, that are only the bleeding edge with kernel engineers on staff, fair play, okay? They'd all seen the light while the rest of us were fumbling around in the dark and getting high on virtual machines. The point I want to make, though, is that the stuff to build containers is not new. It has been around in the Linux kernel for what seems like forever, definitely way before Docker was even a twinkle in Solomon's eye. Now, the Windows world was a bit different. Yeah, sure, Microsoft had a few internal projects, like Drawbridge and server silos, but those were dead in the water, and that's no disrespect to Microsoft, it's just a fact that the genesis of modern containers was all on Linux. Anyway, we used two main building blocks when we're building containers, Namespaces, and Control Groups. Both of them are Linux kernel primitives, and now, we've got equivalents on Windows. Hooray. Namespaces are about isolation, and Control Groups are about grouping objects and setting limits, so Namespaces first. These letters take an operating system, and carve it into multiple, isolated, virtual operating systems. It's a bit like hypervisors in virtual machines. So, in the hypervisor world, we take a single, physical machine, with all of its resources like CPU and RAM, and we carve out one or more virtual machines, and each one gets its own slice of virtual CPU, virtual memory, virtual networking, virtual storage, the whole shebang. Well, in the container world, we use Namespaces to take a single operating system with all of its resources, which tend to be high-level constructs like file systems and process trees and users, and we carve all of that up into multiple virtual operating systems, called containers. Well, each container gets its own virtual or containerized root file system, it's own process tree, it's own zero interface, it's own root user, the Full Monty. And just the way a virtual server in the hypervisor world looks, tastes, and smells like a regular, physical server in the container world, each container looks, smells, and feels exactly like a regular OS, only it's not. All three of these here are sharing a single kernel on the host, but everything's isolated, right? So that there's stuff inside of one container that doesn't even know about these others over here. It's ignorant! It's like, 'What? Other containers? What are you on about? There's only me here.' Well, in the Linux world, we know we've got Namespaces, and in the Windows world, we've also got Namespaces. Now, I've no doubt that the implementation specifics are different, but I suppose to keep the jargon to a minimum, Windows folks are kindly referring to their OS isolation stuff as Namespaces as well, thank you for that. Now, in the Linux world, we've got these Namespaces, and Docker container is basically an organized collection of them. So, this container here, is it's own isolated grouping of these Namespaces. It's got its own process ID table with PID one and everything, its own network namespace with an id zero interface, IP address, its own root file system, blah blah blah. Oh, and it's secure, so it's a secure boundary, and yeah, obviously we can create more, each one isolated and looking and feeling like a standalone OS. Well, you know what, real quick; the PID Namespace like what I think we just hinted at, right, gives each container its own isolated process tree, complete with its very own PID one. This means, right, that a process in one container, say this one here, is blissfully unaware of any over here. Can't see them, doesn't even know they exist. Alright, well, then that Namespace gives each container its own isolated network stack, so its next IP's routing tables, the lot. Mount gives a container its own isolated root file system, that'd be C: on Windows, obviously / on Linux, IPC lets processes in a single container access the same shared memory, but it stops everything from outside of the container, isolation remember? UTS gives everything its own host name, and the username space which is actually relatively new to Docker, but that lets you map accounts inside the container to different users on the host. The typical example is mapping the container's root user to a non-privileged user on the host. Okay, well, the concepts are the same for Linux and Windows, right? Slice and dice the OS, and provide isolation. So that's Namespaces, and it's great and all, but like, any multititan system, there's always the fear of noisy neighbors, I mean, the last thing that this container here, oh, I've taken the Namespaces off, just to make it a bit easier on the eyes, right, the last thing Container A wants here is D over here throwing all night parties and chewing through all the CPU and RAM. So, right, to realistically have containers, you know, something that you'd run in production, we need something to polish the consumption of system resources. In the Linux world, this is control groups, and if you call, you called it C-groups. In Windows, it's Job Objects. But, credit to the Microsoft folks, They seem to be playing nice and generally

calling them Control Groups as well. After all, right, they do a similar thing, and who wants multiple names for everything? But call them what you want, right? The idea is to group processes, and then impose limits. Now, I'm sure you've already got it, but Control Groups that are, say, okay, Container A over here is only going to get this amount of CPU, this amount of memory, and this amount of disk IO, and then, Container B, this amount, and these as well, and with these two technologies, Namespaces and Control Groups, we have got a realistic shot at workable containers in a union file system, or some way of combining a bunch of read-only file systems or blocked devices, lashing away to the layer on top, and presenting to the system as a unified view. Take these three, and we have got modern containers, and that's exactly what Docker did. It came along and it made all of this easy, and the rest is history. Now, there is more, okay. There's always more, I mean, modern Docker containers leveraging things like capabilities and setcomp and a bunch of other stuff to add security and the likes, but honestly, these three are at the very center, and everything else is like icing on the cake, and that's enough, I think, of the kernel stuff. Time to switch tack and take a look at the Docker Engine.

The Docker Engine

Okay, the Docker Engine. If we remember back to the Big Picture, the engine's right at the core of what Docker does, and it's what makes containers easy. But the top here, it exposes an API for us, down here, it interfaces with all the kernel magic, and out pop containers, brilliant. Now, before we dive into the detail, I want to be clear about something. These days, Docker is a full-on platform, so, at the core of everything, yeah, we've got the engine, and that's what we're focusing on, but plugging into the engine is a ton of stuff, I mean, from Docker Inc., we've got the native orchestration stuff in swarm, there's the on-prem secure registry, there's universal control plane with its ops-ui, R-back policies, loads of goodies, and there's a bunch more, right? Plus, there's the ecosystem, so Docker is definitely a complete platform. But all we're focusing on is the engine. Now then, I want you to understand the story of the engine, so step into my DeLorean, and buckle up, because we're going back in time. Alright, way back when, when TVs were black and white, well, Docker came out of a company called dotCloud, and in the beginning, it was a pipe-and-till called dc, for dot, and c for cloud. It was basically a wrapper for LXC and AUFS, AUFS is a union file system, and LXC, a bunch of tools for interfacing with the container primitives in the kernel. Looking familiar, yeah? And it was all Linux back then. Now, I know, Docker gets all the props for making containers popular, and rightly so, but it's only fair to say that it really started with LXC. Oh, I like that. So, props to LXC. Anyway, this relationship, with LXC, didn't last long. As soon as Docker got popular, things got complicated. One of the issues was just the sheer pace of things that were developing at, I mean, Docker was developing as a technology, and as an echo system, and at the same time, and not by coincidence, by the way, but LXC started cranking up development as well. So, of course, the inevitable happened; stuff started breaking, specifically changes in LXC would break Docker, which is no surprise, right? I mean, Docker, being reliant on an external tool like LXC, which is so insanely integral to the project and at the same time, so out of Docker's control, I mean, look, it was never going to be plain sailing. What Docker really needed was something that did the job of LXC, but was under their control. Enter libcontainer. So, libcontainer is pretty much a light for light replacement for LXC that interface to the container stuff to the kernel, but it's under Docker's control, and this was a key move. Anyway, right, by this time, the DC tool had become Docker, and things were developing like crazy, and before we knew it, Docker became a monolith. Now, we call this the daemon, by the way, but rather than being a lightweight and fast like it was supposed to be, it got bloated and slow, I mean, look at it. It's doing everything. It's implementing the HTTP server, and REST API, images, builds, registry stuff, networking storage, authentication, you name it, it was bloated, and it lost its mojo, and it's ironic, right? Because on the one hand, Docker's leading the charge towards micro-services, but on the other hand, Docker itself is a monolith. Like, what? And nobody was happy. For the Docker folks, it ran on a monolith just in there. For the ecosystem, well, they wanted to work with Docker, but really, just the run-time stuff. They didn't care about all this other stuff. Well, actually, sometimes they did. I'll give you an example. So, Kubernetes was out there, and positioning itself as a container orchestrator, and it was using Docker as its run time. But obviously, pulling in Docker meant it was also getting all of this stuff, including Docker's own, built-in orchestrator. Uh-uh. So, Kubernetes, as an orchestrator, was shipping with Docker, which had a competing orchestrator already built in. Talk about mental! Safe to say, the ecosystem wasn't loving the bloat. It was killing usability, and compositability, simplicity, security, you name it, but, then users weren't ecstatic, either. But everything's fixable, right? So, Docker set about this massive project about picking it all, and refactoring the core plumbing stuff into separate tills. And, at about the same time as this, the Open Containers Initiative starts making its way up the stage, and we start getting some standards, specifically an image spec and a container runtime spec. So, a bit of a perfect storm going on here, yeah? Docker re-factoring, and at the same time, we start to get standards. Fabulous. Well, fast forward to today, and we're looking like this. We have got the Docker client, where we slap in commands like Docker Container Run, we've got the Daemon implementing the rest API, Container D here is the container supervised that handles execution and lifecycle operations, things like start, stop, pause and unpause, and we've got the OCI layer, that does the interfacing with the kernel. Alright, on Linux, it works like this. The client asks the daemon for a new container. The daemon gets Container D to start and manage the containers, and runs C at the OCI layer, actually builds them. Run C, by the way, is the reference implementation of the OCI runtime spec, and it's the default runtime for a vanilla installation of Docker. Now, Docker on Linux has looked like this since 1.11, way back in April 2016, but that's just Linux. Things are a bit different on Windows. We still got the client and the demon here at the top, but instead of Container D in the OCI layer, we've got something called the Compute Services layer. Now, OK, I suppose that does make it architecturally a bit different, but the user experience is the same. This kind of plumbing stuff here, at these kind of layers, it's interesting, but it's all super low-level. Day to day, we're not effected. I mean, the API up here in Windows is exactly the same, so no stress. Now, I want to throw Microsoft a bone here. They're not doing anything nefarious, or trying to be different. In fact, they're doing a cracking job in the community. It was just a timing thing. So at the same time Docker was doing all this refactoring into Container D and Run C, Microsoft was also getting ready to ship Server 2016. Now, in order for them to hit their ship dates, they just couldn't wait for Container D and the OCI stuff to bake, so we ended up with some low-level differences. Now, I'll give you my opinion here, which I probably shouldn't, but I don't think it'll be long before we're seeing Container D and an OCI runtime here on Windows, but that's just my opinion, right, I don't speak for Microsoft, or anybody else, for that matter. Anyway, this is the engine today. Now, let me run through the creation of the new container on Linux. Generally speaking, right, we use the Docker client to create containers. The command's docker container run, I'm giving it a bunch of parameters. Okay, well the client takes that command, and it posts it as an API request to the container's create endpoint in the daemon. But guess what? All this engine refactoring has left the daemon without any code to execute run containers. Seriously, Docker no longer even knows how to create containers, all that logic's ripped out and implemented into Container D in the OCI. So to create the container, the daemon calls out to Container D over a GRPC API on a local Unix socket, and even though Container D has got container in its name, even it can't actually create a container. What? Yeah, that's right. All the logic to interface with the Namespaces and stuff in the kernel is implemented by the OCI. So, for Docker on Linux, that defaults to Run C, though you can switch that out for pretty much any OCI compliant runtime. Alright, well, things work like this. OK? You're in that process starts the daemon. The daemon starts Container D, which is a daemon process, so a long-running process, and this is kind of the glue between the daemon here and Run C below, anyway. Container D starts a shim process for every container, and Run C creates the container, and then exits. So Run C gets called for every new container. But it doesn't stick around. The shim does, though, and it's the same for more. So C here how Container D effectively manages multiple Run Cs, or shims? And that's pretty much the process. And you know what? Architecturally, it's great. I mean, it's modular, and composable, and reusable, all the buzzwords that we love, as a matter of fact. Actually, in case that's all jargon to you, all we're saying with composable and reusable is that Container D and Run C here are potentially swappable, definitely Run C, you can swap that out for pretty much any OCI compliant runtime, and they're both reusable as well, so both easily reused by players in the eco-system. And like I was saying, it's all good. But you know what? All of this de-coupling of the container here, from the daemon, and even the Container D, it lets us do really cool stuff, like re-start the daemon in Container D, and not effect running containers. And if you do Docker in production, oh my goodness, you will know what a huge deal this is. I mean, Docker is cranking out new versions of the engine like nobody's business. And upgrading them in the past, like when an upgrade would kill all of you running containers, let's just say, it was a challenge. But now, we can re-start these here, leave all of our containers running, and when they come back up, they just re-discover running containers, and reconnect to the shim. It's a beautiful thing. Okay, so, a few last things. The daemon here still implements a bunch of stuff, but these days, it's mostly higher-level, value-end stuff, that core plumbing stuff is mostly broken out into Container D and the OCI layer. In fact, more's being broken out to Container D, even as I record, it's things like swarm orchestration, overlay network, builds and stacks, cool stuff like that that's getting implemented in the daemon. Oh, yeah. Container D is a Cloud Native Computing Foundation project. In fact, so is GRPC, and they're a great fix together, actually. In fact, keep your eye on GRPC, it is the future. What else did I want to say? Oh yeah, So, it's a one-to-one relationship here, between containers and Run C, or the shim. For every container that you create, a new Run C process forks it, and then exits, leaving every container with its own shim process, connecting it back to Container D. Okay, so it's clearly a one to many relationship between Container D and shims. So, you only ever have one Container D process running on a system, and it's a daemon process, right, long-lived? But Run C isn't, that just starts a container and then bows out. Now, there's also a lightweight seal on Container D, but it's not for general consumption. But the whole point of Container D and Run C are that they're driven by higher level tools. And you know what, I could probably talk all day about this stuff, and you're probably nodding off, if you haven't already, so with that in mind, right, know that this has been long, but it's kind of been a Linux fest, so I'm going to do a quick five minutes on Windows, and then we'll do the recap.

Windows Containers

Alright, Windows came to the Container game late. Nevermind though, Microsoft has done a cracking job, getting them into Windows 10, and Server 2016. And I'm talking about native Windows containers here, the ones that run true blue Win32 apps. Now then, as part of the work to get them onto Windows, Microsoft had to put a bunch of new stuff into the kernel. Now, at our kind of high-level, we're talking about the two main building blocks that we've got in Linux, Namespaces, and Control Groups. The Namespaces stuff lets Windows create additional isolated user spaces, Containers, if you will. And the Control Groups, or Job Objects, yeah? These letters group processes and slap limits on them. Looks familiar, right? Well, as well as that, they did a bunch of work on NTFS and the registry, so that we can get image layering and all of that goodness, like we do with AUFS and overlay AUFS on Linux. Remember, a union file system or a union mount system with some copy on right is an integral part of a Docker container. Anyway, they also ported a Docker client and daemon into Windows. I mean, literally ported it, right? So we got a docker.exe process as a client, and dockerd.exe is a Windows service, and that's the daemon. What all of this means is that we get the same API and the same user experience. We didn't get integration with swarm and other stuff, magic. Below this, though, we start to diverge from Linux. Remember, we said that instead of Container D, and then OCI runtime, we get this Compute Service layer. But it does the same stuff, so as far as we're concerned, like as far as user experience goes, it's all the same. Same commands, same containers. Now, if you poke around inside a Windows container, you're going to see a few differences there as well. We're talking about naked Windows containers, remember, one's running Windows apps. Well anyway, inside, you're going to see a long list of system processes, and that's different, right? In Linux, we're used to seeing a single process per container. Well, you're not going to see that in Windows, and it's not a fact of how Windows works. Basically, over time, Windows has developed a bunch of interdependences, so apps need certain system services, DLLs, to be available, and in turn, some of those rely on others, and if they're not there, things break, and it's not different for containers. Every container needs these processes. When we start a Windows container, it gets this process called SMSS. It's a bit like it is, if you know your Linux. It's got the job of making sure that all of these are the required system service and the likes are rolled up. Once they are, then your app can start. Now again, I know it's a difference, and I know it's easy to point fingers at and make fun of, but does it really impact the user experience? I don't think it does. Now then, Hyper-V containers, OK, yes, it's true, we've actually got two different types of Windows containers. Native Windows containers, and Hyper-V containers. But both have a native Win32 apps, but you can't do Linux inside of a Hyper-V container. But why two options? Well, native containers use Namespaces for isolation, and down at the bottom, they all share the host's kernel, but sometimes, that's not what you need. I mean, from a security perspective, maybe you don't think Namespaces isolation's all it's cracked up to be. Or, maybe you've got an app that needs a slightly different kernel, or a different patch set, or whatever, right? Enter Hyper-V containers. When you set up a Hyper-V container, Windows actually spins up a lightweight Hyper-V VM in the background. Now it is lightweight, right? So it's got less of a performance overhead than a full-blown VM, but inside, you still get a full-blown OS, so it's not using the host's kernel, a separate isolated kernel, and then you run your container on that. So, look at the diagram, right? On the left side, we've got the host OS at the bottom. Well, look, it's at the bottom for the lot really, but on the left side, the native containers are actually using it. They spin up, directly on the host, leverage its kernel, and isolationist done with Namespaces. On the right, we've got a VM. It's lightweight and all that jazz, remember, but inside, it's still running a totally isolated kernel, and it can be Windows or Linux inside, right? Both work with Hyper-V isolation. Anyway, the container runs on that, and obviously, we can have a load of these on each host, but it's always one container per VM. That's kind of the point. Cool and all? But doesn't that make life a bit complicated? Well, not really. You just develop your containers in Windows up, the same way that you always have. There's only one type of build, and then, whether or not you go with native containers or Hyper-V, it's just a deployment decision. If you want Hyper-V, you give the Docker run command, the minus minus isolation equals Hyper-V switch, and to run it natively, you leave that switch off. And that's it, and I reckon that's the gist of Windows containers. A few low-level implementation differences, but user-wise, it's all the same. So if you're familiar with Docker on Linux, Docker on Windows is going to be a breeze. Now then, I know that this has been a ton of theory, and you might be like, 'Oh my goodness, how am I supposed to'

remember all of that?' But lucky for you, we've got a short, sharp recap coming up.

Module Recap

Drinking from the fire hose, yeah? Love it. Well, let's quickly recap. We said that the stuff to build containers has been in the Linux kernel for ages. It was just hard to use, like too hard, okay? Windows was a bit different, they had a couple of internal proof of concepts, but nothing got off the ground. So, Windows is playing catch-up. But the gap is closing, and parity is not a million miles away. Anyway, the major kernel technologies that we are interest in are Namespaces and Control Groups. They're pretty similar across Linux and Windows, and I reckon they're the two fundamental building blocks of containers, plus some sort of a union file system. Well, Namespaces let us ring fence, and isolate areas of an operating system, and this is basically the container. Then, we sprinkle some control groups on top for capping resource usage. Add in a dose of union file system or blocked device snapshotting, and we are staring at the model for a docker container. This was all hard, remember, though, and along came Docker, and everything got easy. Now, Docker iterated like crazy, and mistakes were made. Nothing worthy of death, right? Just a bit of a beating. Though, to be fair, we're only talking about the kind of mistakes that every start-up makes. I even feel harsh, calling them mistakes, it's just part of making something great. Either way, though, one of the issues was bloating at the daemon, it became way more than a simple reusable building block, and nobody was happy. Users weren't happy. Docker wasn't happy, and the eco-system certainly wasn't. So, Docker fixed it, and the community helped, of course. But these days, the engine is way more of modular beast. Not only is it in line with the tried and tested Unix philosophy that a few small, simple components are better than one big one, but it means that a bunch of it is swappable, and reusable. OK, so, the client talks to the daemon, over a REST API. A daemon uses container D to create and manage Container life cycles, and Container D uses Run C to actually interface with the kernel, and build containers. Now, there is some stuff left in the daemon that I'm not showing you, but the point I'm making is that the core bits are broken out into separate projects. Anyway, this effectively decouples running containers from the daemon, meaning that we can stop and restart and even upgrade the daemon, without killing our containers, got to love that. And that's the Docker engine. Ah, yeah, there is some low-level implementation differences between Windows and Linux, but the API and the user stuff is pretty much the same. And who knows? Future versions of Windows might even ship with Container D, and an OCI runtime, but maybe not, I honestly don't know. Either way, though, I just think it's all of it. Eh, no big deal. We're talking low-level stuff that doesn't impact us. Sticking with the Windows side of things, though, there's native containers and Hyper-V. Natives run directly on the Windows host, so leverage its kernel and use Namespace technologies for isolation. Hyper-V, though, spins up a lightweight VM for every new container, the idea being that VM isolation might be better or more secure than Namespaces. Also, though, you get to run a different OS in the VM, if you want, so different versions of Windows, and even Linux. And yeah, I think that's what's done. Now, thanks for sticking with me, I admit that I kind of love this stuff, but I'm hoping that you do, too. In fact, reach out to me on Twitter with your thoughts, is this kind of stuff good, or bad? I'm really keen to know, anyway, we're done, right? We're about to switch gears now, and get hands on with Docker images. Bring it on.

Working with Images

Module Introduction

A proper understanding of how images work is massive if you want to master Docker. In fact, it's so important the next two entire modules are dedicated to them. In this one, we'll crack open the implementation stuff like how the heck is an image even constructed and what's inside it and the likes. Then, in the next one, we'll look a bit more at how we build our own images. So, for this module, we're looking like this. We'll do a quick big picture to cover off the main concepts and it will be quick, if you're super new to this stuff, then I highly recommend taking my Getting Started course first. Now, I can't force you, but beware, right. This is going to be a bit of a deep dive. Anyway, after that, we'll dig into how they're built. Like what's all this layering stuff and what are these crypto IDs all about? Then, we'll do registries, we'll share a few best practices, and then we'll bring it all together with a solid recap. Now, honestly, I'm going to be as hands-on as I possibly can. Plenty of examples and poking around on the CLI. You're obviously welcome to follow along in your own lab or you can just sit and watch. Either way, I think it's going to be fun. Now, as hands-on as we are, we're still going to be explaining a bunch of theory along the way. But I have got the PowerPoint slides from the last module. Nearly 40 hours just on the slides for that one. I'm worried (chuckles) I've done some irreversible damage. So slides will be kept to a minimum. Anyway, I think that's the plan, oh, and although most of what I'm going to show is going to be from a Linux machine, we'll cover the Windows stuff too, just don't sweat it if I don't log onto a Windows machine. Remember, most of the stuff's the same between the two so it shouldn't really matter which platform I'm on. Also, right, we're going to cover a bunch of exam stuff and all of it from Domain two, so we'll use the command line to play with images. We'll inspect images and look at specific attributes. We'll push an image to a registry and pull an image from a registry, describe how layers work and then look at layers, we'll delete an image, tag one, and store one in a registry. Well, let's crack on.

Images: The Big Picture

So, a quick big picture. Hopefully you've completed Getting Started with Docker as a pre-req. That's the idea but it's your call, but cracking on. An image is a ready-only template for creating application containers. Inside of it is all the code and supporting files to run an application. Now, images are build-time constructs and containers are their run-time siblings. So think of a container as maybe a running image or, I suppose, vice versa as an image as stop container. Either way, right, all an image really is, and we're high level at the moment remember, is a bunch of files and a manifest. The files obviously include your app files, but they're also going to be all the OS and the library files and stuff that your app needs to run and ideally, just the ones it needs to run. Then the manifest is a JSON file explaining how it all fits together. Now then, drilling a bit deeper. An image is a bunch of layers that are stacked on top of each other. That's why I'm always drawing them like this. But it looks and feels like a unified file system. So, the stacking's important and we'll get to all the luscious details soon but for now, there's magic going on to hide all this layering and make it feel like a single flat image. Anyway, we take this and we start containers from it. So umpteen containers all sharing a single image. An it's insane for efficiency and container start time. Now, we store images in a registry, which can be cloud or on-prem. We pull them down to our hosts using the docker image pull command. Once on our hosts, we can start containers from them. Now, we're only showing a couple containers for simplicity but remember, they are both sharing a single image and the image is read-only, so, ah, how do the containers write stuff? I mean, read-only and writing, I don't know about you but from my experience, they're usually not a great combo. Well, for each container, we create a thin writable layer and effectively lash it on top of the ready-only image. Then, any writes and updates the container needs to make get performed here. Now, because the writable layer pretty much is the container then it is a one to many relationship with the image here. One writable layer per container. Details to follow, yeah? But I think that's the big picture. The templates for starting containers, the read-only, and the shareable. Under the covers, it's a bunch of layers and a JSON manifest. Love it, let's crack on with the detail.

Images in Detail

Buckle up, because it's hands on time. We said an image is a bunch of layers. We read the manifest file, we stack them up, then we throw in some magic to make it all look unified. Well, you know what, to get an image in the first place, we have got to pull it. I think, probably the easiest way to do that is with docker image pull. And we'll have redis. Now, if you're on a Windows machine, I recommend maybe Microsoft slash dot net. Anyway, each of these pull completes here is a layer and it's the same on Windows. Now then, there's actually no such thing as an image, at least not as a single blob or object. You see, an image is actually a bunch of independent layers that are very loosely connected by a manifest file, which I know is at odds actually with the way always talk about them as a single blob. But they're not. Under the covers a bit, the manifest file, which we sometimes call a config file, right, but as you'd expect, it describes the image, like its ID and tags and when it was created, but importantly it also includes a list of the layers that get stacked and how to stack them. Now these layers are blissfully unaware of the bigger image. Just a bunch of files that are what they are, an independent layer. They have no clue that they're going to be stacked up and made into something bigger. So what I mean by that, right, is that one layer in image has no references to other layers. All of that's done in the manifest. And I think we get an idea of this actually with the pull we just did. I mean, look, we're not pulling the image, so to speak, as a single object with a single progress bar. It's obvious that we're pulling individual layers and it looks like six of them? Anyway, behind the scenes, the pull command's generating an API request to the docker registry API on a registry somewhere. Now, Docker's a bit opinionated about registries, so, unless you tell it something else, it's going to assume Docker Hub, okay? Well, pulling an image is actually a two step process. Get the manifest, pull the layers. Now the manifest's a bit interesting, right? We've got this push towards multi-architecture support and content addressable storage. One's about supporting a single image across multiple architectures, maybe X86 and ARM and PowerPC or whatever, and the other's about using cryptography to guarantee we get the images we asked for. Anyway, step one's getting the manifest. Now, the client first looks for something called a fat manifest, and that's like a manifest of manifests, right? Basically it's a list of architectures supported and a manifest for each of those. So, if your architecture's on the list, it points you to the image manifest that you need. Well, for us, we're on Linux X86 or AMD64 or whatever. Okay, yep. So for us, we get the fat manifest, have a look to see if there's an entry for Linux on X86 and if there is, we go get the image manifest for that. So, I suppose, getting the manifest is a bit of a two step process these days. Get the fat manifest first, then get the image manifest for your architecture. Once we've got that, we pass it for the list of layers and we download them from the registry's blob store which is what we saw here with the pull. Now then, we mentioned content addressable storage. So back in the day, Docker didn't hash its images and there really wasn't an easy way to know if the image we got was the image we asked for. Well, that's obviously not good, especially when most of us are pulling our images across the internet. So, problem, well, solution, and thanks a ton to the community and OCI, but in Docker 1.10 we got content addressable storage, which at the high level says, "okay, every layer has got a 'blob' of files and stuff inside." So now I tell you what, "let's grab a hash of all that content and use it for the image ID." That way we can say, "Okay, registry, give me the image with this particular hash, please." We download it, run the hash again, and see if the two match. And in one fell swoop we have got a way more secure storage model. So, you're seeing the image manifest here that we're referencing stuff via a hash. These are the layer IDs. The syntax is just algorithm sha256 in this case colon and then the hash and hex. Anyway, we get the manifests and we pull the layers and, hey presto, we've got the image on our host and actually we can see the hash if we want. Hmm, okay, right. Anyway, where are we? Okay, we've got out layers, they're linked and stacked thanks to a manifest, and behind the scenes we've got some crypto goodness giving us immutability. Now then, behind the scenes, there's a storage driver pulling together all this layering. For us it is the aufs driver, oh, and most of our images and container stuff is going to exist somewhere here in valid docker. On Windows, this is going to be a program called docker and your storage drive is always going to be Windows filter, though, those could be famous last words. Here on Linux, right, there are a ton of storage options. Aufs is the oldest driver and you still see it everywhere. Personally, I think overlay two is the future. Now then, layering pretty much works like this. There's a base layer at the very bottom. I tend to think of this as like the OS layer. It's the one that's got all the files and OS that build a basic OS, like ubuntu or something. In fact, let's assume it is ubuntu, right? But don't forget, when you run this image as a container, it's going to be using whatever kernel you've got down here on your host and that could be SuSE or Centos or whatever. So all it's actually making this base layer here ubuntu, it's things like, I guess, the usual ubuntu file system layout and maybe a few common ubuntu tools. So it is totally possible to be running a Centos docker host with ubuntu based containers on it. Not Windows, mind you, so it's got to be Linux on Linux or Windows on Windows, from a kernel perspective. Now I'm talking about hyper V containers here. Anyway, look, that container is going to be using whatever kernel your Centos OS here is running. But the file system and the likes in inside of it are going to feel like ubuntu (sighs). Mental maybe but it works. Then, on top of the base layer, we stack more layers. Things like your app code and the like, right. Now, I know this is a bit simplified 'cause I hate PowerPoint but it gives the picture. OS at the base layer with

files and libraries and stuff. Copy in some app files as another layer. I don't know, maybe add another layer of updates later, and the storage driver waves its magic wand and abracadabra and the layers disappear and we're staring at what looks like a single unified file system, fabulous. Now then, each of these layers is represented in a directory in the file system under `var/lib/docker` and then your storage driver name, for us it's aufs and then diff. Windows, that's going to default to c program data docker Windows filter. Okay, six directories, and funny enough, six layers. Simple right? Mmm, maybe not so much. You see, since we got this fancy new content addressable storage model, there's no easy way to match the layer IDs with their respective directories on the host. And it's definitely annoying. Well, I reckon, this one here with the most objects is probably the base layer. Right, so that right there is the content of the base layer of the redis image we just pulled. And if you know your Linux, you're going to know that we're looking at a root file system and that's what we said, right? The base layer of an image has all of the OS files and directories. Then these other layers are going to have like the app code and the config files and stuff. In fact, what's this one up here with only four objects in it? Oh, it's got a couple of hidden objects as well, right. That's where the four comes from. But let's see, what's been added in here? Okay, looks like someone's maybe been updating the users and groups for the image. So, if we go docker history redis now don't be put off by this, right. I'll explain it in a second but I'm looking for something here that, okay, I bet it's this. See how this command, and this whole list here, right, is commands and stuff that will build the image, but command here is adding redis users and groups. So, that's the one that's going to have created this layer up here, cool. Now, a few things about this docker history output. First off, just ignore this column here, right. Nothing wrong, it's just that the command's older than the new storage model so it gets a bit confused. Anyway, the operations here are a history of the image and how its layers were built. This here is at the bottom right is adding all of the file system objects. Then any other line that's got a non zero value at the end here will have created a new layer. Anything that is zero, well, that probably added something to the image's config JSON. So, I reckon, we should have six non zeros here. One, two... Okay, well we've definitely got six layers. Okay (chuckles), ah, right, this one here. It's creating a directory and setting some ownership. So, I'm guessing, I don't know, maybe it's produced such a small layer that it's got rounded down to zero, probably 10k or something. I don't know. The point is right, when building images, some of the things that we do create new layers and some of them add stuff to the image config file. This here's a list of everything that built the redis image. We can see these obviously created new layers. Where as things like setting environment variables and exposing things like network ports just add config to the image's JSON. Now, I want to show you one last thing before we move on. Running docker images inspect on the image gives us its config and its layers. So, at the bottom here we see the layers, yeah? But these are their content hashes. Now, sadly, they don't match up with the directory names or the image IDs shown in the pull. But we see six layers and these are their hashes. If we look further up, we see other stuff that makes up the image. Working directories, environment variables, network ports, you name it, right? But that, I think, I hope, is probably enough for now. So, a bunch of layers with files and stuff in them. Stacked on top of each other and unified by a storage driver according to instructions in a manifest. Then, we start containers from them. Multiple per image if we want. We pull them with the docker image pull. Inspect them with the docker image inspect and delete them, oh yeah, with docker image rm like this and it's gone. Including all of the files in `var/lib/docker/aufs/diff`, (clears throat). Pretend we didn't see that. This endpoint of the directory, right, is different if you're using another storage driver obviously and on Windows, remember, it is all under `c\program\data\docker`. Anyway, last but not least, an image is basically a manifest and a bunch of loosely coupled layers. Alright, let's switch track and talk about registries.

Registries

Right then, images live in registries. When we pull one to our docker host, we are pulling it from a registry. Docker defaults to using Docker Hub but other registries do exist. Google's got one, Amazon does, there's loads. But those, right, are all on the other side of the internet along with the public cloud, right? But if that happens to be not your thing, well, you're in luck, you can totally get on-premises registries as well. In fact, Docker's got one of its own called Docker Trusted Registry that you get as part of Docker Enterprise edition. Anyway, even when you pull an image to your local host, I suppose we could say it gets pulled to a local registry. On Linux, that's under `var/lib/docker` and then the name of your storage driver. On Windows, it's under `c\program\data\docker` Windows filter. So, images live in registries. Now then, image naming's important. The easiest images to address are the official ones. So, basically, Docker Hub's got this notion of official images and unofficial images. The official ones live at the top level of the Hub namespace. So you address them as `docker.io/redis` or `nginx` or whatever. And because Docker defaults to using Hub, if you're pulling from Hub, you can even leave this bit off and just call it `redis` or `nginx`. Couldn't be easier. But it's all a bit misleading in my opinion. You see, to me, that makes it look like the image is called `redis` or `nginx`, and it's not. It works like this, right, you've got your registry. It can be Hub, Google Container Registry, whatever, right? But that's the first part of the name. Leave off if it's Hub, though, right? Anyway, within a registry, we have got repos and within repos, we've got images or sometimes we call these tags. Anyway, in the redis example, `redis` is the repo name. These are the actual images. Actually, a thing, okay, if we look, yeah, even though we only said pull `redis`, Docker's kindly added latest onto the end. It does that. If you're not explicit about the registry, it assumes Docker Hub and if you're not explicit about the image, it assumes latest. But the point I'm making is that technically speaking the image is actually called latest. It lives in the `redis` repo in the Docker Hub registry. Now, sometimes we call this bit the tag, in fact, most of the time we do. But it's the image bit, right? The other bit's the repo. So, we got away with quite a bit with that simple command. And we could've said, okay, docker image pull and be explicit about Docker Hub and from the `redis` repo we'll have, I'll tell you what, let's say we'll have the 4.0.1 image. And, yeah, cool. It's actually the same image. See how the two hashes are the same? So, that must mean that latest and 4.0.1 are actually the same image. So, if we go here, right, in fact, actually (chuckles), all four of these refer to the same image. So, behind the scenes back here, Docker's not pulled the image again. It knows it's already got it. So this output here shows a single actual image with two tags, two names. And lashing the minus minus digest flag on, okay, it's a bit messy to read but extra confirmation it's the same image. Same digest, same ID, same size, same image. So, registry, repo, image. Now, on the topic of the latest tag. Although, Docker automatically adds it if you don't specify one, there's nothing automatic about the latest tag at the repo level. So for example, right, pushing a newer image to a repo does not automatically tag it as latest. It's a manual thing. That means just because an image is called or tagged as latest, does not mean it actually is the latest. In fact, okay, maybe it is in this repo but, you know what, I know if we come to the alpine repo here, right, edge is actually the most recent here. The one's that tagged as latest just means it's the latest stable release. But even worse, right, if we step into the shadowlands of non-official repos, like where my stuff is, and we look at the `techon` plug demo here. Hmm, okay. I guess you can't tell from here. But I know if we pull them locally, adding the a here, right, says to pull all images in the repo that match my platform and architecture. Well, we'll give that a minute. Okay, three images pulled. And see all these already exists lines? That's Docker saying, "Hey, I know that layer and I've already got it, so, I won't pull it again." Anyway, if we list them all again, and look closely at the `tu demo` lines here, we can see that v1 and latest are the same. v2 is different and that's dangerous, right. Latest is actually oldest. So, yeah, it's just another arbitrary tag for v1. So, moral of the story: just because something says it's latest doesn't guarantee it actually is, especially in the wild west of unofficial images. Speaking of which, right, you might've noticed that I've been adding my name to the beginning of these images. That's because they're not official. Official ones live at the top level of the name space. Unofficials live beneath a username or organization. For the most part at least. An exception is definitely the Microsoft images which live under the Microsoft organization, those are still official. Now then, I need to circle back a bit and talk about hashes and digests again 'cause there's a bit of a quirk when it comes to registries. So, walking through the process of pushing an image to a registry. Well, first off, right, there's no such thing as an image, remember? It's a bunch of independent layers with a config file that loosely couples them. Anyway, we've got layers containing data and for each one we compute its content hash that we use as its ID. And I want to be clear, we call this a content hash. Okay, now then, when we push an image to a registry, we do a couple of things, we create a manifest that defines the image, you know, what layers are in it, yeah, and we push the manifest and layers independently but when we push the layers, we compress them. Okay, that's normal when we're hauling stuff over the internet. Remember, the layer IDs are content hashes and compressing a layer, changes its content. So when they arrive at the registry and a hash is computed to verify integrity, we'll get a fail, they won't match. So, to get around this, when we build the manifest that will push to the registry, we populate it with new hashes of the compressed layers. (laughs) Hope you're following. So, on the host, we've got the uncompressed layers and their content hashes. Over the wire and in the registry's blob store, we've got compressed layers and what we're calling distribution hashes. That way, the compressed layers and manifest get pushed to the registry and the registry uses the distribution hashes to verify that everything arrived as it should. Epic, sounds a bit low level though, yeah? So, why am I boring you with this? Well, when you don't know something like this and you're pushing and pulling images and poking around and trying to figure stuff out, and you throw into the mix the fact that each layer also has a random ID for storing it in the file system and you end up with a single image and each layer has got at least three different IDs in umpteen different places, apparently, it can get pretty freaking soul destroying. So, to save you pulling your hair out and wondering the chuff is going on, now you know the score. Uncompressed layers on the host have a hash that we call a content hash, pushing and pulling though using a hash of the compressed data called a distribution hash. And then just to keep you on your toes the UIDs used for storing layers in the file system are random. (groans). Annoying, okay, but there's method behind some of the madness. And, my goodness, I hope that's enough on registries. If you're feeling a bit overwhelmed, don't worry too much, right, we are deep diving. There's a much simpler overview in my other courses. Anyway, quickly, right, registries are where we store Docker images. The main one's Docker Hub and within a registry we store images in repositories. And these are broadly divided as official and unofficial. Now, we're not done, actually. I have got to tell you this. You should in theory, and I give no warranties of course, right, you should in theory be able to rely on official images from repos. There's a good article on Docker.com and a bit of stuff on GitHub here but the gist is this: anything in an official repo has been vetted. So in theory, it should be up to date, ideally free from known vulnerabilities, though I think that's a bit of a big ask. It should be simple to use though and well documented. And the Docker files, man, these should be living lessons in how to write a good Docker file. Living lessons, eh? All in all, great starting point and probably the first place you're going to see cool stuff like multi architecture support. Now in contrast, unofficial repos are anybody's game. I mean, even I've got stuff on there and my stuff is not to be trusted, I'm deadly serious. I mean, one of my repos has over half a million pulls on it and it's got more bugs than a public toilet in an airport. I mean, honestly, now, look, I'm careful not to paint all unofficial repos as cesspits, they're not, in fact, there's some proper good stuff out there. You just need to be more careful, I mean, heck, look, it's a public service across the internet so I'm hoping you're going to be careful anyway. But for unofficial repos, there's no team curating them. There's absolutely zero guarantees and documentation (gasps) what's that? Anyway, that is registries. The way we store images. There's loads out there but Docker Hub's the biggest. Official images are curated and they set a high bar. Unofficial images, well, they're anybody's game. When we push and pull stuff from them, we're pushing and pulling individual layers that are grouped by a manifest file. Stuff being pushed and pulled gets compressed so we need a second set of cryptographic IDs called distribution digests. Now, digest and hash is just the same, right. Anyway, they get uncompressed on the host and then we use their content hashes. Eh, yeah, different hashes can be a bit annoying at times but at least you know why we have them. And that is us definitely done with registries. Coming up next we're going to run through a few simple best practices that will, honestly, make your container life a whole lot easier.

Best Practices

Okay, a few best practices to make your lives a bit easier. First and foremost, where possible, use official images. It's not rocket science and we said it in the last lesson. They're vetted, documented, and generally speaking, moderately free from vulnerabilities. Alpine here on Docker Hub's a shining example. Look at that, I mean, it's practically a sea of green, right, pretty safe. And look here, right. Compressed size two meg, I mean two meg, are they for real? Well, yeah, and that's our next best practice. Keep your images small. Security principle numero uno, smaller is better. It means a smaller attack surface with fewer vectors. In fact, I think a big reason the Alpine repo is so staggeringly free of vulnerabilities is that there's not a million and one packages in the image. Less packages, less potential for bugs. It's security 101. So, use official images and keep things small. And that's okay but what if they don't have what you need in the official repos? Okay, fair play, that happens all the time. All you do is you take something like Alpine latest and you build on it. That way you know you're starting from a decent base and you add your app on top of it. It's obviously way better than starting from huge old image with a bunch of known issues already in there, I mean, yeah. The next thing though is to be explicit referencing images. And we'll get more into this later in the course but there's a danger in always addressing images with the latest tag. 'Cause for instance, right, Alpine latest tomorrow might be a totally different image than Alpine latest today. And the differences between the two can break your app. So be more specific. Using latest in production is just laziness in my opinion. Be more like Alpine three dot whatever, yeah? But that's probably it. Just a few really simple best practices. Now, let's go and recap everything.

Uber Recap

Right, an image is a template for starting containers. It's read-only and we build it by stacking layers and having the storage driver make it look like a normal file system. But remember, we said it's not

a monolithic blob. It's actually a config file plus a bunch of independent layers. And it's inside these layers where all the application binaries, and files, and libraries, and stuff, where they all live. And then config file has the instructions on how to run it as a container. So, how to set the environment, which ports to expose, and how to start the packaged app. Okay, well we can see it's possible, in fact, it's normal to start multiple containers per image. Each container gets its own thin writable layer where it stores changes and each one of those can be linked back to a single image here. But at no point does any of the data in the layers get changed. They are read-only. If a container wants to change a file in one of them, there's a copy on write operation, where it finds the image from whatever layer it's in, copies it up to its container layer, and makes the change there. Remember, images live in registries. These can be in the cloud or on prem and even when we pull an image to our hosts, it still lives in the local registry of sorts. Now we recently got a content addressable storage model. This let's us run a cryptographic algorithm over the contents of a layer and use the resulting hash as the layer's ID. Which is great, right, 'cause it makes the image and its layers immutable. Okay, so, the layers get a hash of their content. The image ID, though, is a hash of the image config file. The result's the same though, right. Change anything in the image config or anything in any of the layers, and the hashes change. Believe me, this has been massive thing in securing what is a vital part of the container pipeline. Now when we push images to registries, we compress them and compressing means changing content. So, we needed a second hash for use with the registry. It's a low level implementation detail but it can make matching things up on the host hard. I mean matching it up for you and me poking around not for the Docker engine. Docker obviously keeps a mapping so it's a piece of cake for the engine but it can be complicated for us. Anyway, on Docker Hub repos are divided into official and unofficial and the two are not equal. Official repo's the safest and follow best practices. Unofficial, mmm, not so much. In fact, unofficial can be dangerous but they can also be great. I mean, there's some absolutely cracking projects out there in unofficial image land, you just got to know where to look. Yes, there's other registries as well and there's even on-premises ones. Finally, I think we used a few Docker image commands. Push and pull letters, upload and download from a remote registry. Inspect gives us the image config including layer data listed by content hash. I love that command by the way, and rm gets rid of old images. And that's it, I promise. We're ready to move on and see how to build our own.

Containerizing an App

Module Intro

So, we're switching tack a bit in this module. I mean, we're all good with what an image is and the likes. So, now it's time to take an application and containerize it, or put it in an image. So, first up, we'll cover off what the process looks like from a high level. I mean, containerize an app? What does it even mean? So, I figure we better cover that off. Once we're cool with that idea, then we're going to take a web app, like some code, and we're going to make it into a docker image, and we'll run a container from it. Now, to do this, we're going to work with something called a Dockerfile. And we'll see in a second, right? It's just a plain text file with a bunch of pretty simple instructions. But the power of this file is insane! I mean, not only to build an image, I'm talking about the potential to bridge the gap, nay, the chasm between dev and ops. Seriously. This file is a way for developers to describe their apps and how they work, and for ops to read the file and understand. Whew! Anyway, then we'll dig a bit. So we'll get under the covers of what we just did, and I think we'll probably share a few best practices at the same time. Then we'll look at multi-stage builds, which is really taking everything that we're going to learn and making it really production-worthy. Then we'll wrap it all up with a solid recap. Now, again, as we go we'll polish off a bunch of stuff from the exam. And again, all from Domain 2. So, we'll show the main parts of a Dockerfile and we'll describe a bunch of the options. We'll show how to create a production-worthy, efficient image, and use a file to create an image, a Dockerfile, yeah? So let's crack on.

The Big Picture

It is all about the applications. Everything. It's all about the apps. Just making sure you know, which I'm sure you did. Anyway, It all starts with app code, and it all ends with a running app. It's like, once upon a time there was some code, blah, blah, blah, container, container, container, and the app ran happily ever after. The end. Anyway, we've got our code. And we're a Docker course, right? So running it means running it in a container. But how do we do that? Well, that is the million Bitcoin question. Okay, well, the process looks pretty much like this. Here's our app code. To get it into an image, we create a Dockerfile, details to follow, yeah? But this is basically a list of instructions on how to build an image with our code inside. Well, once we get the Dockerfile, we use the docker image build command to actually build the image. Then it's obviously easy to start a container from that. But that is the flow. Take your app, write the Dockerfile with some instructions in on how to build an image, and point the docker image build command at that. And out pops an image! Job done. So, let's go do it.

Containerizing an App

Okay. So, All right, I'm on a Linux machine. But it could be Windows, Raspberry Pi, whatever. The principle's going to be the same. The point is, right, here is some code. And again, look, what the code actually is isn't massively important. The point is, it's code, our application, yeah? Now then, to get this code into a container, we need something called a Dockerfile. Now, right from the start, it's normal and probably a good practice to put your Dockerfile in the root folder of your app. Also, it's a bit opinionated about its name, so it is Dockerfile, all one word, and always with a capital D. Okay. Now, all a Dockerfile is, is a list of instructions on how to build an image with an app inside. But remember, this is going to document the app. So, describe it to the rest of the team, and to new starts, and also to the ops guys. It is a beautiful thing. Okay, so we've got our code, right? And it needs something to run on. The example I'm using here is a Linux app, right? So we need some form of a Linux base image. I'm a fan of Alpine these days, so I'm going to start it from that. Now, it's convention that instructions in a Dockerfile are capitalized. In fact, all this file really is is a list of key value pairs. Almost. So, it goes instruction, usually in caps, yeah? And then value. So, we're going from the instruction and then alpine, the value. Now, you always start a Dockerfile with a FROM instruction. This is going to be the base image that we add our app on top of. Now, if you remember the best practices from the previous module, you'll remember we said, go official and go small. Well, Alpine's an official repo, and it is freaking tiny. I mean, check it out, right? It's like two meg compressed, and probably about four meg uncompressed. So, we're official and small. Next up, I'm going to list myself as the maintainer. Now, don't get carried away. I actually have zero intention of maintaining this. It's just a dead simple web app that I only ever used for demos and courses. All I'm doing here, right, is I'm showing you the right way to do things. And also, I guess, how to use labels. But it is normal to list a maintainer, right. So, go ahead and list yourself, or maybe your team inbox or whatever, right? It's good for documentation. Okay. Well, the app that we're containerizing happens to be a node app, so we need to install node and npm, the node package manager. Cool. Well, that's what this run instruction here does. It lets us run commands and perform build activities and the likes inside the image. Kind of, sort of. Again though, we are instruction and then value. Now, let me be clear, okay. The from instruction up here pulls the alpine image and uses that as the base layer for the image that we're building. The label that I'm using here, all that does is adds a bit of metadata to the image config. But then RUN here creates a new layer. And we'll see it in a second, right? But we'll be taking the alpine base here and we're adding a new layer with the software that we're installing. Apt is just a package manager for alpine, right? Like apt for Ubuntu and yum for CentOS, and, I don't know, chocolatey maybe for Windows. The point is, we're adding some software to the image, so we get a new layer. Anyway, Next, we want to copy in our source code, so everything from the same directory as our Dockerfile here, and we'll copy that into /src image. Well, guess what? We're adding more content, so we get another layer. All right? Well, we're set the working directory to /src. We won't need a layer for that, it's just metadata. Next up, we want to install our dependencies. So, npm install here is going to run against whatever is listed in packages.json. Look, the detail's not important. What we care about is it's the RUN instruction again, and like before up here, it is running commands to install and build stuff. So, this one we're installing node itself and npm. Well, now down here we're using it to install dependencies. And again, it's adding content. So, you know it by now, we get another layer. This particular app listens on port 8080, so we'll expose that. Just metadata again. And then last but not least, right, we need to run an app. So, node, and we'll tell it where the app is. And this is relative to WORKDIR up here, okay? Anyway, these here don't really create layers. Just metadata in the config. So, working directory, exposing that work port and specifying the app to run when we start the container from it. So, We've got our code. For this example, it's a nodejs app. For you, right, it can be totally different. Go.net, whatever it is you do, you've got your code. You've also got your Docker host, as well. Now, that's got to be running the right platform and architecture. So, 64-bit Linux or Windows or Raspberry Pi, yeah? That's got to match what your code is written for. Then we write the Dockerfile that says how we take the app and build an image from it. For those, we're starting out with a slimbase image from the official Alpine repo. A bit of metadata setting me as the maintainer, add a new layer with node and the likes getting installed, add our source code in as our third layer. I think? Yep. A fourth layer building in dependencies, and then some final bits of metadata saying, okay, set working directory to /src, the app runs on port 8080, and you know what? When you start the container from the image, make sure that this is the app that runs. So, yeah. Four layers. We should remember that, right? Four layers and some metadata. Well, time to build it, I think. So, from within the directory of our source code and our Dockerfile, right? We'll go, docker image build. Docker build on its own works as well, right? Well, we'll tag this one as psweb, and then the dot here says use the current directory as the context where the code is, yeah? And away that goes. Now then, to keep the momentum going, I'm going to bend a bit of space-time. Right. That's finished. Okay? And we'll get under the covers a bit on the next lesson. But the image is built, and it's tagged, so we're done. That means that if we do docker image ls, there it is. Psweb, and only just built. Tell you what, let's run a container from it. Well, that'll be docker container run. We'll run this one detached, right, so it doesn't steal our terminal. And you know what, it's just a web app, right? So it can tick away in the background. We'll call it, whatever, web1. It runs on port 8080, so I'm going to map that to 8080 on the host, as well. It's host container, like this. And we're going to run it from that psweb image that we just built. So, I guess moment of truth. Okay, we're good. That's a container ID, which means, if we open a web browser here. This is the server the container's running on, yeah? And it was 8080. And there we are! That's our app. So, from source code to running web server in, whatever that was. Probably less than a minute, if you take out my waffling. But I think pretty flipping cool, yeah? Now, if you're on Windows, or Raspberry Pi, or whatever's your thing, right, the commands in the process are the same. I mean, sure, you're not going to run a Win32 app on Raspberry Pi. But assuming you've got your app on the right architecture, the process is the same. Code, Dockerfile, docker image build. Simples, right? Have some of that. Well, that's cool and all, but let's take a look at what went on under the hood.

Digging Deeper

So, we just containerized our web server. Pretty sweet, yeah? We had our code, threw in a Dockerfile, mixed in a bit of docker image build magic, and out popped an image. Well, let's do away with some of the mystery. First up, there's absolutely nothing magical about a Dockerfile. It's just a text file with a bunch of instructions. All right, it's got a few quirks like you need to name it with a capital D, and it's Dockerfile, all one word. But inside, it's just a bunch of really simple text instructions. Then, docker image build comes along, reads it in, order, one line at a time, starting from the top. Proper simple. But as well as that, it's going to be read by the ops team, by your fellow developers, by new hires. Pretty much everyone is going to look to this to understand your app. Anyway, each line in the file is an instruction. And you don't have to, but it is convention to write them as uppercase. Just the instruction name, though. The contents of the instruction you can totally write lowercase. Anyway, every Dockerfile starts with a FROM instruction. This is what starts the ball rolling. It pulls down the base image that everything else will build on top of. And following our best practices, if we can use an official image and a small one, you know what, we probably should. Well, we've gone Alpine, and because we've not put a tag on, we'll get the latest. Now, if you're doing this in production, right, you really want to get specific with tags. But you know what? The FROM instruction will go away and pull whatever image you specify from Docker Hub. Cool. Well, that is layer one. Next, we're adding a label to set the maintainer. And like I said before, honestly, I am not going to be maintaining this. I mean, it'll always be around for you if you're following around and the likes, but I have zero

intentions of patching it and keeping it up to date. I'm really just showing you this so you can see how to use labels which are great for adding custom metadata. RUN here, and here, are actually how we execute commands and stuff inside the image. We're running some package installs here, and installing dependencies here. So, another couple of layers there, right? Well, COPY here is how we pull files and the likes into the image, and you probably guessed it. More content means more layers. And then we've got WORKDIR expose an entry point for adding metadata. Beautiful. But there's still a few gaps, I think. First up, I think I mentioned the build context at least a couple of times. Well, all it is is the location of your source code. If all is right, it's been the working directory. So, I've got my shell sitting in a folder called psweb here, and that has got all of my source code in it. That way, when I run the docker image build, I can just say dot at the end to use the current directory. If my shell was somewhere else in the file system, that's still cool, right? I just have to spell out exactly where the build context was. So, yeah. Build context, that's where your code is. And you can nest stuff, as well, right? Because it gets read recursively. So subfolders are fair game. Which you need to be careful about, actually. Because when you do the build, everything in your build context get sent to the Daemon. And if you've got a ton of stuff in subfiles that you don't need, you're going to waste resources, especially if your Daemon's across the network somewhere. So, yeah. Only have the code that you need in your build context. And feel free to throw your Dockerfile in there, as well. We did. But when you type docker image build, whatever's in there gets sent to the Daemon and processes part of the build. Now, for us, the client and Daemon are on the same host, but it is totally possible to have clients talking to remote Daemons over the network. Which brings me to probably our last thing, actually. Your build context can absolutely be a remote Git repo. In fact, let's do that. So, we've got nothing on this host right now. No images, and then, obviously, no containers. And then over here, this is the URL of the server that I am on. And we can see, yeah. There's definitely nothing listening on 8080 here. So, we've got a clean slate. Well, if we run another docker image build, and again, you can just go docker build if you want. Old habits die hard for some. I know that. We'll tag it the same again, but this time, instead of using dot to use the current working directory as the build context, I'm going to point it to a Git repo. This one here. And away that goes. Exactly the same as before, right? Only this time, the Daemon is pulling the build context across the wire from GitHub. But the process is just the same. And you know what? Sorry, I lied. That's not the last thing. Let's take a look at this output. So, sending context to Docker daemon, well, we just talked about that. Then the first instruction, one of eight, actually, FROM Alpine, pulls the latest Alpine image. And that there is its ID. In fact, yeah. Computer? (computer beeps) Stack each image layer in temporary containers as I'm going through the explanation, please? (Computer Voice) Acknowledge Ok, so we got the base image at the bottom. Next up, we have the maintainer label. To do this, Docker spins up a new container, and it churns out a layer. Once the layer's created, it gets rid of that intermediate container. Poof, gone. Next up, we're installing node and npm. I think we see this as doing a bunch of stuff, fetching and installing and all that goodness. But again, it is doing it inside a temporary container up here. Anyway. It splits out a layer here, and it loses the container. After that, we're copying in the app. Hmm. Huh. Yeah. Looks like maybe we don't need a container for that. Huh. Okay, actually, I'm not sure about that. But look, we get the layer. Then we're setting the working directory. Again, splits out a layer, shoots the container. Then we run npm install. That runs inside a container. Does all of this. And, as usual, splits out a layer and shoots the container. And the same for exposing ENTRYPOINT. Spin up that intermediate container, produce the layers, and shoot the containers. That's the process. Now, then, Only the layers that contain actual data are kept. So, even though it looks like these entry points and expose instructions create layers, they really don't. At least, not ones that we keep. So if we do this ... Okay. First up, we can see that only four of these layers actually contain any data. Magic. But see these IDs over here? See how they match what we built in the picture here, commands and all? More magic. But really, we only need these ones. The others are just metadata. So if we inspect the image, like this, okay. Only four real layers. And no, the IDs don't match, annoyingly. Go back to the previous module if you want to know why. But, yeah, you know what? That is the greasy, oily detail of building an image. Next up, the exciting world of multi-stage builds. This stuff is the future.

Multi-stage Builds

I am hoping by now that it is abundantly clear that size matters when it comes to images. And smaller is definitely better. So, with smaller images, we're talking about things like faster builds, faster deployments, less money wasted on storage, and the killer one for me, less attack surface for the bad guys to aim at. So, running our apps with a minimal OS and minimal supporting packages, that is the gold standard, I mean, I've said it before. If we could run our apps commando, so without any OS at all? Heck yeah, we definitely would. I mean, go check out Unikernels. Anyway. Small, small images is what we're aiming for. The problem is, more often than not, our build pipelines look like this. So, we start out with a pretty big image. You know, one that's got a shedload of packages and build tools that, who knows? Maybe we'll need them. But maybe we won't. Then we copy in a bunch more tools that we know we need. We throw in our app code, and then we do the build. And the image is huge! And this is where it falls apart, right? Then we ship it to production with all the build stuff left in! I mean, it's crazy! It's like building a car in some ginormous factory with robots and lifters and paints stations and all that jazz, and then shipping the car with the factory still attached! I mean, who'd do that? Nobody, right? Only, in the software business, we do it all the time. It's just crazy. Now, good software developers are those with the time? Well, they came up with ways around this, but it was always at the expense of added complexity. So, we'd usually have a pattern that involved multiple Dockerfiles, all glued together with scripts and automation voodoo. And it worked all right, don't get me wrong. It was just clunky and extra work. Well, multi-stage builds to the rescue. This here, what we're talking about now, is official support to technology from the core Docker project. And it's simple. We're talking a single Dockerfile and zero scripting wizardry. Here's the high level, right? We've got a Dockerfile here, and by now, it should look safe and familiar. Only, you know what? It is a bit different. The main thing to note is that we have got multiple FROM instructions, three in this example. Okay, well, that's new-ish. Well, each one marks a distinct build stage. So, internally, right, they're numbered from zero at the top. But even better, we can give them friendly names. So, stage zero here is storefront, and stage one here is appserver. And then the last stage, production. Well, a regular docker image build steps through this from top to bottom. So the storefront stage here's standard stuff. Pull a base image, a big one, right? Set the working directory, copy in some app code, and do some build work. Par for the course so far. The base image it pulled is already big, and then we fattened it up even more by adding stuff in a doing builds. The appservice stage, same again, really. Pull another big image, set a working directory, copy some stuff in, run a build, rinse and repeat. End result, we spit out another even bigger image. All standard stuff so far, though. But let's step back and take an inventory, right? At this point in the build, we've got four images. The two that each build stage pulled down, plus the two that each build stage churned out. The storefront stage here churned out an image based on node:latest, so an image with a bunch of OS and build tools, plus a small, tiny app-related piece of code that we actually want at runtime. Same again for the appservice stage. We churned out an image based on maven:latest with a bunch of OS and packages, and again, a pretty small amount of code we're actually interested in. So, four images with a ton of build machinery inside, and precious little production code. Okay. Onto the production stage where it actually gets interesting. Importantly, we're starting from the Java Alpine image, which right from the start, okay, is significantly smaller than the node and maven images we used before. So that's our best practice, right? Starting from a decently small image. Then a bit of standard stuff here, and we get this COPY from instruction. And this is where the magic of multi-stage builds really comes into play. The COPY from here grabs that image created by storefront build stage, and it picks out just the application code that we want, and it leaves the rest of the image behind! Brilliant. Then another COPY from, this one taking the image built by the appservice stage and again, pulling out just the application code we want. And it sticks it in this image, then we tell the app how to run. So, recapping, right. Because I want to be clear about this. Stage zero of the build here takes a giant image, great for building, okay? Not so great for production. Well, it builds some app code and it spits out even bigger image. Stage one is the same. Pulls a big image, adds some stuff in, throws out an even bigger one. At this point in the build, we've got four images, and inside of them, we have got a boatload of build time machinery, but just a small amount of production code. Maybe think of these two stages as building a car. Stage zero at the top builds like, I don't know, the chassis and the body work, right? Then, stage one here builds the engine and power train. But they've both still got the factory attached! Now, the production stage here grabs the body from up here and the engine from down here, but it leaves the factories behind, and it puts them all together and ships just the car. In the real world of software, the real world of software? Yeah. Well, it's pulling out just the bits of application that we need at runtime, leaving all the build stuff behind, and spitting out an image with our application plus a tiny amount of OS in dependencies. Love it. So, let's do it. Now, I've got a copy of this repo here, which is actually a fork of this repo in the app directory where the Dockerfile is. So, although it's a newish format to the Dockerfile, it's just a regular docker image build command. We'll tag the image like this, and we'll build it from here. And that's away. Now, the build's going to take a minute or two while it pulls the images and the likes, right? So, I'm going to fold space-time and bring us out somewhere in the future when this is done. All right, we're back. And ... Right. These images here are the ones that were used and produced by the first two build stages, and they're pretty big, right? Well, this one here? This is the one we're going to use in production, and it's tiny by comparison! So, that's it, right? Not hard to see. The production image is about, what, a quarter of the size of the two build stage images? That is a pretty solid saving in my book. And the best thing about it? It was easy. A single Dockerfile, a normal docker image build command, and absolutely no scripting. How cool is that? Well, I think time for a recap.

Recap

All right, that was some proper action, yeah? Real apps made into real images. We're recapping, right? We said right at the top that it is all about the apps. Containers, yeah, they're crazy cool and all, but on their own, they're not a lot of use to our businesses. So, we put apps in them. And to do that, we start out with our app code, like our source code and dependencies and stuff. We create a Dockerfile, which really is just a bunch of instructions that tell how to take our code and make an image from it. So we say things like, what base image do we want to use, if you're app's Windows, then obviously choose an appropriate Windows base. If it's Linux, choose Linux, yeah. And a good place to start is the official repos, yeah? Anyway, once we've got the base image, that's when we start throwing our app on top, copying the files, bring in any dependencies, build stuff that we need, and then set things like network ports and the application that we want to run when the image's started as a container. Well, we feed all of this into a docker image build command, and out pops an image ready and raring to start containers. Love it. Well, once we're cool with that, then we can really start turning up the heat with multi-stage builds. These give us leaner and better images ideally suited for production environments. Brilliant. Now, let me beat my drum one final time about those other mystical powers of the Dockerfile. So, outside of letting Docker know how to build an image, it is documentation and it's a potential bridge between dev and ops, a way for developers to describe their app to ops. And also, yeah, a way to quickly onboard new hires and the likes. So, you get a new hire and she's like, how does such-and-such an app work? Easy. Just get her to check the Dockerfile. I do think it's a beautiful thing. Coming up next, we're going to start focusing in a bit on containers.

Working with Containers

Module Intro

Containers. We're already hours into the course and it's only now that we're finally getting into containers? Wow! Well here we are and here's the plan. We'll have a quick Big Picture. Then we'll dive in, we'll touch on logging, and then we'll wrap it up. Now, of course, as we go about things, we're going to touch on some of the exam stuff. From Domain 1 we'll inspect images, add networks, and publish ports. From Domain 2, we'll look at some of the Docker inspect outputs. And from Domain 4 we'll publish a port, then see how we can find out which port a container is accessible on. That's it, let's do it.

Containers: The Big Picture

Okay, first up, in the Docker world, the most atomic unit of scheduling is the container. It's the smallest unit of work we can create. So, in the virtualization world, that's the VM. In the Kubernetes world,

it's the pod. Well with Docker, it is the container. This means, if we want to roll out an out on Docker, we do it as one or more containers. Sure, there's high level objects like services and stack and pods if you're rocking with Kubernetes on Docker. But the smallest unit of work, in the Docker world, is the container. Now then, containers are running instances of images. We've build-time here, run-time here and we know that images are a bunch of layer. Read-only yeah. Well, digging a bit deeper, all a container really is, is a thin, writable layer latched on top. So build-time down here, run-time up here. This means any rights and changes that we make while the container's running, all happen up here in the writeable container layer. Now all of this is done through the magic of union file systems or union mounts, where all of this layering and stacking here gets hidden and everything is made to look like a single unified layer. Anyway, we can have a one to many relationship between images and containers. So each container that we're showing up here, well, it's really just a unique and separate writeable layer, remember. And each on in this example is linked back to a single read-only image down here. So if we're running a couple of containers off of this image and this one here wants to edit a file in the image, well it can't 'cause the image is read-only. I mean can you image the carnage if individual containers could modify shared images without the other containers knowing? Holy cow, all hell'd break loose. So instead of modifying the file inside the image, the container locates it in the layers down here, makes a copy of it in its own writeable layer and makes the change there. That way, right, the container gets the full read, write experience, but without having to have write access to the image. And we call this copy on write. Anytime the container needs write a change to an existing file, it makes its copy and writes the changes there. Cool. Well switching tack a bit. From an OS perspective, we know that every container is its own isolated pod at the OS, Linux, Windows, whatever, yeah. Well that's not massively different from the VM on a hypervisor. Only instead of virtualizing hardware resources, containers are virtualizing operating system resources, file systems, process trees, networks stacks, yeah. Now from a life cycle perspective, we can start containers, stop them, restart them, pause them, and delete them. And until we actually delete them, they stick around. The techie term is persist. So stopping or pausing the container does not get rid of it, nor does it get rid of any of the data inside of it. Everything sticks around 'til we put a gun to its head and tell it to delete. You know what, just like at the end yeah, start, stop, restart, then once we're done, boom delete. Now back to the OS for a second. Linux containers need a Linux kernel. Windows containers, they need a Windows kernel. So as portable as containers are, if you build your apps for Linux, they are only going to run as Linux containers on a Linux Docker host. And the same goes for Windows. If you're writing Windows apps, they're only going to be Windows containers on Windows Docker hosts. 'Cause remember, all that's really in a container, so all that's in that isolated set of name spaces, is a bunch of files. Now obviously these include your application and dependencies right? But the point is, there is no kernel inside. Every container on a host, shares the host's kernel. So trying to run a Linux container, so one that needs a Linux's kernel, over here on a Windows host, yeah, good luck with that. Now I know, Windows has got a couple of ways that it can run Linux containers. But both of them make it so that Linux kernel primitives are available to the container here. So I guess yeah, you can run Linux containers on a Windows machine, but there's magic going on to make it happen. Now amid all of this right, I want to make sure we don't lose our focus. Containers are all about apps. And the so called gold standard when it comes to containerized apps is microservices. This is where each container generally runs a single process and has a single job. So instead of a monolith like this, we break each function out into its own container and then we glue everything together with APIs, hopefully simple, documented, and versioned APIs. The idea though at the container level is that you keep your container as small and simple as possible. In the Linux world, it's usually going to be a single process per container and that process does a single job. I don't know, run a web service or something yeah? This way though we get separation of concerns and all the other goodness that comes with microservices. But, containers are not just for microservices and I've been beating my drum about this for ages. You can totally run some of your more traditional apps in containers, and all without the scary thought of having to refactor into this microservices scariness. And Docker Inc or big D, Docker yeah, they're well on board with this now with their Modernizing Traditional Apps program where the idea is something like this. Take a bit of a safer phased approach. So lift and shift one or two of your traditional apps into a container as is, no code changes, nothing like that, but still get the benefits of containers. And then once you're done with a bit of that and you're a bit more comfortable, I don't know, maybe then you starting looking at rewriting some of this stuff, microserviceizing it. I just made that up. Anyway, look, that's the big picture. A container's basically a think, writeable layer on top of a read-only image and it's a run-time construct. So an execution environment for an app. Every container gets its own file system, process tree, network stack, all of that jazz. Oh yeah, they've got a life cycle not unlike a VM, start, stop, restart, and delete. And we can lift and shift some of our traditional apps into them and that's fine. In fact, Docker Inc. will probably even help you do it. Probably for a price, they are a business after all. But the ideal for a container is that they should be treated as ephemeral and immutable. We don't love our funky words in the tech industry. Okay, by ephemeral we mean that they're short lived. You're not usually aiming for your containers to have year after year of interrupted uptime. Then immutable, this means we really don't want to be logging into them and poking around. The idea with containers, is that we build the image and deploy the container, then when we need to fix and change stuff, we build a new image with a fix and then we switch out the old containers for new ones. None of this logging on and making fix after fix, which in my experience, rarely gets reflected back to the gold build. Anyway, enough theory, let's hit the command line.

Diving Deeper

So I'm on a Linux host with Docker installed. We'll be on a Windows host later. But a quick look here, yeah, shows us we've got no containers running. Okay, well spinning up a new one is as simple as docker container run. This used to be just docker run, which still works by the way. Anyway, I want to log into this container. Wait, what? Didn't I just say that we normally don't log into containers. Well yeah I did and that is right. But we're in a lab here dissecting stuff so different rules apply. You'll see why in a second. Anyway, to make it so we can log into, we go -it. Look the flags up in the help if you want, but I always think of them as interactive terminal, it. Anyway, then we tell it which image to use. And finally we tell what process or application to run. I just need a shell. Okay, so the first thing note, see how my shell prompt's changed. That's 'cause the container is already running and we've switched our shell into it. We've basically attached the standard in and out streams from my local shell here to the container. So anything I type in here is going to run in the container. Coolio. Now hmm? Okay, actually, before we look at the output of that command did you notice how fast the whole container start thing was? Like maybe a second tops and that included downloading the image from Docker hub. Now fair enough, the image we're using in this example is disgustingly small. Most others are probably going to require a few seconds to download the first time you run it. But you get the picture. This stuff is quick. Now then, this ps here, remember it's running inside the container, so we've only got these two processes running. Only it's only one really, 'cause this one here is the ps command which is already exited. So one process, which if we remember plays nicely into what we talked about a minute ago when we said the gold standard for containers is the microservice model with a single process and concern per container. Fabulous. Now things are a bit different over here in the Windows world. This is a similar ps command running inside a typical Windows container and clearly there's a little bit more going on here. And that's 'cause Windows works different to Linux right? We won't get into it, but the net result is, every Windows container runs this handful of processes. Smss here manages all the system processes and POWERSHELL is the main app that I asked the container to run. Okay, well, back here right, if we start a bunch more of the same container, I use Ctrl+P+Q to get out of the container by the way. See how my terminal's back to normal? We'll talk about Ctrl+P+Q in a minute, right, but keeping on track for now, we can see the container is still running. If we start another one of those containers, only this time in the background please, d for detached or I think actually maybe daemon mode. Either way, it won't grab the terminal this time. And we'll tell this one to sleep. Go to sleep. Ha, I tell ya, what I'd give to sleep for a day. Okay, first up, that was closer to a sub one second start time and that's mainly because we've already got the image on the host from the last container we ran. So it was literally setting up the name spaces and stuff. Really quick. And we should see two of them now. Right, so two containers sharing a single image. The containers, though, totally isolated from each other. We remember this right? To start one of them, we go docker container stop, then we give it the name or the ID. If we go with the ID, right, we only need to give it a couple of characters. It's just after uniqueness. Ah, right, this waiting around here is 'cause the container has been given 10 seconds to sort it's stuff out before being forced to stop. We could go down a Unix rabbit hole here about init processes and signals and the likes, but I think suffice to say, right, stopping a container sends a signal to the main process in the container, PID1. If that process knows what to do with the signal, then it tidies things up and says hey Docker, I'm ready to be stopped. But if it doesn't know what to do with the signal, like ours clearly didn't, then Docker gives it a 10 second grace period, after which it forces it to stop. All right, well if we list them now, we only see one. But if we slap -a on the end here to list them all, okay we see two again and this one that's in the exited state is the one that we just stopped. So if we start it up again, you've probably guessed it, we change stop for start. Run this. And it's back, started a minute or so ago, but it's only been up and running for a couple of seconds. And the thing is right, any data that we might have saved into it before we stopped it, it's still going to be there. In fact, let's see that. Okay, yeah, let's do it. Now look, this isn't recommended. Yeah sure, you can save data into container, but it kind of breaks all the containers are ephemeral and immutable rules. So in the real world, you don't want to be doing this. Use a volume instead. But we're in a lab, just slicing stuff up here. So we can get into a running container with docker container exec. Make it interactive again, give it part of the container ID, and run another shell session. And we're straight in right? Now first up, look here. See how it's got a couple of processes going on now? That's 'cause execing into a container starts a new additional process. So the original sleep we started this container with, that's still snoozing away there, but this one here is the shell that we just started with exec. Anyway, we're in the root folder of the container here so, you know what, I'm going to be a bit naughty, I'm going to pipe some text here into a new file, right here in the root directory. Ah, it's a lab people, we can do what we want. Don't do this in the real world. Anyway, there it is right, that's our file. So if we exit out of this, this is going to kill the shell process, but it's going to leave the main sleep process alone. So we have to manually stop it here. And I'm doing it like this just to make sure we get the right container, yeah? Okay, stopped. Start it up again. Exec back into it. Actually, know what, let's do this instead, so instead of getting a full and interactive shell session again, let's just run some commands in it. That's our file and if we cat it, that's what we wrote. So there we go. Stopping and then restarting a container does not destroy any of its data. Brilliant. Well what was all this Ctrl+P+Q business about? Well we start the container, in fact, let me clean up a bit first. Okay, when we start a new container we tell it an application to run. That's this bit here. For this container it's just a shell, sh for shell. In the real world though right, this is going to be your application. Now then, if we kill that app once we've started the container, we also kill the container. And it makes perfect sense right? Think about it. A container's just an execution environment right? A set of name spaces for an app to run in. So if that app exits, well what's the point of the container anymore? There isn't one right? So exiting the app, exits the container. Simple, makes perfect sense. That means if we go into this container here, okay, and if I type exit, I'm telling the shell process to exit. And seeing as the shell is actually the app that the container is running, the container's going to exit as well. Quick check. No containers. If we run another one, so we're inside again right? But if this time we go Ctrl+P+Q see how we're back out, but this time the container's still running, 'cause we didn't kill the shell. That Ctrl+P+Q is a graceful way of getting out of a container without terminating its main process. Now speaking of main processes, we can sometimes start the container without telling it a process to run here on the end. And look, we've still got a shell prompt? Why? How come? Well every image has a default process that it'll run if we don't tell it something different at run-time. So if we inspect this image here, this is it here right? Cmd/bin/sh, that's what a container based on this image will run if we don't tell it something different. But like we said, we can override this when we start the container. A bit like we did actually with the sleep container earlier. And that's how this cmd instruction works. Anything that you tell it to run at run-time is going to overwrite what cmd says. Now if the container was built with the entrypoint instruction instead of cmd, then anything passed in at run-time gets appended to entrypoint as an argument. I hope that makes sense. Cmd instructions get overridden on the command line, whereas entrypoint instructions interpret command line stuff as additional run-time arguments. Okay, we've seen how to start, stop, and restart the container and how to exec into them. Let's just finish things up with a quick look at ports. And you know what, we'll show some love to Windows for this one. So I'm running all of this now on Docker for Windows on my Windows 10 laptop. If we go the usual docker container run, we'll put this one in the background. Call it web1 and we'll map port 80 here on the Docker host to 80 in the container. And we'll use its and we don't need specify command 'cause its runs automatically. So quickly, new container based on its, which has a default web server listening on port 80. Great, well we'll map that through to 80 on the host as well. All right, straightforward we see a bit of wait while the image gets pulled. This one's multiple gigs in size right, but it's all compressed over the wire. If you remember back to when we talked about content hashes and distribution hashes, anyway, let me supercharge this. Cool, now a docker port and then the name of the container, that's going to give us a list of the port mappings. This is saying 80 in the container mapped to 80 on all interfaces on the host. Magic. Well there's actually a bug at the moment that doesn't let you use the local host identifier with its. But when they fix that, you'll be able to point your browser to local host and see the webpage. For now though, I need to get the IP of the container. Lovely and we'll hit that with a web browser. Beautiful, its. So there we go, that's ports. And that's it right? So a quick cleanup before we look at logging. So this here's saying docker container rm, remove or delete, and run it against the output of this block here, which is basically just a list of the IDs of all the containers on the system. And then we're forcing the operation so we don't have to do a separate stop first. Okay, cool. Let's go chat about logging.

Logging

Logging is important okay, so don't let it be an afterthought and definitely don't forget it all together. Anyway, we're interested in two types of logs, daemon logs and container logs. Sometimes we call container logs app logs, right? Well the daemon logs are simple. These are the logs from the Docker daemon, or the Docker engine, depending on how you refer to it. Now most modern Linux systems use systemd. In those instances, daemon logs get sent to journalctl and we can read them with a journalctl command. If you're not on Linux with systemd, you might want to check

`var/log/messages`. On Windows, they go to `AppData/Local/Docker` and you can also check the Windows event viewer. But the daemon logs are the easy part. Container logs or app logs, this is where the action is. Starting with the basics, Docker's hoping that apps log to standard out and standard error. Basically, the PID1 process in every container is getting captured and it's getting forwarded. So design your containers so that your applications are running as PID1, and ideally, logging to standard out and standard error. If you logging to a file though, don't worry, it is possible to do sim links and shunt rights to those files to standard out and error. Or you could do something totally different and maybe mount a volume to those locations so that you can access them outside of the container and make sure they persist when the container's gone. Anyway, since about Docker 17.05 or 17.06 if you're using enterprise edition, Docker has supported the idea of logging drivers. These are plugins right, that integrate container logging with existing logging solutions like Syslog and Gelf and Splunk. The basic premise is to take the normal container logs and forward them to whatever logging solution you're already using and most of the major logging tools have a Docker driver these days. Anyway, you set your default logging driver for the system via `daemon.json` config file. Then any new containers will start using that driver. If you've got the occasional container with specific logging requirements, no sweat. Just give it the `--log-driver` and `--log-opt` flags when you come to start it. That'll override whatever's configured as default for the host. Okay, by default, most Docker hosts default to JSON file logging. This writes out logs to a simple JSON file format. And it's cool right, 'cause you can use the `Docker logs` command to view them. It's just docker logs and then the container name. And if you want, you can dash aft to follow them and all that goodness. As well as that though, it's really easy to configure journald if you're on a Linux host using `systemd`. Aside from those two though, JSON file and journald, which by the way, both work with the `docker logs` command. But aside from that, we start getting into third party specifics like configuring a Splunk server or whatever and we're not getting into stuff like that here. Suffice to say, application logging takes the standard out and standard error streams and forwards them to somewhere else, Syslog, Splunk, Gelf, whatever and it all gets done via logging drivers and we configure these in `daemon.json`. Brilliant, I'm thinking that's enough to get you going. Let's do a quick module recap.

Recap

I'm going to make this quick, because I've already talked longer than I planned. Containers are run-time cousins of images. Under the hood, they're an isolated application execution environment. We know it by now, it's a bunch of grouped namespaces that look and feel like a standalone OS. But containers are OS specific. There's no running Linux containers on Windows and vice versa, at least not without some magic going on behind the scenes. 'Cause the thing is, containers don't contain a kernel. They have to talk to the kernel of the host and Linux containers need a Linux kernel and Windows need a Windows kernel. We also talked about containers being a thin writeable layer that's gets latched on top of a read-only image using a combo of union mounts and bit of copy on write. Brilliant, it's also cool if they can be ephemeral and immutable. Ephemeral being short lived and immutable meaning, we don't really want to logging onto them and messing about. The idea, right, is once they're deployed we should leave 'em alone. If we need to do a fix, you know what, build a new image and deploy a new version. Ohh, keeping it short, what else? Yeah, we said the main process inside of a container is what it's all about. That process is usually going to be your application right? Well kill it and you kill the container. And logging as well right? That's also about that main PID1 process. And that's it. Well it's not, I mean we're only just getting to the good stuff. Coming up next, we're going to see how ridiculously easy it is to build a secure swarm and start doing some orchestrating. Bring it on.

Building a Secure Swarm

Module Intro

Managing a single docker node and maybe a couple of containers on your laptop, well, that's one thing, right? But managing a bunch of nodes and tens or hundreds of containerized apps, wow, that is a whole other thing, believe me. Well, enter Docker Swarm, and Kubernetes. Here's the plan. We'll paint a big picture, so what's all this orchestration about, and what's a Swarm, and what's Kubernetes. Then, we'll do a bit of a deeper dive into a Swarm cluster. Then we'll build one and proper secure, right, with encryption, Mutual TLS and all of that jazz. Then we'll look at Orchestration, but just a bit, right, because we've got a whole module on that later. But it'll be a good primer. Then we'll finish up by doing our usual of reminding ourselves the stuff we've forgotten. Now then, if you're studying for the Docker Certified Associate Exam, you're going to pick up the following, right? In Domain 1 under Orchestration, complete the setup of a Swarm cluster, with managers and worker nodes. Demonstrate steps to lock a Swarm cluster, and paraphrase the importance of quorum within one. Then under Domain 5 Security, describe Mutual TLS. Alright, buckle up.

The Big Picture

I want to keep this short, okay? It's a deep dive course, and I'm hoping you've already got the basics. Anyway, Swarm is the future of Docker, seriously. Now, I know that might sound weird, especially when Kubernetes is looking for all the world like the industry standard Orchestrator for containerized apps, and don't get mad at that if you love another orchestrator. It's just an observation, I mean, feel free to disagree, and I'm happy to have it out on Twitter. Anyway, despite the rise of Kubernetes, including its native support in certain versions of Docker, Swarm is absolutely still at the heart of everything Docker is doing. Stick with me for a second, alright? The reason is Swarm has two parts, The Secure cluster part, and the Orchestrator part. And it's this secure cluster part, here, that is absolutely central to the future of Docker. Especially Docker Enterprise Edition and the higher-level stuff that's going on there. Okay, I get it, Swarm's obviously not even a factor in the lower-level stuff like containerized and the OCI, right? But the higher-level value-add stuff, including native support for Kubernetes, Swarm is front and center. So that's the clustering bit of Swarm. The Orchestrator bit, eh, okay, that's maybe not quite as strategic. I mean, it's not about to disappear, so don't panic if you're running it in production, it's just going forward, it's my guess, right, that the Swarm orchestration bits are going to give way to Kubernetes. Anyway, the Secure clustering bit's absolutely key to the future of Docker. But that begs the question, what is a Secure Swarm cluster? Well at the highest level, it's a cluster of Docker nodes. We've got managers and workers, and everything secure. So we've got Mutual TLS where workers and managers mutually authenticate each other, and all of the network chat is encrypted. Plus, the cluster stores encrypted, and it gets automatically distributed to all managers. And we can use labels to tag nodes and customize the cluster how we want it. Anyway, once we've got the cluster, then we can start scheduling containers to it. So instead of running individual Docker container run commands against specific nodes, and every time having to think about which nodes we should be running them on, well instead of that, we just throw commands at the cluster, and we let Swarm decide. So Swarm does all of the workload balancing and the likes. Great well, we can run two types of work on the cluster, Native Swarm work, and Kubernetes. Though, at the time of recording, right, you can only run Kubernetes work on Docker Enterprise edition. That might change. I know that, I'm just saying for now, if you want Kubernetes on Docker, it's going to be Docker Enterprise edition. But that's the big picture. A Swarm is a secure cluster of Docker nodes. I don't know, right? Kind of like a giant Docker node, in a way of sorts. Anyway, once we've got it, we run work against it, Native Swarm or Kubernetes. Pretty sweet. Okay, now that we know the basics, let's peel back the covers on the clustering side of things.

Swarm Clustering Deep Dive

Alright, first up, Docker is a set of nicely packaged tools. If you pop the hood, you're going to see a bunch of smaller tools. Docker just bundles them, and wraps them in a slick API. So stuff like the Moby engine and containerd, runC and SwarmKit, they're all separate tools, right? But bundled and slightly integrated for that slick Docker experience. Magic. Well, one of the smaller tools is SwarmKit. It lives here on GitHub, and importantly, it's what powers Swarm mode. Hmm, Swarm mode, what's that, then? Okay, back in the day, Docker had this separate orchestration piece called Swarm. You'd installed Docker, then you'd lay a Swarm on top. It was okay, as long as you didn't mind frying your brain configuring it. The thing is, though, it kind of led to a separate toolkit called SwarmKit. The idea being to build an open source all of the small component tooling so that people can pick and choose what they want. Okay, well, in Docker 1.12, SwarmKit got integrated into the overall Docker package. I mean, it's still available as a separate toolkit, it's just as of Docker 1.12, it's fully integrated into the Docker engine. The point being, right, ever since 1.12, Docker's had this notion of Single-engine mode, and Swarm mode. Single-engine's where you install individual Docker instances, and you work with them all separately. Swarm mode, though, that's where you bring them all together as a cluster. And like we've seen, we can start throwing work at the cluster, instead of having to hand pick a node for each and every container, brilliant. Well, for some people it was. Others, let's just say not so much. Anyway, look, any node running as part of a Swarm cluster is in what we call Swarm mode. Not in a cluster, Single-engine mode. So let's go through building a cluster. We've got a node here, Docker installed. Throw a simple command at it, and presto, we've got a Swarm. And that node now, is flipped into Swarm mode, yeah? Now then, behind the scenes, oh my goodness, there's a ridiculous amount of magic just happened. You see, this node's now the first manager of the Swarm. And the first manager in any Swarm is automatically elected as its leader. And that makes it a bit special. For starters, it's the root CA of the Swarm. I mean, you can configure external CAs if you need, just parse in the --external CA flag. But if you don't, this one gets the job. It's also issued itself a client certificate, built a secure cluster store, which by the way is ETCD, and that's automatically distributed to every other manager in the Swarm and it's encrypted. And all of this for free, right? As in, we didn't have to do anything. It's done for us, including a default certificate rotation policy. Epic. Oh good grief, there's more. It's also created a set of cryptographic join tokens. One for joining new managers, and another for joining new workers. So let's join a new manager. We take another node running Docker in Single-engine mode, and we run a Docker Swarm join command on it. We give it the cryptojoin token for managers, and that's it, it's part of the Swarm. And obviously operating in Swarm mode. And see how the cluster store's been extended to it. Oh, and it's been issued its own client certificate, right? That identifies who it is, the Swarm it's a member of, and its role as a manager. Sweet. Same again for a third. Now then, hmm, the picture's getting a bit busy. There's a lot going on, though, so stay with me. Swarm managers are automatically configured for high availability, so any of these can fail, right? And the cluster keeps going. Behind the scenes, though, only one of them is truly active, and that's the leader, which is important, right? Every Swarm has a single leader manager. The others, we call them follower managers. It's rough terminology if you know your Raft. Anyway, when you issue commands at the cluster, go ahead, you can issue them at any of the managers. It's just if you hit a follower manager, it's going to proxy commands to the leader. Now, if and when a leader fails, we have an election. And with all elections, the one with the biggest budget wins. (laughs) No, I'm just kidding. One of the followers gets elected as a new leader. But all of this is handled by Raft, so within a Swarm, okay, all that distributed consensus stuff is done by Raft. The same as Kubernetes, actually. Raft's the go-to solution for distributed consensus these days. Now then, the ideal number of managers is three, five, or seven. Any more than seven, and you can end up spending more time thinking about decisions than actually acting on them. It's like deciding what to eat. If there's a handful of you it takes two minutes. If there's 20 of you, man, you can kiss goodbye to half of your night arguing. And it's the same with Swarm. So three, five, or seven for managers. Just make sure it's an odd number. That increases the chances of achieving quorum, and therefore avoiding split brain. You know, where you've got a network partition or something, and you end up with an equal number of nodes on each side in a stalemate or a split brain. Neither side has got the majority or quorum, right? So updates stop happening. Badness, we don't want to go there. So an odd number. And, actually one is better than two. Two just increases the chances of that one of them will fail. And when it does, it offers absolutely nothing to help. So yeah, one, three, five, or seven, but preferably not one. (laughs) Now, as cool as Raft is, right, it's not a fan of slow or unreliable networks. I mean, who is, right? But this is important. Connect your managers over decent, reliable networks. So for instance, okay, and this is just an example. If you're in Amazon Web Services, don't go putting them in different regions. Across availability zones within a region? That's probably alright. But going cross region is just asking for pain. Okay, well look, adding workers is the same. Docker Swarm join again, only this time give it the Worker join token. And we can have a mix of Linux and Windows. Great if you're running hybrid apps. Now when you join a worker, it does not get access to the cluster store. That's just

for managers. But what each worker does get is the full list of IPs for all the managers. So if one of them dies, the workers can just talk to the others. Oh, and they all get their own certificates, right? Gosh, I hate this diagram, I hope it's valuable, because it's ugly as heck, and it took hours to create. Anyway, like with the managers, the certificate identifies who the worker is. The Swarm that it's a member of, and what its role is: worker, yeah? Now then, the workers do all the application work. And on a Swarm that's either a native Swarm work or it's Kubernetes, and we'll look at these in more detail later. But I think for now, that's a Swarm. A cluster of managers and workers, a full-on PKI where the lead manager is the root CA, and it issues every node with a client certificate that gets used to a mutual authentication, role authorization, and transport encryption. I love it. And on top of that, we've got a distributed encrypted cluster store, cryptographic join tokens, and loads more. And the best bit, it's all just built in and works out of the box. Take a minute to let that sink in. I kid you not, it's something special. Secure out of the box, and easily configurable. Thank you, Docker. And I don't care if that makes me sound like a fan boy, that is genuinely some seriously good stuff. Enough theory, though. Let's go and build one.

Building a Secure Swarm

Now then, after all that about what's going on behind the scenes, there's a pretty good chance you're going to be underwhelmed by this. Or, actually, I don't know, maybe you won't. Maybe you'll see it for what it is and be impressed by the sheer simplicity. We'll see. So I've spoken at a few events where I'm at the front and I ask for a couple of volunteers. One who likes cookies, and one who's never deployed a Swarm before. Then I put up this slide, and I tell everyone that the Swarm node's going to build all of this before the other guy can eat five cookies. And the Swarm guy wins every time. Well, except for this one time when the Swarm guy couldn't use the touch pad on my laptop, but never mind, I'm on a Linux node, and it's currently in Single-engine mode. We can see somewhere here, yeah, Swarm inactive. That means Single-engine mode. So to initialize and use Swarm, make this the leader in CA, issue a client certificate, create distribute and encrypt a cluster store, and create the join tokens and certificate rotation policy, we go docker swarm init. That's it, done, serious. Check this again. Okay, we are Swarm active. Then we've got a crypto NodeID, it's a manager, bunch of other stuff, Raft, and then the CA config. A quick Docker node LS tells us it's the only node in a Swarm. It's ready, active, and it's the leader. Alright, but a single-node Swarm's a bit boring. Let's add some more managers. Well, we need the manager join token for that, so Docker Swarm join-token manager, we can put worker here for the worker token. But that there's the full join command token and all, so we'll have that, thanks. Switch to Node2, and that's it. Yeah, a two-node Swarm. You can run Swarm commands like this on any manager node. And Node2 here is showing as Reachable in the manager column. That means it's a follower manager, right? Leader shows Leader, followers as Reachable. Now, of course it's got its own client certificate, and a copy of the cluster store. But two's the worst number for managers, right? Well, maybe a hundred's worse, but two's bad for split brains. So let's have a third, (laughs) Easy as pie, right? And, two becomes three. And three's a decent number, so a three-node Swarm with three managers configured for HA; love it. Well, adding a worker's the same. We just need the worker join token this time, have that, and there we go, and it's a worker, right? Now, workers cannot query the cluster store. There we go, but if we run that on a manager, here, right, four nodes. And the empty manager status field, here, means that this node is a worker. Now, we can take that same join command and token, and run it on a Windows node, (laughing) And that's it. A hybrid Linux-Windows Swarm. Brilliant. Now, we've got the join command and the worker token on the clipboard. So let's have a go at rotating that worker token. I don't know, assume it's been compromised. Well, rotating it is just a Docker Swarm join-token, tell it to rotate, and worker, Got to run it on a manager, though, okay? But that there is the new token. So if we try and join another worker here with the old on that we've got on the clipboard, (buzzer sound) no-no to the join-o. But look at the Swarm here. Existing node membership is unaffected. So the old token can't be used anymore, it's rotated out, but existing workers, ones that were joined with the old token, they're cool, they don't get bumped, they get to stay. Now, if we want to look at the client certificates, we just run this OpenSSL command. And, in the subject field here, the organization is the Swarm ID, the organizational unit is the node's role, Swarm manager, and the canonical name is the cryptographic node ID. Brilliant, well let's have a look at the join tokens now. First up: Swarm token here identifies what it is. And you can pattern match on that to stop them being accidentally posted on your website, or whatever. Then this long string is a hash of the cluster certificate, Mutual authentication, right? And then the bit after the dash is the bit that determines if it's going to be admitted as a worker or a manager. So we see that the two are identical, right, except for this last field. The bit before the dash, that obviously matches, because they're from the same Swarm. It's the bit at the end that rotates when you rotate tokens. Now then, we've got all this security going on, Mutual TLS and encrypted this and that. And it's all good, yeah, but restarting a manager, or restoring an old backup both present a couple of concerns. So Docker gives you the option to lock a Swarm. It's called Autolock. At a high level, it stops restarted managers from automatically rejoining the Swarm. And then subsequently loading the encryption keys into memory and decrypting the Raft logs and the likes. It also stops you from automatically restoring an old copy of the cluster config. And when I say stop, I mean it makes you enter the unlock key first. Let's have a look. First up, right, Autolock is not enabled by default. So you either give the Docker Swarm init command, the -autolock flag, or you do what we're going to do, and you Autolock an existing Swarm. So we're in a manager, here, and we go Docker Swarm update, then -autolock equals true. And that's the unlock key. Keep it safe, yeah? Anyway, this Swarm's locked, so if I go, service docker restart, it's only for managers, right? Because they get access to all the privileged stuff. Anyway, let's inspect the cluster. Ah-ha so, we're not back in, yet. Everything's still protected. So like the Raft logs on the node, and the likes, they're still encrypted, so safe. Well to rejoin the Swarm we go docker swarm unlock, and then we give it that key. Should be good now if we try that again. And yeah, we are good. So that's Swarm Autolock. And it only affects restarting managers. Workers are not impacted. Oh, and the process of joining a new manager? That doesn't change, just join them as normal. And, I think, yeah, I think that's all I wanted to say. Two simple commands to create a solid, secure Swarm. Docker Swarm init to initialize a new cluster and set up all the required constructs and security stuff, then docker Swarm join to add new nodes. Oh, right yeah, to update the certificate expiry time, we just go docker Swarm update again, -cert expiry, and then whatever you want. Two days yeah, whatever. Quick docker system info, and there we go: two days. Great stuff. Alright, time for a quick look at Orchestration. But it will be quick, right, because we've got a whole module on it later in the course.

Orchestration

A quick high level on Orchestration, really quick. Doing anything at scale demands automation. There's no way you can individually manage tens or hundreds of nodes and hundreds or thousands of containers. Billions, if you google. You need help. Something that's going to self-heal and do smooth updates and rollbacks and stuff. Well, Swarm and Kubernetes do all that. So in the Docker world, we start out with a Swarm cluster. We know all about those. A bunch of Docker nodes clustered together as a kind of pool. Once we've got this, we can deploy applications onto it. Here Swarm, go run my app for me. And we can be declarative. So, here Swarm, run my app for me, oh, and while you're at it, make sure there's always four containers supporting the web front end. Cheers! And it deploys the app and records the desired state of four web front-end containers. And that's the app running. But things break, right? And Swarm and Kubernetes know this. So they're constantly observing the cluster and any time the actual state diverges from the desired state, maybe a node's failed and we've dropped from four web front ends to three, well Swarm and Kubernetes step in and self-heal. Now, there's other stuff like balancing the work across the cluster and rolling updates and stuff. But we've got a whole module on this coming up, so that's enough for now. Let's have a quick module recap.

Recap

Okay, a quick refresher. Swarm is integral to the future of Docker. But there's two main aspects to it. There's the Secure clustering, and then there's the Orchestration. And while both are important, I think the secure clustering is what is integral to the future of Docker. Because on the Orchestration side, it looks for everything like Kubernetes is dominating. So, on the clustering side, we add nodes as managers and workers. Managers are in charge of the cluster, and they make all of the Control Plane decisions. Workers, they do all of the application leg work. Great, well we build a cluster with a simple docker swarm init, and thrown in for free we get a boatload of security stuff. Stuff that used to be so hard, we rarely bothered actually doing it. But in Swarm, it's the opposite. All the security stuff is just configured out of the box. A root CA, Mutual TLS, an encrypted store certificate rotation, secure join tokens, all the good stuff. And it's all built with that single command. Well, adding more nodes is another simple command. So we can literally go from zero to secure cluster in way less than 60 seconds. Then once we've got the cluster, we're ready to rock and roll with app deployments. In that space, we can go with native Swarm, or Kubernetes and we'll talk about them in more detail in a later module. Coming up next, though, we're going to look at Container Networking.

Container Networking

Module Intro

Networking. Now, networking's vast, and it's complex, and to be honest, probably deserves its own course. Well about that, it's got one. How about that? So in this module of this course, I'm giving you the CliffsNotes version. If you want deeper knowledge, and who doesn't right? Well, hit this other course here, it's got all the details. And if you're following along in the container management learning path that we've got, kudos, right? It's already a part of that. Anyway, here's the plan for now. Wait? No big picture? That's right, no big picture. I like to keep you on your toes. We're straight in with networking types, then it's network services, and then it's a recap. But remember, we're scratching the surface here, right? Enough to get you going. Get over to the full Docker networking course for the gory technical details. Now then, if you're studying for the Docker Certified Associate exam, we're going to nail these objectives. And they're all from Domain Four: Networking. So, create a Docker bridge network for a developer to use for their containers, publish a port so that an application is accessible externally, identify which IP and port a container is externally accessible on, describe the different types and use cases for the built-in network drivers, and deploy a service on a Docker overlay network. Now, we're going to cover more than that. These are just the bits from the exam. Let's go.

Network Types

Containers need to talk to each other. And guess what? Sometimes they even need to talk to VMs and physicals and even the internet, who'd of thought, right? I know, I know. And on the flip side, sometimes those VMs and physicals and the internet? They need to talk back to containers. This is new stuff, right? Well, to help with that, we've got a bunch of container networking options. First up, there's the bridge network, sometimes we call it single-house networking. Anyway, it's the oldest and it's the most common, and honestly, it's the crappiest, but it's turned on by default, so we'll cover it. So you've got a host and it's running Docker, yeah? Windows or Linux, we're all good. And it's got a built-in network called Bridge, or Nat on Windows. Now, if you hear people talking about Docker zero, they're talking about this, the default bridge network. Anyway, you can create more of your own if you want, knock yourself out. But each one's an island, so we plumb containers into it and each one gets its own IP on that bridge network. Sweet, they can all talk to each other. But containers on separate bridges? That's a bit of a hassle, because each one of these bridges is isolated, so these two that we can see are isolated layer-two networks, and it'd be the same even if they were on the same host. The only way to get in or out is to map ports to the host. Straight IP-to-IP at layer two or

three, that's a negative. Ghostrider. And it's the same for connecting to the outside world. It all requires port mappings, so it's okay, but really, you know what? It's a bit pants, not very good. And to overlay networks, oh yes. Now, you'll hear them called multi-host networks and although they're becoming commodity these days, they are powerful as heck. So instead of isolated bridges scoped to a single host, an overlay is a single layer-two network spanning multiple hosts. And the cool thing? It doesn't matter if these are all on different networks down here. It's a beautiful thing, and it is so simple to build. No wonder the hood, it's a networking tech fest. If you want all the gory VXLAN stuff, remember, hit the full networking course. The thing is though, it's a single command to create one of these and then you just attach containers, so in the example here, all three of these containers can talk to each other as if they were side by side. And it doesn't stop there. Encryption is a walk in the park. The control plane, that is encrypted out of the box and encrypting the data plane, it's a single command line flag. It is the future. In fact, it's the now. But the built-in overlay is container only. I mean, what if you need your containers to talk to VMs or physicals out on your existing VLANs? Well, enter MACVLAN or transparent on Windows. This gives every container its own IP address and MAC address on the existing network meaning containers can be visible as first-class citizens on your existing VLANs, no bridges and no port mapping directly on the wire if you will but it requires promiscuous mode on the host nick. Boo, if you're living in the public cloud because cloud providers generally don't allow promiscuous mode. So, maybe take a look at IPVLAN for that, it's similar but it doesn't require promiscuous mode though it's not fully baked, it's been in experimental since I don't know, like about 1.12 and I'm not holding my breath for it to make it into the stable channel any time soon. Anyway, sounds simple enough but talk is cheap, let's go and create some. So, I'm on a Docker host and it's a manager of a three-node swarm. So, if we take a look at the networks that we've already got, this one here's the default bridge. That means any new containers that we create will go onto that network unless we tell Docker differently and if we have a closer look at it, bridge, all right, name and ID, scoped locally using the built-in bridge driver, the original driver I suppose and then containers are going to get IPs from this range and speaking of containers, none. Now, remember that it's called Nat on Windows and it's going to look like this. Pretty much the same other than the name and the driver. Well, back here let's run a container. Just something in the background. Now then, note that we're not telling it which network to use, it's going to use the default. So, if we inspect that network again, now we've got a container here and look, it's got an IP but it's pretty much stranded on this host or this bridge actually. To talk with the outside we need to map a port on the host to a port in the container and I think the web service is the easiest example, so if we do this, Docker container run, we'll run it detached, we'll call it web and then we'll map port 8080 on the host to 80 in the container and we'll base it off of nginx. So, nginx runs a web server on port 80, that's inside the container so that's a container port here and when we're mapping that onto port 8080 on the host. Give it a second. Okay, now the Docker port command shows container port mappings and you just give it the name of the container. Okay, 80 in the container to 8080 on all interfaces on the host meaning if we point a web browser to our host, this is the IP of my host, and the host port was 8080, we get nginx. That's nginx running inside the container. Cool, to create a new bridge network let's just Docker network create, tell it to use the bridge driver although this is the default, so you can leave it out and then we give it a name. It's a bridge, golden-gate, never mind. Docker network ls and there it is. So, to run containers on it, we just, let's find one of these old ones, okay, we just add the network flag. Boom, that is on the Golden Gate Bridge. Yeah, never mind. Okay, let's switch tact to overlays. For these to work we really need swarm mode. The reason is they leverage a bunch of the swarm security stuff but that's all behind the scenes, we just give it the normal Docker network create, tell it to use the overlay driver and we give it a name. List them again. Right, there it is. It's an overlay and it's scoped to the swarm. Now, this scope to the swarm bit means it's available on every node in the swarm, multi-host, remember. So, we can create new containers and services on any node in the swarm and attach them to this network. So, let's do it. All right, we've got a command tick creating a new native swarm service. We're calling it pinger, creating two tasks or replicas, putting it on the new overlay and telling it what to run. Off it goes. So, we'll check that. All right, we've got the service with two replicas and because they're on the same overlay, they can ping each other so if we just check which nodes they're on, okay, two and three, so we'll switch over to node two and let's inspect the network. All right, on the containers herethere's the pinger task and this is its IP and we'll park that up here in the corner because we're going to ping that in a second but over here on node three, let's find the details of that other replica, okay, this is the pinger task, so we'll have an exec session into that, please, and time for the moment of truth. Paste that in and there you go, we're pinging a different container on a different host using the overlaying network. How easy was that? Brilliant, but you know what? Let's switch gear for a bit, though, and look at some fundamental network services.

Network Services

A couple of built-in network services are service discovery and load balancing. Service discovery is all about being able to locate services in a swarm and load balancing, that let's us access a service from any node in the swarm, even nodes that aren't hosting the service and it's well right, it balances load across them. Let's look at service discovery first. The premise is pretty simple, every new service gets a name. That name gets registered with DNS on the swarm and every service task so every container in a service gets a DNS resolver that forwards lookups to that swarm-based DNS service. Long story short or net net, all swarm services are pingable by name, with on caveat actually, so long as you're trying to ping it from on the same network. Shall we see it? Well, we've already got this overnet overlay network. But let's clean all the services up, we want to start from new. Okay, now let's create a new one. Put it in the background and we'll call this one ping. Put it on our overlay network, we'll have three replicas, thanks, and we'll make it a simple alpine sleeper, no fancy apps to cloud the detail. Great, let's have another one only we'll call this one pong, yeah, you get what I'm doing but this is all super simple. Two services, ping and pong and critically they're both on the same overlay network, so if we look at the containers running on this node, this one's here from the ping service, so if we exec onto it, we should be able to ping pong. It's stupid I know but look, it works. We're on the ping service and we can locate the pong service by name. Excellent. So, that's service discovery. Auto magic, right? Create a service and give it a name. That registers it with the swarm DNS and every other service in the swarm on the same network can find it using that name. But let me be clear, it is network scoped meaning services on different overlays, they can't find each other. More detail in the Docker networking course. Load balancing though, this is a couple of things, first, ingress load balancing. That's where external clients can access a swarm service via any of the nodes in the swarm and like I think I said before, those nodes don't even need to be running the service, so say we've got like, I don't know, 10 nodes in a swarm and a service with just two replicas, you can still hit any node in the swarm from the outside, even a node that's not running the replica from the service and still reach the service. Coolio. The other aspect is load balancing work across all replicas in a service. Let's have a look. So, we'll create a new service here, call it web, stick it on the overlay and just the one replica, thanks. Now, that's the default if you leave this out, I just want to be explicit for the course and then this. So, -p maps a port and because this is a service, it maps this port swarm wide, so on every node in the swarm and that's important because we're going with just one replica, so we've got three nodes in the swarm and we want to be able to hit this one replica from any of those nodes. So, that means 8080 on every node in the swarm gets mapped back to 80 on this service replica and we'll just run a default nginx again. Okay, let's have a look. All right, what we're interested in is this bit here. It's published swarm wide on 8080 heading to 80 on the service container and it's published on the ingress network, so that's the swarm wide bit. Every node in the swarm gets the ingress network. So, I think we're ready. Services running, this here's the swarm, three nodes, so I can pick any of these, yeah, we'll have this, and hit on 8080 and there it is, nginx but you know what? I could have got lucky and hit the node with the replica, so I'll tell you what, let's just grab a different one here, and we'll try that. Nginx, so that's ingress load balancing. Now, there's internal load balancing as well, so if say we've got 10 replicas running, Swarm's going to do some simple DNS-based load balancing so that all requests get moderately nicely balanced across all 10. But this stuff's cool, right? Because it lets you point an external load balancer at any node in the swarm without having to tell it which nodes are hosting the service and it just works. Brilliant. Let's do a quick recap.

Recap

All right, networking's complex, we know that. Well, Docker makes container networking simple. Out of the box we know it provides a bunch of drivers for different use cases, the bridge driver's find for development and really simple use cases, it's all single host and external access requires port mappings. I'm not a fan of it. Overlay's way better. This is proper multi-host networking. So, it creates a multi-host, layer two network so that containers on different hosts can easily join the same secure network. And it's the bizo but it's container only. If we want to plumb our containers into existing VLANs, we want to take a look at MACVLAN, transparent on Windows. This gives every container its own MAC and its own IP address on your existing VLAN but it requires promiscuous mode on the host adaptor and that's just not happening on most cloud platforms. Well, there's also built-in network services. Service discovery makes every service on the swarm discoverable via a built-in swarm DNS and load balancing? This makes it so that every node in the swarm knows about every service. Cool thing, right? It lets us point external load balancers at any or in fact, every node in the swarm if we want and no matter which node we hit, we reach the intended service and the stack's pluggable, so you can plug in third-party drivers for things like IP address management and maybe different network topologies and last but not least, this was the CliffsNotes version. We cover all of this and more in all of its splendid detail in the accompanying Docker networking course. Sweet, well, coming up next we're going to look at volumes and persistent data.

Working with Volumes and Persistent Data

Module Intro

Okay, containers are the bomb when it comes to non-persistent. They're here today, gone tomorrow and they do immutable as well, where they roll one out and then we never touch it. If we do need to touch it, we don't, we create a whole new one instead and push that out. And that's all great, only it's not great if you've got data that you need to change and you need to persist and let's face it, who doesn't have at least some of that? So this is where volumes come into play. Volumes are a great way to store persistent data and they're nicely decoupled from containers. Anyway, here's the plan. We'll do a big picture, what's all this persistent and non-persistent stuff anyway yeah? Then we'll look closely at volumes, create them, list them, delete them. Then we'll see how to hook them into containers and we'll finish up with a recap. Now as we crack on, we'll cover some stuff from the DCA exam, in particular from domain one orchestration, mount volumes. And domain six, storage and volumes, describe how volumes are used with Docker for persistent storage. Okay, let's do this.

The Big Picture

From a big picture perspective, containers are ideal for non-persistent, ephemeral stateless stuff, talk about buzzword bingo. But you spin up a container, it does a job, maybe it performs an authentication, checks an item stock, I don't know, tracks a shipment yeah? Anyway, then it goes away. It doesn't need to stick around and it doesn't generate any lasting data. Got it. But they're also great for immutable design patterns, that's where we deploy something and then it's hands off, never to be touched again. If you do need to change it, you don't log on and live edit, you just build a new one and deploy that. As well, right, you're unlikely to have this precious long-lived container that you need to migrate to a new data center, that's just not containers. They're usually short-lived, immutable and don't generate data you want to keep. Okay, bringing it back onto topic though. When talking about data, there's broadly two types, persistent and non-persistent. Persistent is the stuff we want to keep, customer records, orders, audit stuff, you know the type. Non-persistent though, that's the stuff we don't care about and I think it's pretty obvious containers are a cracking fit for the non-persistent stuff which is fine, but then what do we do about all that persistent stuff? We've all got it. Well that's where volumes come in. Backing up a bit though right, in the Docker world, every container gets its own non-persistent storage. It's free and it comes with every container. Usually it's on local block storage managed by the storage driver or the graph driver, yeah? Well focus is usually on performance and this is what usually does the container's union file system and all that magic. Persistent storage is different though. We call this volume storage and we have to

specifically create it and as such, right, it leaves outside of the world of the graph driver so away from all that union mount stuff. Now, generally speaking a volume's a directory on the Docker housed that's mounted straight on the container at a specific mount point. But behind the scenes, it can be sitting on your fancy Dan high-speed uber resilient SAN or NAS with all the bells and whistles, yeah? Just so long as your storage system has a Docker volume driver, it's going to work. But you know what, right, it's two things really, yes it can be plugged into some high-performance, highly-available backend right? But it's also an object in Docker that is managed and handled on its own entirely separate from containers. So when you spin up a new container, Docker container run or Docker service create, yeah, the usual commands. Well each one auto-magically gets its own non-persistent graph driver storage, this is the copy-on-write union mount stuff. On Linux, it's carved out to var lib docker and on Windows it's C:\program data docker windows filter. It's local block storage, right, and it lives and dies with the container, ephemeral but it is tied to the life cycle of the container. Volume data though, that's different. This exists outside of the container space and has its own Docker volume sub command but it seamlessly plugs into containers and services whilst still being fully independent. What it means, right, is we can create and delete containers without touching volume data, which is cool right? I mean it gives us a clear line of demarcation, we can start, stop, update and even delete containers and any volume data that they've been using is un-impacted. It also means we can attach a volume to more than one container, though you do need to be careful to avoid corruption. But it's doable and it can be all backed onto your D Dew Pin compressing, self-replicating net app or EMC or whatever's your thing yeah? But I feel like I'm waffling, it's time to see this.

Managing Volumes

So to cement this idea that volumes are fully independent of containers, there's a full on Docker volume sub command and as we can see, it follows the usual syntax. So an LS shows us that we've currently got none. Well to create one, it's just Docker volume create, we'll keep it simple and just give it a name, looks good. Yeah, there it is, cool. Now we can inspect it as well. Alright, a few things. We created it with the default local driver, it got created on the system under here and it's scoped locally. I tell you what let's create another one. List them both now. And if we look under here, There they both are, so those are our volumes. Now to delete them, it's just Docker volume rm and then the names. And those should be gone, we'll just check. Yeah, totally gone. Now, we never actually did anything with them so it's a bit like, meh, what was the point Nigel? Well the point was this, number one to show you the Docker volume command but also to back up what we said about volumes being totally independent of containers. I mean we created, listed, inspected and then we deleted two full on volumes without even touching Docker run or Docker service create. So yeah, Docker volume, your one-stop shop for creating and managing volumes. Now coming up next, this is when we'll see how to use them.

Attaching Volumes to Containers

Okay let's run a new container with a volume. Right now we've got no volumes, right. So if we go Docker container run, make it detached and interactive, I think we'll call this one voltest and then we give it the mount flag, this is how we attach a volume. So we'll say source is ubervol and we'll mount it to slash vol and the container and we'll use alpine latest. Okay, so a few things to note, I think first up right, we're obviously telling it to use a volume that doesn't exist, I mean we just showed that we haven't got any volumes right? So if you specify a volume here that doesn't already exist, Docker's going to create it for you, which is alright but if you think it does exist, like maybe you're trying to specify an existing volume and you make a typo or something, well you're not going to know straight away because instead of saying, wait hang on, that volume doesn't exist, Docker's just going to create it so be aware of that. Anyway that should exist now, right? Yeah. Now the second thing to note is that the syntax is like this, source tells us the name of the actual volume and then target tells us where in the container to mount it. Anyway it's a new volume so it's squeaky clean, but because they live in the Docker-host file system we can inspect them directly here. Now in fact any data that we put in them goes in this data directory. Okay, empty right now, Well I tell you what, let's jump onto that container and take a look. Normally we don't do stuff like this, yeah? Immutable and all but you know what, we're cool because it helps with the demos. Okay and we mounted it to slash vol and we're squeaky clean here as well which is expected, right? Now then, if we write some data to it put it into a new file let's just make sure that took. Right, now we've got data. And if we look on the host again, we should see it here as well. Alright, there it is. So see how this is just a host directory mounted into a container, yeah? Well you know what, because it's managed separately from the container, if we stop and remove that container but the volume should still exist, which is does so fully independent, not tied in any way to the life cycle of the container. Meaning if we start a totally new container, I'll find the command for the old one, this time we'll base it off of nginx, you know what let's mount it to app this time as well and we'll call the container volmore. Okay so you know what, let's take stock for a second. We created a new volume called ubervol and we attached it to an alpine container, great. We wrote some data to it, then we deleted the container. But volumes are independent of containers right? So the ubervol stuck around. Well, now we just started a totally new container and attached the same ubervol to it meaning, right, any data that we created before should still exist in the exact same condition. Let's test it right, so if we jump into this new container okay, and we mounted it to app this time. Okay and it was called newfile. And there it is, exactly how we left it. In fact, let's add some more data. Okay, now if we back up to the host here and if we find that cat command, there it is, that's our data. And you know what because it's managed separately to containers, we should be able to delete it, or should we? What do you reckon? Eh-eh, It's in use. So as long as a volume's in use by a container, you can't delete it, it's a safety latch. But if we delete that container and then try that volume delete again, okay this time it goes and hopefully it's removed from the file system as well? Yeah, so that's the crux of volumes, persistent storage for containers but managed separately with the Docker volume command. And they work with services as well, just slap the dash dash mount flag on the Docker service create command, exactly how we did with Docker run. And you can use them in Docker files with the volume instruction. But that's volumes and the model's pluggable so you can integrate with external, third-party storage systems using plugins and drivers. I think time for a quick recap.

Recap

Okay, recap. We said all containers get this local graph driver storage, it's what stacks the image layers and adds the writeable container layer but it's bound to the container so you delete the container and the graph driver storage goes with it. Which is fine for some workloads, not so much for others. So for containers that create persistent data, we need volumes. These operate outside the graph driver and have a life cycle totally independent of the container, so you can start, stop and delete containers, attach volumes to them and when it comes time to delete the container, the volume stick around and obviously any data written to it. There's also this whole Docker volume sub command for managing volumes, and thanks to the plugin architecture, volumes can exist not only on the local block storage of your Docker host, but also on high-end external systems like SAN and NAS. So if you've got something enterprise class with dedupe and compression and pin provisioning magic and all the nine's availability, as long as it's got a Docker storage driver, you can plug it in, sweet. Alright well that's us done with storage and volumes. Coming up next, we've got secrets.

Working with Secrets

Module Intro

You know what? I'd love to talk to you about this, what's on the slide there, but I can't. It's a secret. Sorry, that was bad. I know, really bad. Anyway, secrets, here's the plan. We'll start out with a big picture, I mean, what even is a secret and how do they work? All the theory stuff, yeah? Then we'll do a demo on the command line to reinforce that theory. After that, we'll deploy a secret into a WordPress app, but we'll do it with Universal Control Plane, the Docker web UI. Now, that's part of Docker Enterprise Edition. The commercial, "stick your hand in your wallet" edition, yeah? And I fully appreciate that not all of you are going to have access to that. But the focus is not on the UI, it's going to be on the app and how the secret fits in. I think you'll like it. Then, we'll do a recap 'cause repetition is the mother of learning. Now then, as usual, we'll touch on some exam stuff. From Domain 1, we'll add networks and publish ports. And from Domain 4, we'll deploy a service on an overlay network and make it available on an external port. Let's crack on.

The Big Picture

First up then, what is a secret? To be honest, it's anything that you want to tell your app that's sensitive. Now, that's normally going to be things like passwords and certificates. But to be honest, it could be things like names of servers and services, basically write anything that you think would be a security threat if it got exposed. Now, in the Docker world, we can be a bit more concrete with our definition. At the time of recording, a Docker secret is a text blob, and it's up to 500k, half a meg. So you're covered for your typical passwords and SSH keys. Anyway, and we're going to see this in a bit, right? But a typical use case is telling a web front-end what the password is to a back-end persistent store. And it's nothing new, right? We've been doing this for years. But in today's world of dynamic, short-lived apps that we deploy here, there, and everywhere, the bolt-on solutions that we've been hacking together are just not up to task. We have been crying out for something safe and secure, and you know what? Something that's infrastructure independent. And that's what we get with Docker secrets. So long as you're running in Swarm-mode, secrets are baked right in. That means, if you're on-prem, in the cloud, on your laptop and you're using Docker, you've got secrets. Now, it needs Swarm-mode because it leverages the security stuff. So let's walk through it. We've got a swarm, right? So you can create a secret. This gets sent to the manager over a secure connection, and the manager puts it in the store where it's encrypted at rest. Brilliant. Then you create your service or maybe update one. The point is, you explicitly grant a service access to the secret. After that, a manager then sends that secret over a secured connection to just the nodes in the swarm that are running a replica for the service we just authorized. It's a least-privileged model, right? Only the workers that are running a replica for a service explicitly granted access to the secret get it. Workers not running replicas for an authorized service, they don't get it. In fact, they don't even know it exists. Now then, Once it's delivered to the node, it gets mounted inside the service task in its unencrypted form. On Linux, that's a file in /run/secrets, and importantly, that's a temp FS volume, so an in-memory file system, meaning at no point is the secret ever persisted to disk on the node. It's only ever in memory. Now, this part is a bit different on Windows because Windows doesn't do in-memory file systems. So on Windows, yeah, it does get persisted to disk on the node. So, I don't know, you might want to mount the Docker root directory using BitLocker or something. But that's it, yeah? Pretty impressive. Oh, and when the service is terminated or the secret's revoked, the worker node is instructed to flush it from memory. Brilliant. Now a couple of things to know about, right? Well, actually, we've said that it's only in Swarm-mode. But that means services, not standalone containers. So even if you've got standalone containers running on a node in Swarm-mode, it won't work, it's just for services. Okay, now you want to be running Docker 1.13 or higher. Before that, the raft logs weren't encrypted. And yeah, for Windows support, that's going to need to be 17.06 and later. And that's it. Let's can the theory and see it in practice.

Secrets on the CLI

Ah, I'm on a Windows node and it's the leader manager of a single node swarm. It's only single node for the demo, right? Obviously, that's not a requirement. Anyway, I've got a file here called classified, and inside the file is the contents of my secret, but I'm not telling you what that is yet. To create a secret from it though, I use the docker secret sub command. We give the secret a name, and having something within the name to indicate a version is a good idea, right? It makes rotating and the likes easier. Anyway, then I tell it to use the classified file. So, create a new secret, call it this, and use the contents of this file as the actual secret. Now, that can be an SSH key or whatever, right? You'll see what it is in this particular example later. Anyway, that's done. My Docker client has sent that secret to the swarm manager demon over a secure channel, and it is now securely stored in the swarms raft. Okay we can see a list of secrets with the usual ls command. There's just the one, that's obviously ours. And you probably get it now, but we can inspect it with the usual inspect. Alright, Now, especially looking at the inspect here, the take-home point so far, I hope, is that nowhere here can we see the unencrypted contents of the secret. Now that it's created and securely stored in the raft, the only way to see it is to grant the service access to it. So let's do it. So it's a normal docker service create. We'll call it secret-service, as in, like, the Secret Service. Come on, it had to be done, right? Anyway, we tell it about the secret. This is what actually grants the service access. And then we'll just make it a simple service, right? We'll see a more realistic example in the next section. Ah, now, Windows images are mahassive, I mean, mahassive. So, I'm going to step out of our three-dimensional space for a second, go forward in time, and it will be quite far right, 'cause these Windows images, like I said, they are big. Anyway, I'm heading for some time in the future when this background download is done. See you there. Okay, I'm back. Whoa, it's dark outside? That was longer than I thought it would be. Anyway, hope it didn't miss anything. But look, we've got a running service. And if we inspect it, and somewhere up here we're going to see the secret config. There it is. So we know that this service is using the secret. Well, we're a single node swarm, so the service replica is definitely going to be running on this node. That's it. So if we exec onto that, and it's in Windows, right? So the secret is going to be mounted as a file under C:\ProgramData\ Docker\secrets\. And there it is. This is /run/Secrets on a Linux container. Alright? But what's in it? I know you're dying to know. Ah, what? All of that at-rest and in-flight encryption stuff, and the least-privileged model, and that's what the secret is? Disappointing. Nigel, disappointing. Anyway, look, you can't delete a secret that's in use. So if we try this here, Denied. The service is using it, right? But if we delete the service and try that secret delete again. Okay, this time it's worked, we'll just make sure though. Yeah, gone. Well, do you know what? That's the simple version. Coming up, we're going to do it all again, but this time we're going to use a real app.

Secrets in Apps

The GUI, yeah? For those of you who might not know, this here is Docker Universal Control Plane. It's Big D Docker's all-singing, all-dancing web UI for ops teams, and it's a "stick your hand in your pocket" and give us some money please" product. But I kind of like it, though, actually. I'm not loving the latest UI redesign. But you know what? It's decently powerful as a tool. Anyway, we've got a job at hand. Secrets. Specifically, right? We are going to deploy a WordPress app. So a WordPress front-end and a MySQL back-end. And we're going to use a secret for the database password. So if we come here to create a secret and then all the way over here to create a new one, and just like the command line, we give it a name and some content. I think wp-sec. And we'll give it a bit of Pluralsight love, right? We all love Pluralsight, yeah? And we're good. Seriously, that's our secret. And again, look. Like the command line, we can poke around in here all day and we're never going to see its unencrypted content. That is all locked away now on the underlying swarm. Okay, well, the app that we're going to deploy needs a network, so we'll have a new one. Call it wp-net. And we're keeping it simple, so that will do. There it is. Now to deploy the back-end service. We'll call this WordPress db, and like we said, we'll go with MySQL. Stick it on that overlay we just created. And now for the secret, which is done under here under environment. So we say, Use Secret, and we pick it from the list. Now, we can, if we want, give it a different name and location to what is default. But we're cool with this, right? This is what will be called on the host, yeah? Anyway, looking good. Now at this point, we've done everything that we need to to grant the service access to the secret. But we need to configure the app to use it, right? So we're using a MySQL back-end and that needs a password, and we're going to tell it to use our secret for that. So this variable here needs setting to the location of the secret in the container. Now it's a Linux container. So the secret we created is going to get mounted into the container's file system at /run/Secrets and then the name of the secret. So that matches this here, yeah? And I reckon we're good, so let's deploy that. Okay, it's running. Time to deploy the front-end. So same again. We'll call this one WordPress front-end, and we'll use the WordPress latest image. We'll put it on a network, the same one as the back-end, right? So they can discover each other by name. But with this being the front-end, right? We want to publish it on a port. So this web service is configured to listen on port 80, and we'll go with ingress so it's available on all nodes in the swarm. But we want to publish it externally on 8001. And that's good. So we're on the right network and we're published on the ingress network. Time to tell it about the secret. So again, use the secret. We've only got the one and we're cool with the defaults. Okay. Now for a couple of environment variables to configure the app. This is app-related stuff right now. We've already done everything that we needed to do to give the front-end access to our secret. Well, first up, we want to tell it to use our secret to access the database, /run/Secrets/wp-sec again. Make sure that matches, yeah. And then another variable to tell it where to find the database server. Now, for this, we just give it the name of the back-end service and then we tell it which port to talk on. Cool. Now remember, because both of these services that we created are on the same overlay network, they can discover each other by name. So that wp-db here, that is the name of the database service. And you know what? We could totally have used another secret for this here. Maybe I should have. Nevermind though, we'll deploy it. Okay, that's running. Now, because we published this on the ingress network, we can open a browser tab here, paste in the DNS name of the lab server, and I think, did we say it was 8001? And there it is. WordPress, in all its glory, secret and all. So yeah, Docker secrets, the way to securely deliver passwords and certificates and the likes to swarm services. And as we've seen, it works on the CLI and the enterprise class web UI. Sweet. Time for a quick recap.

Recap

So, Docker secrets, a safe and secure way to publish secrets to applications, and it is platform-independent. So we start out by creating the secret. In the Docker world, that's a string that can be up to half a meg in size. When we create it, it gets sent to the swarm over a secured network connection, and then it's placed in the raft where it's encrypted at rest. Then we create or update a service. As part of this operation, we authorize the service to access the secret, which causes the control plane to send it to nodes in the swarm that are running replicas for that service. Again, it's encrypted in flight. When it hits the node, it is never persisted to disk, at least not in the Linux world. Instead, it gets mounted into the service replica, which is a container, yeah? As a file in an in-memory file system. And it's unencrypted at this point. Then once the service is done, the control plane tells the client on the worker nodes to totally forget about it, and it is flushed from the nodes. Cool. Like a thousand times better than storing them inside your image in plain text or inserting them as plain text environment variables. This really is enterprise-grade in my opinion. Fabulous and all, but time waits for no one. Coming up in the next module, we're going to look at stacks and services.

Deploying in Production with Stacks and Services

Module Intro

We've said a few times already, containers are all about the apps. Magic. But we need a way to deploy and manage them in production. Enter stacks. This is like the icing on the top of the cake, it's almost like everything so far has been building to this point. Anyway, here's the plan. We'll set the scene with a quick big picture, then, we'll inspect the stack file, and that'll be a full on microservices app fully-defined in a single declarative file. Then we'll take that file and we'll deploy the app and manage it. Then we'll recap. Now then, we're going to cover some Docker certified associate exam stuff while we're at it. Specifically, we'll cover the following from domain one orchestration. Extend the instructions to run individual containers into running services under swarm. Convert an application deployment into a stack file using a YAML compose file with docker stack deploy. Manipulate a running stack of services, increase the number of replicas, and mount volumes. Let's go.

The Big Picture

I think it's fair to say that most apps are a bunch of smaller services that work together. And in the docker corner of the world, that's Services with a capital S. So the Service object in the Docker engine API. And although we've touched on services a little bit already, we've not actually seen a good way to manage a bunch of them that are working together as a single app. Enter stacks. Now before I go any further though, stacks work on the command line, the universal control plain GUI, and even Docker Cloud. Anyway, look, we build an app. And that's usually a bunch of different pieces of code that talk to each other and work together to form a meaningful app. Beautiful. And they can all be different languages and all that. But, we make each one a container. Then, for things like scalability and self-healing, we deploy them as Services. That's capital S again remember, we're talking about deploying them as Docker Services. But each service is still deployed and managed separately, and that's not ideal really, so, we group them as a stack, and voila, meet the highest layer of the Docker application hierarchy. Now then, let me turn things upside down and flip this on its head a bit, cos I think that was the dev view starting from the code. The ops view though, that's the inverse. Ops are going to start with the stack, details to follow, yeah? But that defines a bunch of services and networks and volumes as well, so it's a great piece of application documentation, yeah? But, those services define containers, and containers run code. Anyway, we deploy and manage stacks with the docker stack subcommand or through Docker Cloud on the web UI. It's the business. Now then, the stack file is basically a compose file, so if you know your docker compose, this'll be a breeze. But, this all brings a host of things that are simply game-changing. For starters, defining the desired state of an entire application in a spec file, this is at the heart of things like self-healing and the define once deploy many philosophy. So we define the app and how many replicas and all that kind of stuff, right? We feed it to swarm, and swarm deploys it. But it doesn't just deploy it, it manages it as well. So it's not like your typical developer that just fires and forgets, just kidding, relax. So, it records the spec of each service in the cluster, and then it implements a bunch of background reconciliation loops that watch it. And if things fail, it fixes them. It really is game-changing. I mean, I assume you're not a fan of phone calls at 4:20 AM? If you're not, then this is for you. Like, if a node fails, and maybe it takes down a bunch of replicas with it, swarm doesn't page you to fix it, page by the way is what we had before mobile phones. But no, swarm doesn't page you. It just fixes it itself by spinning up new replicas on a surviving node. Oh my goodness! Now, of course it needs you to have written your app so that you don't lose a bunch of state and alikes when the replicas fail. But if you're doing that, and you've got this, heck yeah, you can stay tucked up and warm in bed while swarm does all of the out of hours break fix work. Love it! As well as all of that though right, a stack file is a great way to document your app, so a developer defines an outright in a stack file and it hands the stack file to operations. And right there, ops has a great description of the application. So it knows what services make it up, what images are in use, networks, volumes, number of replicas, all of that goodness right, and its idea of the change control! What is not to like? Oh, as well as that, you can fork different versions of your stack file for things like dev test and prod, so it's the same app. But I dunno, maybe ease up on the number of replicas in dev and test, or a different secret or something? You get the picture. So yeah, if you deploy containerised apps that fit the microservice model, and you want a way to deploy and manage them as a single app? Stacks are a great way to go, and you get all the self-documentation, version control friendliness and all the declarative self-healing magic thrown in for free. Let's see it.

Stack Files

So here's the app we're going to deploy. It's pretty long. Well, I mean it's not, but it is for a video course. Anyway look, I've included a copy of the file in the course notes, and I've got a copy here as a fork from here. So, that means you can use either of these commands to get your hands on the file, and the commands are in the course notes as well. Anyway, it's a lot to look at, so what we're going to do here is a bit of a compose primer and a breakdown of the app. Right, stack files, as I'm calling them, they're basically compose files. But, they need to call at least the compose V3 file format, cos all the stack related stuff in them is only supported in that version and later. But I'm getting ahead of myself here and I don't want to scare you off. We have got an app here. Defined, in a compose V3 file, or a stack file. And at the highest level, it's defining six services, couple of networks, and a volume. So actually, we've got four top level keys, Version, services, networks, and volumes. Okay, well we always stick version at the top, I'm saying 3.4, then we define our services and we list any networks and volumes that they'll use. For services right, okay, we've got six. And each one of these is its own JSON dictionary with its own set of keys. But I think the main point for us now, is that each of these represents one of our services, so we've got a redis service, db, vote, result, worker, and visualizer. And then these are going to use a couple of networks called frontend and backend, and a volume called db-data. Magic! We're already starting to get a bit of a feel for our app. So, if we expand the services, okay, right at the top we've got the redis service. Now we can see what image it's using, the port it listens on, and for this one we're just listing the container port, right? Letting swarm map it through to a random high numbered port on the swarm. Then it's going to attach to the frontend network, and then we get to the good stuff. This deploy key right, this is pretty much what was new with the V3 format. And it's where we define all the swarm and the stack stuff. So we can see right now, we're deploying one replica of this service, so one container. Then, when we do rolling updates of it, we'll update two replicas at a time. Which, I guess doesn't really apply here because we're only deploying one replica. Well you know what? If we ever scale it to 10 or something, well then when we come to update it, like say to a new version of the image, swarm will iterate through those 10 replicas two at a time, and with a delay of 10 seconds between each two. Then, we've got a restart policy here which basically says restart replicas for this service, if the failure code on any of them says it failed on error. And that's the redis service. Look, it's pretty much saying for the others like db here we're using the postgres image, this one's using a volume, it's on the backend network, and it's got a placement policy, so we're telling it just to run on manager nodes. And that's probably because it's using a volume and maybe the volume's only available on managers or something like that. Which makes me think actually, Swarm is decently intelligent when it comes to scheduling! I mean, this here is telling it only to run replicas on managers. We can do the same for workers. But this is what we would think of as topology-aware scheduling. But it does health-aware scheduling as well, so it'll only schedule work to nodes that it knows are healthy. And, it does H/A scheduling, so this makes sure that replicas of a particular service are not all running on the same node, in case the node goes down. Anyway, it's pretty much the same for the rest of the services. Each time, we define an image, set some ports, join a network, and a bunch of swarm stuff. And then finally the networks and the volumes, which swarm will create for you automatically. But this right here, in this file, this is our app. And it's described in a way that ops can read it and understand it, the cluster can store it as part of its overall desired state, and we can slap it in version control. I'm not kidding, I mean, there is very little that's not to like about this. But you know what? We've been staring at a file for five minutes. Let's go and deploy it.

Deploy and Manage Stacks

Okay, I'm on a Docker host here, and it's in swarm mode. And, I've got a stack file here. Now, it's the exact one that we've just looked at, so six services, couple of networks, and a volume. Basically, it's all the stuff that we'd normally define using things like docker container run or docker service create on the command line, but all nicely packaged in a declarative file. So, to deploy it, we just go, docker stack deploy -C for compose file, and then we tell it our stack file. Now you can call this file whatever you like. Most people still have it as docker-compose.yaml or some named version for dev or test or whatever. But you don't have to, you can call it whatever you want. And as we can see, we're using the native docker stack subcommand, so no need for that extra docker-compose Python binary that we used to need with legacy compose. This is all native go stuff that's implemented directly in the engine. Anyway, we give it a name, and off it goes. And done, deployed. Though, to be fair, it's probably pulling images and the like in the background. Hmm. Okay, busy output, long image names I guess, but, yeah, some of these are still preparing. But we can see the desired state here is running for all of them. It's just current state for some, well some are running but some are preparing. And you know, we get a decent view with the docker stack services command here as well. Cool. Well that's it, the app's deployed. We took our spec file, and we deployed it using docker stack deploy. And behind the scenes, like we see in this command here, it's deployed our six services. And in fact multiple replicas of this vote one here. Which in fact, actually that one's the front end, and we can see it's published on port 5000 externally, so if we come over here, and we can hit any node in the swarm, on port 5000, and it's the voting app, Dogs, magic. Well you know what, there's a bunch of other services, 5001 and 8080, so back here again. We change this to 5001. Right, this is the result service, so it's showing our one vote. And the other one I think was 8080. Okay, that's the visualiser tool, so it's telling us what's running on the swarm. We've got three nodes and then these here are the service replicas. Cool well, with a single vote being cast, clearly we need to scale things up. So the voter vote service, it's the name of the stack underscore name of service, so the stack is called voter, and then in the stack file, this service is called vote. Anyway, look, two replicas, not enough for frontend demand. We need 20. Now, you know what? We can do this the imperative way, in fact let's do that. So we go docker service scale voter vote=20. Cool. Neh, cool-ish. You see, doing things imperatively like that, fine, it's updated the service, and yeah, we can see the service spec in the swarm here should be updated as well. Replicas right, so we're at 20 in the service spec. So desired state 20, current observed state 20? Well you know what, back in our spec file which hopefully we've got in source control somewhere, uh-uh, that is still going to be saying two. Meaning, if we update that file sometime in the future and redeploy from it which is the way we'll normally work, we're going to fall back to just two replicas. So doing it imperatively works, but it's not the right way, things get out of sync. The right way is to update this config file here. We find the voter service. And you know what, let's say 10. Save that, and then we'll reapply it, which to do that, all we do is we find that original docker stack deploy command, and we run that again. It's going to run against the new version of the stack file. So there you go, that is basically updating every service in the stack. So if we look at it again... We're down to 10 replicas for that vote service now. And if we check the service spec on the cluster again... We're showing 10 there as well. So everything's in sync. The desired state recorded on the cluster, the actual state currently being observed on the cluster, and our master config file which again hopefully we're storing in version control somewhere. Brilliant, declarative for the win, really. Now one last thing. Because we've told the cluster its desired state of 10 replicas for this vote service, we, yeah we've got one running on every node in the cluster. So you know what? I'm going to come over to the cluster backend here, I'm on Amazon WebServices, you can be on whatever, it doesn't really matter. I'm just going to pull the plug on node three. Nothing graceful, just get yourself out of here. Off you go. We check our stack again... Right, we've got some shutdown action going on here. So basically, the swarm has noticed that something is wrong. One of the nodes is gone, meaning some of our replicas are missing. So, in the background, it's spinning up more replicas on surviving nodes. And this is that 3AM phone call being dealt with by swarm, thank you very much. And that stacks, right? Multiple services, declaratively defined in a stack file. We'll post that to the swarm, it gets recorded as the app's desired state, and then it gets deployed. Then when it comes to update time, the best way to do that is the declarative way. So that's checking the stack file out of version control, making our changes there, and reapplying from that. Pretty sweet. And of course, we can do the same in the GUI and in Docker Cloud. Same stack files, just with a pretty point and click interface. Tremendous. Let's have a recap.

Recap

Okay, we started out by saying it is all about the apps. But, the apps are generally a collection of smaller services, and they all play together nicely and do something useful, brilliant. Well in the Docker world, these apps are made from containers that we run as services. Then, we group these services into stacks, bingo, we've got an app. So, a stack really is just a bunch of services that make up an app. And we define it in a YAML file, pretty much a compose file with a few extensions to deal with swarm stuff. And it really is just a compose file. Though, you do need to be using version three or later of the compose file spec. But, even though it's using a compose file, we don't need to install compose as a separate tool. This stack stuff, it's all baked directly into the engine. But it needs to be in swarm mode, got to be clear about that. Stacks are about swarm. Anyway look, we've got this stack file defining our app, and we deploy it to the swarm cluster with a docker stack deploy command. And in the background, this does a few things. First up, it records the desired state of the app on a cluster. And of course there's raft in the background making sure that every manager's got the latest copy of it. But second up, it deploys the app, which includes all the services, networks, and volumes and all of that kind of stuff. But then, thanks to background reconciliation loops, swarm manages the app. Cos it's got this notion of desired state, which is really just what we put in the stack file here saying how the app should look on the cluster. Number of replicas, which images, all of that kind of stuff. But if anything ever changes, and we use the example of a node failing and taking a bunch of replicas with it, well swarm sees that change and that the observed state of the cluster no longer matches the desired state, so it goes to work fixing it. Brilliant. We end up with a self-documented, reproducible app that fits nicely into version control. Let me tell ya, it's the future. So yeah, that's stacks. Coming up next, we're going to look at some of the native Docker enterprise tooling.

Enterprise Tooling

Module Intro

Alright then, we're near the end. I can feel it. And if you followed along from the start, then you're going to be pretty skilled on this whole Docker thing by now. Get in. I mean, that's what we came for, right? Anyway, now that we know how all the underlying stuff like images and containers work, we're going to switch tack one last time, and we're going to have a bit of a look at some of the stuff that Docker, Inc. offers in the enterprise space. And let me be clear for a second here, yes, I did say Docker, Inc. So, Big D Docker, the commercial entity, yeah? Now, other companies provide similar products, and in no way am I endorsing a particular product here. I'm not! The thing is, I'm trying to cross two streams here, and if you know your Ghostbusters, crossing streams is bad. Like, total protonic reversal kind of bad. Anyway, look, buckle up 'cause we're about to cross streams. So, Stream 1, I want to give you a feel for the types of products and the kind of value-add stuff that's out there. In Stream 2, I want to cover off a few of Docker Certified Associate objectives. So, two streams, and the best way I could think of covering both was to show you the Docker, Inc. enterprise products. But really, it's not a sales pitch and I'm not endorsing. And you know what? There is some seriously cool stuff on the card here. So, here's the plan, big picture, yeah? The usual, what and why, and short and sweet. Then we'll look at the universal control plane operations UI, I'll show you how to install it, and we'll take a whistle-stop tour of what it does. Then, it'll be Docker Trusted Registry, others do exist, right? But what we're giving you here is the idea of a private registry inside your own firewalls. Then we'll look at some of the features, all of their springs, right? We'll start with role-based access control, then imagine scanning for known vulnerabilities, and a bit of Layer 7 load balancing, then a recap. Now then, this is the reason for crossing streams. If you're thinking of taking the Docker Certified Associate Exam, we'll be looking at these topics. Now remember, okay, this is not a DCA study course. We're a bit more real world than that, so we're not covering everything in the exam, and we're not going into massive depth on exam objectives. But we will be looking at these things. Domain 2: Image Creation, Management, and Registry, we'll do deploy registry, configure a registry, login to a registry, and push an image to a registry. For Domain 3: Installation and configuration, we'll do consistently repeat steps to deploy Docker engine, UCP and DTR on AWS and on-premises in an HA config. Domain 4: Networking, use Docker to load balance HTTP and HTTPS traffic to an application, so configure Layer 7 load balancing with Docker EE. Then finally, Domain 5: Security, demonstrate the image passes a security scan, Configure role-based access control in UCP, and describe the difference between UCP workers and managers. Let's go.

The Big Picture

Okay, these days, Docker are bundling all of their enterprise stuff under the umbrella of Docker Enterprise Edition. EE for short. Now then, it's basically a bit of a hardened engine, and Ops UI, and a secure on-premises registry. I'd say those are the building blocks. Then as part of that, they're bringing things like RBAC, image signing and image scanning, image promotions, and a bunch more, all value-add, yeah? Well, without EE, you get CE, community edition, and the boundaries between the two are a bit fluid, I think, right? So, some of the stuff in EE might slip its way into CE in the future, I don't know, I'm just guessing. But CE is basically the community edition of the engine. So, things like the OCI layer and the container D stuff. But all bundled, right, with the API and daemon to give that core Docker experience, the opinionated runtime, if you will. And it's on its own pretty aggressive release cycle. Then, stuff that's gone in CE finds its way into EE, which has its own separate release cycle, a bunch of additional products, a support package, and a bunch of certified this and that. Now, at the lowest levels of the engine, right, CE and EE are pretty much the same, just EE has fewer release cycles, and stricter configs and stuff. Then, the other EE stuff wraps around that and brings all the value-add, and you pay for it. Again, other vendors offer similar. But the idea is that everything up here is nicely packaged and plays well together, they should seamlessly fit. Anyway, back to the big picture. For the rest of this module, we're going to drill into the UCP web interface, the trusted registry, and then some other stuff that's built around it.

Docker Universal Control Plane (UCP)

Right then, Universal Control Plane from the folks at Docker, it's a GUI. Yep, there's no getting away from it, it's a GUI, and its raison d'être is to manage Swarm and Kubernetes apps, cool. Anyway, you install it as a containerized microservices app on top of the Docker EE engine. We'll run through an install in a second, but yeah, you install Docker EE on your node, and then you pull and start the containers required for UCP. Eventually, building a cluster of manager and worker nodes. And no surprises for guessing, but it is a Swarm cluster under the hood, obviously, right? We've already know that Swarm's got a ton of security and other stuff for the infrastructure level. But that means that managers in the UCP cluster are the control plane, and the workers, that's where you want to run your apps. Anyway, we end up with this enterprise-grade cluster to run Swarm and Kubernetes apps on. So, to install it, and I know that not everyone can do this, I guess, 'cause it's a paid-for product. But, you first of all need to install Docker EE, the Enterprise Edition of the engine. So, I'm logged in as me here at store.docker.com, and if I look at my content, there's Docker EE. Now, I'm going to need this here, right? This is my unique key of sorts, my own personal repository. But I'm installing it on Ubuntu, so I just follow these instructions. There's obviously options for the platforms here as well. Anyway, I've got four Ubuntu nodes and I'm building this cluster. One manager in three workers, with UCP and DTR. Alright, well, this here is Node1, and I just couldn't paste those commands from the store page, yeah? So, first of all here, we're making sure we've got a few packages installed and up to date, particularly, this HTTPs transport. We're going to install over HTTPs. Okay, add the key from my custom repo. Okay, this is my custom repo, yeah? Add the right repo, again, this needs my unique key here, obscured of course, not that I don't trust you, more so that Docker don't shoot me. But now to install the EE engine. Okay, while this is going, there's instructions on your Docker Store page and on the Docker website for the versions of EE, so like, for Red Hat and Windows, or whatever. We've just shown you the way for Ubuntu. Anyway, once it's done, we can see it with the usual Docker commands, Magic, so that's EE. Now, I'm going to go and do the same on the three other nodes in the cluster. Okay, with all that done, it's time to install UCP. So, UCP's a containerized app, I mean, you'd hope so, right? Eat your own dog food and all. But we start the installation with this kind of long Docker run command. Now, versions and IPs are going to be different in the future, that's my AWS IP, yeah? Yours will definitely be different. But straight away, it wants some admin creds. This is enterprise stuff we're talking about here, right? So, follow your corporate standards for this, yeah? I'm a fan of admin and password, 123, it's been uncrackable so far. But look, it's pulling the images for the different UCP bits and pieces. So, agent, auth, metrics, all of that jazz, right? A proper little microservices app. Anyway, any more names or IPs that we want it to go by, again, this is going to be specific to your environment, I'm an AWS, so I'm slapping in all the AWS names and IPs here. Now then, I'm going with a simple install, so the built-in CA, right? You can totally customize this for your environment, see the docs for that. But look, we're done, and we've even got the URL. So, I'll tell you what, let's see it. Oh, yeah, obviously, I'm totally fine with the self-signed cert. You won't get this in the real world if you're using a trusted CA, I just went with the easy self-signing option. Ah, and look, this is my favorite bit this monkey logo here. Please don't change that, Docker, it's brilliant. But we give it admin and password, 123, oh, good grief, and we give it a license, Kay, that should be good. Right, we're in, and a pretty looking UI. So, this main page is the dashboard and it gives us a quick overview. We've got no errors, we're running a bunch of containers, and a service, systems stuff, yeah? In fact, probably UCP itself. But one node and a bunch of other stuff. But look, no workers yet. So, to add a worker, we come down here, and we'll stick with Linux, but clearly we can go with Windows. Yeah, we want it to be a worker, and I'm happy with the default networking. So, custom listen and advertise addresses for if you've got multi-homed instances, or if you're working behind load balances. But in this lab, we're not so, I'll have this command here, and see how it's all Swarm, yeah? Well, we'll paste that into Node2 here, and that's all joined. So, if we come back here, it should be showing up. Maybe we'd give it a refresh. Right, one worker, and we can see the worker over here as well. Brilliant, now then, I'm going to add two more workers but using the exact same process that we just used there. But yeah, that's UCP. This fancy web UI for stacks and services, and images and networks, and volumes and secrets, and you know what? Soon to be Kubernetes. And we're going to see a bit more in a minute. But yeah, that's UCP installed.

Docker Trusted Registry (DTR)

Okay, we've got our form of UCP cluster, and I want to stress two things about it. One, it's Swarm under the hood. So, most of what we've learned about Swarm applies here to UCP, secure networking, client cert, secure store, all of that goodness. But point two, you can deploy this anywhere you want, on-prem, in the cloud, even on your IBM mainframe. Anyway, now that we've got it, it's time to build a private registry. Now, as a primer, registries are where we store images. The most famous one's Docker Hub, but that's out there on the internet, much a scary place for enterprises. What we need is a Docker Hub that you can deploy behind your own firewall. Enter Docker Trusted Registry, ta-da! So first up, architecturally speaking, DTR sits on top of what we've already deployed. So far, that's been the Docker EE engine and then the UCP cluster. Fabulous, but going lower, still. These engines here can be on anything we want. For this demo, I'm running on AWS. But you can in Azure, or whoever your favorite cloud provider is. You can even be on-prem, and on VMs, or bare metal. The point is, you deploy where suits your organization. Alright, now then, it needs UCP, we've got that. But no surprises again here, it is a containerized app. And to install it, we're here on the admin settings, and then it's Docker Trusted Registry. Now look, there's all kinds you can do here, I mean, Swarm... Look, we can see our join tokens and rotate them. Cluster Config, we can config a port, and scheduling. All this kind of stuff, really cool, but we want DTR. So, the first thing to do here is tell UCP about your load balancer. Now, configuring that is beyond the scope of this course, but it's just standard stuff. And you can even leave it out if you want. But we select a node, Node2, I'm just going to let the cluster figure out the Replica ID, this is just a demo lab, so I'm not worried about man-in-the-middle attacks, you should be in the real world though. Now, I don't know if you noticed, but checking these options up here builds this install command, alright? Well, I'm going to stick that on the clipboard, and then come over here to Node2 and I'm going to run it. Alright, and we can see that it's pulling the required images, a containerized microservices app, remember. Alright, we need to authenticate with UCP, don't want scary people installing apps now, do we? And that's always installing. Now, it's going to take a minute or two, so I'll pause everything else in the world until that's done. Okay, we're done, if you're feeling a bit sick, it's nothing to do with listening to me for ages. It's 'cause I just paused your entire world, and then restarted it. Anyway, if we come back here in UCP, we'll close out this window, ah, look. See how we've got two apps now? UCP, and now DTR, and they're stacks. We know all about stacks, right? But these are systems stacks, so not for us to mess about with. Anyway, if we come back to admin settings, and DTR again, okay, it's showing our DTR now. So, if we grab that, and we'll put it into a new tab here, okay, self-sign certificates again, we'll sort this out. Oh, alright, well these will be the UCP creds, normally, this goes straight through, nevermind. And we're in, this is DTR. Our very own private registry, running inside around firewall. And if we quickly look at users here, see that, right? I created already in UCP, and they're showing up here in DTR. And it's the same the other way, right? If we create a new user here, that gets seen in UCP as well, so a shared user database. But then, down here, it's got its own settings, so, updates, proxies, SSO, all of that stuff, right? Back up here, storage, ah, now, you should definitely configure a proper shared backend. This lab's in AWS, so a good chance it's going to be an S3 bucket. Now, I just happen to have one in the same region here as UCP and DTR, and it's got an IAM Policy, which is just Amazon jargon for some permissions that let a user read, write, and delete objects in the bucket, but you know what? This is all Amazon stuff, right? So, I'm not focusing on it, we're just telling it about an AWS bucket, and we're giving it some creds, and cool, a shared backend. Anyway, security. Ah, now, I'm going to say yes, we'll scan images, and I'm going to do yes for online syncs, right? Now we'll see this is in a minute, but DTR can go binary-level scans of images, and look for known vulnerabilities. It's really cool, right? And this online here means that we'll sync the vulnerability database over the internet. Brilliant, though not brilliant for everybody, right? If you happen to be air gapping your DTR from the internet, you want to go with Offline here. This lets us download a TAR file separately, and then manually load it into DTR. Anyway, last but not least garbage collection, but you know what? I'm not bothered about it for now. So, under repositories, we can create and manage image repos. So, where's my name? And I don't know, web-fe, right? To store frontend images, we can make it private or public, and do we want images scanned on push? Well, yes, actually, we do. I'm a real fan of that. It's what we just said before. This will do binary-level image scans and hunt for known vulnerabilities. And setting this here just means it'll do that every time we push an image. Okay, cool, then under Advanced Settings here, we can mark the repo as immutable or not, fabulous. And you know what? I think by now, we've probably got everything we need to look at some of the more advanced features. Speaking of which, first of all is role-based access control.

Role-based Access Control (RBAC)

Role-based access control, which users have what level of access to which objects? It's absolutely vital, and enterprises, they just cannot work without it. Luckily, the Docker EE Stacks supports it. And it does so through something a grant, which if we pick it apart, is basically a user or a team, we call this the subject, a bunch of permissions, we call this the role, and then a set of resources, we call this the collection. Now, these are just the UCP terms, right? But a user or a team gets a certain set of access or permissions against a certain set of resources, standard stuff. Well, in UCP here, if we come under User Management, we've basically got organizations and teams and users, that's the subject part of the grant, then, roles and grants. So, if we come under orgs and teams here, let's create some orgs. And this is it, right? Just a name. Anyway, we'll create a few of them. Okay, a few there, and then within each org, we normally create teams. And look, again, just a name and a description, right? So, we'll create a few of those. Finally, we need some users. And guess what, this is not rocket science either. Username, password, and a full name, mega simple stuff. Well, I tell you what, I'll create a few of those in the background as well. Now then, following standard approaches, we add users into teams. So for now, that's come up here to orgs and teams, drill into an org, and then a team. Then we come up here to add users. So, we select a bunch of them, and Add. Now, you get the picture, I'm sure, so I'll sort things out so that we've got users and teams in the likes. Magic, so we're all set now with the subject bit. Now for the role. Well, these ones here are the out-of-the-box roles. Eh, you know what? Maybe they're okay for some of your requirements, but definitely not all of them. So, this is where things start getting cool. In fact, this little Create Role button up here, this opens up the rabbit hole. Well, the simple stuff first, we'll give it a name, network-ops, and then hit Operations here. And this is where the magic happens. This is basically an expandable list of granular API operations. And it's what we assign to the role. So, an obvious as an example would be container operations here. And look at them all, it's all of the container-related API operations, and we can allow or deny everyone, set it to allow, and untick to deny. But you know what? We call this the network ops role, so we're interested in network operations, and I'm just going to say give them all. And that's it. I don't want this role to have access to anything else. And there it is, that is our custom role. But take a second to consider how powerful this is 'cause granular is the name of the game when it comes to RBAC, the more granular, the better. I mean, you need to know your stuff, right? But granularity is power when it comes to access control. Alright, well, for the collection though, this is a set of resources. We'll create a new one, and we'll call it zones. Imagine our environment split into three zones, dev, test, and prod. Well, these are hierarchical, right? I mean collections are hierarchical. So, if we hit View Children, and there aren't any right now, but I can create some, so Dev, and I think we'll have Test and Prod as well. Alright, we've now got the three building blocks for a grant, some users and teams for the subject, a custom role, and some collections. So, we can create a new one. The list a bit, well, it's alphabetical, but it's a bit backwards for the way that I work. Anyway, for the subject, I'm going to pick organizations and equus, and

then for the team, I'm going to say equus-ops. Under roles, I'm going to pick that network-ops one that we just created. And then for the collection, well, I'm going to drill in, and I'll say Zones, and I think Prod. And with all three of those, we can hit Create. And that's our grant, everyone in the equus-ops team gets the network-ops role, that custom one that we just created, to anything that we stick in the zone's Prod collection, pretty sweet. Now, there's nothing in the zone's Prod collection yet, we just created it, but... Yeah, if we come down here to nodes, this is just an example, right? I'm not saying it's the best one, but we've at least got some nodes at the moment. And if we look at one of them, right, see how under collection here it's showing as Shared? Well, that's the default, right? But we can configure it here under Collection, and then we can say, Zones, and Prod. Now, grant's a dynamic, right? So, we can definitely move objects in and out of collections like we're doing here, and the grant keeps up. Now to see if this works, Okay, cool, it did, I wasn't sure 'cause with nodes, there are some restrictions around managers and I think even nodes that are running DTR replicas, I think they have to be in the system collection. But that one was okay. And that's the basics of RBAC in Docker EE and universal control plane. It's all about the grant, and the roles bit? Super granular these days. Well, with that under our belt, let's go and take a look at image scanning.

Image Scanning

Alright then, we've got our secure on-prem registry configured at this address. And on it, we have got a repo configured, called challenger/web-fe. Then on Node4 here in the cluster, I've got an image called web-fe, sweet. Well, to push this image to the challenger/web-fe repo on DTR, we need to re-tag it. You see, that's how pushing Docker images works. You tag the image with the registry and the repo that you want to push it to. So, we go, "docker image tag" and it's web-fe, that's its current tag. First, we'll tell it the DNS name of the registry, this will be different in your environment, right? Just remember, it's got to match how you resolve your registry. Then we tell it the name of the repo. And we'll tag it as latest. Alright, we'll check that it's there, which it is, and before we push it to DTR, we need to log in, so that's, "docker login" and then we tell it where we want to log into. This is our DTR again, yeah? And then we just give it a set of creds for a user on that registry. So, I'll log in as me. Okay, which if we pop over here and look, we should see that I've got permission on the repo. hm. Okay, right, we've got the ops team here with read/write permission, and you know what? My account is a member of the ops team. Long story short, right? I've logged in with an account that's got permission on the repo. Now, hm, you know what? I was going to say let's see, but before we do that, let's check this. Right, we want image scanning on push. Basically, scan every pushed image, yeah? Well, now let's see it. So, we go docker image push then we give it the image tag, let's chance of a typo if I copy it, yeah? But that's going to push the image to this registry in repo. Okay, it's a small image, so if we come back to DTR, okay, scanned and clean. Cool, but we can dig in for a deeper report. Eh, okay, for this image, not much, I mean, it's a small image and it's clean, right? But you know what? If we push another image, so back here, I'm going to pull an old image from a previous course, one that I know is full of nasties, right? Now Docker's opinionated, right? So, because I didn't tell it which registry to pull from, it went with Docker Hub. Just give it a second or two. Okay, so if we tag that one now, and we'll tag this one as dirty. And then if we push that, and we'll copy and paste again, right? Ah, now this one's going to take a minute 'cause it's a bit bigger. So, we'll come back when it's done. Okay, we're back in the repo, but I've covered up the results 'cause I think you should probably be sitting down to see this, it's not pretty, and view discretion is advised, are you ready? Oof, that right there, ladies and gents, is a dangerous image. In fact, even more disturbing scenes to follow. Aw, oof, you do not want to be running your production off of that, and you know what? That's what I love about security scanning, but it's also what I hate 'cause with great knowledge comes great responsibility. I mean, would I dare go show something like that to my boss? Eh, maybe not, you know, 'cause there's a pretty good chance she's going to tell me either fix it, or get my coat. So, security scanning, yes, a very powerful tool. But, one that can kick the proverbial hornet's nest. Right then, you know what? One last thing before we recap, and dare I say, the best 'til last? I don't know, decide for yourself. But application layer routing is what we're looking at next.

Layer 7 Load Balancing

I'm pretty sure that earlier in the course, we've seen at least a couple of examples of routing and load balancing in a Swarm. You know, where we deploy a service publish it on the ingress network, and then we can hit any node in the Swarm and reach it. Well, we call that the routing mesh, or the Swarm-mode routing mesh, and it's a transport layer solution, great. Well, it's got a big brother or sister, called the HTTP routing mesh, which, in true UCP style, builds on top of the Swarm mode routing mesh, adding application layer intelligence. And yes, at the time of recording, it is only available to paying Enterprise Edition customers. Now then, before we demo it, with the Swarm-mode routing mesh here, every service gets a VIP, a virtual IP. This is stable, it's long-lived, and it masks the IPs of service replicas. So, let's say you've got a service with 10 replicas. Every one gets an IP and it registers that IP with the VIP. Then, when DNS resolves that service name, it resolves it to the VIP, and the VIP then round-robin's across the 10 replica IPs, brilliant. Also though, again, sort of behind the scenes, any time we publish a service on a Swarm-wide port, that port is actually published on a special system overlay network called ingress. Put all this together, and it's what makes it possible to hit any node in the cluster on that service port and get redirected to a valid service replica. And it's pretty dope, only, it's ignorant of higher layers. Remember, it's all transport layer stuff down in around Layer 4. Anything higher in the stack, that's a mystery, and that's where the HRM comes in. Add a high level, the HRM, like HTTP routing mesh, that lets you publish multiple services on the same Swarm-wide port. And then in order to route traffic to the right service, it inspects the HTTP host header. So, a simple example that we'll build here, We've got a UCP cluster, and we deploy two services, red.service and white.service. And they are both published on these exact same two ports. So, both on each port, yeah? Then when traffic hits the cluster, the HRM steps up, reads the HTTP headers and says, "Oh, red.company.com, you go to this service. Or maybe it's white.company.com, "well, you go to this one." And it is a fairly beautiful thing. Talk is cheap though, let's do it. So, we're here in UCP, and you know what? Don't worry if the UI has changed a bit. The fundamentals won't have. Well, we come under admin settings here, and we find the routing mesh. But turning it on is just this tick box here. Now, I mean, we can configure different ports if we want, but that's the gist. One click for on, and choose a couple of ports. Sweet. Now then, under the hood, this has created a system service here, called UCP HRM. And if we look at its config, we can see that it's got a couple of ports, right? And no surprises, but it's the two that we said when we turned it on. And see as well how it's connected to the ingress network. Speaking of networks, okay, well first up, here's the UCP HRM network, it's an overlay, and it's scoped to the Swarm. But also, here's the ingress network. That's also a Swarm-scoped overlay. And these two are critical to how the HRM works. But you know what? With all of this in place, we're ready to deploy an app. So, we'll deploy red first, use this image, and I think for this one, we'll say five replicas. Now then, under Network, the application actually listens on 8080. Yes, we want to publish it on the ingress network, and we don't need a port here 'cause we're going to use the ports we configured the HRM for. Right, well then, we want to add a house name based route, this is the magic, right? Now for this demo, I'm going to take the easy option, but in the real world, that's probably going to be HTTPS, but we're going to be hitting this one on red.company.com, and that looks good. Okay, a little red warning about attaching it to the HRM network, but you know what? We, hm, no, actually, nearly forgot, we need to give it an environment variable. So, this app accepts an environment variable, called TITLE, and we'll call this one red. Sweet, that's going to go and spin up five replicas. So, while that's going on, we'll do the same for the white service. Give it a name, tell it to use the same image, you know what? This time, we'll just leave it as a single replica. But then for the network, so it's the same app, so it's 8080 again. Yes, yes, yes, and a house name rule, HTTP again, and this time, white.company.com. Confirm that and put it on the HRM network. Oof, nearly forgot the environment variable again. We'll call it WHITE this time. Okay, so while that's creating, let's stick this up here. Two services. Red and White. Red has five replicas, and White has one. Alright then, let's go try this out. So, if I go red.company.com here, and before I hit Return, remember a few things, I've got name resolution configured for this. So, if you're following along, you're going to need your own name resolution. It can just be a host's file, right? But it's resolving this DNS name to the IP of a node in the Swarm, any node, right? Or maybe a load balance that it's pointing to your nodes. But the Red service here has got five replicas, and we gave it the title, RED, so here we go. Okay, we've got RED here, and we're racking up the replicas, five, right? Okay, and then these five handling or future requests. Brilliant, we found the right service. But we should be able to come up here and change this to white, and before we hit Return again, remember, this one's going to be called WHITE, and it's only got one replica, yeah? Let's see. Bingo, WHITE and one replica. And that's really cool. Two services, on the same cluster, on the same port. And Docker knows how to route requests to the right one based on the host header up here. Brilliant, decent Layer 7 routine, let's do a recap.

Recap

Okay, first up, plenty of companies offer competing products to what we've shown here, and we've only shown you a small part of what the Docker products can do. Moral of the story, there is a much bigger world out there, but at least now, you've got an idea. Anyway, Docker EE and the stuff that we've shown here are commercial products. That means they cost money, but they come with support contracts. Well, Docker universal control plane is a graphical container management tool designed for ops and DevOps. It sits on top of the EE version of the Docker engine, which in turn, sits on top of just about anything you'd like. Now, we didn't get specific about the lowdown stuff here, right? But we're talking about cloud and on-prem. Check with Docker though for the latest support matrix. Anyway, UCP has this notion of a cluster, managers and workers, and if you poke beneath the surface, it is all Swarm, which makes sense, right? Swarm's enterprise grade, and it's secure. Anyway, the net result is a fancy web UI that can do things like RBAC and security scanning, and of course, deploying and managing Swarm and Kubernetes apps. But we also talked about Docker Trusted Registry and on-prem or any virtual private cloud registry. So, a safe place to store and manage your application images within the safety of your own environment. Now, with the Docker stuff that we saw, it is all about that tightly integrated set of enterprise grade tools. A container as a service platform, if you will. But all tested and certified, and wrapped in a support agreement to help you sleep at night, sweet. Well you know what? This is pretty much where the train stops. But before you jump off, stick around for maybe just two or three more minutes while I throw some ideas at you about where you might want to go next. Because it's a big old container world out there, and a little nudge in the right direction might make all the difference.

What Next

What Next

Oh my goodness. What a journey. Well, this train's about to pull into the station. But you know what? It is a big old station with a mind-boggling number of places you can go next. So to help you out, just let me give you two or three ideas. First up, we've got more container courses right here on Pluralsight. If you've just taken this course and maybe not the container management learning path then that is a cracking place to start, right? I mean, I've regularly got people saying, "Hey thanks, Nigel, I loved your Docker course." And I'm like, "Well, great, but which one?" And you know what, so often when I say that, they're like, "What? There's more?" So yeah, in case you didn't know, there's more. And not just from me. So go check them out. I've also got a Docker book. So if you do books, check it out. Now, I mean, yeah, there's going to be some content similarity. Docker is Docker, right? It'd be a bit weird if a Docker book had totally different content to a Docker video course. So if you get the book expect some similar content. Docker, yeah? But if you like books and maybe you want something to reinforce what we've talked about here, check it out. There's also meet-ups like all over the place. These are local gatherings of people interested in Docker, and you get all kinds of people. All different levels, right? But always great people. So get yourself along to a meet-up and get involved. I mean, man, I'm excited for you. Get to a local meet-up. There's DockerCon as well. So two to three days of Docker, Docker, Docker. I'm always there, and they're great places to learn and network. So if you do go, right, and you see me? Come and say hi. Honestly, I would be gutted if you saw me, but you decided not to say hi. Anyway, then there's the exam. Docker Certified Associate. If exams and certs are your thing, have a look at that. Now, I know this course wasn't a study guide for the exam, right? But we did touch on a bunch of the topics. And I reckon, right, with not a lot more effort, yeah, I reckon you'd be not far off ready for it. Then there's kubernetes. If you're going to be deploying containerized apps, at scale and in the Cloud, you're going to be doing it with

kubernetes. And lucky enough, so much of what you've learned hereabout Docker is applicable to kubernetes. In fact, since forever, kubernetes has used Docker to run its containers. Now, that's kind of changing at the moment, okay? These days, the kubernetes container runtime is pluggable. But, it's looking for all intents and purposes like the default runtime going forward is going to be containerd. And we know containerd, right? And that it came out of Docker. In fact, Docker itself these days is running containerd at the lower levels. We covered that, right? So you're in great shape to start your kubernetes journey. And you probably should start one of those, right? It is the hot technology at the moment. I mean, calling it the Linux of the Cloud is not an exaggeration. Well, guess what, right? To help you out with kubernetes, we have got a course; Getting Started with Kubernetes. And it is exciting stuff. Oh, and I've got a book as well. So yeah, kubernetes. I recommend you check it out, definitely. You know what, right? The main thing is keep learning. I'm serious. The future is bright. So, thanks for sticking with me. I've had a blast, and I really appreciate you being here. And, honestly, I hope-. Well, I guess not only that you've enjoyed it, I mean, I do hope you've enjoyed it, but I really hope that you've learned what you set out to. I've tried really hard to make it fun and informative. So, congrats on getting to the end. Feel free to give me a shout. Now, look, I can't fix all of your hard problems, alright? I've got more courses that I'm working on, and I'm raising a family. But I would love to hear from you, so say hi. And that's it! Good luck.

From <<https://app.pluralsight.com/library/courses/docker-deep-dive-update/transcript>>

Installation

Sunday, March 18, 2018 1:04 PM

INstallation of Docker:

INstallation doc link:

<https://linuxconfig.org/how-to-install-docker-in-rhel-8>

INstall yum utils:

yum install yum-utils

To create a repo for docker

sudo yum-config-manager --add-repo <https://download.docker.com/linux/centos/docker-ce.repo>

to check docker versions:

yum list docker-ce --showduplicates | sort -r

INstall odcker:

sudo yum install docker-ce --nobest *****

start docker:

systemctl enable --now docker

check docker status:

systemctl is-active docker

we can check that it is enabled at boot:

systemctl is-enabled docker

Global installation:

sudo docker run -d --rm --name=linuxconfig-test -p 80:80 httpd *****

Dicker on aws

Friday, June 21, 2019 10:22 AM

Create one aws instance and download pem file.

To login using ssh, create ppk(private key) file using puttygen :: (Setps -> open puttygen - load; - navigate to pem file - save as private key(name it as you like in the comment box))

Now go to putty and expand ssh and click on auth and browse for ppk file. Once done click on session and give the username and ip of ec2 instance and click on open.

Once logged in to ec2 instance through putty, follow the below commands:

```
Sudo su -  
Yum update  
Yum install java  
Yum install wget  
Yum install curl  
Yum install telnet  
Exit  
Sudo yum install docker  
Docker images  
Docker ps  
docker ps -a  
Docker pull maven  
Docker pull httpd  
Docker pull docker.io/alpine/git  
Docker images  
Docker info
```

sudo git clone <https://github.com/softwareyoga/docker-tomcat-tutorial.git> (to download tomcat docker file along with webapp.war)

Docker run hello-world

--> to install tomcat and deploy app on docker container:

```
Docker pull docker.io/consol/tomcat-7.0 (download tomcat docker image)  
Docker images  
docker run docker.io/consol/tomcat-7.0 --> to run the tomcat in foreground  
docker run -d docker.io/consol/tomcat-7.0 --> to run the tomcat in background  
docker run -d --name es docker.io/consol/tomcat-7.0 --> to run the container in background and by giving a specific name to the container  
docker container ls -- . gives the containers list  
docker ps -a --> gives the list of all containers  
docker stop <container_id> --> Will stop the container  
docker rm ${docker ps -a -q -f status=exited} --> removes all the container in existed state  
docker container prune --> removes all the container in existed state
```

To remove docker and install (3 types - by creating repos, docker script and yum/rpm) :

```
yum remove docker \
    docker-client \
    docker-client-latest \
    docker-common \
    docker-latest \
    docker-latest-logrotate \
    docker-logrotate \
    docker-engine
```

From <<https://docs.docker.com/install/linux/docker-ce/centos/>> ----> not working using repo installation

Alternative using below:

<https://linuxconfig.org/how-to-install-docker-in-rhel-8>

Install Docker RHEL 8

Tuesday, October 15, 2019 11:29 AM

How to install Docker CE on RHEL 8 / CentOS 8

Egidio Docile

Redhat / CentOS

23 September 2019

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The latest release of the [RHEL 8](#) / CentOS 8. Red Hat has built its own tools, `buildah` and `podman`, which aim to be compatible with existing docker images and work without relying on a daemon, allowing the creation of containers as normal users, without the need of special permissions (with some limitations: e.g. at the moment of writing, it's still not possible to map host ports to the container without privileges).

Some specific tools, however, are still missing: an equivalent of `docker-compose`, for example does not exists yet. In this tutorial we will see how to install and run the original Docker CE on Rhel8 by using the official Docker repository for CentOS7.

In this tutorial you will learn:

- How to enable the docker-ce repository on RHEL 8 / CentOS 8
- How to install docker and docker-compose on RHEL 8 / CentOS 8



Docker installed on RHEL 8 / CentOS 8

Software Requirements and Conventions Used

Category	Requirements, Conventions or Software Version Used
System	RHEL 8 / CentOS 8
Software	Docker version 18.09.2
Other	Permission to run command with root privileges.
Conventions	# - requires given linux commands to be executed with root privileges either directly as a root user or by use of <code>sudo</code> command \$ - requires given linux commands to be executed as a regular non-privileged user

Software Requirements and Linux Command Line Conventions

What is Docker?

Docker is an open source project which allows the creation and distribution of applications inside `containers`, which are standardized environments that can be easily replicated, independently from the host system. While in Red Hat Enterprise Linux 7 Docker was officially supported, on the new release of this open source operating system, it has been replaced by a series of other tools developed by Red Hat itself: `buildah` and `podman`.

By the use of an external repository, however, it's still possible to install Docker CE (Community Edition). In this tutorial we will see how to install this repository; notice however, that it was originally meant for [CentOS 7](#) (a RHEL clone), and the community version of Docker has no official support for Red Hat Enterprise Linux. Because of this, issues exist - we discuss them below.

Adding the external repository

Since Docker is not available on RHEL 8 / CentOS 8, we need to add an external repository to obtain the software. In this case we will use the official Docker CE CentOS repository: this is, at the moment of writing, the only way to install Docker CE on RHEL 8 / CentOS 8.

The `dnf config-manager` utility let us, among the other things, easily enable or disable a repository in our distribution. By default, only the `appstream` and `baseos` repositories are enabled on Rhel8; we need to add and enable also the `docker-ce` repo. All we need to do to accomplish this task, is to run the following command:

```
$ sudo dnf config-manager --add-repo=https://download.docker.com/linux/centos/docker-ce.repo
```

We can verify that the repository has been enabled, by looking at the output of the following command:

```
$ sudo dnf repolist -v
```

The command above will return detailed information about all the enabled repositories. This is what you should see at this point:
Repo-id : docker-ce-stable

```

Repo-name      : Docker CE Stable - x86_64
Repo-revision: 1549905809
Repo-updated  : Mon 11 Feb 2019 06:23:29 PM CET
Repo-pkgs     : 30
Repo-size     : 618 M
Repo-baseurl  : https://download.docker.com/linux/centos/7/x86\_64/stable
Repo-expire   : 172,800 second(s) (last: Mon 18 Feb 2019 10:23:54 AM CET)
Repo-filename : /etc/yum.repos.d/docker-ce.repo
Repo-id       : rhel-8-for-x86_64-appstream-rpms
Repo-name     : Red Hat Enterprise Linux 8 for x86_64 - AppStream Beta (RPMs)
Repo-revision: 1542158694
Repo-updated  : Wed 14 Nov 2018 02:24:54 AM CET
Repo-pkgs     : 4,594
Repo-size     : 4.9 G
Repo-baseurl  : https://cdn.redhat.com/content/beta/rhel8/8/x86\_64/appstream/os
Repo-expire   : 86,400 second(s) (last: Mon 18 Feb 2019 10:23:55 AM CET)
Repo-filename : /etc/yum.repos.d/redhat.repo
Repo-id       : rhel-8-for-x86_64-baseos-rpms
Repo-name     : Red Hat Enterprise Linux 8 for x86_64 - BaseOS Beta (RPMs)
Repo-revision: 1542158719
Repo-updated  : Wed 14 Nov 2018 02:25:19 AM CET
Repo-pkgs     : 1,686
Repo-size     : 925 M
Repo-baseurl  : https://cdn.redhat.com/content/beta/rhel8/8/x86\_64/baseos/os
Repo-expire   : 86,400 second(s) (last: Mon 18 Feb 2019 10:23:56 AM CET)
Repo-filename : /etc/yum.repos.d/redhat.repo
Total packages: 6,310

```

Installing docker-ce

The `docker-ce-stable` repository is now enabled on our system. The repository contains several versions of the `docker-ce` package, to display all of them, we can run:

```
$ dnf list docker-ce --showduplicates | sort -r
docker-ce.x86_64      3:19.03.2-3.el7          docker-ce-stable
docker-ce.x86_64      3:19.03.1-3.el7          docker-ce-stable
docker-ce.x86_64      3:19.03.0-3.el7          docker-ce-stable
docker-ce.x86_64      3:18.09.9-3.el7          docker-ce-stable
docker-ce.x86_64      3:18.09.8-3.el7          docker-ce-stable
docker-ce.x86_64      3:18.09.7-3.el7          docker-ce-stable
docker-ce.x86_64      3:18.09.6-3.el7          docker-ce-stable
docker-ce.x86_64      3:18.09.5-3.el7          docker-ce-stable
docker-ce.x86_64      3:18.09.4-3.el7          docker-ce-stable
docker-ce.x86_64      3:18.09.3-3.el7          docker-ce-stable
docker-ce.x86_64      3:18.09.2-3.el7          docker-ce-stable
docker-ce.x86_64      3:18.09.1-3.el7          docker-ce-stable
docker-ce.x86_64      3:18.09.0-3.el7          docker-ce-stable
docker-ce.x86_64      18.06.3.ce-3.el7          docker-ce-stable
docker-ce.x86_64      18.06.2.ce-3.el7          docker-ce-stable
docker-ce.x86_64      18.06.1.ce-3.el7          docker-ce-stable
docker-ce.x86_64      18.06.0.ce-3.el7          docker-ce-stable
docker-ce.x86_64      18.03.1.ce-1.el7.centos  docker-ce-stable
docker-ce.x86_64      18.03.0.ce-1.el7.centos  docker-ce-stable
docker-ce.x86_64      17.12.1.ce-1.el7.centos  docker-ce-stable
docker-ce.x86_64      17.12.0.ce-1.el7.centos  docker-ce-stable
docker-ce.x86_64      17.09.1.ce-1.el7.centos  docker-ce-stable
docker-ce.x86_64      17.09.0.ce-1.el7.centos  docker-ce-stable
docker-ce.x86_64      17.06.2.ce-1.el7.centos  docker-ce-stable
docker-ce.x86_64      17.06.1.ce-1.el7.centos  docker-ce-stable
docker-ce.x86_64      17.06.0.ce-1.el7.centos  docker-ce-stable
docker-ce.x86_64      17.03.3.ce-1.el7          docker-ce-stable
docker-ce.x86_64      17.03.2.ce-1.el7.centos  docker-ce-stable
docker-ce.x86_64      17.03.1.ce-1.el7.centos  docker-ce-stable
docker-ce.x86_64      17.03.0.ce-1.el7.centos  docker-ce-stable
```

What version to install? Well, Red Hat seems to have somehow blocked the installation of `containerd.io > 1.2.0-3.el7`, which is a dependency of `docker-ce`. Because of this, simply running the `sudo dnf install docker-ce` command, won't work. As we will see in a minute, it's still possible to workaround this problem; once `docker-ce` is installed, however, another problem becomes evident: as long as `firewalld`, the system firewall manager is enabled, `DNS resolution` inside docker containers does not work.

This is, of course a critical problem. However, if you still want to proceed with the installation, here are the possible methods that can be used to avoid the dependencies issues:

- Install a specific version of `docker-ce` which requires an installable version of the `containerd.io` package;
- Force the installation providing the `--nobest` option
- Install the latest available `containerd.io` rpm manually;

Install a specific version of docker-ce

At the moment of writing the versions of `docker-ce` that are installed without problems are:

- `docker-ce-3:18.09.1-3.el7`
- `docker-ce-18.06.3.ce-3.el7`
- `docker-ce-17.12.1.ce-1.el7.centos`

To install a specific version, all we have to do is to provide the fully qualified package name, for example:

```
$ sudo dnf install docker-ce-3:18.09.1-3.el7
```

Force the installation of docker-ce with the --nobest option

Normally, when installing a package, the best available candidate is selected from a repository. In this case, for example, the installation of the latest version of `docker-ce` is attempted (and fails). By using the `--nobest` option, we can change this behavior so that the first version of `docker-ce` with satisfiable dependencies is selected as "fallback", in this case `3:18.09.1-3.el7`.

```
$ sudo dnf install --nobest docker-ce
Dependencies resolved.
Problem: package docker-ce-3:19.03.2-3.el7.x86_64 requires containerd.io >= 1.2.2-3, but none of the providers can be installed
 - cannot install the best candidate for the job
 - package containerd.io-1.2.2-3.3.el7.x86_64 is excluded
 - package containerd.io-1.2.2-3.el7.x86_64 is excluded
 - package containerd.io-1.2.4-3.1.el7.x86_64 is excluded
 - package containerd.io-1.2.5-3.1.el7.x86_64 is excluded
 - package containerd.io-1.2.6-3.3.el7.x86_64 is excluded
=====
=====
Package           Arch      Version            Repository
Size
=====
Installing:
  docker-ce        x86_64    3:18.09.1-3.el7
stable          19 M
  Installing dependencies:
    containerd.io   x86_64    1.2.0-3.el7
stable          22 M
    docker-ce-cli   x86_64    1:19.03.2-3.el7
stable          39 M
    container-selinux
x86_64-appstream-rpms
    tar             x86_64    2:1.30-4.el8
x86_64-baseos-rpms
    libcgroup       x86_64    0.41-19.el8
x86_64-baseos-rpms
    python3-policycoreutils
x86_64-baseos-rpms
    python3-libsemanage
x86_64-baseos-rpms
    python3-setools
x86_64-baseos-rpms
    checkpolicy     x86_64    2.8-5.el8
x86_64-baseos-rpms
    python3-audit   x86_64    3.0-0.10.20180831git0047a6c.el8
x86_64-baseos-rpms
    policycoreutils-python-utils
x86_64-baseos-rpms
    skipping packages with broken dependencies:
      docker-ce      x86_64    3:19.03.2-3.el7
stable          24 M
  Transaction Summary
=====
=====
Install 12 Packages
Skip 1 Package
Total download size: 85 M
Installed size: 351 M
Is this ok [y/N]:
```

Install the latest available containerd.io package manually

If we strictly need to install the latest version of `docker-ce`, we can install the required version of `containerd.io` manually, by running:

```
$ sudo dnf install https://download.docker.com/linux/centos/7/x86\_64/stable/Packages/containerd.io-1.2.6-3.3.el7.x86\_64.rpm
```

After the package is installed, we can simply install the latest `docker-ce`:

```
$ sudo dnf install docker-ce
Dependencies resolved.
```

```
=====
=====
Package           Arch      Version            Repository
Size
=====
Installing:
  docker-ce        x86_64    3:19.03.2-3.el7
24 M
  Installing dependencies:
    docker-ce-cli   x86_64    1:19.03.2-3.el7
39 M
    tar             x86_64    2:1.30-4.el8
baseos-rpms
    libcgroup       x86_64    0.41-19.el8
baseos-rpms
    skipping Transaction Summary
=====
```

```
=====
Install 4 Packages
Total download size: 65 M
Installed size: 275 M
Is this ok [y/N]:
This option is less convenient since the containerd.io package is not installed as a dependency of docker-ce, therefore it will not be removed automatically when the latter is uninstalled from the system.
Whatever method we use to install docker-ce, as said before, in order to make DNS resolution work inside Docker containers, we must disable firewalld (a system reboot may be also needed):
$ sudo systemctl disable firewalld
```

Start and enable the docker daemon

Once `docker-ce` is installed, we must start and enable the docker daemon, so that it will be also launched automatically at boot. The command we need to run is the following:

```
$ sudo systemctl enable --now docker
```

At this point, we can confirm that the daemon is active by running:

```
$ systemctl is-active docker
```

```
active
```

Similarly, we can check that it is enabled at boot, by running:

```
$ systemctl is-enabled docker
```

```
enabled
```

Installing docker-compose

Docker compose is a very useful package which let us manage multi-container applications, like for example those based on the LAMP stack, where each part of the environment (PHP, Apache, MariaDB) is provided by a dedicated container (if you are interested in the subject, take a look at our tutorial about creating a docker-based lamp stack). The package is not available on Rhel8, nor an equivalent exists to be used with the Rhel tools. It's, however, possible to install it in many ways: just keep on reading and decide what suits you best.

Global installation

The way we should install `docker-compose` varies depending on whether we want to install it globally or just for a single user. At the moment of writing, the only way to install it globally is to download the binary from the github page of the project:

```
$ curl -L "https://github.com/docker/compose/releases/download/1.23.2/docker-compose-$(uname -s)-$(uname -m)" -o docker-compose
```

Once the binary is downloaded, we move it into `/usr/local/bin` and we make it executable:

```
$ sudo mv docker-compose /usr/local/bin && sudo chmod +x /usr/local/bin/docker-compose
```

The `/usr/local` hierarchy is not chosen randomly. This directory structure is made to be used for files installed by the local administrator manually (for software compiled from source, for example), in order to ensure separation from the software installed with the system package manager.

Although it's possible for a normal user to run docker-related commands if he is part of the `docker` group (the group is automatically created when we install `docker-ce`), by default they must be executed with root privileges for security reasons. When we need to do the latter, since the `/usr/local/bin` directory is not in the root user's `PATH`, we either need to call the binary specifying its location or add `/usr/local/bin` to the `PATH` itself. The first option is the one which I recommend in this case.

Per-user installation

If our user is part of the `docker` group, and thus it is allowed to run docker commands, and since `docker-compose` is available as a python package, we can also install it using `pip`, the python package manager. First, make sure [pip itself is installed](#):

```
$ sudo dnf install python3-pip
```

To obtain docker-compose we run:

```
$ pip3.6 install docker-compose --user
```

Please notice that even if would be possible to run pip as root to install a package globally, this is not recommended and highly discouraged.

Testing docker

We installed docker and docker-compose, now to check that everything works as expected, we can try to build an image and run a container: in this case we will use the official `httpd` one. All we have to do is to launch the following command:

```
sudo docker run --rm --name=linuxconfig-test -p 80:80 httpd
```

Since the `httpd` image does not exists locally it will be automatically fetched and built. Finally, a container based on it will be launched in the foreground (it will be automatically removed when stopped). We should be able to see the `It works!` message when we reach our machine ip via browser.

Conclusions

Red Hat Enterprise Linux 8 does not support Docker: on this distribution it has been replaced by Red Hat own tools like `buildah` and `podman`, which are compatible with Docker but don't need a server/client architecture to run. Using native tools, where possible, is always the recommended way to go, but for a reason or another you may still want to install the original Docker. In this tutorial, we saw how it is possible to install `Docker CE` on Rhel8, by using the official Docker repository for CentOS7, which is a 100% compatible clone.

This is not an ideal solution, and as we saw, at the moment, some workarounds are needed to make Docker work on RHEL8. If some new issues arises, or better solutions to the problems mentioned above are found, this article will be updated accordingly. Stay tuned.

Docker commands

Wednesday, October 16, 2019 11:46 AM

Docker stop rm prune ... etc commands:

<https://linuxize.com/post/how-to-remove-docker-images-containers-volumes-and-networks/>

docker container ls [OPTIONS]

Options

Name, shorthand	Default	Description
--all , -a		Show all containers (default shows just running)
--filter , -f		Filter output based on conditions provided
--format		Pretty-print containers using a Go template
--last , -n	-1	Show n last created containers (includes all states)
--latest , -l		Show the latest created container (includes all states)
--no-trunc		Don't truncate output
--quiet , -q		Only display numeric IDs
--size , -s		Display total file sizes

Parent command

Command	Description
docker container	Manage containers

Related commands

Command	Description
docker container attach	Attach local standard input, output, and error streams to a running container
docker container commit	Create a new image from a container's changes
docker container cp	Copy files/folders between a container and the local filesystem
docker container create	Create a new container
docker container diff	Inspect changes to files or directories on a container's filesystem
docker container exec	Run a command in a running container
docker container export	Export a container's filesystem as a tar archive
docker container inspect	Display detailed information on one or more containers
docker container kill	Kill one or more running containers

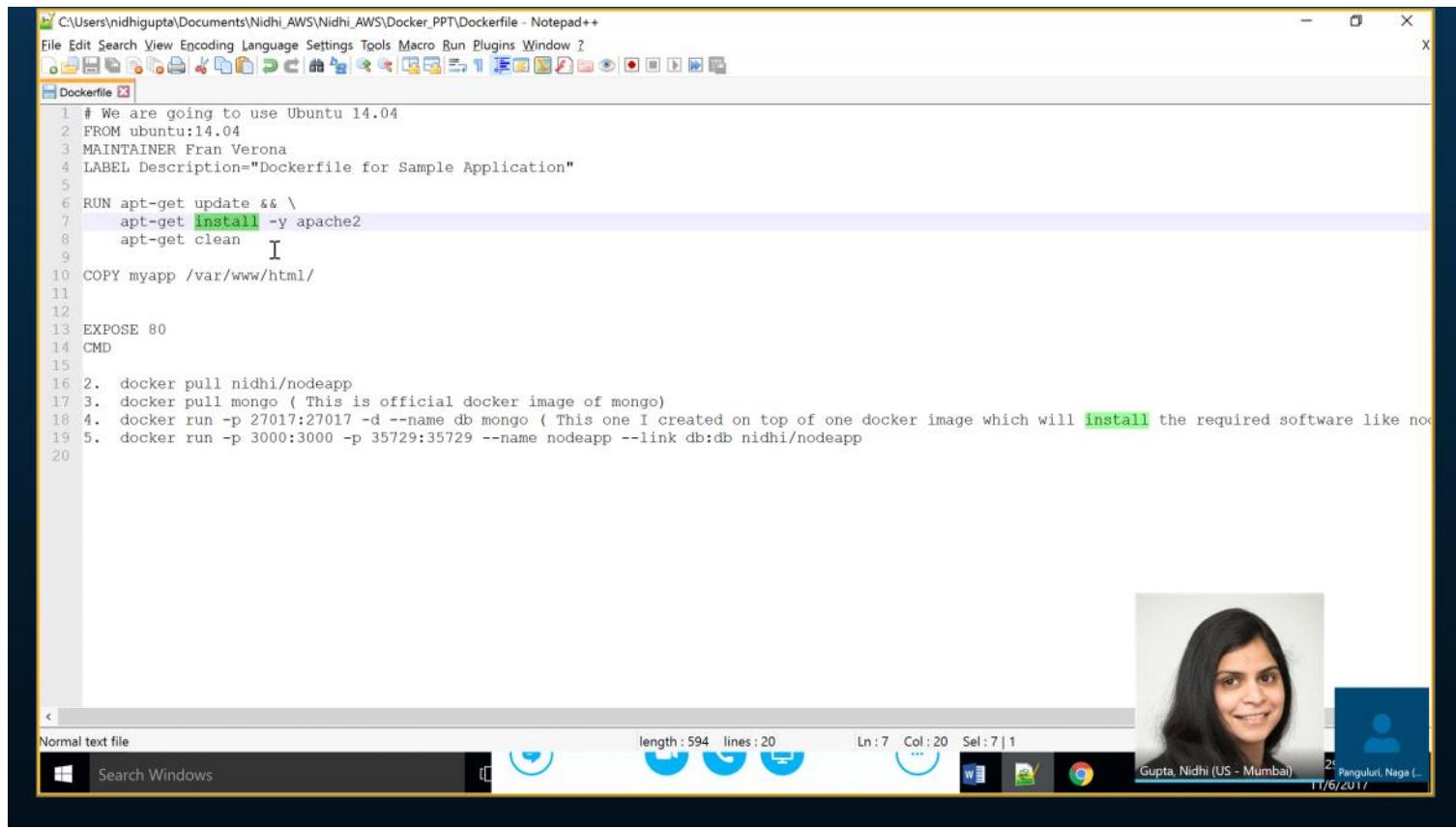
<u>docker container logs</u>	Fetch the logs of a container
<u>docker container ls</u>	List containers
<u>docker container pause</u>	Pause all processes within one or more containers
<u>docker container port</u>	List port mappings or a specific mapping for the container
<u>docker container prune</u>	Remove all stopped containers
<u>docker container rename</u>	Rename a container
<u>docker container restart</u>	Restart one or more containers
<u>docker container rm</u>	Remove one or more containers
<u>docker container run</u>	Run a command in a new container
<u>docker container start</u>	Start one or more stopped containers
<u>docker container stats</u>	Display a live stream of container(s) resource usage statistics
<u>docker container stop</u>	Stop one or more running containers
<u>docker container top</u>	Display the running processes of a container
<u>docker container unpause</u>	Unpause all processes within one or more containers
<u>docker container update</u>	Update configuration of one or more containers
<u>docker container wait</u>	Block until one or more containers stop, then print their exit codes

From <https://docs.docker.com/engine/reference/commandline/container_ls/>

To stop all the running containers ---> docker container stop \$(docker ps -q)

Docker Deloitte training

Monday, November 6, 2017 5:35 PM



C:\Users\nidhigupta\Documents\Nidhi_AWS\Nidhi_AWS\Docker_PPT\Dockerfile - Notepad++

```
1 # We are going to use Ubuntu 14.04
2 FROM ubuntu:14.04
3 MAINTAINER Fran Verona
4 LABEL Description="Dockerfile for Sample Application"
5
6 RUN apt-get update && \
7     apt-get install -y apache2
8     apt-get clean
9
10 COPY myapp /var/www/html/
11
12
13 EXPOSE 80
14 CMD
15
16 2. docker pull nidhi/nodeapp
17 3. docker pull mongo ( This is official docker image of mongo)
18 4. docker run -p 27017:27017 -d --name db mongo ( This one I created on top of one docker image which will install the required software like no
19 5. docker run -p 3000:3000 -p 35729:35729 --name nodeapp --link db:db nidhi/nodeapp
20
```

Normal text file

length : 594 lines : 20 Ln : 7 Col : 20 Sel : 7 | 1

Gupta, Nidhi (US - Mumbai) 21 Panguluri, Naga ... 11/6/2017

Docker CLI commands



Command to build an image

- Docker build -t appName .

Command to show running containers

- Docker ps command

Command to show all containers

- Docker ps -a

Command to show all images

- Docker images

Running containers in detached mode

- Docker run -d busybox

Push Images to DockerHub

- Create a Docker hub account
- docker login -username=
- Docker push repository name



Docker installation docs and links:

Download link:

<https://hub.docker.com/search/?type=edition&offering=community>

Installation Doc:

<https://www.digitalocean.com/community/tutorials/how-to-install-and-use-docker-on-centos-7>

Video:

<https://www.youtube.com/watch?v=JprTjTViaEA>

<https://ionnylangefeld.github.io/learning/Docker/How%2Bto%2BDocker.html>

Jenkins

Monday, February 27, 2017 4:31 PM

Jenkins Best Practices

https://en.wikipedia.org/wiki/Continuous_integration<- Read this!

<https://wiki.jenkins-ci.org/display/JENKINS/Jenkins+Best+Practices>

<http://www.slideshare.net/andrewbayer/7-habits-of-highly-effective-jenkins-users>

Set up version control of job configurations

Keep jobs simple! Don't put a ton of bash in each job. If a job needs to do something complex, put it in a script in GitHub and check it out as needed.

Use templated builders to simplify common tasks

Keep all scripts in version control - avoid running scripts that live on the Jenkins server filesystem

Don't install unnecessary plugins - plugins are often written by third parties and can interact with each other in strange ways

Use LDAP authentication if possible for traceability - avoid anonymous access

If possible, set up user/group roles so that only the people who need access to the internals of Jenkins have access

Backup artifacts

Keep Jenkins up to date! Out of date installations tend to rot.

Tie jobs into Sonar to track code quality

Commit often! It's easier to collaborate on code when everyone is constantly integrating their changes.

Job names in Jenkins should not use spaces - directories are created for each job, and some tools don't support directories with spaces

You can enforce this with the Restrict Project Naming global configuration using the pattern \\$*

Set up a Jenkins display where everyone can see when your jobs are failing

Guy's Favorite Jenkins Plugins

Doony: Not quite a plugin, but it's a set of easy-to-install UI improvements for Jenkins. <http://doony.org/>

AnsiColor: Colorized console logs.

Build Monitor Plugin: Pretty live job status monitor.

Build Trigger Badge Plugin: At a glance, see why each build was triggered - an upstream job, a manual trigger, an SCM trigger, etc.

Console Tail Plugin: See the last n lines of the latest build on a job's main page. Find out why your build failed without digging through logs.

embeddable-build-status: Show your build status with a live icon you can embed in your GitHub readme.

Jenkins disk-usage plugin: Easily keep track of your disk space usage on the Jenkins master.

Jenkins Jabber notifier plugin: Notify chatrooms and users of build failures.

Jenkins Workspace Cleanup Plugin: Delete your workspace before or after builds. Ensure a fresh build every time.

Monitoring: Track Jenkins master and slave performance. This is crucial when your Jenkins installation starts acting funny and you want to know why.

Naginator: Automatically re-run failed builds, in case they failed due to an environmental issue.

ShiningPanda Plugin: Creates Python virtualenvs for you to work in.

Template Project plugin: Use jobs as templates for other jobs. Lets you easily manage multiple jobs that share a similar configuration.

Timestamper: Timestamp your console logs.

SCM Sync Configuration Plugin: Sync your Jenkins configuration files (which are mostly XML) to GitHub. Version control everything.

Jenkins Administration

If you need to restart Jenkins, go to /safeRestart or /restart

If this doesn't work, you'll need to SSH into Jenkins and run sudo service jenkins restart

To update Jenkins, run sudo ./jenkins update Jenkins

If you install plugins, do it one at a time and restart Jenkins after each plugin, then go into a few configuration menus and run a few jobs to make sure nothing is broken. Installing Jenkins plugins is a bit risky and it's best avoided unless you have a really good reason to do it.

We're using the latest LTS Jenkins version. <https://wiki.jenkins-ci.org/display/JENKINS/LTS+Release+Line>

The Jenkins home directory is /var/lib/jenkins.

Don't disable the Maven plugin. Jenkins won't start up. If you do disable it by accident, re-enable it with sudo rm /var/lib/jenkins/plugins/maven-plugin.jpi.disabled

If you accidentally lock everyone out of Jenkins due to incorrect security settings, disable global security in /var/lib/jenkins/config.xml

From <<https://gist.github.com/guykisei/fdc3bb48392a4d871140#file-gistfile1-txt>>

Zabbix

Thursday, March 16, 2017 11:51 AM

Below are the commands to restart the Zabbix. Sudo to root and execute these commands.

```
systemctl stop zabbix-java-gateway;systemctl stop zabbix-agent;systemctl stop zabbix-server;systemctl stop httpd;systemctl stop mysqld  
service zabbix-java-gateway status;service zabbix-agent status;service zabbix-server status;service httpd status;service mysqld status  
systemctl start mysqld;systemctl start httpd;systemctl start zabbix-server;systemctl start zabbix-agent;systemctl start zabbix-java-gateway;  
service zabbix-java-gateway status;service zabbix-agent status;service zabbix-server status;service httpd status;service mysqld status
```

LogFile locations :

/var/log/Zabbix

zabbix_server.log
zabbix_java_gateway.log

10.64.65.254 pthadur credentials; sudo su -

Sonar

Wednesday, May 10, 2017 12:34 PM

Download a file from below location:

<https://www.sonarqube.org/downloads/>

<http://10.64.65.20:9010/>

To start sonar

```
cd /home/pthadur/DryRun SONAR/SonarQube/sonarqube-5.4/bin/linux-x86-64
```

```
./sonar.sh start
```

```
*****
```

To run sonar report on 6.3 (configured code base is Release Branch)

IP: 10.64.65.20

User: SonarQube63

Password: Sonar@123

Properties and xml Path: /home/SonarQube63/SONAR/Sonar

To modify the code base please open the properties and change the working directory.

Command To Run Sonar (Sequential Execution) - not in use

```
IES → nohup /home/SonarQube63/SONAR/apache-ant-1.10.0/bin/ant -v -f /home/SonarQube63/SONAR/Sonar/HSRI-IES-sonar-build.xml > /home/SonarQube63/SONAR/logs/HSRI-IES-sonar-build.log &
```

```
HIX → nohup /home/SonarQube63/SONAR/apache-ant-1.10.0/bin/ant -v -f /home/SonarQube63/SONAR/Sonar/HSRI-HIX-sonar-build.xml > /home/SonarQube63/SONAR/logs/HSRI-HIX-sonar-build.log &
```

```
SSP → nohup /home/SonarQube63/SONAR/apache-ant-1.10.0/bin/ant -v -f /home/SonarQube63/SONAR/Sonar/HSRI-SSP-sonar-build.xml > /home/SonarQube63/SONAR/logs/HSRI-SSP-sonar-build.log &
```

```
CCAP → nohup /home/SonarQube63/SONAR/apache-ant-1.10.0/bin/ant -v -f /home/SonarQube63/SONAR/Sonar/HSRI-CCAP-sonar-build.xml > /home/SonarQube63/SONAR/logs/HSRI-CCAP-sonar-build.log &
```

```
EARR → nohup /home/SonarQube63/SONAR/apache-ant-1.10.0/bin/ant -v -f /home/SonarQube63/SONAR/Sonar/HSRI-EARR-sonar-build.xml > /home/SonarQube63/SONAR/logs/HSRI-EARR-sonar-build.log &
```

Command To Run Sonar (Sequential Execution) - RB

```
IES → nohup /home/SonarQube63/SONAR/apache-ant-1.10.0/bin/ant -v -f /home/SonarQube63/SONAR/Sonar/RB/HSRI-IES-sonar-build.xml > /home/SonarQube63/SONAR/Sonar/RB/logs/HSRI-IES-sonar-build.log &
```

```
HIX → nohup /home/SonarQube63/SONAR/apache-ant-1.10.0/bin/ant -v -f /home/SonarQube63/SONAR/Sonar/RB/HSRI-HIX-sonar-build.xml > /home/SonarQube63/SONAR/Sonar/RB/logs/HSRI-HIX-sonar-build.log &
```

```
SSP → nohup /home/SonarQube63/SONAR/apache-ant-1.10.0/bin/ant -v -f /home/SonarQube63/SONAR/Sonar/RB/HSRI-SSP-sonar-build.xml > /home/SonarQube63/SONAR/Sonar/RB/logs/HSRI-SSP-sonar-build.log &
```

```
CCAP → nohup /home/SonarQube63/SONAR/apache-ant-1.10.0/bin/ant -v -f /home/SonarQube63/SONAR/Sonar/RB/HSRI-CCAP-sonar-build.xml > /home/SonarQube63/SONAR/Sonar/RB/logs/HSRI-CCAP-sonar-build.log &
```

```
EARR → nohup /home/SonarQube63/SONAR/apache-ant-1.10.0/bin/ant -v -f /home/SonarQube63/SONAR/Sonar/RB/HSRI-EARR-sonar-build.xml > /home/SonarQube63/SONAR/Sonar/RB/logs/HSRI-EARR-sonar-build.log &
```

Command To Run Sonar (Sequential Execution) - WB

```
IES → nohup /home/SonarQube63/SONAR/apache-ant-1.10.0/bin/ant -v -f /home/SonarQube63/SONAR/Sonar/WB/HSRI-IES-sonar-build.xml > /home/SonarQube63/SONAR/Sonar/WB/logs/HSRI-IES-sonar-build.log &
```

```
HIX → nohup /home/SonarQube63/SONAR/apache-ant-1.10.0/bin/ant -v -f /home/SonarQube63/SONAR/Sonar/WB/HSRI-HIX-sonar-build.xml > /home/SonarQube63/SONAR/Sonar/WB/logs/HSRI-HIX-sonar-build.log &
```

```
SSP → nohup /home/SonarQube63/SONAR/apache-ant-1.10.0/bin/ant -v -f /home/SonarQube63/SONAR/Sonar/WB/HSRI-SSP-sonar-build.xml > /home/SonarQube63/SONAR/Sonar/WB/logs/HSRI-SSP-sonar-build.log &
```

```
CCAP → nohup /home/SonarQube63/SONAR/apache-ant-1.10.0/bin/ant -v -f /home/SonarQube63/SONAR/Sonar/WB/HSRI-CCAP-sonar-build.xml > /home/SonarQube63/SONAR/Sonar/WB/logs/HSRI-CCAP-sonar-build.log &
```

```
EARR → nohup /home/SonarQube63/SONAR/apache-ant-1.10.0/bin/ant -v -f /home/SonarQube63/SONAR/Sonar/WB/HSRI-EARR-sonar-build.xml > /home/SonarQube63/SONAR/Sonar/WB/logs/HSRI-EARR-sonar-build.log &
```

```
*****
```

To run sonar report on 5.4 (configured code base is Weekly Branch)

IP: 10.64.65.20

Use my credentials

Properties and xml Path: /home/pthadur/DryRun SONAR/Sonar

To modify the code base please open the properties and change the working directory.

Command To Run Sonar (Sequential Execution) - for Release branch Tag

```
nohup /home/pthadur/DryRun SONAR/apache-ant-1.10.0/bin/ant -v -f /home/pthadur/DryRun SONAR/Sonar/RBT/HSRI-IES-sonar-build.xml > /home/pthadur/DryRun SONAR/Sonar/RBT/logs/HSRI-IES-sonar-build.log &
```

```
nohup /home/pthadur/DryRun SONAR/apache-ant-1.10.0/bin/ant -v -f /home/pthadur/DryRun SONAR/Sonar/RBT/HSRI-HIX-sonar-build.xml > /home/pthadur/DryRun SONAR/Sonar/RBT/logs/HSRI-HIX-sonar-build.log &
```

```
nohup /home/pthadur/DryRun SONAR/apache-ant-1.10.0/bin/ant -v -f /home/pthadur/DryRun SONAR/Sonar/RBT/HSRI-SSP-sonar-build.xml > /home/pthadur/DryRun SONAR/Sonar/RBT/logs/HSRI-SSP-sonar-build.log &
```

```
nohup /home/pthadur/DryRun SONAR/apache-ant-1.10.0/bin/ant -v -f /home/pthadur/DryRun SONAR/Sonar/RBT/HSRI-CCAP-sonar-build.xml > /home/pthadur/DryRun SONAR/Sonar/RBT/logs/HSRI-CCAP-sonar-build.log &
```

```
nohup /home/pthadur/DryRun SONAR/apache-ant-1.10.0/bin/ant -v -f /home/pthadur/DryRun SONAR/Sonar/RBT/HSRI-EARR-sonar-build.xml > /home/pthadur/DryRun SONAR/Sonar/RBT/logs/HSRI-EARR-sonar-build.log &
```

Command To Run Sonar (Sequential Execution) - for Release branch

```
nohup /home/pthadur/DryRun SONAR/apache-ant-1.10.0/bin/ant -v -f /home/pthadur/DryRun SONAR/Sonar/RB/HSRI-IES-sonar-build.xml > /home/pthadur/DryRun SONAR/Sonar/RB/logs/HSRI-IES-sonar-build.log &
```

```
nohup /home/pthadur/DryRun SONAR/apache-ant-1.10.0/bin/ant -v -f /home/pthadur/DryRun SONAR/Sonar/RB/HSRI-HIX-sonar-build.xml > /home/pthadur/DryRun SONAR/Sonar/RB/logs/HSRI-HIX-sonar-build.log &
```

```
nohup /home/pthadur/DryRun SONAR/apache-ant-1.10.0/bin/ant -v -f /home/pthadur/DryRun SONAR/Sonar/RB/HSRI-SSP-sonar-build.xml > /home/pthadur/DryRun SONAR/Sonar/RB/logs/HSRI-SSP-sonar-build.log &
```

```
nohup /home/pthadur/DryRun SONAR/apache-ant-1.10.0/bin/ant -v -f /home/pthadur/DryRun SONAR/Sonar/RB/HSRI-CCAP-sonar-build.xml > /home/pthadur/DryRun SONAR/Sonar/RB/logs/HSRI-CCAP-sonar-build.log &
```

```
nohup /home/pthadur/DryRun SONAR/apache-ant-1.10.0/bin/ant -v -f /home/pthadur/DryRun SONAR/Sonar/RB/HSRI-EARR-sonar-build.xml > /home/pthadur/DryRun SONAR/Sonar/RB/logs/HSRI-EARR-sonar-build.log &
```

Command To Run Sonar (Sequential Execution) - for CP

```
nohup /home/pthadur/DryRun SONAR/apache-ant-1.10.0/bin/ant -v -f /home/pthadur/DryRun SONAR/Sonar/CP/HSRI-IES-sonar-build.xml > /home/pthadur/DryRun SONAR/Sonar/CP/logs/HSRI-IES-sonar-build.log &
```

```
nohup /home/pthadur/DryRun SONAR/apache-ant-1.10.0/bin/ant -v -f /home/pthadur/DryRun SONAR/Sonar/CP/HSRI-HIX-sonar-build.xml > /home/pthadur/DryRun SONAR/Sonar/CP/logs/HSRI-HIX-sonar-build.log &
nohup /home/pthadur/DryRun SONAR/apache-ant-1.10.0/bin/ant -v -f /home/pthadur/DryRun SONAR/Sonar/CP/HSRI-SSP-sonar-build.xml > /home/pthadur/DryRun SONAR/Sonar/CP/logs/HSRI-SSP-sonar-build.log &
nohup /home/pthadur/DryRun SONAR/apache-ant-1.10.0/bin/ant -v -f /home/pthadur/DryRun SONAR/Sonar/CP/HSRI-CCAP-sonar-build.xml > /home/pthadur/DryRun SONAR/Sonar/CP/logs/HSRI-CCAP-sonar-build.log &
nohup /home/pthadur/DryRun SONAR/apache-ant-1.10.0/bin/ant -v -f /home/pthadur/DryRun SONAR/Sonar/CP/HSRI-EARR-sonar-build.xml > /home/pthadur/DryRun SONAR/Sonar/CP/logs/HSRI-EARR-sonar-build.log &
```

Command To Run Sonar (Sequential Execution) - for WB

```
nohup /home/pthadur/DryRun SONAR/apache-ant-1.10.0/bin/ant -v -f /home/pthadur/DryRun SONAR/Sonar/WB/HSRI-IES-sonar-build.xml > /home/pthadur/DryRun SONAR/Sonar/WB/logs/HSRI-IES-sonar-build.log &
nohup /home/pthadur/DryRun SONAR/apache-ant-1.10.0/bin/ant -v -f /home/pthadur/DryRun SONAR/Sonar/WB/HSRI-HIX-sonar-build.xml > /home/pthadur/DryRun SONAR/Sonar/WB/logs/HSRI-HIX-sonar-build.log &
nohup /home/pthadur/DryRun SONAR/apache-ant-1.10.0/bin/ant -v -f /home/pthadur/DryRun SONAR/Sonar/WB/HSRI-SSP-sonar-build.xml > /home/pthadur/DryRun SONAR/Sonar/WB/logs/HSRI-SSP-sonar-build.log &
nohup /home/pthadur/DryRun SONAR/apache-ant-1.10.0/bin/ant -v -f /home/pthadur/DryRun SONAR/Sonar/WB/HSRI-CCAP-sonar-build.xml > /home/pthadur/DryRun SONAR/Sonar/WB/logs/HSRI-CCAP-sonar-build.log &
nohup /home/pthadur/DryRun SONAR/apache-ant-1.10.0/bin/ant -v -f /home/pthadur/DryRun SONAR/Sonar/WB/HSRI-EARR-sonar-build.xml > /home/pthadur/DryRun SONAR/Sonar/WB/logs/HSRI-EARR-sonar-build.log &
*****
```

Sonar 56

Thursday, April 19, 2018 2:28 PM

user - Sonar56
password - Sonar56@123
port 9120
sontext /sonar56

Bamboo

Friday, June 9, 2017 8:35 PM

```
root@ENT-DV-UHBLD01:/opt/Bamboo/atlassian-bamboo-5.1.1/bin
Using username "pthadur".
Last login: Fri Jun  9 08:25:32 2017 from 192.168.30.115
[pthadur@ENT-DV-UHBLD01 ~]$ sudo su -
[sudo] password for pthadur:
[root@ENT-DV-UHBLD01 ~]# -ef!|grep bamboo
root      9033  9001  0 10:55 pts/2    00:00:00 grep bamboo
root      9549  1  3 May24 ?        12:29:08 /usr/bin/java -Djava.util.logging.config.file=/opt/Bamboo/atlassian-bamboo-5.1.1/conf/logging.properties -Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManager -XX:MaxPermSize=512m -Xms1024m -Xmx4096m -Djava.endorsed.dirs=/opt/Bamboo/atlassian-bamboo-5.1.1/endorsed -classpath /opt/Bamboo/atlassian-bamboo-5.1.1/bin/bootstrap.jar:/opt/Bamboo/atlassian-bamboo-5.1.1/bin/tomcat-juli.jar -Dcatalina.home=/opt/Bamboo/atlassian-bamboo-5.1.1 -Djava.io.tmpdir=/opt/Bamboo/atlassian-bamboo-5.1.1/temp org.apache.catalina.startup.Bootstrap start
[root@ENT-DV-UHBLD01 bin]# cd /opt/Bamboo/atlassian-bamboo-5.1.1/bin/
[root@ENT-DV-UHBLD01 bin]# ./bamboo.sh
bamboo.sh   catalina.sh      commons-daemon.jar      digest.sh      setclasspath.sh  shutdown.sh  startup.sh      tomcat-juli.jar      tool-wrapper.sh
bootstrap.jar  catalina-tasks.xml  commons-daemon-native.tar.gz  permgen.sh  setenv.sh       start-bamboo.sh  stop-bamboo.sh  tomcat-native.tar.gz  version.sh
[root@ENT-DV-UHBLD01 bin]# ./stop-bamboo.sh

Bamboo Standalone Edition
  Version : 5.1.1

Detecting JVM PermGen support...
PermGen switch is supported. Setting to 512m

If you encounter issues starting or stopping Bamboo Standalone Edition, please see the Troubleshooting guide at https://confluence.atlassian.com/display/BAMBOO/Bamboo+installation+guide

Using CATALINA_BASE:  /opt/Bamboo/atlassian-bamboo-5.1.1
Using CATALINA_HOME:  /opt/Bamboo/atlassian-bamboo-5.1.1
Using CATALINA_TMPDIR: /opt/Bamboo/atlassian-bamboo-5.1.1/temp
Using JRE_HOME:      /usr
Using CLASSPATH:     /opt/Bamboo/atlassian-bamboo-5.1.1/bin/bootstrap.jar:/opt/Bamboo/atlassian-bamboo-5.1.1/bin/tomcat-juli.jar
[root@ENT-DV-UHBLD01 bin]# ./start-bamboo.sh

To run Bamboo in the foreground, start the server with start-bamboo.sh -fg

Server startup logs are located in /opt/Bamboo/atlassian-bamboo-5.1.1/bin/logs/catalina.out

Bamboo Standalone Edition
  Version : 5.1.1

Detecting JVM PermGen support...
PermGen switch is supported. Setting to 512m

If you encounter issues starting or stopping Bamboo Standalone Edition, please see the Troubleshooting guide at https://confluence.atlassian.com/display/BAMBOO/Bamboo+installation+guide

Using CATALINA_BASE:  /opt/Bamboo/atlassian-bamboo-5.1.1
Using CATALINA_HOME:  /opt/Bamboo/atlassian-bamboo-5.1.1
Using CATALINA_TMPDIR: /opt/Bamboo/atlassian-bamboo-5.1.1/temp
Using JRE_HOME:      /usr
Using CLASSPATH:     /opt/Bamboo/atlassian-bamboo-5.1.1/bin/bootstrap.jar:/opt/Bamboo/atlassian-bamboo-5.1.1/bin/tomcat-juli.jar
[root@ENT-DV-UHBLD01 bin]# ps -ef|grep bamboo
root      9263  1 54 10:56 pts/2    00:00:52 /usr/bin/java -Djava.util.logging.config.file=/opt/Bamboo/atlassian-bamboo-5.1.1/conf/logging.properties -Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManager -XX:MaxPermSize=512m -Xms1024m -Xmx4096m -Djava.endorsed.dirs=/opt/Bamboo/atlassian-bamboo-5.1.1/endorsed -classpath /opt/Bamboo/atlassian-bamboo-5.1.1/bin/bootstrap.jar:/opt/Bamboo/atlassian-bamboo-5.1.1/bin/tomcat-juli.jar -Dcatalina.home=/opt/Bamboo/atlassian-bamboo-5.1.1 -Djava.io.tmpdir=/opt/Bamboo/atlassian-bamboo-5.1.1/temp org.apache.catalina.startup.Bootstrap start
root      9365  9001  0 10:57 pts/2    00:00:00 grep bamboo
[root@ENT-DV-UHBLD01 bin]#
```



how to trigger a bamboo plan using batch file

<https://community.atlassian.com/t5/Answers-Developer-Questions/Trigger-Bamboo-Plan-via-REST-Call/qaq-p/497583>
https://docs.atlassian.com/bamboo/REST/4.0/?_ga=2.96233052.110003652.1498721816-215692414.1480577905
<https://bobswift.atlassian.net/wiki/display/BCLI/Examples>

```
bamboo.buildKey
bamboo.planKey
bamboo.shortPlanKey
bamboo.shortJobKey
bamboo.buildResultKey
bamboo.resultsUrl
bamboo.buildNumber
bamboo.buildPlanName
bamboo.planName
bamboo.shortPlanName
bamboo.shortJobName
bamboo.buildTimeStamp
bamboo.agentId
bamboo.agentWorkingDirectory
bamboo.build.working.directory
bamboo.ManualBuildTriggerReason.userName
#Generic repository variables
bamboo.planRepository.<position>.branchName
bamboo.planRepository.<position>.name
bamboo.planRepository.<position>.revision
bamboo.planRepository.<position>.previousRevision
bamboo.planRepository.<position>.type
#Subversion
bamboo.planRepository.<position>.username
bamboo.planRepository.<position>.repositoryUrl
The repository URL
bamboo.planRepository.<position>.branch
bamboo.planRepository.<position>.username
```

Rest api

Tuesday, September 4, 2018 11:46 AM

```
#####
[phadur@ENT-DV-UHBLD01 ~]$ curl -u npanguluri:2WrWitpi http://10.64.65.20:8085/rest/api/latest/result/HSRI-BUILDHSRIIESBRANCH/latest
<?xml version="1.0" encoding="UTF-8" standalone="yes"?><result restartable="false" onceOff="false" continuable="false" id="89916213" number="2110" lifeCycleState="Finished" state="Successful" key="HSRI-BUILDHSRIIESBRANCH-2110" expand="changes,metadata,plan,vcsRevisions,artifacts,comments,labels,jiraIssues,stages"><link rel="self" href="http://10.64.65.20:8085/rest/api/latest/result/HSRI-BUILDHSRIIESBRANCH-2110"/><plan enabled="true" type="chain" shortKey="BUILDHSRIIESBRANCH" shortName="1-BUILD-HSRIIES-Branch (GOLD BRANCH)" name="HSRI - 1-BUILD-HSRIIES-Branch (GOLD BRANCH)" key="HSRI-BUILDHSRIIESBRANCH"><link rel="self" href="http://10.64.65.20:8085/rest/api/latest/plan/HSRI-BUILDHSRIIESBRANCH"/></plan><planName>1-BUILD-HSRIIES-Branch (GOLD BRANCH)</planName>< projectName>HSRI</projectName>
<buildStartTime>2018-09-03T22:54:25.000-04:00</buildStartTime><prettyBuildStartTime>Mon, 3 Sep, 10:54 PM</prettyBuildStartTime>
<buildCompletedTime>2018-09-03T23:17:26.000-04:00</buildCompletedTime><prettyBuildCompletedTime>Mon, 3 Sep, 11:17 PM</prettyBuildCompletedTime>
<buildDurationInSeconds>1381</buildDurationInSeconds><buildDuration>1381326</buildDuration><buildDurationDescription>23 minutes</buildDurationDescription><buildRelativeTime>2 hours ago</buildRelativeTime><vcsRevisionKey>181635</vcsRevisionKey><vcsRevisions size="1" max-result="1" start-index="0"/><buildTestSummary>No tests found</buildTestSummary>
<successfulTestCount>0</successfulTestCount><failedTestCount>0</failedTestCount><quarantinedTestCount>0</quarantinedTestCount><buildReason>Child of &lt;a href=&quot;http://10.64.65.20:8085/browse/BUILDVERSIONGENERATION-WBBUILDVERSIONGENERATIONPLAN-98&quot;&gt;BUILDVERSIONGENERATION-WBBUILDVERSIONGENERATIONPLAN-98 &lt;/a&gt;</buildReason><artifacts size="0" max-result="0" start-index="0"/><comments size="0" max-result="0" start-index="0"/><labels size="0" max-result="0" start-index="0"/><jiraIssues size="6" max-result="6" start-index="0"/><stages size="4" max-result="4" start-index="0"/><changes size="7" max-result="7" start-index="0"/><metadata size="3" max-result="3" start-index="0"/></result>
[phadur@ENT-DV-UHBLD01 ~]$ curl -u npanguluri:2WrWitpi http://10.64.65.20:8085/rest/api/latest/result/HSRI-BUILDHSRIIESBRANCH/latest/log
<?xml version="1.0" encoding="UTF-8" standalone="yes"?><status><status-code>404</status-code><message>null for uri: <message></status>
```

```
#####
Prints the log on the screen : curl -u npanguluri:2WrWitpi http://10.64.65.20:8085/browse/HSRI-BUILDHSRIIESBRANCH-JOB1-2110/log
#####

```

Bamboo api descriptions:

<https://developer.atlassian.com/server/bamboo/bamboo-rest-resources/#BambooRESTResources-BuildQueueService>
<https://bobswift.atlassian.net/wiki/spaces/BCLI/pages/2392065/Examples>
<https://bobswift.atlassian.net/wiki/spaces/BCLI/pages/2392066/Reference>

```
#####
Running a bamboo plan using api:
```

```
export BAMBOO_USER=foo
export BAMBOO_PASS=bar
export PROJECT_NAME=TST
export PLAN_NAME=DMY
export STAGE_NAME=JOB1
curl --user $BAMBOO_USER:$BAMBOO_PASS -X POST -d "$STAGE_NAME&ExecuteAllStages" http://mybamboohost:8085/rest/api/latest/queue/\$PROJECT\_NAME-\$PLAN\_NAME
```

From <<https://community.atlassian.com/t5/Answers-Developer-Questions/Trigger-Bamboo-Plan-via-REST-Call/qaq-p/497583>>

More examples in below URL:

<https://developer.atlassian.com/server/bamboo/rest-api-deployment-triggers-for-bamboo/>

```
# curl --user un:pwd -X POST -d "stage&executeAllStages" -d "bamboo.variable.TEST=WORKS" http://10.0.0.0/rest/api/latest/queue/CAP-BR.json
```

From <<https://stackoverflow.com/questions/18674733/invoking-bamboo-plan-remotely>>

Retrieve results from bamboo plan:

<http://softwareproductionengineering.blogspot.com/2014/06/how-do-you-retrieve-test-results-from.html>

Splunk

Thursday, June 22, 2017 12:29 PM

Creds:

npanguluri/Welcome34

10.64.33.34

if splunk is down... then login to 10.64.33.34 with your vpn credentials

and then check the status first

sudo /opt/Splunk/splunk/bin/splunk status

and if it down then start it

sudo /opt/Splunk/splunk/bin/splunk start

We have created individual user accounts for the Splunk. please use the below credentials.

<https://splunk.ribidges.ri.gov>

https://wiki.ribidges.ri.gov/index.php/Main_Page#Splunk

Username: npanguluri

Password: lh9FoNHg

Keerthi Splunk access:

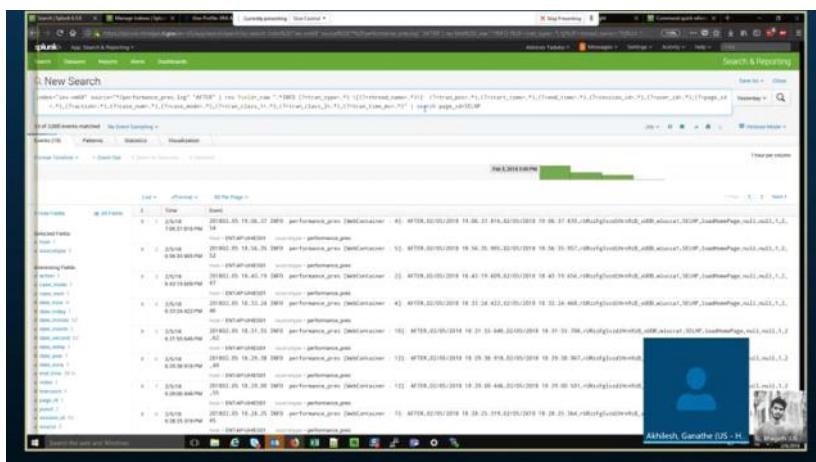
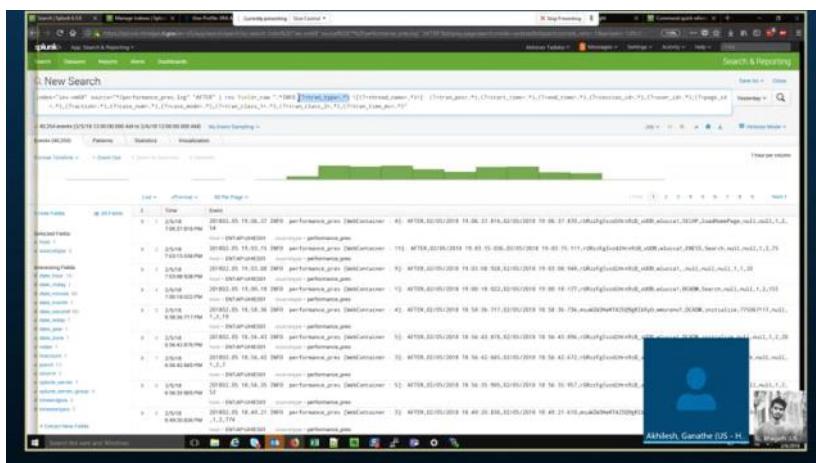
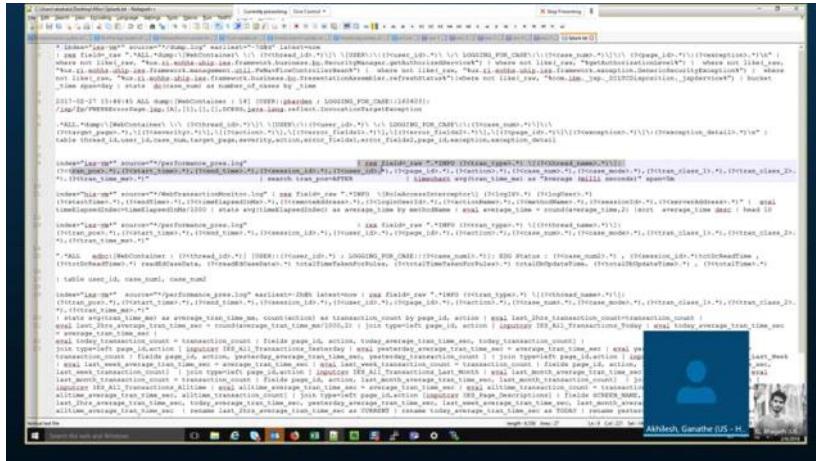
kravipati

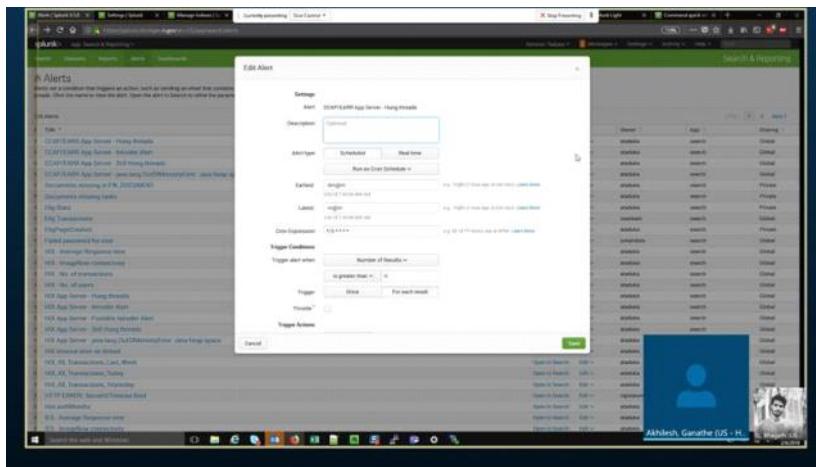
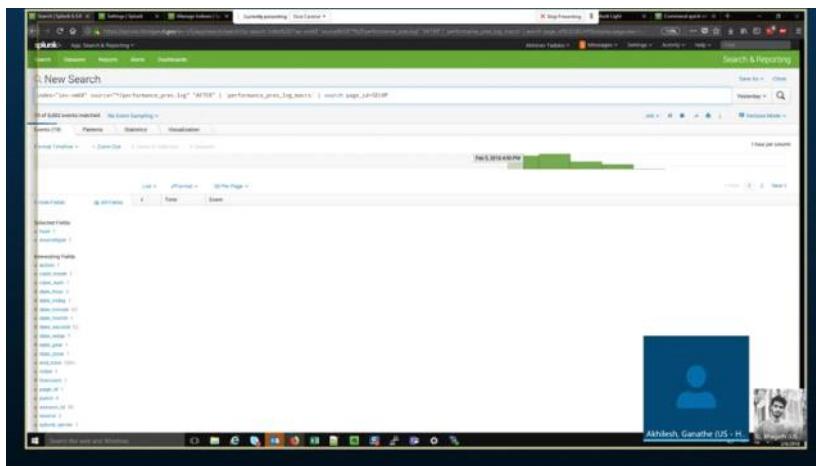
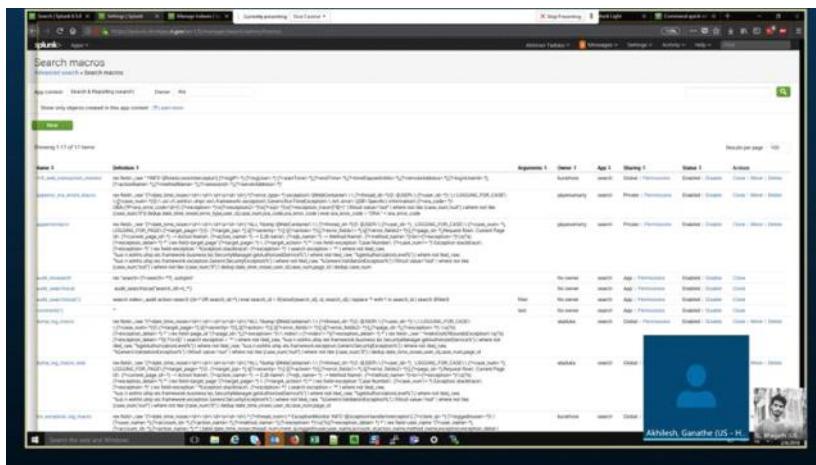
Vetrii@578

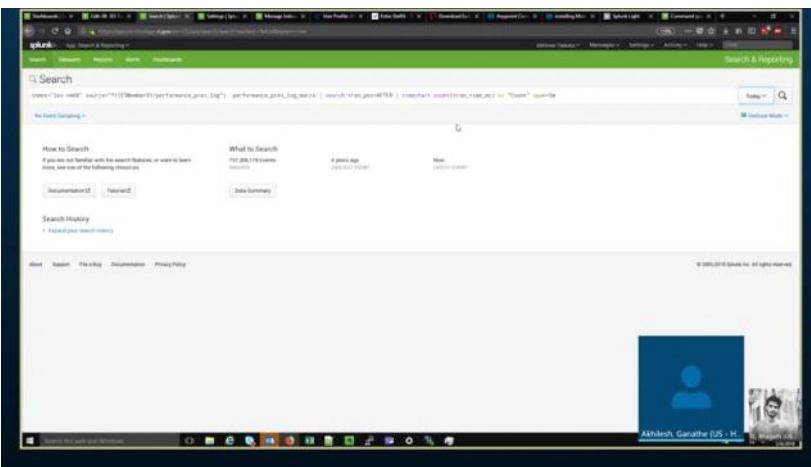
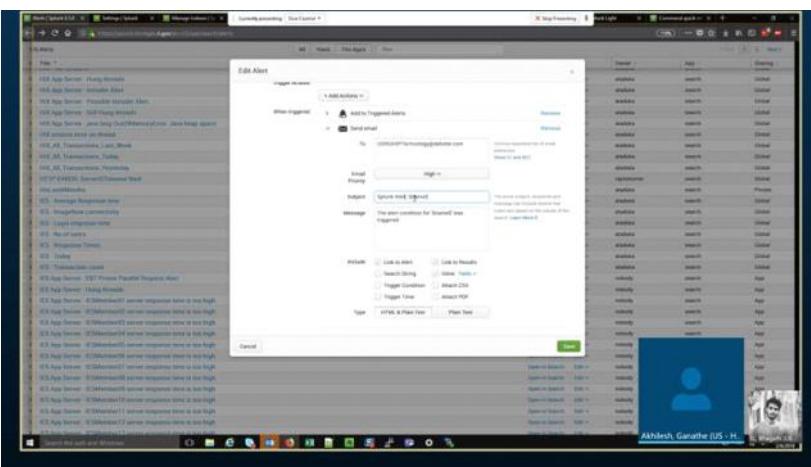
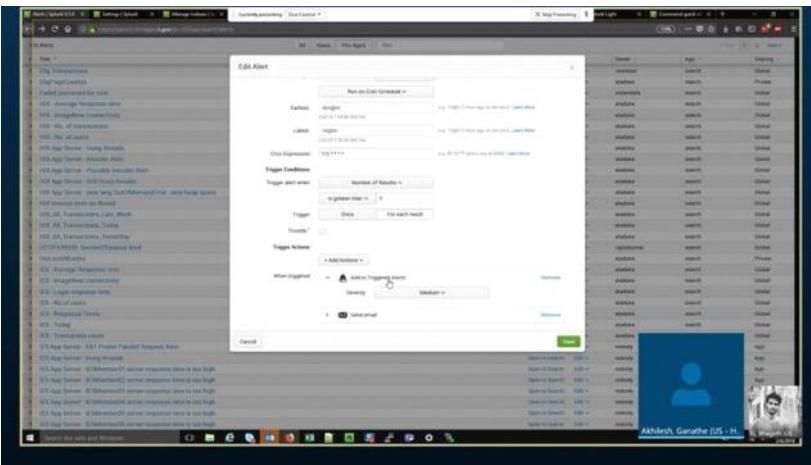
```
./splunk add monitor /opt/IBM/HSRI/IES-Trunk/IEAppLogs/ApplicationLogs/IES1 -index devn-ies-vm92
./splunk add monitor /opt/IBM/HSRI/CCAPEARR-Trunk/Logs/ApplicationLogs/CCAP1 -index devn-ccap-vm92
./splunk add monitor /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/SSP1 -index devn-ssp-vm92
./splunk add monitor /opt/IBM/HSRI/IES-Trunk/IEAppLogs/ApplicationLogs/IES1 -index devn-ies-vm92
./splunk add monitor /opt/IBM/HSRI/HIX-Trunk/HIXLogs/ApplicationLogs -index devn-hix-vm92
./splunk add monitor /opt/IBM/HSRI/SSP-Trunk/SSPLogs/ApplicationLogs -index devn-ssp-vm92
./splunk add monitor /opt/IBM/HSRI/CCAPEARR-Trunk/Logs/ApplicationLogs/CCAP1 -index devn-ccap-vm92
./splunk add monitor /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IES1 -index devn-ies-vm92
./splunk add monitor /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/HIX1 -index devn-hix-vm92
./splunk add monitor /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/SSP1 -index devn-ssp-vm92
./splunk add monitor /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/CCAP1 -index devn-ccap-vm92
```

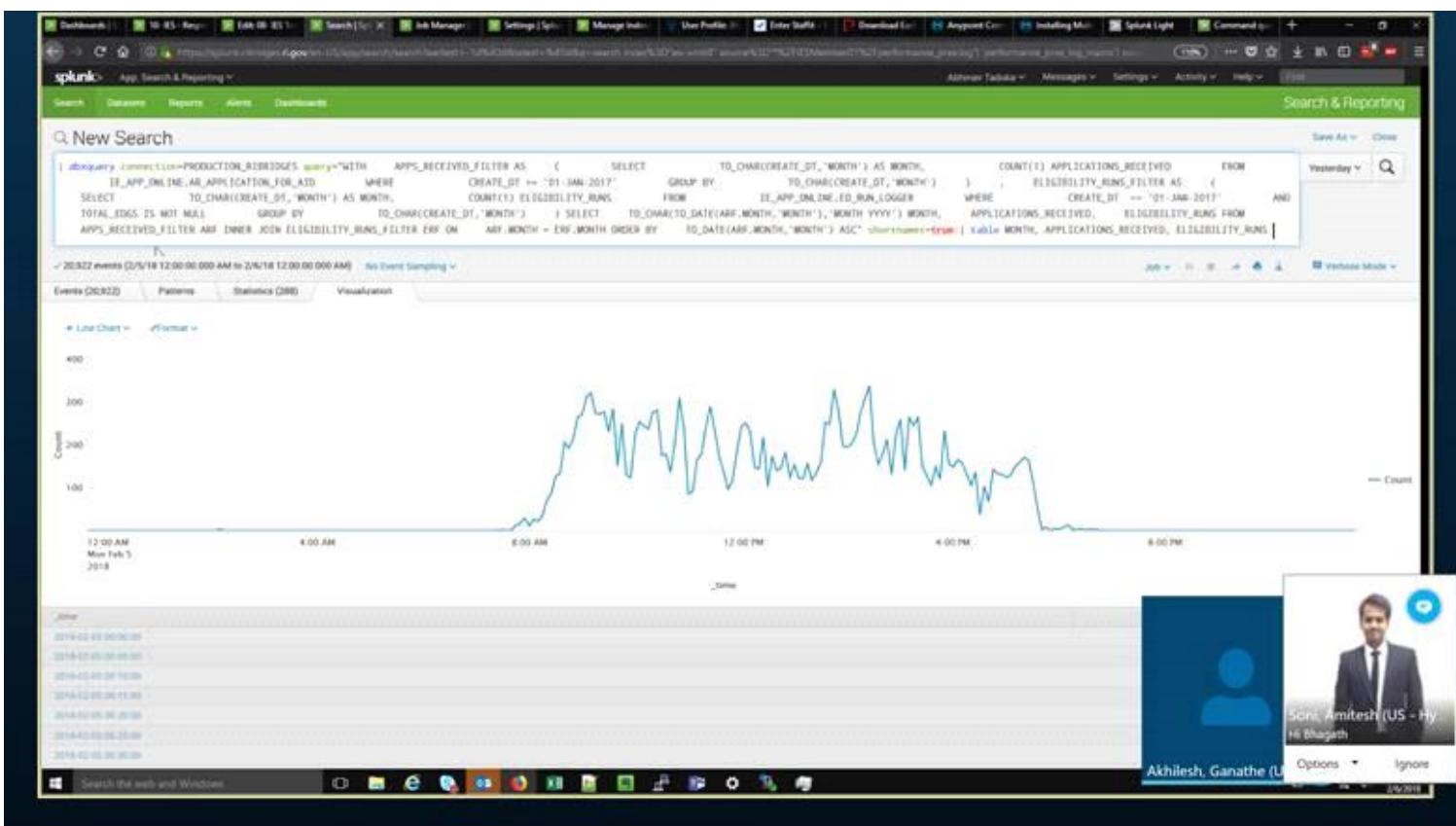
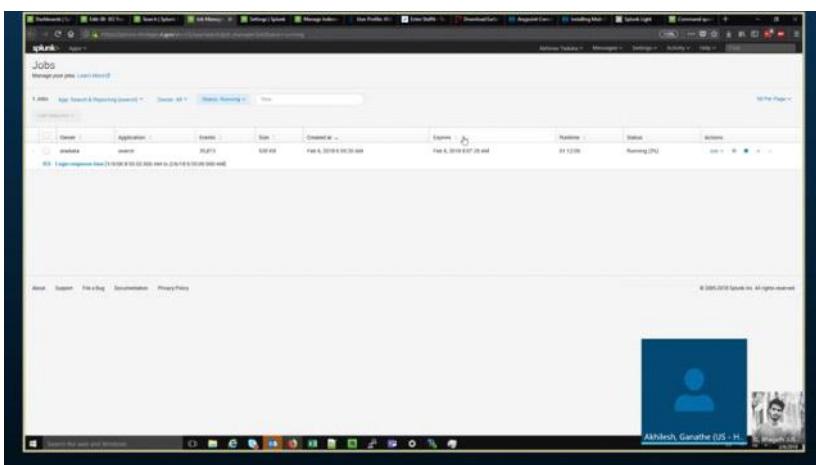
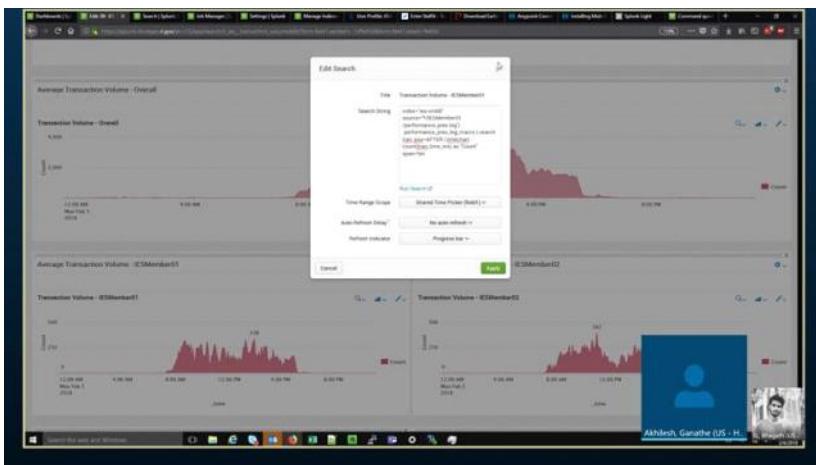
KT - Abhinav

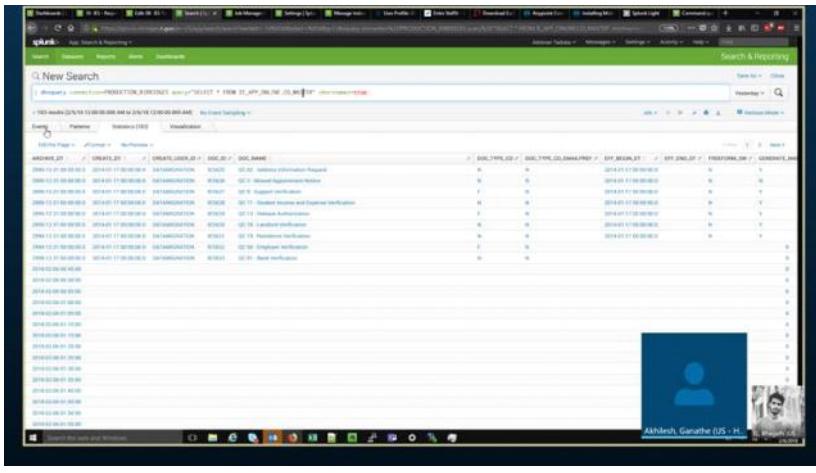
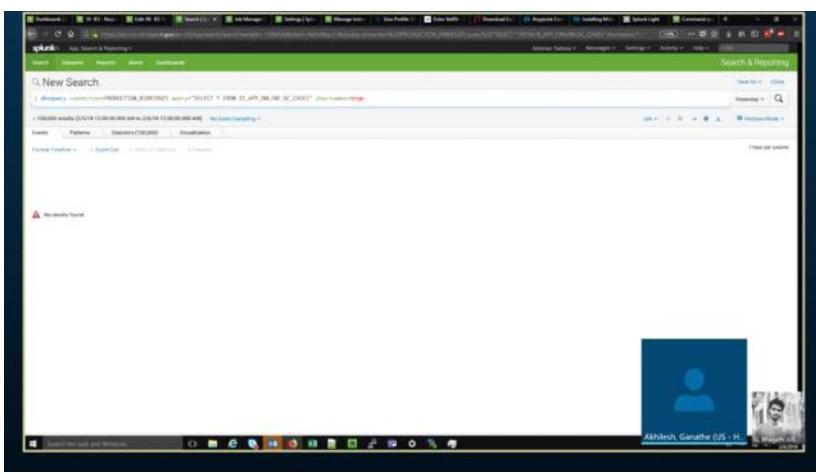
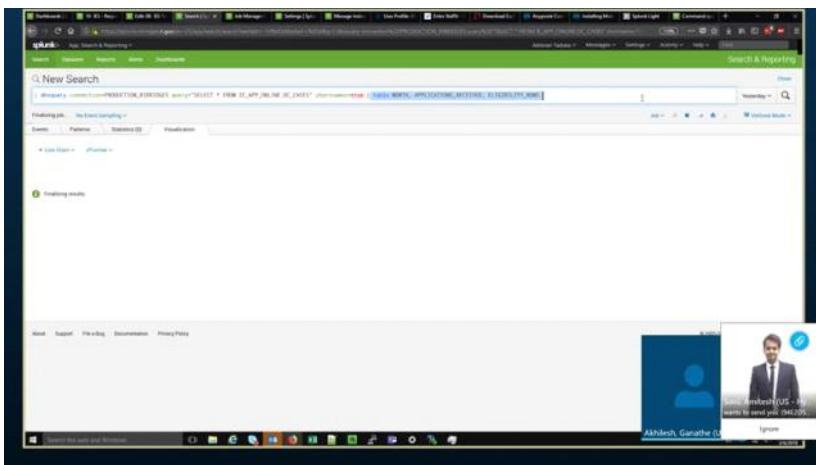
Wednesday, February 7, 2018 2:17 PM

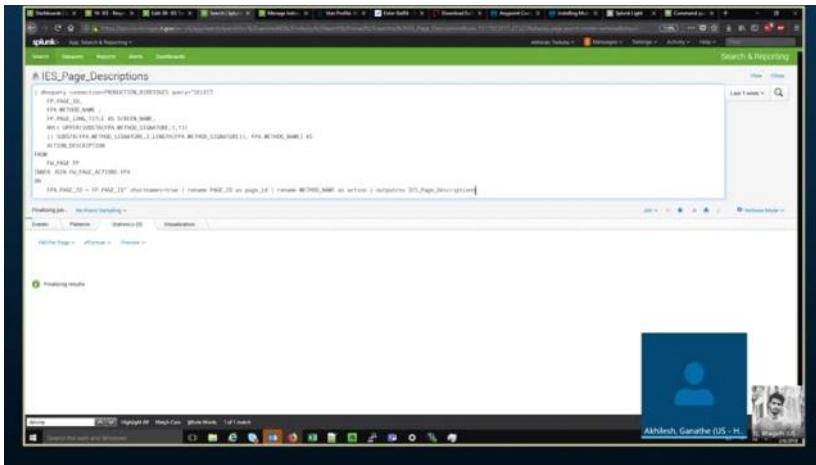
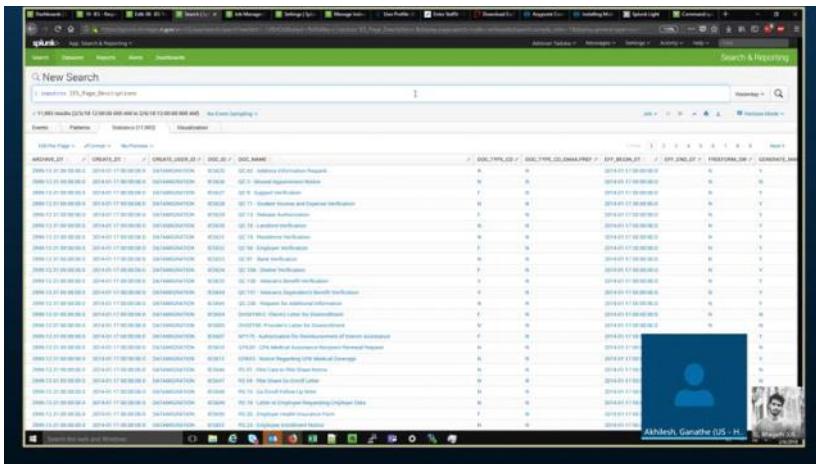
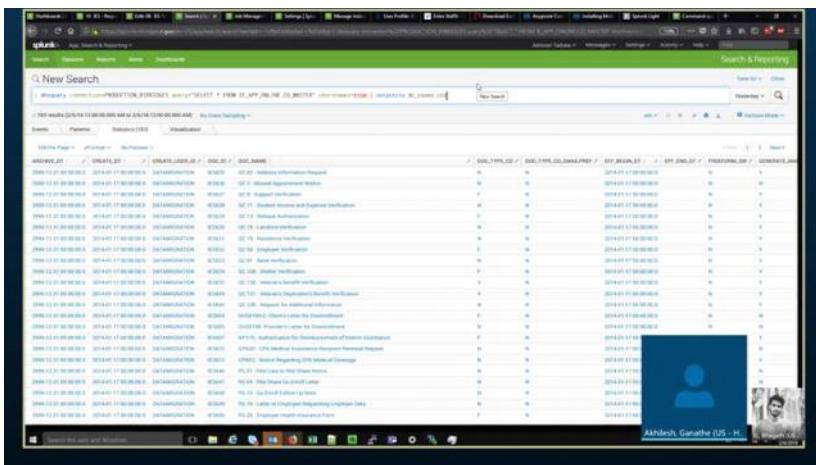












01- IES Crashes and ORA errors - Weekly Report Dashboard

Last 1 week

Transactions: 102,474 | Page Crash C: 962 | ORA Errors: 370 | Impacted Cas: 460 | Impacted Pag: 94 | Impacted Use: 333

page_id	SCREEN_NAME	Number of instances	Number of cases impacted
DBOTC	Finalize Eligibility	449	163
DOORL	Wrapup - Run Eligibility	219	55
DCHRP	Household Address Details	118	26
DCESG	eSignature	31	13

Akhilash, Ganathe (US - H) | Sargoch (US - H)

Dashboard

Monday, January 22, 2018 12:58 PM

Csv file path:

/opt/Splunk/splunk/var/run/splunk/csv/IES_Page_Descriptions.csv

Dashboard query:

```
index="ies-vm*" source="*/dump.log"
|`dump_log_macro_new` |join type=left page_id [inputcsv IES_Page_Descriptions] | fillnull value="null" | where not like (SCREEN_NAME,"null") |stats count as "Number of instances"
```

Dashboard Name

01- IES Crashes and ORA errors - Weekly Report Dashboard

KT - Team

Monday, November 20, 2017 2:32 PM

Definition Of Splunk:

"Splunk is an American multinational corporation headquartered in San Francisco, California, which produces software for searching, monitoring, and analyzing machine-generated big data, via a web-style interface."

History:

The company Splunk (which is a reference to cave exploration) was started in 2003 by Michael Baum, Rob Das, and Erik Swan, and was founded to pursue a disruptive new vision of making machine-generated data easily accessible, usable, and valuable to everyone.

Machine Data:

Machine data (one of the fastest growing segments of big data) is defined as any information that is automatically created without human intervention. This data can be from a wide range of sources, including websites, servers, applications, networks, mobile devices, and so on, and can span multiple environments and can even be Cloud-based.

Splunk Application:

Splunk (the product) runs from both a standard command line as well as from an interface that is totally web-based (which means that no thick client application needs to be installed to access and use the tool) and performs large-scale, high-speed indexing on both historical and real-time data.

Splunk does not require a restore of any of the original data but stores a compressed copy of the original data (along with its indexing information), allowing you to delete or otherwise move (or remove) the original data. Splunk then utilizes this searchable repository from which it efficiently creates graphs, reports, alerts, dashboards, and detailed visualizations.

Splunk's main product is Splunk Enterprise, or simply Splunk, which was developed using C/C++ and Python for maximum performance and which utilizes its own Search Processing Language (SPL) for maximum functionality and efficiency.

SPL:

"SPL is the search processing language designed by Splunk® for use with Splunk software. SPL encompasses all the search commands and their functions, arguments, and clauses. Its syntax was originally based upon the UNIX pipeline and SQL. The scope of SPL includes data searching, filtering, modification, manipulation, insertion, and deletion."

Universal File Handling:

Splunk has the ability to read all kinds of data—in any format—from any device or application. Its power lies in its ability to turn this data into operational intelligence (OI), typically out of the box and without the need for any special parsers or adapters to deal with particular data formats.

Splunk uses internal algorithms to process new data and new data sources automatically and efficiently. Once Splunk is aware of a new data type, you don't have to reintroduce it again, saving time.

The correlation of information:

A Splunk search gives the user the ability to effortlessly recognize relationships and patterns in data and data sources based on the following factors:

- Time, proximity, and distance
- Transactions (single or a series)
- Subsearches (searches that actually take the results of one search and then use them as input or to affect other searches)
- Lookups to external data and data sources
- SQL-like joins

Splunk Software Types:

- Splunk Enterprise
- Splunk Cloud
- Splunk Light
- Splunk Free

Splunk commands

Tuesday, October 3, 2017 12:38 PM

```
index="ies-vm*" source="/opt/IBM/HSRI/IES-PRD/IEAppLogs/ApplicationLogs/IESmember02/*" exception  
  
/opt/apps/splunkforwarder/bin/splunk remove monitor /opt/IBM/CCAP/DEVM/Logs/ApplicationLogs  
/opt/apps/splunkforwarder/bin/splunk remove monitor /opt/IBM/WebSphere/AppServer/profiles/DEVMAppSrv/logs/DEVMmember01  
/opt/apps/splunkforwarder/bin/splunk remove monitor /opt/IBM/SSP/DEVM/SSPLogs/ApplicationLogs  
/opt/apps/splunkforwarder/bin/splunk remove monitor /opt/IBM/WebSphere/AppServer/profiles/DEVM-SSPAppSrv/logs/DEVMmember01  
/opt/apps/splunkforwarder/bin/splunk add monitor /opt/IBM/CCAP/DEVM/Logs/ApplicationLogs -index npd-ccap  
/opt/apps/splunkforwarder/bin/splunk add monitor /opt/IBM/WebSphere/AppServer/profiles/DEVMAppSrv/logs/DEVMmember01 -index npd-ccap  
/opt/apps/splunkforwarder/bin/splunk add monitor /opt/IBM/SSP/DEVM/SSPLogs/ApplicationLogs -index npd-ccap  
/opt/apps/splunkforwarder/bin/splunk remove monitor /opt/IBM/SSP/DEVM/SSPLogs/ApplicationLogs  
/opt/apps/splunkforwarder/bin/splunk add monitor /opt/IBM/SSP/DEVM/SSPLogs/ApplicationLogs -index npd-ssp  
/opt/apps/splunkforwarder/bin/splunk add monitor /opt/IBM/WebSphere/AppServer/profiles/DEVM-SSPAppSrv/logs/DEVMmember01 -index npd-ssp
```

troubleshooting

Wednesday, September 27, 2017 8:00 PM

8:00 PM

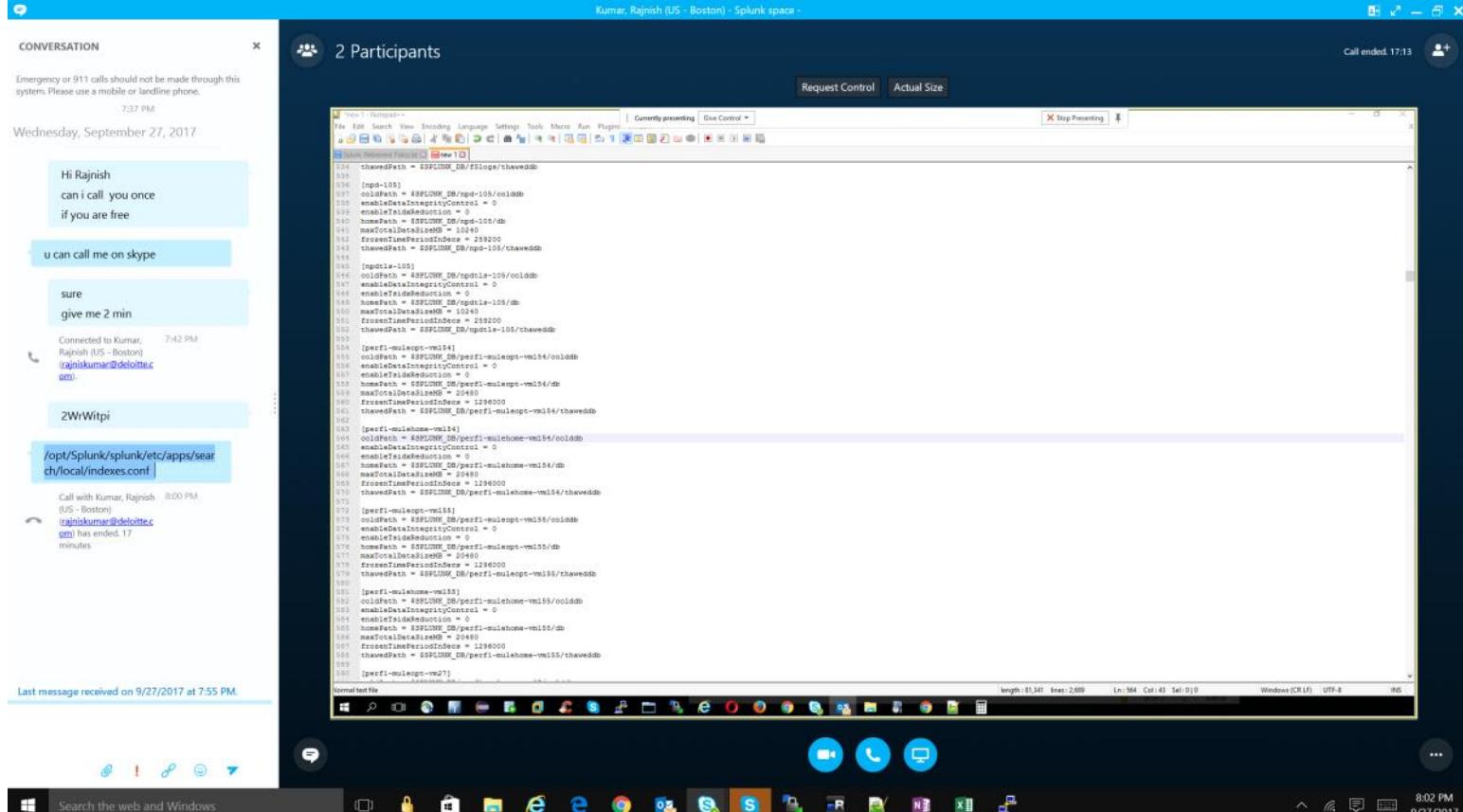
If space is full:

Error message from splunk -

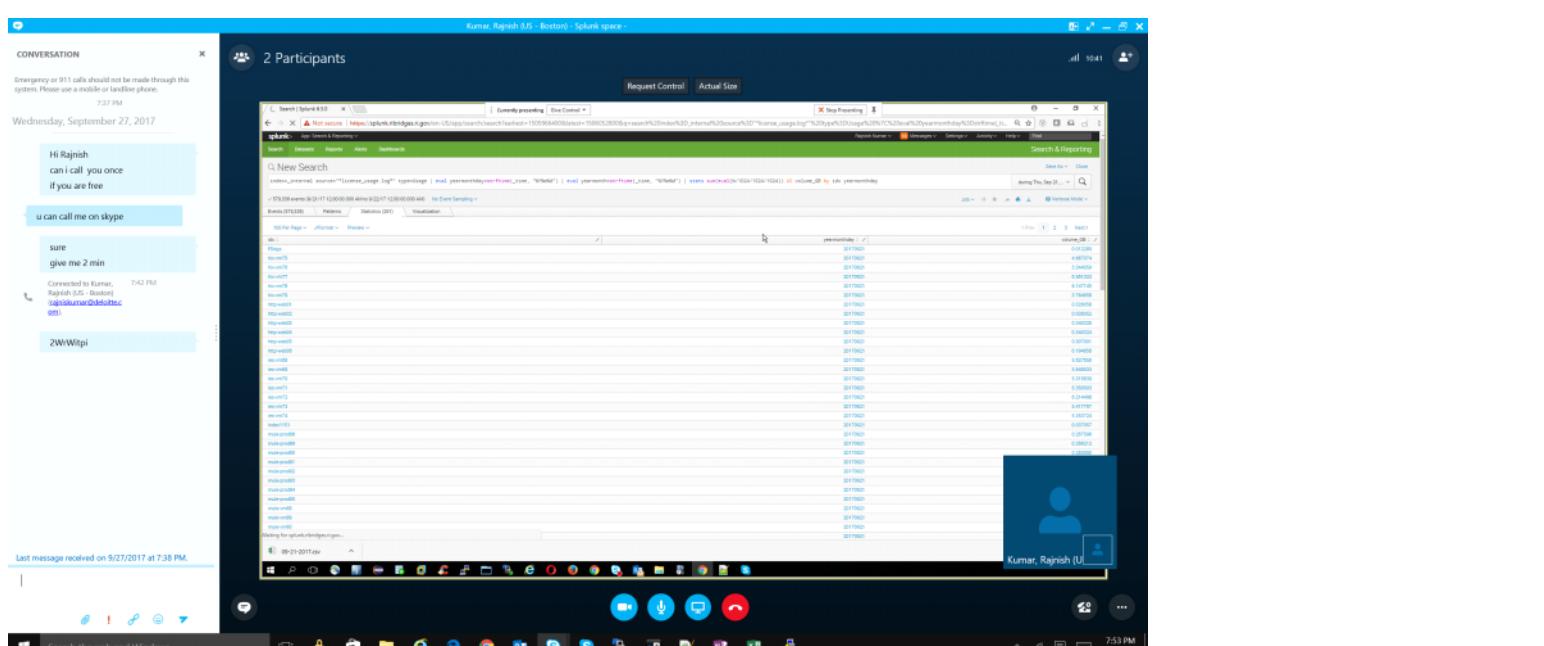
Dispatch Manager: The minimum free disk space (1000MB) reached for /opt/Splunk/splunk/var/run/splunk/dispatch@9/27/2017, 9:15:21 AM
skipped indexing of internal audit event will keep dropping events until indexer congestion is remedied. Check disk space and other issues that may cause indexer to block@9/27/2017, 9:03:28 AM

Log in to splunk indexer and open below file

/opt/Splunk/splunk/etc/apps/search/local/indexes.conf



Published in the official journal of the Society for the Study of Evolution



Indexex

Monday, September 25, 2017 3:46 PM

splunk indexes for SITM:

* IES

Application:

10.64.65.251:/opt/IBM/HSRI/IES-SITTT1/IEAppLogs/ApplicationLogs/IES1

Splunk Index: sitm-ies-vm251

WebSphere:

10.64.65.251:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IES1

Splunk Index: sitm-ies-vm251

* HIX

Application:

10.64.33.13:/opt/IBM/HSRI/HIX-SITTT1/HIXLogs/ApplicationLogs

Splunk Index: sitm-hix-vm13

WebSphere

10.64.33.13:/opt/IBM/WebSphere/AppServer/profiles/AppSrv02/logs/HIX1

Splunk Index: sitm-hix-vm13

* SSP

Application:

10.64.65.251:/opt/IBM/HSRI/SSP-SITTT1/SSPLogs/ApplicationLogs

Splunk Index: sitm-ssp-vm251

WebSphere:

10.64.65.251:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/SSP1

Splunk Index: sitm-ssp-vm251

* CCAP

Application:

10.64.33.13:/opt/IBM/HSRI/CCAP-SITTT1/Logs/ApplicationLogs/CCAP2

Splunk Index: sitm-ccap-vm13

WebSphere:

10.64.33.13:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/CCAP2

Splunk Index: sitm-ccap-vm13

* OPA

10.64.65.252:/home/apache/HSRI/SITTT1-Tomcat/apache-tomcat-7.0.76/logs

Splunk Index: sitm-opa-vm252

* Mule

10.64.65.252:/opt/SITM/mule-standalone-3.4.0/logs

Splunk Index: sitm-mule-vm252

* MuleTLS

10.65.33.16:/home/muleuser/TLS_mule_SITM/mule-standalone-3.8.0/logs

Splunk Index: sitm-muletls-vm16

Splunk Indexes for PROD, PERF*, PRDT, SIT* and UAT*.

1. PROD

* IES

ies-vm68
ies-vm69
ies-vm70
ies-vm71
ies-vm72
ies-vm73
ies-vm74

* HIX

hix-vm75
hix-vm76
hix-vm77
hix-vm78
hix-vm79

* SSP

ssp-vm80
ssp-vm81
ssp-vm82
ssp-vm83
ssp-vm84

* CCAP

por-vm86
por-vm87

* Mule

mule-vm88
mule-vm89
mule-vm90
mule-vm91
mule-vm92
mule-vm93
mule-vm94
mule-vm95
mule-prod88
mule-prod89
mule-prod90
mule-prod91
mule-prod92
mule-prod93
mule-prod94
mule-prod95

```
* OPA  
rules-prod96  
rules-prod97  
rules-prod98  
rules-prod99  
rules-prod100  
rules-prod101  
rules-prod102  
rules-prod103
```

```
* Batch  
opconbatch-vm56  
opconbatch-vm57  
opconbatch-vm105
```

```
* Web  
http-web01  
http-web02  
http-web03  
http-web04  
http-web05  
http-web06
```

.....

2. PERF1

```
* IES  
Application:  
perf1-ies01-vm59  
perf1-ies02-vm59  
perf1-ies03-vm59  
perf1-ies04-vm59  
perf1-ies05-vm59  
perf1-ies06-vm60  
perf1-ies07-vm60  
perf1-ies08-vm60  
perf1-ies09-vm60  
perf1-ies10-vm60  
perf1-ies11-vm61  
perf1-ies12-vm61  
perf1-ies13-vm61  
perf1-ies14-vm61  
perf1-ies15-vm61
```

```
WebSphere:  
perf1-ws01-vm59  
perf1-ies02-vm59  
perf1-ies03-vm59  
perf1-ies04-vm59  
perf1-ies05-vm59  
perf1-ies06-vm60
```

perf1-ies07-vm60
perf1-ies08-vm60
perf1-ies09-vm60
perf1-ies10-vm60
perf1-ies11-vm61
perf1-ies12-vm61
perf1-ies13-vm61
perf1-ies14-vm61
perf1-ies15-vm61

* HIX

Application:

perf1-hix01-vm62
perf1-hix02-vm62
perf1-hix03-vm62
perf1-hix04-vm62
perf1-hix05-vm63
perf1-hix06-vm63
perf1-hix07-vm63
perf1-hix08-vm63
perf1-hix09-vm86
perf1-hix10-vm86
perf1-hix11-vm86
perf1-hix12-vm86

WebSphere:

perf1-hix01-vm62
perf1-hix02-vm62
perf1-hix03-vm62
perf1-hix04-vm62
perf1-hix05-vm63
perf1-hix06-vm63
perf1-hix07-vm63
perf1-hix08-vm63
perf1-hix09-vm86
perf1-hix10-vm86
perf1-hix11-vm86
perf1-hix12-vm86

* SSP:

Application:

perf1-ssp-vm64
perf1-ssp-vm65

WebSphere:

perf1-ssp01-vm64
perf1-ssp02-vm64
perf1-ssp03-vm64
perf1-ssp04-vm64
perf1-ssp05-vm64
perf1-ssp06-vm65
perf1-ssp07-vm65
perf1-ssp08-vm65

perf1-ssp09-vm65

perf1-ssp10-vm65

* CCAP

Application:

perf1-ccap01-vm87

perf1-ccap02-vm87

WebSphere:

perf1-ccap01-vm87

perf1-ccap02-vm87

* Mule

perf1-muleopt-vm154

perf1-mulehome-vm154

perf1-muleopt-vm155

perf1-mulehome-vm155

perf1-muleopt-vm27

perf1-mulehome-vm27

perf1-muleopt-vm45

perf1-mulehome-vm45

* MuleTLS

perf1-muletls1-vm154

perf1-muletls2-vm154

perf1-muletls1-vm155

perf1-muletls2-vm155

perf1-muletls1-vm27

perf1-muletls2-vm27

perf1-muletls1-vm45

perf1-muletls2-vm45

* EBTFIS

perf1-ebtjis-vm154

perf1-ebtjis-vm155

perf1-ebtjis-vm27

perf1-ebtjis-vm45

* OPA

perf1-opa1-vm143

perf1-opa2-vm143

perf1-opa1-vm144

perf1-opa2-vm144

perf1-opa1-vm71

perf1-opa2-vm71

perf1-opa1-vm72

perf1-opa2-vm72

* HTTP / Web

perf1-web-vm115

perf1-web-vm116

3. PERF2

* IES

Application: perf2-ies-vm54
WebSphere: perf2-ies-vm54

* HIX

Application: perf2-hix-vm52
WebSphere: perf2-hix-vm52

* SSP

Application: perf2-ssp-vm52
WebSphere: perf2-ssp-vm52

* CCAP

Application: perf2-ccap-vm52
WebSphere: perf2-ccap-vm52

* OPA:

perf2-opa-vm53

* Mule

perf2-mule-vm53
perf2-mulehome-vm53

* MuleTLS

perf2-muletls-vm53

4. PRDT

* IES

Application: prdt-ies-vm54
WebSphere: prdt-ies-vm54

* HIX

Application: prdt-hix-vm41
WebSphere: prdt-hix-vm41

* SSP

Application: prdt-ssp-vm41
WebSphere: prdt-ssp-vm41

* CCAP

Application: prdt-ccap-vm41
WebSphere: prdt-ccap-vm41

* OPA

prdt-opa-vm43

* Mule

prdt-mule-vm42

* MuleTLS

prdt-muletls-vm42

* EBTFSI

prdt-ebtfsi-vm42

.....

5. SITM

* IES

Application: sitm-ies-vm251

WebSphere: sitm-ies-vm251

* HIX

Application: sitm-hix-vm13

WebSphere: sitm-hix-vm13

* SSP

Application: sitm-ssp-vm251

WebSphere: sitm-ssp-vm251

* CCAP

Application: sitm-ccap-vm13

WebSphere: sitm-ccap-vm13

* OPA

sitm-opa-vm252

* Mule

sitm-mule-vm252

* MuleTLS

sitm-muletls-vm16

.....

6. SITMT

* IES

Application: sitmt-ies-vm12

WebSphere: sitmt-iesws-vm12

* HIX

Application: sitmt-hix-vm12

WebSphere: sitmt-hixws-vm12

* SSP

Application: sitmt-ssp-vm12

WebSphere: sitmt-sspws-vm12

* CCAP
Application: sitmt-ccap-vm12
WebSphere: sitmt-ccapws-vm12

* Mule
sitmt-mule-vm18

* EBTFIS
sitmt-ebtjis-vm18

* MuleTLS
sitmt-muletls-vm18

* OPA:
sitmt-opa-vm18

.....

7. SITN

* IES
Application: sitn-ies-vm13
WebSphere: sitn-iesws-vm13

* HIX
Application: sitn-hix-vm13
WebSphere: sitn-hixws-vm13

* SSP
Application: sitn-ssp-vm13
WebSphere: sitn-sspws-vm13

* CCAP
Application: sitn-ccap-vm13
WebSphere: sitn-ccapws-vm13

* Mule
sitn-mule-vm16

* EBTFIS
sitn-ebtjis-vm16

* MuleTLS
sitn-muletls-vm16

* OPA
sitn-opa-vm16

.....

8. SITNT

* IES

Application: sitnt-ies-vm11
WebSphere: sitnt-iesws-vm11

* HIX
Application: sitnt-hix-vm11
WebSphere: sitnt-hixws-vm11

* SSP
Application: sitnt-ssp-vm11
WebSphere: sitnt-sspws-vm11

* CCAP
Application: sitnt-ccap-vm11
WebSphere: sitnt-ccapws-vm11

* Mule
sitnt-mule-vm19

* EBTFIS
sitnt-ebtjis-vm19

* MuleTLS
sitnt-muletls-vm19

* OPA
sitnt-opa-vm17

.....

9. SITW

* IES
Application: sitw-ies-vm251
WebSphere: sitw-iesws-vm251

* HIX
Application: sitw-hix-vm12
WebSphere: sitw-hixws-vm12

* SSP
Application: sitw-ssp-vm33
WebSphere: sitw-sspws-vm33

* CCAP
Application: sitw-ccap-vm33
WebSphere: sitw-ccapws-vm33

* Mule
sitw-mule-vm252

* EBTFIS
sitw-ebtjis-vm252

* MuleTLS
sitw-muletls-vm252

* OPA
sitw-opa-vm252

.....

10. SITWT

* IES
Application: sitwt-ies-vm12
WebSphere: sitwt-iesws-vm12

* HIX
Application: sitwt-hix-vm12
WebSphere: sitwt-hixws-vm12

* SSP
Application: sitwt-ssp-vm12
WebSphere: sitwt-sspws-vm12

* CCAP
Application: sitwt-ccap-vm12
WebSphere: sitwt-ccapws-vm12

* Mule
sitwt-mule-vm15

* EBTFIS
sitwt-ebtjis-vm15

* MuleTLS
sitwt-muletls-vm15

* OPA
sitwt-opa-vm15

.....

11. UATL

* IES
Application: uatl-ies-vm67, uatl-ies-vm68
WebSphere: uatl-ies-vm67, uatl-ies-vm68

* HIX
Application: uatl-hix-vm67, uatl-hix-vm68
WebSphere: uatl-hix-vm67, uatl-hix-vm68

* SSP
Application: uatl-ssp-vm67, uatl-ssp-vm68
WebSphere: uatl-ssp-vm67, uatl-ssp-vm68

* CCAP
Application: uatl-ccap-vm67, uatl-ccap-vm68
WebSphere: uatl-ccap-vm67, uatl-ccap-vm68

* EBTFSI
uatl-ebtfsi-vm69

* Mule
uatl-mule-vm69

* MuleTLS
uatl-tlsmule-vm69

.....

12. UATM

* IES
Application: uatm-ies-vm103
WebSphere: uatm-ies-vm103

* HIX
Application: uatm-hix-vm103
WebSphere: uatm-hix-vm103

* SSP
Application: uatm-ssp-vm103
WebSphere: uatm-ssp-vm103

* CCAP
Application: uatm-ccap-vm103
WebSphere: uatm-ccap-vm103

* Mule
npd-105

* MuleTLS
npdtls-105

.....

13. UATMP

* IES
Application : uatmp-ies-vm11
WebSphere: uatmp-iesws-vm11

* HIX
Application : uatmp-hix-vm11
WebSphere: uatmp-hixws-vm11

* SSP

Application : uatmp-ssp-vm11
WebSphere: uatmp-sspws-vm11

* CCAP
Application : uatmp-ccap-vm11
WebSphere: uatmp-ccapws-vm11

* Mule
uatmp-mule-vm19

* EBT-FIS
uatmp-ebtgis-vm19

* MuleTLS
uatmp-muletls-vm19

* OPA
uatmp-opa-vm17

.....

14. UATMT

* IES
Application: uatmt-ies-vm84
WebSphere: uatmt-ies-vm84

* HIX
Application: uatmt-hix-vm84
WebSphere: uatmt-hix-vm84

* SSP
Application: uatmt-ssp-vm84
WebSphere: uatmt-ssp-vm84

* CCAP
Application: uatmt-ccap-vm84
WebSphere: uatmt-ccap-vm84

* Mule
uatmt-mule-vm79

* MuleTLS
uatmt-muletls-vm79

.....

15. UATN:

* IES
uatn-ies-vm14

* HIX

uatn-hix-vm14

* SSP

uatn-ssp-vm14

* CCAP

uatn-ccap-vm14

* Mule

uatn-mule-vm56

* MuleTLS

uatn-muletls-vm56

* EBTFIS

uatn-ebtjis-vm56

* OPA

uatn-opa-vm56

.....

16. UATNT:

* IES

uatnt-ies-vm14

* HIX

uatnt-hix-vm14

* SSP

uatnt-ssp-vm14

* CCAP

uatnt-ccap-vm14

* Mule

uatnt-mule-vm56

* MuleTLS

uatnt-muletls-vm56

* EBTFIS

uatnt-ebtjis-vm56

* OPA

uatnt-opa-vm56

.....

17. UATW

* IES

Application: uatw-ies-vm109
Websphere: uatw-ies-vm109

* HIX

Application: uatw-hix-vm109
Websphere: uatw-hix-vm109

* SSP

Application: uatw-ssp-vm109
Websphere: uatw-ssp-vm109

* CCAP:

Application: uatw-ccap-vm109
Websphere: uatw-ccap-vm109

* OPA

uatw-opa-vm110

* Mule

uatw-mule-vm110

* MuleTLS

uatw-muletls-vm110

.....

18. UATWT

* IES

Application: uatwt-ies-vm54
WebSphere: uatwt-iesws-vm54

* HIX

Application: uatwt-hix-vm54
WebSphere: uatwt-hixws-vm54

* SSP

Application: uatwt-ssp-vm54
WebSphere: uatwt-sspws-vm54

* CCAP

Application: uatwt-ccap-vm54
WebSphere: uatwt-ccapws-vm54

* Mule

Splunk Index: uatwt-mule-vm44

* EBT-FIS

uatwt-ebtgis-vm44

* MuleTLS

uatwt-muletls-vm44

* OPA
uatwt-opa-vm44
.....

KT

Tuesday, September 19, 2017 6:03 PM

i need to how to config that pool and set the data limit - splunk licensing

```
1,
mkdir /opt/Splunk
2,
get the tar file(splunk forwarder) from splunk website of version 6.5.2
3,
extract the file in /opt/Splunk
4,
now you will be able to see splunkforwarder folder in /opt/Splunk/
5,
now go to /opt/Splunk/splunkforwarder/
    note:
        bin, var and etc folders are important because
        in etc - all config files
        in var - all the log related files
        in bin - executable files
/opt/Splunk/splunkforwarder/var/log/splunk
in above logs - metrics log - you can see the amount data is getting indexed. If there is any blockage in the queues.
    audit.log - user related information and their activity log
    splunkd.log - errors related to forwarders
6,
go to
/opt/Splunk/splunkforwarder/etc/system/default
all default settings will be here and preferably not to modify them
/opt/Splunk/splunkforwarder/etc/system/local
we have the file as like /opt/Splunk/splunkforwarder/etc/system/default. but we can modify here:
input.conf(file that has data inputs to forward to splunk indexers)
host = ENT-UAT-UHAPPO3
#if you want to monitor any location
[monitor://opt/IBM/HSRI/CCAP-SITTT3/Logs/ApplicationLogs/CCAP1]
index = DEVW_CCAP(only underscore should be given)
IgnoreOlderThan = 2d "reduces burden to splunk no change in user activities"
#if you want to monitor any particular file.
[monitor://opt/IBM/HSRI/CCAP-SITTT3/Logs/ApplicationLogs/CCAP1/Default.log]
index = DEVW_CCAP_Defaultlog(only underscore should be given)

setting one index per vm:
input.conf
host = ENT-UAT-UHAPPO3
index = DEVW(only underscore should be given)
IgnoreOlderThan = 2d "reduces burden to splunk no change in user activities""optional"
#if you want to monitor any location
[monitor://opt/IBM/HSRI/CCAP-SITTT3/Logs/ApplicationLogs/CCAP1]
SourceType = DEVWCCAP "you can filter particular logs using source type - need to specify source type long with index while searching - value add from user perspective for more search refinement"
[monitor://opt/IBM/HSRI/CCAP-SITTT3/Logs/ApplicationLogs/HIX1]
[monitor://opt/IBM/HSRI/CCAP-SITTT3/Logs/ApplicationLogs/SSP1]
[monitor://opt/IBM/HSRI/CCAP-SITTT3/Logs/ApplicationLogs/IES1]

7,
output.conf (file has data to forward the logs to which indexer)

# example
[tcpout] "stanza - protocol used to transfer packets"
defaultGroup = default-autob-group "pool/group name"
[tcpout:default-autob-group] "we can give index name if there is one index per vm/forwarder. if there are multiple index then we should give group name"
server = 10.64.33.34:9997 "indexer IP and port and we can add multiple indexers separated by comma"
[tcpout-server://10.64.33.34:9997]

8,
```

Splunk install

Friday, August 18, 2017 4:40 PM

Dsvds

```
root@ip-172-31-0-159:/home/ec2-user
Using username "ec2-user".
Authenticating with public key "imported-openssh-key"
[ec2-user@ip-172-31-0-159 ~]$ sudo su
[root@ip-172-31-0-159 ec2-user]# yum list splunk
Loaded plugins: amazon-id, rhui-ib, search-disabled-repos
rhui-REGION-client-config-server-7
rhui-REGION-rhel-server-rh-common
rhui-REGION-rhel-server-rh-common
(1/7) rhui-REGION-client-config-server-7/x86_64/primary_db
(2/7) rhui-REGION-rhel-server-rh-common/7Server/x86_64/group
(3/7) rhui-REGION-rhel-server-rh-common/7Server/x86_64/group
(4/7) rhui-REGION-rhel-server-rh-common/7Server/x86_64/primary_db
(5/7) rhui-REGION-rhel-server-rh-common/7Server/x86_64/updateinfo
(6/7) rhui-REGION-rhel-server-releases/7Server/x86_64/updateinfo
(7/7) rhui-REGION-rhel-server-releases/7Server/x86_64/primary_db
Error: No matching Packages to list
[root@ip-172-31-0-159 ec2-user]# yum install epel-release
Loaded plugins: amazon-id, rhui-ib, search-disabled-repos
No package epel-release available.
Error: Nothing to do
[root@ip-172-31-0-159 ec2-user]# wget [REDACTED]
```

Search the web and Windows

4:40 PM

8/18/2017

```

root@ip-172-31-0-159:/etc/yumrepos.d
Using username "ec2-user".
Authenticating with public key "importedOpensshKey"
[ec2-user@ip-172-31-0-159 ~]$ sudo su
[root@ip-172-31-0-159 ~]# yum list splunk
Loaded plugins: amazon-id, rhui-lb, search-disabled-repos
rhui-REGION-client-config-server-7
rhui-REGION-rhel-server-releaser
rhui-REGION-rhel-server-rh-common
rhui-REGION-rhel-server-rh-common
(1/7): rhui-REGION-client-config-server-7/x86_64/primary_db
(2/7): rhui-REGION-rhel-server-rh-common/7Server/x86_64/group
(3/7): rhui-REGION-rhel-server-releases/7Server/x86_64/group
(4/7): rhui-REGION-rhel-server-rh-common/7Server/x86_64/primary_db
(5/7): rhui-REGION-rhel-server-rh-common/7Server/x86_64/updateinfo
(6/7): rhui-REGION-rhel-server-releases/7Server/x86_64/updateinfo
(7/7): rhui-REGION-rhel-server-releases/7Server/x86_64/primary_db
Error: No matching Packages to list
[root@ip-172-31-0-159 ec2-user]# yum install epel-release
Loaded plugins: amazon-id, rhui-lb, search-disabled-repos
No package epel-release available.
Error: Nothing to do
[root@ip-172-31-0-159 ec2-user]# sudo yum install -y https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm
Loaded plugins: amazon-id, rhui-lb, search-disabled-repos
Error: Nothing to do
[root@ip-172-31-0-159 ec2-user]# yum repolist
Loaded plugins: amazon-id, rhui-lb, search-disabled-repos
repo id
rhui-REGION-client-config-server-7/x86_64
rhui-REGION-rhel-server-releases/7Server/x86_64
rhui-REGION-rhel-server-rh-common/7Server/x86_64
repolist: 17,18
[root@ip-172-31-0-159 ec2-user]# cd /etc/yum
[root@ip-172-31-0-159 yum]# ls
fasnay.d pluginconf.d protected.d vars version-groups.conf
[root@ip-172-31-0-159 etc]# ls
atdime cron.deny dracut.conf grub.conf kdump.conf magic os-release python rsyncd.conf ssl tmpfiles.d
aliases cron.hourly e2fsck.conf grub.d kernel makedumpfile.conf.sample pam.d qemu+ga syslog.conf statetab tuned
aliases.db cron.monthly environment gshadow krb5.conf man.db.conf passwd rc0.d rsyslog.d statetab.d
alternatives crontab exports gshadow- krb5.conf.d mikeJfs.conf passwd- rc1.d udev
anacrontab cron.weekly filesystems gss ld.so.cache modprobe.d pkcs11 rwtab vconsole.conf
audisp crypttab firewalld host.conf ld.so.conf.motd rc2.d virc
audit csh.cshrc fstab hostname libaudit.conf motd rc3.d wpa_supplicant
bash_completion.d cron.login gcrypt libaudit.conf hosts.allow libaudit.conf ntfs rc4.d xinetd
bashrc dbus-1 GeolIP.conf libaudit.conf hosts.allow libaudit.conf my.cnf security sudoers
btrfs.d default GeolIP.conf.default libaudit.conf hosts.deny libaudit.conf my.cnf.d security.d
blkconfig.d defmod.d grpkey init.d localtime my.cnf.d
chrony.conf dhcpc libaudit.conf my.cnf.d NetworkManager ppp rc5_local
chrony.conf.conf DIR_COLORS grpkey inittab localtime my.cnf.d NetworkManager
cloud DIR_COLORS.256color group iproute2 logrotate.conf networks prelink.conf.d redhat-release
cron.d DIR_COLORS.lightgbcolor group issue logrotate.d.conf naswitch.conf printcap resolv.conf shadow
cron.daily dracut.conf grub2.cfg issue.net machine-id logrotate.d.conf naswitch.conf.bak profile rhsm shells
[root@ip-172-31-0-159 etc]# cat yum.repos.d
[root@ip-172-31-0-159 yum.repos.d]# ls
redhat.repo redhat-rhui-client-config.repo redhat-rhui.repo rhui-load-balancers.conf
[root@ip-172-31-0-159 yum.repos.d]# less redhat.repo
[root@ip-172-31-0-159 yum.repos.d]#

```



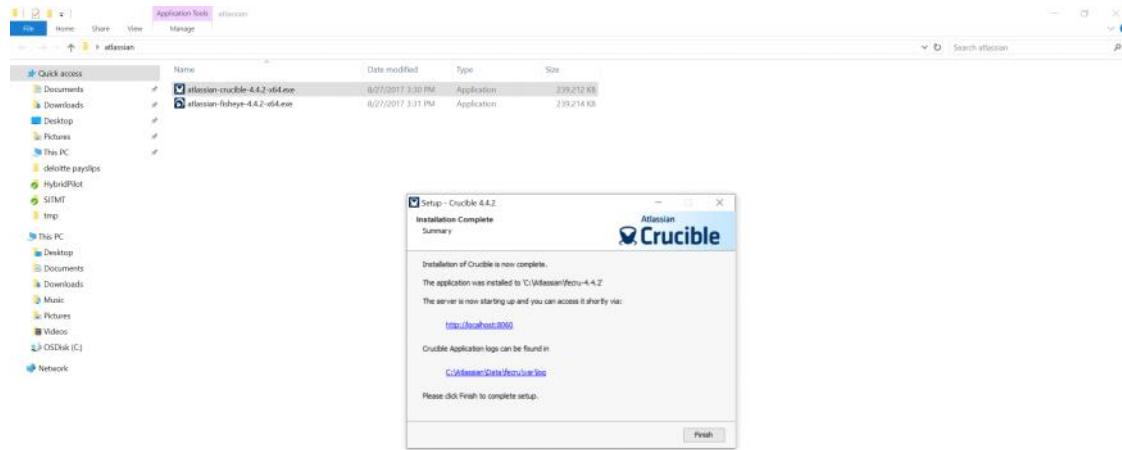
— ◻ ✕

4:54 PM

crucible

Monday, August 28, 2017 1:58 PM

DvdvdsV



<http://localhost:8060/>
C:\Atlassian\Data\fecru\var\log

C:\Atlassian\fecru-4.4.2\bin
Start.bat



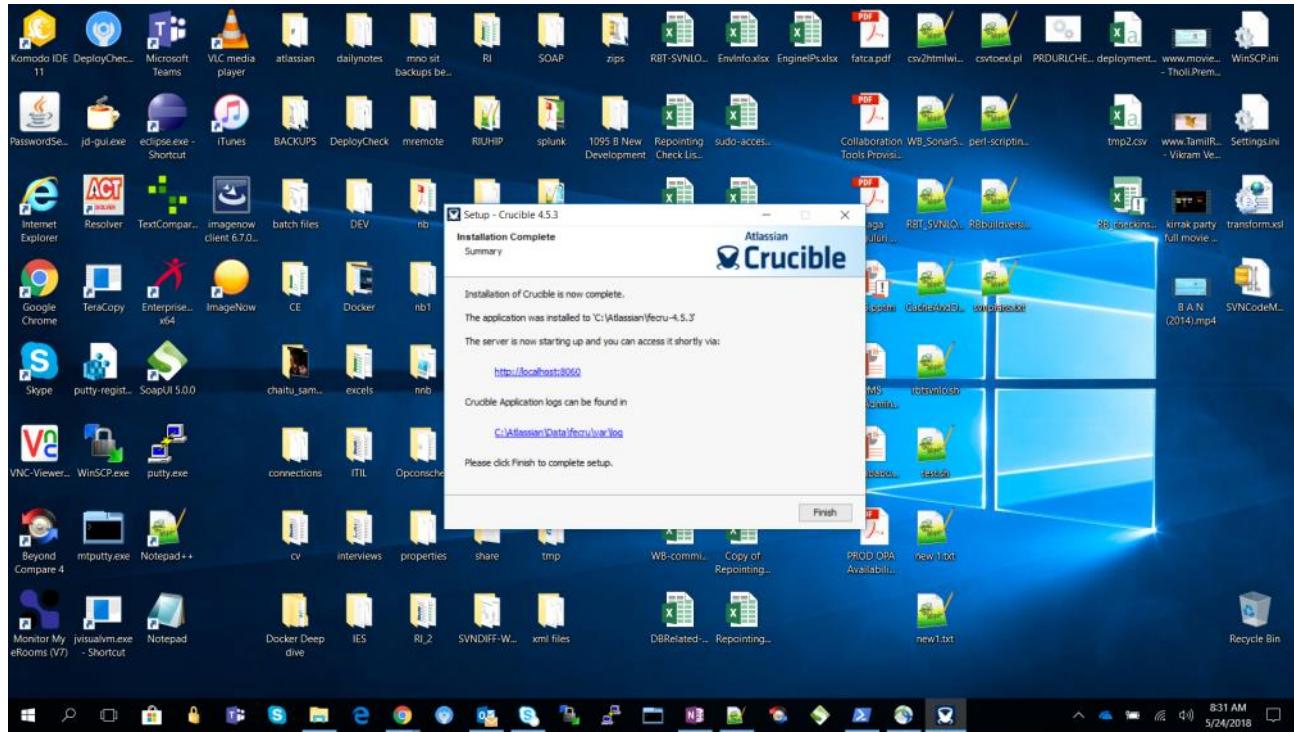
Crusible

Thursday, May 24, 2018 8:30 AM

[Download the Crucible installer](#)

From <<https://confluence.atlassian.com/crucible/installing-crucible-on-windows-298977371.html>>

After installation:



URL:

<http://localhost:8060/>

Log location:

C:\Atlassian\Data\fecru\var\log

Generate Evaluation Lic X +

my.atlassian.com/license/evaluation?utm_nooverride=1&ref=prod&product=Crucible&build=20180321104931&callback=http%3A%2F%2Flocalhost%3A8060%2Fsetup%2FsaveCr

eb198421 Billing Details Email Preferences Get Help Marketplace Atlassian Home Log Out

ATLASSIAN Licenses Orders Downloads Buy

My Atlassian

New Evaluation License

Product: Crucible

License type: Crucible (Server) ✓

Organization:

Your instance is: up and running
 not installed yet

Server ID: B356-3GEU-05ZP-F4DW

Please note we only provide evaluation support for 90 days per product.

By clicking here you accept the [Atlassian Customer Agreement](#).

<https://my.atlassian.com/license/evaluation>

Generate License Cancel

Licenses - My Atlassian X +

my.atlassian.com/products/index?sen=11754675&evalid=11754675&eval=true#license_11754675

SEN-L11754675 Crucible (Server): Evaluation self 22 Jun 2018 Request Support

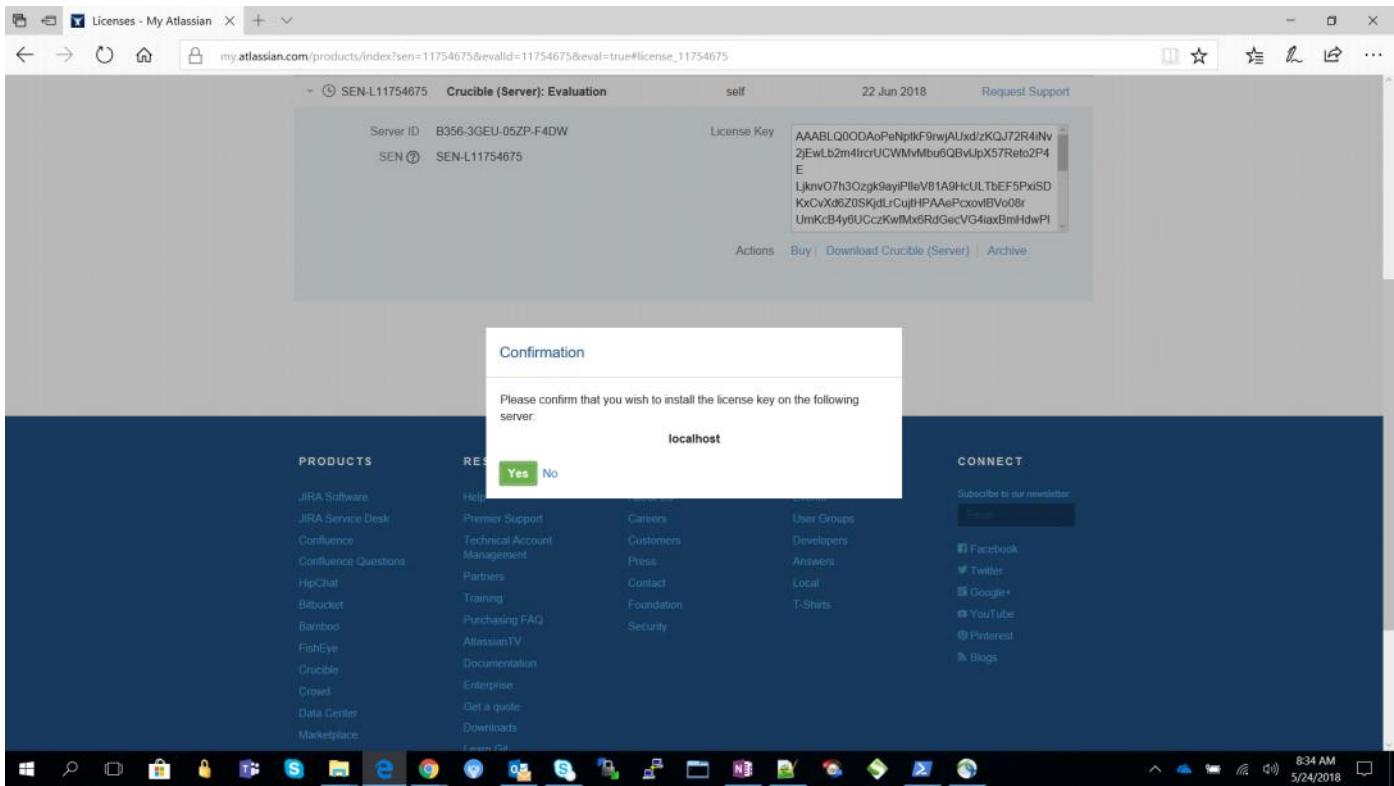
Server ID: B356-3GEU-05ZP-F4DW License Key: AAABILQ0ODAoPeNptkF9nwjAUxd/zKQJ72R4iNv2jEwl2m4lrcrUCWMvMbuQBvUpX57Reto2P4E LjknvO7h3Ozgk9ayiPlleV81A9HcULTbEF5PxidSKxvX620SKjdLcujtHPAAePcovvBVo08UmKcb4y6UCCzKwfMx8RdGecVG4iaxBmHdwPI

Actions: Buy | Download Crucible (Server) | Archive

Confirmation

Please confirm that you wish to install the license key on the following server:
localhost

Yes No



Add Jira:

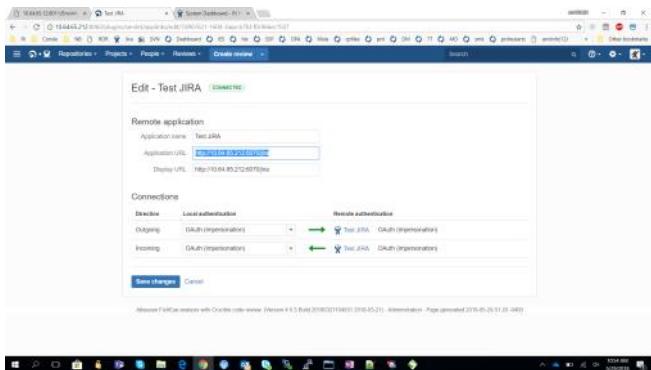
Failed to configure it while setup process - need add it manually after installation complete

Add repository:

Crucible-Fisheye-Test

<https://10.64.65.20:18080/svn/Crucible-Fisheye-Test/branches>

Warwick



Fisheye

Thursday, May 24, 2018 12:36 PM

Access url:

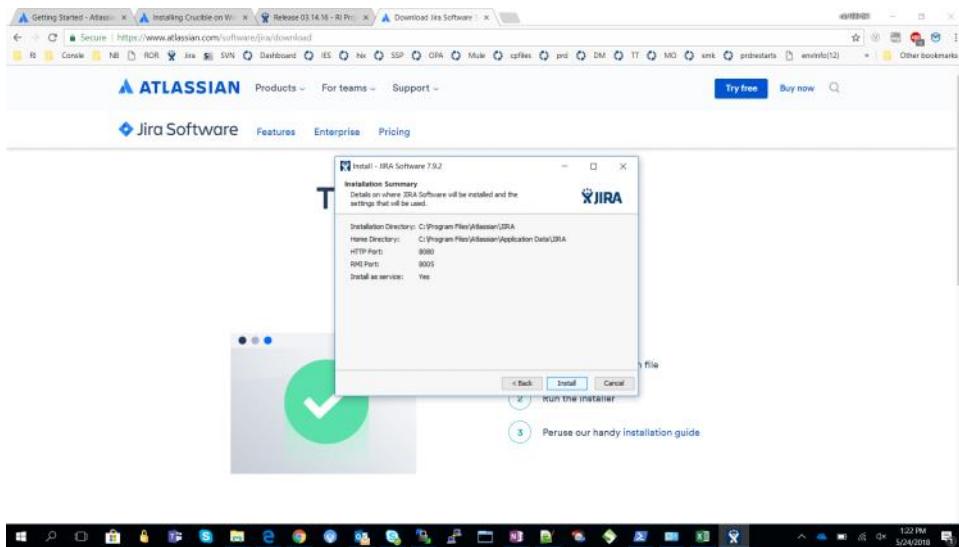
<http://localhost:8060/setup/jiraConnect.do>

Log location:

C:\Atlassian\Fisheye\Data\fecru\var\log

Jira

Thursday, May 24, 2018 1:22 PM



Installation Path:

C:\Program Files\Atlassian\JIRA

URL:

<http://localhost:8080/login.jsp>

Rest api -

- <baseUrl>/rest/applinks/1.0/manifest

From <<https://confluence.atlassian.com/crucible/configuring-jira-integration-in-the-setup-wizard-298977374.html>>

Devops 1

Thursday, November 22, 2018 10:43 AM

DevOps Model Defined

DevOps is the combination of cultural philosophies, practices, and tools that increases an organization's ability to deliver applications and services at high velocity: evolving and improving products at a faster pace than organizations using traditional software development and infrastructure management processes. This speed enables organizations to better serve their customers and compete more effectively in the market.

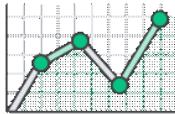
How DevOps Works

Under a DevOps model, development and operations teams are no longer "siloed." Sometimes, these two teams are merged into a single team where the engineers work across the entire application lifecycle, from development and test to deployment to operations, and develop a range of skills not limited to a single function.

In some DevOps models, quality assurance and security teams may also become more tightly integrated with development and operations and throughout the application lifecycle. When security is the focus of everyone on a DevOps team, this is sometimes referred to as DevSecOps.

These teams use practices to automate processes that historically have been manual and slow. They use a technology stack and tooling which help them operate and evolve applications quickly and reliably. These tools also help engineers independently accomplish tasks (for example, deploying code or provisioning infrastructure) that normally would have required help from other teams, and this further increases a team's velocity.

Benefits of DevOps



Speed

Move at high velocity so you can innovate for customers faster, adapt to changing markets better, and grow more efficient at driving business results. The DevOps model enables your developers and operations teams to achieve these results. For example, microservice and continuous delivery let teams take ownership of services and then release updates to them quicker.



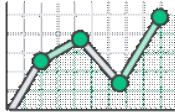
Rapid Delivery

Increase the frequency and pace of releases so you can innovate and improve your product faster. The quicker you can release new features and fix bugs, the faster you can respond to your customers' needs and build competitive advantage. Continuous integration and continuous delivery are practices that automate the software release process, from build to deploy.



Reliability

Ensure the quality of application updates and infrastructure changes so you can reliably deliver at a more rapid pace while maintaining a positive experience for end users. Use practices like continuous integration and continuous delivery to test that each change is functional and safe. Monitoring and logging practices help you stay informed of performance in real-time.



Scale

Operate and manage your infrastructure and development processes at scale. Automation and consistency help you manage complex or changing systems efficiently and with reduced risk. For example, infrastructure as code helps you manage your development, testing, and production environments in a repeatable and more efficient manner.



Improved Collaboration

Build more effective teams under a DevOps cultural model, which emphasizes values such as ownership and accountability. Developers and operations teams collaborate closely, share many responsibilities, and combine their workflows. This reduces inefficiencies and saves time (e.g. reduced handover periods between developers and operations, writing code that takes into account the environment in which it is run).



Security

Move quickly while retaining control and preserving compliance. You can adopt a DevOps model without sacrificing security by using automated compliance policies, fine-grained controls, and configuration management techniques. For example, using infrastructure as code and policy as code, you can define and then track compliance at scale.

If you are really planning to get started with #DEVOPS check out this [The Devops Engineer E-Degree](#) tutorial which is a specialized degree to learn devops from scratch & become a Master in Just 3 months. 6+ courses, Webinars, Mentors, support & Lot more. Enroll now to grab some early bird discounts.

From <<https://www.quora.com/What-is-DevOps>>

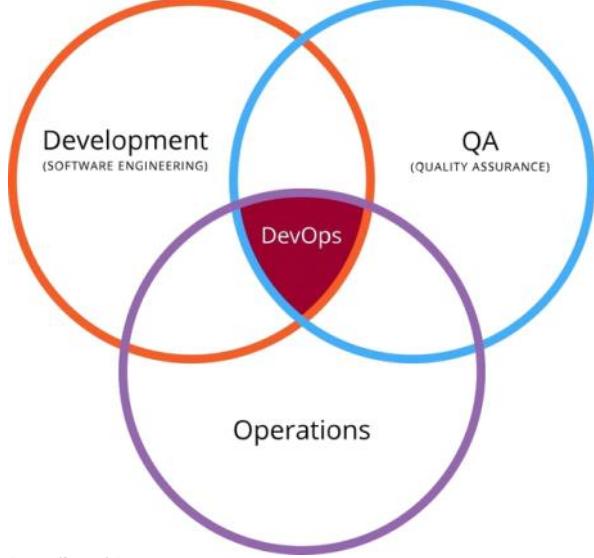
Devops 2

Thursday, November 22, 2018 10:44 AM

DevOps is a set of practices intended to reduce the time between committing a change to a system and the change being placed into normal production, while ensuring high quality.

DevOps (a clipped compound of "development" and "operations") is a software engineering culture and practice that aims at **unifying software development (Dev) and software operation (Ops)**.

DevOps is the combination of cultural philosophies, practices, and tools that increases an organization's ability to deliver applications and services at high velocity: evolving and improving products at a faster pace than organizations using traditional software development and infrastructure management processes. This speed enables organizations to better serve their customers and compete more effectively in the market.



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Security

Move quickly while retaining control and preserving compliance. You can adopt a DevOps model without sacrificing security by using automated compliance policies, fine-grained controls, and configuration management techniques. For example, using infrastructure as code and policy as code, you can define and then track compliance at scale.

There are many DevOps tools available in the market by different vendors like Amazon etc which are used in the great deal to speed up the software development and reduce time to market.

Hope, it gives you some brief idea about DevOps.

From <<https://www.quora.com/What-is-DevOps>>

Devops 3

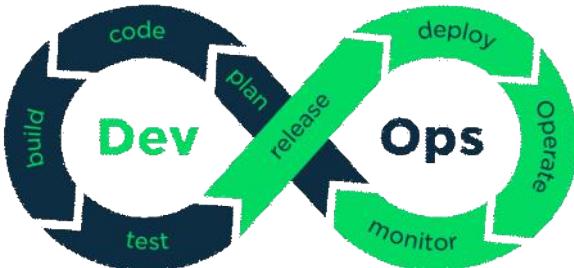
Thursday, November 22, 2018 10:46 AM

What is DevOps and all the basic concept of DevOps

Origin of DevOps

Andrew Shafer and Patrick Debois first introduced the term publicly in 2008 at Agile Toronto conference. DevOps is (a stapled compound term of development and operations) is a software engineering culture or methodology that aims at integrating software development and software operations. It encourages the communication between software developers and IT operations to increase the efficiency at which products are delivered the main feature of DevOps guide the automation and monitoring at all steps of software development. It mainly targets at shorter development cycles, increased implementation frequency, more errorless release perfectly aligned with business objectives.

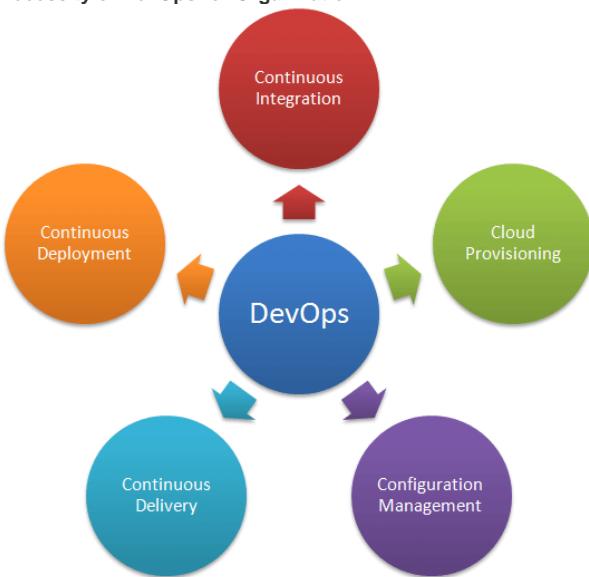
The Concept of DevOps



We know that DevOps is made from two terms Development and Operation, In traditional method the organizations were facing so many problems because there was no communication between development team and operation team, because of that the total strength or we can say efficiency of organization is fallen down, now we can understand that how the DevOps concept developed. Get It? The incapability of organization made people to think that they have to move for a different approach and "then" the concept of DevOps was created.

DevOps is the method or process of development and operation experts, synchronizing their work in the entire service delivery lifecycle.

Necessity of DevOps for Organization?



The DevOps methodology improves understanding of the steps in the total service lifecycle by regulating the service management to assist in the operational activities which ultimately prevents or reduces production errors.

The Company who implemented DevOps process achieves more performance with plain and simple with a unique group of members who's all work are synchronized. Simply the organization who implements DevOps in their process can deliver the service faster with better and innovative functionality. It also overcomes the potential problems in service delivery, collaborating the two departments assure that the services are delivered faster also diminishes the uncertain events in product development stage through automated testing.

Organization also have to understand that to make DevOps approach more effectively, you need deliberate control over business management and be also ready for cultural change to cultivate the right skills.

Benefits of DevOps

The Technical Benefits:

1. Problems are less and can be fixed easily
2. Software delivery becomes a stable process
3. Resolving of problems becomes faster

The Business Benefits:

1. Features are delivered more quickly
2. Operating procedure becomes smooth and controllable
3. Gives more time to add value

There are cultural Benefits:

1. Higher employee commitment
2. Happier, more productive teams
3. More opportunity for professional development

There are other measurable benefits like:

1. Reduce service delivery time:

By collaborating the most important department in the company will ultimately reduce the service delivery time because there are fewer errors and automated testing at every step of product development cycle.

2. Better defect detection:

DevOps methodology is basically based on the Agile principles so the massive product development steps are broken down into small, strategic and particular steps and because of that business can gain more control on the process by monitoring every step.

3. Improved communication and collaboration:

Synchronizing two different departments in the organization is not complex like it sounds because it creates a communication path between development and operation engineer's helps each other process with their skills and capabilities.

4. Fast recover from failure:

In conventional IT work process, first the development proves carried out and then the functionality was improved by the operation engineers but in DevOps culture both departments work closely with each other so the changes or failures of product are identified early and resolved.

5. More time to innovate:

Reduced time over total service delivery process and less fallback because of improved product development cycle, engineers can work more efficiently and spend their saved time on innovating new functions or new process.

6. More Stable with Greater quality software:

The secret of success in DevOps methodology is because in this method, the all components of enterprise follow single objective. DevOps works by giving different roles and responsibilities to same staff or employees but one common objective which orbit around quality, reliability, security, user experience and time to market.

I think this information is enough to understand what is DevOps, if you want more information read this article [Why DevOps - Insights, scope, Benefits, Salary](#)

Tableau

Monday, February 4, 2019 1:41 PM

```
#logged in as tableau
cd ~
ll
sudo yum install tableau-tabcmd-2018-2-2.noarch.rpm --#(failed as java is 1.6)
#switched to root. downloaded java 1.8(jdk-8uversion-linux-x64.rpm) and copied to /home/tableau
sudo -s
yum update
uname -a
lscpu
which java
java -version
rpm -Uvh jdk-8u192-linux-x64.rpm -- upgrade command
java -version
#used below command as "package is not signed coming" instead of yum install tabXXXX.rpm. tried 'yum clean metadata' but no luck. Also we can use rpm -ivh tabXXXX.rpm
yum install --nogpgcheck -y tableau-tabcmd-2018-2-2.noarch.rpm
```

newrelic

Monday, March 25, 2019 3:34 PM

New Relic

Download and installation steps:

<https://infrastructure.newrelic.com/accounts/2287385/install>

Perforce

Thursday, April 18, 2019 4:43 PM

Username: Admin
Password: admin
IP Address:
1. 14.142.27.210:6001 - 2 VM Linux + 1 Windows
2. 14.142.27.210:6002
3. 14.142.27.210:6003
4. 14.142.27.210:6004
5. 14.142.27.210:6005
6. 14.142.27.210:6006
7. 14.142.27.210:6007
8. 14.142.27.210:6008
9. 14.142.27.210:6009
10. 14.142.27.210:6010 =====
11. 14.142.27.210:6011
12. 14.142.27.210:6012
13. 14.142.27.210:6013
14. 14.142.27.210:6014
15. 14.142.27.210:6015 RAJESH
=====

Product - ProdX

Mgrx - MgrX

With DevOps Mindset

- Immediate release
- Improving a qUALITY
- rEDUCTION oF cOST

<https://www.devopsschool.com/video/devops>

What is Perforce?

- 4 Years In Past - Product Owned by Company Called "Perforce"
- Rename - Helix Company - Perforce

Perforce(Company)

<https://www.perforce.com/products>

Focus - Helix Core

What is Perforce?

Version Control tool.

Storing a code

Versioning

What is changes?

When

Why

Where?

Who

PERIOD OF TIME

its a team collab tool.

Where Perforce stands in SDLC cycle?

---- DONE

Architect - Plan ---- Jira, Trello, Confluence, Helix ALM

Dev - 10 - 10 Module

Integ of code ---

- Version Control tool.

--SVN, GIT, P4

OPEN SOURCE - RCS -> CVS -> SVN -> Git

PAID - Bitkeeper - ClearCase - Perforce - VSS - TFS - Mercury

CVS -> SVN Bitkeeper - ClearCase - Perforce - VSS - TFS - Mercury

-----SERVER-CLIENT-----

Git

-----DISTRIBUTED MODEL-----

Peer Code Review - Code Collab - Gerrit - Helix Swarm

Static Code Review - SonarQube - HelixQAC

Build mgmt - makefile -> ant-> maven -> gradle

nant --> msbuild

UT - Junit - Nunit

Pack -

Repo mgmt for package - Artifactory

Deployments -

ProdX10.4 -->200 Boxes

Getting a 200 box - 1 mins ===== Cloud (AWS, GC + Openstack, openShift)

1 BOX - Deployment - 9 mins

200 Boxes Dep ===== 9 mins

100 WIN

100 LINX

100 AP 50 NG 50 IIS

50 T 50 WL 50 WS 50 J

50 MYSQL 50 MS 50 PS 50 OR

10 mins

Config mgmt tool

Programming - Puppet, Chef, Ansible, Salt

GUI - Octopus Deploy, uDeploy

1 SECOND

Docker - Container

AT

Output...

Code Coverage -

--- Release ----

RELEASE

<https://www.devopsschool.com/path/>

=====

How Perforce works!!!!

SERVER - CLINET

SVN === P4D

Manage a repo

Code + Meta data

In Perforce

repository === DEPOT

DISTRIBUTED MODEL

- Git

=====

Other tools --

How to install and Configure?

Server

- P4D

- Windows + Linux + Mac

How to install p4D on Linux?

How to install p4d on Windows?

Client

- p4win (GUI) - Dep

- p4v (GUI) - (Uses p4) == FOCUS

WIN

LINUX

MAC

- p4 (Command line Client)

- p4web

- p4exp

- Windows + Linux + Mac

How to install p4v on Linux?

How to install p4v on Windows?

BUT

What we will

p4d - Linux

p4v - Windows

14.142.27.210:6015

Windows VMs - administrator/P@ssw0rd

192.168.0.103

Linux VMs - root/root

Pre Req ---

Step 1 - create a new user

which will have Super Access

Step 2 - INFO

first and default repo is always DEPOT

Step 3 - Create a worksapce

What is Workspace....

- is a custom view of the depot(s) / branches/ projects in client machine.

Design a Depot structure....

Depot

 prodX

 main

 fea1

 fea2

 project-name2

 project-name3

Depot

 DelX

 main === ><https://wordpress.org/latest.zip>

 fea1

 fea2

 release2.0

 DelY

 DelZ

Basic Operations

=====

Step 1 - get a Source Code?

<https://wordpress.org/latest.zip>

 unzip

 and

 copy into workspace

Step 2 - Mark for add (~ add) == ONLY FOR NEW FILE..

Step 3 - Submit (~ commit)

Step 4 - See the commits / Revision....

=====

What is Changelist?

=====

=====

How to edit a file?

How to delete a file?

How to sync old version of file?

How to See history and revision?

How to rename a file/dir?

How to compare a changes?

 file

 directory

 braanches

=====

Workspace

----> MAP

```

----> DEPOTS | Dir | branches | Files
=====
VIEW
Conflict situation
=====
-----AUTO-----
DEPOT          USER1        USER2
file1.txtV1    file1.txtV2  file1.txtV1 (MODIFIED)
                           file1.txtV2

-----MANUAL-----
DEPOT          USER1        USER2
file1.txtV1    file1.txtV2  file1.txtV1 (MODIFIED)
                           file1.txtV2

LINE 30      LINE 30

function(abs1, abs2)  function(abs1, abs2, abs3)

Merging conflict
branches.......
```

depot

- product1
 - main
 - dev ----->
 - qa

workspace

=====

p4 worksapce mine

p4 edit w

//depot/product1/dev/... //WSNAME/depot/product1/dev/...

//depot/product1/qa/... //WSNAME/depot/product1/qa/...

repo1

- product2
 - main
 - dev
 - qa
- product3

repo2

- product4
 - main
 - dev
 - qa
- product5

repo3

- product6

=====

Setting up a Perforce Server in Linux
Setting up a Perforce client in Linux
Branching
 How to create a branch?
 How to merge branch?
 Conflict Res
 Manual

Shelving feature.....
Streams
Jobs
=====
Commands line
 Using p4
=====
SETTING UP A p4D n p4 in LINUX
192.168.0.141

```

root
root
=====PREQ=====
Verify the Public Key
Download the public key at https://package.perforce.com/perforce.pubkey
To obtain the fingerprint of the public key, run:
$ wget https://package.perforce.com/perforce.pubkey
$ gpg --with-fingerprint perforce.pubkey
Verify that it matches this fingerprint:
E581 31C0 AEA7 B082 C6DC 4C93 7123 CB76 0FF1 8869
=====INSTALLATION=====
Step 1 - Add Perforce's packaging key to your RPM keyring:
sudo rpm --import https://package.perforce.com/perforce.pubkey
Step 2 - Add Perforce's repository to your YUM configuration.
Create a file called /etc/yum.repos.d/perforce.repo with the following content:
[perforce]
name=Perforce
baseurl=http://package.perforce.com/yum/rhel/7/x86_64
enabled=1
gpgcheck=1
where {version} is either 6 for RHEL 6 or 7 for RHEL 7
Step 3 -Install the package by running
$ sudo yum install helix-p4d
=====CONFIG=====
cd /opt/perforce/sbin
./configure-perforce-server.sh
Perforce Service name [master]:
Service master not found. Creating...
Perforce Server root (P4ROOT) [/opt/perforce/servers/master]:
Create directory? (y/n) [y]:
Perforce Server unicode-mode (y/n) [n]:
Perforce Server case-sensitive (y/n) [y]:
Perforce Server address (P4PORT) [ssl:1666]:
Perforce super-user login [super]: super
Perforce super-user password:
Re-enter password.
Perforce super-user password:
::::::::::::::::::
:: P4D configuration has completed successfully.
::
:: Here is what has been done so far:
::
:: - Your p4d service settings have been written to
::   the following p4dctl configuration file:
::   /etc/perforce/p4dctl.conf.d/master.conf
:: - The p4d service has been initialized with the P4ROOT:
::   /opt/perforce/servers/master/root
:: - The p4d service has been started with the P4PORT: ssl:1666
:: - The p4d service has been set to Security Level 3.
:: - The new Perforce super-user 'super' has been created and the
::   password has been set to the one specified.
::
:: Here is what you can do now:
::
:: - You can manage it with the 'perforce' user, using the following:
::
::   sudo -u perforce p4dctl <cmd>
::
:: - You can connect to it by setting the P4PORT and P4USER
::   environment variables and running 'p4 <cmd>'. For example, run:
::
::   export P4PORT=ssl:1666
::   export P4USER=super
::

```

```

:: p4 login
::
:: For help, run:
::
:: p4 help
::
:: - To connect to this p4d service from another machine, include
:: this machine's name or IP address in the P4PORT. For example:
::
:: export P4PORT=ssl:192.168.0.141:1666
::
:: - For help with creating Perforce Helix user accounts, populating
:: the depot with files, and making other customizations for your
:: site, see the Helix Versioning Engine Administrator Guide:
::
:: https://www.perforce.com/perforce/doc.current/manuals/p4sag/index.html
::
::::::::::
67 systemctl stop firewalld
68 systemctl disable firewalld
=====START//STOP=====
----LINUX-----
export P4PORT=ssl:1666
export P4USER=super
export P4PORT=ssl:192.168.0.141:1666
export P4USER=super
----WINDOWS-----
set P4PORT=ssl:192.168.0.141:1666
set P4USER=super
C:\Users\Admin>pf info
'pf' is not recognized as an internal or external command,
operable program or batch file.
C:\Users\Admin>p4 info
The authenticity of '192.168.0.141:1666' can't be established,
this may be your first attempt to connect to this P4PORT.
The fingerprint for the key sent to your client is
74:E4:90:4E:A5:6B:4F:95:6C:50:25:B3:36:70:7E:16:9D:BA:56:07
To allow connection use the 'p4 trust' command.
C:\Users\Admin>p4 trust
The fingerprint of the server of your P4PORT setting
'ssl:192.168.0.141:1666' (192.168.0.141:1666) is not known.
That fingerprint is 74:E4:90:4E:A5:6B:4F:95:6C:50:25:B3:36:70:7E:16:9D:BA:56:07
Are you sure you want to establish trust (yes/no)? yes
Added trust for P4PORT 'ssl:192.168.0.141:1666' (192.168.0.141:1666)
C:\Users\Admin>p4 info
User name: super
Client name: WINDOWS-8D303PR
Client host: WINDOWS-8D303PR
Client unknown.
Current directory: c:\Users\Admin
Peer address: 192.168.0.214:49166
Client address: 192.168.0.214
Server address: 192.168.0.141:1666
Server root: /opt/perforce/servers/master/root
Server date: 2019/04/16 09:57:57 +0530 IST
Server uptime: 00:08:26
Server version: P4D/LINUX26X86_64/2018.2/1779952 (2019/04/02)
Server encryption: encrypted
Server cert expires: Apr 15 04:19:31 2021 GMT
ServerID: master
Server services: commit-server
Server license: none
Case Handling: sensitive
C:\Users\Admin>
=====
```

```
=====
```

Branching & Merging Stra

<https://docs.microsoft.com/en-us/azure/devops/repos/tfvc/branching-strategies-with-tfvc?view=azure-devops>

repo -

- trunk
- branches
 - branch1
 - branch2
- tags
 - tag1
 - tag2

When to create branch?

```
main
    Fea1
    Fea1
rel1.0
    bug
        patch/hotfixes
/depot/main/... /client-name/depot/fea1/.
```

label

=====
Perforce usign Command line... - USERS

p4

```
    options
    commands
        options
```

p4 OPTIONS

Options:

- b batchsize specify a batchsize to use with -x (default 128)
 - h -? print this message
 - s prepend message type to each line of server output
 - v level debug modes
 - V print client version
 - x file read named files as xargs
 - G format input/output as marshalled Python objects
 - z tag format output as 'tagged' (like fstat)
 - l show progress indicators
- c client set client name (default \$P4CLIENT)
 - C charset set character set (default \$P4CHARSET)
 - d dir set current directory for relative paths
 - H host set host name (default \$P4HOST)
 - l language set message language (default \$P4LANGUAGE)
 - p port set server port (default \$P4PORT)
 - P password set user's password (default \$P4PASSWD)
 - q suppress all info messages
 - r retries Retry command if network times out
 - Q charset set command character set (default \$P4COMMANDCHARSET)
 - u user set user's username (default \$P4USER)

--script Run the named P4-Lua script

p4 -p ssl:192.168.0.141:1666 -u super -P super123 -c client

```
    user
    password
    ip:port
    client
```

P4PORT

P4USER

set P4CLIENT=WINDOWS-8D303PR

P4PASSWORD

p4 -p ssl:192.168.0.141:1666 -u super -P super123 login

```

p4 -p ssl:192.168.0.141:1666 -u super -P super123 client
p4 -p ssl:192.168.0.141:1666 -u super -P super123 -c client sync
---
p4 -p ssl:192.168.0.141:1666 -u super -P super123 -c client edit //////
EDITOR
p4 -p ssl:192.168.0.141:1666 -u super -P super123 -c client submit
p4 -p ssl:192.168.0.141:1666 -u super -P super123 logout
=====
USERS & GROUPS & PERMISSION
=====
PERMISSION ==> GROUP
    Dev
=====
3rd Day
-----
Perforce Server Anatomy
Perforce Proxy
Perforce Replication
Perforce Backup
Perforce Restore
Perforce Server Configuration
Perforce Upgrade
=====
P4 REPO
    Files
        /opt/perforce/servers/<master>/archives/
    Metadata == DB
        /opt/perforce/servers/master/root
    journals
        a file which has delta meta info from last created checkpoint.
    log
        /opt/perforce/servers/master/logs
Trigger
=====
p4d
p4v
p4merge
p4diff
p4admin
p4
P4Proxy
=====
Download the p4p executable to the machine on which you want to run the proxy.
$ wget https://cdist2.perforce.com/perforce/r18.2/bin.linux26x86\_64/p4p
$ chmod 755 p4p
Select a directory on this machine (P4PCACHE) in which to cache file revisions.
/opt/perforce/proxy/master/archives
Select a port (P4PORT) on which p4p will listen for requests from Perforce applications
1668
Select the target Perforce server (P4TARGET) for which this proxy will cache.
ssl:192.168.0.141:1666
FINAL
./p4p set -S "Perforce Proxy" P4OPTIONS="-p 1668 -t ssl:192.168.0.141:1666" -r /opt/perforce/proxy/master/archives -d -L /opt/perforce/proxy/logs
p4 -p ssl:192.168.0.141:1666 info
-----
TRUST-----
cd /perforce/bin
wget https://cdist2.perforce.com/perforce/r18.2/bin.linux26x86\_64/p4
chmod 755 p4
./p4 -p ssl:192.168.0.141:1666 info
./p4 -p ssl:192.168.0.141:1666 trust
./p4p -p tcp64:[::]:1999 -t ssl:192.168.0.141:1666 -r /opt/perforce/proxy/master/archives
./p4p -p tcp64:[::]:1999 -t ssl:192.168.0.141:1666 -r /opt/perforce/proxy/master/archives -L /opt/perforce/proxy/logs -d
=====
p4 triggers
---

```

Triggers:

```
welcome change-submit //depot/... "/usr/bin/bash /opt/perforce/usr/triggers/welcome.sh  
%changelist%"
```

Triggers

https://www.perforce.com/manuals/v15.1/cmdref/p4_triggers.html
<https://www.devopsschool.com/blog/helix-server-perforce-trigger-quick-start-guide/>
<https://www.perforce.com/perforce/r12.1/manuals/cmdref/triggers.html>

```
=====
```

How to take a backup?

Step 1- Take a backup of filesystem

Step 2- Take a checkpoint of db/meta

-----Checking process-----

Step 1- Stop a perforce server

```
$ p4dctl stop master
```

Step 2 - Take a checkpoint

```
$ cd /opt/perforce/sbin/
```

```
$ ./p4d -r /opt/perforce/servers/master/root -jc
```

```
[root@localhost sbin]# ./p4d -r /opt/perforce/servers/master/root -jc
```

Checkpointing to/journals/master.ckp.1...

```
MD5 (..../journals/master.ckp.1) = 438530F86115AFB3F4186EE013BE4CE9
```

Rotating/journals/journal to/journals/master.jnl.0...

```
[root@localhost sbin]#
```

Step 3 - Start aa P4d server

```
$ chown -R perforce:perforce /opt/perforce
```

```
$ p4dctl start master
```

Step 4 - Commit one more time

Step 5- Stop a perforce server

```
$ p4dctl stop master
```

Step 6 - Take a checkpoint

```
$ ./p4d -r /opt/perforce/servers/master/root -jc
```

```
=====
```

How to restore? in ANOTHER SERVER

```
$ cd /opt/perforce/servers/master/root
```

```
$ rm -rf db*
```

```
$ cd /opt/perforce/servers/master/archives [SCP from OLD server to New Server]
```

```
$ p4dctl stop master
```

```
[ SCP CHeCKPOINT and MD5 file from SOURCE To DEST SERVER\
```

```
$ p4d -jv my_checkpoint_file
```

```
$ p4d -r $P4ROOT -jr path/checkpoint_file path/journal_file
```

```
$ chown -R perforce:perforce /opt/perforce
```

```
$ p4dctl start master
```

```
=====
```

Perforce Shelving

Git Crash Course

Helix4Git

Git Fusion

Helix Swarm

Perforce Broker

#HelixTeamHub

```
=====
```

Git Crash Course

```
-----
```

What is Git?

Source Code mgmt tool.

By Linus

Coz Bitkeeper...

Distributed mgmt tool

Why Git?

WHO

WHAT

WHEN

WHAT

WHERE

Model

Server-client ---- *

Distributed - Git

Diff

Hw to install

Windows - git-bash frm git-scm.com

Linux -

 sudo yum install git

 sudo apt-get install git

upgrade

<https://www.devopsschool.com/tutorial/git/>

MAC

dmg from git-scm.com

Git basic workflow

=====

1. Create a repo

git init

2. [ONE TIME]

git config user.name "Rajesh Kumar"

git config user.email "rajesh@scmgalaxy.com"

git config --list

3. ADD a file....

 notepad

 esc

 vs

4. add a file to git [[[Move a changes fromm Working dir to Staging]]]

\$ git add filename/dir

5. commit a file [[[From Staging to Repo]]]]

\$ git commit -m"adding my first file"

6. see the committed file....

\$ git log

7. What was committed

git show 4b79dfdfdecae3a5bf9a010658cbc7d79dd59959

540 start .

541 clear

542 git status

543 git add file2.txt

544 git status

545 git commit -m"a"

546 git status

547 clear

548 ls

549 touch file3.txt file4.txt file5.txt file6.txt file7.txt

550 git status

551 git add file3.txt file4.txt

552 git status

553 clear

554 ls

555 vi fiel1.txt

556 git status

557 git add fiel1.txt

558 git status

559 git commit -m"addgin" fiel1.txt file3.txt

560 git status

561 ls

562 history

=====

HTTP =====

SSH

MFA

7 git log

568 git push <https://github.com/scmgalaxy/delx.git> master

569 ls

570 git status

571 git log

572 cd

```
573 start .
574 git push git@github.com:scmgalaxy/delx.git master
575 ls
576 cd /d
577 cd delx/
578 git push git@github.com:scmgalaxy/delx.git master
579 git add .
580 git commit -m"adding all"
581 git push git@github.com:scmgalaxy/delx.git master
582 touch fsdf;git add .;git commit -m"adding"
583 git push git@github.com:scmgalaxy/delx.git master
584 touch fsfdd;git add .;git commit -m"adding"
585 git push https://github.com/scmgalaxy/delx.git master
586 git push https://github.com/scmgalaxy/delx.git master
587 git push https://github.com/scmgalaxy/delx.git master
588 git push https://github.com/scmgalaxy/delx.git master
589 history
```

From <<https://www.devopsschool.com/notes/helix/corp-april-deloitte-2019.txt>>

650354
<http://rajeshkumar.xyz/>

Ansible

Tuesday, May 7, 2019 5:06 PM

<https://www.udemy.com/dashboard/purchase-history/>

blockchain

Monday, May 27, 2019 11:28 AM

<https://www.anaconda.com/distribution/#windows> - to download anaconda python

Mining bitcoins

Requires - high end system

Wallet with all services. Eg:
coinbase.com

From <<https://www.profitableventure.com/startng-a-bitcoin-mining-business/>>

jira

Monday, June 3, 2019 1:20 PM

- Hostname: NPDALMJR01
- IP Address: 10.64.65.211
- Username: spgunupudi
- Password: spgunupudi@667
- JIRA location: /opt/atlassian736
- JIRA bin location for start and stop: /opt/atlassian736/jira/bin
- JIRA logs location: /opt/atlassian736/jira/logs
- Splunk index for jira logs: alm-tools

whenever you need to stop and start, please follow below things:

```
# stop jira
    sudo /opt/atlassian736/jira/bin/stop-jira.sh
# delete plugins and cache
    rm -rf /opt/atlassian736/application-data/jira/caches/indexes/plugins/atlassian-subversion-revisions
    rm -rf /opt/atlassian736/application-data/jira/plugins/.bundled-plugins
    rm -rf /opt/atlassian736/application-data/jira/plugins/.osgi-plugins
# start jira
    sudo /opt/atlassian736/jira/bin/start-jira.sh
# check logs
    tail -500f /opt/atlassian736/jira/logs/catalina.out

-->
sudo /opt/atlassian736/jira/bin/stop-jira.sh;sleep 05;sudo rm -rf /opt/atlassian736/application-data/jira/caches/indexes/plugins/atlassian-subversion-revisions;sudo rm -rf /opt/atlassian736/application-data/jira/plugins/.bundled-plugins;sudo rm -rf /opt/atlassian736/application-data/jira/plugins/.osgi-plugins;sleep 05;sudo /opt/atlassian736/jira/bin/start-jira.sh;sudo tail -500f
/opt/atlassian736/jira/logs/catalina.out
```

OPSHUB

Friday, June 21, 2019 10:19 AM

jama - pick list - to add iteration

Jira- "

OPSHUB - RIB-TEST - inactivate - edit - add/= - save - activate

Python

Friday, August 16, 2019 1:27 PM

To upgrade and changing the default python - <https://stackoverflow.com/questions/41839344/update-python-on-linux-2-7-to-3-5>

DEFINITIONS:

A **function** is a block of instructions that performs an action and, once defined, can be reused. Functions make code more modular, allowing you to use the same code over and over again.

Python has a number of built-in functions that you may be familiar with, including:

- `print()` which will print an object to the terminal
- `int()` which will convert a string or number data type to an integer data type
- `len()` which returns the length of an object

Function names include parentheses and may include parameters.

#####

One of the most important concepts in object-oriented programming is the distinction between **classes and objects**, which are defined as follows:

- **Class** — A blueprint created by a programmer for an object. This defines a set of attributes that will characterize any object that is instantiated from this class.
- **Object** — An instance of a class. This is the realized version of the class, where the class is manifested in the program.

PY installations and troubleshooting

Tuesday, September 3, 2019 5:45 PM

```
#####
Issue 1: --> zlib not available
[root@ansiblecontroller ~]# curl https://bootstrap.pypa.io/get-pip.py -o get-pip.py
% Total % Received % Xferd Average Speed Time Time Time Current
Dload Upload Total Spent Left Speed
100 1733k 100 1733k 0 0 3349k 0 --:--:--:--:--:-- 3366k
[root@ansiblecontroller ~]# python get-pip.py --user
Traceback (most recent call last):
  File "get-pip.py", line 22312, in <module>
    main()
  File "get-pip.py", line 197, in main
    bootstrap(tmpdir=tmpdir)
  File "get-pip.py", line 82, in bootstrap
    import pip._internal
zipimport.ZipImportError: can't decompress data; zlib not available
[root@ansiblecontroller ~]# python --version
Python 3.5.2
```

Resolution:

```
*****
In the python source folder
./configure --prefix= --with-zlib-dir=/usr/local/lib
and
make && make install
```

From <<https://github.com/pypa/pip/issues/1919>>

```
Go to pytho source dir:(cd /etc/yum.repos.d/Python-3.5.2)
[root@ansiblecontroller ~]# locate Python-3.5.2
/etc/yum.repos.d/Python-3.5.2
[root@ansiblecontroller Python-3.5.2]# ./configure --prefix= --with-zlib-dir=/usr/local/lib
[root@ansiblecontroller Python-3.5.2]# make && make install
#####
#####
```

1. Python Inro

Monday, August 19, 2019 10:31 AM

SOURCE ---- <https://www.w3schools.com/python/python_getstarted.asp>

What is Python?

Python is a popular programming language. It was created by Guido van Rossum, and released in 1991.
It is used for:

- web development (server-side),
- software development,
- mathematics,
- system scripting.

What can Python do?

- Python can be used on a server to create web applications.
- Python can be used alongside software to create workflows.
- Python can connect to database systems. It can also read and modify files.
- Python can be used to handle big data and perform complex mathematics.
- Python can be used for rapid prototyping, or for production-ready software development.

Why Python?

- Python works on different platforms (Windows, Mac, Linux, Raspberry Pi, etc).
- Python has a simple syntax similar to the English language.
- Python has syntax that allows developers to write programs with fewer lines than some other programming languages.
- Python runs on an interpreter system, meaning that code can be executed as soon as it is written. This means that prototyping can be very quick.
- Python can be treated in a procedural way, an object-orientated way or a functional way.

Good to know

- The most recent major version of Python is Python 3, which we shall be using in this tutorial. However, Python 2, although not being updated with anything other than security updates, is still quite popular.
- In this tutorial Python will be written in a text editor. It is possible to write Python in an Integrated Development Environment, such as Thonny, Pycharm, Netbeans or Eclipse which are particularly useful when managing larger collections of Python files.

Python Syntax compared to other programming languages

- Python was designed for readability, and has some similarities to the English language with influence from mathematics.
- Python uses new lines to complete a command, as opposed to other programming languages which often use semicolons or parentheses.
- Python relies on indentation, using whitespace, to define scope; such as the scope of loops, functions and classes. Other programming languages often use curly-brackets for this purpose.

2. Python Install

Tuesday, August 20, 2019 10:28 AM

Python Install

Many PCs and Macs will have python already installed.

To check if you have python installed on a Windows PC, search in the start bar for Python or run the following on the Command Line (cmd.exe):

```
C:\Users\Your Name>python --version
```

To check if you have python installed on a Linux or Mac, then on linux open the command line or on Mac open the Terminal and type:

```
python --version
```

If you find that you do not have python installed on your computer, then you can download it for free from the following website: <https://www.python.org/>

Python Quick Start

Python is an interpreted programming language, this means that as a developer you write Python (.py) files in a text editor and then put those files into the python interpreter to be executed.

The way to run a python file is like this on the command line:

```
C:\Users\Your Name>python helloworld.py
```

Where "helloworld.py" is the name of your python file.

Let's write our first Python file, called helloworld.py, which can be done in any text editor.

```
helloworld.py
```

```
print("Hello, World!")
```

Run example

Simple as that. Save your file. Open your command line, navigate to the directory where you saved your file, and run:

```
C:\Users\Your Name>python helloworld.py
```

The output should read:

```
Hello, World!
```

Congratulations, you have written and executed your first Python program.

The Python Command Line

To test a short amount of code in python sometimes it is quickest and easiest not to write the code in a file. This is made possible because Python can be run as a command line itself.

Type the following on the Windows, Mac or Linux command line:

```
C:\Users\Your Name>python
```

From there you can write any python, including our hello world example from earlier in the tutorial:

```
C:\Users\Your Name>python
```

```
Python 3.6.4 (v3.6.4:d48eceb, Dec 19 2017, 06:04:45) [MSC v.1900 32 bit (Intel)] on win32
```

Type "help", "copyright", "credits" or "license" for more information.

```
>>> print("Hello, World!")
```

Which will write "Hello, World!" in the command line:

```
C:\Users\Your Name>python
```

```
Python 3.6.4 (v3.6.4:d48eceb, Dec 19 2017, 06:04:45) [MSC v.1900 32 bit (Intel)] on win32
```

Type "help", "copyright", "credits" or "license" for more information.

```
>>> print("Hello, World!")
```

```
Hello, World!
```

Whenever you are done in the python command line, you can simply type the following to quit the python command line interface:

```
exit()
```

3. Python Syntax

Tuesday, August 20, 2019 10:28 AM

Execute Python Syntax

As we learned in the previous page, Python syntax can be executed by writing directly in the Command Line:

```
>>> print("Hello, World!")
```

Hello, World!

Or by creating a python file on the server, using the .py file extension, and running it in the Command Line:

```
C:\Users\Your Name>python myfile.py
```

Python Indentations

Where in other programming languages the indentation in code is for readability only, the indentation in Python is very important. Python uses indentation to indicate a block of code.

Example

```
if 5 > 2:  
    print("Five is greater than two!")
```

[Run example »](#)

Python will give you an error if you skip the indentation:

Example

```
if 5 > 2:  
print("Five is greater than two!")
```

[Run example »](#)

Python Variables

In Python variables are created the moment you assign a value to it:

Example

Variables in Python:

```
x = 5  
y = "Hello, World!"
```

[Run example »](#)

Python has no command for declaring a variable.

You will learn more about variables in the [Python Variables](#) chapter.

Comments

Python has commenting capability for the purpose of in-code documentation.

Comments start with a #, and Python will render the rest of the line as a comment:

Example

Comments in Python:

```
#This is a comment.
```

```
print("Hello, World!")
```

[Run example »](#)

Test Yourself With Exercises

Exercise:

Insert the missing part of the code below to output "Hello World".
xxxxxx ("Hello World")

[Submit Answer »](#)

4. Python Comments

Tuesday, August 20, 2019 10:28 AM

Comments

Comments can be used to explain Python code.

Comments can be used to make the code more readable.

Comments can be used to prevent execution when testing code.

Creating a Comment

Comments starts with a `#`, and Python will ignore them:

Example

```
#This is a comment  
print("Hello, World!")
```

[Run example »](#)

Comments can be placed at the end of a line, and Python will ignore the rest of the line:

Example

```
print("Hello, World!") #This is a comment
```

[Run example »](#)

Comments does not have to be text to explain the code, it can also be used to prevent Python from executing code:

Example

```
#print("Hello, World!")  
print("Cheers, Mate!")
```

[Run example »](#)

Multi Line Comments

Python does not really have a syntax for multi-line comments.

To add a multiline comment you could insert a `#` for each line:

Example

```
#This is a comment  
#written in  
#more than just one line  
print("Hello, World!")
```

[Run example »](#)

Or, not quite as intended, you can use a multiline string.

Since Python will ignore string literals that are not assigned to a variable, you can add a multiline string (triple quotes) in your code, and place you comment inside it:

Example

....

This is a comment

written in

more than just one line

```
print("Hello, World!")
```

[Run example »](#)

5. Python Variables

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Variables

Variables are containers for storing data values.

Unlike other programming languages, Python has no command for declaring a variable.
A variable is created the moment you first assign a value to it.

Creating Variables

Example

```
x = 5  
y = "John"  
print(x)  
print(y)
```

[Run example »](#)

Variables do not need to be declared with any particular type and can even change type after they have been set.

Example

```
x = 4 # x is of type int  
x = "Sally" # x is now of type str  
print(x)
```

[Run example »](#)

String variables can be declared either by using single or double quotes:

Example

```
x = "John"  
# is the same as  
x = 'John'
```

[Run example »](#)

Variable Names

A variable can have a short name (like x and y) or a more descriptive name (age, carname, total_volume). Rules for Python variables:

- A variable name must start with a letter or the underscore character
- A variable name cannot start with a number
- A variable name can only contain alpha-numeric characters and underscores (A-z, 0-9, and _)
- Variable names are case-sensitive (age, Age and AGE are three different variables)

Remember that variable names are case-sensitive

Assign Value to Multiple Variables

Python allows you to assign values to multiple variables in one line:

Example

```
x, y, z = "Orange", "Banana", "Cherry"  
print(x)  
print(y)  
print(z)
```

[Run example »](#)

And you can assign the *same* value to multiple variables in one line:

Example

```
x = y = z = "Orange"  
print(x)  
print(y)  
print(z)
```

[Run example »](#)

Output Variables

The Python `print` statement is often used to output variables.

To combine both text and a variable, Python uses the `+` character:

Example

```
x = "awesome"  
print("Python is " + x)
```

[Run example »](#)

You can also use the `+` character to add a variable to another variable:

Example

```
x = "Python is "  
y = "awesome"  
z = x + y  
print(z)
```

[Run example »](#)

For numbers, the `+` character works as a mathematical operator:

Example

```
x = 5  
y = 10  
print(x + y)
```

[Run example »](#)

If you try to combine a string and a number, Python will give you an error:

Example

```
x = 5  
y = "John"  
print(x + y)
```

[Run example »](#)

6. Python Numbers

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Python Numbers

There are three numeric types in Python:

- int
- float
- complex

Variables of numeric types are created when you assign a value to them:

Example

```
x = 1 # int  
y = 2.8 # float  
z = 1j # complex
```

To verify the type of any object in Python, use the `type()` function:

Example

```
print(type(x))  
print(type(y))  
print(type(z))
```

[Run example »](#)

Int

Int, or integer, is a whole number, positive or negative, without decimals, of unlimited length.

Example

Integers:

```
x = 1  
y = 35656222554887711  
z = -325522
```

```
print(type(x))  
print(type(y))  
print(type(z))
```

[Run example »](#)

Float

Float, or "floating point number" is a number, positive or negative, containing one or more decimals.

Example

Floats:

```
x = 1.10  
y = 1.0  
z = -35.59
```

```
print(type(x))
print(type(y))
print(type(z))
```

[Run example »](#)

Float can also be scientific numbers with an "e" to indicate the power of 10.

Example

Floats:

```
x = 35e3
y = 12E4
z = -87.7e100
```

```
print(type(x))
print(type(y))
print(type(z))
```

[Run example »](#)

Complex

Complex numbers are written with a "j" as the imaginary part:

Example

Complex:

```
x = 3+5j
y = 5j
z = -5j
```

```
print(type(x))
print(type(y))
print(type(z))
```

[Run example »](#)

Type Conversion

You can convert from one type to another with the `int()`, `float()`, and `complex()` methods:

Example

Convert from one type to another:

```
x = 1 # int
y = 2.8 # float
z = 1j # complex
```

```
#convert from int to float:
```

```
a = float(x)
```

```
#convert from float to int:
```

```
b = int(y)
```

```
#convert from int to complex:
```

```
c = complex(x)
```

```
print(a)
```

```
print(b)
```

```
print(c)
```

```
print(type(a))
```

```
print(type(b))
```

```
print(type(c))
```

[Run example »](#)

Note: You cannot convert complex numbers into another number type.

Random Number

Python does not have a `random()` function to make a random number, but Python has a built-in module called `random` that can be used to make random numbers:

Example

Import the random module, and display a random number between 1 and 9:

```
import random
```

```
print(random.randrange(1,10))
```

[Run example »](#)

From <https://www.w3schools.com/python/python_numbers.asp>

7. Python Casting

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Casting

Specify a Variable Type

There may be times when you want to specify a type on to a variable. This can be done with casting. Python is an object-orientated language, and as such it uses classes to define data types, including its primitive types.

Casting in python is therefore done using constructor functions:

- `int()` - constructs an integer number from an integer literal, a float literal (by rounding down to the previous whole number), or a string literal (providing the string represents a whole number)
- `float()` - constructs a float number from an integer literal, a float literal or a string literal (providing the string represents a float or an integer)
- `str()` - constructs a string from a wide variety of data types, including strings, integer literals and float literals

Example

Integers:

```
x = int(1) # x will be 1  
y = int(2.8) # y will be 2  
z = int("3") # z will be 3
```

[Run example »](#)

Example

Floats:

```
x = float(1) # x will be 1.0  
y = float(2.8) # y will be 2.8  
z = float("3") # z will be 3.0  
w = float("4.2") # w will be 4.2
```

[Run example »](#)

Example

Strings:

```
x = str("s1") # x will be 's1'  
y = str(2) # y will be '2'  
z = str(3.0) # z will be '3.0'
```

[Run example »](#)

8. Python Strings

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String Literals

String literals in python are surrounded by either single quotation marks, or double quotation marks.

'hello' is the same as "hello".

You can display a string literal with the `print()` function:

Example

```
print("Hello")
```

```
print('Hello')
```

[Run example »](#)

Assign String to a Variable

Assigning a string to a variable is done with the variable name followed by an equal sign and the string:

Example

```
a = "Hello"
```

```
print(a)
```

[Run example »](#)

Multiline Strings

You can assign a multiline string to a variable by using three quotes:

Example

You can use three double quotes:

```
a = """Lorem ipsum dolor sit amet,
```

```
consectetur adipiscing elit,
```

```
sed do eiusmod tempor incididunt
```

```
ut labore et dolore magna aliqua."""
```

```
print(a)
```

[Run example »](#)

Or three single quotes:

Example

```
a = '''Lorem ipsum dolor sit amet,
```

```
consectetur adipiscing elit,
```

```
sed do eiusmod tempor incididunt
```

```
ut labore et dolore magna aliqua.'''
```

```
print(a)
```

[Run example »](#)

Note: in the result, the line breaks are inserted at the same position as in the code.

Strings are Arrays

Like many other popular programming languages, strings in Python are arrays of bytes representing unicode characters.

However, Python does not have a character data type, a single character is simply a string with a length of 1. Square brackets can be used to access elements of the string.

Example

Get the character at position 1 (remember that the first character has the position 0):

```
a = "Hello, World!"
```

```
print(a[1])
```

[Run example »](#)

Example

Substring. Get the characters from position 2 to position 5 (not included):

```
b = "Hello, World!"
```

```
print(b[2:5])
```

[Run example »](#)

Example

The strip() method removes any whitespace from the beginning or the end:

```
a = " Hello, World! "
```

```
print(a.strip()) # returns "Hello, World!"
```

[Run example »](#)

Example

The len() function returns the length of a string:

```
a = "Hello, World!"
```

```
print(len(a))
```

[Run example »](#)

Example

The lower() method returns the string in lower case:

```
a = "Hello, World!"
```

```
print(a.lower())
```

[Run example »](#)

Example

The upper() method returns the string in upper case:

```
a = "Hello, World!"
```

```
print(a.upper())
```

[Run example »](#)

Example

The `replace()` method replaces a string with another string:

```
a = "Hello, World!"  
print(a.replace("H", "J"))
```

[Run example »](#)

Example

The `split()` method splits the string into substrings if it finds instances of the separator:

```
a = "Hello, World!"  
print(a.split(",")) # returns ['Hello', ' World!']
```

[Run example »](#)

Learn more about String Methods with our [String Methods Reference](#)

String Format

As we learned in the Python Variables chapter, we cannot combine strings and numbers like this:

Example

```
age = 36  
txt = "My name is John, I am " + age  
print(txt)
```

[Run example »](#)

But we can combine strings and numbers by using the `format()` method!

The `format()` method takes the passed arguments, formats them, and places them in the string where the placeholders `{}` are:

Example

Use the `format()` method to insert numbers into strings:

```
age = 36  
txt = "My name is John, and I am {}"  
print(txt.format(age))
```

[Run example »](#)

The `format()` method takes unlimited number of arguments, and are placed into the respective placeholders:

Example

```
quantity = 3  
itemno = 567  
price = 49.95  
myorder = "I want {} pieces of item {} for {} dollars."  
print(myorder.format(quantity, itemno, price))
```

[Run example »](#)

You can use index numbers `{0}` to be sure the arguments are placed in the correct placeholders:

Example

```
quantity = 3
```

```
itemno = 567
price = 49.95
myorder = "I want to pay {2} dollars for {0} pieces of item {1}."
print(myorder.format(quantity, itemno, price))
```

[Run example »](#)

Test Yourself With Exercises

Exercise:

Use the `len` method to print the length of the string.
x = "Hello World"
print()

[Submit Answer »](#)

9. Python Operators

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Operators

Operators are used to perform operations on variables and values.

Python divides the operators in the following groups:

- Arithmetic operators
- Assignment operators
- Comparison operators
- Logical operators
- Identity operators
- Membership operators
- Bitwise operators

Python Arithmetic Operators

Arithmetic operators are used with numeric values to perform common mathematical operations:

Operator	Name	Example	Try it
+	Addition	x + y	Try it »
-	Subtraction	x - y	Try it »
*	Multiplication	x * y	Try it »
/	Division	x / y	Try it »
%	Modulus	x % y	Try it »
**	Exponentiation	x ** y	Try it »
//	Floor division	x // y	Try it »

Python Assignment Operators

Assignment operators are used to assign values to variables:

Operator	Example	Same As	Try it
=	x = 5	x = 5	Try it »
+=	x += 3	x = x + 3	Try it »
-=	x -= 3	x = x - 3	Try it »
*=	x *= 3	x = x * 3	Try it »
/=	x /= 3	x = x / 3	Try it »
%=	x %= 3	x = x % 3	Try it »
//=	x //= 3	x = x // 3	Try it »
**=	x **= 3	x = x ** 3	Try it »
&=	x &= 3	x = x & 3	Try it »
=	x = 3	x = x 3	Try it »
^=	x ^= 3	x = x ^ 3	Try it »
>>=	x >>= 3	x = x >> 3	Try it »
<<=	x <<= 3	x = x << 3	Try it »

Python Comparison Operators

Comparison operators are used to compare two values:

Operator	Name	Example	Try it
==	Equal	x == y	Try it »
!=	Not equal	x != y	Try it »
>	Greater than	x > y	Try it »
<	Less than	x < y	Try it »
>=	Greater than or equal to	x >= y	Try it »
<=	Less than or equal to	x <= y	Try it »

Python Logical Operators

Logical operators are used to combine conditional statements:

Operator	Description	Example	Try it
and	Returns True if both statements are true	x < 5 and x < 10	Try it »
or	Returns True if one of the statements is true	x < 5 or x < 4	Try it »
not	Reverse the result, returns False if the result is true	not(x < 5 and x < 10)	Try it »

Python Identity Operators

Identity operators are used to compare the objects, not if they are equal, but if they are actually the same object, with the same memory location:

Operator	Description	Example	Try it
is	Returns true if both variables are the same object	x is y	Try it »
is not	Returns true if both variables are not the same object	x is not y	Try it »

Python Membership Operators

Membership operators are used to test if a sequence is presented in an object:

Operator	Description	Example	Try it
in	Returns True if a sequence with the specified value is present in the object	x in y	Try it »
not in	Returns True if a sequence with the specified value is not present in the object	x not in y	Try it »

Python Bitwise Operators

Bitwise operators are used to compare (binary) numbers:

Operator	Name	Description
&	AND	Sets each bit to 1 if both bits are 1
	OR	Sets each bit to 1 if one of two bits is 1
^	XOR	Sets each bit to 1 if only one of two bits is 1
~	NOT	Inverts all the bits
<<	Zero fill left shift	Shift left by pushing zeros in from the right and let the leftmost bits fall off
>>	Signed right shift	Shift right by pushing copies of the leftmost bit in from the left, and let the rightmost bits fall off

Test Yourself With Exercises

Exercise:

Multiply `10` with `5`, and print the result.
`print(10 * 5)`

[Submit Answer »](#)

10. Python Lists

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Python Collections (Arrays)

There are four collection data types in the Python programming language:

- **List** is a collection which is ordered and changeable. Allows duplicate members.
- **Tuple** is a collection which is ordered and unchangeable. Allows duplicate members.
- **Set** is a collection which is unordered and unindexed. No duplicate members.
- **Dictionary** is a collection which is unordered, changeable and indexed. No duplicate members.

When choosing a collection type, it is useful to understand the properties of that type. Choosing the right type for a particular data set could mean retention of meaning, and, it could mean an increase in efficiency or security.

List

A list is a collection which is ordered and changeable. In Python lists are written with square brackets.

Example

Create a List:

```
thislist = ["apple", "banana", "cherry"]  
print(thislist)
```

[Run example »](#)

Access Items

You access the list items by referring to the index number:

Example

Print the second item of the list:

```
thislist = ["apple", "banana", "cherry"]  
print(thislist[1])
```

[Run example »](#)

Change Item Value

To change the value of a specific item, refer to the index number:

Example

Change the second item:

```
thislist = ["apple", "banana", "cherry"]  
thislist[1] = "blackcurrant"  
print(thislist)
```

[Run example »](#)

Loop Through a List

You can loop through the list items by using a **for** loop:

Example

Print all items in the list, one by one:

```
thislist = ["apple", "banana", "cherry"]  
  
for x in thislist:  
  
    print(x)
```

[Run example »](#)

You will learn more about **for** loops in our [Python For Loops](#) Chapter.

Check if Item Exists

To determine if a specified item is present in a list use the `in` keyword:

Example

Check if "apple" is present in the list:

```
thislist = ["apple", "banana", "cherry"]  
if "apple" in thislist:  
    print("Yes, 'apple' is in the fruits list")
```

[Run example »](#)

List Length

To determine how many items a list has, use the `len()` method:

Example

Print the number of items in the list:

```
thislist = ["apple", "banana", "cherry"]  
print(len(thislist))
```

[Run example »](#)

Add Items

To add an item to the end of the list, use the `append()` method:

Example

Using the `append()` method to append an item:

```
thislist = ["apple", "banana", "cherry"]  
thislist.append("orange")  
print(thislist)
```

[Run example »](#)

To add an item at the specified index, use the `insert()` method:

Example

Insert an item as the second position:

```
thislist = ["apple", "banana", "cherry"]  
thislist.insert(1, "orange")  
print(thislist)
```

[Run example »](#)

Remove Item

There are several methods to remove items from a list:

Example

The `remove()` method removes the specified item:

```
thislist = ["apple", "banana", "cherry"]  
thislist.remove("banana")  
print(thislist)
```

[Run example »](#)

Example

The `pop()` method removes the specified index, (or the last item if index is not specified):

```
thislist = ["apple", "banana", "cherry"]
thislist.pop()
print(thislist)
```

[Run example »](#)

Example

The `del` keyword removes the specified index:

```
thislist = ["apple", "banana", "cherry"]
del thislist[0]
print(thislist)
```

[Run example »](#)

Example

The `del` keyword can also delete the list completely:

```
thislist = ["apple", "banana", "cherry"]
del thislist
```

[Run example »](#)

Example

The `clear()` method empties the list:

```
thislist = ["apple", "banana", "cherry"]
thislist.clear()
print(thislist)
```

[Run example »](#)

Copy a List

You cannot copy a list simply by typing `list2 = list1`, because: `list2` will only be a *reference* to `list1`, and changes made in `list1` will automatically also be made in `list2`. There are ways to make a copy, one way is to use the built-in List method `copy()`.

Example

Make a copy of a list with the `copy()` method:

```
thislist = ["apple", "banana", "cherry"]
mylist = thislist.copy()
print(mylist)
```

[Run example »](#)

Another way to make a copy is to use the built-in method `list()`.

Example

Make a copy of a list with the `list()` method:

```
thislist = ["apple", "banana", "cherry"]
mylist = list(thislist)
print(mylist)
```

[Run example »](#)

The `list()` Constructor

It is also possible to use the `list()` constructor to make a new list.

Example

Using the `list()` constructor to make a List:

```
thislist = list(("apple", "banana", "cherry")) # note the double round-brackets  
print(thislist)
```

[Run example »](#)

List Methods

Python has a set of built-in methods that you can use on lists.

Method	Description
append()	Adds an element at the end of the list
clear()	Removes all the elements from the list
copy()	Returns a copy of the list
count()	Returns the number of elements with the specified value
extend()	Add the elements of a list (or any iterable), to the end of the current list
index()	Returns the index of the first element with the specified value
insert()	Adds an element at the specified position
pop()	Removes the element at the specified position
remove()	Removes the item with the specified value
reverse()	Reverses the order of the list
sort()	Sorts the list

Test Yourself With Exercises

Exercise:

Print the second item in the `Fruits` list.
`fruits = ["apple", "banana", "cherry"]`
`print()`

[Submit Answer »](#)

11. Python Tuples

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Tuple

A tuple is a collection which is ordered and **unchangeable**. In Python tuples are written with round brackets.

Example

Create a Tuple:

```
thistuple = ("apple", "banana", "cherry")  
print(thistuple)
```

[Run example »](#)

Access Tuple Items

You can access tuple items by referring to the index number, inside square brackets:

Example

Return the item in position 1:

```
thistuple = ("apple", "banana", "cherry")  
print(thistuple[1])
```

[Run example »](#)

Change Tuple Values

Once a tuple is created, you cannot change its values. Tuples are **unchangeable**.

Loop Through a Tuple

You can loop through the tuple items by using a **for** loop.

Example

Iterate through the items and print the values:

```
thistuple = ("apple", "banana", "cherry")
```

```
for x in thistuple:
```

```
    print(x)
```

[Run example »](#)

You will learn more about **for** loops in our [Python For Loops](#) Chapter.

Check if Item Exists

To determine if a specified item is present in a tuple use the **in** keyword:

Example

Check if "apple" is present in the tuple:

```
thistuple = ("apple", "banana", "cherry")
```

```
if "apple" in thistuple:
```

```
    print("Yes, 'apple' is in the fruits tuple")
```

[Run example »](#)

Tuple Length

To determine how many items a tuple has, use the **len()** method:

Example

Print the number of items in the tuple:

```
thistuple = ("apple", "banana", "cherry")
```

```
print(len(thistuple))
```

[Run example »](#)

Add Items

Once a tuple is created, you cannot add items to it. Tuples are **unchangeable**.

Example

You cannot add items to a tuple:

```
thistuple = ("apple", "banana", "cherry")
thistuple[3] = "orange" # This will raise an error
print(thistuple)
```

[Run example »](#)

Remove Items

Note: You cannot remove items in a tuple.

Tuples are **unchangeable**, so you cannot remove items from it, but you can delete the tuple completely:

Example

The **del** keyword can delete the tuple completely:

```
thistuple = ("apple", "banana", "cherry")
del thistuple
print(thistuple) #this will raise an error because the tuple no longer exists
```

[Run example »](#)

The tuple() Constructor

It is also possible to use the **tuple()** constructor to make a tuple.

Example

Using the tuple() method to make a tuple:

```
thistuple = tuple(("apple", "banana", "cherry")) # note the double round-brackets
print(thistuple)
```

[Run example »](#)

Tuple Methods

Python has two built-in methods that you can use on tuples.

Method	Description
<u>count()</u>	Returns the number of times a specified value occurs in a tuple
<u>index()</u>	Searches the tuple for a specified value and returns the position of where it was found

Test Yourself With Exercises

Exercise:

Print the first item in the `fruits` tuple.

```
fruits = ("apple", "banana", "cherry")  
print()
```

[Submit Answer »](#)

12. Python Sets

Tuesday, August 20, 2019 10:28 AM

Set

A set is a collection which is unordered and unindexed. In Python sets are written with curly brackets.

Example

Create a Set:

```
thisset = {"apple", "banana", "cherry"}  
print(thisset)
```

[Run example »](#)

Note: Sets are unordered, so you cannot be sure in which order the items will appear.

Access Items

You cannot access items in a set by referring to an index, since sets are unordered the items has no index.

But you can loop through the set items using a `for` loop, or ask if a specified value is present in a set, by using the `in` keyword.

Example

Loop through the set, and print the values:

```
thisset = {"apple", "banana", "cherry"}
```

`for x in thisset:`

```
    print(x)
```

[Run example »](#)

Example

Check if "banana" is present in the set:

```
thisset = {"apple", "banana", "cherry"}
```

```
print("banana" in thisset)
```

[Run example »](#)

Change Items

Once a set is created, you cannot change its items, but you can add new items.

Add Items

To add one item to a set use the `add()` method.

To add more than one item to a set use the `update()` method.

Example

Add an item to a set, using the `add()` method:

```
thisset = {"apple", "banana", "cherry"}
```

```
thisset.add("orange")
```

```
print(thisset)
```

[Run example »](#)

Example

Add multiple items to a set, using the `update()` method:

```
thisset = {"apple", "banana", "cherry"}  
  
thisset.update(["orange", "mango", "grapes"])
```

```
print(thisset)
```

[Run example »](#)

Get the Length of a Set

To determine how many items a set has, use the `len()` method.

Example

Get the number of items in a set:

```
thisset = {"apple", "banana", "cherry"}  
  
print(len(thisset))
```

```
print(len(thisset))
```

[Run example »](#)

Remove Item

To remove an item in a set, use the `remove()`, or the `discard()` method.

Example

Remove "banana" by using the `remove()` method:

```
thisset = {"apple", "banana", "cherry"}  
  
thisset.remove("banana")  
  
print(thisset)
```

```
print(thisset)
```

[Run example »](#)

Note: If the item to remove does not exist, `remove()` will raise an error.

Example

Remove "banana" by using the `discard()` method:

```
thisset = {"apple", "banana", "cherry"}  
  
thisset.discard("banana")  
  
print(thisset)
```

```
print(thisset)
```

[Run example »](#)

Note: If the item to remove does not exist, `discard()` will **NOT** raise an error.

You can also use the `pop()`, method to remove an item, but this method will remove the *last* item. Remember that sets are unordered, so you will not know what item that gets removed.

The return value of the `pop()` method is the removed item.

Example

Remove the last item by using the `pop()` method:

```
thisset = {"apple", "banana", "cherry"}
```

```
x = thisset.pop()
```

```
print(x)
```

```
print(thisset)
```

[Run example »](#)

Note: Sets are *unordered*, so when using the `pop()` method, you will not know which item that gets removed.

Example

The `clear()` method empties the set:

```
thisset = {"apple", "banana", "cherry"}
```

```
thisset.clear()
```

```
print(thisset)
```

[Run example »](#)

Example

The `del` keyword will delete the set completely:

```
thisset = {"apple", "banana", "cherry"}
```

```
del thisset
```

```
print(thisset)
```

[Run example »](#)

The `set()` Constructor

It is also possible to use the `set()` constructor to make a set.

Example

Using the `set()` constructor to make a set:

```
thisset = set(("apple", "banana", "cherry")) # note the double round-brackets
```

```
print(thisset)
```

[Run example »](#)

Set Methods

Python has a set of built-in methods that you can use on sets.

Method	Description
add()	Adds an element to the set
clear()	Removes all the elements from the set
copy()	Returns a copy of the set
difference()	Returns a set containing the difference between two or more sets
difference_update()	Removes the items in this set that are also included in another, specified set
discard()	Remove the specified item
intersection()	Returns a set, that is the intersection of two other sets
intersection_update()	Removes the items in this set that are not present in other, specified set(s)

isdisjoint()	Returns whether two sets have a intersection or not
issubset()	Returns whether another set contains this set or not
issuperset()	Returns whether this set contains another set or not
pop()	Removes an element from the set
remove()	Removes the specified element
symmetric_difference()	Returns a set with the symmetric differences of two sets
symmetric_difference_update()	inserts the symmetric differences from this set and another
union()	Return a set containing the union of sets
update()	Update the set with the union of this set and others

Test Yourself With Exercises

Exercise:

Check if "apple" is present in the `fruits` set.

```
fruits = {"apple", "banana", "cherry"}
if ("apple" in fruits):
    print("Yes, apple is a fruit!")
```

[Submit Answer »](#)

13. Python Dictionaries

Wednesday, August 21, 2019 11:32 AM

Dictionary

A dictionary is a collection which is unordered, changeable and indexed. In Python dictionaries are written with curly brackets, and they have keys and values.

Example

Create and print a dictionary:

```
thisdict = {  
    "brand": "Ford",  
    "model": "Mustang",  
    "year": 1964  
}  
  
print(thisdict)
```

[Run example »](#)

Accessing Items

You can access the items of a dictionary by referring to its key name, inside square brackets:

Example

Get the value of the "model" key:

```
x = thisdict["model"]
```

[Run example »](#)

There is also a method called `get()` that will give you the same result:

Example

Get the value of the "model" key:

```
x = thisdict.get("model")
```

[Run example »](#)

Change Values

You can change the value of a specific item by referring to its key name:

Example

Change the "year" to 2018:

```
thisdict = {  
    "brand": "Ford",  
    "model": "Mustang",  
    "year": 1964  
}  
  
thisdict["year"] = 2018
```

[Run example »](#)

Loop Through a Dictionary

You can loop through a dictionary by using a `for` loop.
When looping through a dictionary, the return value are the *keys* of the dictionary, but there are methods to return the *values* as well.

Example

Print all key names in the dictionary, one by one:

```
for x in thisdict:  
    print(x)
```

[Run example »](#)

Example

Print all *values* in the dictionary, one by one:

```
for x in thisdict:  
    print(thisdict[x])
```

[Run example »](#)

Example

You can also use the `values()` function to return values of a dictionary:

```
for x in thisdict.values():  
    print(x)
```

[Run example »](#)

Example

Loop through both *keys* and *values*, by using the `items()` function:

```
for x, y in thisdict.items():  
    print(x, y)
```

[Run example »](#)

Check if Key Exists

To determine if a specified key is present in a dictionary use the `in` keyword:

Example

Check if "model" is present in the dictionary:

```
thisdict = {  
    "brand": "Ford",  
    "model": "Mustang",  
    "year": 1964  
}  
  
if "model" in thisdict:  
    print("Yes, 'model' is one of the keys in the thisdict dictionary")
```

[Run example »](#)

Dictionary Length

To determine how many items (key-value pairs) a dictionary has, use the `len()` method.

Example

Print the number of items in the dictionary:

```
print(len(thisdict))
```

[Run example »](#)

Adding Items

Adding an item to the dictionary is done by using a new index key and assigning a value to it:

Example

```
thisdict = {  
    "brand": "Ford",  
    "model": "Mustang",  
    "year": 1964  
}  
  
thisdict["color"] = "red"  
  
print(thisdict)
```

[Run example »](#)

Removing Items

There are several methods to remove items from a dictionary:

Example

The `pop()` method removes the item with the specified key name:

```
thisdict = {  
    "brand": "Ford",  
    "model": "Mustang",  
    "year": 1964  
}  
  
thisdict.pop("model")  
  
print(thisdict)
```

[Run example »](#)

Example

The `popitem()` method removes the last inserted item (in versions before 3.7, a random item is removed instead):

```
thisdict = {  
    "brand": "Ford",  
    "model": "Mustang",  
    "year": 1964  
}  
  
thisdict.popitem()  
  
print(thisdict)
```

[Run example »](#)

Example

The `del` keyword removes the item with the specified key name:

```
thisdict = {  
    "brand": "Ford",  
    "model": "Mustang",
```

```
"year": 1964  
}  
  
del thisdict["model"]  
  
print(thisdict)
```

[Run example »](#)

Example

The `del` keyword can also delete the dictionary completely:

```
thisdict = {  
    "brand": "Ford",  
    "model": "Mustang",  
    "year": 1964  
}  
  
del thisdict  
  
print(thisdict) #this will cause an error because "thisdict" no longer exists.
```

[Run example »](#)

Example

The `clear()` keyword empties the dictionary:

```
thisdict = {  
    "brand": "Ford",  
    "model": "Mustang",  
    "year": 1964  
}  
  
thisdict.clear()  
  
print(thisdict)
```

[Run example »](#)

Copy a Dictionary

You cannot copy a dictionary simply by typing `dict2 = dict1`, because: `dict2` will only be a *reference* to `dict1`, and changes made in `dict1` will automatically also be made in `dict2`. There are ways to make a copy, one way is to use the built-in Dictionary method `copy()`.

Example

Make a copy of a dictionary with the `copy()` method:

```
thisdict = {  
    "brand": "Ford",  
    "model": "Mustang",  
    "year": 1964  
}  
  
mydict = thisdict.copy()  
  
print(mydict)
```

[Run example »](#)

Another way to make a copy is to use the built-in method `dict()`.

Example

Make a copy of a dictionary with the `dict()` method:

```

thisdict = {
    "brand": "Ford",
    "model": "Mustang",
    "year": 1964
}
mydict = dict(thisdict)
print(mydict)

```

[Run example »](#)

The dict() Constructor

It is also possible to use the `dict()` constructor to make a new dictionary:

Example

```

thisdict = dict(brand="Ford", model="Mustang", year=1964)

# note that keywords are not string literals

# note the use of equals rather than colon for the assignment

print(thisdict)

```

[Run example »](#)

Dictionary Methods

Python has a set of built-in methods that you can use on dictionaries.

Method	Description
<code>clear()</code>	Removes all the elements from the dictionary
<code>copy()</code>	Returns a copy of the dictionary
<code>fromkeys()</code>	Returns a dictionary with the specified keys and values
<code>get()</code>	Returns the value of the specified key
<code>items()</code>	Returns a list containing the a tuple for each key value pair
<code>keys()</code>	Returns a list containing the dictionary's keys
<code>pop()</code>	Removes the element with the specified key
<code>popitem()</code>	Removes the last inserted key-value pair
<code>setdefault()</code>	Returns the value of the specified key. If the key does not exist: insert the key, with the specified value
<code>update()</code>	Updates the dictionary with the specified key-value pairs
<code>values()</code>	Returns a list of all the values in the dictionary

Test Yourself With Exercises

Exercise:

Use the `get` method to print the value of the "model" key of the `car` dictionary.

```

car = {
    "brand": "Ford",
    "model": "Mustang",
    "year": 1964
}
print()

```

[Submit Answer »](#)

14. Python If ... Else

Wednesday, August 21, 2019 11:35 AM

Python Conditions and If statements

Python supports the usual logical conditions from mathematics:

- Equals: `a == b`
- Not Equals: `a != b`
- Less than: `a < b`
- Less than or equal to: `a <= b`
- Greater than: `a > b`
- Greater than or equal to: `a >= b`

These conditions can be used in several ways, most commonly in "if statements" and loops.

An "if statement" is written by using the `if` keyword.

Example

If statement:

```
a = 33
b = 200
if b > a:
    print("b is greater than a")
```

[Run example »](#)

In this example we use two variables, `a` and `b`, which are used as part of the if statement to test whether `b` is greater than `a`. As `a` is `33`, and `b` is `200`, we know that 200 is greater than 33, and so we print to screen that "b is greater than a".

Indentation

Python relies on indentation, using whitespace, to define scope in the code. Other programming languages often use curly-brackets for this purpose.

Example

If statement, without indentation (will raise an error):

```
a = 33
b = 200
if b > a:
    print("b is greater than a") # you will get an error
```

[Run example »](#)

Elif

The `elif` keyword is python's way of saying "if the previous conditions were not true, then try this condition".

Example

```
a = 33
b = 33
if b > a:
    print("b is greater than a")
elif a == b:
    print("a and b are equal")
```

[Run example »](#)

In this example `a` is equal to `b`, so the first condition is not true, but the `elif` condition is true, so we print to screen that "a and b are equal".

Else

The `else` keyword catches anything which isn't caught by the preceding conditions.

Example

```
a = 200
b = 33
if b > a:
    print("b is greater than a")
elif a == b:
    print("a and b are equal")
else:
    print("a is greater than b")
```

[Run example »](#)

In this example **a** is greater than **b**, so the first condition is not true, also the **elif** condition is not true, so we go to the **else** condition and print to screen that "a is greater than b". You can also have an **else** without the **elif**:

Example

```
a = 200
b = 33
if b > a:
    print("b is greater than a")
else:
    print("b is not greater than a")
```

[Run example »](#)

Short Hand If

If you have only one statement to execute, you can put it on the same line as the if statement.

Example

One line if statement:

```
if a > b: print("a is greater than b")
```

[Run example »](#)

Short Hand If ... Else

If you have only one statement to execute, one for if, and one for else, you can put it all on the same line:

Example

One line if else statement:

```
print("A") if a > b else print("B")
```

[Run example »](#)

You can also have multiple else statements on the same line:

Example

One line if else statement, with 3 conditions:

```
print("A") if a > b else print("=") if a == b else print("B")
```

[Run example »](#)

And

The **and** keyword is a logical operator, and is used to combine conditional statements:

Example

Test if **a** is greater than **b**, AND if **c** is greater than **a**:

```
if a > b and c > a:
```

```
    print("Both conditions are True")
```

[Run example »](#)

Or

The **or** keyword is a logical operator, and is used to combine conditional statements:

Example

Test if **a** is greater than **b**, OR if **a** is greater than **c**:

```
if a > b or a > c:
```

```
    print("At least one of the conditions is True")
```

[Run example »](#)

Test Yourself With Exercises

Exercise:

```
Print "Hello World if a is greater than b.  
a = 50  
b = 10  
if a > b  
    print("Hello World")
```

[Submit Answer »](#)

15. Python While Loops

Wednesday, August 21, 2019 11:35 AM

While Loops

Python Loops

Python has two primitive loop commands:

- `while` loops
- `for` loops

The while Loop

With the `while` loop we can execute a set of statements as long as a condition is true.

Example

Print i as long as i is less than 6:

```
i = 1  
while i < 6:  
    print(i)  
    i += 1
```

[Run example »](#)

Note: remember to increment i, or else the loop will continue forever.

The `while` loop requires relevant variables to be ready, in this example we need to define an indexing variable, `i`, which we set to 1.

The break Statement

With the `break` statement we can stop the loop even if the while condition is true:

Example

Exit the loop when i is 3:

```
i = 1  
while i < 6:  
    print(i)  
    if i == 3:  
        break  
    i += 1
```

[Run example »](#)

The continue Statement

With the `continue` statement we can stop the current iteration, and continue with the next:

Example

Continue to the next iteration if i is 3:

```
i = 0
while i < 6:
    i += 1
    if i == 3:
        continue
    print(i)
```

[Run example »](#)

Test Yourself With Exercises

Exercise:

Print **i** as long as **i** is less than 6.

```
i = 1
i < 6
    print(i)
    i += 1
```

[Submit Answer »](#)

16. Python For Loops

Wednesday, August 21, 2019 11:35 AM

For Loops

A `for` loop is used for iterating over a sequence (that is either a list, a tuple, a dictionary, a set, or a string). This is less like the `for` keyword in other programming languages, and works more like an iterator method as found in other object-orientated programming languages.

With the `for` loop we can execute a set of statements, once for each item in a list, tuple, set etc.

Example

Print each fruit in a fruit list:

```
fruits = ["apple", "banana", "cherry"]

for x in fruits:
    print(x)
```

[Run example »](#)

The `for` loop does not require an indexing variable to set beforehand.

Looping Through a String

Even strings are iterable objects, they contain a sequence of characters:

Example

Loop through the letters in the word "banana":

```
for x in "banana":
    print(x)
```

[Run example »](#)

The break Statement

With the `break` statement we can stop the loop before it has looped through all the items:

Example

Exit the loop when `x` is "banana":

```
fruits = ["apple", "banana", "cherry"]

for x in fruits:
    print(x)

    if x == "banana":
        break
```

[Run example »](#)

Example

Exit the loop when `x` is "banana", but this time the break comes before the print:

```
fruits = ["apple", "banana", "cherry"]

for x in fruits:
    if x == "banana":
        break

    print(x)
```

[Run example »](#)

The continue Statement

With the `continue` statement we can stop the current iteration of the loop, and continue with the next:

Example

Do not print banana:

```
fruits = ["apple", "banana", "cherry"]  
for x in fruits:  
    if x == "banana":  
        continue  
    print(x)
```

[Run example »](#)

The range() Function

To loop through a set of code a specified number of times, we can use the `range()` function,

The `range()` function returns a sequence of numbers, starting from 0 by default, and increments by 1 (by default), and ends at a specified number.

Example

Using the `range()` function:

```
for x in range(6):  
    print(x)
```

[Run example »](#)

Note that `range(6)` is not the values of 0 to 6, but the values 0 to 5.

The `range()` function defaults to 0 as a starting value, however it is possible to specify the starting value by adding a parameter: `range(2, 6)`, which means values from 2 to 6 (but not including 6):

Example

Using the start parameter:

```
for x in range(2, 6):  
    print(x)
```

[Run example »](#)

The `range()` function defaults to increment the sequence by 1, however it is possible to specify the increment value by adding a third parameter: `range(2, 30, 3)`:

Example

Increment the sequence with 3 (default is 1):

```
for x in range(2, 30, 3):  
    print(x)
```

[Run example »](#)

Else in For Loop

The `else` keyword in a `for` loop specifies a block of code to be executed when the loop is finished:

Example

Print all numbers from 0 to 5, and print a message when the loop has ended:

```
for x in range(6):  
    print(x)
```

```
else:  
    print("Finally finished!")
```

[Run example »](#)

Nested Loops

A nested loop is a loop inside a loop.
The "inner loop" will be executed one time for each iteration of the "outer loop":

Example

Print each adjective for every fruit:

```
adj = ["red", "big", "tasty"]  
fruits = ["apple", "banana", "cherry"]
```

```
for x in adj:  
    for y in fruits:  
        print(x, y)
```

[Run example »](#)

17. Python Functions

Wednesday, August 21, 2019 11:35 AM

Functions

A function is a block of code which only runs when it is called.
You can pass data, known as parameters, into a function.
A function can return data as a result.

Creating a Function

In Python a function is defined using the `def` keyword:

Example

```
def my_function():
    print("Hello from a function")
```

Calling a Function

To call a function, use the function name followed by parenthesis:

Example

```
def my_function():
    print("Hello from a function")

my_function()
```

Parameters

Information can be passed to functions as parameter.

Parameters are specified after the function name, inside the parentheses. You can add as many parameters as you want, just separate them with a comma.

The following example has a function with one parameter (`fname`). When the function is called, we pass along a first name, which is used inside the function to print the full name:

Example

```
def my_function(fname):
    print(fname + " Refsnes")

my_function("Emil")
my_function("Tobias")
my_function("Linus")
```

Default Parameter Value

The following example shows how to use a default parameter value.
If we call the function without parameter, it uses the default value:

Example

```
def my_function(country = "Norway"):
    print("I am from " + country)
```

```
my_function("Sweden")
my_function("India")
my_function()
my_function("Brazil")
Run example »
```

Passing a List as a Parameter

You can send any data types of parameter to a function (string, number, list, dictionary etc.), and it will be treated as the same data type inside the function.

E.g. if you send a List as a parameter, it will still be a List when it reaches the function:

Example

```
def my_function(food):
    for x in food:
        print(x)

fruits = ["apple", "banana", "cherry"]

my_function(fruits)
Run example »
```

Return Values

To let a function return a value, use the `return` statement:

Example

```
def my_function(x):
    return 5 * x

print(my_function(3))
print(my_function(5))
print(my_function(9))
Run example »
```

Recursion

Python also accepts function recursion, which means a defined function can call itself.

Recursion is a common mathematical and programming concept. It means that a function calls itself. This has the benefit of meaning that you can loop through data to reach a result.

The developer should be very careful with recursion as it can be quite easy to slip into writing a function which never terminates, or one that uses excess amounts of memory or processor power. However, when written correctly recursion can be a very efficient and mathematically-elegant approach to programming.

In this example, `tri_recursion()` is a function that we have defined to call itself ("recurse"). We use the `k` variable as the data, which decrements (-1) every time we recurse. The recursion ends when the condition is not greater than 0 (i.e. when it is 0).

To a new developer it can take some time to work out how exactly this works, best way to find out is by testing and modifying it.

Example

Recursion Example

```
def tri_recursion(k):
    if(k>0):
```

```
result = k+tri_recursion(k-1)
print(result)

else:
    result = 0
return result

print("\n\nRecursion Example Results")
tri_recursion(6)
```

[Run example »](#)

18. Python Lambda

Wednesday, August 21, 2019 11:35 AM

Lambda

A lambda function is a small anonymous function.

A lambda function can take any number of arguments, but can only have one expression.

Syntax

`lambda arguments : expression`

The expression is executed and the result is returned:

Example

A lambda function that adds 10 to the number passed in as an argument, and print the result:

```
x = lambda a : a + 10  
print(x(5))
```

[Run example »](#)

Lambda functions can take any number of arguments:

Example

A lambda function that multiplies argument a with argument b and print the result:

```
x = lambda a, b : a * b  
print(x(5, 6))
```

[Run example »](#)

Example

A lambda function that sums argument a, b, and c and print the result:

```
x = lambda a, b, c : a + b + c  
print(x(5, 6, 2))
```

[Run example »](#)

Why Use Lambda Functions?

The power of lambda is better shown when you use them as an anonymous function inside another function.

Say you have a function definition that takes one argument, and that argument will be multiplied with an unknown number:

```
def myfunc(n):  
    return lambda a : a * n
```

Use that function definition to make a function that always doubles the number you send in:

Example

```
def myfunc(n):
    return lambda a : a * n
```

```
mydoubler = myfunc(2)
```

```
print(mydoubler(11))
```

[Run example »](#)

Or, use the same function definition to make a function that always *triples* the number you send in:

Example

```
def myfunc(n):
    return lambda a : a * n
```

```
mytripler = myfunc(3)
```

```
print(mytripler(11))
```

[Run example »](#)

Or, use the same function definition to make both functions, in the same program:

Example

```
def myfunc(n):
    return lambda a : a * n
```

```
mydoubler = myfunc(2)
```

```
mytripler = myfunc(3)
```

```
print(mydoubler(11))
```

```
print(mytripler(11))
```

[Run example »](#)

Use lambda functions when an anonymous function is required for a short period of time.

19. Python Arrays

Wednesday, August 21, 2019 11:35 AM

Arrays

Note: Python does not have built-in support for Arrays, but [Python Lists](#) can be used instead.

Arrays

Arrays are used to store multiple values in one single variable:

Example

Create an array containing car names:

```
cars = ["Ford", "Volvo", "BMW"]
```

[Run example »](#)

What is an Array?

An array is a special variable, which can hold more than one value at a time.

If you have a list of items (a list of car names, for example), storing the cars in single variables could look like this:

```
car1 = "Ford"  
car2 = "Volvo"  
car3 = "BMW"
```

However, what if you want to loop through the cars and find a specific one? And what if you had not 3 cars, but 300?
The solution is an array!

An array can hold many values under a single name, and you can access the values by referring to an index number.

Access the Elements of an Array

You refer to an array element by referring to the *index number*.

Example

Get the value of the first array item:

```
x = cars[0]
```

[Run example »](#)

Example

Modify the value of the first array item:

```
cars[0] = "Toyota"
```

[Run example »](#)

The Length of an Array

Use the `len()` method to return the length of an array (the number of elements in an array).

Example

Return the number of elements in the `cars` array:

```
x = len(cars)
```

[Run example »](#)

Note: The length of an array is always one more than the highest array index.

Looping Array Elements

You can use the `for in` loop to loop through all the elements of an array.

Example

Print each item in the `cars` array:

```
for x in cars:
```

```
    print(x)
```

[Run example »](#)

Adding Array Elements

You can use the `append()` method to add an element to an array.

Example

Add one more element to the `cars` array:

```
cars.append("Honda")
```

[Run example »](#)

Removing Array Elements

You can use the `pop()` method to remove an element from the array.

Example

Delete the second element of the `cars` array:

```
cars.pop(1)
```

[Run example »](#)

You can also use the `remove()` method to remove an element from the array.

Example

Delete the element that has the value "Volvo":

```
cars.remove("Volvo")
```

[Run example »](#)

Note: The list's `remove()` method only removes the first occurrence of the specified value.

Array Methods

Python has a set of built-in methods that you can use on lists/arrays.

Method	Description
<code>append()</code>	Adds an element at the end of the list
<code>clear()</code>	Removes all the elements from the list
<code>copy()</code>	Returns a copy of the list
<code>count()</code>	Returns the number of elements with the specified value
<code>extend()</code>	Add the elements of a list (or any iterable), to the end of the current list
<code>index()</code>	Returns the index of the first element with the specified value
<code>insert()</code>	Adds an element at the specified position
<code>pop()</code>	Removes the element at the specified position
<code>remove()</code>	Removes the first item with the specified value
<code>reverse()</code>	Reverses the order of the list
<code>sort()</code>	Sorts the list

Note: Python does not have built-in support for Arrays, but Python Lists can be used instead.

20. Python Classes and Objects

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Classes and Objects

Python is an object oriented programming language.

Almost everything in Python is an object, with its properties and methods.

A Class is like an object constructor, or a "blueprint" for creating objects.

Create a Class

To create a class, use the keyword `class`:

Example

Create a class named MyClass, with a property named x:

```
class MyClass:
```

```
    x = 5
```

[Run example »](#)

Create Object

Now we can use the class named myClass to create objects:

Example

Create an object named p1, and print the value of x:

```
p1 = MyClass()
```

```
print(p1.x)
```

[Run example »](#)

The `__init__()` Function

The examples above are classes and objects in their simplest form, and are not really useful in real life applications.

To understand the meaning of classes we have to understand the built-in `__init__()` function.

All classes have a function called `__init__()`, which is always executed when the class is being initiated.

Use the `__init__()` function to assign values to object properties, or other operations that are necessary to do when the object is being created:

Example

Create a class named Person, use the `__init__()` function to assign values for name and age:

```
class Person:
```

```
    def __init__(self, name, age):
```

```
        self.name = name
```

```
        self.age = age
```

```
p1 = Person("John", 36)
```

```
print(p1.name)
```

```
print(p1.age)
```

[Run example »](#)

Note: The `__init__()` function is called automatically every time the class is being used to create a new object.

Object Methods

Objects can also contain methods. Methods in objects are functions that belong to the object.
Let us create a method in the Person class:

Example

Insert a function that prints a greeting, and execute it on the p1 object:

```
class Person:  
    def __init__(self, name, age):  
        self.name = name  
        self.age = age  
  
    def myfunc(self):  
        print("Hello my name is " + self.name)  
  
p1 = Person("John", 36)  
p1.myfunc()
```

[Run example »](#)

Note: The `self` parameter is a reference to the current instance of the class, and is used to access variables that belong to the class.

The self Parameter

The `self` parameter is a reference to the current instance of the class, and is used to access variables that belongs to the class.
It does not have to be named `self`, you can call it whatever you like, but it has to be the first parameter of any function in the class:

Example

Use the words *mysillyobject* and *abc* instead of *self*:

```
class Person:  
    def __init__(mysillyobject, name, age):  
        mysillyobject.name = name  
        mysillyobject.age = age  
  
    def myfunc(abc):  
        print("Hello my name is " + abc.name)
```

p1 = Person("John", 36)

p1.myfunc()

[Run example »](#)

Modify Object Properties

You can modify properties on objects like this:

Example

Set the age of p1 to 40:

```
p1.age = 40
```

[Run example »](#)

Delete Object Properties

You can delete properties on objects by using the `del` keyword:

Example

Delete the age property from the p1 object:

```
del p1.age
```

[Run example »](#)

Delete Objects

You can delete objects by using the `del` keyword:

Example

Delete the p1 object:

```
del p1
```

[Run example »](#)

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Mosh Hamedani - Python

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[Python Tutorial - Python for Beginners \[Full Course\]](#)



Ptcharm - <https://www.jetbrains.com/pycharm/>

```
>>> print(42)          # <class 'int'>
42
>>> print(3.14)        # <class 'float'>
3.14
>>> print(1 + 2j)      # <class 'complex'>
(1+2j)
>>> print(True)         # <class 'bool'>
True
>>> print([1, 2, 3])    # <class 'list'>
[1, 2, 3]
>>> print((1, 2, 3))    # <class 'tuple'>
(1, 2, 3)
>>> print({'red', 'green', 'blue'})  # <class 'set'>
{'red', 'green', 'blue'}
>>> print({'name': 'Alice', 'age': 42}) # <class 'dict'>
{'name': 'Alice', 'age': 42}
>>> print('hello')       # <class 'str'>
hello
```

Prometheus Grafana Docker

Wednesday, September 18, 2019 8:23 PM

```
<Naga> sudo apt-get install prometheus prometheus-node-exporter prometheus-pushgateway prometheus-alertmanager -y
<acanubhav> https://www.javatpoint.com/docker-java-example
<acanubhav> https://www.callicoder.com/spring-boot-websocket-chat-example/
<acanubhav> https://www.callicoder.com/spring-boot-docker-example/
<sheeba> https://www.callicoder.com/spring-boot-websocket-chat-example/
<sheeba> https://www.callicoder.com/spring-boot-docker-example/
<Pardhu> git clone https://github.com/callicoder/spring-boot-websocket-chat-demo
<Pardhu> git clone https://github.com/callicoder/spring-boot-websocket-chat-demo
<acanubhav> https://spring-ws-chat.herokuapp.com/
<sheeba> git clone https://github.com/callicoder/spring-boot-websocket-chat-demo
<nishant> https://www.callicoder.com/spring-boot-docker-example/
<acanubhav> https://www.callicoder.com/spring-boot-docker-example/
<Pardhu> docker build -t spring-boot-websocket-chat-demo
<Pardhu> https://www.callicoder.com/spring-boot-docker-example/
<acanubhav-1> https://linuxize.com/post/how-to-install-apache-maven-on-ubuntu-18-04/
<acanubhav> wget https://www-us.apache.org/dist/maven/maven-3/3.6.0/binaries/apache-maven-3.6.0-bin.tar.gz -P /tmp
<acanubhav> sudo tar xf /tmp/apache-maven-3.6.0 /opt
<acanubhav> sudo ln -s /opt/apache-maven-3.6.0 /opt/maven
<acanubhav> sudo nano /etc/profile.d/maven.sh
<Pardhu> docker run -p 5000:8080 spring-boot-websocket-chat-demo
<nishant> mvn package -Dmaven.test.skip=true
<nishant> skip test cmd
<Pardhu> pardhu205 / spring-boot-websocket-chat-demo
<Pardhu> docker run -p 5000:8080 pardhu205/spring-boot-websocket-chat-demo:0.0.1-SNAPSHOT
<Naga> nb198421/springboot.1
<acanubhav> https://medium.com/swlh/dockerizing-spring-boot-application-df5ae7dd1e37
<acanubhav> https://www.callicoder.com/spring-boot-actuator/
<nishant> mvn clean package -Dmaven.test.skip=true
<acanubhav> https://github.com/callicoder/spring-boot-actuator-demo
<acanubhav> https://www.callicoder.com/spring-boot-actuator-metrics-monitoring-dashboard-prometheus-grafana/
<Pardhu> - job_name: 'spring-actuator'
metrics_path: '/actuator/prometheus'
scrape_interval: 5s
static_configs:
- targets: ['HOST_IP:8080']
<acanubhav> 10280
<acanubhav> 9845
<acanubhav> 6756
<Deepak> jvm_memory_used_bytes(area="nonheap",id="Code Cache")
<DH> dhanumansetty@deloitte.com
<Pardhu> https://transfer.pcloud.com/
<Naga> npanguluri@deloitte.com
<DH> https://transfer.pcloud.com/download.html?code=5ZPm1HkZuBd0fNdLhobZbbx2ZeyML6ScaN978WYDiu0f5h0bs02XX&label=Transfer%20-%20files%20sent%20%28to%20recipient%29
<acanubhav> sudo apt-get install prometheus prometheus-node-exporter prometheus-pushgateway prometheus-alertmanager -y
<Sumit> https://prometheus.io/download/
<acanubhav-1> https://github.com/prometheus/alertmanager/releases/download/v0.19.0/alertmanager-0.19.0.linux-amd64.tar.gz
<acanubhav> https://medium.com/@abhishekhardwaj510/alertmanager-integration-in-prometheus-197e03bfabdf
<acanubhav> pastebin.com/AAHTWUzL
<sheeba> pastebin.com/AAHTWUzL
<acanubhav-1> rule_files:
- 'alerts.yml'

alerting:
alertmanagers:
- scheme: http
path_prefix: /alertmanager
static_configs:
- targets: ['localhost:9093']
<Naga> npanguluri@deloitte.com
<acanubhav> https://transfer.pcloud.com/download.html?code=5ZkK1HkZcUoe59kRtP0ZYbx2ZDAnasTCCh1YRLVu2rJG3TypSh1q7&label=Transfer%20-%20files%20sent%20%28to%20recipient%29
<acanubhav> https://petargitnik.github.io/blog/2018/01/03/how-to-install-alertmanager-on-ubuntu-16.04
<Naga> https://pastebin.com/n8pvePpv
```

From <<https://www.chatcrypt.com/chat.html>>

<https://www.youtube.com/watch?v=nMLQgXf8tZ0> --> simple devops projects

install docker on linux:

<https://www.youtube.com/watch?v=KCckWweNSrM>

<https://docs.docker.com/v17.12/manuals/>

<https://docs.docker.com/v17.12/install/linux/docker-ee/rhel/>

<https://docs.docker.com/install/linux/docker-ee/rhel/#install-using-the-repository>

<https://docs.docker.com/install/linux/docker-ee/rhel/#prerequisites>

Training running notes

Wednesday, September 18, 2019 8:23 PM

consultanubhav@gmail.com
9510468956

Pastebin

```
Install OracleVMbox with unbuntu 64 bit and run the instance.(ubuntu/password)
update apt --> sudo apt-get update -y
install prometheus --> apt-get install prometheus
remove prometheus --> sudo apt-get remove prometheus
start the service(prometheus) --> sudo systemctl status prometheus; sudo systemctl stop/start prometheus
yaml file of prometheus --> cat /etc/prometheus/prometheus.yaml
prometheus runs on 9090 port. to check if the port is in use or not --> ss -tln
Install docker --> sudo apt install docker.io
start docker service --> sudo systemctl status/start/stop docker (or) sudo systemctl status/start/stop docker.service
now run 'docker ps' --> it shouldnt work as we installed docker with sudo permissions. to change it to service account, chnage the permision of chmod ubuntu:docker /var/run/docker.sock. Now 'docker ps' command will work with our sudo
install nginx 10 times(for i in {1..10};do echo "Naga";done) --> for i in {1..10};do docker run -dit nginx;done(dir - demon interactive terminal can use man docker for all abbreviations)
to know if 10 docker containers are running or not --> ipaddr | grep "docker" | wc -l
to run a container on docker with a specific name --> docker run --name naganginx -dit nginx
docker --version
now install apache on docker -->
docker pull httpd --> it will pull the httpd image
docker images - gives all the docker images on the current system
docker docker run -dit --name "apache1" httpd --> to instal apache httpd using docker
docker ps --> will the status of all runnig docker containers
docker ps -a --> will the status of all docker containers
docker exec -it apache1 ls (or) docker exec apache1 ls --> to run a shell command on the container
docker exec -it apache1 ls /run --> to run a shell command on the container
to remove a docker container --> docker stop <container_name>; docker rm <container_name> (or) docker rm -f <container_name>
docker info --> will provide all the detilas of the containers on the docker
installing python --> docker run -dit --name "python1" python
removing python --> docker rmi python
to remove a image --> docker rmi httpd(if any containe ris using it, it will be terminated in some time)
docker network ls --> to show the network types being used by the containers.
docker stats --> stats of the docker containers
docker history nginx --> will give the history of the docker image
docker logs <container_name> --> shows the log of that container
docker search hadoop --> will search all the images on the docker related to that string
to install a cAdvisor give the below command -->
sudo docker run \
--volume=/:/rootfs:ro \
--volume=/var/run:/var/run:ro \
--volume=/sys:/sys:ro \
--volume=/var/lib/docker:/var/lib/docker:ro \
--volume=/dev/disk:/dev/disk:ro \
--publish=8080:8080 \
--detach=true \
--name=cadvisor \
google/cadvisor:latest

now check the container/images: docker images;docker ps; curl -L 0.0.0.0:8080
also hit the same in the browser and check the stats of docker in Cadvisor
```

now we will do the same in prometheus by configuring the yml file:

```
tail -f /var/log/prometheus.log
```

to install grafana, give the below command:

```
apt-get install -y software-properties-common
sudo add-apt-repository "deb https://packages.grafana.com/oss/deb stable main"
wget -q -O - https://packages.grafana.com/gpg.key | sudo apt-key add -
sudo apt-get update
sudo apt-get install grafana
sudo systemctl status grafana-server.service
sudo systemctl enable grafana-server.service
sudo systemctl start grafana-server.service
```

```
add localhost:3000 to the prometheus yml file
and login in to grafana and add new datasource and add prometheus url;
```

```
to increase the load on the container:
docker exec <docker_ID> dd if=/dev/zero of=/dev/null
to check the stats use:
```

docker stats --> you will see the fluctuation in the cpu of that particular docker container.

TO install prometheus-node-exporter prometheus-pushgateway prometheus-alertmanager
sudo apt-get install prometheus prometheus-node-exporter prometheus-pushgateway prometheus-alertmanager -y

and to list the units:
sudo systemctl list-units

to import the prometheus dashboard in grafana --> go to manage - import - 159/3662(prometheus)1860(node exporter) 10280/9845/6756(springa)- load and give the name and select prometheus/node exporter and click on import

to run a query in grafana --> dashboard - add new query - give the command and click on add query.... it will show the graph on the top in prometheus --> graph - give the query and click ok and switch to graph tab below. you will see the graph

SECOND DAY:

javapoint.com/docker-java-example

sudo apt install maven
docker run openjdk
docker images

Prometheus.Alertmanager installation doc --> <https://medium.com/@abhishekhardwaj510/alertmanager-integration-in-prometheus-197e03bfabdf>

<https://www.javatpoint.com/docker-java-example> --> helloapp
<https://www.callicoder.com/spring-boot-websocket-chat-example/> --> chat site
<https://www.callicoder.com/spring-boot-docker-example/>
<https://spring-ws-chat.herokuapp.com/>
<https://www.callicoder.com/spring-boot-docker-example/>
<https://linuxize.com/post/how-to-install-apache-maven-on-ubuntu-18-04/> --> to install java, maven ...

alertmanager 9093
prometheus - 9090
cadvisor - 8080
grafana - 3000

sudo snap install prometheus-alertmanager --> to install alertmanager using snap

storej.io
medium.com
web 3.0

ref code:
<https://wazirx.com/invite/akvhdswc>

Terminal and browser history

Wednesday, September 18, 2019 9:02 PM

```
ubuntu1@ubuntu1-VirtualBox:~$ history
1 pwd
2 ss -tln
3 sudo systemctl list-units | grep "prometheus"
4 sudo systemctl list-units
5 sudo systemctl list-units | grep alert
6 sudo systemctl list-units
7 sudo apt-get update -y
8 whereis prometheus
9 sudo apt-get install prometheus
10 sudo apt-get status prometheus.service
11 sudo systemctl status prometheus.service
12 sudo systemctl enable prometheus.service
13 cd /etc/prometheus/
14 ll
15 vi prometheus.yml
16 cp prometheus.yml prometheus_bkp.yml
17 sudo cp prometheus.yml prometheus_bkp.yml
18 sudo tail -100f /var/log/prometheus/prometheus.log
19 sudo gedit /etc/prometheus/prometheus.yml
20 sudo systemctl stop prometheus.service
21 sudo systemctl status prometheus.service
22 sudo systemctl start prometheus.service
23 sudo systemctl status prometheus.service
24 sudo tail -100f /var/log/prometheus/prometheus.log
25 ll
26 sudo systemctl stop prometheus.service
27 cp prometheus_bkp.yml prometheus.yml
28 sudo cp prometheus_bkp.yml prometheus.yml
29 sudo systemctl start prometheus.service
30 sudo systemctl status prometheus.service
31 ss -tln
32 sudo app install docker.io
33 sudo apt install docker.io
34 ss -tln
35 sudo systemctl status docker.service
36 sudo docker run --volume=/:/rootfs:ro --volume=/var/run:/var/run:ro --volume=/sys:/sys:ro --volume=/var/lib/docker:/var/lib/docker:ro --volume=/dev/disk:/dev/disk:ro --publish=8080:8080 --detach=true --name=cadvisor google/cadvisor:latest
37 curl -L 0.0.0.0:8080
38 sudo apt-get install curl
39 curl -L 0.0.0.0:8080
40 sudo gedit /etc/prometheus/prometheus.yml
41 curl -L 0.0.0.0:8080
42 sudo systemctl restart prometheus.service
43 ss -tln
44 ping 10.0.2.15
45 scp prometheus.yml nishant@10.0.2.15:/etc/
46 ifconfig
47 sudo gedit /etc/prometheus/prometheus.yml
48 apt-get install -y software-properties-common
49 sudo apt-get install -y software-properties-common
50 sudo add-apt-repository "deb https://packages.grafana.com/oss/deb stable main"
51 wget -q -O - https://packages.grafana.com/gpg.key | sudo apt-key add -
52 sudo apt-get update
53 sudo apt-get install grafana
54 sudo systemctl status grafana-server.service
55 sudo systemctl enable grafana-server.service
56 sudo systemctl start grafana-server.service
57 sudo systemctl status grafana-server.service
58 sudo gedit /etc/prometheus/prometheus.yml
59 sudo systemctl restart prometheus.service
60 sudo systemctl status prometheus.service
61 ss -tln
62 docker ps
63 sudo docker ps
64 sudo docker exec ccac19f8ed40 dd if=/dev/zero of=/dev/n
65 sudo docker exec ccac19f8ed40 dd if=/dev/zero of=/dev/null
66 sudo apt-get install prometheus prometheus-node-exporter prometheus-pushgateway prometheus-alertmanager -y
67 sudo gedit /etc/prometheus/prometheus.yml
68 sudo systemctl restart prometheus.service
69 ss -tln
70 ifconfig
71 hostname -i
72 hostname
73 cd /
74 ls
75 cd /opt/
76 mkdir spring-boot-websocket
77 sudo mkdir spring-boot-websocket
78 cd spring-boot-websocket
```

```

79 git clone https://github.com/callicoder/spring-boot-websocket-chat-demo
80 sudo git clone https://github.com/callicoder/spring-boot-websocket-chat-demo
81 sudo apt install maven
82 sudo git clone https://github.com/callicoder/spring-boot-websocket-chat-demo
83 sudo docker run openjdk
84 java
85 java --version
86 docker images
87 docker images
88 sudo docker images
89 docker pull httpd
90 sudo docker pull httpd
91 sudo docker pull nginx
92 sudo chown ubuntu1:docker /var/run/docker.sock
93 docker images
94 mvn -version
95 sudo apt install git
96 sudo git clone https://github.com/callicoder/spring-boot-websocket-chat-demo
97 docker ps
98 docker images
99 docker images ls
100 docker exec images ls
101 sudo mvn clean package
102 ls
103 locate downloads
104 locate download
105 cd /home/ubuntu1
106 cd /home/ubuntu1/Downloads/spring-boot-websocket-chat-demo-master
107 ls
108 sudo mvn clean package
109 which java
110 java --version
111 java -version
112 echo $JAVA_HOME
113 env
114 env | grep -i java
115 env | grep -i "java"
116 sudo apt install default-jdk
117 java -version
118 javac
119 sudo wget https://www-us.apache.org/dist/maven/maven-3/3.6.0/binaries/apache-maven-3.6.0-bin.tar.gz -P /tmp
120 sudo mvn clean package
121 docker build -t spring-boot-websocket-chat-demo
122 docker build -t spring-boot-websocket-chat-demo-master
123 docker build -t spring-boot-websocket-chat-demo-master .
124 docker images
125 docker run -p 8181:8181 spring-boot-websocket-chat-demo-master
126 docker run -p 5000:8181 spring-boot-websocket-chat-demo-master
127 docker run -p 5000:8080 spring-boot-websocket-chat-demo-master
128 docker run -p 5000:8080 pardhu205/spring-boot-websocket-chat-demo:0.0.1-SNAPSHOT
129 sudo docker run -p 5000:8080 pardhu205/spring-boot-websocket-chat-demo:0.0.1-SNAPSHOT
130 sudo docker run -p 5000:8080 nb198421/springboot.1
131 sudo docker run -p 5000:8080 insure91/spring-boot-websocket-chat-demo:0.0.1-SNAPSHOT
132 docker push nb198421/springboot.1
133 cd /opt/
134 mkdir java-docker-app
135 sudo mkdir java-docker-app
136 cd java-docker-app/
137 vi Hello.java
138 sudo vi Hello.java
139 ll
140 sudo vi dockerfile
141 docker build -t java-app .
142 docker run java-app
143 ss -tln
144 spring init -d=web,actuator -n=actuator-demo actuator-demo
145 cd /home/ubuntu1/
146 cd /home/ubuntu1/
147 ls
148 cd Downloads/
149 ls
150 ll
151 cd spring-boot-websocket-chat-demo-master/
152 ll
153 spring init -d=web,actuator -n=actuator-demo actuator-demo
154 sudo gedit pom.xml
155 sudo mvn clean
156 sudo mvn clean package -Dmaven.test.skip=true
157 docker build -t spring .
158 docker run -p 5000:8080 spring
159 sudo mvn clean
160 sudo mvn clean package -Dmaven.test.skip=true
161 docker run -p 5000:8080 spring
162 sudo vi application.properties
163 ll

```

```

164 sudo vi application.properties
165 ;ll
166 ll
167 sudo vi application.properties
168 ll
169 sudo
177 application.properties
170 sudo mvn clean
171 sudo mvn clean package -Dmaven.test.skip=true
172 docker build -t spring .
173 docker run -p 5000:8080 spring
174 cd ../
175 ll
176 cd spring-boot-actuator-demo-master/
177 ll
178 sudo mvn clean
179 sudo mvn clean package
180 cd target/
181 ll
182 pwd
183 cd ../../
184 ll
185 cd spring-boot-websocket-chat-demo-master/
186 ll
187 cd -
188 cd spring-boot-actuator-demo-master/
189 sudo mvn clean
190 sudo mvn clean package
191 docker build -t springa .
192 docker run -p 5000:8080 springa
193 docker pull prom/prometheus
194 docker image ls
195 sudo cd /etc/prometheus/
196 ll
197 sudo cd /etc/prometheus/
198 ll
199 cd /etc/prometheus/
200 ll
201 cp prometheus.yml prometheus_bkp1.yml
202 sudo cp prometheus.yml prometheus_bkp1.yml
203 sudo gedit prometheus.yml
204 sudo systemctl stop prometheus.service
205 sudo systemctl stop prometheus.service
206 sudo systemctl start prometheus.service
207 sudo systemctl status prometheus.service
208 systemctl list-units | grep "alert"
209 systemctl list-units
210 systemctl list-units | grep "alert"
211 systemctl list-units
212 sudo apt-get install prometheus-alertmanager -y
213 sudo apt-get install prometheus-alertmanager
214 systemctl list-units | grep "prometheus"
215 sudo apt cache search prometheus
216 sudo apt-cache search prometheus
217 sudo apt update
218 sudo apt-cache search prometheus
219 sudo apt list --upgradable
220 sudo apt-cache search prometheus
221 wget https://github.com/prometheus/alertmanager/releases/download/v0.19.0/alertmanager-0.19.0.linux-amd64.tar.gz
222 wget https://github.com/prometheus/alertmanager/releases/download/v0.19.0/alertmanager-0.19.0.linux-amd64.tar.gz --no-check-certificate
223 sudo wget https://github.com/prometheus/alertmanager/releases/download/v0.19.0/alertmanager-0.19.0.linux-amd64.tar.gz --no-check-certificate
224 ll
225 tar -xvf alertmanager-0.19.0.linux-amd64.tar.gz
226 sudo tar -xvf alertmanager-0.19.0.linux-amd64.tar.gz
227 ll
228 cd alertmanager-0.19.0.linux-amd64/
229 ll
230 cd alertmanger
231 ll
232 ./alertmanager
233 sudo ./alertmanager
234 cd ../
235 sudo mv alertmanager-0.19.0.linux-amd64/alertmanager /usr/local/bin/
236 cd /usr/local/bin/
237 ll
238 mkdir /etc/alertmanager/
239 sudo mkdir /etc/alertmanager/
240 vim /etc/alertmanager/alertmanager.yml
241 sudo vi /etc/alertmanager/alertmanager.yml
242 docker stats
243 sudo docker stats
244 docker ps
245 cd /var/log/
246 ls
247 cd ../

```

```

248 ls
249 cd ../
250 docker ps
251 docker stop ccac19f8ed40
252 docker ps
253 docker images ls
254 docker image ls
255 docker container ls
256 docker login
257 docker tag spring-boot-websocket-chat-demo-master nb198421/springboot.1
258 docker container ls
259 docker image ls
260 sudo docker run -p 5000:8080 insure91/spring-boot-websocket-chat-demo:0.0.1-SNAPSHOT
261 pwd
262 cd /home/ubuntu1/Downloads/
263 ll
264 cd spring-boot-websocket-chat-demo-master/
265 sudo vi application.properties
266 sudo systemctl stop prometheus.service
267 sudo systemctl start prometheus.service
268 sudo systemctl status prometheus.service
269 sudo systemctl stop prometheus.service
270 sudo systemctl start prometheus.service
271 sudo systemctl status prometheus.service
272 sudo systemctl stop prometheus.service
273 sudo systemctl start prometheus.service
274 sudo systemctl status prometheus.service
275 sudo systemctl stop prometheus.service
276 sudo systemctl start prometheus.service
277 sudo systemctl status prometheus.service
278 cd ../
279 cd spring-boot-actuator-demo-master/
280 docker run -p 5000:8000 springa
281 docker run -p 5000:8080 springa
282 pwd
283 ll
284 sudo cp prometheus.yml prometheus_bkp2.yml
285 sudo gedit prometheus.yml
286 sudo systemctl stop prometheus.service
287 sudo systemctl start prometheus.service
288 sudo systemctl status prometheus.service
289 ll
290 sudo cp prometheus_bkp2.yml prometheus.yml
291 sudo systemctl stop prometheus.service
292 sudo systemctl start prometheus.service
293 sudo systemctl status prometheus.service
294 sudo systemctl stop prometheus.service
295 sudo gedit prometheus.yml
296 history
297 cd /etc/alertmanager/
298 ll
299 cd /var/log/prometheus
300 tail -100f prometheus.log
301 cd ../
302 cd alertmanager/
303 ll
304 cd /usr/local/bin/
305 ll
306 ./alertmanager
307 sudo ./alertmanager
308 pwd
309 cd /etc/
310 ll
311 cd prometheus/
312 ll
313 sudo cp alertmanager-0.19.0.linux-amd64.tar.gz /etc/alertmanager/
314 cd ../alertmanager/
315 ll
316 tar -xvf alertmanager-0.19.0.linux-amd64.tar.gz
317 sudo tar -xvf alertmanager-0.19.0.linux-amd64.tar.gz
318 ll
319 cd alertmanager-0.19.0.linux-amd64/
320 ll
321 cd ..\/
322 cd ../
323 ll
324 sudo cp alert.yaml alertmanager-0.19.0.linux-amd64
325 cd alertmanager-0.19.0.linux-amd64/
326 ll
327 sudo ./alertmanager
328 ll
329 sudo cp alert.yaml /etc/prometheus/
330 ss -tln
331 sudo systemctl stop prometheus-alertmanager
332 sudo systemctl stop prometheus-alertmanager.alertmanager

```

```
333 sudo systemctl stop prometheus-alertmanager.alertmanager.service
334 ps -ef|grep alertmanager
335 sudo systemctl stop alertmanager
336 sudo systemctl stop prometheus-alertmanager.alertmanager.service
337 sudo systemctl status snap.prometheus-alertmanager.alertmanager.service
338 sudo systemctl stop snap.prometheus-alertmanager.alertmanager.service
339 sudo systemctl status snap.prometheus-alertmanager.alertmanager.service
340 sudo systemctl start snap.prometheus-alertmanager.alertmanager.service
341 sudo systemctl status snap.prometheus-alertmanager.alertmanager.service
342 sudo vi /etc/alertmanager/alert.yml
343 sudo vi /etc/alertmanager/alertmanager.yml
344 cd /etc/alertmanager/
345 ll
346 rm .alertmanager.yml.swp
347 sudo rm .alertmanager.yml.swp
348 ll
349 cat alert.yml
350 cd ../prometheus/
351 sudo gedit prometheus.yml
352 sudo systemctl stop prometheus.service
353 sudo systemctl start prometheus.service
354 sudo systemctl status prometheus.service
355 sudo systemctl stop prometheus.service
356 sudo systemctl start prometheus.service
357 sudo systemctl status prometheus.service
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408 sudo systemctl stop prometheus.service
409 sudo systemctl start prometheus.service
410 sudo systemctl status prometheus.service
411 sudo systemctl stop prometheus.service
412 sudo systemctl start prometheus.service
413 sudo systemctl status prometheus.service
414 sudo systemctl stop prometheus.service
415 sudo systemctl start prometheus.service
416 sudo systemctl status prometheus.service
417 sudo systemctl stop prometheus.service
```

```

418 sudo systemctl start prometheus.service
419 sudo systemctl status prometheus.service
420 sudo systemctl stop prometheus.service
421 ll
422 cp prometheus_bkp2.yml prometheus.yml
423 sudo cp prometheus_bkp2.yml prometheus.yml
424 ss -tln
425 ps -ef|grep 9094
426 sudo systemctl stop prometheus.service
427 sudo systemctl start prometheus.service
428 sudo systemctl status prometheus.service
429 ping sheeba-virtualBox
430 ping sheeba-VirtualBox
431 ping 103.76.233.129
432 ps -ef|grep snap
433 sudo snap install prometheus-alertmanager
434 sudo systemctl list-units | grep alert
435 ss -tln
436 ll
437 sudo cp alert.yml alert_bkp.yml
438 cd ..../alertmanager/
439 ll
440 cd alertmanager-0.19.0.linux-amd64/
441 ll
442 sudo cp alertmanager.yml alertmanager_bkp.yml
443 cd /
444 ll
445 ls
446 cd /etc/prometheus/
447 ls
448 ls
449 rm prometheus.yml alert.yml
450 sudo rm prometheus.yml alert.yml
451 sudo cp /home/ubuntu1/Downloads/*.yml .
452 ls
453 ss -tln
454 sudo systemctl status prometheus.service
455 sudo systemctl restart prometheus.service
456 sudo systemctl status prometheus.service
457 gedit prometheus.yml
458 sudo systemctl status prometheus.service
459 sudo systemctl restart prometheus.service
460 sudo systemctl status prometheus.service
461 sudo systemctl restart prometheus.service
462 sudo systemctl status prometheus.service
463 ls
464 gedit prometheus
465 gedit prometheus.yml
466 sudo gedit prometheus.yml
467 sudo systemctl restart prometheus.service
468 sudo systemctl status prometheus.service
469 sudo systemctl restart prometheus.service
470 sudo systemctl status prometheus.service
471 sudo gedit prometheus.yml
472 sudo adduser user1 vboxsf
473 sudo adduser ubuntu1 vboxsf
474 history
477 docker ps -a
478 docker port static-site
479 docker port
480 docker port statis-site
481 docker port prakhar1989/static-site
482 docker ps -a
483 docker port prakhar1989/static-site
484 docker stop statis-site
485 docker ps -a
486 docker rm $(docker ps -a -q -f status=exited)
487 docker ps -a
488 docker pull ubuntu:18.04
489 docker omages
490 docker images
491 pwd
492 git clone https://github.com/prakhar1989/docker-curriculum.git
493 sudo git clone https://github.com/prakhar1989/docker-curriculum.git
494 wget https://github.com/prakhar1989/docker-curriculum.git
495 wget https://github.com/prakhar1989/docker-curriculum.git --no-check-certificate
496 ll
497 cd docker-curriculum.git
498 pwd
499 docker ps -a
500 docker port 1786e9e06929
501 cd /opt/FoodTrucks-master/
502 ls
503 vi Dockerfile
504 docker build -t nb198421/foodtruck

```

```
505 docker build -t nb198421/foodtruck .
506 docker run -P --rm nb198421/foodtruck
507 docker network ls
508 docker network inspect bridge
509 history
510 history
511 docker run -it --rm nb198421/foodtruck bash
512 docker network create foodtruck-net
513 docker network ls
514 docker container stop es
515 docker container ls
516 docker ps -a
517 docker container rm es
518 docker run -d --name es --net foodtrucks-net -p 9200:9200 -p 9300:9300 -e "discovery.type=single-node" docker.elastic.co/elasticsearch/elasticsearch:6.3.2
519 docker run -d --name es --net foodtruck-net -p 9200:9200 -p 9300:9300 -e "discovery.type=single-node" docker.elastic.co/elasticsearch/elasticsearch:6.3.2
520 docker container stop es
521 docker container rm es
522 docker run -d --name es --net foodtruck-net -p 9200:9200 -p 9300:9300 -e "discovery.type=single-node" docker.elastic.co/elasticsearch/elasticsearch:6.3.2
523 docker network inspect foodtrucks-net
524 docker network inspect foodtruck-net
525 docker run -it --rm --net foodtruck-net nb198421/foodtruck bash
526 docker container ls
527 docker run -d --net foodtruck-net -p 5000:5000 --name foodtrunk1 nb198421/foodtruck
528 docker container ls
529 curl -I 0.0.0.0:5000
530 ll
531 cat setup-docker.sh
532 exit
533 du -sh .
534 sudo du -sh .
535 sudo du -sh
536 sudo docker ps -a
537 docker rm 7012b9519990
538 sudo docker rm 7012b9519990
539 sudo docker rm f38353bd9dde
540 sudo docker ps -a
541 docker rm ${ps -a -q -f status=exited}
542 sudo docker rm ${docker ps -a -q -f status=exited}
543 sudo docker rm ${docker ps -a -q -f status=exited}
544 sudo docker rm ${docker ps -a -q -f status=exited}
545 sudo docker ps -a
546 sudo docker container prune
547 sudo docker ps -a
548 sudo chown ubuntu1:docker /var/run/docker.
549 sudo chown ubuntu1:docker /var/run/docker.sock
550 docker rm ${docker ps -a -q -f status=exited}
551 docker ps -a
552 docker run --rm prakhar1989/static-site
553 docker run -d -p --name statis-site prakhar1989/static-site
554 docker run -d -P --name statis-site prakhar1989/static-site
555 docker run -p 8888:80 prakhar1989/static-site
556 cd /opt/
557 cd ../
558 sudo chmod -R 777 /opt/
559 wget https://github.com/prakhar1989/FoodTrucks --no-check-certificate
560 ll
561 cd /opt/
562 wget https://github.com/prakhar1989/FoodTrucks --no-check-certificate
563 ll
564 cd FoodTrucks
565 ll
566 unzip FoodTrucks-master.zip
567 ll
568 cd FoodTrucks-master/
569 ls
570 tree -l
571 tree -L 2
572 sudo apt install tree
573 tree
574 tree -L 2
575 tree -L 1
576 tree -L 3
577 tree -L 4
578 tree -L 2
579 docker search websphere liberty
580 docker search websphere
581 docker search elasticsearch
582 docker pull elasticsearch
583 docker pull docker.elastic.co/elasticsearch/elasticsearch:6.3.2
584 docker run -d --name es -p 9200:9200 -p 9300:9300 -e "discovery.type=single-node" docker.elastic.co/elasticsearch/elasticsearch:6.3.2
585 docker container list
586 docker container list
587 docker container logs 1101cb0365f4
588 curl -L 0.0.0.0:9200
589 docker container logs --follow 1101cb0365f4
```

```

590 man docker
591 exit
592 sudo systemctl status docker
593 sudo docker run hello-world
594 ss -tln
595 sudo systemctl status snap.prometheus-alertmanager.alertmanager.service
596 sudo systemctl stop snap.prometheus-alertmanager.alertmanager.service
597 sudo systemctl status snap.prometheus-alertmanager.alertmanager.service
598 ss -tln
599 sudo docker pull bustbox
600 sudo docker pull busybox
601 sudo docker pull busybox
602 docker images
603 sudo docker images
604 sudo docker run busybox echo "Hello World!"
605 sudo docker run busybox echo "Hello World!"
606 docker ps -
607 docker ps
608 sudo docker ps
609 sudo docker ps -a
610 sudo docker run -it busybox sh
611 cd /home/ubuntu1/Downloads/
612 ls
613 sudo cp -r docker-curriculum-master /opt/
614 cd /opt/
615 cd docker-curriculum-master/
616 sudo cd docker-curriculum-master/
617 ll
618 sudo chmod -R 777 docker-curriculum-master/
619 cd docker-curriculum-master/
620 ll
621 cd flask-app/
622 docker build -t nb198421/catnip
623 docker build -t nb198421/catnip .
624 docker run -p 8888:5000 nb198421/catnip
625 history
626 exit
627 history

```

browser history

<https://pastebin.com/n8pvePpv>
<https://pastebin.com/>
<https://www.google.com/search?client=ubuntu&channel=fs&q=pastebin&ie=utf-8&oe=utf-8>
https://accounts.google.com/signin/v2/identifier?continue=https%3A%2F%2Fmail.google.com%2Fmail%2F&service=mail&sacu=1&rip=1&f_lowName=GifWebSignIn&flowEntry=ServiceLogin
<https://accounts.google.com/ServiceLogin?continue=https%3A%2F%2Fmail.google.com%2Fmail%2F&service=mail&sacu=1&rip=1>
<https://www.google.com/intl/en-GB/gmail/about/>
<https://www.google.com/search?client=ubuntu&channel=fs&q=gmail&ie=utf-8&oe=utf-8>
<http://localhost:9093/#/alerts>
<http://localhost:9093/>
<https://api.pcloud.com/getpubzip>
<https://transfer.pcloud.com/download.html?code=5ZkK1HkZcUoe59kRtP0ZYbx2ZDAnasTCCh1YRLVu2rJG3TypSh1q7&label=Transfer%20-%20files%20sent%20%28to%20recipient%29>
<https://pastebin.com/AAHTWUzL>
<https://medium.com/@abhishekhardwaj510/alertmanager-integration-in-prometheus-197e03bfabdf>
<http://localhost:3000/dashboard/new?tab=queries&panelId=2&edit&fullscreen&orgId=1&refresh=5s&from=now-5m&to=now>
<http://localhost:3000/dashboard/new?tab=visualization&panelId=2&edit&fullscreen&orgId=1&refresh=5s&from=now-5m&to=now>
<http://localhost:5000/actuator/prometheus>
<http://localhost:3000/dashboard/new?panelId=2&edit&fullscreen&orgId=1&refresh=5s&from=now-5m&to=now>
<http://localhost:3000/dashboard/new?panelId=2&edit&fullscreen&orgId=1&refresh=5s>
<http://localhost:3000/dashboard/new?panelId=2&edit&fullscreen&orgId=1>
<http://localhost:3000/dashboard/new?orgId=1>
<http://localhost:3000/?orgId=1>
<http://localhost:3000/>
http://localhost:3000/d/spring_boot_21/spring-boot-2-1-statistics?orgId=1&from=now-5m&to=now&refresh=30s
http://localhost:3000/d/spring_boot_21/spring-boot-2-1-statistics?orgId=1&from=now-5m&to=now&refresh=5s
http://localhost:3000/d/spring_boot_21/spring-boot-2-1-statistics?orgId=1&from=now-5m&to=now
http://localhost:3000/d/spring_boot_21/spring-boot-2-1-statistics?orgId=1
http://localhost:3000/d/spring_boot_21/spring-boot-2-1-statistics
<http://localhost:3000/dashboard/import>
<http://localhost:3000/dashboards>
<http://localhost:3000/d/000000001/actuator?orgId=1&refresh=30s&from=now-5m&to=now>
<http://localhost:3000/d/000000001/actuator?orgId=1&refresh=30s&from=now-5m&to=now&fullscreen&edit&panelId=18>
<http://localhost:3000/d/000000001/actuator?orgId=1&refresh=30s>
<http://localhost:3000/d/000000001/actuator/orgId=1>
<http://localhost:3000/actuator>
<http://localhost:3000/datasources/edit/4/?gettingstarted>
<http://localhost:3000/datasources/edit/4?gettingstarted>

<http://localhost:3000/datasources/new?gettingstarted>
[http://localhost:3000/d/1AtOGmpWk/prometheus-2-0-overview-3662?orgId=1&refresh=5s](http://localhost:3000/d/1AtOGmpWk/prometheus-2-0-overview-3662?orgId=1&refresh=5s&var-job>All&var-instance>All&var-interval=1h)
<http://localhost:3000/d/1AtOGmpWk/prometheus-2-0-overview-3662?orgId=1>
<http://localhost:3000/d/1AtOGmpWk/prometheus-2-0-overview-3662>
<http://localhost:3000/d/000000001/prometheus-system?orgId=1&refresh=5s>
<http://localhost:3000/d/000000001/prometheus-system>
<http://localhost:3000/datasources/edit/3/?gettingstarted>
<http://localhost:3000/datasources/edit/3?gettingstarted>
<http://localhost:3000/d/10DxVmtWk/node-exporter-server-metrics?orgId=1>
[http://localhost:9090/graph#%5B%7B%22range_input%22%3A%221h%22%2C%22end_input%22%3A%22%22%2C%22step_input%22%3A%22%22%2C%22stacked%22%3A%22%22%2C%22expr%22%3A%22%22%2C%22tab%22%3A1%7D%5D](http://localhost:9090/graph#%5B%7B%22range_input%22%3A%221h%22%2C%22end_input%22%3A%22%22%2C%22step_input%22%3A%22%22%2C%22st_acked%22%3A%22%22%2C%22expr%22%3A%22tomcat_global_request_seconds_count%22%2C%22tab%22%3A0%7D%2C%7B%22range_input%22%3A%221h%22%2C%22end_input%22%3A%22%22%2C%22step_input%22%3A%22%22%2C%22stacked%22%3A%22%22%2C%22expr%22%3A%22%22%2C%22tab%22%3A1%7D%5D)
[http://localhost:9090/graph#%5B%7B%22range_input%22%3A%221h%22%2C%22end_input%22%3A%22%22%2C%22step_input%22%3A%22%22%2C%22st_acked%22%3A%22%22%2C%22expr%22%3A%22%22%2C%22tab%22%3A1%7D%5D](http://localhost:9090/graph#%5B%7B%22range_input%22%3A%221h%22%2C%22end_input%22%3A%22%22%2C%22step_input%22%3A%22%22%2C%22st_acked%22%3A%22%22%2C%22expr%22%3A%22%22tomcat_global_request_seconds_count%22%2C%22tab%22%3A1%7D%5D)
http://localhost:9090/graph#%5B%7B%22range_input%22%3A%221h%22%2C%22end_input%22%3A%22%22%2C%22step_input%22%3A%22%22%2C%22st_acked%22%3A%22%22%2C%22expr%22%3A%22%22%2C%22tab%22%3A1%7D%5D
http://localhost:9090/graph#%5B%7B%22range_input%22%3A%221h%22%2C%22end_input%22%3A%22%22%2C%22step_input%22%3A%22%22%2C%22st_acked%22%3A%22%22%2C%22expr%22%3A%22%22%2C%22tab%22%3A1%7D%5D
<http://localhost:5000/actuator>
<http://localhost:5000/>
<http://localhost:5000/actuator/>
<http://localhost:9090/graph>
http://localhost:9090/graph#%5B%7B%22range_input%22%3A%221h%22%2C%22end_input%22%3A%22%22%2C%22step_input%22%3A%22%22%2C%22st_acked%22%3A%22%22%2C%22expr%22%3A%22%22%2C%22container_cpu_usage_seconds_total%22%2C%22tab%22%3A0%7D%5D
<https://www.callicoder.com/spring-boot-actuator-metrics-monitoring-dashboard-prometheus-grafana/>
<http://localhost:5000/actuator/health>
<https://codeload.github.com/callicoder/spring-boot-actuator-demo/zip/master>
<https://github.com/callicoder/spring-boot-actuator-demo>
<file:///home/ubuntu1/Downloads/spring-boot-websocket-chat-demo-master/pom.xml>
<https://www.callicoder.com/spring-boot-actuator/>
<https://medium.com/swlh/dockerizing-spring-boot-application-df5ae7dd1e37>
<https://hub.docker.com/search/?type=image>
<https://hub.docker.com/search/>
<http://hub.docker.com/search/>
<https://hub.docker.com/search/?q=%>
<https://hub.docker.com/search/?namespace=nb198421>
<http://hub.docker.com/search/?namespace=nb198421>
<https://cloud.docker.com/u/nb198421/repository/list>
<https://hub.docker.com/>
https://id.docker.com/login/?next=%2Fid%2Foauth%2Fauthorize%2F%3Fclient_id%3D43f17c5f-9ba4-4f13-853d-9d0074e349a%726next%3Dhttps%253A%252F%252Fhub.docker.com%26nonce%
3DeyJhbGciOiJIUzI1NilsInR5cCl6IkpxVCJ9.eyJhdWQOii0M2YxN2M1Zi05YmE0LTRnMTMtODUzC05ZDAwNzRIMzQ5YTciLCleHaiOiE1Njg3ODQ5NDUsImIhdCI6MTU2ODc4NDY0NSwicmZwiiloVlhCb25RWXm3dGFIMHJMREFZLUIkUT09liwidGFyZ2V0X2xpbtmtfdXJpljoiaHR0cHM6Ly9odWluZG9ja2VyLmNvbSJ9.rCPlerlfNBkols33pSwylYtOJXeUfmTzQzw p12QcCn8%26redirect_uri%3Dhttps%253A%252F%252Fhub.docker.com%252Fss%252Fcallback%26response_type%3Dcode%26scope%3Dopenid%26state%
3DeyJhbGciOiJIUzI1NilsInR5cCl6IkpxVCJ9.eyJhdWQOii0M2YxN2M1Zi05YmE0LTRnMTMtODUzC05ZDAwNzRIMzQ5YTciLCleHaiOiE1Njg3ODQ5NDUsImIhdCI6MTU2ODc4NDY0NSwicmZwiiloVlhCb25RWXm3dGFIMHJMREFZLUIkUT09liwidGFyZ2V0X2xpbtmtfdXJpljoiaHR0cHM6Ly9odWluZG9ja2VyLmNvbSJ9.rCPlerlfNBkols33pSwylYtOJXeUfmTzQzw p12QcCn8%26redirect_uri%3Dhttps%253A%252F%252Fhub.docker.com%252Fss%252Fcallback%26response_type%3Dcode%26scope%3Dopenid%26state%
<https://id.docker.com/reset-password/?service=43f17c5f-9ba4-4f13-853d-9d0074e349a7>
https://id.docker.com/login/?next=%2Fid%2Foauth%2Fauthorize%2F%3Fclient_id%3D43f17c5f-9ba4-4f13-853d-9d0074e349a%726nonce%
3DeyJhbGciOiJIUzI1NilsInR5cCl6IkpxVCJ9.eyJhdWQOii0M2YxN2M1Zi05YmE0LTRnMTMtODUzC05ZDAwNzRIMzQ5YTciLCleHaiOiE1Njg3ODQ4NTgsImIhdCI6MTU2ODc4NDU1OCwicmZwiobncxeWIIxy12TU5wZm0Y2Y1cxVDFPz09liwidGFyZ2V0X2xpbtmtfdXJpljoiaHR0cHM6Ly9odWluZG9ja2VyLmNvbSJ9.AMW_aFlml_tSLzSMUij8kk8sLi3r2VOQ4i7_o_h2DQFO%26redirect_uri%3Dhttps%253A%252F%252Fhub.docker.com%252Fss%252Fcallback%26response_type%3Dcode%26scope%3Dopenid%26state%
3DeyJhbGciOiJIUzI1NilsInR5cCl6IkpxVCJ9.eyJhdWQOii0M2YxN2M1Zi05YmE0LTRnMTMtODUzC05ZDAwNzRIMzQ5YTciLCleHaiOiE1Njg3ODQ4NTgsImIhdCI6MTU2ODc4NDU1OCwicmZwiobncxeWIIxy12TU5wZm0Y2Y1cxVDFPz09liwidGFyZ2V0X2xpbtmtfdXJpljoiaHR0cHM6Ly9odWluZG9ja2VyLmNvbSJ9.AMW_aFlml_tSLzSMUij8kk8sLi3r2VOQ4i7_o_h2DQFO%26redirect_uri%3Dhttps%253A%252F%252Fhub.docker.com%252Fss%252Fcallback%26response_type%3Dcode%26scope%3Dopenid%26state%
<https://www.callicoder.com/spring-boot-websocket-chat-example/>
<https://github.com/callicoder/spring-boot-actuator-demo>

Sharing file between vmbox and local

Wednesday, September 18, 2019 9:03 PM

Click on devices from the menu and click on install guest addition cd image
then give the below command

Sudo adduser <currentuser> vboxsf

on vmware go to settings and share folders and click on add folder icon and browser for the folder on windows and check mark auto mount and click on ok.

once done go ubuntu and give below command

Sudo reboot

after reboot, go to /media in which you can see the shared folder.

3 rd day

Thursday, September 19, 2019 5:07 PM

docker rm \$(docker ps -a -q -f status=exited) (or) docker container prune --> it will remove all the containers which are in exit state

git clone <https://github.com/prakhar1989/docker-curriculum.git>

<https://github.com/prakhar1989/FoodTrucks>

<https://docker-curriculum.com/>

hub.docker.co/elasticsearch --> to search any image link

docker run -d --name es -p 9200:9200 -p 9300:9300 -e "discovery.type=single-node" docker.elastic.co/elasticsearch/elasticsearch:6.3.2

<https://codelabs.developers.google.com/codelabs/cloud-springboot-kubernetes/#0> --> kubernetes on GCP

ninth-library-253404

```
gcloud beta container --project "<your project ID>" \
clusters create "prometheus-demo-cluster" \
--zone "<desired zone>" \
--cluster-version "latest" \
--enable-stackdriver-kubernetes
```

```
gcloud container clusters create hello-java-cluster \
--num-nodes 2 \
--machine-type n1-standard-1 \
--zone us-central1-c
```

<https://medium.com/htc-research-engineering-blog/monitoring-kubernetes-clusters-with-grafana-e2a413febefd> --> kubernetes with grafana
<https://github.com/giantswarm/prometheus> --> prometheus steps

```
export KUBE_NAMESPACE=prometheus
export KUBE_CLUSTER=prometheus-demo-cluster
export GCP_REGION=us-central1-c
export GCP_PROJECT=<my project ID>
export DATA_DIR=/prometheus/
export DATA_VOLUME=prometheus-storage-volume
export SIDECAR_IMAGE_TAG=release-0.3.2
```

```
export KUBE_NAMESPACE=prometheus
export KUBE_CLUSTER=prometheus-demo-cluster
export GCP_REGION=us-central1-c
export DATA_DIR=/prometheus/
export DATA_VOLUME=prometheus-storage-volume
export SIDECAR_IMAGE_TAG=release-0.3.2
```

<https://docker-curriculum.com/> --> docker hello world app, busybox, flaskapp, food truck, elasticsearch, accessing 2 containers by creating network

<https://codelabs.developers.google.com/codelabs/cloud-springboot-kubernetes/#5> --> creating kubernetes cluster. deploying hello app, allow external traffic, scaling, disable auto upgrade for kubernetes and roll back app changes.

<https://medium.com/google-cloud/prometheus-and-stackdriver-fb8f7524ece0> --> creating kubernetes cluster for prometheus and stackdrive

<https://medium.com/@valyala/promql-tutorial-for-beginners-9ab455142085> and <https://timber.io/blog/promql-for-humans/> --> prometheus query language details

CHATCRYTP(3 rd day):

```
<acanubhav> https://docker-curriculum.com/
<acanubhav> https://cloud.google.com/billing/docs/how-to/modify-project
<sheeba> docker rm $(docker ps -a -q -f status=exited)
<acanubhav> wget https://github.com/prakhar1989/docker-curriculum.git
<acanubhav> wget https://github.com/prakhar1989/docker-curriculum/archive/master.zip
<acanubhav> https://github.com/prakhar1989/FoodTrucks
<acanubhav> https://www.elastic.co/guide/en/elasticsearch/reference/6.4/docker.html
<acanubhav>
https://codelabs.developers.google.com/codelabs/cloud-springboot-kubernetes/#0
<NAGA> http://34.69.147.53:8080/
```

```

<Sumit> http://35.232.107.243:8080/
<pardhu> http://34.66.172.203:8080/
<Nishant> 34.70.157.85
<raj> http://34.66.158.216:8080/
<acanubhav> https://medium.com/google-cloud/prometheus-and-stackdriver-fb8f7524ece0
<acanubhav> gcloud beta container --project prometheus01" \
clusters create "prometheus-demo-cluster" \
--zone us-central1-c \
--cluster-version "latest" \
--enable-stackdriver-kubernetes
<acanubhav> 1
git clone https://github.com/bibinwilson/kubernetes-prometheus
<acanubhav> ACCOUNT=$(gcloud info --format='value(config.account)')
<acanubhav> git clone https://github.com/bibinwilson/kubernetes-prometheus.git
<acanubhav> gcloud beta container clusters create prometheus-demo-cluster \
--zone us-central1-c \
--cluster-version "latest" \
--enable-stackdriver-kubernetes
<raj> https://raw.githubusercontent.com/bibinwilson/kubernetes-prometheus/master/clusterRole.yaml
<sheeb> export KUBE_NAMESPACE=prometheus
export KUBE_CLUSTER=prometheus-demo-cluster
export GCP_REGION=us-central1-c
export GCP_PROJECT=superb-leaf-253404
export DATA_DIR=/prometheus/
export DATA_VOLUME=prometheus-storage-volume
export SIDECAR_IMAGE_TAG=release-0.3.2
<acanubhav> https://medium.com/@valyala/promql-tutorial-for-beginners-9ab455142085
<acanubhav> https://timber.io/blog/promql-for-humans/
<raj> dhanumansetty@deloitte.com
<acanubhav> https://medium.com/htc-research-engineering-blog/monitoring-kubernetes-clusters-with-grafana-e2a413febef
<acanubhav> https://github.com/giantswarm/prometheus

```

GCP --- cloud shell history:

```

1 pwd
2 cd /opt/
3 ls
4 git clone https://github.com/spring-guides/gs-spring-boot.git
5 sudo git clone https://github.com/spring-guides/gs-spring-boot.git
6 cd gs-spring-boot/complete
7 ./mvnw -DskipTests spring-boot:run
8 ./mvnw -DskipTests package
9 cd /opt/
10 ll
11 sudo ./mvnw -DskipTests package
12 sudo ./mvnw -DskipTests spring-boot:run
13 ./mvnw -DskipTests package
14 sudo ./mvnw -DskipTests package
15 ./mvnw -DskipTests com.google.cloud.tools:jib-maven-plugin:build \
16 sudo ./mvnw -DskipTests com.google.cloud.tools:jib-maven-plugin:build \ -Dimage=gcr.io/$GOOGLE_CLOUD_PROJECT/hello-java:v1
17 ./mvnw -DskipTests com.google.cloud.tools:jib-maven-plugin:build \ -Dimage=gcr.io/$GOOGLE_CLOUD_PROJECT/hello-java:v1
18 sudo ./mvnw -DskipTests com.google.cloud.tools:jib-maven-plugin:build \ -Dimage=gcr.io/$GOOGLE_CLOUD_PROJECT/hello-java:v1
19 sudo ./mvnw -DskipTests com.google.cloud.tools:jib-maven-plugin:build \ -Dimage=gcr.io/$GOOGLE_CLOUD_PROJECT/hello-java:v1
20 man docker
21 docker ps -a
22 docker ps
23 docker images
24 ss -tln
25 sudo docker run -ti --rm -p 8080:8080 gcr.io/$GOOGLE_CLOUD_PROJECT/hello-java:v1
26 sudo docker run -ti --rm -p 8080:8080 \gcr.io/$GOOGLE_CLOUD_PROJECT/hello-java:v1
27 gcloud container clusters create hello-java-cluster --num-nodes 2 --machine-type n1-standard-1 --zone us-central1-c
28 kubectl run hello-java --image=gcr.io/$GOOGLE_CLOUD_PROJECT/hello-java:v1 --port=8080
29 kubectl get deployments
30 kubectl get pods
31 kubectl expose deployment hello-java --type=LoadBalancer
32 kubectl get services
33 kubectl scale deployment hello-java --replicas=3
34 kubectl get pods
35 kubectl get deployments
36 ls
37 cd gs-spring-boot/complete/src/main/java/hello/
38 vi HelloController.java \
39 vi HelloController.java
40 sudo vi HelloController.java
41 sudo vi HelloController.java
42 cd -
43 pwd
44 ./mvnw -DskipTests package
45 docker run -ti --rm -p 8080:8080 gcr.io/$GOOGLE_CLOUD_PROJECT/hello-java:v1
46 sudo ./mvnw -DskipTests package
47 cd gs-spring-boot/

```

```

48 ls
49 sudo ./mvnw -DskipTests package
50 pwd
51 lsd
52 ls
53 ./mvnw -DskipTests package
54 sudo ./mvnw -DskipTests package
55 ./mvnw -DskipTests com.google.cloud.tools:jib-maven-plugin:build -Dimage=gcr.io/$GOOGLE_CLOUD_PROJECT/hello-java:v2
56 sudo ./mvnw -DskipTests com.google.cloud.tools:jib-maven-plugin:build -Dimage=gcr.io/$GOOGLE_CLOUD_PROJECT/hello-java:v2
57 kubectl set image deployment/hello-java hello-java=gcr.io/$GOOGLE_CLOUD_PROJECT/hello-java:v2
58 kubectl rollout undo deployment/hello-java
59 cd -
60 ll
61 cd gs-spring-boot/complete/src/main/java/hello/
62 ll
63 vi HelloController.java
64 ll
65 cd /opt/
66 gcloud beta container --project "<your project ID" clusters create "prometheus-demo-cluster" --zone "<desired zone>" --cluster-version "latest" --enable-stackdriver-kubernetes
67 gcloud beta container --project "<My First Project" clusters create "prometheus-demo-cluster" --zone "us-central1-c" --cluster-version "latest" --enable-stackdriver-kubernetes
68 gcloud beta container --project "My First Project" clusters create "prometheus-demo-cluster" --zone "us-central1-c" --cluster-version "latest" --enable-stackdriver-kubernetes
69 gcloud beta container --project prometheus01" \
70 clusters create "prometheus-demo-cluster" \
71 --zone us-central1-c \
72 --cluster-version "latest" \
73 --enable-stackdriver-kubernetes
74 gcloud beta container --project prometheus01" clusters create "prometheus-demo-cluster" --zone us-central1-c --cluster-version "latest" --enable-stackdriver-kubernetes
75 gcloud beta container --project "prometheus01" clusters create "prometheus-demo-cluster" --zone us-central1-c --cluster-version "latest" --enable-stackdriver-kubernetes
76 gcloud beta container clusters create "prometheus-demo-cluster" --zone us-central1-c --cluster-version "latest" --enable-stackdriver-kubernetes
77 ACCOUNT=$(gcloud info --format='value(config.account)')
78 kubectl create clusterrolebinding owner-cluster-admin-binding --clusterrole cluster-admin --user $ACCOUNT
79 kubectl create namespace prometheus
80 kubectl create -f clusterRole.yaml
81 vi clusterRole.yaml
82 sudo vi clusterRole.yaml
83 kubectl create -f clusterRole.yaml
84 kubectl create -f configMap.yaml -n prometheus
85 sudo vi configMap.yaml
86 kubectl create -f configMap.yaml -n prometheus
87 sudo vi configMap.yaml
88 kubectl create -f configMap.yaml -n prometheus
89 sudo vi configMap.yaml
90 sudo vi clusterRole.yaml
91 kubectl create -f clusterRole.yaml
92 kubectl create -f configMap.yaml -n prometheus
93 sudo vi configMap.yaml
94 kubectl create -f configMap.yaml -n prometheus
95 sudo vi prometheus-deployment.yaml
96 kubectl create -f prometheus-deployment.yaml -n prometheus
97 ll
98 cp prometheus-deployment.yaml prometheus-deployment_bkp.yaml
99 sudo cp prometheus-deployment.yaml prometheus-deployment_bkp.yaml
100 kubectl create -f prometheus-deployment.yaml -n prometheus
101 ll
102 rm prometheus-deployment.yaml
103 sudo rm prometheus-deployment.yaml
104 kubectl create -f prometheus-deployment.yaml -n prometheus
105 cp prometheus-deployment_bkp.yaml prometheus-deployment.yaml
106 sudo cp prometheus-deployment_bkp.yaml prometheus-deployment.yaml
107 kubectl create -f prometheus-deployment.yaml -n prometheus
108 sudo kubectl create -f prometheus-deployment.yaml -n prometheus
109 ls
110 kubectl create -f prometheus-deployment.yaml -n prometheus
111 ll
112 rm prometheus-deployment.yaml
113 sudo rm prometheus-deployment.yaml
114 ll
115 sudo rm prometheus-deployment_bkp.yaml
116 ll
117 kubectl create -f prometheus-deployment.yaml -n prometheus
118 ll
119 pwd
120 ll
121 cd ../
122 sudo chmod -R 777 /opt
123 vi prometheus-deployment.yaml
124 sudo vi prometheus-deployment.yaml
125 sudo cp prometheus-deployment.yaml /opt/
126 cd /opt/p
127 cd /opt/
128 kubectl create -f prometheus-deployment.yaml -n prometheus
129 kubectl get pods -n prometheus

```

```
130 kubectl port-forward prometheus-deployment-7ddb99dcb-fkz4d 8080:9090 -n prometheus
131 export KUBE_NAMESPACE=prometheus
132 export KUBE_CLUSTER=prometheus-demo-cluster
133 export GCP_REGION=<my region>
134 export GCP_PROJECT=<my project ID>
135 export DATA_DIR=/prometheus/
136 export DATA_VOLUME=prometheus-storage-volume
137 export SIDECAR_IMAGE_TAG=release-0.3.2
138 export GCP_REGION=us-central1-c
139 export GCP_PROJECT="My First Project"
140 sh ./patch.sh deployment prometheus-deployment
141 ||
142 cd ../
143 ||
144 sudo vi patch.sh
145 sh ./patch.sh deployment prometheus-deployment
146 sudo vi patch.sh
147 sh ./patch.sh deployment prometheus-deployment
148 kubectl get pods -n prometheus
149 kubectl port-forward prometheus-deployment-78fb5694b4-7j257 8080:9090 -n prometheus
150 kubectl get pods -n prometheus
151 kubectl port-forward prometheus-deployment-847fc4b69c-7bfkj 8080:9090 -n prometheus
152 locate prometheus.yml
153 find / prometheus.yml
154 clear
155 pwd
156 history
```

mail

Friday, September 20, 2019 10:52 AM

Summary of first day's training :

Topic	Description
Docker Commands	Exercise/Activity of executing Docker commands for different scenarios: To check installation is correct or not --> docker run hello-world To pull image --> docker pull <imagename> (say imagename as busybox) To check docker image --> docker images To run container --> docker run busybox To check list of containers which are up --> docker ps To check list of containers irrespective of state --> docker ps -a To remove all stopped containers --> docker container prune To remove images --> docker rmi
Docker associated with WebApps	Exercise/Activity of executing Docker commands for different scenarios associated with webapps: To remove local image and download latest and run the image --> docker run --rm <dockerid>/<appname> (ex: docker run --rm prakhar1989/static-site) To run the container in detached mode --> docker run -d -P --name <containername> <dockerid>/<appname> (ex: docker run -d -P --name static-site prakhar1989/static-site) To check on which port our container is running --> docker port <containername> (ex: docker port static-site) To specify custom port to which the client will forward connections to the container --> docker run -p <port>:80 <dockerid>/<containername> To stop the container --> docker stop <containername> (ex: docker stop static-site)
Different types of Docker Images	Base, Child, Official, User - images
Containerizing python app	Activity of containerizing the python app: Step1: Clone the app from git --> git clone https://github.com/prakhar1989/docker-curriculum.git Step2: Run the app on specified port --> docker run -p 8888:5000 <dockerid>/<imagename> Step3: Push the image --> docker push <dockerid>/<imagename>
Multi Container Environments	Process of multi containers accessing each other : Step1 : Clone the app from git --> git clone https://github.com/prakhar1989/FoodTrucks Step2 : Pull the elastic search --> docker pull docker.elastic.co/elasticsearch/elasticsearch:6.3.2 Step3 : To run the elastic on single node --> docker run -d --name es -p 9200:9200 -p 9300:9300 -e "discovery.type=single-node" docker.elastic.co/elasticsearch/elasticsearch:6.3.2 step4 : To check whether we are able ping to elastic search(ex: curl 0.0.0.0:9200) step5 : To build webapp--> docker build -t prakhar1989/foodtrucks-web step6 : To run webapp --> docker run -P --rm prakhar1989/foodtrucks-web (Here it should fail) step7 : To check networks --> docker network ls step 8: To inspect the network --> docker network inspect bridge step 9: To check whether our app is exposing to elastic search --> docker run -it --rm prakhar1989/foodtrucks-web bash step 10: To create a new network --> docker network create foodtrucks-net Now stop and remove the container(es). Start both foodtruckswebapp and elasticsearch --> docker run -d --name es --net foodtrucks-net -p 9200:9200 -p 9300:9300 -e "discovery.type=single-node" docker.elastic.co/elasticsearch/elasticsearch:6.3.2
Monitoring kubernetes using prometheus	Activity with Kubernetes: We created account google kubernetes engine(GKE) to deploy springbootapp in kubernetes and monitor using prometheus Step1: Create a project in GKE step2: Clone the project from git --> git clone https://github.com/spring-guides/gs-spring-boot.git step3: Run the application --> ./mvnw -DskipTests spring-boot:run step4: create the JAR deployable for the application--> ./mvnw -DskipTests package step5: Run a docker container--> ./mvnw -DskipTests com.google.cloud.tools:jib-maven-plugin:build \ -Dimage=gcr.io/\$GOOGLE_CLOUD_PROJECT/hello-java:v1 step6: Create a cluster--> gcloud container clusters create hello-java-cluster \ --num-nodes 2 \ --machine-type n1-standard-1 \ --zone us-central1-c step7: Deploy application on kubernetes --> kubectl run hello-java \ --image=gcr.io/\$GOOGLE_CLOUD_PROJECT/hello-java:v1 \ --port=8080 step8: To allow external traffic --> kubectl expose deployment hello-java --type=LoadBalancer kubectl get services we should now be able to reach the service by pointing your browser to this address: <a href="http://<EXTERNAL_IP>:8080">http://<EXTERNAL_IP>:8080

Summary of second day's training :

Category	Description
Containerizing and Monitoring Springboot Application	Exercise/Activity: Step1 - Clone springboot app from github(git clone h_ttps://github.com/callicoder/spring-boot-websocket-chat-demo) Step2 - To package the app and download necessary jars(mvn clean package) Step3 - Docker build(docker build -t appname) Step4 - Running the docker image(eg: docker run -p 5000:8080 appname) Step5 - Push the image to docker hub (docker push callicoder/spring-boot-websocket-chat-demo:0.0.1-SNAPSHOT) Step6 - Docker image(docker images.. here the app should be visible as a image) Adding Target by modifying prometheus.yml Example :

	<p>To monitor spring boot app we need to configure it in prometheus.yml file under scrape configs under scrape configs</p> <pre><code>===== - job_name: 'spring-boot-app' # Override the global default and scrape targets from this job every 5 seconds. scrape_interval: 5s metrics_path: '/prometheus' # scheme defaults to 'http'. static_configs: - targets: ['localhost:8080']</code></pre>
Springboot Actuator	<ul style="list-style-type: none"> > Springboot has component called actuator which pulls the healthchecks and metrics about the application > To monitor this is prometheus we nee to add dependency of prometheus in pom.xml file <p>Exercise/Activity:</p> <ul style="list-style-type: none"> > Maven dependency to be added in pom.xml <pre><code><dependency> <groupId>io.micrometer</groupId> <artifactId>micrometer-registry-prometheus</artifactId> </dependency></code></pre> <ul style="list-style-type: none"> > After adding this dependency follow the steps in SB App COnterization mentioned above - till <i>Pushing the image to docker</i> > After pushing the image to docker, we should get few metrics like with endpoints like health, info, prometheus. eg: http://localhost:5000/actuator/health etc., > Now we can see the metrics in prometheus by adding the actuator target entry in scrape configs as mentioned in below example <pre><code>- job_name: 'spring-actuator' metrics_path: '/actuator/prometheus' scrape_interval: 5s static_configs: - targets: ['HOST_IP:8080']</code></pre> <ul style="list-style-type: none"> > Finally these metrics can be visualized in grafana by adding prometheus as a datasource.
(Prometheus) Alert Manager	<p>It is mainly used to send alerts in scenarios whenever instances go down or any high usage of cpu memory etc.</p> <p>Exercise/Activity:</p> <p>Step 1 - Download alert manager in linux system (sudo apt-get install prometheus-alertmanager) Step 2 - Firstly we need to write the rules in json or yml file(ex. alerts.yml) and this file has to be placed in prometheus folder Step 3 - Add the entry for rule file in prometheus.yml under <i>rule_files</i> section Step 4 - In <i>alertmanager.yml</i> - we will configure the mode of alerting like email/SMS/Pager etc., Step 5 - We can verify/watch the status of Prometheus targets by PromQL query: "up" in Prometheus Web UI.</p> <p>Alertmanager will also fire emails depending on alertmanager.yml configuration</p>

Summary of first day's training :

Points:

- VM Set up in local
- Overview of Docker, Prometheus, Grafana, Cadvisor, Node Exporter
- Installation and exercises on the above mentioned tools
- Linux Commands for above activity
- Grafana - Data Source and Dashboards creation

Category	Description
Virtual Box and Ubuntu	Did set up of Oracle Virtual Box installation and configured ubuntu OS by taking around 4GB of memory to execute the exercises on linux environment
Docker	<p>Linux commands for DOCKER Installation and accessing IMAGES & CONTAINERS</p> <p>Docker Installation -- sudo apt-get install docker.io Docker status -- sudo systemctl status docker To start Docker -- sudo systemctl start docker To stop Docker -- sudo systemctl stop docker Docker version -- docker --version Installing nginx containers -- for i in {1..10} ; do docker run -dit nginx; done</p> <p>To know container metrics -- docker stats To pull image from docker -- docker pull httpd To check images -- docker images To check containers -- docker ps (only containers which are up and running) To check containers -- docker ps -a (all the containers irrespective to the state) To start containers -- docker start containerid To stop containers -- docker stop containerid To remove container -- docker rm containername To remove image -- docker rmi imagename Docker information -- docker information</p>
Cadvisor(build by google)	Used to monitor docker containers . Default port : 8080

	<p>Linux commands to install and run the CAdvisor using Docker</p> <pre>*-----* sudo docker run \ --volume=/:/rootfs:ro \ --volume=/var/run:/var/run:ro \ --volume=/sys:/sys:ro \ --volume=/var/lib/docker/:/var/lib/docker:ro \ --volume=/dev/disk/:/dev/disk:ro \ --publish=8080:8080 \ --detach=true \ --name=cadvisor \ google/cadvisor:latest *-----*</pre> <p>Excercise/Activity: Monitored docker nginx containers using Cadvisor</p>
Prometheus	<ul style="list-style-type: none"> > Installed prometheus and added few scrape configs (targets) for monitoring purpose like cAdvisor and prometheus itself > Executed few queries in promql web UI and saw the metrics
Grafana	<p>Linux commands to install and run the Grafana: [Default port:3000]</p> <pre>> sudo apt-get install -y software-properties-common > sudo add-apt-repository "deb ht_tps://packages.grafana.com/oss/deb stable main" > wget -q -O - ht_tps://packages.grafana.com/gpg.key sudo apt-key add - > sudo apt-get update > sudo apt-get install grafana > sudo systemctl start grafana-server.service > sudo systemctl status grafana-server.service > sudo systemctl enable grafana-server.service</pre> <p>Exercise/Activity:</p> <ul style="list-style-type: none"> > Added prometheus as a data source and could see the graphs for cpu usage and few other metrics > Able to configure default dashboards (Prometheus, Prometheus 2.0) using ID/JSON formats
Node Exporter	<p>Installed as part of prometheus when its added as a scrape config entry (no need for explicit installation) and runs on port number 9100</p> <p>Linux commands to install Prometheus - node exporter, push gateway, alert manager:</p> <pre>sudo apt-get install prometheus prometheus-node-exporter prometheus-pushgateway prometheus-alertmanager</pre> <p>Note: It is mainly used to pull metrics about http_requests.</p>
Black Box Exporter	Runs on port number 9115 . It is mainly used to pull memory related metrics.

Regards,
 Deepak Hanumansetty
 Mob # +91 99850 66559

-----Original Appointment-----

From: Shinde, Shilpa

Sent: Thursday, September 12, 2019 11:45 AM

To: Shinde, Shilpa; Hanumansetty, Deepak; Pardha Satya Sivanaga, Pardhu; Kolli, Rajasekhar Reddy; Mutteparwar, Sumit Sunil; Geetha Mounika, Geetha; Sindhu, Vijay; Bhan, Sumit; Vemula, Balaji; Addagulla, Akhil; Khanum, Majida Tanveer; Kumar, Vijay; Panguluri, Naga; Bhargav, Bhargav; Das, Abhishek; Bano, Sheeba; Tiwar i, Nishant

Cc: Goel, Ambika; Sreedharan, Chitra

Subject: Prometheus and Grafana Tools Training -Hyderabad -All Training Room in Deloitte Towers

When: Tuesday, September 17, 2019 8:45 AM to Thursday, September 19, 2019 6:15 PM (UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi.

Where: All 3 days in Deloitte Towers

Hi all,

You have been nominated for the session “ **Prometheus and Grafana Tools Training** ” starting from **17th,18th , & 19th Sep -2019**.

Training Venue :

Date	Start	End	Time Zone	Room	Status
9/17/2019 Tue	9:00 AM	6:00 PM	IST	I 1F_TRG 06 (40)	Confirmed
9/18/2019 Wed	9:00 AM	6:00 PM	IST	I 1F_TRG 02 (38)	Confirmed
9/19/2019 Thu	9:00 AM	6:00 PM	IST	I 3F_TRG 02 (24)	Confirmed

Date : 17th ,18th , & 19th Sep

Request you to be on time on all days for the smooth delivery of the session.

Please note that there is a significant amount of investment in trainings like these and attendance is compulsory on all days .

Also, learning credits can only be awarded on full attendance, there are no partial credits awarded.

Thanks
 Shilpa

Tomcat

Friday, October 4, 2019 10:42 AM

[Skip to main content](#)

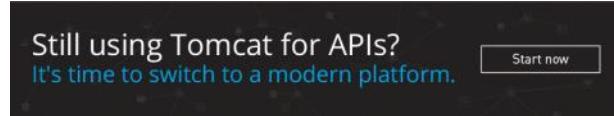
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- Speed up development



Using Tomcat reload features to speed up development

In compliance with a recommendation in Section 4 of the Java [Servlet](#) specification, Apache Tomcat implements methods of systematically reloading Java classes to allow an application's components to be updated without restarting the entire server.

This feature is very important for development, as server start-up and restart times have proven to be a serious drain to developer productivity as the minutes add up. In fact, the slow server restart time of Java EE stack application servers was one of the driving forces behind Tomcat's widespread adoption, both for personal and enterprise-level projects. However, even Tomcat can't [start](#) up as fast as it can reload an application while running. By reloading only the changed classes of an isolated application, developers can get new features up and running within seconds instead of minutes.

[Tcat](#)'s central management console gives you deep visibility into your web application performance. Reliably stop, start, deploy and redeploy applications, get custom alerts by email or phone, and more. [Download Tcat](#) today!

In this article, we'll cover proper [configuration](#) and use examples for all of the different mechanisms Tomcat provides for reloading applications and Java classes, including:

- [reload via server restart](#)
- [manual reload with Tomcat Manager](#)
- [hot reloading via Context settings](#)
- [hot reloading with WatchedResources](#)
- [hot reloading with an IDE such as Eclipse](#)

We'll also cover some reasons [why you should not use automatic reloading in a production environment](#), and some alternative solutions.

How reloading works

Before we begin, let's quickly define some of the terms used in this article, to avoid confusion.

In this article, you'll see references to both "reloading" and "redeploying" web applications. Although both have to do with propagating changes to an application to the server for use, these terms are not quite interchangeable.

On an Apache Tomcat server, to "reload" an application means to call a method of the StandardContext class called StandardContext.reload() on a given [Context](#). This method creates a new classloader and new servlets, drops all references to the old servlets, and then calls the Servlet.init() method on the servlet, which brings the servlet to an initialized state, triggering a reload of all classes and libraries by the new classloader.

By contrast, "redeployment" means that the application is first deleted entirely from its deployed directory, and then re-deployed onto the server from your appBase directory.

A word on server restart

The most basic, free-of-error way to reload your web application is to restart your Tomcat server. Although this method is slow, and can be a real hassle if you are running multiple applications on your server, there are a number of situations where a full server restart is the most appropriate method of reloading your application.

These special cases include cases where your application has components that must be configured in [Catalina](#)'s server.xml file, such as GlobalNamingResources, or if you have used a symbolic link to your docBase to configure application settings.

Restarting the Tomcat server is also a way to stop and restart your applications, which allows elements such as web.xml files to be reloaded (although there are ways of reloading these files without stopping the server).

Reloading via the Tomcat manager

The Tomcat Manager, a web application included with all standard distributions of Tomcat, has the ability reload web applications (as well as start, stop, [deploy](#), and [undeploy](#) them), even if the application context is not configured as "reloadable". This is especially useful for reloading an application in a production environment, where Tomcat's

automatic reload features should be disabled, or for low-performance environments where automatic reload could cause [memory](#) issues.

Once it has been properly configured, the Tomcat Manager can be accessed either through a web console at [http://\[host\]:\[port\]/manager/html](http://[host]:[port]/manager/html), or through a variety of URI-based commands designed to expose its functionality for scripting.

To reload an application from the web console, navigate to the "List Applications" tab. From this page, you can choose an application from a list of all applications deployed on the server to reload. To reload an application via a URI command, use the following format:

```
http://[hostname]:[port]/manager/reload?path=[/path/to/your/webapp]
```

These commands work even if you have not declared your application context as "reloadable". Note that to date ([Tomcat 6.0.26](#)), the Manager application cannot reload applications that are deployed as WAR files, only applications that were deployed as exploded directories.

To reload a WAR-deployed application reflecting changes using Manager, you can undeploy the application and then re-deploy it. The Tomcat Manager can also not be used to reload changes to the web.xml file. To propagate these changes without restarting your entire server using Manager, simply stop and then start the application. Alternatively, you can configure these files as WatchedResources, [as shown below](#).

For obvious [security](#) reasons, the Tomcat Manager is disabled by default. Enabling it requires not one but several changes to Tomcat's configuration.

For a complete guide to configuring and using the Tomcat Manager's reload functionality, as well as all its other features, visit our [Getting The Most Out Of The Tomcat Manager](#) article.

Hot reload via context settings

In detail-oriented stages of development, such as optimization, it is often necessary to make many small changes, some of which are merely tests of a variety of methods by which a single feature could be coded. In this kind of environment, manually triggering every reload via the Manager application is not feasible or efficient enough.

To address this issue, Tomcat includes a method called "backgroundProcess" as part of the Catalina component. Normally, this process provides sessions expiration, but when properly configured, it can also monitor all of an application's classes for changes, and call for a reload if any of them change.

To configure reloading, add the "reloadable" attribute to your application's Context element, either in its Context fragment or in Server.xml:

```
<Context ... reloadable="true">
```

You can also configure the delay in seconds before the backgroundProcess is run on the container in the context element, via the backgroundProcessorDelay attribute, although this value can also be inherited from the Host or Engine.

Hot reload with WatchedResource

When you define a Context as "reloadable", Catalina's default behavior is to watch its classes, libraries, and web.xml configuration files for changes to trigger reload. Sometimes you'll want to add other files to this list, such as logger configuration files. In these situations, you can use the WatchedResource element nested inside the Context to specify additional files that Tomcat should watch. Use the following syntax:

```
<Host>
<Context ... reloadable="true">
  <WatchedResource>path/to/watched/resource</WatchedResource>
  <WatchedResource>another/path/to/another/resource</WatchedResource>
</Context>
</Host>
```

Note that only one file may be contained in each pair of WatchedResource tags. You can configure these settings either in the application's context.xml fragment, the server.xml file, or in Catalina's conf/context.xml file, if you would like to create global settings for all contexts.

Hot reload with Eclipse IDE

By configuring your Context to automatically reload when classes are altered and integrating Tomcat and Eclipse (or any other Java IDE) using the Web Tools Platform, you can add a hot reload functionality to your development environment.

Follow these simple configuration steps:

- If you have not already integrated Tomcat with Eclipse, visit our illustrated step-by-step Guide to [Tomcat Eclipse](#) Integration, which will walk you through this process.
- Follow the configuration steps provided in the previous section to enable hot reloading on your Tomcat server.
- Configure your Eclipse workspace to point directly at your running Tomcat server's folder structure. This may require some permissions configuration.
- Directly edit your classes while your server is running, and watch Tomcat automatically reload your application as you save them.

Moving to production

Hot reloading is very useful for development, but you should make sure to disable all automatic reloading configurations prior to moving your application to production. Here's some insight into why this is so important.

Reloading classes is complicated. If only one reference is retained to the old class when the new class is created, the old class will not be properly disposed of, which is known as a Classloader leak. This is one of the most commonly reported problems for any Java platform.

In addition to this consideration, the Servlet.init() method used by Tomcat to reload applications requires the entire application to be re-initialized, a multi-step process that becomes higher in overhead as application complexity increases.

Lastly, a failed automatic reload can result in lost state data, which is not acceptable in a production environment.

For these reasons, it is best to disable all automatic reloading when you move to production, and rely on the Tomcat Manager or an alternate administrative tool such as [Tcat](#) to manage applications.

Related articles

- [Apache Tomcat Eclipse integration guide & plugin](#)
- [Enterprise Apache Tomcat admin solutions - A look at your options](#)
- [Apache Tomcat resources](#)
- [Understanding the Tomcat Classpath - Common problems and how to fix them](#)
- [Getting the most out of the Tomcat manager web application](#)

- Related resources

- [The value of APIs for business](#)

- [What is REST API design?](#)
- [API development best practices](#)

- Recommended for you

- [Connectivity benchmark report](#)

- [The application network](#)

- [How to design and manage APIs](#)

- Watch now on demand

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- [English](#) [Full site](#)

From <<https://www.mulesoft.com/tcat/tomcat-reload#watchedresource>>

Blog:

https://liferay.dev/forums/-/message_boards/message/3050893 (Read the blog regarding work(temp) foler) ---> Link inside this blog - <http://tomcat.apache.org/tomcat-5.5-doc/config/context.html>

<https://dzone.com/articles/hot-swap-java-bytecode-on-runtime>

<https://www.mulesoft.com/tcat/tomcat-classpath> - *

Apache/Tomcat step by step setup

Monday, June 15, 2020 10:19 AM

Java - https://download.oracle.com/otn-pub/java/jdk/14.0.1+7/664493ef4a6946b186ff29eb326336a2/jdk-14.0.1_linux-x64_bin.tar.gz?AuthParam=1589519632_292d07624a0ce1e451f73eeb17bf260d

Httpd - <https://httpd.apache.org/download.cgi>

Mod_jk - <https://tomcat.apache.org/download-connectors.cgi>

After downloading copy all the files in to /home/user/

JDK

Installing java(JDK):

```
[root@localhost opt]# sudo yum install java-1.8.0-openjdk-devel
Loaded plugins: langpacks, product-id, search-disabled-repos
Resolving Dependencies
--> Running transaction check
--> Package java-1.8.0-openjdk-devel.x86_64 1:1.8.0.161-2.b14.el7 will be installed
--> Processing Dependency: java-1.8.0-openjdk(x86-64) = 1:1.8.0.161-2.b14.el7 for package: 1:java-1.8.0-openjdk-devel-1.8.0.161-2.b14.el7.x86_64
--> Processing Dependency: libawt_xawt.so(SUNWprivate_1.1)(64bit) for package: 1:java-1.8.0-openjdk-devel-1.8.0.161-2.b14.el7.x86_64
--> Processing Dependency: libawt.so()(64bit) for package: 1:java-1.8.0-openjdk-devel-1.8.0.161-2.b14.el7.x86_64
--> Processing Dependency: libawt_xawt.so()(64bit) for package: 1:java-1.8.0-openjdk-devel-1.8.0.161-2.b14.el7.x86_64
--> Processing Dependency: libjava.so()(64bit) for package: 1:java-1.8.0-openjdk-devel-1.8.0.161-2.b14.el7.x86_64
--> Processing Dependency: libjvm.so()(64bit) for package: 1:java-1.8.0-openjdk-devel-1.8.0.161-2.b14.el7.x86_64
--> Running transaction check
--> Package java-1.8.0-openjdk.x86_64 1:1.8.0.161-2.b14.el7 will be installed
--> Processing Dependency: xorg-x11-fonts-Type1 for package: 1:java-1.8.0-openjdk-1.8.0.161-2.b14.el7.x86_64
--> Processing Dependency: libgif.so.4()(64bit) for package: 1:java-1.8.0-openjdk-1.8.0.161-2.b14.el7.x86_64
--> Package java-1.8.0-openjdk-headless.x86_64 1:1.8.0.161-2.b14.el7 will be installed
--> Processing Dependency: copy-jdk-configs >= 2.2 for package: 1:java-1.8.0-openjdk-headless-1.8.0.161-2.b14.el7.x86_64
--> Processing Dependency: tzdata-java >= 2015d for package: 1:java-1.8.0-openjdk-headless-1.8.0.161-2.b14.el7.x86_64
--> Processing Dependency: jpackage-utils for package: 1:java-1.8.0-openjdk-headless-1.8.0.161-2.b14.el7.x86_64
--> Processing Dependency: lksctp-tools(x86-64) for package: 1:java-1.8.0-openjdk-headless-1.8.0.161-2.b14.el7.x86_64
--> Running transaction check
--> Package copy-jdk-configs.noarch 0:3.3-2.el7 will be installed
--> Package giflib.x86_64 0:4.1.6-9.el7 will be installed
--> Processing Dependency: libICE.so.6()(64bit) for package: giflib-4.1.6-9.el7.x86_64
--> Processing Dependency: libSM.so.6()(64bit) for package: giflib-4.1.6-9.el7.x86_64
--> Package javapackages-tools.noarch 0:3.4.1-11.el7 will be installed
--> Processing Dependency: python-javapackages = 3.4.1-11.el7 for package: javapackages-tools-3.4.1-11.el7.noarch
--> Package lksctp-tools.x86_64 0:1.0.17-2.el7 will be installed
--> Package tzdata-java.noarch 0:2018c-1.el7 will be installed
--> Package xorg-x11-fonts-Type1.noarch 0:7.5-9.el7 will be installed
--> Processing Dependency: mkgfontdir for package: xorg-x11-fonts-Type1-7.5-9.el7.noarch
--> Processing Dependency: mkgfontdir for package: xorg-x11-fonts-Type1-7.5-9.el7.noarch
--> Processing Dependency: ttmkfd for package: xorg-x11-fonts-Type1-7.5-9.el7.noarch
--> Processing Dependency: ttmkfd for package: xorg-x11-fonts-Type1-7.5-9.el7.noarch
--> Running transaction check
--> Package libICE.x86_64 0:1.0.9-9.el7 will be installed
--> Package libSM.x86_64 0:1.2.2-2.el7 will be installed
--> Package python-javapackages.noarch 0:3.4.1-11.el7 will be installed
--> Package ttmkfd.x86_64 0:3.0.9-42.el7 will be installed
--> Package xorg-x11-font-utils.x86_64 1:7.5-20.el7 will be installed
--> Processing Dependency: libXfont.so.1()(64bit) for package: 1:xorg-x11-font-utils-7.5-20.el7.x86_64
--> Processing Dependency: libfontenc.so.1()(64bit) for package: 1:xorg-x11-font-utils-7.5-20.el7.x86_64
--> Running transaction check
--> Package libXfont.x86_64 0:1.5.2-1.el7 will be installed
--> Package libfontenc.x86_64 0:1.1.3-3.el7 will be installed
--> Finished Dependency Resolution
```

Dependencies Resolved

Package	Arch	Version	Repository	Size
<hr/>				
Installing:				
java-1.8.0-openjdk-devel	x86_64	1:1.8.0.161-2.b14.el7	InstallMedia-AppStream	9.8 M
Installing for dependencies:				
copy-jdk-configs	noarch	3.3-2.el7	InstallMedia-AppStream	21 k
giflib	x86_64	4.1.6-9.el7	InstallMedia-AppStream	40 k
java-1.8.0-openjdk	x86_64	1:1.8.0.161-2.b14.el7	InstallMedia-AppStream	244 k
java-1.8.0-openjdk-headless	x86_64	1:1.8.0.161-2.b14.el7	InstallMedia-AppStream	32 M
javapackages-tools	noarch	3.4.1-11.el7	InstallMedia-AppStream	73 k
libICE	x86_64	1.0.9-9.el7	InstallMedia-AppStream	66 k
libSM	x86_64	1.2.2-2.el7	InstallMedia-AppStream	39 k
libXfont	x86_64	1.5.2-1.el7	InstallMedia-AppStream	152 k
libfontenc	x86_64	1.1.3-3.el7	InstallMedia-AppStream	31 k
lksctp-tools	x86_64	1.0.17-2.el7	InstallMedia-AppStream	88 k
python-javapackages	noarch	3.4.1-11.el7	InstallMedia-AppStream	31 k
ttmkfd	x86_64	3.0.9-42.el7	InstallMedia-AppStream	48 k
tzdata-java	noarch	2018c-1.el7	InstallMedia-AppStream	183 k
xorg-x11-font-utils	x86_64	1:7.5-20.el7	InstallMedia-AppStream	87 k

```
xorg-x11-fonts-Type1           noarch      7.5-9.el7        InstallMedia-AppStream      521 k
```

Transaction Summary

```
=====  
Install 1 Package (+15 Dependent packages)
```

Total download size: 43 M

Installed size: 147 M

Is this ok [y/d/N]: y

Downloading packages:

Total	55 MB /s 43 MB 00:00:00
Running transaction check	
Running transaction test	
Transaction test succeeded	
Running transaction	
Installing : libfontenc-1.1.3-3.el7.x86_64	1/16
Installing : libICE-1.0.9-9.el7.x86_64	2/16
Installing : libSM-1.2.2-2.el7.x86_64	3/16
Installing : giflib-4.1.6-9.el7.x86_64	4/16
Installing : libXfont-1.5.2-1.el7.x86_64	5/16
Installing : xorg-x11-font-utils-7.5-20.el7.x86_64	6/16
Installing : lksctp-tools-1.0.17-2.el7.x86_64	7/16
Installing : ttmkfdir-3.0.9-42.el7.x86_64	8/16
Installing : xorg-x11-fonts-Type1-7.5-9.noarch	9/16
Installing : copy-jdk-configs-3.3-2.el7.noarch	10/16
Installing : tzdata-java-2018c-1.el7.noarch	11/16
Installing : python-javapackages-3.4.1-11.el7.noarch	12/16
Installing : javapackages-tools-3.4.1-11.el7.noarch	13/16
Installing : 1:java-1.8.0-openjdk-headless-1.8.0.161-2.b14.el7.x86_64	14/16
Installing : 1:java-1.8.0-openjdk-1.8.0.161-2.b14.el7.x86_64	15/16
Installing : 1:java-1.8.0-openjdk-devel-1.8.0.161-2.b14.el7.x86_64	16/16
Verifying : python-javapackages-3.4.1-11.el7.noarch	1/16
Verifying : libICE-1.0.9-9.el7.x86_64	2/16
Verifying : tzdata-java-2018c-1.el7.noarch	3/16
Verifying : giflib-4.1.6-9.el7.x86_64	4/16
Verifying : xorg-x11-fonts-Type1-7.5-9.noarch	5/16
Verifying : 1:java-1.8.0-openjdk-1.8.0.161-2.b14.el7.x86_64	6/16
Verifying : 1:java-1.8.0-openjdk-headless-1.8.0.161-2.b14.el7.x86_64	7/16
Verifying : copy-jdk-configs-3.3-2.el7.noarch	8/16
Verifying : ttmkfdir-3.0.9-42.el7.x86_64	9/16
Verifying : 1:java-1.8.0-openjdk-devel-1.8.0.161-2.b14.el7.x86_64	10/16
Verifying : libXfont-1.5.2-1.el7.x86_64	11/16
Verifying : javapackages-tools-3.4.1-11.el7.noarch	12/16
Verifying : libfontenc-1.1.3-3.el7.x86_64	13/16
Verifying : lksctp-tools-1.0.17-2.el7.x86_64	14/16
Verifying : libSM-1.2.2-2.el7.x86_64	15/16
Verifying : 1:xorg-x11-font-utils-7.5-20.el7.x86_64	16/16

Installed:

```
java-1.8.0-openjdk-devel.x86_64 1:1.8.0.161-2.b14.el7
```

Dependency Installed:

copy-jdk-configs.noarch 0:3.3-2.el7	giflib.x86_64 0:4.1.6-9.el7	java-1.8.0-openjdk.x86_64 1:1.8.0.161-2.b14.el7
java-1.8.0-openjdk-headless.x86_64 1:1.8.0.161-2.b14.el7	javapackages-tools.noarch 0:3.4.1-11.el7	libICE.x86_64 0:1.0.9-9.el7
libSM.x86_64 0:1.2.2-2.el7	libXfont.x86_64 0:1.5.2-1.el7	libfontenc.x86_64 0:1.1.3-3.el7
lksctp-tools.x86_64 0:1.0.17-2.el7	python-javapackages.noarch 0:3.4.1-11.el7	ttmkfdir.x86_64 0:3.0.9-42.el7
tzdata-java.noarch 0:2018c-1.el7	xorg-x11-font-utils.x86_64 1:7.5-20.el7	xorg-x11-fonts-Type1.noarch 0:7.5-9.el7

Complete!

```
[root@localhost opt]# java -version
```

```
openjdk version "1.8.0_161"
```

```
OpenJDK Runtime Environment (build 1.8.0_161-b14)
```

```
OpenJDK 64-Bit Server VM (build 25.161-b14, mixed mode)
```

```
[root@localhost opt]# whereis java
```

```
java: /usr/bin/java /usr/lib/java /etc/java /usr/share/java /usr/share/man/man1/java.1.gz
```

```
[root@localhost opt]# which java
```

```
/bin/java
```

```
[root@localhost opt]#
```

```
#####
#####          JDK installed          #####
#####
```

Installing TOMCAT:

```
Tomcat - https://tomcat.apache.org/download-90.cgi
```

Use the above link to download the tomcat and copy the binaries to the target machine. In this case it is copied to /opt/apps/

Now extract the tar file at the same location.

Go to /opt/apps/apache-tomcat-9.0.35

To start/stop the tomcat go to bin dir under /opt/apps/apache-tomcat-9.0.35 and use below command:

```
./shutdown.sh
```

```
./startup.sh
```

```
#####
#####          TOMCAT installed          #####
#####
```

Enabling Tomcat manager:

Go to /opt/apps/apache-tomcat-9.0.35/conf and open tomcat **tomcat-users.xml**

And add the below lines and save the file.

```
<role rolename="admin-gui"/>
```

```

<user username="admin" password="admin" roles="admin-gui"/>
</tomcat-users>
Restart the tomcat.
Now go to localhost:8080 and click on hostmanger tab. This will route you to Tomcat manager.
#####
##### TOMCAT MANAGER enabled #####
To deploy the application on tomcat, we need to first download the sample application(sample.war) file from the below and copy it to the target machine.
https://tomcat.apache.org/tomcat-7.0-doc/appdev/sample/
Now go to /opt/apps/apache-tomcat-9.0.35/webapps/
Copy the sample.war file to this location
Tomcat will automatically extract the war file and loads the application.
To check the application is installed properly or not --> we check logs at /opt/apps/apache-tomcat-9.0.35/logs/catalina.out or you can hit the application url http://localhost:8080/sample
We can also deploy the folder in tomcat - TASK
#####
##### Application deployment completed #####
##### Disable auto Application deployment #####
#####
Go to /opt/apps/apache-tomcat-9.0.35/conf and open server.xml. Look for the below line:
<Host name="localhost" appBase="webapps"
      unpackWARs="true" autoDeploy="true">
Change it like below and save it.
<Host name="localhost" appBase="webapps"
      unpackWARs="true" autoDeploy="false">
Restart tomcat.
Now deploy app and check it is getting deployed or not.
#####
##### Disable auto Application deployment completed #####
#####
##### VIRTUAL HOSTING IN SHARED #####
Shutdown tomcat server.
Demosite
Prosite
Create site1, site2 and site3 under /opt/apps/apache-tomcat-9.0.35/
Copy content inside webapps in above created folders.
Now got to conf folder and open server.xml and add the below lines under <Host name="localhost" appBase="webapps" unpackWARs="true" autoDeploy="true">:
<Host name="localhost" appBase="site1" unpackWARs="true" autoDeploy="true">
<Host name="localhost" appBase="site2" unpackWARs="true" autoDeploy="true">
<Host name="localhost" appBase="site3" unpackWARs="true" autoDeploy="true">
Open hosts in /etc and do the below changes:
Actual file:
127.0.0.1 localhost localhost.localdomain localhost4 localhost4.localdomain4
::1 localhost localhost.localdomain localhost6 localhost6.localdomain6
After modification:
127.0.0.1 localhost localhost.localdomain localhost4 localhost4.localdomain4
::1 localhost localhost.localdomain localhost6 localhost6.localdomain6
127.0.0.1 www.site1.com
127.0.0.1 www.site2.com
127.0.0.1 www.site3.com
Start the Tomcat.
Hit the below url's and check if they are up and running:
http://localhost:8080/sample
http://www.site1.com:8080/sample
http://www.site2.com:8080/sample
http://www.site3.com:8080/sample
#####
##### VIRTUAL HOSTING IN SHARED #####
#####
##### CLUSTER SETUP #####
Create tomcat1 and tomcat2 folder under /opt/apps/
Copy all the folders inside /opt/apps/apache-tomcat-9.0.35/ into tomcat1 and tomcat2
Delete bin and lib folders from tomcat1 and tomcat2 -- .ignored
Open server.xml from both tomcat1 and tomcat2 and change shutdown port, connector port and ajp port.
Ex: default port --> 8005(shutdown), 8080(Start) and 8009(AJP)
Tomcat1 --> 8105(shutdown), 8180(Start) and 8109(AJP)
Tomcat2 --> 8205(shutdown), 8280(Start) and 8209(AJP)
Create new scripts folder under /opt/apps
In scripts create wrapper scripts to stop, start and restart tomcat1 and tomcat2 instances.
Ex:
#!/bin/bash
export CATALINA_HOME=/opt/apps/apache-tomcat-9.0.35
export CATALINA_BASE=/opt/apps/tomcat1

cd ${CATALINA_HOME}/bin
./shutdown.sh
sleep 10
./startup.sh
Now deploy sample.war on both tomcat1 and tomcat2.
Restart tomcat1 and tomcat2 . Check for clean logs
Hit the app url's:
http://localhost:8080/sample
http://localhost:8180/sample
http://localhost:8280/sample
#####
##### CLUSTER SETUP COMPLETED #####
#####
##### SSL SETUP ON TOMCAT #####
Create folder 'SSLKeys' in /opt/apps
Go to /opt/apps/SSLKeys
Now to keytool run the below command. In this case it is /usr/bin/
./keytool -genkey -keyalg RSA -alias mykey -keystore /opt/apps/SSLKeys/tomcatkey
Give the required details when prompted and tomcatkey file will be generated at /opt/apps/SSLKeys

```

Now got to server.xml and edit the like below:

```
#secure port related:  
<Connector port="8443" protocol="org.apache.coyote.http11.Http11NioProtocol"  
    maxThreads="150" SSLEnabled="true">  
    <SSLHostConfig>  
        <Certificate certificateKeystoreFile="/opt/apps/SSLKeys/tomcatkey" certificateKeystorePassword="password"  
            type="RSA" />  
    </SSLHostConfig>  
</Connector>  
#AJB related:  
<Connector protocol="AJP/1.3"  
    address "::1"  
    port="8009"  
    redirectPort="8443" secretRequired="false" />
```

Restart tomcat and hit http and https url's.

<http://localhost:8080>

<https://localhost:8443>

```
##### TOMCAT SSL SETUP COMPLETED #####
```

```
#####
```

To install apache webserver. --> yum install httpd

To know the httpd version. --> httpd -V

To check the Url. --> curl <http://localhost:80>

To stop of httpd. --> systemctl stop httpd

To start of httpd. --> systemctl start httpd

Netstat -tupn | grep -l http

/var/www/html

If no index.html is there. Create one

Vi index.html

<html>

<center> WELCOME CLASS </center>

</html>

check the Url. --> curl <http://localhost:80>

```
#####
```

netstat -tulpn

Iptables -L

Iptables -F

DirectoryIndex:

ServerRoot:

To know if httpd is installed on linux. --> rpm -qa | grep -l http

To check the status of httpd. --> systemctl status httpd or netstat -tupan | grep -i http or ps -ef|grep http

Install mod_ssl, if you wanna enable SSL on httpd. --> yum install mod_ssl

After httpd file changes, give the following command to check it everything compatable. --> httpd -t

To list all the modules. --> yum list | grep -l mod_

To check the number of line in a file. --> vi file.txt -> press esc button -> type :set number and enter. This will display numbers for every line in the file.

```
#####
```

```
##### HTTPD SETUP COMPLETED #####
```

```
##### MOD_JK AND LB SETUP #####
```

Add mod_jk.so file in /etc/httpd/modules/

Add the below lines at the end of the httpd.conf

```
LoadModule jk_module modules/mod_jk.so  
JkWorkersFile conf/workers.properties
```

JkLogLevel info

JkLogFile logs/mod_jk.log

JkMount /* lb

Now create workers.properties at /etc/httpd/conf. Add below lines:

```
#  
worker.list=lb  
  
#Instance2  
worker.tomcat1.type=ajp13  
worker.tomcat1.host=192.168.42.138  
worker.tomcat1.host=8109  
#Instance2  
worker.tomcat2.type=ajp13  
worker.tomcat2.host=192.168.42.138  
worker.tomcat2.host=8209  
  
worker.lb.type=lb  
worker.lb.balance_workers=tomcat1,tomcat2
```

Open server.xml in each of the above to instances and do the below changes:

```
#instance1  
<Connector protocol="AJP/1.3"  
    address="0.0.0.0"  
    port="8009"
```

```

redirectPort="8443" secretRequired="false" />

<Engine name="Catalina" defaultHost="localhost">jvmRoute="tomcat1"
#instance2
<Connector protocol="AJP/1.3"
address="0.0.0.0"
port="8109"
redirectPort="8443" secretRequired="false" />

<Engine name="Catalina" defaultHost="localhost">jvmRoute="tomcat2"

Restart httpd and tomcat instances

#####
#####Enabling SSL on httpd #####
Install mod_ssl

cd /opt/apps/SSLKeys
#Generate ssl key using below comamnd (this will generate the key the current location)
openssl genrsa -out webserver.key 2048
#Generate csr key using below comamnd
openssl req -new -key webserver.key -out webserver.csr --> create csr file
openssl x509 -req -days 365 -in webserver.csr -signkey webserver.key -out webserver.crt --> certificate will be created

Open /etc/httpd/conf.d/ssl.conf
check document root is enabled
check server name is correct
add path for crt file and key file
set firewall(you can add service https or port 443)
-> firewall-cmd --permanent --add-service=https
success
-> firewall-cmd --permamnent --add-port=443/tcp
success
firewall-cmd --reload
success

restart httpd --> systemctl restart httpd
systemctl enable httpd

check the url:
https:localhost:80
#####
##### SSL enabled on httpd #####
#####

```

Apache tomcat Tutorial - Udemy

Sunday, May 10, 2020 9:44 PM

This course starts with the basic concepts of Tomcat Server as beginners and moves to advance topics of server configuration. Covers most of the major concepts that one should know while using Tomcat. As Tomcat is the core servlet container being used in many open source app servers like JBoss, this will give a solid foundation for further progress in middleware. If you are a middleware administrator(tomcat server administrator) then it is more suitable for you as it covers deployment, ssl configuration and various cluster related configuration steps that you generally use while administering the servers. Configuring a server is a daunting task and you need more clarity about various parameters, this tomcat server course is drafted keeping all the initial complexity in mind by making simple videos to address complex topics of Apache tomcat.

What you'll learn

- At the end of the course student will be able to learn deployment on Tomcat Server, how it works.
- Will learn the security concepts to make the deployed applications more secure.
- Can create and manage high availability cluster.
- Can scale the applications from middleware perspective to take millions of requests/sec.
- Will be able to create and manage virtual hosts in an shared hosting environment.
- Understand the optimization techniques and setting other important parameters.

Are there any course requirements or prerequisites?

- Students should have basic understanding of web application concepts and familiar with windows and Linux basics

Who this course is for:

- Any one who wants to learn about the working of Apache Tomcat server from scratch.
- It is also useful for people who are in operational support and need to know the advance concepts of Tomcat

Apache Tomcat

Monday, May 11, 2020 1:11 PM

Apache Tomcat

1

Apache Tomcat

- Representation and Management of Data on the Web

2

What is Tomcat?

- A Web server is a program that receives HTTP requests and returns HTTP responses
- Tomcat is a Web Server created by Apache
- Tomcat supports Servlets!

3

Installing Tomcat

- Create a directory for installation (tomcat_home)
- Inside the directory, type "tomcat setup"
- The following directories will be created
 - conf
 - lib
 - logs
 - my-webapps-template-dir
 - webapps

4

Running Tomcat

- Go to the installation directory
- Use the command "tomcat start" to start the server
- Use the command "tomcat stop" to stop the server
- You get to the server by requesting on a web browser `http://localhost:port/`
- Host is the machine on which you started tomcat
- Port is the port number according to the configuration (default 8080)

5

Note Examples of Servlets (and JSP) are available here

Note You may have to disable the proxies of your web browser in order for this to work

6

Important Note

- Tomcat runs in the background.
- Tomcat has started and you can try to access it after you see at your prompt something like
 - 2003-05-04 120229 - PoolTcpConnector Starting HttpConnectionHandler on 8383
 - 2003-05-04 120231 - PoolTcpConnector Starting Ajp12ConnectionHandler on 8007

7

Extremely Important Note

- When you run tomcat, it causes many processes to be created
- By order of the system Do not run tomcat on pita, mangal, inferno, etc. Do run tomcat on your local workstation
- Remember to stop tomcat before logging off!!!

8

Changing the Default Port

- Open the file server.xml in the directory conf of the tomcat installation

It!-- Normal HTTP --gt ItConnector

```
className "org.apache.tomcat.service.PoolTcpConn
ector">t ItParameter name"handler"
value"org.apache.tomcat.service.
http.HttpConnectionHandler"/gt ItParameter
name"port" value"8080"/gt
It/Connectorgt
```

9

The Directory Structure of a Web Application (1)

- Web applications are located in the webapps directory
- Each web application has its own subdirectory.
- The web application subdirectory is built in a standard fashion
- Note After creating the subdirectory you must restart Tomcat, for tomcat to recognize it!

10

The Directory Structure of a Web Application (2)

- /dbi The root directory of the dbi web application. Store here HTML and JSP files
- /dbi/WEB-INF All resources for the web application that are not in the root directory. Store here web.xml (which describes your servlets)
- /dbi/WEB-INF/classes Servlet and utility classes
- /dbi/WEB-INF/lib Utility JAR files

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Referring to your Files in the Browser

- To open a page called a.html in the ROOT directory of the dbi web application
- http://lhostgtlportgt/dbi/a.html
- To open a servlet called HelloWorld.class of the dbi web application
- http://lhostgtlportgt/dbi/servlet/HelloWorld
- Ugh! Do we really need to specify directory "servlet" in order to reference the servlet?

12

Configuring Servlet Information

- If you simply put the Servlet class file in the dbi/WEB-INF/classes directory, it will be known to Tomcat by its class name
- You can configure the tomcat name and other things in the web.xml file, which should go in the dbi/WEB-INF directory.

13

The web.xml File

- Use the web.xml file to
- configure the way the servlet is called in the browser
- give it initialization parameters
- set session timeout
- An example web.xml file can be found here and is on the following slides

14

- lt?xml version"1.0" encoding"ISO-8859-1"?gt
- lt!DOCTYPE web-app
- PUBLIC "-//Sun Microsystems, Inc.//DTD Web Application 2.2//EN" "http://java.sun.com/j2ee/dtds/web-app_2_2.dtd"gt

- Itweb-appgt
- Itsession-timeoutgt30lt/session-timeoutgt
- Itservletgt
- Itservlet-namegtthilt/servlet-namegt
- Itservlet-classgtHelloWorldlt/servlet-classgt
- Itinit-paramgt
- Itparam-namegtloginlt/param-namegt
- Itparam-valuegtsonoopylt/param-valuegt
- It/init-paramgt
- It/servletgt

15

- It?xml version="1.0" encoding="ISO-8859-1"?gt
- It!DOCTYPE web-app
- PUBLIC "-//Sun Microsystems, Inc.//DTD Web Application 2.2//EN" "http://java.sun.com/j2ee/dtds/web-app_2_2.dtd"gt
- Itweb-appgt
- Itsession-timeoutgt30lt/session-timeoutgt
- Itservletgt
- Itservlet-namegtthilt/servlet-namegt
- Itservlet-classgtHelloWorldlt/servlet-classgt
- Itinit-paramgt
- Itparam-namegtloginlt/param-namegt
- Itparam-valuegtsonoopylt/param-valuegt
- It/init-paramgt
- It/servletgt

16

- It?xml version="1.0" encoding="ISO-8859-1"?gt
- It!DOCTYPE web-app
- PUBLIC "-//Sun Microsystems, Inc.//DTD Web Application 2.2//EN" "http://java.sun.com/j2ee/dtds/web-app_2_2.dtd"gt
- Itweb-appgt
- Itsession-timeoutgt30lt/session-timeoutgt
- Itservletgt
- Itservlet-namegtthilt/servlet-namegt
- Itservlet-classgtHelloWorldlt/servlet-classgt
- Itinit-paramgt
- Itparam-namegtloginlt/param-namegt
- Itparam-valuegtsonoopylt/param-valuegt
- It/init-paramgt
- It/servletgt

17

- Itservlet-mappinggt
- Itservlet-namegtthilt/servlet-namegt
- Iturl-patterngt/hilt/url-patterngt
- It/servlet-mappinggt
- Itservlet-mappinggt
- Itservlet-namegtthilt/servlet-namegt
- Iturl-patterngt.hilt/url-patterngt
- It/servlet-mappinggt
- Iterror-pagegt
- Iterror-codegt404lt/error-codegt
- Itlocationgt/servlet/NotFoundlt/locationgt
- It/error-pagegt
- It/web-appgt

18

- It/servlet-mappinggt
- It/servlet-namegt/hilt/servlet-namegt
- It/url-patterngt/hilt/url-patterngt
- It/servlet-mappinggt
- It/servlet-mappinggt
- It/servlet-namegt/hilt/servlet-namegt
- It/url-patterngt.hilt/url-patterngt
- It/servlet-mappinggt
- It/error-pagegt
- It/error-codegt404lt/error-codegt
- It/locationgt/servlet/NotFoundlt/locationgt
- It/error-pagegt
- It/web-appgt

19

Deploying your Web Application

- Go to the root directory of your application (e.g., dbi)
- Archive the distribution jar -cvf dbi.war
- Move the war file to tomcat_home/webapps
- Remove the directory dbi
- Restart Tomcat
- Note When you run tomcat, the war file is unpacked, so the directory dbi will be created

20

Think About it?

- When you change the web.xml file you have to restart Tomcat. Why?
- Where do you put your .java files?
- How do you get your class files where they belong?

21

Working with Apache A Recommendation

22

Recommendation

- Develop your java code outside of the tomcat directories
- Compile to the correct directories
- Use ant to organize the process

23

Setting up your Directories

- Choose a directory to work in (e.g., /dbi/project)
- Create the directory with the following subdirectories
- etc will contain the file web.xml
- src will contain your source files (your .java files)
- lib will contain any jar files you need
- web will contain HTML and JSP pages for your site

24

Build File Properties

- Here is an ant build file
- You need to change the values for the following properties
- Itproperty name="tomcat.home" value="complete-path-to-tomcat-home"/gt
- Itproperty name="app.name" value="your-app-name"/gt

25

Build File Targets

- The build file has 5 targets
- prepare Creates the directory hierarchy in the webapps directory for the application copies web.xml file
- clean Deletes the directory hierarchy created in prepare
- compile Compiles the files from src to the proper directory under tomcat (which directory?)

26

Build File Targets

- all does clean, prepare and compile
- dist creates a war file from the web application and a jar file from the web application

From <https://www.powershow.com/view/94127-MDEyN/Apache_Tomcat_powerpoint_ppt_presentation>

JMX

Monday, October 14, 2019 4:38 PM

Simple and preferred:

```
jmx enabling:  
add the below line in catalina.bat  
set "JAVA_OPTS=%JAVA_OPTS%-Djava.protocol.handler.pkgs=org.apache.catalina.webresources -Dcom.sun.management.jmxremote -Dcom.sun.management.jmxremote.port=9999 -  
Dcom.sun.management.jmxremote.authenticate=false -Dcom.sun.management.jmxremote.ssl=false -verbose:class"
```

Online solution(working but not preferred):

```
where java  
setx JAVA_HOME -m "path"  
setx JRE_HOME -m "path"  
echo %JAVA_HOME%  
echo %JRE_HOME%
```

Edit this file - tomcat-users.xml to add this xml section -

```
<tomcat-users>  
<role rolename="admin"/>  
<role rolename="admin-gui"/>  
<role rolename="manager-gui"/>  
<user username="tomcatadmin" password="tomcat2009" roles="admin,admin-gui,manager-gui"/>  
</tomcat-users>
```

registering tomcat as a windows service(optional):

Follow the below link:

<https://stackoverflow.com/questions/15136327/how-to-enable-jmx-on-tomcat7-running-as-windows-service>

or:

Install Tomcat as Windows service, either using the command (first cd into \bin\)
service.bat install

or your custom scripts.

Enable Apache Service Manager for the installed service using the following command:
tomcat7w.exe //MS//ApacheTomcatWindowsServer

This should start Apache Service Monitor program on your system tray. Click on its icon. select 'Configure', click on the 'Java' tab and append the following on the 'Java Options' text box, one option per line:

```
-Dcom.sun.management.jmxremote.port=8090  
-Dcom.sun.management.jmxremote.authenticate=false  
-Dcom.sun.management.jmxremote.ssl=false
```

Save and exit and restart the service.

To connect to the JMX console, fire jconsole from your JDK installation, click 'New Connection', specify 'Remote Process' and enter hostname:8090.

To enable yum repo :

How to Setup Local Yum/DNF Repository on RHEL 8 Server Using DVD or ISO File

by [Pradeep Kumar](#) · Published May 12, 2019 · Updated June 24, 2019

Recently Red Hat has released its most awaited operating system “RHEL 8”, in case you have installed RHEL 8 Server on your system and wondering how to setup local yum or dnf repository using installation DVD or ISO file then refer below steps and procedure.



In RHEL 8, we have two package repositories:

- BaseOS
- Application Stream

BaseOS repository have all underlying OS packages where as Application Stream repository have all application related packages, developer tools and databases etc. Using Application stream repository, we can have multiple of versions of same application and Database.

Step:1) Mount RHEL 8 ISO file / Installation DVD

To mount RHEL 8 ISO file inside your RHEL 8 server use the beneath mount command,

```
[root@linuxtechi-rhel8 ~]# mount -o loop rhel-8.0-x86_64-dvd.iso /opt/
```

Note: I am assuming you have already copied RHEL 8 ISO file inside your system,

In case you have RHEL 8 installation DVD, then use below mount command to mount it,

```
[root@linuxtechi-rhel8 ~]# mount /dev/sr0 /opt/
```

Step:2) Copy media.repo file from mounted directory to /etc/yum.repos.d/

In our case RHEL 8 Installation DVD or ISO file is mounted under /opt folder, use cp command to copy media.repo file to /etc/yum.repos.d/ directory,

```
[root@linuxtechi-rhel8 ~]# cp -v /opt/media.repo /etc/yum.repos.d/rhel8.repo
```

```
/opt/media.repo' > '/etc/yum.repos.d/rhel8.repo'
```

```
[root@linuxtechi-rhel8 ~]#
```

Set “644” permission on “/etc/yum.repos.d/rhel8.repo”

```
[root@linuxtechi-rhel8 ~]# chmod 644 /etc/yum.repos.d/rhel8.repo
```

```
[root@linuxtechi-rhel8 ~]#
```

Step:3) Add repository entries in “/etc/yum.repos.d/rhel8.repo” file

By default, rhel8.repo file will have following content,

```
[root@linuxtechi-rhel8 ~]# cat /etc/yum.repos.d/rhel8.repo
[InstallMedia]
name=Red Hat Enterprise Linux 8.0.0
mediaid=None
metadata_expire=-1
gpgcheck=0
cost=500
[root@linuxtechi-rhel8 ~]#
```

Edit rhel8.repo file and add the following contents,

```
[root@linuxtechi-rhel8 ~]# vi /etc/yum.repos.d/rhel8.repo
[InstallMedia-BaseOS]
name=Red Hat Enterprise Linux 8 - BaseOS
metadata_expire=1
gpgcheck=1
enabled=1
baseurl=file:///opt/BaseOS/
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-redhat-release
```

```
[InstallMedia-AppStream]
name=Red Hat Enterprise Linux 8 - AppStream
metadata_expire=-1
gpgcheck=1
enabled=1
baseurl=file:///opt/AppStream/
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-redhat-release
```

rhel8.repo should look like above once we add the content, In case you have mounted the Installation DVD or ISO on different folder then change the location and folder name in base url line for both repositories and rest of parameter leave as it is.

Step:4) Clean Yum / DNF and Subscription Manager Cache

Use the following command to clear yum or dnf and subscription manager cache,

```
root@linuxtechi-rhel8 ~]# dnf clean all
[root@linuxtechi-rhel8 ~]# subscription-manager clean
All local data removed
[root@linuxtechi-rhel8 ~]#
```

Step:5) Verify whether Yum / DNF is getting packages from Local Repo

Use dnf or yum repolist command to verify whether these commands are getting packages from Local repositories or not.

```
root@linuxtechi-rhel8 ~]# dnf repolist
Updating Subscription Management repositories.
Unable to read consumer identity
This system is not registered to Red Hat Subscription Management. You can use subscription-manager to register.
Last metadata expiration check: 1:32:44 ago on Sat 11 May 2019 08:48:24 AM BST.
repo id          repo name           status
InstallMedia-AppStream Red Hat Enterprise Linux 8 - AppStream      4,672
InstallMedia-BaseOS   Red Hat Enterprise Linux 8 - BaseOS        1,658
[root@linuxtechi-rhel8 ~]#
```

Note : You can use either dnf or yum command, if you use yum command then its request is redirecting to DNF itself because in RHEL 8 yum is based on DNF command.

If you have noticed the above command output carefully, we are getting warning message “This system is not registered to Red Hat Subscription Management. You can use subscription-manager to register”, if you want to suppress or prevent this message while running dnf / yum command then edit the file “/etc/yum/pluginconf.d/subscription-manager.conf”, changed the parameter “enabled=1” to “enabled=0”

```
root@linuxtechi-rhel8 ~]# vi /etc/yum/pluginconf.d/subscription-manager.conf
[main]
enabled=0
```

save and exit the file.

Step:6) Installing packages using DNF / Yum

Let's assume we want to install nginx web server then run below dnf command,

```
root@linuxtechi-rhel8 ~]# dnf install nginx
[root@linuxtechi-rhel8 ~]# dnf install nginx
Last metadata expiration check: 1:47:03 ago on Sat 11 May 2019 08:48:24 AM BST.
Dependencies resolved.
=====
 Package           Arch    Version            Repository      Size
=====
Installing:
 nginx            x86_64  1:1.14.1-8.module+el8+2505+fe936cef  InstallMedia-AppStream  569 k
Installing dependencies:
 nginx-all-modules noarch  1:1.14.1-8.module+el8+2505+fe936cef  InstallMedia-AppStream  23 k
 nginx-mod-http-image-filter x86_64  1:1.14.1-8.module+el8+2505+fe936cef  InstallMedia-AppStream  34 k
 nginx-mod-http-perl       x86_64  1:1.14.1-8.module+el8+2505+fe936cef  InstallMedia-AppStream  45 k
 nginx-mod-http-xslt-filter x86_64  1:1.14.1-8.module+el8+2505+fe936cef  InstallMedia-AppStream  33 k
 nginx-mod-mail          x86_64  1:1.14.1-8.module+el8+2505+fe936cef  InstallMedia-AppStream  64 k
 nginx-mod-stream         x86_64  1:1.14.1-8.module+el8+2505+fe936cef  InstallMedia-AppStream  85 k
Transaction Summary
=====
Install 7 Packages

Total size: 854 k
Installed size: 2.0 M
Is this ok [y/N]: y
```

Similarly if you want to install LEMP stack on your RHEL 8 system use the following dnf command,

```
root@linuxtechi-rhel8 ~]# dnf install nginx mariadb php -y
```

Package	Arch	Version	Repository	Size
Installing:				
mariadb	x86_64	3:10.3.11-1.module+el8+2765+cfa4f87b	InstallMedia-AppStream	6.2 M
nginx	x86_64	1:1.14.1-8.module+el8+2505+fe936cef	InstallMedia-AppStream	569 k
php	x86_64	7.2.11-1.module+el8+2561+laca3413	InstallMedia-AppStream	1.5 M
Installing dependencies:				
apr	x86_64	1.6.3-9.el8	InstallMedia-AppStream	125 k
apr-util	x86_64	1.6.1-6.el8	InstallMedia-AppStream	105 k
httpd	x86_64	2.4.37-10.module+el8+2764+7127e69e	InstallMedia-AppStream	1.4 M
httpd-filesystem	noarch	2.4.37-10.module+el8+2764+7127e69e	InstallMedia-AppStream	34 k
httpd-tools	x86_64	2.4.37-10.module+el8+2764+7127e69e	InstallMedia-AppStream	101 k
mariadb-common	x86_64	3:10.3.11-1.module+el8+2765+cfa4f87b	InstallMedia-AppStream	62 k
mariadb-connector-c	x86_64	3.0.7-1.el8	InstallMedia-AppStream	148 k
mariadb-connector-c-config	noarch	3.0.7-1.el8	InstallMedia-AppStream	13 k
mod_http2	x86_64	1.11.3-1.module+el8+2443+605475b7	InstallMedia-AppStream	156 k
nginx-all-modules	noarch	1:1.14.1-8.module+el8+2505+fe936cef	InstallMedia-AppStream	23 k
nginx-filesystem	noarch	1:1.14.1-8.module+el8+2505+fe936cef	InstallMedia-AppStream	24 k
nginx-mod-http-image-filter	x86_64	1:1.14.1-8.module+el8+2505+fe936cef	InstallMedia-AppStream	34 k
nginx-mod-http-perl	x86_64	1:1.14.1-8.module+el8+2505+fe936cef	InstallMedia-AppStream	45 k
nginx-mod-http-xslt-filter	x86_64	1:1.14.1-8.module+el8+2505+fe936cef	InstallMedia-AppStream	33 k
nginx-mod-mail	x86_64	1:1.14.1-8.module+el8+2505+fe936cef	InstallMedia-AppStream	64 k
nginx-mod-stream	x86_64	1:1.14.1-8.module+el8+2505+fe936cef	InstallMedia-AppStream	85 k
php-cli	x86_64	7.2.11-1.module+el8+2561+laca3413	InstallMedia-AppStream	3.1 M
php-common	x86_64	7.2.11-1.module+el8+2561+laca3413	InstallMedia-AppStream	653 k
redhat-logos-httpd	noarch	80.7-1.el8	InstallMedia-BaseOS	25 k
Installing weak dependencies:				
apr-util-bdb	x86_64	1.6.1-6.el8	InstallMedia-AppStream	25 k
apr-util-openssl	x86_64	1.6.1-6.el8	InstallMedia-AppStream	27 k
php-fpm	x86_64	7.2.11-1.module+el8+2561+laca3413	InstallMedia-AppStream	1.6 M

This confirms that we have successfully configured Local yum / dnf repository on our RHEL 8 server using Installation DVD or ISO file.

In case these steps help you technically, please do share your feedback and comments.

Read More on : [How to Install and Configure KVM on RHEL 8](https://www.linuxtechi.com/how-to-install-and-configure-kvm-on-rhel-8/)

From <<https://www.linuxtechi.com/setup-local-yum-dnf-repository-rhel-8/>>

Enabling yum - hands on

Friday, May 15, 2020 11:26 PM

Install the rhel 7.5 with default setting on vmworkstation pro 15

Log in to winscp and putty:

-> to get the ip addrees use the following command and capture the first inet value - in this case it is 192.168.42.135

-----> using winscp copy the rhel 7.5 iso file which is used to install on vm workstation to /opt/ISO/

-----> now log in to putty and follow the below commands to enable YUM(ignore all dnf command and its error output):

```
Unable to use key file "C:\Users\npanguluri\Desktop\firstinstance.ppk" (unable to open file)
```

```
Using username "user".
```

```
Last login: Sat May 16 02:46:49 2020
```

```
[user@localhost ~]$ su -
```

```
Password:
```

```
[root@localhost ~]# df -h
```

Filesystem	Size	Used	Avail	Use%	Mounted on
/dev/sda3	18G	5.4G	13G	31%	/
devtmpfs	900M	0	900M	0%	/dev
tmpfs	911M	0	911M	0%	/dev/shm
tmpfs	911M	9.7M	902M	2%	/run
tmpfs	911M	0	911M	0%	/sys/fs/cgroup
/dev/sda1	297M	124M	174M	42%	/boot
tmpfs	183M	0	183M	0%	/run/user/0
tmpfs	183M	0	183M	0%	/run/user/1000

```

gpgcheck=0
cost=500
[InstallMedia-BaseOS]
name=Red Hat Enterprise Linux 7.5 - BaseOS
metadata_expire=-1
gpgcheck=1
enabled=1
baseurl=file:///media/iso/
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-redhat-release
[InstallMedia-AppStream]
name=Red Hat Enterprise Linux 7.5 - AppStream
metadata_expire=-1
gpgcheck=1
enabled=1
baseurl=file:///media/iso/
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-redhat-release
[root@localhost iso]# yum repolist
Loaded plugins: langpacks, product-id, search-disabled-repos, subscription-manager
This system is not registered with an entitlement server. You can use subscription-manager to register.
InstallMedia-AppStream                                         | 4.3 kB 00:00:00
InstallMedia-BaseOS                                         | 4.3 kB 00:00:00
(1/4): InstallMedia-AppStream/group_gz                      | 145 kB 00:00:00
(2/4): InstallMedia-BaseOS/group_gz                         | 145 kB 00:00:00
(3/4): InstallMedia-BaseOS/primary_db                       | 4.1 MB 00:00:00
(4/4): InstallMedia-AppStream/primary_db                     | 4.1 MB 00:00:00
repo id          repo name                                status
InstallMedia-AppStream          Red Hat Enterprise Linux 7.5 - AppStream      5,099
InstallMedia-BaseOS            Red Hat Enterprise Linux 7.5 - BaseOS        5,099
repolist: 10,198
[root@localhost iso]# yum install curl
Loaded plugins: langpacks, product-id, search-disabled-repos, subscription-manager
This system is not registered with an entitlement server. You can use subscription-manager to register.
Package curl-7.29.0-46.el7.x86_64 already installed and latest version
Nothing to do
[root@localhost iso]# vi /etc/yum/pluginconf.d/subscription-manager.conf
change the value 1 to 0 and save it
[root@localhost iso]# yum update
Loaded plugins: langpacks, product-id, search-disabled-repos
No packages marked for update
[root@localhost iso]# yum list all
Loaded plugins: langpacks, product-id, search-disabled-repos
Installed Packages
GeoIP.x86_64           1.5.0-11.el7          @anaconda/7.5
NetworkManager.x86_64    1:1.10.2-13.el7       @anaconda/7.5
NetworkManager-config-server.noarch   1:1.10.2-13.el7       @anaconda/7.5
#####
##### YUM is ENABLED #####
#####

```

Simple DevOps project

Thursday, February 27, 2020 11:37 AM

Simple DevOps Project -01

We know how to use work with each and Git, Jenkins independently. What if you want to collaborate these two? that is where Simple DevOps project helps you. Follow below steps if you are a new guy to DevOps. You love it.

Follow this article in YouTube

Prerequisites

EC2 instance with tomcat installation **installation steps video

Jenkins server **Get Help here

Part-01 : Adding steps for Integration

Steps to create Jenkin job

Login to Jenkins console

Create Jenkins job, Fill the following details,

Source Code Management:

Repository: <https://github.com/ValaxyTech/hello-world.git>

Branches to build : */master

Build:

Root POM:pom.xml

Goals and options : clean install package

Part-02: Adding Deployment Steps

in this part we are going to install 'deploy to container' plugin. this is need to deploy on tomcat server which we are using .

Install maven plugin without restart

Manage Jenkins > Jenkins Plugins > available > deploy to container

To deploy our build artifacts on tomcat server our Jenkins server need access. For this we should setup credentials. This option is available in Jenkins home page

setup credentials

credentials > jenkins > Global credentials > add credentials

Username : deployer

Password : XXXXXX

id : Tomcat_user

Description: Tomcat user to deploy on tomcat server

Modify the same job which created in part-01 and add deployment steps.

Post Steps

Deploy war/ear to container

WAR/EAR files : **/*.war

Containers : Tomcat 8.x

Credentials: Tomcat_user (which created in above step)

Tomcat URL : [http://<PUBLIC IP>:<PORT NO>](http://<PUBLIC_IP>:<PORT_NO>)

Save and run the job now.

Port-03 : Continuous Integration & Continuous Deployment (CI/CD)

Now job is running fine but to make this as Continuous Integration and Continuous Deployment Tod do that go back and modify job as below.

Build Triggers

Poll SCM

schedule */2 * * * *

Save the job and modify the code in GitHub. Then you could see your job get trigger a build without any manual intervention.

GIT/GITHUB - cmd

Monday, June 15, 2020 10:10 AM

```
git version
wget https://storage.googleapis.com/deloitte-training/sample-master.zip
unzip sample-master.zip
touch .gitignore
vi .gitignore
|||
cp .gitignore ..internal/
git add .
git status
git commit -m "Firsty commit into external"
git config --global user.email "anujnarayan11@gmail.com"
git config --global user.name "anujnarayan23"
git commit -m "Firsty commit into external"
git status
git remote add origin https://github.com/anujnarayan23/External-demo.git
git push
anujnarayan11@gmail.com
Wadians@114088
https://github.com/anujnarayan23/External-demo.git
https://github.com/anujnarayan23/Internal-demo.git
git remote add origin https://github.com/anujnarayan23/Internal-demo.git
git push -u origin Test1
git config credential.helper store
git push
```

```
npm install
npm test
```

Monitoring

Tuesday, July 14, 2020 1:09 PM

What is Monitoring?

Monitoring is the regular observation and recording of activities taking place in a project or programme. It is a process of routinely gathering information on all aspects of the project.

Monitoring is very important in project planning and implementation.

It is like watching where you are going while riding a bicycle; you can adjust as you go along and ensure that you are on the right track.

Monitoring provides information that will be useful in:

- ◆ Analysing the situation in the community and its project;
- ◆ Determining whether the inputs in the project are well utilized;
- ◆ Identifying problems facing the community or project and finding solutions;
- ◆ Ensuring all activities are carried out properly by the right people and in time;
- ◆ Using lessons from one project experience on to another; and
- ◆ Determining whether the way the project was planned is the most appropriate way of solving the problem at hand.

From <<http://cec.vcn.bc.ca/cmp/modules/mon-wht.htm>>

#####
Gathering Metrics from Your Infrastructure and Applications

Introduction:-

Understanding the state of your systems is essential for ensuring the reliability and stability of your applications and services. Information about the health and performance of your deployments not only helps your team react to issues, it also gives them the security to make changes with confidence. One of the best ways to gain this insight is with a robust monitoring system that gathers metrics, visualizes data, and alerts operators when things appear to be broken.

In our introduction to metrics, monitoring, and alerting guide, we discussed some of the core concepts involved in monitoring software and infrastructure. Metrics are the primary material processed by monitoring systems to build a cohesive view of the systems being tracked. Knowing which components are worth monitoring and what specific characteristics you should be looking at is the first step in designing a system that can provide reliable, actionable insights about the state of your software and hardware.

In this guide, we will start by discussing a popular framework used to identify the most critical metrics to track. Afterwards, we will walk through how those indicators can be applied to components throughout your deployment. This process will focus on the fundamental resources of individual servers at first and then adjust the scope to cover increasingly larger areas of concern.

The Golden Signals of Monitoring

In the highly influential Google SRE (site reliability engineering) Book, the chapter on monitoring distributed systems introduces a useful framework called the four golden signals of monitoring that represents the most important factors to measure in a user-facing system. We will discuss each of these four characteristics below.

Latency

Latency is a measurement of the time it takes to complete an action. The specifics of how this is measured depends on the component, but some common analogues are processing time, response time, or travel time.

Measuring latency gives you a concrete measure of how long a specific task or action takes to complete. Capturing the latency of various components allows you to build a holistic model of the different performance characteristics of your system. This can help you find bottlenecks, understand which resources require the most time to access, and notice when actions suddenly take longer than expected. The authors of the SRE book emphasize the importance of distinguishing between successful and unsuccessful requests when calculating latencies, as they can have very different profiles that might skew the averages of a service.

Traffic

Traffic measures the "busyness" of your components and systems. This captures the load or demand on your services so that you can understand how much work your system is currently performing.

Sustained high or low traffic numbers can indicate that the service might need more resources or that a problem is preventing traffic from being routed correctly. However, for the majority of cases, traffic rates will be most useful in helping understand issues surfaced through other signals. For example, if latency increases beyond an acceptable level, being able to correlate that time frame with a spike in traffic is helpful. Traffic can be used to understand the maximum amount of traffic that can be handled and how the service degrades or fails at various stages of load.

Errors

It is important to track errors to understand the health of your components and how frequently they are failing to respond to requests appropriately. Some applications or services expose errors in clean, ready-made interfaces, but additional work may be required to gather the data from other programs.

Distinguishing between different types of errors can make it easier to pinpoint the exact nature of problems that are impacting your applications. This also gives you flexibility in alerting. You might need to be alerted immediately if one type of error appears, but for another, you might not be concerned as long as the rate is below an acceptable threshold.

Saturation

Saturation measures how much of a given resource is being used. Percentages or fractions are frequently used with resources that have a clear total capacity, but more creative measurements might be needed for resources with less well-defined maximum.

Saturation data provides information about the resources that a service or application depends on to operate effectively. Since a service provided by one component may be consumed by another, saturation is one of the glue metrics that surfaces the capacity problems of underlying systems. As such, saturation and latency problems in one layer might correspond with a marked increase in traffic or error measurements in the underlying layer.

Measuring Important Data Throughout Your Environment

Using the four golden signals as a guideline, you can begin to look at how those metrics would be expressed throughout the hierarchy of your systems. Since services are often built by adding layers of abstraction on top of more basic components, metrics should be designed to add insight at each level of the deployment.

We will look at different levels of complexity present in common distributed application environments:

Individual server components
Applications and services
Collections of servers

Environmental dependencies

End-to-end experience

The ordering above expands the scope and level of abstraction with each subsequent layer.

Metrics to Collect for Individual Server Components

The base level metrics that are important to collect are those relevant to the underlying computers that your systems rely on. Although considerable effort in modern software development goes into abstracting the physical components and low level operating system details, every service relies on the underlying hardware and operating systems to do its work. Because of this, keeping an eye on the foundational resources of your machines is the first step in building an understanding of the health of your systems.

When considering which metrics to collect at the machine level, think about the individual resources available. These will include representations of your server's hardware as well as core abstractions provided by the OS, like processes and file descriptors. Looking at each component in terms of the four golden signals, certain signals may be obvious while others may be more difficult to reason about.

Brendan Gregg, an influential performance engineer, outlines many ways to get core metrics from Linux systems to satisfy the needs of a framework he calls the USE method for performance analysis (utilization, saturation, and errors). Since there is significant overlap between the USE method and the four golden signals, we can use some of his recommendations as a jumping off point for figuring out what data to collect from server components.

To measure CPU, the following measurements might be appropriate:

Latency: Average or maximum delay in CPU scheduler

Traffic: CPU utilization

Errors: Processor specific error events, faulted CPUs

Saturation: Run queue length

For memory, the signals might look like this:

Latency: (none - difficult to find a good method of measuring and not actionable)

Traffic: Amount of memory being used

Errors: Out of memory errors

Saturation: OOM killer events, swap usage

For storage devices:

Latency: average wait time (await) for reads and writes

Traffic: read and write I/O levels

Errors: filesystem errors, disk errors in /sys/devices

Saturation: I/O queue depth

The networking signals can look like this:

Latency: Network driver queue

Traffic: Incoming and outgoing bytes or packets per second

Errors: Network device errors, dropped packets

Saturation: overruns, dropped packets, retransmitted segments

Along with representations of physical resources, it is also a good idea to gather metrics related to operating system abstractions that have limits enforced. Some examples that fall into this category are file handles and thread counts. These are not physical resources, but instead constructs with ceilings set by the operating system to prevent processes from overextending themselves. Most can be adjusted and configured with commands like ulimit, but tracking changes in usage of these resources can help you detect potentially harmful changes in your software's usage.

Metrics to Collect for Applications and Services

Moving up a layer, we start to deal with the applications and services that run on the servers. These programs use the individual server components we dealt with earlier as resources to do work. Metrics at this level help us understand the health of our single-host applications and services. We've separated distributed, multi-host services into a separate section to clarify the factors most important in those configurations.

While the metrics in the last section detailed the capabilities and performance of individual components and the operating system, the metrics here will tell us how well applications are able to perform the work we ask of them. We also want to know what resources our applications depend on and how well they manage those constraints.

It is important to keep in mind that the metrics in this section represent a departure from the generalized approach we were able to use last time. The metrics that are most important from this point on will be very dependent on your applications' characteristics, your configuration, and the workloads that you are running on your machines. We can discuss ways of identifying your most important metrics, but your results will depend on what the server is specifically being asked to do.

For applications that serve clients, the four golden signals are often fairly straightforward to pick out:

Latency: The time to complete requests

Traffic: Number of requests per second served

Errors: Application errors that occur when processing client requests or accessing resources

Saturation: The percentage or amount of resources currently being used

Some of the more important metrics you'll want to keep track of are those related to dependencies. These will often be best expressed by saturation metrics related to individual components. For instance, application memory utilization, available connections, number of file handles opened, or number of workers active can help you understand the effect of your configuration applied in the context of the physical server.

The four golden signals were designed primarily for distributed microservices, so they assume a client-server architecture. For applications that do not use a client-server architecture, the same signals are still important, but the "traffic" signal might need to be reconsidered slightly. This is basically a measurement of busyness, so finding a metric that adequately represents that for your application will serve the same purpose. The specifics will depend on what your program is doing, but some general substitutes might be the number of operations or data processed per second.

Metrics to Measure Collections of Servers and Their Communication

Most services, especially when operated in a production environment, will span multiple server instances to increase performance and availability. This increased level of complexity adds additional surface area that is important to monitor. Distributed computing and redundant systems can make your systems more flexible, but network-based coordination is more fragile than communication within a single host. Robust monitoring can help alleviate some of the difficulties of dealing with a less reliable communication channel.

Beyond the network itself, for distributed services, the health and performance of the server group is more important than the same measures applied to any individual host. While services are intimately tied to the computer they run on when confined to a single host, redundant multi-host services rely on the resources of multiple hosts while remaining decoupled from direct dependency on any one computer.

The golden signals at this level look very similar to those measuring service health in the last section. They will, however, take into account the additional coordination required between group members:

Latency: Time for the pool to respond to requests, time to coordinate or synchronize with peers

Traffic: Number of requests processed by the pool per second

Errors: Application errors that occur when processing client requests, accessing resources, or reaching peers

Saturation: The amount of resources currently being used, the number of servers currently operating at capacity, the number of servers available.

While these have a definite resemblance to the important metrics for single-host services, each of the signals grows in complexity when distributed. Latency becomes a more complicated issue as processing can require communication between multiple hosts. Traffic is no longer a function of a single server's abilities, but is instead a summary of the group's capabilities and the efficiency of the routing algorithm used to distribute work. Additional error modes are introduced related to networking connectivity or host failure. Finally, saturation expands to include the combined resources available to the hosts, the networking link connecting each host, and the ability to properly coordinate access to the dependencies each computer needs.

Metrics Related to External Dependencies and the Deployment Environment

Some of the most valuable metrics to collect exist at the boundary of your application or service, outside of your direct control. External dependencies including those related to your hosting provider and any services your applications are built to rely on. These represent resources you are not able to administer directly, but which can compromise your ability to guarantee your own service.

Because external dependencies represent critical resources, one of the only mitigation strategies available in case of full outages is to switch operations to a different provider. This is only a viable strategy for commodity services, and even then only with prior planning and loose coupling with the provider. Even when mitigation is difficult, knowledge of external events affecting your application is incredibly valuable.

The golden signals applied to external dependencies may look similar to this:

Latency: Time it takes to receive a response from the service or to provision new resources from a provider

Traffic: Amount of work being pushed to an external service, the number of requests being made to an external API

Errors: Error rates for service requests

Saturation: Amount of account-restricted resources used (instances, API requests, acceptable cost, etc.)

These metrics can help you identify problems with your dependencies, alert you to impending resource exhaustion, and help keep expenses under control. If the service has drop-in alternatives, this data can be used to decide whether to move work to a different provider when metrics indicate a problem is occurring. For situations with less flexibility, the metrics can at least be used to alert an operator to respond to the situation and implement any available manual mitigation options.

Metrics that Track Overall Functionality and End-to-End Experience

The highest level metrics track requests through the system in context of the outermost component that users interact with. This might be a load balancer or other routing mechanism that is responsible for receiving and coordinating requests to your service. Since this represents the first touch point with your system, collecting metrics at this level gives an approximation of the overall user experience.

While the previously described metrics are incredibly useful, the metrics in this section are often the most important to set up alerting for. To avoid response fatigue, alerts—especially pages—should be reserved for scenarios that have a recognizable negative effect on user experience. Problems surfaced with these metrics can be investigated by drilling down using the metrics collected at other levels.

The signals we look for here are similar to those of the individual services we described earlier. The primary difference is the scope and the importance of the data we gather here:

Latency: The time to complete user requests

Traffic: Number of user requests per second

Errors: Errors that occur when processing client requests or accessing resources

Saturation: The percentage or amount of resources currently being used

As these metrics parallel user requests, values that fall outside of acceptable ranges for these metrics likely indicate direct user impact. Latency that does not conform to customer-facing or internal SLAs (service level agreements), traffic that indicates a severe spike or drop off, increases in error rates, and an inability to serve requests due to resource constraints are all fairly straightforward to reason about at this level. Assuming that the metrics are accurate, the values here can be directly mapped against your availability, performance, and reliability goals.

Conclusion

In this guide, we began by discussing the four golden signals that tend to be most helpful for discovering and understanding impactful changes in your systems. Afterwards, we used the signals as a lens to evaluate the most important factors to track at different layers of a deployment.

Evaluating your systems from top to bottom can help identify the critical components and interactions required to run reliable and performant services. The four golden signals can be a great starting point for structuring metrics to best indicate the health of your systems. However, keep in mind that while the golden signals are a good framework, you will have to be aware of other metrics specific to your situation. Collect whatever data you think will be most likely to warn of problems or help you troubleshoot when things go wrong.

Active MQ

Tuesday, September 13, 2016 3:10 PM

To stop a server and start a server.

```
cd /home/muleuser/HSRI/SITCV6-ActiveMQ/apache-activemq-5.9.1/bin/linux-x86-64  
./activemq status  
./activemq stop  
./activemq start
```

ActiveMQ Cluster/Slave Setup

Monday, July 29, 2019 11:21 AM

Creating a Simple ActiveMQ Master/Slave Setup

NOV 17TH, 2015 posted by [chamilaapache activemq](#)

ActiveMQ is a high performing message broker, however if clustering is needed, it supports [a number of methods](#). Out of these, the [Master/Slave](#) is a pattern where the persistence layer is shared between multiple broker instances. A Single Master broker connects to the persistence, and the rest of the Slave brokers keep waiting to attain the lock on the persistence. If the Master node goes down the lock for the persistence is released and a Slave quickly acquires it, allowing a client to continue operation without any data loss. The clients should connect to the Master/Slave setup, using the `failover:` transport, or they should implement a manual failover mechanism to automatically connect to the next available broker when the first one goes down.

```
1 connectionfactoryName=TopicConnectionFactory
2 java.naming.provider.url=failover:(tcp://localhost:61617,tcp://localhost:61618,tcp://localhost:61619)?initialReconnectDelay=100
3 java.naming.factory.initial=org.apache.activemq.jndi.ActiveMQInitialContextFactory
```

How to Setup a Master/Slave

Let's setup two broker instances in the same machine. The two instances will open different ports for the protocols, so there will be no conflicts. They will use the flat file based embedded KahaDB as the persistence layer and the two instances will share the KahaDB instance.

Creating Two Broker Instances

Unzip the ActiveMQ distribution to two places and offset port values in the second one to use different ports so that there will be no conflicts for ports used by the different protocol connectors. The places to change are in `<ACTIVEMQ_HOME>/conf/activemq.xml` and `<ACTIVEMQ_HOME>/conf/jetty.xml`.

activemq.xml

```
1 <transportConnectors>
2   <!-- DOS protection, limit concurrent connections to 1000 and frame size to 100MB -->
3   <transportConnector name="openwire" uri="tcp://0.0.0.0:61626?maximumConnections=1000&wireFormat.maxFrameSize=104857600"/>
4   <transportConnector name="amqp" uri="amqp://0.0.0.0:5682?maximumConnections=1000&wireFormat.maxFrameSize=104857600"/>
5   <transportConnector name="stomp" uri="stomp://0.0.0.0:61623?maximumConnections=1000&wireFormat.maxFrameSize=104857600"/>
6   <transportConnector name="mqtt" uri="mqtt://0.0.0.0:1893?maximumConnections=1000&wireFormat.maxFrameSize=104857600"/>
7   <transportConnector name="ws" uri="ws://0.0.0.0:61624?maximumConnections=1000&wireFormat.maxFrameSize=104857600"/>
8 </transportConnectors>
```

jetty.xml

```
1 <bean id="jettyPort" class="org.apache.activemq.web.WebConsolePort" init-method="start">
2   <!-- the default port number for the web console -->
3   <property name="host" value="0.0.0.0"/>
4   <property name="port" value="8171"/>
5 </bean>
```

Now let's point the KahaDB persistence to the same location. This will result in only one instance at a time being able to acquire the lock to the DB and when the lock is released the other instance will be able get it from the same location.

Modify the `persistenceAdapter` tag inside `<ACTIVEMQ_HOME>/conf/activemq.xml` as follows.

```
1 <persistenceAdapter>
2   <kahaDB directory="/tmp/mq/kahadb"/>
3 </persistenceAdapter>
```

Do this change for both of the instances.

Now, let's introduce the two instances to each other by adding a `networkConnector` pointing to each other. Add the following block to the `<ACTIVEMQ_HOME>/conf/activemq.xml` after the `persistenceAdapter` block in the master.

```
1 <networkConnectors>
2   <networkConnector uri="static:(tcp://localhost:61626)" />
3 </networkConnectors>
```

Port 61626 is the OpenWire port in the Slave instance. Similarly add the same block in the Slave `activemq.xml` file, pointing to the Master's OpenWire port. Static discovery is used here to statically point to the existing broker instances.

Starting the instances

Now let's start the Master broker instance.

```
1 cd <ACTIVEMQ_HOME>/bin
2 ./activemq start
3 # tail the logs just for the fun of it
4 tail -100f ..../data/activemq.log
```

When observing the logs you will see some log entries similar to the following repeatedly appearing.

```
1 2015-11-17 19:10:19,731 | INFO | Establishing network connection from vm://localhost?async=false&network=true to tcp://localhost:61626 |
2 org.apache.activemq.network.DiscoveryNetworkConnector | ActiveMQ Task-61
3 2015-11-17 19:10:19,733 | INFO | Connector vm://localhost started | org.apache.activemq.broker.TransportConnector | ActiveMQ Task-61
4 2015-11-17 19:10:19,736 | INFO | localhost Shutting down | org.apache.activemq.network.DemandForwardingBridgeSupport | ActiveMQ BrokerService[localhost] Task-134
5 2015-11-17 19:10:19,738 | INFO | localhost bridge to Unknown stopped | org.apache.activemq.network.DemandForwardingBridgeSupport | ActiveMQ BrokerService[localhost] Task-134
6 2015-11-17 19:10:19,739 | INFO | Connector vm://localhost stopped | org.apache.activemq.broker.TransportConnector | ActiveMQ Task-61
7 2015-11-17 19:10:19,741 | WARN | Could not start network bridge between: vm://localhost?async=false&network=true and: tcp://localhost:61626 due to: Connection refused | org.apache.activemq.network.DiscoveryNetworkConnector | ActiveMQ Task-61
```

This is because we "introduced" the Slave broker to the Master broker and now it's looking for it.

Now start the Slave broker and tail the logs. You will see a different set of logs appearing.

```
1 2015-11-17 18:34:37,359 | INFO | Database /tmp/mq/kahadb/lock is locked... waiting 10 seconds for the database to be unlocked. Reason: java.io.IOException: File '/tmp/mq/kahadb/lock' could not be locked. | org.apache.activemq.store.SharedFileLocker | main
```

This is because the lock for the shared DB is already acquired by the Master broker. The Slave broker will not start until it is able to acquire the lock for the DB. If you try to see which ports are open using the `netstat` command you will see that only the Master broker is up and running and ready to accept requests.

Now if you connect to the broker setup using the `failover:` transport you will see that the client connected the Master broker. Create a queue and publish an event to the queue without consuming it. Now stop the Master broker. You will see the Slave broker acquiring the lock to the DB and become ready to accept requests. Start a consumer with the `failover` transport and observe it connecting to and retrieving the event (which was published to the Master broker) from the Slave broker. There was no data loss and the service didn't stop responding for more than a few moments which the Slave took to start up after acquiring the DB lock.

From <http://chamilad.github.io/blog/2015/11/17/creating-a-simple-activemq-master-slash-slave-setup/>

ActiveMQ - Network of Brokers Explained (Part Four)

by [Ashwini Kuntamukkala](#)Apr. 02, 14 · [Integration Zone](#) · Not set

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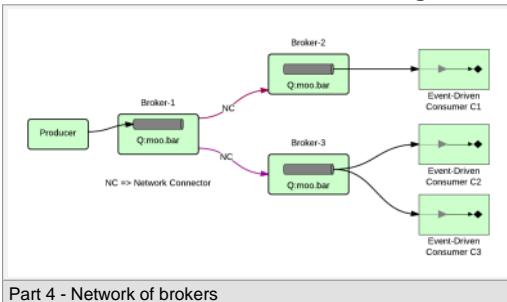
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In the previous [part 3](#), we have seen how ActiveMQ helps distinguish remote consumers from local consumers which helps in determining shorter routes from message producers to consumers. In this part 4, we will look into how to load balance concurrent consumers on remote brokers.

Let's consider a bit more advanced configuration to load balance concurrent message consumers on a queue in remote brokers as shown below.



In the above configuration, we have a message producer sending messages into a queue `moo.bar` on broker-1. Broker-1 establishes network connectors to broker-2 and broker-3. Consumer C1 consumes messages from queue `moo.bar` on broker-2 while consumers C2 and C3 are concurrent consumers on queue `moo.bar` on broker-3.

Let's see this in action

Let's create three brokers instances...

1. Ashwinis-MacBook-Pro:bin akuntamukkala\$ pwd
/Users/akuntamukkala/apache-activemq-5.8.0/bin
2. Ashwinis-MacBook-Pro:bin akuntamukkala\$./activemq-admin create ..//cluster/broker-1
3. Ashwinis-MacBook-Pro:bin akuntamukkala\$./activemq-admin create ..//cluster/broker-2
4. Ashwinis-MacBook-Pro:bin akuntamukkala\$./activemq-admin create ..//cluster/broker-3
5. Fix the broker-2 and broker-3 transport, amqp connectors and jetty http port by modifying the corresponding conf/activemq.xml and conf/jetty.xml as follows:

Broker	Openwire Port	Jetty HTTP Port	AMQP Port
broker-1	61616	8161	5672
broker-2	61626	9161	5682
broker-3	61636	10161	5692

6. Fix network connector on broker-1 such that messages on queues can be forwarded dynamically to consumers on broker-2 and broker-3. This can be done by adding the following XML snippet into broker-1's conf/activemq.xml

```

<networkConnectors>
    <networkConnector
        name="Q:broker1->broker2"
        uri="static:(tcp://localhost:61626)"
        duplex="false"
        decreaseNetworkConsumerPriority="true"
        networkTTL="2"
        dynamicOnly="true">
        <excludedDestinations>
            <topic physicalName=">" />
        </excludedDestinations>
    </networkConnector>

```

```

<networkConnector
    name="Q:broker1->broker3"
    uri="static:(tcp://localhost:61636)"
    duplex="false"
    decreaseNetworkConsumerPriority="true"
    networkTTL="2"
    dynamicOnly="true">
    <excludedDestinations>
        <topic physicalName="/" />
    </excludedDestinations>
</networkConnector>
</networkConnectors>

```

7. Start broker-2, broker-3 and broker-1. We can start these in any order.
1. ./apache-activemq-5.8.0/cluster/broker-3/bin\$./broker-3 console
 2. ./apache-activemq-5.8.0/cluster/broker-2/bin\$./broker-2 console
 3. ./apache-activemq-5.8.0/cluster/broker-1/bin\$./broker-1 console

8. Let's start the consumers C1 on broker-2 and C2, C3 on broker-3 but on the same queue called "moo.bar"
1. ./apache-activemq-5.8.0/example\$ ant consumer -Durl=tcp://localhost:61626 -Dsubject=moo.bar
 2. ./apache-activemq-5.8.0/example\$ ant consumer -Durl=tcp://localhost:61636 -Dsubject=moo.bar -DparallelThreads=2

The consumer subscriptions are forwarded by broker-2 and broker-3 to their neighboring broker-1 which has a network connector established to both broker-2 and broker-3 by the use of advisory messages.

9. Let's review the broker web consoles to see the queues and corresponding consumers.

1. We find that broker-2's web console shows one queue "moo.bar" having 1 consumer, broker-3's web console shows one queue "moo.bar" having 2 concurrent consumers
2. Though there are three consumers (C1 on broker-2 and C2,C3 on broker-3), broker-1 sees only two consumers (representing broker-2 and broker-3).

Queues						
Name	Number Of Pending Messages	Number Of Consumers	Messages Enqueued	Messages Dequeued	Views	Operations
moo.bar	0	2	0	0	Browse Active Consumers Send To Purge Delete	Max pending Prefetch Retain

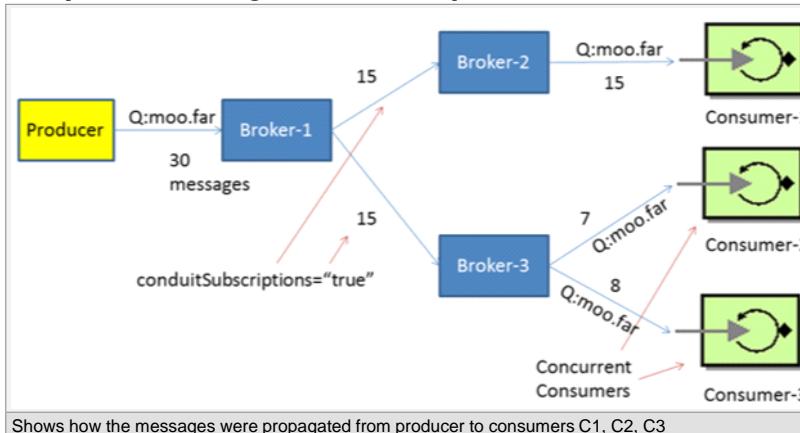
<http://localhost:8161/admin/queues.jsp>

Active Consumers for moo.bar								
Client ID	Session ID	Selector	Enqueued	Dequeued	Dispatched	Prefetch Max Pending	Exclusive Retention	Retain
Broker-1->Broker-2_broker-1	ID:ahwinn-MacBook-Pro-60504-13988479305-3.1		0	0	0	0	false	false
Broker-1->Broker-3_broker-1	ID:ahwinn-MacBook-Pro-60504-13988479305-3.1		0	0	0	0	false	false

This is because the network connector from broker-1 to broker-2 and to broker-3 by default has a property "conduitSubscriptions" which is true.

Due to which broker-3's C2 and C3 which consume messages from the same queue "moo.bar" are treated as one consumer in broker-1.

10. Let's produce 30 messages into broker-1's queue moo.bar and see how the messages are divvied among the consumers C1, C2 and C3



As seen above, even though there were three consumers and 30 messages, they didn't get to process 10 messages each as C2, C3 subscriptions were consolidated into one consumer at broker-1.

conduitSubscriptions="true" is a useful setting if we were creating subscribers on topics as that would prevent duplicate messages. More on this in part 5.

So, in order to make C2 and C3 subscriptions on queue moo.bar propagate to broker-1, let's redo the same steps 6, 7, 8, 9 and 10 after setting conduitSubscriptions="false" in broker-1's network connector configuration in conf/activemq.xml

Here is the new network connector configuration snippet for broker-1:

```

<networkConnectors>
<networkConnector
    name="Q:broker1->broker2"
    uri="static:(tcp://localhost:61626)"
    duplex="false"
    decreaseNetworkConsumerPriority="true"
    networkTTL="2"
    conduitSubscriptions="false"
    dynamicOnly="true">
    <excludedDestinations>

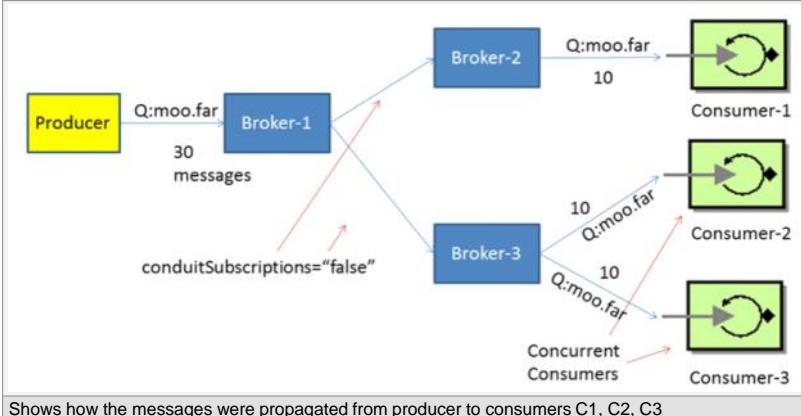
```

```

<topic physicalName="" />
</excludedDestinations>
</networkConnector>
<networkConnector
  name="Q:broker1->broker3"
  uri="static:(tcp://localhost:61636)"
  duplex="false"
  decreaseNetworkConsumerPriority="true"
  networkTTL="2"
  conduitSubscriptions="false"
  dynamicOnly="true">
  <excludedDestinations>
    <topic physicalName="" />
  </excludedDestinations>
</networkConnector>
</networkConnectors>

```

Upon restarting the brokers and consumers C1, C2 and C3 and producing 30 messages into broker-1's moo.bar queue, we find that all of the three consumer subscriptions are visible at broker-1. As a result broker-1 dispatches 10 messages to each of the consumers in a round-robin fashion to load balance. This is depicted pictorially below.



Shows how the messages were propagated from producer to consumers C1, C2, C3

Broker-1's web console @ <http://localhost:8161/admin/queueConsumers.jsp?JMSDestination=moo.bar> shows that broker-1 now sees 3 consumers and dispatches 10 messages to each consumer

Active Consumers for moo.bar

Client ID Connection ID ↑	SessionId	Selector	Enqueues	Dequeues	Dispatched	Dispatched Queue
Q:broker1->broker2_broker- 2_inbound_broker-1 ID:localhost-55394-1395902619654- 11:1	1		10	10	10	0
Q:broker1->broker3_broker- 3_inbound_broker-1 ID:localhost-55394-1395902619654- 12:1	1		10	10	10	0
Q:broker1->broker3_broker- 3_inbound_broker-1 ID:localhost-55394-1395902619654- 12:1	1		10	10	10	0

All three consumers processed 10 messages each

Thus in this part 4 of the blog series, we have seen how we can load balance remote concurrent consumers which are consuming messages from a queue.

As always, your comments and feedback is appreciated!

In the next part 5, we will explore how the same scenario will play out if we were to use a topic instead of a queue. Stay tuned...

References

- http://fusesource.com/docs/esb/4.3/amq_clustering/Networks-Connectors.html

Resources

- The configuration files (activemq.xml and jetty.xml) of all the brokers used in this blog are available [here](#).

From <<https://dzone.com/articles/activemq-network-brokers-2>>

ActiveMQ - Network of Brokers Explained



by [Ashwini Kuntamukkala](#)

Mar. 12, 14 · [Integration Zone](#) · Not set

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Objective

This 7 part blog series is to share about how to create network of ActiveMQ brokers in order to achieve high availability and scalability.

Why network of brokers?

ActiveMQ message broker is a core component of messaging infrastructure in an enterprise. It needs to be highly available and dynamically scalable to facilitate communication between dynamic heterogeneous distributed applications which have varying capacity needs.

Scaling enterprise applications on commodity hardware is a rage nowadays. ActiveMQ caters to that very well by being able to create a network of brokers to share the load.

Many times applications running across geographically distributed data centers need to coordinate messages. Running message producers and consumers across geographic regions/data centers can be architected better using network of brokers.

ActiveMQ uses transport connectors over which it communicates with message producers and consumers. However, in order to facilitate broker to broker communication, ActiveMQ uses **network connectors**.

A network connector is a bridge between two brokers which allows on-demand message forwarding.

In other words, if Broker B1 initiates a network connector to Broker B2 then the messages on a channel (queue/topic) on B1 get forwarded to B2 if there is at least one consumer on B2 for the same channel. If the network connector was configured to be duplex, the messages get forwarded from B2 to B1 on demand.

This is very interesting because it is now possible for brokers to communicate with each other dynamically.

In this 7 part blog series, we will look into the following topics to gain understanding of this very powerful ActiveMQ feature:

1. Network Connector Basics - Part 1
2. Duplex network connectors - Part 2
3. Load balancing consumers on local/remote brokers - Part 3
4. Load-balance consumers/subscribers on remote brokers
 1. Queue: Load balance remote concurrent consumers - Part 4
 2. Topic: Load Balance Durable Subscriptions on Remote Brokers - Part 5
5. Store/Forward messages and consumer failover - Part 6
 1. How to prevent stuckmessages
6. Virtual Destinations - Part 7

To give credit where it is due, the following URLs have helped me in creating this blog post series.

1. [Advanced Messaging with ActiveMQ](#) by [Dejan Bosanac](#) [Slides 32-36]
2. [Understanding ActiveMQ Broker Networks](#) by [Jakub Korab](#)

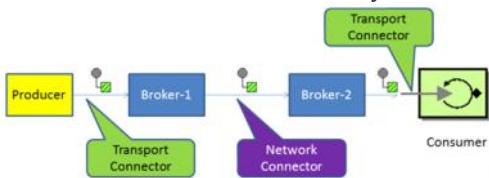
Prerequisites

1. ActiveMQ 5.8.0 – To create broker instances
2. Apache Ant – To run ActiveMQ sample producer and consumers for demo.

We will use multiple ActiveMQ broker instances on the same machine for the ease of demonstration.

Network Connector Basics - Part 1

The following diagram shows how a network connector functions. It bridges two brokers and is used to forward messages from Broker-1 to Broker-2 on demand if established by Broker-1 to Broker-2.



A network connector can be duplex so messages could be forwarded in the opposite direction; from Broker-2 to Broker-1, once there is a consumer on Broker-1 for a channel which exists in Broker-2. More on this in Part 2

Setup network connector between broker-1 and broker-2

- Create two broker instances, say broker-1 and broker-2

```

Ashwinis-MacBook-Pro:bin akuntamukkala$ pwd
/Users/akuntamukkala/apache-activemq-5.8.0/bin
Ashwinis-MacBook-Pro:bin akuntamukkala$ ./activemq-admin create ./bridge-demo/broker-1
Ashwinis-MacBook-Pro:bin akuntamukkala$ ./activemq-admin create ./bridge-demo/broker-2

```

Since we will be running both brokers on the same machine, let's configure broker-2 such that there are no port conflicts.

- Edit /Users/akuntamukkala/apache-activemq-5.8.0/bridge-demo/broker-2/conf/activemq.xml
 - Change transport connector to 61626 from 61616
 - Change AMQP port from 5672 to 6672 (won't be using it for this blog)
- Edit /Users/akuntamukkala/apache-activemq-5.8.0/bridge-demo/broker-2/conf/jetty.xml
 - Change web console port to 9161 from 8161
- Configure Network Connector from broker-1 to broker-2

Add the following XML snippet to /Users/akuntamukkala/apache-activemq-5.8.0/bridge-demo/broker-1/conf/activemq.xml

```

<networkConnectors>
<networkConnector
    name="T:broker1->broker2"
    uri="static:(tcp://localhost:61626)"
    duplex="false"
    decreaseNetworkConsumerPriority="true"
    networkTTL="2"
    dynamicOnly="true">
    <excludedDestinations>
        <queue physicalName=">" />
    </excludedDestinations>
</networkConnector>
<networkConnector
    name="Q:broker1->broker2"
    uri="static:(tcp://localhost:61626)"
    duplex="false"
    decreaseNetworkConsumerPriority="true"
    networkTTL="2"
    dynamicOnly="true">
    <excludedDestinations>
        <topic physicalName=">" />
    </excludedDestinations>
</networkConnector>
</networkConnectors>

```

The above XML snippet configures two network connectors "T:broker1->broker2" (only topics as queues are excluded) and "Q:broker1->broker2" (only queues as topics are excluded). This allows for nice separation between network connectors used for topics and queues. The name can be arbitrary although I prefer to specify the [type]:[source broker]->[destination broker].

The URI attribute specifies how to connect to broker-2

- Start broker-2

```

Ashwinis-MacBook-Pro:bin akuntamukkala$ pwd
/Users/akuntamukkala/apache-activemq-5.8.0/bridge-demo/broker-2/bin
Ashwinis-MacBook-Pro:bin akuntamukkala$ ./broker-2 console

```

- Start broker-1

```

Ashwinis-MacBook-Pro:bin akuntamukkala$ pwd
/Users/akuntamukkala/apache-activemq-5.8.0/bridge-demo/broker-1/bin
Ashwinis-MacBook-Pro:bin akuntamukkala$ ./broker-1 console

```

Logs on broker-1 show 2 network connectors being established with broker-2

```

INFO | Establishing network connection from vm://broker-1?async=false&network=true to tcp://localhost:61626
INFO | Connector vm://broker-1 Started
INFO | Establishing network connection from vm://broker-1?async=false&network=true to tcp://localhost:61626
INFO | Network connection between vm://broker-1#24 and tcp://localhost/127.0.0.1:61626@52132(broker-2) has been established.
INFO | Network connection between vm://broker-1#26 and tcp://localhost/127.0.0.1:61626@52133(broker-2) has been established.

```

Web Console on broker-1 @ <http://localhost:8161/admin/connections.jsp> shows the two network connectors established to broker-2

Network Connectors

Name	Network TTL	Dynamic Only	Conduit Subscriptions	Bridge Temps	Decrease Priorities	Dispatch Async
T:broker1->broker2	2	true	true	true	true	true
Q:broker1->broker2	2	true	true	true	true	true

The same on broker-2 does not show any network connectors since no network connectors were initiated by broker-2

Let's see this in action

Let's produce 100 persistent messages on a queue called "foo.bar" on broker-1.

```
Ashwinis-MacBook-Pro:example akuntamukkala$ pwd  
/Users/akuntamukkala/apache-activemq-5.8.0/example  
Ashwinis-MacBook-Pro:example akuntamukkala$ ant producer -Durl=tcp://localhost:61616 -Dtopic=false -Ddurable=true -Dsubject=foo.bar -Dmax=100  
broker-1 web console shows that 100 messages have been enqueued in queue "foo.bar"
```

<http://localhost:8161/admin/queues.jsp>

The screenshot shows the 'Queues' section of the ActiveMQ Admin Console. A table lists one queue: 'foo.bar'. The details are: Name: foo.bar, Number Of Pending Messages: 100, Number Of Consumers: 0, Messages Enqueued: 100, and Messages Dequeued: 0.

Let's start a consumer on a queue called "foo.bar" on broker-2. The important thing to note here is that the destination name "foo.bar" should match exactly.

```
Ashwinis-MacBook-Pro:example akuntamukkala$ ant consumer -Durl=tcp://localhost:61626 -Dtopic=false -Dsubject=foo.bar
```

We find that all the 100 messages from broker-1's foo.bar queue get forwarded to broker-2's foo.bar queue consumer.

broker-1 admin console at <http://localhost:8161/admin/queues.jsp>

The screenshot shows the 'Queues' section of the ActiveMQ Admin Console on broker-1. The queue 'foo.bar' has 100 pending messages, 0 consumers, 100 enqueued messages, and 100 dequeued messages.

broker-2 admin console @ <http://localhost:9161/admin/queues.jsp> shows that the consumer we had started has consumed all 100 messages which were forwarded on-demand from broker-1

The screenshot shows the 'Queues' section of the ActiveMQ Admin Console on broker-2. The queue 'foo.bar' has 0 pending messages, 1 consumer, 100 enqueued messages, and 100 dequeued messages.

broker-2 consumer details on foo.bar queue

The screenshot shows the 'Active Consumers' section for the 'foo.bar' queue on broker-2. There is one active consumer with session ID 1, selector null, and the following statistics: Enqueues: 100, Dequeues: 100, Dispatched: 100, Dispatched Queue: null, Prefetch Max pending: 1000, and Exclusive Retrospective: false.

broker-1 admin console shows that all 100 messages have been dequeued [forwarded to broker-2 via the network connector].

broker-1 admin console shows that all 100 messages have been dequeued [forwarded to broker-2 via the network connector].

The screenshot shows the 'Queues' section of the ActiveMQ Admin Console on broker-1. The queue 'foo.bar' has 0 pending messages, 1 consumer, 100 enqueued messages, and 100 dequeued messages.

broker-1 consumer details on "foo.bar" queue shows that the consumer is created on demand: [name of connector]_[destination broker]_inbound_[source broker]

The screenshot shows the 'Active Consumers' section for the 'foo.bar' queue on broker-1. There is one active consumer with session ID 1, selector null, and the following statistics: Enqueues: 100, Dequeues: 100, Dispatched: 0, Dispatched Queue: null, Prefetch Max pending: 1000, and Exclusive Retrospective: false.

Thus we have seen the basics of network connector in ActiveMQ.

As always, please feel to comment about anything that can be improved. Your inputs are welcome!

Stay tuned for Part 2.

From <<https://dzone.com/articles/active-mq-network-brokers>>

Jmeter

Friday, September 9, 2016 2:03 PM

Perf - loguser/loguser@123

Go to below path:

cd /home/loguser/Jmeter

Stop the server:

ps -ef|grep CMDR*()

Kill the PID to stop the server.

Start the Server:

nohup ./startAgent.sh &

Check the PID:

ps -ef|grep CMDR*

TIBCO

Friday, August 19, 2016 4:28 PM

CV6

```
cd /home/tibcouser/HSRI/SITCV1-tibco/tps/5.0/bin  
scp penri@10.64.65.18:/home/penri/CodeMerge/CCI-files/*.csv .  
. ./MCIScript.sh  
. ./MPIScript.sh
```

To Print duplicates:

```
awk -F, ' ++A[$1] > 1 { print $1 } ' CCI_INDV_LINK.csv
```

To count Duplicates:

```
awk -F, ' ++A[$1] > 1 { print $1 } ' CCI_INDV_LINK.csv | wc -l
```

PRD

```
java -jar /opt/apps/tibco/PROD/tps/5.0/java/sample/NSC.jar -host PRDMDMPS01 -port 5051 -cmd tbllist
```

IR-Tibco:

```
/opt/tibco/tps/5.0/bin/TIB_tps_server -p 5000 -t 4 -l enginelogs -r incomingqueries -m 8194304 10.64.65.26 10.64.33.28
```

```
java -jar /opt/tibco/tps/5.0/java/sample/NSC.jar -host 10.64.65.59 -port 5000 -cmd recdelete -table CCI_INDV -keys 1000147319  
java -jar /opt/tibco/tps/5.0/java/sample/NSC.jar -host 10.64.65.59 -port 5000 -cmd recadd -table CCI_INDV -file export_netrics.csv  
java -jar /home/tibcouser/HSRI/SITCV1-tibco/tps/5.0/java/sample/NSC.jar -host 10.64.65.252 -port 60551 -cmd recget -table CCI_INDV_ALIAS -keys 1169
```

```
java -jar /opt/tibco/tps/5.0/java/sample/NSC.jar -host 10.64.33.28 -port 5000 -cmd recdelete -table CCI_INDV_LINK -keys 1001442160512398
```

```
java -jar /opt/tibco/tps/5.0/java/sample/NSC.jar -host 10.64.33.28 -port 5000 -cmd recdelete -table CCI_INDV_LINK -keys 1001442160467780
```

```
java -jar /opt/tibco/tps/5.0/java/sample/NSC.jar -host 10.64.33.28 -port 5000 -cmd recdelete -table CCI_INDV_PRGM_ST -keys 100144216033873765
```

```
java -jar /opt/tibco/tps/5.0/java/sample/NSC.jar -host 10.64.33.28 -port 5000 -cmd recdelete -table CCI_INDV_PRGM_ST -keys 100144216033873766  
java -jar /home/tibcouser/HSRI/SITMT-tibco/tps/5.0/java/sample/NSC.jar -host 10.64.65.94 -port 60151 -cmd recget -table CCI_INDV_LINK -keys 1660358777
```

```
/opt/tibco/tps/5.0/bin/TIB_tps_server -a Data -p 5000 -t 4 -l enginelogs -r incomingqueries -m 41943040 10.64.65.110 10.64.65.110
```

```
java -jar /opt/tibco/tps/5.0/java/sample/NSC.jar -host 10.64.65.110 -port 5000 -cmd tbllist  
java -jar /opt/tibco/tps/5.0/java/sample/NSC.jar -host 10.64.65.110 -port 5000 -cmd recget -table CCI_INDV -keys 1001365035  
java -jar /opt/tibco/tps/5.0/java/sample/NSC.jar -host 10.64.65.110 -port 5000 -cmd tbdump -table CCI_INDV  
java -jar /opt/tibco/tps/5.0/java/sample/NSC.jar -host 10.64.65.110 -port 5000 -cmd tblstats -table CCI_INDV  
java -jar /opt/tibco/tps/5.0/java/sample/NSC.jar -host 10.64.65.110 -port 5000 -cmd recdelete -table CCI_INDV -keys 1001365035
```

```
java -jar /home/tibco/HSRI/UATNT/tps/5.0/java/sample/NSC.jar -host 10.64.33.56 -port 5000 -cmd tbllist
```

```
java -jar /home/tibco/HSRI/UATNT/tps/5.0/java/sample/NSC.jar -host 10.64.33.56 -port 5000 -cmd recget -table CCI_INDV -keys 1773893626
```

```
java -jar /home/tibco/HSRI/UATWT-tibco/tps/5.0/java/sample/NSC.jar -host 10.64.33.53 -port 5100 -cmd tbllist  
/home/tibco/HSRI/UATWT-tibco/tps/5.0/bin
```

UATW

```
java -jar /opt/tibco/tps/5.0/java/sample/NSC.jar -host 10.64.65.110 -port 5000 -cmd tbllist
```

Devm

```
java -jar /home/tibcouser/HSRI/DEVBranch-tibco/tps/5.0/java/sample/NSC.jar -host 10.64.65.94 -port 60150 -cmd tbllist
```

UATN

```
java -jar /home/tibco/HSRI/UATTT-tibco/tps/5.0/java/sample/NSC.jar -host 10.64.33.56 -port 60051 -cmd tbllist
```

UATNT

```
java -jar /home/tibco/HSRI/UATNT/tps/5.0/java/sample/NSC.jar -host 10.64.33.56 -port 5000 -cmd tbllist
```

```
UATWT
java -jar /home/tibco/HSRI/UATWT-tibco/tps/5.0/java/sample/NSC.jar -host 10.64.33.53 -port 5100 -cmd tbllist
UATMP
java -jar /home/tibcouser/HSRI/tps/5.0/java/sample/NSC.jar -host 10.64.33.17 -port 5000 -cmd tbllist
PRDP
java -jar /home/tibcouser/HSRI/SITCV1-tibco/tps/5.0/java/sample/NSC.jar -host 10.64.65.252 -port 60551 -cmd tbllist
UATL
java -jar /home/tibco/tibco-PLT/tps/5.0/java/sample/NSC.jar -host 10.64.33.69 -port 5000 -cmd tbllist
/home/tibco/tibco-PLT/tps/5.0/bin
```

Checking if the tables are loaded

```
-----  
java -jar NSC.jar -host localhost -port 5001 -cmd tbllist
```

Looking @ Netrics Dump

```
-----  
java -jar NSC.jar -host localhost -port 5001 -cmd tbldump -table MPI_PROVIDERS
```

Killing a Process

```
-----  
ps ax | grep 5001  
kill -9 <ProcessID>
```

Adding a Record Through Command Line

```
-----  
java -jar NSC.jar -host localhost -port 5001 -cmd recadd -table MPI_PROVIDERS -file data1.csv -fieldnamesfirst -keyfieldindex 0  
where data1.csv contains the set of records to be added.
```

Searching a Record

```
-----  
java -jar NSC.jar -host localhost -port 5001 -cmd recget -table MPI_PROVIDERS -keys <Netrics KEY>
```

Mule

Tuesday, September 13, 2016 3:14 PM

MULE:

to take backup - tar -czf apps_DATE.tgz apps
TO restore backup - tar -xvf <nameof.tgz>

```
cd /opt/mule-standalone-3.4.0/;tar -czf apps_$(date +%d-%b-%C%y-%H.%M).tgz apps  
cd /opt/mule-standalone-3.4.0/bin/./mule stop
```

or

```
cd /opt/mule-standalone-3.4.0/;tar -czf apps_12Oct2016.tgz apps  
cd /opt/mule-standalone-3.4.0/bin/./mule stop  
cd /opt/mule-standalone-3.4.0/bin/./mule start
```

```
cd /opt/mule-standalone-3.4.0/bin/  
.mule status  
Or  
cd /opt/mule-standalone-3.4.0/bin/./mule status
```

Or

```
cd /opt/mule-standalone-3.4.0/bin;tar -czf apps_$DATE.tgz apps;./mule status;./mule stop;./mule status;./mule start;./mule status;
```

```
cd /opt/apache-tomcat-7.0.69/bin;./shutdown.sh;./shutdown.sh;sleep 10;./startup.sh;tail -100f ..//logs/catalina.out
```

Ex:

```
cd /home/muleuser/1095bMule/  
tar -xvf /home/muleuser/1095bMule/mule-standalone-3.4.0/apps_07Sep2016.tgz
```

FDSH cert deleting and adding

Thursday, January 16, 2020 10:06 AM

Hi Team – FYI --

Follow the below steps for any updating the cert in jks.

The below operations were performed under the following location for your reference → /home/ribapp/CertGen/NPD/FDSH_Formal_Impl
deleting old alias/cert from keystore

→ /opt/softwares/jdk1_8/bin/keytool -delete -alias cms-intermediate -keystore FDSH_F_keystore.jks
Enter keystore password:

Warning:

The JKS keystore uses a proprietary format. It is recommended to migrate to PKCS12 which is an industry standard format using "keytool -importkeystore -srckeystore FDSH_F_keystore.jks -destkeystore FDSH_F_keystore.jks -deststoretype pkcs12".

→ /opt/softwares/jdk1_8/bin/keytool -delete -alias cms-root -keystore FDSH_F_keystore.jks
Enter keystore password:

Warning:

The JKS keystore uses a proprietary format. It is recommended to migrate to PKCS12 which is an industry standard format using "keytool -importkeystore -srckeystore FDSH_F_keystore.jks -destkeystore FDSH_F_keystore.jks -deststoretype pkcs12".

→ /opt/softwares/jdk1_8/bin/keytool -delete -alias impl.hub.cms.gov -keystore FDSH_F_keystore.jks
Enter keystore password:

Warning:

The JKS keystore uses a proprietary format. It is recommended to migrate to PKCS12 which is an industry standard format using "keytool -importkeystore -srckeystore FDSH_F_keystore.jks -destkeystore FDSH_F_keystore.jks -deststoretype pkcs12".

Adding alias/cert to Keystore

→ /opt/softwares/jdk1_8/bin/keytool -import -file root.cer -alias cms-root -keystore FDSH_F_keystore.jks
Enter keystore password:

Owner: CN=DigiCert Global Root CA, OU=www.digicert.com, O=DigiCert Inc, C=US

Issuer: CN=DigiCert Global Root CA, OU=www.digicert.com, O=DigiCert Inc, C=US

Serial number: 83be056904246b1a1756ac95991c74a

Valid from: Thu Nov 09 19:00:00 EST 2006 until: Sun Nov 09 19:00:00 EST 2031

Certificate fingerprints:

MD5: 79:E4:A9:84:0D:7D:3A:96:D7:C0:4F:E2:43:4C:89:2E

SHA1: A8:98:5D:3A:65:E5:E5:C4:B2:D7:D6:D4:0C:6D:2F:B1:9C:54:36

SHA256: 43:48:A0:E9:44:4C:78:CB:26:5E:05:8D:5E:89:44:B4:D8:4F:96:62:BD:26:DB:25:7F:89:34:A4:43:C7:01:61

Signature algorithm name: SHA1withRSA

Subject Public Key Algorithm: 2048-bit RSA key

Version: 3

Extensions:

#1: ObjectId: 2.5.29.35 Criticality=false

AuthorityKeyIdentifier [

KeyIdentifier [

0000: 03 DE 50 35 56 D1 4C BB 66 F0 A3 E2 1B 1B C3 97 ..P5V.Lf.....

0010: B2 3D D1 55 .=.U

]

]

#2: ObjectId: 2.5.29.19 Criticality=true

BasicConstraints:[

CA:true

PathLen:2147483647

]

#3: ObjectId: 2.5.29.15 Criticality=true

KeyUsage [

DigitalSignature

Key_CertSign

Crl_Sign

]

#4: ObjectId: 2.5.29.14 Criticality=false

SubjectKeyIdentifier [

KeyIdentifier [

0000: 03 DE 50 35 56 D1 4C BB 66 F0 A3 E2 1B 1B C3 97 ..P5V.Lf.....

0010: B2 3D D1 55 .=.U

]

]

Trust this certificate? [no]: yes

Certificate was added to keystore

Warning:

The JKS keystore uses a proprietary format. It is recommended to migrate to PKCS12 which is an industry standard format using "keytool -importkeystore -srckeystore FDSH_F_keystore.jks -destkeystore FDSH_F_keystore.jks -deststoretype pkcs12".

```
*****
```

```
→ /opt/softwares/jdk1_8/bin/keytool -import -file intermediate.cer -alias cms-intermediate -keystore FDSH_F_keystore.jks
Enter keystore password:
Certificate was added to keystore
```

Warning:

The JKS keystore uses a proprietary format. It is recommended to migrate to PKCS12 which is an industry standard format using "keytool -importkeystore -srckeystore FDSH_F_keystore.jks -destkeystore FDSH_F_keystore.jks -deststoretype pkcs12".

```
*****
```

```
→ /opt/softwares/jdk1_8/bin/keytool -import -file impl.hub.cms.gov.cer -alias impl.hub.cms.gov -keystore FDSH_F_keystore.jks
Enter keystore password:
Certificate was added to keystore
```

Warning:

The JKS keystore uses a proprietary format. It is recommended to migrate to PKCS12 which is an industry standard format using "keytool -importkeystore -srckeystore FDSH_F_keystore.jks -destkeystore FDSH_F_keystore.jks -deststoretype pkcs12".

Tibco Scripts 2

Wednesday, October 26, 2016 11:55 AM

```
ssh $Username@$TibcoIP 'scp penri@10.64.65.18:/home/penri/CodeMerge/CCI-files/*.csv /opt/tibco/tps/5.0/bin/'  
ssh $Username@$TibcoIP '/opt/tibco/tps/5.0/bin/NetricsReload.sh'
```

```
ssh username@host exec /bin/sh -s arg1 arg2 arg3 < /path/to/script.sh(in local server)
```

From <<http://www.unix.com/shell-programming-and-scripting/260577-how-can-i-execute-local-script-remote-machine-include-arguments.html>>

Security

Wednesday, November 23, 2016 5:08 PM

<http://www.tecmint.com/password-protect-apache-web-directories-using-htaccess/>

<https://devops.profitbricks.com/tutorials/set-up-basic-authentication-in-apache-using-htaccess-on-centos-7/>

Imagenow

Friday, March 10, 2017 9:27 PM

```
[root@ENT-DV-UHIMG05 ~]# cd /opt/inserver6/
```

```
[root@ENT-DV-UHIMG05 inserver6]# ps -ef | grep inser
```

```
root  2474 2071 0 08:11 pts/0 00:00:00 tail -100f INServerMA_inserverMA_ma_Primary_20140924.log
root  9325 6994 0 08:14 pts/1 00:00:00 grep inser
root  12662 1 0 Sep09 ? 00:23:48 /opt/inserver6/bin/inserverMQ -g
root  12701 1 0 Sep09 ? 00:34:02 /opt/inserver6/bin/inserver -g
root  12704 1 0 Sep09 ? 00:03:57 /opt/inserver6/bin/inserverAlarm -g
root  12707 1 0 Sep09 ? 00:12:38 /opt/inserver6/bin/inserverBatch -g
root  12710 1 0 Sep09 ? 00:05:03 /opt/inserver6/bin/inserverEM -g
root  12713 1 0 Sep09 ? 00:26:29 /opt/inserver6/bin/inserverFS -g
root  12716 1 0 Sep09 ? 00:07:04 /opt/inserver6/bin/inserverImp -g
root  12719 1 0 Sep09 ? 00:07:54 /opt/inserver6/bin/inserverJob -g
root  12723 1 0 Sep09 ? 02:16:47 /opt/inserver6/bin/inserverMonitor -g
root  12731 1 0 Sep09 ? 00:11:29 /opt/inserver6/bin/inserverNotification -g
root  12740 1 0 Sep09 ? 00:43:55 /opt/inserver6/bin/inserverOSM -g
root  12761 1 0 Sep09 ? 00:02:38 /opt/inserver6/bin/inserverTask -g
root  12772 1 0 Sep09 ? 00:18:26 /opt/inserver6/bin/inserverWorkflow -g
root  12942 1 0 Sep09 ? 00:08:01 ./inserverMA -start Primary
```

Inserver commands

inserver -help or -h or -? Displays the command line options.

inserver -name Displays the name.

inserver -description Displays the description.

inserver -company Displays the company name.

inserver -version or -v Displays the version number.

inserver -start or -g [instance] Starts the service.

inserver -stop or -k [instance] [-f] Stops the server. Optional -f forces the server to stop regardless of connected users.

inserver -stop-instances or -ki Stops all instances of this service.

inserver -stop-agents or -ka Stops all instances of all services.
inserver -status or -s [instance] Displays the status of the service.
inserver -repair [instance] Cleans up orphaned database records for an instance of a service.
inserver -list-instances Displays all instances of this service on this computer.
inserver -register-hw-node Registers this computer as inserver hardware node.
inserver -list-agents Displays all instances of all services on this computer.
inserver -list-systemwide Displays all instances of all services on all computers.

To verify all agents running

- 1) Go to folder
 - a. /opt/inserver6/bin
 - b. ./setenv.sh
 - c. ./inserver –list-agents (to verify all services are running)
 - d. ./inserver –repair (does auto correct)
 - e. ./inserverXX –start (to start specific service alone)

Space Issue: To resolve space issues clean contents in below folders

- 1) Logs
 - Folder : /opt/inserver6/log
 - Folder : /opt/inserver6/log/error_logs
- 2) OSM folder
 - a. Folder : /opt/inserver6/osm_***/***/***/all old folders
 - b. Example: /opt/inserver6/osm_01.00001/00000000/00000466

```
cd /opt/inserver6/bin/  
../shutdownIN.sh  
../startIN.sh  
ps -ef|grep inserver
```

```
[root@ENT-DV-UHIMG05 bin]# ./inserverWorkflow -status  
inserverWorkflow: running  
Server Uptime: 0 days, 17 hours, 11 minutes, 8 seconds
```

```
[root@ENT-DV-UHIMG05 bin]# ./inserverMA -status  
inserverMA: running
```

Server Uptime: 2 days, 16 hours, 19 minutes, 23 seconds

Mounts

Wednesday, March 15, 2017 1:12 PM

```
#10.64.65.25
mount -t nfs 10.64.33.43:/home/apache/HSRI/UATCV-Tomcat/apache-tomcat-7.0.76/logs/ /opt/Environment-LOGS/PRDT/OPA
mount -t nfs 10.64.33.54:/opt/IBM/HSRI/IES-UATCV/IEAppLogs/ApplicationLogs/ /opt/Environment-LOGS/PRDT/IES/App
mount -t nfs 10.64.33.54:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/UAT-CV-IES/ /opt/Environment-LOGS/PRDT/IES/Server
mount -t nfs 10.64.33.41:/opt/IBM/HSRI/SSP-UATCV/SSPLogs/ApplicationLogs/ /opt/Environment-LOGS/PRDT/SSP/App
mount -t nfs 10.64.33.41:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/SSP/ /opt/Environment-LOGS/PRDT/SSP/Server
mount -t nfs 10.64.33.41:/opt/IBM/HSRI/CCAPP-UATCV/Logs/ApplicationLogs/CCAP/ /opt/Environment-LOGS/PRDT/CCAP/App
mount -t nfs 10.64.33.41:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/CCAP/ /opt/Environment-LOGS/PRDT/CCAP/Server
mount -t nfs 10.64.33.41:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/HIX/ /opt/Environment-LOGS/PRDT/HIX/Server
mount -t nfs 10.64.33.41:/opt/IBM/HSRI/HIX-UATCV/HIXLogs/ApplicationLogs/ /opt/Environment-LOGS/PRDT/HIX/App
mount -t nfs 10.64.33.42:/home/muleuser/mule-standalone-3.4.0/logs/ /opt/Environment-LOGS/PRDT/EBTMule
mount -t nfs 10.64.33.42:/home/muleuser/TLS_mule/mule-standalone-3.8.0/logs/ /opt/Environment-LOGS/PRDT/TLSMule
mount -t nfs 10.64.33.42:/opt/mule-standalone-3.4.0/logs/ /opt/Environment-LOGS/PRDT/Mule
```

```
#build server
mount -t nfs 10.64.33.12:/opt/IBM/ /opt/Mount_WebSphere/
```

```
[root@ENT-DV-UHBLD01 Mount_WebSphere]# mount -t nfs 10.64.33.12:/opt/IBM/ /opt/Mount_WebSphere/
[root@ENT-DV-UHBLD01 Mount_WebSphere]# hostname -i
10.64.65.20
```

10.64.65.94 Logger server:

```
#!/bin/sh
#SITM
mount -t nfs 10.64.65.251:/opt/IBM/HSRI/IES-SITTT1/IEAppLogs/ /home/loguser/SITTimeTravel/TT1/IES/App
mount -t nfs 10.64.65.251:/opt/IBM/HSRI/SSP-SITTT1/SSPLogs/ /home/loguser/SITTimeTravel/TT1/SSP/App
mount -t nfs 10.64.33.13:/opt/IBM/HSRI/HIX-SITTT1/HIXLogs/ /home/loguser/SITTimeTravel/TT1/HIX/App
mount -t nfs 10.64.33.13:/opt/IBM/HSRI/CCAP-SITTT1/Logs/ /home/loguser/SITTimeTravel/TT1/CCAP/App
mount -t nfs 10.64.65.251:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IES1/ /home/loguser/SITTimeTravel/TT1/IES/Server
mount -t nfs 10.64.65.251:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/SSP1/ /home/loguser/SITTimeTravel/TT1/SSP/Server
mount -t nfs 10.64.33.13:/opt/IBM/WebSphere/AppServer/profiles/AppSrv02/logs/HIX1/ /home/loguser/SITTimeTravel/TT1/HIX/Server
mount -t nfs 10.64.33.13:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/CCAP2/ /home/loguser/SITTimeTravel/TT1/CCAP/server
mount -t nfs 10.64.33.16:/home/muleuser/TLS_mule_SITM/mule-standalone-3.8.0/logs/ /home/loguser/SITTimeTravel/TT1/MULE/TLS
mount -t nfs 10.64.65.252:/opt/SITM/mule-standalone-3.4.0/logs/ /home/loguser/SITTimeTravel/TT1/MULE/RegMule
mount -t nfs 10.64.65.252:/opt/SITM_EBTMIS/mule-standalone-3.4.0/logs/ /home/loguser/SITTimeTravel/TT1/MULE/EBTMule
mount -t nfs 10.64.65.252:/home/apache/HSRI/SITTT1-Tomcat/apache-tomcat-7.0.76/logs/ /home/loguser/SITTimeTravel/TT1/OPA/logs
#DEVW
mount -t nfs 10.64.65.12:/opt/IBM/HSRI/IES-Branch3/IEAppLogs/ /home/loguser/SITRegular/PreSIT/IES/App
mount -t nfs 10.64.65.12:/opt/IBM/HSRI/SSP-Branch3/SSPLogs/ /home/loguser/SITRegular/PreSIT/SSP/App
mount -t nfs 10.64.33.12:/opt/IBM/HSRI/HIX-Branch3/HIXLogs/ /home/loguser/SITRegular/PreSIT/HIX/App
mount -t nfs 10.64.65.31:/opt/IBM/HSRI/CCAPEARR-Branch3/Logs/ /home/loguser/SITRegular/PreSIT/CCAPEARR/App
mount -t nfs 10.64.65.12:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IES1/ /home/loguser/SITRegular/PreSIT/IES/Server
mount -t nfs 10.64.65.12:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/SSP1/ /home/loguser/SITRegular/PreSIT/SSP/Server
mount -t nfs 10.64.33.12:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/HIX1/ /home/loguser/SITRegular/PreSIT/HIX/Server
mount -t nfs 10.64.65.31:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/CCAP1/ /home/loguser/SITRegular/PreSIT/CCAPEARR/Server
mount -t nfs 10.64.65.18:/opt/mule-standalone-3.4.0/logs/ /home/loguser/SITRegular/PreSIT/Mule
mount -t nfs 10.64.65.252:/home/muleuser/TLS_mule_Branch3/mule-standalone-3.8.0/logs/ /home/loguser/SITRegular/PreSIT/TLSMule
mount -t nfs 10.64.65.18:/home/muleuser/mule-standalone-3.4.0/logs/ /home/loguser/SITRegular/PreSIT/EBTMule
mount -t nfs 10.64.65.18:/home/apache/HSRI/SITBranch3-Tomcat/apache-tomcat-7.0.76/logs/ /home/loguser/SITRegular/PreSIT/OPA
#UATW
mount -t nfs 10.64.65.109:/opt/IBM/HSRI/CCAPP-SITCV6/Logs/ /home/loguser/SITCV6/CCAP/App
mount -t nfs 10.64.65.109:/opt/IBM/HSRI/HIX-SITCV6/HIXLogs/ /home/loguser/SITCV6/HIX/App
mount -t nfs 10.64.65.109:/opt/IBM/HSRI/IES-SITCV6/IEAppLogs/ /home/loguser/SITCV6/IES/App
```

```

mount -t nfs 10.64.65.109:/opt/IBM/HSRI/SSP-SITCV6/SSPLogs/ /home/loguser/SITCV6/SSP/App
mount -t nfs 10.64.65.109:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/CCAP1/ /home/loguser/SITCV6/CCAP/Server
mount -t nfs 10.64.65.109:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/HIX1/ /home/loguser/SITCV6/HIX/Server
mount -t nfs 10.64.65.109:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IES1/ /home/loguser/SITCV6/IES/Server
mount -t nfs 10.64.65.109:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/SSP1/ /home/loguser/SITCV6/SSP/Server
mount -t nfs 10.64.65.110:/home/muleuser/mule-standalone-3.4.0/logs/ /home/loguser/SITCV6/EBTMuleLog
mount -t nfs 10.64.65.110:/opt/mule-standalone-3.4.0/logs/ /home/loguser/SITCV6/MULELogs
mount -t nfs 10.64.65.110:/home/muleuser/TLS_mule/mule-standalone-3.8.0/logs/ /home/loguser/SITCV6/TLS_Mule
mount -t nfs 10.64.65.110:/opt/apache-tomcat-7.0.76/logs/ /home/loguser/SITCV6/TomcatLogs
#UATM
mount -t nfs 10.64.65.103:/opt/IBM/HSRI/IES-UATM/IEAppLogs/ /home/loguser/UATM/IES/App
mount -t nfs 10.64.65.103:/opt/IBM/HSRI/HIX-UATM/HIXLogs/ /home/loguser/UATM/HIX/App
mount -t nfs 10.64.65.103:/opt/IBM/HSRI/SSP-UATM/SSPLogs/ /home/loguser/UATM/SSP/App
mount -t nfs 10.64.65.103:/opt/IBM/HSRI/CCAPEARR-UATM/Logs/ /home/loguser/UATM/CCAP/App
mount -t nfs 10.64.65.103:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IES1/ /home/loguser/UATM/IES/server
mount -t nfs 10.64.65.103:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/HIX1/ /home/loguser/UATM/HIX/server
mount -t nfs 10.64.65.103:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/SSP1/ /home/loguser/UATM/SSP/server
mount -t nfs 10.64.65.103:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/CCAP3/ /home/loguser/UATM/CCAP/server
mount -t nfs 10.64.65.105:/home/muleuser/mule-standalone-3.4.0/logs/ /home/loguser/UATM/Mule/EBT_Logs
mount -t nfs 10.64.65.105:/opt/mule-standalone-3.4.0/logs/ /home/loguser/UATM/Mule/Mule
mount -t nfs 10.64.65.105:/home/muleuser/TLS_mule_UATM/mule-standalone-3.8.0/logs/ /home/loguser/UATM/Mule/TLS_Mule
mount -t nfs 10.64.65.105:/home/apache/HSRI/UATM-Tomcat/apache-tomcat-7.0.76/logs/ /home/loguser/UATM/OPA
#SITW
mount -t nfs 10.64.65.251:/opt/IBM/HSRI/IES-SITTT2/IEAppLogs/ /home/loguser/SITTimeTravel/TT2/IES/App
mount -t nfs 10.64.33.12:/opt/IBM/HSRI/HIX-SITTT2/HIXLogs/ /home/loguser/SITTimeTravel/TT2/HIX/App
mount -t nfs 10.64.65.33:/opt/IBM/HSRI/SSP-SITTT2/SSPLogs/ /home/loguser/SITTimeTravel/TT2/SSP/App
mount -t nfs 10.64.65.33:/opt/IBM/HSRI/CCAPEARR-SITTT2/Logs/ /home/loguser/SITTimeTravel/TT2/CCAP/App
mount -t nfs 10.64.65.251:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IES3/ /home/loguser/SITTimeTravel/TT2/IES/Server
mount -t nfs 10.64.33.12:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/HIX2/ /home/loguser/SITTimeTravel/TT2/HIX/Server
mount -t nfs 10.64.65.33:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/SSP2/ /home/loguser/SITTimeTravel/TT2/SSP/Server
mount -t nfs 10.64.65.33:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/CCAP2/ /home/loguser/SITTimeTravel/TT2/CCAP/Server
mount -t nfs 10.64.65.252:/opt/SITW/mule-standalone-3.4.0/logs/ /home/loguser/SITTimeTravel/TT2/MULE
mount -t nfs 10.64.65.252:/opt/SITW_EBTFIS/mule-standalone-3.4.0/logs/ /home/loguser/SITTimeTravel/TT2/EBTMule
mount -t nfs 10.64.65.252:/home/muleuser/TLS_mule_SITTT2/mule-standalone-3.8.0/logs/ /home/loguser/SITTimeTravel/TT2/TLSMule
mount -t nfs 10.64.65.252:/home/muleuser/SITW_SAVE/mule-standalone-3.4.0/logs/ /home/loguser/SITTimeTravel/TT2/SAVE
mount -t nfs 10.64.65.252:/home/apache/HSRI/SITTT2-Tomcat/apache-tomcat-7.0.76/logs/ /home/loguser/SITTimeTravel/TT2/OPA
#SITN
mount -t nfs 10.64.33.13:/opt/IBM/HSRI/IES-SITTT4/IEAppLogs/ /home/loguser/SITTimeTravel/SITN/IES/App
mount -t nfs 10.64.33.13:/opt/IBM/HSRI/HIX-SITTT4/HIXLogs/ /home/loguser/SITTimeTravel/SITN/HIX/App
mount -t nfs 10.64.33.13:/opt/IBM/HSRI/SSP-SITTT4/SSPLogs/ /home/loguser/SITTimeTravel/SITN/SSP/App
mount -t nfs 10.64.33.13:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IES1/ /home/loguser/SITTimeTravel/SITN/IES/Server
mount -t nfs 10.64.33.13:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/HIX1/ /home/loguser/SITTimeTravel/SITN/HIX/Server
mount -t nfs 10.64.33.13:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/SSP1/ /home/loguser/SITTimeTravel/SITN/SSP/Server
mount -t nfs 10.64.33.16:/opt/mule-standalone-3.4.0/logs/ /home/loguser/SITTimeTravel/SITN/MULE
mount -t nfs 10.64.33.16:/home/muleuser/TLS_mule_SITTT4/mule-standalone-3.8.0/logs/ /home/loguser/SITTimeTravel/SITN/TLSMule
mount -t nfs 10.64.33.16:/home/muleuser/mule-standalone-3.4.0/logs/ /home/loguser/SITTimeTravel/SITN/EBTMule
mount -t nfs 10.64.33.16:/home/muleuser/SITN_SAVE/mule-standalone-3.4.0/logs/ /home/loguser/SITTimeTravel/SITN/SAVE
mount -t nfs 10.64.33.16:/home/apache/HSRI/SITTT4-Tomcat/apache-tomcat-7.0.82/logs/ /home/loguser/SITTimeTravel/SITN/OPA
#SITNT
mount -t nfs 10.64.33.11:/opt/IBM/HSRI/IES-UATTT/IEAppLogs/ /home/loguser/UAT-TT/IES/App
mount -t nfs 10.64.33.11:/opt/IBM/HSRI/HIX-UATTT/HIXLogs/ /home/loguser/UAT-TT/HIX/App
mount -t nfs 10.64.33.11:/opt/IBM/HSRI/SSP-UATTT/SSPLogs/ /home/loguser/UAT-TT/SSP/App
mount -t nfs 10.64.33.11:/opt/IBM/HSRI/CCAPP-UATTT/Logs/ /home/loguser/UAT-TT/CCAP/App
mount -t nfs 10.64.33.11:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IES/ /home/loguser/UAT-TT/IES/Server
mount -t nfs 10.64.33.11:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/HIX1/ /home/loguser/UAT-TT/HIX/Server
mount -t nfs 10.64.33.11:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/SSP/ /home/loguser/UAT-TT/SSP/Server
mount -t nfs 10.64.33.11:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/CCAP/ /home/loguser/UAT-TT/CCAP/Server
mount -t nfs 10.64.33.19:/opt/mule-standalone-3.4.0/logs/ /home/loguser/UAT-TT/MULELogs/Mule
mount -t nfs 10.64.33.19:/home/muleuser/TLS_mule/mule-standalone-3.8.0/logs/ /home/loguser/UAT-TT/MULELogs/TLSMule
mount -t nfs 10.64.33.19:/home/muleuser/mule-standalone-3.4.0/logs/ /home/loguser/UAT-TT/MULELogs/EBT
mount -t nfs 10.64.33.17:/home/apache/HSRI/UATTT-Tomcat/apache-tomcat-7.0.76/logs/ /home/loguser/UAT-TT/TomcatLogs
#UATMT
mount -t nfs 10.64.65.84:/opt/IBM/HSRI/CCAPP-HSRIUATTT2/Logs/ /home/loguser/HSRIUATTT2/CCAP/App

```

```

mount -t nfs 10.64.65.84:/opt/IBM/HSRI/HIX-HSRIUATT2/HIXLogs/ /home/loguser/HSRIUATT2/HIX/App
mount -t nfs 10.64.65.84:/opt/IBM/HSRI/IES-HSRIUATT2/IEAppLogs/ /home/loguser/HSRIUATT2/IES/App
mount -t nfs 10.64.65.84:/opt/IBM/HSRI/SSP-HSRIUATT2/SSPLogs/ /home/loguser/HSRIUATT2/SSP/App
mount -t nfs 10.64.65.84:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/CCAP1/ /home/loguser/HSRIUATT2/CCAP/Server
mount -t nfs 10.64.65.84:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/HIX2/ /home/loguser/HSRIUATT2/HIX/Server
mount -t nfs 10.64.65.84:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IES1/ /home/loguser/HSRIUATT2/IES/Server
mount -t nfs 10.64.65.84:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/SSP1/ /home/loguser/HSRIUATT2/SSP/Server
mount -t nfs 10.64.65.79:/opt/mule-standalone-3.4.0/logs/ /home/loguser/HSRIUATT2/MULELogs
mount -t nfs 10.64.65.79:/home/muleuser/TLS_mule_HSRIUATT2/mule-standalone-3.8.0/logs/ /home/loguser/HSRIUATT2/TLS_MULELogs
mount -t nfs 10.64.65.79:/home/muleuser/mule-standalone-3.4.0/logs/ /home/loguser/HSRIUATT2/EBTLogs
mount -t nfs 10.64.65.79:/home/muleuser/UATMT_SAVE/mule-standalone-3.4.0/logs/ /home/loguser/HSRIUATT2/SAVE
mount -t nfs 10.64.65.79:/home/apache/HSRI/HSRIUATT2-Tomcat/apache-tomcat-7.0.76/logs/ /home/loguser/HSRIUATT2/TomcatLogs
#UATNT
mount -t nfs 10.64.33.14:/opt/IBM/HSRI/UATNT/IES2/IEAppLogs/ /home/loguser/UATNT/IES/App
mount -t nfs 10.64.33.14:/opt/IBM/HSRI/UATNT/HIX2/HIXLogs/ /home/loguser/UATNT/HIX/App
mount -t nfs 10.64.33.14:/opt/IBM/HSRI/UATNT/SSP2/SSPLogs/ /home/loguser/UATNT/SSP/App
mount -t nfs 10.64.33.14:/opt/IBM/HSRI/UATNT/CCAPP2/Logs/ /home/loguser/UATNT/CCAP/App
mount -t nfs 10.64.33.14:/opt/IBM/WebSphere/AppServer/profiles/AppSrv02/logs/IES2/ /home/loguser/UATNT/IES/Server
mount -t nfs 10.64.33.14:/opt/IBM/WebSphere/AppServer/profiles/AppSrv02/logs/HIX2/ /home/loguser/UATNT/HIX/Server
mount -t nfs 10.64.33.14:/opt/IBM/WebSphere/AppServer/profiles/AppSrv02/logs/SSP2/ /home/loguser/UATNT/SSP/Server
mount -t nfs 10.64.33.14:/opt/IBM/WebSphere/AppServer/profiles/AppSrv02/logs/CCAP2/ /home/loguser/UATNT/CCAP/Server
mount -t nfs 10.64.33.56:/opt/UATNT/mule-standalone-3.4.0/logs/ /home/loguser/UATNT/MULELogs
mount -t nfs 10.64.33.56:/home/muleuser/TLS_UATNT/mule-standalone-3.8.0/logs/ /home/loguser/UATNT/MULE/TLS
mount -t nfs 10.64.33.56:/home/muleuser/mule-standalone-3.4.0/logs/ /home/loguser/UATNT/MULE/EBT
mount -t nfs 10.64.33.56:/home/muleuser/UATNT_SAVE/mule-standalone-3.4.0/logs/ /home/loguser/UATNT/MULE/SAVE
mount -t nfs 10.64.33.56:/home/apache/HSRI/UATNT/apache-tomcat-7.0.76/logs/ /home/loguser/UATNT/TomcatLogs
#UATN
mount -t nfs 10.64.33.14:/opt/IBM/HSRI/UATND/CCAPP1/Logs/ /home/loguser/UATN/CCAP/App
mount -t nfs 10.64.33.14:/opt/IBM/HSRI/UATND/IES1/IEAppLogs/ /home/loguser/UATN/IES/App
mount -t nfs 10.64.33.14:/opt/IBM/HSRI/UATND/HIX1/HIXLogs/ /home/loguser/UATN/HIX/App
mount -t nfs 10.64.33.14:/opt/IBM/HSRI/UATND/SSP1/SSPLogs/ /home/loguser/UATN/SSP/App
mount -t nfs 10.64.33.14:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/CCAP1/ /home/loguser/UATN/CCAP/Server
mount -t nfs 10.64.33.14:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IES1/ /home/loguser/UATN/IES/Server
mount -t nfs 10.64.33.14:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/HIX2/ /home/loguser/UATN/HIX/Server
mount -t nfs 10.64.33.14:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/SSP1/ /home/loguser/UATN/SSP/Server
mount -t nfs 10.64.33.56:/opt/UATN/mule-standalone-3.4.0/logs/ /home/loguser/UATN/MULELogs
mount -t nfs 10.64.33.56:/home/muleuser/TLS_mule_HSRIUATT2/mule-standalone-3.8.0/logs/ /home/loguser/UATN/TLS
mount -t nfs 10.64.33.56:/home/muleuser/mule-standalone-3.4.0/logs/ /home/loguser/UATNT/MULE/EBT
mount -t nfs 10.64.33.56:/home/apache/HSRI/UATTT-Tomcat/apache-tomcat-7.0.76/logs/ /home/loguser/UATN/TomcatLogs
#IESCorrespondence-common
mount -t nfs 10.64.65.18:/opt/IESCorrespondenceMule/mule-standalone-3.4.0/logs/ /home/loguser/SIT_IESCorrespondenceMediator_Logs
#PRDP
mount -t nfs 10.64.65.251:/opt/IBM/HSRI/CCAPP-SITCV1/Logs/ /home/loguser/SITConversion/CV1/CCAP/App
mount -t nfs 10.64.65.251:/opt/IBM/HSRI/IES-SITCV1/IEAppLogs/ /home/loguser/SITConversion/CV1/IES/App
mount -t nfs 10.64.65.251:/opt/IBM/HSRI/HIX-SITCV1/HIXLogs/ /home/loguser/SITConversion/CV1/HIX/App
mount -t nfs 10.64.65.251:/opt/IBM/HSRI/SSP-SITCV1/SSPLogs/ /home/loguser/SITConversion/CV1/SSP/App
mount -t nfs 10.64.65.251:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/CCAP2/ /home/loguser/SITConversion/CV1/CCAP/Server
mount -t nfs 10.64.65.251:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IES2/ /home/loguser/SITConversion/CV1/IES/Server
mount -t nfs 10.64.65.251:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/HIX2/ /home/loguser/SITConversion/CV1/HIX/Server
mount -t nfs 10.64.65.251:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/SSP2/ /home/loguser/SITConversion/CV1/SSP/Server
mount -t nfs 10.64.65.252:/opt/SITCV1/mule-standalone-3.4.0/logs/ /home/loguser/SITConversion/CV1/MULE
mount -t nfs 10.64.65.252:/home/muleuser/mule-standalone-3.4.0/logs/ /home/loguser/SITConversion/CV1/EBTMule
mount -t nfs 10.64.65.252:/home/muleuser/TLS_mule_SITCV1/mule-standalone-3.8.0/logs/ /home/loguser/SITConversion/CV1/TLS
mount -t nfs 10.64.65.252:/home/apache/HSRI/SITCV1-Tomcat/apache-tomcat-7.0.76/logs/ /home/loguser/SITConversion/CV1/Tomcat
#SITWT/TT3
mount -t nfs 10.64.33.12:/opt/IBM/HSRI/IES-SITTT3/IEAppLogs/ /home/loguser/SITTimeTravel/TT3/IES/App
mount -t nfs 10.64.33.12:/opt/IBM/HSRI/HIX-SITTT3/HIXLogs/ /home/loguser/SITTimeTravel/TT3/HIX/App
mount -t nfs 10.64.33.12:/opt/IBM/HSRI/SSP-SITTT3/SSPLogs/ /home/loguser/SITTimeTravel/TT3/SSP/App
mount -t nfs 10.64.33.12:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IES1/ /home/loguser/SITTimeTravel/TT3/IES/Server
mount -t nfs 10.64.33.12:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/HIX1/ /home/loguser/SITTimeTravel/TT3/HIX/Server
mount -t nfs 10.64.33.12:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/SSP1/ /home/loguser/SITTimeTravel/TT3/SSP/Server
mount -t nfs 10.64.33.15:/opt/mule-standalone-3.4.0/logs/ /home/loguser/SITTimeTravel/TT3/MULE/RegMule
mount -t nfs 10.64.33.15:/home/muleuser/TLS_mule/mule-standalone-3.8.0/logs/ /home/loguser/SITTimeTravel/TT3/MULE/TLS

```

```
mount -t nfs 10.64.33.15:/home/muleuser/mule-standalone-3.4.0/logs/ /home/loguser/SITTimeTravel/TT3/MULE/EBT
mount -t nfs 10.64.33.15:/home/apache/HSRI/SITTT3-Tomcat/apache-tomcat-7.0.76/logs/ /home/loguser/SITTimeTravel/TT3/OPA
#SITMT/SITREG
mount -t nfs 10.64.65.12:/opt/IBM/HSRI/IES-SITMT/IEAppLogs/ApplicationLogs/ /home/loguser/SITMT/IES/App
mount -t nfs 10.64.65.12:/opt/IBM/HSRI/HIX-SITMT/HIXLogs/ /home/loguser/SITMT/HIX/App
mount -t nfs 10.64.65.12:/opt/IBM/HSRI/SSP-SITMT/SSPLLogs/ApplicationLogs/ /home/loguser/SITMT/SSP/App
mount -t nfs 10.64.65.12:/opt/IBM/HSRI/CCAPEARR-SITMT/Logs/ApplicationLogs/CCAP1/ /home/loguser/SITMT/CCAP/App
mount -t nfs 10.64.65.12:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IES2/ /home/loguser/SITMT/IES/Server
mount -t nfs 10.64.65.12:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/HIX2/ /home/loguser/SITMT/HIX/Server
mount -t nfs 10.64.65.12:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/SSP2/ /home/loguser/SITMT/SSP/Server
mount -t nfs 10.64.65.12:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/CCAP1/ /home/loguser/SITMT/CCAP/Server
mount -t nfs 10.64.65.18:/opt/SITMT/mule-standalone-3.4.0/logs/ /home/loguser/SITMT/MULE/RegMule
mount -t nfs 10.64.65.18:/opt/SITMT_EBTFIS/mule-standalone-3.4.0/logs/ /home/loguser/SITMT/MULE/EBTMule
mount -t nfs 10.64.65.18:/home/muleuser/TLS_mule_SITMT/mule-standalone-3.8.0/logs/ /home/loguser/SITMT/MULE/TLSMule
mount -t nfs 10.64.65.18:/home/apache/HSRI/SITMT-Tomcat/apache-tomcat-7.0.76/logs/ /home/loguser/SITMT/TomcatLogs
#UATL
#given to US team to do it
```

unmount

Thursday, March 16, 2017 5:20 PM

```
#!/bin/sh
#SITM
umount -l /home/loguser/SITTimeTravel/TT1/IES/App
umount -l /home/loguser/SITTimeTravel/TT1/SSP/App
umount -l /home/loguser/SITTimeTravel/TT1/HIX/App
umount -l /home/loguser/SITTimeTravel/TT1/CCAP/App
umount -l /home/loguser/SITTimeTravel/TT1/IES/Server
umount -l /home/loguser/SITTimeTravel/TT1/SSP/Server
umount -l /home/loguser/SITTimeTravel/TT1/HIX/Server
umount -l /home/loguser/SITTimeTravel/TT1/CCAP/server
umount -l /home/loguser/SITTimeTravel/TT1/MULE/TLS
umount -l /home/loguser/SITTimeTravel/TT1/MULE/RegMule
umount -l /home/loguser/SITTimeTravel/TT1/MULE/EBTMule
umount -l /home/loguser/SITTimeTravel/TT1/OPA/logs
#DEVV
umount -l /home/loguser/SITRegular/PreSIT/IES/App
umount -l /home/loguser/SITRegular/PreSIT/SSP/App
umount -l /home/loguser/SITRegular/PreSIT/HIX/App
umount -l /home/loguser/SITRegular/PreSIT/CCAPEARR/App
umount -l /home/loguser/SITRegular/PreSIT/IES/Server
umount -l /home/loguser/SITRegular/PreSIT/SSP/Server
umount -l /home/loguser/SITRegular/PreSIT/HIX/Server
umount -l /home/loguser/SITRegular/PreSIT/CCAPEARR/Server
umount -l /home/loguser/SITRegular/PreSIT/Mule
umount -l /home/loguser/SITRegular/PreSIT/TLSMule
umount -l /home/loguser/SITRegular/PreSIT/EBTMule
umount -l /home/loguser/SITRegular/PreSIT/OPA
#UATW
umount -l /home/loguser/SITCV6/CCAP/App
umount -l /home/loguser/SITCV6/HIX/App
umount -l /home/loguser/SITCV6/IES/App
umount -l /home/loguser/SITCV6/SSP/App
umount -l /home/loguser/SITCV6/CCAP/Server
umount -l /home/loguser/SITCV6/HIX/Server
umount -l /home/loguser/SITCV6/IES/Server
umount -l /home/loguser/SITCV6/SSP/Server
umount -l /home/loguser/SITCV6/EBTMuleLog
umount -l /home/loguser/SITCV6/MULELogs
umount -l /home/loguser/SITCV6/TLS_Mule
umount -l /home/loguser/SITCV6/TomcatLogs
#UATM
umount -l /home/loguser/UATM/IES/App
umount -l /home/loguser/UATM/HIX/App
umount -l /home/loguser/UATM/SSP/App
umount -l /home/loguser/UATM/CCAP/App
umount -l /home/loguser/UATM/IES/server
umount -l /home/loguser/UATM/HIX/server
umount -l /home/loguser/UATM/SSP/server
```

```
umount -l /home/loguser/UATM/CCAP/server
umount -l /home/loguser/UATM/Mule/EBT_Logs
umount -l /home/loguser/UATM/Mule/Mule
umount -l /home/loguser/UATM/Mule/TLS_Mule
umount -l /home/loguser/UATM/OPA
#SITW
umount -l /home/loguser/SITTimeTravel/TT2/IES/App
umount -l /home/loguser/SITTimeTravel/TT2/HIX/App
umount -l /home/loguser/SITTimeTravel/TT2/SSP/App
umount -l /home/loguser/SITTimeTravel/TT2/CCAP/App
umount -l /home/loguser/SITTimeTravel/TT2/IES/Server
umount -l /home/loguser/SITTimeTravel/TT2/HIX/Server
umount -l /home/loguser/SITTimeTravel/TT2/SSP/Server
umount -l /home/loguser/SITTimeTravel/TT2/CCAP/Server
umount -l /home/loguser/SITTimeTravel/TT2/MULE
umount -l /home/loguser/SITTimeTravel/TT2/EBTMule
umount -l /home/loguser/SITTimeTravel/TT2/TLSMule
umount -l /home/loguser/SITTimeTravel/TT2/OPA
#SITN
umount -l /home/loguser/SITTimeTravel/SITN/IES/App
umount -l /home/loguser/SITTimeTravel/SITN/HIX/App
umount -l /home/loguser/SITTimeTravel/SITN/SSP/App
umount -l /home/loguser/SITTimeTravel/SITN/IES/Server
umount -l /home/loguser/SITTimeTravel/SITN/HIX/Server
umount -l /home/loguser/SITTimeTravel/SITN/SSP/Server
umount -l /home/loguser/SITTimeTravel/SITN/MULE
umount -l /home/loguser/SITTimeTravel/SITN/TLSMule
umount -l /home/loguser/SITTimeTravel/SITN/EBTMule
umount -l /home/loguser/SITTimeTravel/SITN/SAVE
umount -l /home/loguser/SITTimeTravel/SITN/OPA
#SITNT
umount -l /home/loguser/UAT-TT/IES/App
umount -l /home/loguser/UAT-TT/HIX/App
umount -l /home/loguser/UAT-TT/HIX/App
umount -l /home/loguser/UAT-TT/CCAP/App
umount -l /home/loguser/UAT-TT/IES/Server
umount -l /home/loguser/UAT-TT/HIX/Server
umount -l /home/loguser/UAT-TT/SSP/Server
umount -l /home/loguser/UAT-TT/CCAP/Server
umount -l /home/loguser/UAT-TT/MULELogs/Mule
umount -l /home/loguser/UAT-TT/MULELogs/TLSMule
umount -l /home/loguser/UAT-TT/MULELogs/EBT
umount -l /home/loguser/UAT-TT/TomcatLogs
umount -l /home/loguser/UAT-TT/MULELogs/EBT
umount -l /home/loguser/UAT-TT/MULELogs/Mule
umount -l /home/loguser/UAT-TT/MULELogs/TLSMule
umount -l /home/loguser/UAT-TT/TomcatLogs
#PERF2
umount -l /home/loguser/UAT/IES/App
umount -l /home/loguser/UAT/HIX/App
umount -l /home/loguser/UAT/SSP/App
umount -l /home/loguser/UAT/CCAP/App
umount -l /home/loguser/UAT/IES/Server
```

```
umount -l /home/loguser/UAT/HIX/Server
umount -l /home/loguser/UAT/SSP/Server
umount -l /home/loguser/UAT/CCAP/Server
umount -l /home/loguser/UAT/MULELogs
umount -l /home/loguser/UAT/TLSMule
umount -l /home/loguser/UAT/EBTLogs
umount -l /home/loguser/UAT/TomcatLogs
#UATMT
umount -l /home/loguser/HSRIUATT2/CCAP/App
umount -l /home/loguser/HSRIUATT2/HIX/App
umount -l /home/loguser/HSRIUATT2/IES/App
umount -l /home/loguser/HSRIUATT2/SSP/App
umount -l /home/loguser/HSRIUATT2/CCAP/Server
umount -l /home/loguser/HSRIUATT2/HIX/Server
umount -l /home/loguser/HSRIUATT2/IES/Server
umount -l /home/loguser/HSRIUATT2/SSP/Server
umount -l /home/loguser/HSRIUATT2/MULELogs
umount -l /home/loguser/HSRIUATT2/TLS_MULELogs
umount -l /home/loguser/HSRIUATT2/EBTLogs
umount -l /home/loguser/HSRIUATT2/SAVE
umount -l /home/loguser/HSRIUATT2/TomcatLogs
#UATNT
umount -l /home/loguser/UATNT/IES/App
umount -l /home/loguser/UATNT/HIX/App
umount -l /home/loguser/UATNT/SSP/App
umount -l /home/loguser/UATNT/CCAP/App
umount -l /home/loguser/UATNT/IES/Server
umount -l /home/loguser/UATNT/HIX/Server
umount -l /home/loguser/UATNT/SSP/Server
umount -l /home/loguser/UATNT/CCAP/Server
umount -l /home/loguser/UATNT/MULELogs
umount -l /home/loguser/UATNT/MULE/TLS
umount -l /home/loguser/UATNT/MULE/EBT
umount -l /home/loguser/UATNT/MULE/SAVE
umount -l /home/loguser/UATNT/TomcatLogs
#UATN
umount -l /home/loguser/UATN/CCAP/App
umount -l /home/loguser/UATN/IES/App
umount -l /home/loguser/UATN/HIX/App
umount -l /home/loguser/UATN/SSP/App
umount -l /home/loguser/UATN/CCAP/Server
umount -l /home/loguser/UATN/IES/Server
umount -l /home/loguser/UATN/HIX/Server
umount -l /home/loguser/UATN/SSP/Server
umount -l /home/loguser/UATN/MULELogs
umount -l /home/loguser/UATN/TLS
umount -l /home/loguser/UATNT/MULE/EBT
umount -l /home/loguser/UATN/TomcatLogs
#IESCorrespondence-common
umount -l /home/loguser/SIT_IESTCorrespondenceMediator_Logs
#PRDP
umount -l /home/loguser/SITConversion/CV1/CCAP/App
umount -l /home/loguser/SITConversion/CV1/IES/App
```

```
umount -l /home/loguser/SITConversion/CV1/HIX/App
umount -l /home/loguser/SITConversion/CV1/SSP/App
umount -l /home/loguser/SITConversion/CV1/CCAP/Server
umount -l /home/loguser/SITConversion/CV1/IES/Server
umount -l /home/loguser/SITConversion/CV1/HIX/Server
umount -l /home/loguser/SITConversion/CV1/SSP/Server
umount -l /home/loguser/SITConversion/CV1/MULE
umount -l /home/loguser/SITConversion/CV1/EBTMule
umount -l /home/loguser/SITConversion/CV1/TLS
umount -l /home/loguser/SITConversion/CV1/Tomcat
#SITWT/TT3
umount -l /home/loguser/SITTimeTravel/TT3/IES/App
umount -l /home/loguser/SITTimeTravel/TT3/HIX/App
umount -l /home/loguser/SITTimeTravel/TT3/SSP/App
umount -l /home/loguser/SITTimeTravel/TT3/IES/Server
umount -l /home/loguser/SITTimeTravel/TT3/HIX/Server
umount -l /home/loguser/SITTimeTravel/TT3/SSP/Server
umount -l /home/loguser/SITTimeTravel/TT3/MULE/RegMule
umount -l /home/loguser/SITTimeTravel/TT3/MULE/TLS
umount -l /home/loguser/SITTimeTravel/TT3/MULE/EBT
umount -l /home/loguser/SITTimeTravel/TT3/OPA
#SITMT/SITREG
umount -l /home/loguser/SITMT/IES/App
umount -l /home/loguser/SITMT/HIX/App
umount -l /home/loguser/SITMT/SSP/App
umount -l /home/loguser/SITMT/CCAP/App
umount -l /home/loguser/SITMT/IES/Server
umount -l /home/loguser/SITMT/HIX/Server
umount -l /home/loguser/SITMT/SSP/Server
umount -l /home/loguser/SITMT/CCAP/Server
umount -l /home/loguser/SITMT/MULELogs
umount -l /home/loguser/SITMT/EBTMuleLog
umount -l /home/loguser/SITMT/TLS_Mule
umount -l /home/loguser/SITMT/TomcatLogs
#UATL
```

```
#SITM
/home/loguser/SITTimeTravel/TT1
#DEVW
/home/loguser/SITRegular/PreSIT
#SITMT(mules and opa needs to be mounted)
/home/loguser/SITRegular/Branch
#UATW
/home/loguser/SITCV6
#UATM
/home/loguser/UATM
#SITW
/home/loguser/SITTimeTravel/TT2
#SITN
/home/loguser/SITTimeTravel/SITN
```

```
#SITNT
/home/loguser/UAT
#opa getting hung need to restart nfs - no sudo access
/home/loguser/UAT/TomcatLogs
#SITMT
/home/loguser/SITMT
#UATMT
/home/loguser/HSRIUATTT2
#UATNT
/home/loguser/UATNT
#UATN
/home/loguser/UATN
#IESCorrespondence-common
/home/loguser/SIT_IESTCorrespondenceMediator_Logs
#PRDP
/home/loguser/SITConversion/CV1
#PRDT(Mules needs to be mounted - no sudo access to proceed)
/opt/Environment-LOGS/PRDT(10.64.65.25)
#SITWT
/home/loguser/SITTimeTravel/TT3
#UATL
pending
#UATWT
pending
```

Mount checks

Monday, July 17, 2017 4:45 PM

#SITW

```
cd /home/loguser/SITTimeTravel/TT2/IES/App;ls -lrt|wc;sleep 02
cd /home/loguser/SITTimeTravel/TT2/HIX/App;ls -lrt|wc;sleep 02
cd /home/loguser/SITTimeTravel/TT2/SSP/App;ls -lrt|wc;sleep 02
cd /home/loguser/SITTimeTravel/TT2/CCAP/App;ls -lrt|wc;sleep 02
cd /home/loguser/SITTimeTravel/TT2/IES/Server;ls -lrt|wc;sleep 02
cd /home/loguser/SITTimeTravel/TT2/HIX/Server;ls -lrt|wc;sleep 02
cd /home/loguser/SITTimeTravel/TT2/SSP/Server;ls -lrt|wc;sleep 02
cd /home/loguser/SITTimeTravel/TT2/CCAP/Server;ls -lrt|wc;sleep 02
cd /home/loguser/SITTimeTravel/TT2/MULE;ls -lrt|wc;sleep 02
cd /home/loguser/SITTimeTravel/TT2/EBTMule;ls -lrt|wc;sleep 02
cd /home/loguser/SITTimeTravel/TT2/TLSMule;ls -lrt|wc;sleep 02
cd /home/loguser/SITTimeTravel/TT2/OPA;ls -lrt|wc;sleep 02
```

#UATNT

```
cd /home/loguser/UATNT/IES/App;ls -lart | wc;sleep 02
cd /home/loguser/UATNT/HIX/App;ls -lart | wc;sleep 02
cd /home/loguser/UATNT/SSP/App;ls -lart | wc;sleep 02
cd /home/loguser/UATNT/CCAP/App;ls -lart | wc;sleep 02
cd /home/loguser/UATNT/IES/Server;ls -lart | wc;sleep 02
cd /home/loguser/UATNT/HIX/Server;ls -lart | wc;sleep 02
cd /home/loguser/UATNT/SSP/Server;ls -lart | wc;sleep 02
cd /home/loguser/UATNT/CCAP/Server;ls -lart | wc;sleep 02
cd /home/loguser/UATNT/MULELogs;ls -lart | wc;sleep 02
cd /home/loguser/UATNT/MULE/TLS;ls -lart | wc;sleep 02
cd /home/loguser/UATNT/MULE/EBT;ls -lart | wc;sleep 02
cd /home/loguser/UATNT/TomcatLogs;ls -lart | wc;sleep 02
```

#UATMT

```
cd /home/loguser/HSRIUATT2/CCAP/App;ls -lrt|wc;sleep 02
cd /home/loguser/HSRIUATT2/HIX/App;ls -lrt|wc;sleep 02
cd /home/loguser/HSRIUATT2/IES/App;ls -lrt|wc;sleep 02
cd /home/loguser/HSRIUATT2/SSP/App;ls -lrt|wc;sleep 02
cd /home/loguser/HSRIUATT2/CCAP/Server;ls -lrt|wc;sleep 02
cd /home/loguser/HSRIUATT2/HIX/Server;ls -lrt|wc;sleep 02
cd /home/loguser/HSRIUATT2/IES/Server;ls -lrt|wc;sleep 02
cd /home/loguser/HSRIUATT2/SSP/Server;ls -lrt|wc;sleep 02
cd /home/loguser/HSRIUATT2/MULELogs;ls -lrt|wc;sleep 02
cd /home/loguser/HSRIUATT2/TLS_MULELogs;ls -lrt|wc;sleep 02
cd /home/loguser/HSRIUATT2/EBTLogs;ls -lrt|wc;sleep 02
cd /home/loguser/HSRIUATT2/SAVE;ls -lrt|wc;sleep 02
cd /home/loguser/HSRIUATT2/TomcatLogs;ls -lrt|wc;sleep 02
```

#SITN

```
cd /home/loguser/SITTimeTravel/SITN/IES/App;ls -lart | wc;sleep 02
cd /home/loguser/SITTimeTravel/SITN/HIX/App;ls -lart | wc;sleep 02
cd /home/loguser/SITTimeTravel/SITN/SSP/App;ls -lart | wc;sleep 02
cd /home/loguser/SITTimeTravel/SITN/IES/Server;ls -lart | wc;sleep 02
```

```
cd /home/loguser/SITTimeTravel/SITN/HIX/Server;ls -lart | wc;sleep 02
cd /home/loguser/SITTimeTravel/SITN/SSP/Server;ls -lart | wc;sleep 02
cd /home/loguser/SITTimeTravel/SITN/MULE;ls -lart | wc;sleep 02
cd /home/loguser/SITTimeTravel/SITN/TLSMule;ls -lart | wc;sleep 02
cd /home/loguser/SITTimeTravel/SITN/EBTMule;ls -lart | wc;sleep 02
cd /home/loguser/SITTimeTravel/SITN/SAVE;ls -lart | wc;sleep 02
cd /home/loguser/SITTimeTravel/SITN/OPA;ls -lart | wc;sleep 02
```

batch

Sunday, March 26, 2017 10:48 AM

```
nohup sh -x MU-BEDBC-DLY.ksh /home/opconbatch/hsri-ies-batch/PRD 1 &
```

```
[opconbatch@ENT-UT-UHBAT02 npanguluri]$ cd /home/opconbatch/hsri-ies-batch/PRD/MU/scripts/
[opconbatch@ENT-UT-UHBAT02 scripts]$ pwd
/home/opconbatch/hsri-ies-batch/PRD/MU/scripts
[opconbatch@ENT-UT-UHBAT02 scripts]$ nohup sh -x MU-BEDBC-DLY.ksh /home/opconbatch/hsri-ies-batch/PRD 1 &
[1] 20919
[opconbatch@ENT-UT-UHBAT02 scripts]$ nohup: appending output to `nohup.out'

[opconbatch@ENT-UT-UHBAT02 scripts]$ jobs
[1]+  Running          nohup sh -x MU-BEDBC-DLY.ksh /home/opconbatch/hsri-ies-batch/PRD 1 &
[opconbatch@ENT-UT-UHBAT02 scripts]$ nohup sh -x MU-BEDBC-DLY.ksh /home/opconbatch/hsri-ies-batch/PRD 2 &
[2] 20970
[opconbatch@ENT-UT-UHBAT02 scripts]$ nohup: appending output to `nohup.out'

[opconbatch@ENT-UT-UHBAT02 scripts]$ nohup sh -x MU-BEDBC-DLY.ksh /home/opconbatch/hsri-ies-batch/PRD 3 &
[3] 20995
[opconbatch@ENT-UT-UHBAT02 scripts]$ nohup: appending output to `nohup.out'

[opconbatch@ENT-UT-UHBAT02 scripts]$ nohup sh -x MU-BEDBC-DLY.ksh /home/opconbatch/hsri-ies-batch/PRD 4 &
[4] 21025
[opconbatch@ENT-UT-UHBAT02 scripts]$ nohup: appending output to `nohup.out'

[opconbatch@ENT-UT-UHBAT02 scripts]$ nohup sh -x MU-BEDBC-DLY.ksh /home/opconbatch/hsri-ies-batch/PRD 5 &
[5] 21057
[opconbatch@ENT-UT-UHBAT02 scripts]$ nohup: appending output to `nohup.out'

[opconbatch@ENT-UT-UHBAT02 scripts]$ jobs
[1]  Running          nohup sh -x MU-BEDBC-DLY.ksh /home/opconbatch/hsri-ies-batch/PRD 1 &
[2]  Running          nohup sh -x MU-BEDBC-DLY.ksh /home/opconbatch/hsri-ies-batch/PRD 2 &
[3]  Running          nohup sh -x MU-BEDBC-DLY.ksh /home/opconbatch/hsri-ies-batch/PRD 3 &
[4]- Running          nohup sh -x MU-BEDBC-DLY.ksh /home/opconbatch/hsri-ies-batch/PRD 4 &
[5]+ Running          nohup sh -x MU-BEDBC-DLY.ksh /home/opconbatch/hsri-ies-batch/PRD 5 &
[opconbatch@ENT-UT-UHBAT02 scripts]$ hostname -i
10.64.1.57
[opconbatch@ENT-UT-UHBAT02 scripts]$
```

```
-cp $CLASSPATH -Djava.util.logging.config.file=batch-logging.properties
```

```
#!/bin/bash
opconbatchHome='/home/opconbatch'
mirthConnect='/home/opconbatch/Mirth\ Connect'
HSRIHome='/home/opconbatch/hsri-ies-batch/HSRIUATTT2'
commonLocation='/home/opconbatch/hsri-hix-batch/HSRIUATTT2/common'

# Setting up Permissions
cd $opconbatchHome
chmod -R 777 *
chmod 700 $mirthConnect
cd $HSRIHome
chmod 711 CLASSPATH
cd $commonLocation
chmod 711 properties
```

```
SITCV6
#!/bin/bash
opconbatchHome='/home/opconbatch'
mirthConnect='/home/opconbatch/Mirth\ Connect'
HSRIHome='/home/opconbatch/hsri-ies-batch/SITCV6'
commonLocation='/home/opconbatch/hsri-hix-batch/SITCV6/common'
```

```
# Setting up Permissions
cd $opconbatchHome
chmod -R 777 *
chmod 700 $mirthConnect
cd $HSRIHome
chmod 711 CLASSPATH
cd $commonLocation
chmod 711 properties
```

```
UATM
#!/bin/bash
opconbatchHome='/home/opconbatch'
mirthConnect='/home/opconbatch/Mirth\ Connect/'
HSRIHome='/home/opconbatch/hsri-ies-batch/UATM'
commonLocation='/home/opconbatch/hsri-hix-batch/UATM/common'
```

```
# Setting up Permissions
cd $opconbatchHome
chmod -R 777 *
chmod 700 $mirthConnect
cd $HSRIHome
chmod 711 CLASSPATH
cd $commonLocation
chmod 711 properties
```

```
SITMT
#!/bin/bash
opconbatchHome='/home/opconbatch'
mirthConnect='/home/opconbatch/Mirth\ Connect/'
HSRIHome='/home/opconbatch/hsri-ies-batch/SITMT'
commonLocation='/home/opconbatch/hsri-hix-batch/SITMT/common'
```

```
# Setting up Permissions
cd $opconbatchHome
chmod -R 777 *
chmod 700 $mirthConnect
cd $HSRIHome
chmod 711 CLASSPATH
cd $commonLocation
chmod 711 properties
```

```
#UATMP
#!/bin/bash
opconbatchHome='/home/opconbatch'
mirthConnect='/home/opconbatch/Mirth\ Connect/'
HSRIHome='/home/opconbatch/hsri-ies-batch/UATMP'
commonLocation='/home/opconbatch/hsri-hix-batch/UATMP/common'
```

```
# Setting up Permissions
cd $opconbatchHome
chmod -R 777 *
chmod 700 $mirthConnect
cd $HSRIHome
chmod 711 CLASSPATH
cd $commonLocation
chmod 711 properties
```

#SITNT

```
#!/bin/bash
opconbatchHome='/home/opconbatch'
mirthConnect='/home/opconbatch/Mirth\ Connect/'
HSRIHome='/home/opconbatch/hsri-ies-batch/UAT-TT'
commonLocation='/home/opconbatch/hsri-hix-batch/UAT-TT/common'
```

```
# Setting up Permissions
cd $opconbatchHome
chmod -R 777 *
chmod 700 $mirthConnect
cd $HSRIHome
chmod 711 CLASSPATH
cd $commonLocation
chmod 711 properties
```

#PERF2

```
#!/bin/bash
opconbatchHome='/home/opconbatch'
mirthConnect='/home/opconbatch/Mirth\ Connect/'
HSRIHome='/home/opconbatch/hsri-ies-batch/UAT'
commonLocation='/home/opconbatch/hsri-hix-batch/UAT/common'
```

```
# Setting up Permissions
cd $opconbatchHome
chmod -R 777 *
chmod 700 $mirthConnect
cd $HSRIHome
chmod 711 CLASSPATH
cd $commonLocation
chmod 711 properties
```

Apache httpd

Thursday, July 6, 2017 10:23 AM

```
[root@ENT-TST-UHAPP08 conf]# cp httpd.conf httpd.conf_bkp_231116
[root@ENT-TST-UHAPP08 conf]# ll
total 160
-rw-r--r-- 1 root root 34243 Nov  6 23:56 @@
-rw-r--r-- 1 root root 34313 Nov  7 01:49 httpd.conf
-rw-r--r-- 1 root root 34172 Nov  4 10:41 httpd.conf_bkp
-rw-r--r-- 1 root root 34313 Nov 23 06:47 httpd.conf_bkp_231116
-rw-r--r-- 1 root root 13139 Jul 18 2014 magic
[root@ENT-TST-UHAPP08 conf]#
[root@ENT-TST-UHAPP08 conf]#
[root@ENT-TST-UHAPP08 conf]#
[root@ENT-TST-UHAPP08 conf]# vi httpd.conf
[root@ENT-TST-UHAPP08 conf]# htpasswd -c /etc/httpd/.htpasswd user1
New password:
Re-type new password:
Adding password for user user1
[root@ENT-TST-UHAPP08 conf]# chown apache:apache /etc/httpd/.htpasswd
[root@ENT-TST-UHAPP08 conf]# chmod 0660 /etc/httpd/.htpasswd
[root@ENT-TST-UHAPP08 conf]# nano
[root@ENT-TST-UHAPP08 conf]#
[root@ENT-TST-UHAPP08 conf]#
[root@ENT-TST-UHAPP08 conf]# nano /home/wasadmin/htdocs/.htaccess
[root@ENT-TST-UHAPP08 conf]#
[root@ENT-TST-UHAPP08 conf]#
[root@ENT-TST-UHAPP08 conf]# /etc/init.d/httpd status
httpd (pid 29608) is running...
[root@ENT-TST-UHAPP08 conf]# /etc/init.d/httpd stop
Stopping httpd: [ OK ]
[root@ENT-TST-UHAPP08 conf]# /etc/init.d/httpd status
httpd is stopped
[root@ENT-TST-UHAPP08 conf]# /etc/init.d/httpd start
Starting httpd: [ OK ]
[root@ENT-TST-UHAPP08 conf]# /etc/init.d/httpd status
httpd (pid 30661) is running...
[root@ENT-TST-UHAPP08 conf]#
[root@ENT-TST-UHAPP08 conf]#
[root@ENT-TST-UHAPP08 conf]# pwd
/etc/httpd/conf
[root@ENT-TST-UHAPP08 conf]#
[root@ENT-TST-UHAPP08 conf]#
[root@ENT-TST-UHAPP08 conf]# ll
total 160
-rw-r--r-- 1 root root 34243 Nov  6 23:56 @@
-rw-r--r-- 1 root root 34319 Nov 23 06:49 httpd.conf
-rw-r--r-- 1 root root 34172 Nov  4 10:41 httpd.conf_bkp
-rw-r--r-- 1 root root 34313 Nov 23 06:47 httpd.conf_bkp_231116
-rw-r--r-- 1 root root 13139 Jul 18 2014 magic
[root@ENT-TST-UHAPP08 conf]#
[root@ENT-TST-UHAPP08 conf]#
```

```
[root@ENT-TST-UHAPP08 conf]# ls -lart
total 168
-rw-r--r-- 1 root root 13139 Jul 18 2014 magic
-rw-r--r-- 1 root root 34172 Nov 4 10:41 httpd.conf_bkp
-rw-r--r-- 1 root root 34243 Nov 6 23:56 @@
-rw-r--r-- 1 root root 34313 Nov 23 06:47 httpd.conf_bkp_231116
-rw-r--r-- 1 root root 34319 Nov 23 06:49 httpd.conf
drwxr-xr-x 2 root root 4096 Nov 23 06:49 .
drwxr-xr-x 4 root root 4096 Nov 23 06:50 ..
[root@ENT-TST-UHAPP08 conf]#
[root@ENT-TST-UHAPP08 conf]#
[root@ENT-TST-UHAPP08 conf]# cd ..
[root@ENT-TST-UHAPP08 httpd]# ls -lart
total 32
lrwxrwxrwx 1 root root 13 Sep 25 2015 run -> ../../var/run
lrwxrwxrwx 1 root root 29 Sep 25 2015 modules -> ../../usr/lib64/httpd/modules
lrwxrwxrwx 1 root root 19 Sep 25 2015 logs -> ../../var/log/httpd
drwxr-xr-x 2 root root 4096 Sep 25 2015 conf.d
drwxr-xr-x 106 root root 12288 Nov 18 12:53 ..
lrwxrwxrwx 1 root root 21 Nov 23 06:09 htdocs -> /home/wasadmin/htdocs
drwxr-xr-x 2 root root 4096 Nov 23 06:49 conf
drwxr-xr-x 4 root root 4096 Nov 23 06:50 .
-rw-rw---- 1 apache apache 20 Nov 23 06:50 .htpasswd
[root@ENT-TST-UHAPP08 httpd]#
[root@ENT-TST-UHAPP08 httpd]#
[root@ENT-TST-UHAPP08 httpd]#
[root@ENT-TST-UHAPP08 httpd]#
[root@ENT-TST-UHAPP08 httpd]# cat .htpasswd
user1:Vr9TpubyBg0ow
[root@ENT-TST-UHAPP08 httpd]# cd /home/wasadmin/htdocs
[root@ENT-TST-UHAPP08 htdocs]# ll
total 116
-rw xr-xr-x 1 wasadmin AdminGroup 0 Nov 23 05:59 d2utmpJxZlXq
drwxr-xr-x 2 wasadmin AdminGroup 4096 Nov 23 06:02 DeploymentInstructions_files
-rw-r--r-- 1 wasadmin AdminGroup 10551 Nov 23 06:00 DeploymentInstructions.htm
-rw-r--r-- 1 wasadmin AdminGroup 14821 Nov 22 09:39 DeploymentInstructions.xlsx
drwxr-xr-x 2 wasadmin AdminGroup 4096 Nov 23 05:59 EnvInfo_files
-rw-r--r-- 1 wasadmin AdminGroup 10611 Nov 23 05:59 EnvInfo.htm
-rw-r--r-- 1 wasadmin AdminGroup 59251 Nov 23 05:59 EnvironmentInformation.xlsx
-rw-r--r-- 1 wasadmin AdminGroup 248 Nov 23 05:59 test.html
[root@ENT-TST-UHAPP08 htdocs]#
[root@ENT-TST-UHAPP08 htdocs]#
[root@ENT-TST-UHAPP08 htdocs]#
[root@ENT-TST-UHAPP08 htdocs]# ls -lart
total 128
-rw-r--r-- 1 wasadmin AdminGroup 14821 Nov 22 09:39 DeploymentInstructions.xlsx
drwxr-xr-x 33 wasadmin AdminGroup 4096 Nov 23 05:59 ..
-rw-r--r-- 1 wasadmin AdminGroup 248 Nov 23 05:59 test.html
-rw-r--r-- 1 wasadmin AdminGroup 59251 Nov 23 05:59 EnvironmentInformation.xlsx
-rw-r--r-- 1 wasadmin AdminGroup 10611 Nov 23 05:59 EnvInfo.htm
drwxr-xr-x 2 wasadmin AdminGroup 4096 Nov 23 05:59 EnvInfo_files
-rw xr-xr-x 1 wasadmin AdminGroup 0 Nov 23 05:59 d2utmpJxZlXq
-rw-r--r-- 1 wasadmin AdminGroup 10551 Nov 23 06:00 DeploymentInstructions.htm
```

```

drwxr-xr-x 2 wasadmin AdminGroup 4096 Nov 23 06:02 DeploymentInstructions_files
-rw-r--r-- 1 root  root     98 Nov 23 06:55 .htaccess
drwxr-xr-x 4 wasadmin AdminGroup 4096 Nov 23 06:55 .
[root@ENT-TST-UHAPP08 htdocs]#
[root@ENT-TST-UHAPP08 htdocs]#
[root@ENT-TST-UHAPP08 htdocs]#
[root@ENT-TST-UHAPP08 htdocs]# cat .htaccess
AuthType Basic
AuthName "Restricted Content"
AuthUserFile /etc/httpd/.htpasswd
Require valid-user
[root@ENT-TST-UHAPP08 htdocs]# cd /etc/httpd/
[root@ENT-TST-UHAPP08 httpd]# ll
total 8
drwxr-xr-x 2 root root 4096 Nov 23 06:49 conf
drwxr-xr-x 2 root root 4096 Sep 25 2015 conf.d
lrwxrwxrwx 1 root root  21 Nov 23 06:09 htdocs -> /home/wasadmin/htdocs
lrwxrwxrwx 1 root root  19 Sep 25 2015 logs -> ../../var/log/httpd
lrwxrwxrwx 1 root root  29 Sep 25 2015 modules -> ../../usr/lib64/httpd/modules
lrwxrwxrwx 1 root root  13 Sep 25 2015 run -> ../../var/run
[root@ENT-TST-UHAPP08 httpd]#
[root@ENT-TST-UHAPP08 httpd]#
[root@ENT-TST-UHAPP08 httpd]# cd conf
[root@ENT-TST-UHAPP08 conf]# ll
total 160
-rw-r--r-- 1 root root 34243 Nov  6 23:56 @@
-rw-r--r-- 1 root root 34319 Nov 23 06:49 httpd.conf
-rw-r--r-- 1 root root 34172 Nov  4 10:41 httpd.conf_bkp
-rw-r--r-- 1 root root 34313 Nov 23 06:47 httpd.conf_bkp_231116
-rw-r--r-- 1 root root 13139 Jul 18 2014 magic
[root@ENT-TST-UHAPP08 conf]# cd ..
[root@ENT-TST-UHAPP08 httpd]# ls -lart
total 32
lrwxrwxrwx 1 root  root   13 Sep 25 2015 run -> ../../var/run
lrwxrwxrwx 1 root  root   29 Sep 25 2015 modules -> ../../usr/lib64/httpd/modules
lrwxrwxrwx 1 root  root   19 Sep 25 2015 logs -> ../../var/log/httpd
drwxr-xr-x 2 root  root  4096 Sep 25 2015 conf.d
drwxr-xr-x 106 root root 12288 Nov 18 12:53 ..
lrwxrwxrwx 1 root  root   21 Nov 23 06:09 htdocs -> /home/wasadmin/htdocs
drwxr-xr-x 2 root  root  4096 Nov 23 06:49 conf
drwxr-xr-x 4 root  root  4096 Nov 23 06:50 .
-rw-rw---- 1 apache apache 20 Nov 23 06:50 .htpasswd
[root@ENT-TST-UHAPP08 httpd]#
[root@ENT-TST-UHAPP08 httpd]#
[root@ENT-TST-UHAPP08 httpd]#
[root@ENT-TST-UHAPP08 httpd]# chown root:root /etc/httpd/.htpasswd
[root@ENT-TST-UHAPP08 httpd]# ls -lart
total 32
lrwxrwxrwx 1 root  root   13 Sep 25 2015 run -> ../../var/run
lrwxrwxrwx 1 root  root   29 Sep 25 2015 modules -> ../../usr/lib64/httpd/modules
lrwxrwxrwx 1 root  root   19 Sep 25 2015 logs -> ../../var/log/httpd
drwxr-xr-x 2 root  root  4096 Sep 25 2015 conf.d
drwxr-xr-x 106 root root 12288 Nov 18 12:53 ..

```

```

lrwxrwxrwx 1 root root 21 Nov 23 06:09 htdocs -> /home/wasadmin/htdocs
drwxr-xr-x 2 root root 4096 Nov 23 06:49 conf
drwxr-xr-x 4 root root 4096 Nov 23 06:50 .
-rw-rw---- 1 root root 20 Nov 23 06:50 .htpasswd
[root@ENT-TST-UHAPP08 httpd]#
[root@ENT-TST-UHAPP08 httpd]#
[root@ENT-TST-UHAPP08 httpd]# /etc/init.d/httpd restart
Stopping httpd: [ OK ]
Starting httpd: [ OK ]
[root@ENT-TST-UHAPP08 httpd]# /etc/init.d/httpd status
httpd (pid 30787) is running...
[root@ENT-TST-UHAPP08 httpd]# pwd
/etc/httpd
[root@ENT-TST-UHAPP08 httpd]#
[root@ENT-TST-UHAPP08 httpd]#
[root@ENT-TST-UHAPP08 httpd]#
[root@ENT-TST-UHAPP08 httpd]# ll
total 8
drwxr-xr-x 2 root root 4096 Nov 23 06:49 conf
drwxr-xr-x 2 root root 4096 Sep 25 2015 conf.d
lrwxrwxrwx 1 root root 21 Nov 23 06:09 htdocs -> /home/wasadmin/htdocs
lrwxrwxrwx 1 root root 19 Sep 25 2015 logs -> ../../var/log/httpd
lrwxrwxrwx 1 root root 29 Sep 25 2015 modules -> ../../usr/lib64/httpd/modules
lrwxrwxrwx 1 root root 13 Sep 25 2015 run -> ../../var/run
[root@ENT-TST-UHAPP08 httpd]#
[root@ENT-TST-UHAPP08 httpd]#
[root@ENT-TST-UHAPP08 httpd]#
[root@ENT-TST-UHAPP08 httpd]#
[root@ENT-TST-UHAPP08 httpd]# cd conf
[root@ENT-TST-UHAPP08 conf]# ll
total 160
-rw-r--r-- 1 root root 34243 Nov 6 23:56 @
-rw-r--r-- 1 root root 34319 Nov 23 06:49 httpd.conf
-rw-r--r-- 1 root root 34172 Nov 4 10:41 httpd.conf_bkp
-rw-r--r-- 1 root root 34313 Nov 23 06:47 httpd.conf_bkp_231116
-rw-r--r-- 1 root root 13139 Jul 18 2014 magic
[root@ENT-TST-UHAPP08 conf]# vi httpd.conf
[root@ENT-TST-UHAPP08 conf]#
[root@ENT-TST-UHAPP08 conf]#
[root@ENT-TST-UHAPP08 conf]# /etc/init.d/httpd restart
Stopping httpd: [ OK ]
Starting httpd: [ OK ]
[root@ENT-TST-UHAPP08 conf]# /etc/init.d/httpd status
httpd (pid 30872) is running...
[root@ENT-TST-UHAPP08 conf]#

```

pentaho

Friday, July 28, 2017 7:30 AM

/opt/biserver-ce/pentaho-solutions/system/logs
/opt/biserver-ce/tomcat/logs

TO STOP AND START PENTAHO SERVER:

```
sh /opt/biserver-ce/tomcat/bin/catalina.sh stop
sh /opt/biserver-ce/tomcat/bin/catalina.sh status
sh /opt/biserver-ce/tomcat/bin/catalina.sh stop -force
sh /opt/biserver-ce/tomcat/bin/catalina.sh start
```

scp penri@10.64.65.18:/home/penri/CodeMerge/CCI-files/*.csv .

To Generate CSV files:

Go to - /opt/data-integration

give the following command - sh kitchen.sh [-file:/home/penri/netrics-kjb/j_sit_csv_table_extract.kjb](#) -log:/home/penri/extract.log
CSV files will be generated at /home/penri/CCI-files/

Notepad++

Friday, April 20, 2018 6:03 PM

```
#  
^( [^ ]* ) .  
\1
```

From <<https://superuser.com/questions/800136/how-can-i-delete-everything-after-the-first-column-in-notepad>>

```
# converting column into rows  
Ctrl + A: Selects all.  
Ctrl + J: aligns them in a row.
```

From <<https://superuser.com/questions/598241/transpose-column-to-row>>

tutorials

Monday, October 29, 2018 3:31 PM

SVN:

[SVN Tutorials for Beginners | Version Control Tutorials for DevOps S-1](#)



[SVN Tutorials for Beginners | Version Control | SVN Session 2](#)



Complete linux:

[The Complete Red Hat Linux Course: Beginner to RHCSA!](#)



Cygwin sshd

Monday, March 4, 2019 12:40 PM

```
chmod 400 /etc/ssh_host_ecdsa_key
```

```
cygrunsrv -R sshd
```

```
ssh-host-config -y
```

```
net start sshd
```

<https://x.cygwin.com/docs/ug/using-remote-apps.html>

rtvscan

Monday, March 11, 2019 11:54 AM

/etc/init.d/rtvscand stop

Innovation

Thursday, May 9, 2019 1:07 PM

<https://developer.ibm.com/answers/questions/404515/dockerising-websphere-application-server-nd-85x-or/>

Oracle vm virtualbox

Friday, May 10, 2019 5:28 PM

Installation steps for rhel 8(64) on oracle vm virtualbox:

<https://developers.redhat.com/rhel8/install-rhel8-vbox/>

Vmware work station pro 14

Monday, May 20, 2019 11:18 AM

Serial Keys:

YV54A-2ZW5P-M887Y-UWXNE-QPUXD

VY3R2-0NW0L-H845Q-TDMXT-XQAT0

VC7JR-A0Z97-08EGZ-M4YNV-XVHD0

FC1TU-4RGEQ-084EP-2XQQX-ZGHWA

CU1WA-8HGEN-M815Z-HQP5E-QKADF

AY7D0-FTG44-H846Y-2XPGV-P32T8

From <<https://gist.github.com/gopalindians/6b4c871243ad7c689f83a480673daab6>>

Enabling jmx on mule and IES

Thursday, May 30, 2019 11:14 AM

Add the below lines in wrapper.conf on mule.

```
wrapper.java.additional.X=-Dcom.sun.management.jmxremote  
wrapper.java.additional.X=-Dcom.sun.management.jmxremote.port=1096  
wrapper.java.additional.X=-Dcom.sun.management.jmxremote.authenticate=false  
wrapper.java.additional.X=-Dcom.sun.management.jmxremote.ssl=false  
wrapper.java.additional.X=-Dcom.sun.management.jmxremote.host=10.64.64.232
```

From <<https://support.mulesoft.com/s/article/How-to-enable-JMX-using-wrapper-parameters>>

[Mantri, Lekhak Vishnu (US - Hyderabad):

```
wrapper.java.additional.X=-Dcom.sun.management.jmxremote=true  
wrapper.java.additional.X=-Dcom.sun.management.jmxremote.port=1096  
wrapper.java.additional.X=-Dcom.sun.management.jmxremote.rmi.port=1096  
wrapper.java.additional.X=-Dcom.sun.management.jmxremote.authenticate=false  
wrapper.java.additional.X=-Dcom.sun.management.jmxremote.ssl=false  
wrapper.java.additional.X=-Dcom.sun.management.jmxremote.host=10.64.64.232
```

Add the below line on App dmgr console for all the nodes:

```
-Djavax.management.builder.initial= -Dcom.sun.management.jmxremote  
-Dcom.sun.management.jmxremote.authenticate=false  
-Dcom.sun.management.jmxremote.ssl=false  
-Dcom.sun.management.jmxremote.port=2004  
-Djava.rmi.server.hostname=10.64.65.222
```

TT Tips

Friday, June 21, 2019 11:34 AM

```
#!/bin/sh
foldername=$(date +%m%d%y%H%M)
mkdir /log/archive/$filename

logname=`grep fileName /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/installedApps/ENT-TST-UHAPP06Cell01/HIXMainITR3_APTC.ear/HIXWeb.war/WEB-INF/classes/log4j.properties | awk -F "=" '{print $2}'` 

cd /log
zip /log/archive/$filename.log_`$filename` $logname
> $logname

---

rm -rf /log/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/EngineServer01/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/EngineServer02/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/SIT-HIX-APTC/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/SIT-Perf-HIX/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/wstemp/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/temp/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/wstemp/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/temp/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/logs/dmgr/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/logs/ffdc/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/ffdc/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/nodeagent/*

or

find /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/wstemp -type f -exec sh -c '>{}' \;
find /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/temp -type f -exec sh -c '>{}' \;
find /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/wstemp -type f -exec sh -c '>{}' \;
find /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/temp -type f -exec sh -c '>{}' \;
find /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/logs/dmgr -type f -exec sh -c '>{}' \;
find /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/logs/ffdc -type f -exec sh -c '>{}' \;
find /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/ffdc -type f -exec sh -c '>{}' \;
find /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/ -type f -exec sh -c '>{}' \;

find /home/muleuser/TLS_mule_SITTT4/mule-standalone-3.8.0/logs/ -type f -exec sh -c '>{}' \;

/opt/mule-standalone-3.4.0/logs/ -type f -exec sh -c '>{}' \;
Find /opt/mule-standalone-3.4.0/logs/ -type f -exec sh -c '>{}' \;
/opt/HSRI/svnautomerge/ReleaseBranchCodeBase/
Find /opt/IBM/HSRI/IES-SITCV6/IEAppLogs/ApplicationLogs/IES1 -type f -exec sh -c '>{}' \;
find /opt/inserver6/log/error_logs/20161013/ -type f -exec sh -c '>{}' \;
Find /opt/IBM/HSRI/IES-Branch3/IEAppLogs/ApplicationLogs/IES1 -type f -exec sh -c '>{}' \;
find /opt/IBM/HSRI/UATNT/IES2/IEAppLogs/ApplicationLogs/IES2 -type f -exec sh -c '>{}' \;

find /hix/module_release/mno_dev/ -type f -exec sh -c '>{}' \;
find /hix/module_release/dev/ -type f -exec sh -c '>{}' \;
find /hix/module_release/comdev/ -type f -exec sh -c '>{}' \;
find /hix/module_release/dev3/ -type f -exec sh -c '>{}' \;
find /hix/module_release/dev1/ -type f -exec sh -c '>{}' \;
find /hix/module_release/dev2/ -type f -exec sh -c '>{}' \;

/opt/IBM/HSRI/IES-SITTT4/IEAppLogs/ApplicationLogs/IES1/ -type f -exec sh -c '>{}' \;
find /opt/IBM/WebSphere/WebSphere/AppServer/profiles/AppSrv01/logs/HIX1/ -type f -exec sh -c '>{}' \;
```

```

find /opt/IBM/HSRI/IES-SITCV2/IEAppLogs/ApplicationLogs/IES1 -type f -exec sh -c '{}' \;
find /opt/IBM/HSRI/IES-SITTT1/IEAppLogs/ApplicationLogs/IES1 -type f -exec sh -c '{}' \;
#/opt/HIXEAR/TimeTravel/TimeTravel.jar
#/home/wasadmin/SIT-Perf-HIX_Properties/TimeTravel/TimeTravel.jar

cd /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/wsadmin.sh -f /home/wasadmin/xx.py -lang jython -user wasadmin -password wasadmin;

AdminTask.setJVMProperties(['-nodeName ENT-IR-UHAPPR1Node01 -serverName server1 -bootClasspath [/opt/HIXEAR/TimeTravel.jar ] -verboseModeClass true -
verboseModeGarbageCollection false -verboseModeJNI false -initialHeapSize 1024 -maximumHeapSize 3072 -runHProf false -hprofArguments -debugMode true -debugArgs "-
agentlib:jdwp=transport=dt_socket,server=y,suspend=n,address=7777" -executableJarFileName -genericJvmArguments -disableJIT false'])
AdminConfig.save()

cd /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/stopServer.sh SIT-HIX-APTC -user wasadmin -password wasadmin

sleep 180

cd /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/startServer.sh SIT-HIX-APTC

MNO DEV TT - /opt/HIXEAR/TimeTravel.jar
MNO SIT - /opt/HIXEAR/TimeTravel.jar
SIT2 - /home/wasadmin/server2/TTjar/TimeTravel.jar or /home/wasadmin/TimeTravel/TimeTravel.jar
SIT3 - /opt/HIXEAR/TimeTravel.jar
SIT4 - /opt/NEWSIT4/TimeTravel.jar or /home/wasadmin/server4/TTjar/TimeTravel.jar
UAT01 - /opt/HIXEAR/TimeTravel.jar
Perf01 - /opt/HIXEAR/TimeTravel.jar
dev3 - /opt/HIXEAR/server3/TimeTravel.jar
IR - /opt/HIXEAR/TimeTravel/TimeTravel.jar
DEV1 - /opt/HIXEAR/TimeTravel.jar

SIT TT2 - /opt/IBM/HSRI/HIX-SITTT2/TimeTravelJar/TimeTravel.jar

RIBA-MODEV
rm -rf /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/logs/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/logs/ffdc/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/logs/dmgr/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/wstemp/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/temp/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/wstemp/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/temp/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/Engineservice/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/ffdc/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/HIX-MODEV/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IES-MODEV/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/nodeagent/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv02/logs/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv02/logs/Engineservice/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv02/logs/ffdc/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv02/logs/HIX-MODEV/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv02/logs/IES-MODEV/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv02/logs/nodeagent/*

IR
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/nodeagent/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/EngineServer02/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IR-HIX/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/ffdc/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IR-access/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IR-IE/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/wstemp/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/temp/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/wstemp/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/temp/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/logs/dmgr/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/logs/ffdc/*

```

Disable TT script(UATWT) - type1

Monday, November 13, 2017 2:35 PM

```
# Date Change in UATWT
# Author:  Sai krishna
# Email:   saikrishna5@deloitte.com
# Date:    March 17 2017
#!/bin/bash

if [[ `date +%m/%d/%Y` == ${bamboo.MONTH}/${bamboo.DATE}/${bamboo.YEAR} ]]; then
    ### Date Change in IES ####
    cd /opt/IBM/HSRI/UATWT/IES/CLASSPATH/HSRIProperties/;
    rm -rf calendar.properties;
    echo "date = ${bamboo.MONTH}/${bamboo.DATE}/${bamboo.YEAR}" > calendar.properties;
    echo "#source.date = config" >> calendar.properties;
    echo "source.date = system" >> calendar.properties;
    echo "#source.date = dbms" >> calendar.properties;
    echo "#source.date = aging" >> calendar.properties;
    echo "source.holiday = config" >> calendar.properties;
    echo "#source.holiday = reference" >> calendar.properties;
    cp calendar.properties /opt/IBM/HSRI/UATWT/IES/EnvSpecificProperties/;
    ### Date Change in HIX #####
    cd /opt/IBM/HSRI/UATWT/HIX/properties/;
    rm -f timetravel.properties;
    echo "timetravel_enabled=N" > timetravel.properties;
    echo "#month day year hour min ss" >> timetravel.properties;
    echo "date=${bamboo.MONTH} ${bamboo.DATE} ${bamboo.YEAR} 12 12 12" >> timetravel.properties;
    cp timetravel.properties /opt/IBM/HSRI/UATWT/HIX/EnvSpecificProperties/;
    echo "Removing the variable from BootClassPath from application console"
    /opt/IBM/WebSphere/AppServer/profiles/AppSrv02/bin/wsadmin.sh -f /opt/IBM/HSRI/UATWT/TimeTravel/Script/TT_OFF.py -lang jython -username wasadmin -password wasadmin;
    ### Date Change in CCAP #####
    cd /opt/IBM/HSRI/UATWT/CCAP/CLASSPATH/CCAPEARRProperties/;
    rm -rf calendar.properties;
    echo "date = ${bamboo.MONTH}/${bamboo.DATE}/${bamboo.YEAR}" > calendar.properties;
    echo "#source.date = config" >> calendar.properties;
    echo "source.date = system" >> calendar.properties;
    echo "#source.date = dbms" >> calendar.properties;
    echo "#source.date = aging" >> calendar.properties;
    echo "source.holiday = config" >> calendar.properties;
    echo "#source.holiday = reference" >> calendar.properties;
    cp calendar.properties /opt/IBM/HSRI/UATWT/CCAP/EnvSpecificProperties/;

else
    ### Date Change in IES #####
    cd /opt/IBM/HSRI/UATWT/IES/CLASSPATH/HSRIProperties/;
    rm -rf calendar.properties;
    echo "date = ${bamboo.MONTH}/${bamboo.DATE}/${bamboo.YEAR}" > calendar.properties;
    echo "#source.date = config" >> calendar.properties;
    echo "#source.date = dbms" >> calendar.properties;
    echo "#source.date = system" >> calendar.properties;
    echo "#source.date = aging" >> calendar.properties;
    echo "source.holiday = config" >> calendar.properties;
    echo "#source.holiday = reference" >> calendar.properties;
    cp calendar.properties /opt/IBM/HSRI/UATWT/IES/EnvSpecificProperties/;
    ### Date Change in HIX #####
    cd /opt/IBM/HSRI/UATWT/HIX/properties/;
    rm -f timetravel.properties;
    echo "timetravel_enabled=Y" > timetravel.properties;
    echo "#month day year hour min ss" >> timetravel.properties;
    echo "date=${bamboo.MONTH} ${bamboo.DATE} ${bamboo.YEAR} 12 12 12" >> timetravel.properties;
    cp timetravel.properties /opt/IBM/HSRI/UATWT/HIX/EnvSpecificProperties/;
    echo "Adding the variable into BootClassPath"
    /opt/IBM/WebSphere/AppServer/profiles/AppSrv02/bin/wsadmin.sh -f /opt/IBM/HSRI/UATWT/TimeTravel/Script/TT_ON.py -lang jython -username wasadmin -password wasadmin;
    ### Date Change in CCAP #####
    cd /opt/IBM/HSRI/UATWT/CCAP/CLASSPATH/CCAPEARRProperties/;
    rm -rf calendar.properties;
    echo "date = ${bamboo.MONTH}/${bamboo.DATE}/${bamboo.YEAR}" > calendar.properties;
    echo "#source.date = config" >> calendar.properties;
    echo "#source.date = dbms" >> calendar.properties;
    echo "source.date = system" >> calendar.properties;
    echo "#source.date = aging" >> calendar.properties;
    echo "source.holiday = config" >> calendar.properties;
    echo "#source.holiday = reference" >> calendar.properties;
    cp calendar.properties /opt/IBM/HSRI/UATWT/CCAP/EnvSpecificProperties/;

fi
```

```
### Restarting Servers
cd /opt/IBM/WebSphere/AppServer/profiles/AppSrv02/bin;
./stopServer.sh UATWTIES -username wasadmin -password wasadmin;
./stopServer.sh UATWTHIX -username wasadmin -password wasadmin;
./stopServer.sh UATWTSSP -username wasadmin -password wasadmin;
./stopServer.sh UATWTCCAP -username wasadmin -password wasadmin;
sleep 15
./startServer.sh UATWTIES;
echo ""
./startServer.sh UATWTHIX;
echo ""
./startServer.sh UATWTSSP;
echo ""
./startServer.sh UATWTCCAP;
echo ""
```

TT_OFF.py

Monday, November 13, 2017 2:36 PM

```
AdminConfig.unsetAttributes('{'cells/ENT-UAT-UHAPP08Cell01/nodes/ENT-UAT-UHAPP08Node02/servers/UATWTHIX|server.xml#JavaVirtualMachine_1489437272958}', ['bootClasspath'])
```

```
AdminTask.setJVMProperties('[-nodeName ENT-UAT-UHAPP08Node02 -serverName UATWTHIX -bootClasspath "" -verboseModeClass true -verboseModeGarbageCollection false -verboseModeJNI false -initialHeapSize 4096 -maximumHeapSize 4096 -runHProf false -hprofArguments -debugMode false -debugArgs "-agentlib:jdwp=transport=dt_socket,server=y,suspend=n,address=7777"-executableJarFileName -genericJvmArguments "-Djavax.management.builder.initial=-Dcom.sun.management.jmxremote -Dcom.sun.management.jmxremote.authenticate=false -Dcom.sun.management.jmxremote.ssl=false -Dcom.sun.management.jmxremote.port=7100 -Djava.rmi.server.hostname=10.64.33.54" -disableJIT false]')
```

```
AdminConfig.save()
```

TT_ON.py

Monday, November 13, 2017 2:37 PM

```
AdminTask.setJVMProperties(['-nodeName ENT-UAT-UHAPP08Node02 -serverName UATWTHIX -bootClasspath [/opt/IBM/HSRI/UATWT/TimeTravel/TimeTravelJar/TimeTravel.jar] -verboseModeClass true -verboseModeGarbageCollection false -verboseModeJNI false -initialHeapSize 4096 -maximumHeapSize 4096 -runHProf false -hprofArguments -debugMode false -debugArgs "-agentlib:jdwp=transport=dt_socket,server=y,suspend=n,address=7777"-executableJarFileName -genericJvmArguments "-Djavax.management.builder.initial= -Dcom.sun.management.jmxremote -Dcom.sun.management.jmxremote.authenticate=false -Dcom.sun.management.jmxremote.ssl=false -Dcom.sun.management.jmxremote.port=7100 -Djava.rmi.server.hostname=10.64.33.54"-disableJIT false"]')
AdminConfig.save()
```

Batch TT

Monday, November 13, 2017 2:38 PM

```
#!/bin/bash
```

```
if [[ `date +%m/%d/%Y` == ${bamboo.MONTH}/${bamboo.DATE}/${bamboo.YEAR} ]]; then
    ### Date Change in IES ####
    cd /home/opconbatch/hsri-ies-batch/UATWT/CLASSPATH/HSRIProperties;
    rm -rf calendar.properties;
    echo "date = ${bamboo.MONTH}/${bamboo.DATE}/${bamboo.YEAR}" > calendar.properties;
    echo "#source.date = config" >> calendar.properties;
    echo "source.date = system" >> calendar.propaerties;
    echo "#source.date = dbms" >> calendar.properties;
    echo "#source.date = aging" >> calendar.properties;
    echo "source.holiday = config" >> calendar.properties;
    echo "#source.holiday = reference" >> calendar.properties;
    cp calendar.properties /home/opconbatch/hsri-ies-batch/EnvSpecificProperties/UATWT

else
    ### Date Change in IES ####
    cd /home/opconbatch/hsri-ies-batch/UATWT/CLASSPATH/HSRIProperties;
    rm -rf calendar.properties;
    echo "date = ${bamboo.MONTH}/${bamboo.DATE}/${bamboo.YEAR}" > calendar.properties;
    echo "#source.date = config" >> calendar.properties;
    echo "#source.date = dbms" >> calendar.properties;
    echo "#source.date = system" >> calendar.properties;
    echo "source.date = aging" >> calendar.properties;
    echo "source.holiday = config" >> calendar.properties;
    echo "#source.holiday = reference" >> calendar.properties;
    cp calendar.properties /home/opconbatch/hsri-ies-batch/EnvSpecificProperties/UATWT
fi
```

DB

Monday, November 13, 2017 2:39 PM

```
./home/oracle/UATWT1_DB.env
if [[ `date +%m/%d/%Y` == ${bamboo.MONTH}/${bamboo.DATE}/${bamboo.YEAR} ]]; then
    sqlplus "/as sysdba" <<EOF
    whenever sqlerror exit sql.sqlcode;
    set echo off
    set heading off
    ALTER SYSTEM SET FIXED_DATE=NONE;
    EOF

else
    sqlplus "/as sysdba" <<EOF
    whenever sqlerror exit sql.sqlcode;
    set echo off
    set heading off
    TRUNCATE TABLE IE_APP_MRS_OWNER.FW_PARAMETERS;
    INSERT INTO IE_APP_MRS_OWNER.FW_PARAMETERS (PARM_ID, PARM_NAME, PARM_VALUE, CREATE_USER_ID, UPDATE_USER_ID, CREATE_DT, UPDATE_DT, UNIQUE_TRANS_ID, ARCHIVE_DT)
    VALUES (51, 'APPLICATION_DATE', to_char(to_date('${bamboo.DATE}-${bamboo.MONTH}-${bamboo.YEAR}', 'DD-MM-YYYY'), 'DD-MON-YYYY'), 'DB_PROC', 'USER01', TO_DATE ('10-JAN-12', 'DD-MON-RR'), TO_DATE ('01-JAN-12', 'DD-MON-RR'), 1, TO_DATE ('31-DEC-2999', 'DD-MON-RRR'));
    COMMIT;
    ALTER SYSTEM SET FIXED_DATE='${bamboo.YEAR}-${bamboo.MONTH}-${bamboo.DATE}-00:00:00';
    SELECT parm_value FROM IE_APP_MRS_OWNER.FW_PARAMETERS;
    SELECT SYSDATE FROM DUAL;
    exit;
    EOF
fi
```

FW

Monday, November 13, 2017 2:39 PM

```
. /home/oracle/UATWT1_DB.env
```

```
sqlplus "/as sysdba" <<EOF
whenever sqlerror exit sql.sqlcode;
set echo off
set heading off
```

```
update IE_APP_MRS_OWNER.FW_BATCH_PARAMETER_CONTROL set parameters='${bamboo.MONTH}/${bamboo.DATE}/${bamboo.YEAR}' where job_id='FW-GLOBL-DLY';
commit;
```

```
exit;
EOF
```

email

Monday, November 13, 2017 2:40 PM

```
#!/bin/bash
```

```
rm -rf /home/saikrishna5>Email/UATWT>Email.txt
echo "Hi All" >> /home/saikrishna5>Email/UATWT>Email.txt
echo " " >> /home/saikrishna5>Email/UATWT>Email.txt
echo "Date in UATWT is changed to ${bamboo.MONTH}/${bamboo.DATE}/${bamboo.YEAR}" >> /home/saikrishna5>Email/UATWT>Email.txt
echo " " >> /home/saikrishna5>Email/UATWT>Email.txt
echo "Thanks & Regards" >> /home/saikrishna5>Email/UATWT>Email.txt
echo "Saikrishna Vadlakondas" >> /home/saikrishna5>Email/UATWT>Email.txt

cat /home/saikrishna5>Email/UATWT>Email.txt | mail -s "Date Change in UATWT" USRIUHIPTechnology@deloitte.com usrionsitetestingteam@deloitte.com USIndiaRhodesIslandOffshoreITestingTeam@DELOITTE.com -- -
uwt@uatwtdatechange.uhip.ri.gov;
```

Disable TT script(SITNT) - type2

Wednesday, November 29, 2017 4:30 PM

FW

Wednesday, November 29, 2017 4:30 PM

```
. /home/oracle/UHPTTIE_DB.env
```

```
sqlplus "/as sysdba" <<EOF
whenever sqlerror exit sql.sqlcode;
set echo off
set heading off
```

```
update IE_APP_MRS_OWNER.FW_BATCH_PARAMETER_CONTROL set parameters='${bamboo.MONTH}/${bamboo.DATE}/${bamboo.YEAR}' where job_id='FW-GLOBL-DLY';
commit;
```

```
exit;
EOF
```

DB

Wednesday, November 29, 2017 4:30 PM

```
./home/oracle/UHPTTIE_DB.env

sqlplus "/as sysdba" <<EOF
whenever sqlerror exit sql.sqlcode;
set echo off
set heading off

TRUNCATE TABLE IE_APP_MRS_OWNER.FW_PARAMETERS;

INSERT INTO IE_APP_MRS_OWNER.FW_PARAMETERS (PARM_ID, PARM_NAME, PARM_VALUE, CREATE_USER_ID, UPDATE_USER_ID, CREATE_DT, UPDATE_DT, UNIQUE_TRANS_ID, ARCHIVE_DT)
VALUES (51, 'APPLICATION_DATE', to_char(to_date('${bamboo.DATE}-${bamboo.MONTH}-${bamboo.YEAR}', 'DD-MON-YYYY'), 'DD-MON-YYYY'), 'DB_PROC', 'USER01', TO_DATE ('10-JAN-12', 'DD-MON-RR'), TO_DATE ('01-JAN-12', 'DD-MON-RR'), 1, TO_DATE ('31-DEC-2999', 'DD-MON-RRRR'));

COMMIT;

ALTER SYSTEM SET FIXED_DATE='${bamboo.YEAR}-${bamboo.MONTH}-${bamboo.DATE}00:00:00';

SELECT parm_value FROM IE_APP_MRS_OWNER.FW_PARAMETERS;

SELECT SYSDATE FROM DUAL;

exit;
EOF
```

Batch

Wednesday, November 29, 2017 4:32 PM

```
### Date Change in IES Batch ###
cd /home/opconbatch/hsri-ies-batch/UAT-TT/CLASSPATH/HSRIProperties/;
rm -rf calendar.properties;
echo "date = ${bamboo.MONTH}/${bamboo.DATE}/${bamboo.YEAR}" > calendar.properties;
echo "#source.date = config" >> calendar.properties;
echo "#source.date = dbms" >> calendar.properties;
echo "#source.date = system" >> calendar.properties;
echo "#source.date = aging" >> calendar.properties;
echo "#source.holiday = config" >> calendar.properties;
echo "#source.holiday = reference" >> calendar.properties;
#chmod 777 calendar.properties;
chmod -R 777 /home/opconbatch/hsri-ies-batch/UAT-TT
chmod 711 /home/opconbatch/hsri-ies-batch/UAT-TT/CLASSPATH
cp calendar.properties /home/opconbatch/hsri-ies-batch/EnvSpecificProperties/UAT-TT;
echo "batch date change completed"
```

App

Wednesday, November 29, 2017 4:32 PM

```
### Date Change in IES ###
cd /opt/IBM/HSRI/IES-UATT/CLASSPATH/HSRIProperties/;
rm -rf calendar.properties;
echo "date = ${bamboo.MONTH}/${bamboo.DATE}/${bamboo.YEAR}" > calendar.properties;
echo "#source.date = config" >> calendar.properties;
echo "#source.date = dbms" >> calendar.properties;
echo "#source.date = system" >> calendar.properties;
echo "#source.date = aging" >> calendar.properties;
echo "#source.holiday = config" >> calendar.properties;
echo "#source.holiday = reference" >> calendar.properties;
cp calendar.properties /opt/IBM/HSRI/IES-UATT/EnvSpecificProperties/;

### Date Change in HIX ###
cd /opt/IBM/HSRI/HIX-UATT/properties/;
rm -f timetravel.properties;
echo "timetravel_enabled=Y" > timetravel.properties;
echo "#month day year hour min ss" >> timetravel.properties;
echo "date=${bamboo.MONTH} ${bamboo.DATE} ${bamboo.YEAR} 12 12 12" >> timetravel.properties;
cp timetravel.properties /opt/IBM/HSRI/HIX-UATT/EnvSpecificProperties/;

### Date Change in CCAP ###
cd /opt/IBM/HSRI/CCAPP-UATT/CLASSPATH/CCAPEARRProperties/;
rm -rf calendar.properties;
echo "date = ${bamboo.MONTH}/${bamboo.DATE}/${bamboo.YEAR}" > calendar.properties;
echo "#source.date = config" >> calendar.properties;
echo "#source.date = dbms" >> calendar.properties;
echo "#source.date = system" >> calendar.properties;
echo "#source.date = aging" >> calendar.properties;
echo "#source.holiday = config" >> calendar.properties;
echo "#source.holiday = reference" >> calendar.properties;
chmod 777 calendar.properties;
cp calendar.properties /opt/IBM/HSRI/CCAPP-UATT/EnvSpecificProperties/;

### Restarting Servers
cd /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin;
./stopServer.sh IES -username wasadmin -password wasadmin;
./stopServer.sh HIX1 -username wasadmin -password wasadmin;
./stopServer.sh SSP -username wasadmin -password wasadmin;
./stopServer.sh CCAP -username wasadmin -password wasadmin;
sleep 15
./startServer.sh IES;
echo ""
./startServer.sh HIX1;
echo ""
./startServer.sh SSP;
echo ""
./startServer.sh CCAP;
echo ""
```

Jira

Tuesday, August 27, 2019 1:33 PM

TO get the status of the jira ticket:

```
curl -u spgunupudi:Spring2015 -X GET -H "Content-Type: application/json" --insecure --silent http://10.64.65.211:6070/jira/rest/api/2/issue/UHIPOPS-27044?fields=status 2>&1 | grep -o -P '(?<="name":").*(?=,"id":")'
```

<http://10.64.65.211:6070/jira/rest/api/2/issue/UHIPOPS-27044?fields=issuetype>

<http://10.64.65.211:6070/jira/rest/api/2/issue/UHIPOPS-27044?fields=<fieldname>>

whenever you need to stop and start, please follow below things:

```
# stop jira
    sudo /opt/atlassian7135/jira/bin/stop-jira.sh
# delete plugins and cache
rm -rf /opt/atlassian736/application-data/jira/caches/indexes/plugins/atlassian-subversion-revisions;rm -rf /opt/atlassian736/application-data/jira/plugins/.bundled-plugins;sudo rm -rf /opt/atlassian736/application-data/jira/plugins/osgi-plugins
# start jira
    sudo /opt/atlassian7135/jira/bin/start-jira.sh;tail -f /opt/atlassian7135/jira/logs/catalina.out
# check logs
    tail -500f /opt/atlassian736/jira/logs/catalina.out
```

Commands:

JIRA

```
project = UHIP AND issuetype = "Work Request" AND status in (Open, Reopened, "Ready for Review", "Ready for Test", Rejected, "Development in Progress") AND "Defect Type" in (Security, "Interface / Batch Process", "UI (Browser)", Functional, "Reports & Notices") AND Release in ("Iteration 3", "Iteration 3 (Nov 2013)") AND "Test Phase" in (SIT, E2E) ORDER BY cf[11200] ASC, priority DESC, key ASC
```

cf[13339] = OPA AND cf[13340] = "Access Request" AND fixVersion is not EMPTY

fixVersion = 7.28 AND "Property file change" in ("OPA", online);

Env issues filter:

```
project = RIB_TEST AND Iteration = "Release_7.28(12_13)" AND "Root Cause" = "Valid-Environment Issue"
```

Creating iteration

Tuesday, May 5, 2020 11:46 AM

PFB the steps for creating iteration in JIRA:

- Go to **settings**
- Select **issues**
- Choose **custom fields** option present in the left pane
- In the search box, type **iteration**
- In **iterations** go to **configure**
- Go to the extreme bottom of the **options** menu
- Select **edit option** present at the end of the in the **options** list
- At the end of the page there will be **Add New Custom Field Option**
- Create new iteration in the **add value** text box
- **Add it.**

Important note : Make sure there are no blank spaces in the iteration name.

SOA

Tuesday, December 3, 2019 6:06 PM

https://docs.oracle.com/cd/E28280_01/admin.1111/e10226/toc.htm
[SOA admin guide](#)

cloc

Wednesday, February 12, 2020 12:11 PM

cloc --strip-comments=nc <path>

From <<http://cloc.sourceforge.net/>>

<http://cloc.sourceforge.net/> - useful commands related to cloc
<https://www.tecmint.com/cloc-count-lines-of-code-in-linux/> - commands of cloc

[npanguluri@ENT-DV-UHBLD01 cloc-1.62]\$./cloc /home/npanguluri/testproject/cloc/checkout/WBT-IES
55318 text files.
50678 unique files.
6959 files ignored.

<http://cloc.sourceforge.net> v 1.62 T=378.10 s (128.7 files/s, 39420.7 lines/s)

Language	files	blank	comment	code
Java	34961	1734826	2268008	6932152
HTML	6127	79667	281189	909496
JSP	2711	159020	144446	794865
XML	677	4785	2939	588674
Javascript	2033	82857	69862	443282
CSS	468	23846	3894	305277
Korn Shell	1589	7301	29832	22274
XSD	24	39	194	10145
LESS	4	380	73	2758
SQL	9	7	0	854
PHP	4	21	9	725
XSLT	11	13	6	513
Bourne Shell	11	154	42	282
C#	4	25	22	99
Visualforce Component	8	0	0	69
Perl	2	28	0	64
JSON	1	0	0	36
ASP.Net	2	12	0	27
DOS Batch	1	0	0	11
SUM:	48647	2092981	2800516	10011603

Weblogic

Monday, March 16, 2020 5:16 PM

./startWebLogic.sh > \$DOMAIN_HOME/servers/AdminServer/logs/AdminServer.out 2>&1 &

From <<https://www.middlewareinventory.com/blog/how-to-start-weblogic-command-line/>>

SSL:

/opt/softwares/java/jre/bin/java

```
/opt/softwares/java/jre/bin/keytool -genkey -keyalg RSA -alias selfsigned -keystore identity.jks \
-dname "CN='DEVOPABR01', OU=DEVM, O=DC, L=HYD, ST=Telangana C=IN" \
-storepass password1 -validity 3600 -keysize 2048 -keypass password1
```

```
/opt/softwares/java/jre/bin/keytool -selfcert -v -alias selfsigned -keypass password1 -keystore identity.jks \
-storepass password1 -storetype jks -validity 3600
```

```
/opt/softwares/java/jre/bin/keytool -export -v -alias selfsigned -file "``hostname``-rootCA.der" -keystore identity.jks \
-storepass password1
```

Trust? yes

```
/opt/softwares/java/jre/bin/keytool -import -v -trustcacerts -alias selfsigned -file "``hostname``-rootCA.der" \
-keystore trust.jks -storepass password1 -noprompt
```

/opt/apps/ORACLE/Weblogic/DEVM/user_projects/domains/opa-devm/security/keystore/identity.jks
JKS

password1

/opt/apps/ORACLE/Weblogic/DEVM/user_projects/domains/opa-devm/security/keystore/trust.jks
JKS

Password1

Restart ssl --> click on it in admin console

NodeManager.properties

KeyStores=CustomIdentityAndCustomTrust

CustomIdentityKeystoreType=jks

CustomIdentityKeyStoreFileName=/opt/apps/ORACLE/Weblogic/DEVM/user_projects/domains/opa-devm/security/keystore/identity.jks

CustomIdentityKeyStorePassPhrase=password1

CustomIdentityPrivateKeyPassPhrase=password1

CustomIdentityAlias=selfsigned

CustomTrustKeystoreType=jks

CustomTrustKeyStoreFileName=/opt/apps/ORACLE/Weblogic/DEVM/user_projects/domains/opa-devm/security/keystore/trust.jks

CustomTrustKeyStorePassPhrase=password1

Problem-Statements:

The requirement from the client is to monitor all the systems(DB, APP, OS, Network ... etc) using a single tool and sends out the alerts based upon the requirements though we have multiple monitoring tools for the respective layer.

Monitoring stack that was in-place included below:

Nagios

Zabbix

Innovation Story:

After exploring some of the monitoring tools in the markets, we have finalized to use Splunk which one of the best tool and uses elastic search technology.

Some of the key benefits of the Splunk:

Identify and resolve issues up to 70% faster

Reduces costly escalations by up to 90%

Splunk converts complex logs to visual graphs and reports resulting simplified analysis, reporting and troubleshooting.

No separate database requirements like oracle or SQL as Splunk stores all data in its index.

supports any format and any amount of data.

Simple to implement and scale.

Continually index all of your data in real time.

Automatically discover useful information embedded in your data, so you don't have to identify it yourself.

Search your physical and virtual IT infrastructure for literally anything of interest and get results in seconds.

Save searches and tag useful information, to make your system smarter.

Set up alerts to automate the monitoring of your system for specific recurring events.

Generate analytical reports with interactive charts, graphs, and tables and share them with others.

Share saved searches and reports with fellow Splunk users, and distribute their results to team members and project stakeholders via email.

Pro-actively review your IT systems to head off server downtimes and security incidents before they arise.

Design specialized, information-rich views and dashboards that fit the requirements.

We Started exploring monitoring tools that showed potential in handling integrations with the dashboards that are available with the different monitoring tools as well provide customization, the tool we finalized and started using to propose solution showed potential in integration with the interactive dashboards and provide high level reports for business users.

The tool also showed potential in independently monitoring the network stack and also created visibility to the network of application and their associated connection-performances/health checks. It also provided the EUM(End-User-Management).

Second part of the innovation was we started customizing existing tools that were monitoring the individual application stack by accessing the core and how few routine cleanups can be performed- one of them was we leverage shell scripts that were used in xymon-hobbit to invoke and cleanup if any of the stack were hitting higher thresholds(like OS-health- disk space- garbage)- This also involved in auto-spinning of the memory(Currently we have this kind of implemented in pay-service-use in all cloud providers like AWS-Azure-GCP etc..).

We also started leveraging chatbots where if the user started facing difficult in any of the application stack they were launching requests and the chatbots were helping it to resolve and create incidents in the system where it was creating and also self-healing in case of any triggered thresholds it found itself-NLP-AI Bots.

The Tool that was explored and proposed to the client had almost all types of monitoring capabilities available in space of :

Application Servers(Tomcat,Websphere,Weblogic,Geronimo etc...)

ERP(Microsoft Dynamics,SAP,siebel,Oracle EBS etc..)

Services(Apache Spark, Hadoop, LDAP,Ping,Zookeeper,AD etc..)

Middleware/Portal(Apache Kafka, Oracle Tuxedo, RabbitMQ,Websphere MQ etc..)

Database Servers

Mail Servers

CloudApps(Amazon,Azure,Openstack etc..)

Web Servers/Services(ADManager, Apache, Elastic,IIS,Nginix,WUE,MEOpManger etc..)

Virtulization (Docker,Hyper-V,VCenter etc..)

It also had capabilities to leverage APM Insights there are other integration capabilities that it can provide accross all the layers.

Broadcom solutioning - questionnaire

Tuesday, February 25, 2020 1:33 PM

existing ci/CD flow?

how many apps and its topology

code flow

release managemnet process and freqency

how tier1stack inter connected now

scrum waterfall agile

quals to support capability

what is the requiremnet from us?

do we have to support the same or do we need to come up with any improvements or revamp

spectrum system

UIM systems

GCP

Friday, October 12, 2018 1:12 PM

External Ip of VM1 on GCP -

<https://console.cloud.google.com>

35.190.141.227

Installing java on linux:

yum install java-1.7.0-openjdk-devel

From <https://access.redhat.com/documentation/en-us/jboss_enterprise_application_platform/6/html/installation_guide/install_openjdk_on_red_hat_enterprise_linux>

One of the ways: failed

Installing vnc, enabling firewalls and port

[Google Cloud Tutorial - VNC to Linux VM](#)



To install desktop:

yum groupinstall 'Server with GUI'

From <<https://linuxconfig.org/install-gnome-gui-on-rhel-7-linux-server>>

Created one more user

Npanguluri/nagap@123

2nd way:

Second try for vnc on gcp with new box

Monday, October 15, 2018 10:02 AM

[How To Install and Configure VNC Remote Access for the GNOME Desktop on CentOS 7](#)



Oracle installation:

[How to install Oracle 11g on Linux](#)



Notes in the below link for the above video:

<https://oracle-base.com/articles/11g/oracle-db-11gr2-installation-on-oracle-linux-6>

<https://blogs.oracle.com/linux/oracle-rdbms-server-11gr2-pre-install-rpm-for-oracle-linux-6-has-been-released>

To check if the package is installed or not:

Rpm -qa | grep -i <packagename.rpm>

To install a package using a rpm:

Rpm -ivh <packagename.rpm>

To enable setev:

<https://kerneltalks.com/troubleshooting/setenv-command-not-found/>

To enable dos2unix:

<https://www.linuxquestions.org/questions/linux-software-2/dos2unix-command-not-found-820134/>

Xhost issues:

<https://community.oracle.com/thread/4171332>

<https://community.oracle.com/thread/212624>

Installing splunk on GCP

Thursday, February 28, 2019 7:55 AM

Download splunk rpm from below link:

<http://download.splunk.com/products/splunk/releases/6.2.3/splunk/linux/splunk-6.2.3-264376.i386.rpm>

From <<https://answers.splunk.com/answers/89471/use-wget-to-download-splunk.html>>

Copy the rpm file to gcp linux server.

Exchnage the keys and login through winscp to copy file from local to gcp linux . (<https://cloud.google.com/compute/docs/instances/connecting-advanced#thirdpartytools>)

<https://35.200.182.127/>

Azure dash borad:

Sing in(microsoft linked gmail account) :
Nagababu.panguluri@gmail.com

Software1

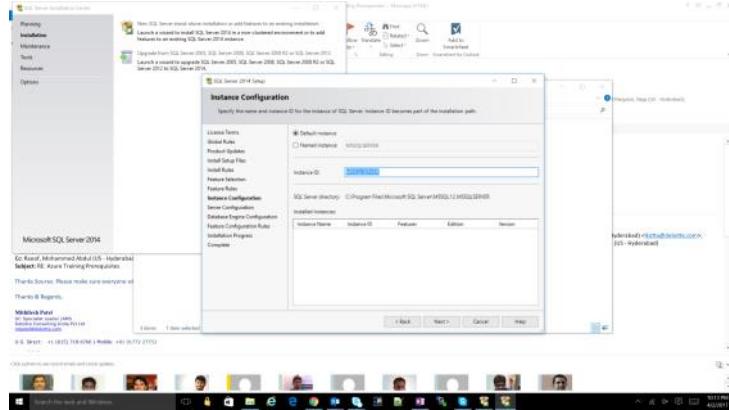
<https://portal.azure.com/#dashboard/private/c29a7ee4-b2b8-4fed-a33a-250d882be00c>

#####
Sql for azure:

C:\Azure\sql server\64bit\SQLEXPR_x64_ENU\ - default path

Default instance id:

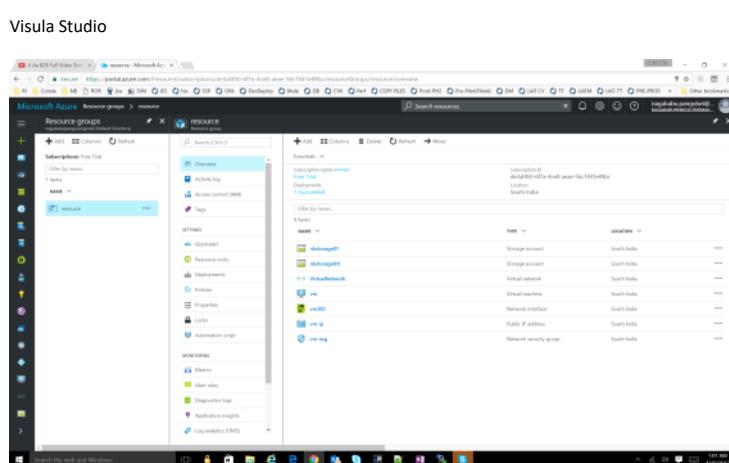
MSSQLSERVER



C:\Azure\sql server\64bit\SQLManagementStudio_x64_ENU\

sqllocaldb.msi - done

#####
Visula Studio



Azure

Friday, August 18, 2017 12:24 PM

URL's:

New:

<https://portal.azure.com/>

Classic:

<https://manage.windowsazure.com>

AWS

Friday, August 18, 2017 12:59 PM

<https://console.aws.amazon.com/console/home>

Creating a new instance under free tier:

The screenshot shows the AWS EC2 Management Console. The left sidebar contains links for EC2 Dashboard, Events, Tags, Reports, Limits, Instances, Launch Templates, Spot Requests, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images, AMIs, and Bundle Tasks. The main content area displays the following statistics: 0 Running Instances, 0 Dedicated Hosts, 0 Volumes, 0 Key Pairs, 0 Placement Groups, 0 Elastic IPs, 0 Snapshots, 0 Load Balancers, and 1 Security Groups. Below this, a 'Create Instance' section features a prominent 'Launch Instance' button. To the right, there are three columns: 'Account Attributes' (listing Supported Platforms, VPC, Default VPC, and Resource ID length management), 'Additional Information' (listing Getting Started Guide, Documentation, All EC2 Resources, Forums, Pricing, and Contact Us), and 'AWS Marketplace' (listing Barracuda CloudGen Firewall for AWS - PAYG by Barracuda Networks, Inc., with a rating of 4.5 stars). The bottom of the screen shows the Windows taskbar with various pinned icons.

Click on Launch Instance under EC2 Dashboard.

The screenshot shows the 'Launch instance wizard | EC2 Management Console'. The top navigation bar includes links for RI, Console, NB, ROR, BITCOIN, udemy, Jira, SVN, 30, Splunk, SVNhooks, GuestNet, Air Projector by qra..., TIME, Sonar, envinfo, nb198421, Mumbai, Support, Feedback, English (US), and a date/time stamp of 7/23/2019 at 11:12 AM. The main content area is titled 'Step 1: Choose an Amazon Machine Image (AMI)'. It displays a search bar with the placeholder 'Search for an AMI by entering a search term e.g. "Windows"'. Below it, a table lists three AMI options: 1. Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-0d2692b6acea720e6 (Free tier eligible, 64-bit (x86)). 2. Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type - ami-0b99c7725b9484f9e (Free tier eligible, 64-bit (x86)). 3. Red Hat Enterprise Linux 8 (HVM), SSD Volume Type - ami-0a74bfeb190bd404f (Free tier eligible, 64-bit (x86)). Each row has a 'Select' button. The left sidebar has a 'Quick Start' heading with links for My AMIs, AWS Marketplace, Community AMIs, and Free tier only.



Select the OS(In this case I am selecting Red hat).

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	General purpose	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.xlarge	4	16	EBS only	-	Moderate	Yes
<input type="checkbox"/>	General purpose	t2.2xlarge	8	32	EBS only	-	Moderate	Yes



Select t2.micro as it is in free tier eligible. And then click on "Next:Configure instance Details".

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances	1	Launch into Auto Scaling Group
Purchasing option	<input type="checkbox"/> Request Spot Instances	
Network	vpc-f486b79c (default)	<input type="checkbox"/> Create new VPC
Subnet	subnet-d5d4abbd Default in ap-south-1a 4091 IP Addresses available	<input type="checkbox"/> Create new subnet
Auto-assign Public IP	Use subnet setting (Enable)	
Placement group	<input type="checkbox"/> Add instance to placement group	
Capacity Reservation	Open	<input type="checkbox"/> Create new Capacity Reservation
IAM role	None	<input type="checkbox"/> Create new IAM role
Shutdown behavior	Stop	
Enable termination protection	<input type="checkbox"/> Protect against accidental termination	
Monitoring	<input type="checkbox"/> Enable CloudWatch detailed monitoring	



Leave everything as default for now and click on "Next: Add Storage"

A screenshot of the AWS EC2 instance launch wizard, specifically Step 4: Add Storage. The page shows a table for adding storage volumes. A new volume row is being added, with 'Root' as the Volume Type, '/dev/sda1' as the Device, and 'snap-0443d84c4d094af1a' as the Snapshot. The Size is set to 10 GiB, and the Volume Type is set to General Purpose SSD (gp2). Other columns include IOPS (100 / 3000), Throughput (N/A), Delete on Termination (unchecked), and Encryption (Not Encrypted). A note at the bottom states: "Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. Learn more about free usage tier eligibility and usage restrictions." Navigation links at the top include: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage (highlighted), 5. Add Tags, 6. Configure Security Group, 7. Review.

Leave everything as default and click on "Next: Add Tags"



Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver.

A copy of a tag can be applied to volumes, instances or both.

Tags will be applied to all instances and volumes. [Learn more about tagging your Amazon EC2 resources.](#)

Key	(128 characters maximum)	Value	(256 characters maximum)	Instances	Volumes
This resource currently has no tags					

Choose the Add tag button or click to add a Name tag.
Make sure your IAM policy includes permissions to create tags.

Add Tag (Up to 50 tags maximum)

Cancel Previous Review and Launch Next: Configure Security Group

Click on Add Tag.

Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver.

A copy of a tag can be applied to volumes, instances or both.

Tags will be applied to all instances and volumes. [Learn more about tagging your Amazon EC2 resources.](#)

Key	(128 characters maximum)	Value	(256 characters maximum)	Instances	Volumes
Name		Linux1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Add another tag (Up to 50 tags maximum)

Cancel Previous Review and Launch Next: Configure Security Group

Fill the Key and Values.(Like in the above screenshot) and click on "Next: Configure Security Group"

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group:

- Create a new security group
- Select an existing security group

Security group name:

Description:

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	Custom	0.0.0.0/0 e.g. SSH for Admin Desktop

Add Rule

Warning
Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

[Cancel](#) [Previous](#) [Review and Launch](#)

You can create a new security group and or you can use the default one by selecting the "Selecting the existing group".

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group:

- Create a new security group
- Select an existing security group

Security Group ID	Name	Description	Actions
sg-bcbd54d3	default	default VPC security group	Copy to new

Inbound rules for sg-bcbd54d3 (Selected security groups: sg-bcbd54d3)

Type	Protocol	Port Range	Source	Description
All traffic	All	All	sg-bcbd54d3 (default)	

[Cancel](#) [Previous](#) [Review and Launch](#)

Feedback English (US) © 2008 - 2019, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved. Privacy Policy Terms of Use 11:25 AM 7/23/2019

Selected the default security group from the list and click on "Review and Launch"

The screenshot shows the AWS Launch Instance Wizard at Step 7: Review Instance Launch. The configuration is as follows:

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	Variable	1	1	EBS only	-	Low to Moderate

Security Groups:

Security Group ID	Name	Description
sg-bcbd54d3	default	default VPC security group

All selected security groups inbound rules:

Type	Protocol	Port Range	Source	Description
All traffic	All	All	sg-bcbd54d3 (default)	

Launch Options:

- Instance Details (Edit instance details)
- Storage (Edit storage)
- Tags (Edit tags)

Buttons: Cancel, Previous, Launch, Define key pair and launch.

Verify all the details and click on "Launch"

Now create new key pair and download the pem file.

Logging to aws wc2 instance form winscp and putty

Tuesday, July 23, 2019 11:30 AM

AWS exam code

Monday, October 14, 2019 5:39 PM

Aws solution architect :
b1457520-c95f-4070-bec9-308dcb55bf10

Xvoucher :
AWW1143F4950

<https://www.aws.training/Certification>

GCP

Wednesday, February 27, 2019 9:48 PM

OSSEC

Friday, October 27, 2017 10:09 PM

<https://ossec.github.io/>

Follow below link to install ossec on a linux bix.

<http://parthicloud.com/ossec-agent-installation-in-linux-step-by-step/>

<http://ossec-docs.readthedocs.io/en/latest/manual/installation/>

First try

Wednesday, November 8, 2017 3:58 PM

Failed:

```
[pthadur@ent-tst-uhdat06 ~]$ cd /home/pthadur
[pthadur@ent-tst-uhdat06 ~]$ ls
mount ossec-hids-2.9.2.tar.gz
[pthadur@ent-tst-uhdat06 ~]$ tar xf ossec-hids-2.9.2.tar.gz
[pthadur@ent-tst-uhdat06 ~]$ ls
mount ossec-hids-2.9.2 ossec-hids-2.9.2.tar.gz
[pthadur@ent-tst-uhdat06 ~]$ cd ossec-hids-2.9.2
[pthadur@ent-tst-uhdat06 ossec-hids-2.9.2]$ ll
total 116
drwx----- 4 pthadur AdminGroup 4096 Aug 9 08:15 active-response
-rw----- 1 pthadur AdminGroup 583 Aug 9 08:15 BUGS
-rw----- 1 pthadur AdminGroup 7500 Aug 9 08:15 CHANGELOG
-rw----- 1 pthadur AdminGroup 310 Aug 9 08:15 CONFIG
drwx----- 7 pthadur AdminGroup 4096 Aug 9 08:15 contrib
-rw----- 1 pthadur AdminGroup 4259 Aug 9 08:15 CONTRIBUTORS
drwx----- 4 pthadur AdminGroup 4096 Aug 9 08:15 doc
drwx----- 4 pthadur AdminGroup 4096 Aug 9 08:15 etc
-rw----- 1 pthadur AdminGroup 1850 Aug 9 08:15 INSTALL
-rwx----- 1 pthadur AdminGroup 33000 Aug 9 08:15 install.sh
-rw----- 1 pthadur AdminGroup 24710 Aug 9 08:15 LICENSE
-rw----- 1 pthadur AdminGroup 2193 Aug 9 08:15 README.md
drwx----- 32 pthadur AdminGroup 4096 Aug 9 08:15 src
[pthadur@ent-tst-uhdat06 ossec-hids-2.9.2]$ ./install.sh
```

```
** Para instalação em português, escolha [br].
** 要使用中文进行安装,请选择 [cn].
** Für eine deutsche Installation wählen Sie [de].
** Για εγκατάσταση στα Ελληνικά, επιλέξτε [el].
** For installation in English, choose [en].
** Para instalar en Español , eliga [es].
** Pour une installation en français, choisissez [fr]
** A Magyar nyelvű telepítéshez válassza [hu].
** Per l'installazione in Italiano, scegli [it].
** 日本語でインストールします。選択して下さい。 [jp].
** Voor installatie in het Nederlands, kies [nl].
** Aby instalować w języku Polskim, wybierz [pl].
** Для инструкций по установке на русском ,введите [ru].
** Za instalaciju na srpskom, izaberi [sr].
** Türkçe kurulum için seçin [tr].
(en;br;/cn;/de;/el;/es;/fr;/hu;/it;/jp;/nl;/pl;/ru;/sr;/tr) [en]: en
```

Error 0x2.

You must be root to use this script.

```
[pthadur@ent-tst-uhdat06 ossec-hids-2.9.2]$ cd ..
[pthadur@ent-tst-uhdat06 ~]$ chmod -R 777 ossec-hids-2.9.2
[pthadur@ent-tst-uhdat06 ~]$ cd ossec-hids-2.9.2
[pthadur@ent-tst-uhdat06 ossec-hids-2.9.2]$ ll
total 116
drwxrwxrwx 4 pthadur AdminGroup 4096 Aug 9 08:15 active-response
-rw-rwxrwx 1 pthadur AdminGroup 583 Aug 9 08:15 BUGS
-rw-rwxrwx 1 pthadur AdminGroup 7500 Aug 9 08:15 CHANGELOG
-rw-rwxrwx 1 pthadur AdminGroup 310 Aug 9 08:15 CONFIG
drwxrwxrwx 7 pthadur AdminGroup 4096 Aug 9 08:15 contrib
-rw-rwxrwx 1 pthadur AdminGroup 4259 Aug 9 08:15 CONTRIBUTORS
drwxrwxrwx 4 pthadur AdminGroup 4096 Aug 9 08:15 doc
drwxrwxrwx 4 pthadur AdminGroup 4096 Aug 9 08:15 etc
-rw-rwxrwx 1 pthadur AdminGroup 1850 Aug 9 08:15 INSTALL
-rwxrwxrwx 1 pthadur AdminGroup 33000 Aug 9 08:15 install.sh
-rw-rwxrwx 1 pthadur AdminGroup 24710 Aug 9 08:15 LICENSE
-rwxrwxrwx 1 pthadur AdminGroup 2193 Aug 9 08:15 README.md
drwxrwxrwx 32 pthadur AdminGroup 4096 Aug 9 08:15 src
[pthadur@ent-tst-uhdat06 ossec-hids-2.9.2]$ ./install.sh
```

```
** Para instalação em português, escolha [br].
** 要使用中文进行安装,请选择 [cn].
** Für eine deutsche Installation wählen Sie [de].
** Για εγκατάσταση στα Ελληνικά, επιλέξτε [el].
** For installation in English, choose [en].
** Para instalar en Español , eliga [es].
** Pour une installation en français, choisissez [fr]
** A Magyar nyelvű telepítéshez válassza [hu].
** Per l'installazione in Italiano, scegli [it].
** 日本語でインストールします。選択して下さい。 [jp].
** Voor installatie in het Nederlands, kies [nl].
** Aby instalować w języku Polskim, wybierz [pl].
** Для инструкций по установке на русском ,введите [ru].
** Za instalaciju na srpskom, izaberi [sr].
** Türkçe kurulum için seçin [tr].
(en;br;/cn;/de;/el;/es;/fr;/hu;/it;/jp;/nl;/pl;/ru;/sr;/tr) [en]: en
```

Error 0x2.

You must be root to use this script.

```
[pthadur@ent-tst-uhdat06 ossec-hids-2.9.2]$ sudo -s
[sudo] password for pthadur:
```

```
[root@ent-tst-uhdat06 ossec-hids-2.9.2]# pwd
/home/pthadur/ossec-hids-2.9.2
[root@ent-tst-uhdat06 ossec-hids-2.9.2]# ./install.sh

** Para instalação em português, escolha [br].
** 要使用中文进行安装, 请选择 [cn].
** Für eine deutsche Installation wählen Sie [de].
** Για εγκατάσταση στα Ελληνικά, επιλέξτε [el].
** For installation in English, choose [en].
** Para instalar en Español , eliga [es].
** Pour une installation en français, choisissez [fr]
** A Magyar nyelvű telepítéshez válassza [hu].
** Per l'installazione in Italiano, scegli [it].
** 日本語でインストールします。選択して下さい。[jp].
** Voor installatie in het Nederlands, kies [nl].
** Aby instalować w języku Polskim, wybierz [pl].
** Для инсталляций по установке на русском ,введите [ru].
** Za instalaciju na srpskom, izaberite [sr].
** Türkçe kurulum için seçin [tr].
(en/cn/de/el/es/fr/hu/it/jp/nl/pl/ru/sr/tr) [en]: en
OSSEC HIDS v2.9.2 Installation Script - http://www.ossec.net
```

You are about to start the installation process of the OSSEC HIDS.
You must have a C compiler pre-installed in your system.

- System: Linux ent-tst-uhdat06.uhip.ri.gov 2.6.18-419.el5
- User: root
- Host: ent-tst-uhdat06.uhip.ri.gov

-- Press ENTER to continue or Ctrl-C to abort. --

1- What kind of installation do you want (server, agent, local, hybrid or help)? server

- Server installation chosen.

2- Setting up the installation environment.

- Choose where to install the OSSEC HIDS [/var/ossec]: /home/pthadur
- Installation will be made at /home/pthadur .
- The installation directory already exists. Should I delete it? (y/n) [y]: n

3- Configuring the OSSEC HIDS.

- 3.1- Do you want e-mail notification? (y/n) [y]: y
- What's your e-mail address? npanguluri@deloitte.com
- We found your SMTP server as: mx1.deloitte.ipphmx.com.
- Do you want to use it? (y/n) [y]: y
- Using SMTP server: mx1.deloitte.ipphmx.com.

3.2- Do you want to run the integrity check daemon? (y/n) [y]: y

- Running syscheck (integrity check daemon).

3.3- Do you want to run the rootkit detection engine? (y/n) [y]: y

- Running rootcheck (rootkit detection).

strings: '/usr/bin/mail': No such file

- 3.4- Active response allows you to execute a specific command based on the events received. For example, you can block an IP address or disable access for a specific user.
- More information at: <http://www.ossec.net/en/manual.html#active-response>

- Do you want to enable active response? (y/n) [y]: y

- Active response enabled.

- By default, we can enable the host-deny and the firewall-drop responses. The first one will add a host to the /etc/hosts.deny and the second one will block the host on iptables (if linux) or on ipfilter (if Solaris, FreeBSD or NetBSD).
- They can be used to stop SSHD brute force scans, portscans and some other forms of attacks. You can also add them to block on snort events, for example.

- Do you want to enable the firewall-drop response? (y/n) [y]: y

- firewall-drop enabled (local) for levels >= 6

- Default white list for the active response:
- 192.168.103.10
- 192.168.103.11

- Do you want to add more IPs to the white list? (y/n) [n]: n

3.5- Do you want to enable remote syslog (port 514 udp)? (y/n) [y]: y

- Remote syslog enabled.

3.6- Setting the configuration to analyze the following logs:

-- /var/log/messages
-- /var/log/secure
-- /var/log/maillog

- If you want to monitor any other file, just change
the ossec.conf and add a new localfile entry.
Any questions about the configuration can be answered
by visiting us online at <http://www.ossec.net>.

--- Press ENTER to continue ---

5- Installing the system

- Running the Makefile
CC external/cJSON/cJSON.o
external/cJSON/cJSON.c:596:2: warning: no newline at end of file
LINK libcJSON.a
RANLIB libcJSON.a
cd external/zlib-1.2.8/ && ./configure && make libz.a
Checking for gcc...
Checking for shared library support...
Building shared library libz.so.1.2.8 with gcc.
Checking for off64_t... Yes.
Checking for fseeko... Yes.
Checking for strerror... Yes.
Checking for unistd.h... Yes.
Checking for stdarg.h... Yes.
Checking whether to use vs[n]printf() or s[n]printf()... using vs[n]printf().
Checking for vsnprintf() in stdio.h... Yes.
Checking for return value of vsnprintf()... Yes.
Checking for attribute(visibility) support... Yes.
make[1]: Entering directory '/home/pthadur/ossec-hids-2.9.2/src/external/zlib-1.2.8'
gcc -O3 -D_LARGEFILE64_SOURCE=1 -DHAVE_HIDDEN -c -o adler32.o adler32.c
gcc -O3 -D_LARGEFILE64_SOURCE=1 -DHAVE_HIDDEN -c -o crc32.o crc32.c
gcc -O3 -D_LARGEFILE64_SOURCE=1 -DHAVE_HIDDEN -c -o deflate.o deflate.c
gcc -O3 -D_LARGEFILE64_SOURCE=1 -DHAVE_HIDDEN -c -o infback.o infback.c
gcc -O3 -D_LARGEFILE64_SOURCE=1 -DHAVE_HIDDEN -c -o inffast.o inffast.c
gcc -O3 -D_LARGEFILE64_SOURCE=1 -DHAVE_HIDDEN -c -o inflate.o inflate.c
gcc -O3 -D_LARGEFILE64_SOURCE=1 -DHAVE_HIDDEN -c -o inftrees.o inftrees.c
gcc -O3 -D_LARGEFILE64_SOURCE=1 -DHAVE_HIDDEN -c -o trees.o trees.c
gcc -O3 -D_LARGEFILE64_SOURCE=1 -DHAVE_HIDDEN -c -o zutil.o zutil.c
gcc -O3 -D_LARGEFILE64_SOURCE=1 -DHAVE_HIDDEN -c -o compress.o compress.c
gcc -O3 -D_LARGEFILE64_SOURCE=1 -DHAVE_HIDDEN -c -o uncompr.o uncompr.c
gcc -O3 -D_LARGEFILE64_SOURCE=1 -DHAVE_HIDDEN -c -o gzclose.o gzclose.c
gcc -O3 -D_LARGEFILE64_SOURCE=1 -DHAVE_HIDDEN -c -o zlib.o zlib.c
gcc -O3 -D_LARGEFILE64_SOURCE=1 -DHAVE_HIDDEN -c -o gread.o gread.c
gcc -O3 -D_LARGEFILE64_SOURCE=1 -DHAVE_HIDDEN -c -o gwrite.o gwrite.c
ar rc libz.a adler32.o crc32.o deflate.o infback.o inflate.o inftrees.o trees.o zutil.o compress.o uncompr.o gzclose.o zlib.o gread.o gwrite.o
make[1]: Leaving directory '/home/pthadur/ossec-hids-2.9.2/src/external/zlib-1.2.8'
cd external/lua/ && make posix
make[1]: Entering directory '/home/pthadur/ossec-hids-2.9.2/src/external/lua-5.2.3'
cd src && make posix
make[2]: Entering directory '/home/pthadur/ossec-hids-2.9.2/src/external/lua-5.2.3/src'
make all SYSCFLAGS="-DLUA_USE_POSIX"
make[3]: Entering directory '/home/pthadur/ossec-hids-2.9.2/src/external/lua-5.2.3/src'
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o lapi.o lapi.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o lcode.o lcode.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o lctype.o lctype.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o ldebug.o ldebug.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o ldo.o ldo.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o ldump.o ldump.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o lfunc.o lfunc.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o lgc.o lgc.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o lex.o lex.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o lmem.o lmem.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o lobject.o lobject.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o lopcodes.o lopcodes.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o lparser.o lparser.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o lstate.o lstate.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o lstring.o lstring.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -oitable.o itable.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o ltm.o ltm.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o lundump.o lundump.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o lvm.o lvm.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o lzio.o lzio.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o lauxlib.o lauxlib.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o lbaselib.o lbaselib.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o lbitlib.o lbitlib.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o lcorolib.o lcorolib.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o ldblib.o ldblib.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o liolib.o liolib.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o imathlib.o imathlib.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o loslib.o loslib.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o lstrlib.o lstrlib.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o itablib.o itablib.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o loadlib.o loadlib.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX="/home/pthadur" -DLUA_USE_POSIX -c -o linit.o linit.c

```

ar rcu liblua.a lapi.o lcode.o lctype.o ldebug.o ldo.o ldump.o lfunc.o lgc.o llex.o lmem.o lobject.o lopcodes.o lparser.o lstate.o lstring.o ltable.o ltm.o lundump.o lvm.o lzio.o lauxlib.o lbaselib.o lbitlib.o lcorolib.o ldblib.o liolib.o
Imathlib.o loslib.o lstrlib.o Itablib.o loadlib.o limit.o
ranlib liblua.a
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX=/home/pthadur -DLUA_USE_POSIX -c -o lua.o lua.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX=/home/pthadur -DLUA_USE_POSIX -c -o luac.o luac.c
cc -O2 -Wall -DLUA_COMPAT_ALL -DPREFIX=/home/pthadur -DLUA_USE_POSIX -c -o ossec.o ossec.c
make[3]: Leaving directory '/home/pthadur/ossec-hids-2.9.2/src/external/lua-5.2.3/src'
make[2]: Leaving directory '/home/pthadur/ossec-hids-2.9.2/src/external/lua-5.2.3/src'
make[1]: Leaving directory '/home/pthadur/ossec-hids-2.9.2/src/external/lua-5.2.3'
CC os_maid/config.o
CC os_maid/maild.o
CC os_maid/mail_list.o
CC os_maid/os_maid_client.o
CC os_maid/sendcustomemail.o
CC os_maid/sendmail.o
CC os_crypto/blowfish/bf_op.o
CC os_crypto/blowfish/bf_skey.o
CC os_crypto/blowfish/bf_enc.o
CC os_crypto/md5/md5.o
CC os_crypto/md5/md5_op.o
CC os_crypto/sha1/sha1_op.o
CC os_zlib/os_zlib.o
LINK os_zlib.a
RANLIB os_zlib.a
CC os_crypto/shared/keys.o
CC os_crypto/shared/msgs.o
CC os_crypto/md5_sha1/md5_sha1_op.o
LINK os_crypto.a
RANLIB os_crypto.a
CC config/active-response.o
CC config/agentlessd-config.o
CC config/alerts-config.o
CC config/client-config.o
CC config/config.o
CC config/csyslogd-config.o
CC config/dbd-config.o
CC config/global-alerts-config.o
CC config/global-config.o
CC config/localfile-config.o
CC config/remote-config.o
CC config/reports-config.o
CC config/rootcheck-config.o
CC config/rules-config.o
CC config/syscheck-config.o
LINK config.a
RANLIB config.a
CC shared/agent_op.o
CC shared/custom_output_search_replace.o
CC shared/debug_op.o
CC shared/dirtree_op.o
CC shared/file_op.o
CC shared/file-queue.o
CC shared/fs_op.o
CC shared/hash_op.o
CC shared/help_op.o
CC shared/list_op.o
CC shared/math_op.o
CC shared/mem_op.o
CC shared/mq_op.o
CC shared/privep_op.o
CC shared/pthreads_op.o
CC shared/randombytes.o
CC shared/read-agents.o
CC shared/read-alert.o
CC shared/regex_op.o
CC shared/report_op.o
CC shared/rules_op.o
CC shared/sig_op.o
shared/sig_op.c: In function 'HandleSIG':
shared/sig_op.c:29: warning: implicit declaration of function 'strsignal'
shared/sig_op.c:29: warning: format '%s' expects type 'char *', but argument 4 has type 'int'
CC shared/store_op.o
CC shared/string_op.o
CC shared/validate_op.o
CC shared/wait_op.o
LINK shared.a
RANLIB shared.a
CC os_net/os_net.o
LINK os_net.a
RANLIB os_net.a
CC os_regex/os_match.o
CC os_regex/os_match_compile.o
CC os_regex/os_match_execute.o
CC os_regex/os_match_free_pattern.o
CC os_regex/os_regex.o
CC os_regex/os_regex_compile.o
CC os_regex/os_regex_execute.o
CC os_regex/os_regex_free_pattern.o
CC os_regex/os_regex_free_substrings.o
CC os_regex/os_regex_maps.o
CC os_regex/os_regex_match.o
CC os_regex/os_regex_startswith.o
CC os_regex/os_regex_strbreak.o

```

```
CC os_regex/os_regex_str.o
LINK os_regex.a
RANLIB os_regex.a
CC os_xml/os_xml_access.o
CC os_xml/os_xml.o
CC os_xml/os_xml_node_access.o
CC os_xml/os_xml_variables.o
CC os_xml/os_xml_writer.o
LINK os_xml.a
RANLIB os_xml.a
CC ossec-maild
CC os_csyslogd/alert.o
CC os_csyslogd/config.o
CC os_csyslogd/csyslogd.o
CC os_csyslogd/main.o
CC ossec-csyslogd
CC agentlessd/agentlessd.o
CC agentlessd/main.o
CC ossec-agentlessd
CC os_execd/config.o
CC os_execd/exec.o
CC os_execd/execd.o
CC os_execd/win_execd.o
CC ossec-execd
CC logcollector/config.o
CC logcollector/logcollector.o
CC logcollector/main.o
CC logcollector/read_command.o
CC logcollector/read_djb_multilog.o
CC logcollector/read_fullcommand.o
CC logcollector/read_mssql_log.o
CC logcollector/read_multiline.o
CC logcollector/read_mysql_log.o
CC logcollector/read_nmapg.o
CC logcollector/read_ossecalert.o
CC logcollector/read_postgresql_log.o
CC logcollector/read_snortfull.o
CC logcollector/read_syslog.o
CC logcollector/read_win_el.o
CC logcollector/read_win_event_channel.o
CC ossec-logcollector
CC remoted/ar-forward.o
CC remoted/config.o
CC remoted/main.o
CC remoted/manager.o
CC remoted/remoted.o
CC remoted/secure.o
CC remoted/sendmsg.o
CC remoted/syslog.o
CC remoted/syslogtcp.o
CC ossec-remoted
CC client-agent/agentd.o
CC client-agent/config.o
CC client-agent/event-forward.o
CC client-agent/intcheck_op.o
CC client-agent/main.o
CC client-agent/notify.o
CC client-agent/receiver.o
CC client-agent/receiver-win.o
CC client-agent/sendmsg.o
CC client-agent/start_agent.o
CC ossec-agent
CC addagent/b64.o
CC addagent/main.o
CC addagent/manage_agents.o
CC addagent/manage_keys.o
CC addagent/read_from_user.o
CC addagent/validate.o
CC manage_agents
CC util/syscheck_update.o
CC syscheck_update
CC util/clear_stats.o
CC clear_stats
CC util/list_agents.o
CC list_agents
CC util/agent_control.o
CC agent_control
CC util/syscheck_control.o
CC syscheck_control
CC util/rootcheck_control.o
CC rootcheck_control
CC util/verify-agent-conf.o
CC verify-agent-conf
CC util/ossec-regex.o
CC ossec-regex
CC syscheckd/config.o
CC syscheckd/create_db.o
CC syscheckd/run_check.o
CC syscheckd/run_realtime.o
CC syscheckd/seechanges.o
CC syscheckd/syscheck.o
CC syscheckd/win-registry.o
CC rootcheck/check_open_ports.o
CC rootcheck/check_rc_dev.o
```

```

CC rootcheck/check_rc_files.o
CC rootcheck/check_rc_if.o
CC rootcheck/check_rc_pids.o
rootcheck/check_rc_pids.c: In function 'loop_all_pids':
rootcheck/check_rc_pids.c:130: warning: implicit declaration of function 'getsid'
rootcheck/check_rc_pids.c:135: warning: implicit declaration of function 'getpgid'
CC rootcheck/check_rc_policy.o
CC rootcheck/check_rc_ports.o
CC rootcheck/check_rc_readproc.o
CC rootcheck/check_rc_sys.o
CC rootcheck/check_rc_trojans.o
CC rootcheck/common.o
CC rootcheck/common_rcl.o
CC rootcheck/config.o
CC rootcheck/os_string.o
CC rootcheck/rootcheck.o
CC rootcheck/run_rk_check.o
CC rootcheck/unix-process.o
rootcheck/unix-process.c: In function 'os_get_process_list':
rootcheck/unix-process.c:94: warning: implicit declaration of function 'getsid'
rootcheck/unix-process.c:95: warning: implicit declaration of function 'getpgid'
CC rootcheck/win-common.o
CC rootcheck/win-process.o
LINK rootcheck.a
RANLIB rootcheck.a
CC ossec-syscheckd
CC monitord/compress_log.o
CC monitord/generate_reports.o
CC monitord/main.o
CC monitord/manage_files.o
CC monitord/monitor_agents.o
CC monitord/monitord.o
CC monitord/sign_log.o
CC ossec-monitord
CC reportd/report.o
CC ossec-reportd
CC os_auth/main-server.o
CC os_auth/ssl.o
os_auth/ssl.c: In function 'get_ssl_context':
os_auth/ssl.c:107: warning: implicit declaration of function 'TLSv1_2_method'
os_auth/ssl.c:107: warning: assignment makes pointer from integer without a cast
os_auth/ssl.c:108: warning: passing argument 1 of 'SSL_CTX_new' discards qualifiers from pointer target type
CC os_auth/check_cert.o
CC ossec-authd
os_auth/ssl.o: In function 'get_ssl_context':
ssl.c:(.text+0x263): undefined reference to 'TLSv1_2_method'
collect2: ld returned 1 exit status
make: *** [ossec-authd] Error 1

```

Error 0x5.

Building error. Unable to finish the installation.

SVN Commands

Monday, March 19, 2018 6:29 PM

```
#####
Checkout command:  
svn checkout https://10.64.65.20:18080/svn/HSRI-IES/tags/CriticalProjects-IES /opt/HSRI/svnautomerge/WBT/IES  
#####  
Getting diff using merge dry run command:  
svn merge https://10.64.65.20:18080/svn/HSRI-IES/branches/GOLD-BUILD-For-09132016Live-IES7.0.0 --dry-run > /opt/HSRI/svnautomerge/WBT/logs/IES.log  
Or  
svn diff -x "--ignore-all-space --ignore-eol-style" https://10.64.65.20:18080/svn/HSRI-IES/branches/GOLD-BUILD-For-09132016Live-IES7.0.0 https://10.64.65.20:18080/svn/HSRI-IES/tags/CriticalProjects-IES > /opt/HSRI/SVN/DiffReport/WB-WBT/IES.log  
#####  
DIFF:  
svn diff -x "--ignore-all-space --ignore-eol-style" --old=https://10.64.65.20:18080/svn/HSRI-IES/branches/ReleaseBranch-IES\_27-Oct-2017 --new=https://10.64.65.20:18080/svn/HSRI-IES/branches/ReleaseBranch-IES > IESdiff.log  
  
svn diff -x "--ignore-all-space --ignore-eol-style" -r135399:152087 https://10.64.65.20:18080/svn/HSRI-IES/branches/ReleaseBranch-IES > IESdiff135399-152087.log  
  
svn diff -x "--ignore-all-space --ignore-eol-style" --old=https://10.64.65.20:18080/svn/HSRI-IES/branches/ReleaseBranch-MULE\_27-Oct-2017 --new=https://10.64.65.20:18080/svn/HSRI-IES/branches/ReleaseBranch-MULE/1095B > IESMULE-1095Bdiff.log  
#####  
SVN Server commands:  
Start:  
/opt/csvn/bin/httpd -f /opt/csvn/data/conf/httpd.conf -k start  
or  
/opt/csvn/bin/httpd -k start -f /opt/csvn/data/conf/httpd.conf  
#####  
To get the brach creation date:  
svn log --limit 1 --stop-on-copy --revision 1:HEAD --quiet https://10.64.65.20:18080/svn/HSRI-IES/branches/ReleaseBranch-IES\_22-Oct-2018  
#####  
to get the repository creation date:  
svn propget -r 0 svn:date https://10.64.65.20:18080/svn/HSRI-IES  
#####  
to get the log from branch creation date to any date:  
svn log --stop-on-copy --revision 1:(date)/revision --quiet https://10.64.65.20:18080/svn/HSRI-IES/branches/ReleaseBranch-IES\_22-Oct-2018  
svn log --stop-on-copy --revision 1:HEAD --quiet https://10.64.65.20:18080/svn/HSRI-IES/branches/ReleaseBranch-IES  
svn checkout https://10.64.65.20:18080/svn/Crucible-Test/trunk Crucible-Test --username npanguluri  
#####  
Warwick SVN server:  
root 7424 1 Jan07 ? 00:00:11 /opt/csvn/bin/. wrapper-linux-x86-64 /opt/csvn/bin/.. /data/conf/csvn-wrapper.conf wrapper.syslog.ident=csvn wrapper.pidfile=/opt/csvn/bin/.. /data/run/csvn.pid  
wrapper.name=csvn wrapper.displayname=CSVN Console wrapper.daemonize=TRUE wrapper.statusfile=/opt/csvn/bin/.. /data/run/csvn.status  
wrapper.java.statusfile=/opt/csvn/bin/.. /data/run/csvn.java.status wrapper.lockfile=/var/lock/subsys/csvn  
#####  
SVN DUMP:  
/opt/csvn/bin/svnadmin dump /opt/csvn/data/repositories/RI-UHIP-CONVERSION | gzip -9 > /opt/FinalSVNDump/RI-UHIP-CONVERSION.dump.gz &&  
/opt/csvn/bin/svnadmin dump /opt/csvn/data/repositories/RI-UHIP-IES | gzip -9 > /opt/FinalSVNDump/RI-UHIP-IES.dump.gz &&  
/opt/csvn/bin/svnadmin dump /opt/csvn/data/repositories/WAHBE | gzip -9 > /opt/FinalSVNDump/WAHBE.dump.gz &&  
/opt/csvn/bin/svnadmin dump /opt/csvn/data/repositories/RI-UHIP-AUTOMATION | gzip -9 > /opt/FinalSVNDump/RI-UHIP-AUTOMATION.dump.gz &&  
#####  
REPO CREATION(RI):  
1, Go to access rules and create a repository on SVN.  
2, Then go to the below given location on 20 server(using root access) - /opt/csvn/data/repositories/  
3, Give the below commands to get permission to create folders on the newly created SVN Repository:  
> chown -R opensrc RI-USI-INFRA  
> chgrp -R AdminGroup RI-USI-INFRA  
[HSRI-DATAMART/] trunk  
*.*  
@admins=rw  
Example:  
HSRI-DATAMART  
https://10.64.65.20:18080/svn/HSRI-DATAMART/trunk  
> chown -R opensrc HSRI-DATAMART  
> chgrp -R AdminGroup HSRI-DATAMART  
[HSRI-DATAMART/] trunk  
@admins=r  
@hsridatamart=rw  
#####  
svn log -r 1:HEAD --limit 1 --stop-on-copy  
  
svn merge <what> <from> <to>  
  
svn diff --diff-cmd /usr/bin/diff -x "-i -b" COMMITTERS  
  
From <http://svn.gnu.org.ua/svnbook/svn.ref.svn.c.diff.html>  
  
svn diff --diff-cmd /usr/bin/diff -x "-i -b -w -b" -r {2018-04-22}:HEAD "https://10.64.65.20:18080/svn/HSRI-BASELINE/HSRI-SSP/branches/GOLD-BUILD-For-09132016Live-SSP7.0.0" "https://10.64.65.20:18080/svn/HSRI-BASELINE/HSRI-SSP/branches/ReleaseBranch-SSP" > /opt/HSRI/svnautomerge/WB/logs/SSPdiff-r.log  
  
svn diff -r 10838:HEAD --exclude-revisions 10861:10862 myBranch  
  
From <https://groups.google.com/forum/#topic/subversion\_users/ooUjQAlv-Og>  
  
From <https://www.mediawiki.org/wiki/Quick SVN merging guide>  
  
to get the branch created date and version  
svn log --verbose --stop-on-copy https://10.64.65.20:18080/svn/HSRI-IES/tags/GOLD-BUILD-For-09132016Live-IES7.0.0
```

```
svn log --limit 1 --stop-on-copy --revision 1:HEAD --quiet
```

<https://stackoverflow.com/questions/4499910/how-to-display-a-specific-users-commits-in-svn-log>

To Create branch on SVN :

Suppose you want to create a branch from a trunk name (as "TEST") then use:

```
svn cp -m "CREATE BRANCH TEST" $svn_url/trunk $svn_url/branches/TEST
```

From <<http://stackoverflow.com/questions/2041/how-do-i-create-a-branch-in-svn>>

To copy from trunk to Branch:

```
svn copy https://host.example.com/repos/project/trunk https://host.example.com/repos/project/branches/branch-name \ -m "Creating a branch of project"
```

From <<http://stackoverflow.com/questions/2041/how-do-i-create-a-branch-in-svn>>

```
svn commit -m "LogMessage" [-depth ARG] [-no-unlock] PATH
```

svn checkout <https://10.64.65.20:18080/svn/HSRI-IES/branches/NBTEST> /opt/MO

```
svn log https://10.64.65.20:18080/svn/HSRI-BASELINE/branches/GOLD-BUILD-For-09132016Live-OPA7.0.0 -qv -r {2016-12-01}:{2017-01-05} > log.txt &
svn log https://10.64.65.20:18080/svn/HSRI-BASELINE/branches/GOLD-BUILD-For-09132016Live-OPA7.0.0 -r {2016-12-01}:{2017-01-05} > log1.txt
```

svn log -v -r HEAD:HEAD <https://10.64.65.20:18080/svn/HSRI-IES/branches/ReleaseBranch-IES>

svn merge <https://10.64.65.20:18080/svn/HSRI-IES/branches/ReleaseBranch-IES> --dry-run -x --ignore-all-space > /opt/HSRI/svnautomerge/logs/RB2CP/ies.log

svn merge <https://10.64.65.20:18080/svn/HSRI-IES/branches/ReleaseBranch-IES> --dry-run > /opt/HSRI/svnautomerge/logs/RB2CP/ies.log

Get-SvnLogData | Export-Csv -Path temp.csv

From <<https://stackoverflow.com/questions/11436214/how-to-export-the-subversion-log-to-spreadsheet>>

```
svn log https://10.64.65.20:18080/svn/HSRI-BASELINE/branches/GOLD-BUILD-For-09132016Live-OPA7.0.0 -r {{2016-12-01}:{2017-01-05}} | grep " | awk '{ print $1 $2 $3 $4 $5 $6 $7 $8 $9 $10; }' > log3.log
```

To Get diff report for 2 branches:

1st command

svn diff mothlyurl releasebranchurl > filename

2nd command

grep "Index:" filename | cut -d ":" -f2 | tee filename

A Added

D Deleted

U Updated

C Conflict

G Merged

E Existed

R Replaced

From <<http://subversion.apache.org/docs/svn-merge.txt>>

to grep a particular user svn log(it will only give revision, date and no of line)

```
svn log -v https://10.64.65.20:18080/svn/HSRI-IES/branches/ReleaseBranch-IES | grep MayankS
```

OUTPUT:

```
[mpanguri@ENT-DV-UHBLD01 SVN]$ svn log -v https://10.64.65.20:18080/svn/HSRI-IES/branches/ReleaseBranch-IES | grep MayankS
r107735 | MayankS | 2017-05-29 07:15:11 -0400 (Mon, 29 May 2017) | 1 line
r107672 | MayankS | 2017-05-29 03:07:51 -0400 (Mon, 29 May 2017) | 1 line
r107648 | MayankS | 2017-05-27 08:59:30 -0400 (Sat, 27 May 2017) | 1 line
r107647 | MayankS | 2017-05-27 08:58:41 -0400 (Sat, 27 May 2017) | 1 line
```

to grep a particular user svn log(we get full details by increasing A and B values)

```
svn log -v https://10.64.65.20:18080/svn/HSRI-IES/branches/ReleaseBranch-IES grep -ir -A 2 -B 2 MayankS
```

OUTPUT:

Paris Query change

```
r107735 | MayankS | 2017-05-29 07:15:11 -0400 (Mon, 29 May 2017) | 1 line
Changed paths:
  M /branches/ReleaseBranch-IES/ED/common/src/us/ri/eohhs/uhip/ies/business/rules/ed/EdUtil.java
  --
WP Phase 4 Consolidate Verification Fields for DHS VCLs
  -----
r107672 | MayankS | 2017-05-29 03:07:51 -0400 (Mon, 29 May 2017) | 1 line
Changed paths:
  M /branches/ReleaseBranch-IES/ED/batch/src/us/ri/eohhs/uhip/ies/ed/batch/enrollment/jobs/NFPPaymentFileUpdateBatchJob.java
  --
Sonar Change.
```

SVN LOG

```
svn log -v -r 113919:HEAD https://10.64.65.20:18080/svn/HSRI-IES/branches/ReleaseBranch-IES | tr -d '\n' | sed -r 's/-{2,}/\n/g' | sed -r 's/ \|([^\n]+)\|/\n/g' | sed -r 's/^r//' | sed -r "s/[0-9]+ lines?//g" | sort -g | sed 's/ | /;g' > list.csv
```

```
svn log -v -r 113919:HEAD https://10.64.65.20:18080/svn/HSRI-IES/branches/ReleaseBranch-IES | tr -d '\n' | sed -r 's/-{2,}/\n/g' | sed -r 's/ \|([^\n]+)\|/\n/g' | sed -r 's/^r//' | sed -r "s/[0-9]+ lines?//g" | sort -g | sed 's/ | /;g' > list_v.csv
```

16-may-2018

```
svn diff -x "--ignore-all-space --ignore-eol-style" https://10.64.65.20:18080/svn/HSRI-IES/branches/GOLD-BUILD-For-09132016Live-IES7.0.0 https://10.64.65.20:18080/svn/HSRI-IES/tags/CriticalProjects-IES > /opt/HSRI/SVN/DiffReport/WB-WBT/IES.log
```

<https://10.64.65.20:18080/svn/HSRI-IES/branches/ReleaseBranch-IES>

```
svn merge https://10.64.65.20:18080/svn/HSRI-IES/branches/ReleaseBranch-IES. --dry-run > /opt/HSRI/svnautomerger/WB/logs/HIX.log
```

```
svn diff --diff-cmd diff -x -ewbb "https://10.64.65.20:18080/svn/HSRI-IES/branches/ReleaseBranch-IES/IEWebApp/WebContent/jsp/bi/BIARMAttendanceRecordMaintenance.jsp" "https://10.64.65.20:18080/svn/HSRI-IES/branches/CriticalProjects-IES/IEWebApp/WebContent/jsp/bi/BIARMAttendanceRecordMaintenance.jsp"
```

```
svn diff --diff-cmd diff -x -ewbb "https://10.64.65.20:18080/svn/HSRI-HIX/branches/ReleaseBranch-HIX" "https://10.64.65.20:18080/svn/HSRI-HIX/branches/GOLD-BUILD-For-09132016Live-HIX7.0.0" > /opt/HSRI/svnautomerger/WB/logs/HIXdiff.log
```

<http://www.yolinux.com/TUTORIALS/Subversion.html>

<https://www.thegeekstuff.com/2011/04 svn-command-examples/>

```
svn diff -r119478:116150 https://10.64.65.20:18080/svn/HSRI-IES/branches/ReleaseBranch-IES | diffstat -m
```

List of files between rev range:

```
svn --username npanguluri --password 2WrWitpi log -v -r 50808:HEAD https://10.64.65.20:18080/svn/HSRI-HIX/branches/ReleaseBranch-HIX | grep "/branches/ReleaseBranch-HIX/" | wc -l
```

Repo creation date:

```
svn proplist --revprop -r 0 svn:date http://svn.apache.org/repos/asf
```

From <<https://serverfault.com/questions/640833/how-to-know-the-date-of-creation-of-an-svn-repository>>

```
#####
To change the message log after commit is done:  
http://help.collab.net/index.jsp?topic=/faq/changelog.html
```

```
#####
Author change:  
svn propset --revprop -r <revision_number> svn:author <new_username>
```

From <<https://blog.tinned-software.net/change-author-of-last-svn-commit/>>

SPLITTING UP AN SVN REPO:
<https://blog.tinned-software.net/splitting-up-an-svn-repository/>

```
#####
SVN REVERT:  
https://www.tutorialspoint.com/svn/svn\_fix\_mistakes.htm
```

```
#####
SVN STATUS:  
http://svnbook.red-bean.com/en/1.8/svn.ref.svn.c.status.html
```

To fix svn status... like ! ?

```
https://stackoverflow.com/questions/33947524/how-to-fix-subversion-and-status-automatically
```

```
https://www.cs.ucsb.edu/~mike/c48/misc/svn\_notes.html
```

```
https://stackoverflow.com/questions/2034/what-do-the-result-codes-in-svn-mean
```

```
#####
SVN ADMIN TASKS:  
http://svnbook.red-bean.com/en/1.7/svn.ref.html
```

```
#####
How to manage files with M status in the checkout location:  
svn revert -R .  
svn update
```

```
#####
How to remove unversioned(?) status files in the checkout location:(worked)  
svn status --no-ignore | grep '^!?' | sed 's/^!?\?//'  
svn status --no-ignore | grep '^!?' | sed 's/^!?\?//' | xargs -lxx rm -rf xx
```

Ref: <http://www.guyruitenberg.com/2008/01/18/delete-unversioned-files-under-svn/>

Or (not tested)

```
svn status --no-ignore | grep '^![?]' | cut -c 9- | while IFS= read -r f; do rm -rf "$f"; done
```

```
svn status --no-ignore | grep '^![?]' | cut -c 9- | while IFS= read -r f; print "%s\n" "Deleting ${f}..."
```

```
svn cleanup . --remove-unversioned
```

```
svn status | grep '^?' | awk '{print $2}' | xargs rm -rf
```

```
rm -rf `svn status --no-ignore | grep '^![?]' | sed 's/^![?]/'`
```

<https://stackoverflow.com/questions/2803823/how-can-i-delete-all-unversioned-ignored-files-folders-in-my-working-copy>

```
#####
To remove leading spaces and print the first character from svn status command:  
svn status --no-ignore | sed 's/^\[ \t]*// | awk '{print $1}'
```

```
#####
To unlock all the locked files at a time:  
svn status -t | head -n -1 | awk '{ print $3 }' | xargs svn unlock --force
```

From <<https://stackoverflow.com/questions/3155250/how-can-i-release-locks-in-subversion-recursively>>

Below command will unlock all the files in a branch(cant handles paths/files having spaces in it)

```
svn status -u | head -n -1 | awk '{ print $3 }' | xargs svn unlock --force
```

Below command will unlock all the files in a branchHandles paths/files having spaces in it)

```
svn --username svnops --password svnops123 status -u | head -n -1 | awk '{print substr($0, index($0, $3))}' | sed 's/^"/;/s/$"/' | xargs svn unlock --force
```

break up of above cmd:

```
svn --username svnops --password svnops123 status -u --> prints the locked file paths/files
```

```
head -n -1 --> removes line from the output
awk '{print substr($0, index($0, $3))}' --> removes first 2 columns from the output and prints what ever is there after second column
sed 's/^"/";s/$"/' --> adds double quotes at the start and end on the output content
xargs svn unlock --force --> runs the unlock command on the output path
#####
#####
```

Using command-line Subversion to access project source files

- [Help index](#)
- [About source code version control with Software Configuration Management \(Subversion\)](#)
- Using command-line svn to access project source files
- [Getting started with Subversion](#)
- [Working with files in the SVN repository](#)
- [Contributing your changes to the SVN repository](#)
- [Working with the repository](#)

Getting started with command-line Subversion

If you are participating in a development project that is using Subversion for version control, you will need to use Subversion to access and change project source files. You can browse the source code online to view a project's directory structure and files by clicking on the [Subversion](#) link in the left navigation pane for the project.

The [Subversion](#) page displays with three subdirectories: branches/, tags/ and one README file. The README file gives a top level view of the Subversion repository. You can click [Access options](#) to view the Subversion client setup instructions. You must have a Subversion client installed on your local machine.

Getting a local working copy for your project `svn checkout`

To get a "working copy" of the latest source files, you must check out the source files, a process which copies the files onto your system from the repository. In your shell or terminal client, type:

`svn checkout https://(projectname).(domain)/svn/(projectname)/(DIR) (projectname) --username [type-user-name-here]`

Enter your user password when prompted. This should be the same password associated with your user account on this site. Not specifying the directory will checkout the entire project source code. You may want to checkout the "trunk" directory as it has the working "www/" folder.

Switches: `--revision (-r) REV`, `--quiet (-q)`, `--non-recursive (-N)`, `--username USER`, `--password PASS`, `--no-auth-cache`, `--non-interactive`, `--config-dir DIR`

See [Basic Work Cycle](#), [Initial Checkout](#), [Working Copies](#)

Note: If your site is not SSL (Secured Socket Layer) enabled, use `http` instead of `https` to perform a Subversion operation. For example, to checkout the latest source code from a project's repository, use this command:

`svn checkout https://(projectname).(domain)/svn/(projectname)/(DIR) (projectname) --username [type-user-name-here]`

Working with files in the Subversion repository

Once you have checked out a local copy of the project repository, you can edit the existing files, create new files and directories, and delete files locally. Any changes you make affect only your local copies of the project files until you commit your changes back to the Subversion repository.

Adding files/directories from your working copy to the repository: `svn add`

You can add a new file to the repository after you have first created and edited it in your working directory or add a directory with or without its contents using

`svn add FILENAME/DIR`.

This will add files/directories to your working copy and schedule them for addition to the repository. They will be uploaded and added to the repository on your next commit. If you add something and change your mind before committing, you can unschedule the addition using `svn revert`.

Switches: `--targets FILENAME`, `--non-recursive (-N)`, `--quiet (-q)`, `--config-dir arg`, `--auto-props`, `--no-auto-props`

See [Examples on adding files/directories](#)

Viewing the content of specific files with revision and author information: `svn blame`

You can view the author and revision information in-line for the specified files by typing:

`svn blame FILENAME`

Each line of text is annotated at the beginning with the author (username) and the revision number for the last change to that line.

Switches: `--revision (-r) REV`, `--username USER`, `--password PASS`, `--no-auth-cache`, `--non-interactive`, `--config-dir DIR`

Viewing the content of specific files: `svn cat`

At times, your working copy may be obsolete as compared to the repository or you may have modified your local working copy. In such cases, you will want to see the differences in the content of a specific file before you commit your changes or decide edit your working copy. Running `svn cat FILENAME` will automatically fetch the HEAD revision from the repository. This subcommand is mainly used to retrieve a file as it existed in an older revision number and display it on your screen. Alternatively, you can browse the source code of your project on this site to do the same.

Switches: `--revision (-r) REV`, `--username USER`, `--password PASS`, `--no-auth-cache`, `--non-interactive`, `--config-dir DIR`

Cleaning up the working copy: `svn cleanup`

Sometimes, you may get a "working copy locked" error. To remove the locks and recursively clean up the working copy, use `svn update`.

Switches: `--diff3-cmd CMD`, `--config-dir DIR`

See [svn cleanup](#)

Copying file or directory in a working copy or in the repository: `svn copy`

Your project may require you to make use of legacy documents. For example, you may want to use an already existing HTML file and use its code as reference to maintain the look and feel of the product while creating fresh content. Instead of creating a file from scratch, you can simply copy this file using `svn copy`, save it under a different name and change the content. You can copy a file from the repository to your local working copy or vice versa. You can also copy files from within your local working copy. Subversion does not support cross repository copying. Use `svn copy SRC DST` to achieve this.

Switches: `--message (-m) TEXT`, `--file (-F) FILE`, `--revision (-r) REV`, `--quiet (-q)`, `--username USER`, `--password PASS`, `--no-auth-cache`, `--non-interactive`, `--force-log`, `--editor-cmd EDITOR`, `--encoding ENC`, `--config-dir DIR`

See [svn copy](#)

Deleting a file or a directory from your local working copy: `svn delete`

You may want to delete unwanted files from your local working copy. Using `svn delete` `FILENAME` schedules it to be deleted. The actual deletion of the file in the repository takes place only when you commit.

Switches: `--force`, `--force-log`, `--message (-m) TEXT`, `--file (-F) FILE`, `--quiet (-q)`, `--targets FILENAME`, `--username USER`, `--password PASS`, `--no-auth-cache`, `--non-interactive`, `--editor-cmd EDITOR`, `--encoding ENC`, `--config-dir DIR`

Viewing the differences between files: `svn diff`

You can use `svn diff` to display local modifications in a specified file in your working copy against the one in the repository. In the command prompt, type:

`svn diff (PATH of the file) (URL of the project's repository)`

For example, to compare a locally modified file "index.html" against the one in the project's repository, type:

`svn diff $SRC/....../index.html https://(projectname).(domain)/svn/(projectname)/trunk (projectname) --username [type-user-name-here]`

Alternatively, you can go to the directory where the file belongs and type:

`svn diff (FILENAME)`

This will display the difference with the revision number.

Switches: `--revision (-r) REV`, `--old OLD-TARGET`, `--new NEW-TARGET`, `--extensions (-x) "ARGS"`, `--non-recursive (-N)`, `--diff-cmd CMD`, `--notice-ancestry`, `--username USER`, `--password PASS`, `--no-auth-cache`, `--non-interactive`, `--no-diff-deleted`, `--config-dir DIR`

See [Examining History](#), [svn diff](#)

Exporting a clean directory tree on your local machine: `svn export`

You can extract an unversioned copy, that is, a clean directory of a tree, on your local machine from the project repository or from within your local working copy. To get a clean directory of an older revision from the repository, type:

`svn export [-r REV] [PATH]`

This will export a clean directory tree from the repository specified by URL, at a revision REV (if specified), otherwise at HEAD, into PATH. If PATH is omitted, the last component of the URL is used for the local directory name. Alternatively, you can also export a clean directory tree from the working copy specified by PATH1 into PATH2 within your local machine. This will preserve all local changes, but will not copy files under version control. To achieve this, type:

`svn export PATH1 PATH2`

Switches: `--revision (-r) REV`, `--quiet (-q)`, `--force`, `--username USER`, `--password PASS`, `--no-auth-cache`, `--non-interactive`, `--config-dir DIR`

Getting help on subversion: `svn help`

Subversion offers you help within the command-line interface. To get help on a specific subcommand, type:

`svn help [SUBCOMMAND...]`

Switches: `--version`, `--quiet (-q)`

Contributing your changes to the SVN repository

After making changes to files and/or directories locally, you must commit those changes to the SVN repository.

Committing your changes: `svn commit`

To commit your changes into the shared repository, type:

`svn commit -m "Type your justification here"`

If you do not include a description of your change to the file, you will be prompted to add it by invoking your file editor before svn can complete the commit action or you will get a "Commit failed" error. All commits are logged automatically and posted to the project's commit discussion.

Switches: `--message (-m) TEXT`, `--file (-F) FILE`, `--quiet (-q)`, `--non-recursive (-N)`, `--targets FILENAME`, `--force-log`, `--username USER`, `--password PASS`, `--no-auth-cache`, `--non-interactive`, `--encoding ENC`, `--config-dir DIR`

See [Commit Your Changes](#), [editor-cmd](#)

Importing an unversioned file or tree in the project repository: `svn import`

You can recursively commit an unversioned file or tree into the project repository using `svn import`. Parent directories are created in the repository as required. The following command will recursively commit a copy from the PATH to the URL. If PATH is omitted ". " is assumed.

svn import [PATH] URL

Example: To create an unversioned directory (**D**) with a file on your local machine. Navigate to your Subversion page by clicking the [Subversion](#) link in the left navigation pane for your project. Note that NEWDIR is not listed under [Browse source code](#). To import **D** into your project's repository, type:

svn import -m "Type your message here" D [http://\(projectname\).\(domain\)/svn/\(projectname\)/NEWDIR](http://(projectname).(domain)/svn/(projectname)/NEWDIR)

Refresh the page. Note that D is listed under **Browse source code**. Click D to see the file.

Switches: --message (-m) TEXT, --file (-F) FILE, --quiet (-q), --non-recursive (-N), --username USER, --password PASS, --no-auth-cache, --non-interactive, --force-log, --editor-cmd EDITOR, --encoding ENC, --config-dir DIR, --auto-props, --no-auto-props

Printing information about paths in your working copy: svn info

You will from time to time need specific information about files in your working copy to execute certain subcommands. Typing **svn info** will print exhaustive but useful information about items in your working copy paths in your working copy, including: Path, Name, URL, Revision, Node Kind, Last Changed, author, Last Changed Revision, Last Changed Date, Text Last Updated, Properties Last Updated and Checksum.

Switches: --targets FILENAME, --recursive (-R), --config-dir DIR

Viewing list of directory entries in the repository: svn list

Before starting work on a project or fetching a 'working copy', you may want to see the contents i.e. directories and files in your project's repository or view directory entries in your local working copy. You can type **svn list [TARGET...]** in the command prompt to view the same. Alternatively, you can view your project's repository by navigating to the **Software configuration management** page within your project.

Switches: --revision (-r) REV, --verbose (-v), --recursive (-R), --username USER, --password PASS, --no-auth-cache, --non-interactive, --config-dir DIR

Viewing commit log messages: svn log

You can view the individual file/directory histories of the files/directories in your 'working copy' or the repository to track revision information by typing:

svn log [PATH]

The result is a display of the file's/directories' revision information, starting with the most current revision with information such as the commit messages and the author name. Alternatively, you can use this site to view the commit log messages for individual files in your project repository. Click the **Subversion** link from the left navigation pane of your project. The **Subversion** page appears. Search for your file inside the directories under **Browse source code** and click the filename. This will display a page with commit log messages.

Switches: --revision (-r) REV, --quiet (-q), --verbose (-v), --targets FILENAME, --stop-on-copy, --incremental, --xml, --username USER, --password PASS, --no-auth-cache, --non-interactive, --config-dir DIR

See [svn log](#)

Merging changes: svn merge

You can run the **svn merge** command to tell Subversion to merge the latest versions of files from the repository into your working copies.

Switches: --revision (-r) REV, --non-recursive (-N), --quiet (-q), --force, --dry-run, --diff3-cmd CMD, --ignore-ancestry, --username USER, --password PASS, --no-auth-cache, --non-interactive, --config-dir DIR

See [svn merge](#), [Resolve Conflicts \(Merging Others' Changes\)](#), [Branching and Merging](#), [Common Use-Cases for Merging](#), [Best Practices for Merging](#)

Working with the repository

Creating new directory: svn mkdir

To create a new directory in your working copy, type:

svn mkdir PATH

To create a new directory in your project repository, type:

svn mkdir URL

The final component of the PATH or URL determines the directory name. A directory in the repository is created with an immediate commit, so it requires a commit message

Switches: --message (-m) TEXT, --file (-F) FILE, --quiet (-q), --username USER, --password PASS, --no-auth-cache, --non-interactive, --editor-cmd EDITOR, --encoding ENC, --force-log, --config-dir DIR

Moving a file or a directory: svn move

You can move a file or a directory within your working copy or within your project's repository using **svn move SRC DST**. This command is equivalent to an **svn copy** followed by **svn delete**. Moving a file or a directory within your working copy moves and schedules it for addition for the next commit. Moving a file or a directory within your project repository is an atomic commit, so it requires a commit message.

Switches: --message (-m) TEXT, --file (-F) FILE, --revision (-r) REV, --quiet (-q), --force, --username USER, --password PASS, --no-auth-cache, --non-interactive, --editor-cmd EDITOR, --encoding ENC, --force-log, --config-dir DIR

Working with properties

Subversion has a number of specific properties that affect or determine its behavior. You can modify, commit, and revert property changes just like the contents of your files. You can delete, edit, print, list, set a property from files, directories or revisions from your local working copy or your project's repository.

See [Properties](#), [Unversioned Properties](#), [Meta-data Properties](#), [svn propdel](#), [svn propedit](#), [svn propget](#), [svn proplist](#), [svn propset](#), [Hook Scripts](#)

Resolving conflicts: svn resolved

You may get a conflict while updating your local working copy. You will need to resolve the conflict. After resolving, type **svn resolved PATH...** to tell your working copy that the conflict has been "resolved."

Switches: --targets FILENAME, --recursive (-R), --quiet (-q), --config-dir DIR

See [Resolve Conflicts \(Merging Others' Changes\)](#)

Reverting your changes: svn revert

As you work with Subversion, you will realize that **svn revert PATH...** is equivalent to a **Ctrl Z** on Windows. You can:

- Revert any local changes on your local working copy and thus, resolve any conflicted states.
- Revert the contents of an item and the property changes in your working copy.
- Cancel out any scheduling operations like file addition, file deletion etc.

NOTE that not providing any target may result in loss of changes in your working copy.

Switches: --targets FILENAME, --recursive (-R), --quiet (-q), --config-dir DIR

Getting status of files/directories: svn status

It is a good practice in version control to review your changes before committing them to the project's repository. You can run **svn status** to print the status of the files and directories in your working copy. This will result in a coded eight column output. It is humanly impossible to draw an 'error-free' conclusion from the output as each column has an exhaustive legend. To make this task simpler and simultaneously see an example, type **svn help status** in your command prompt.

Switches: --show-updates (-u), --verbose (-v), --non-recursive (-N), --quiet (-q), --no-ignore, --username USER, --password PASS, --no-auth-cache, --non-interactive, --config-dir DIR

See [Examining Your Changes](#)

Switching your working copy: svn switch

You can update your working copy to mirror a new URL using **svn switch URL [PATH]**. You can move a working copy or a part of your working copy to a new branch. You can use this subcommand as a shortcut for branching.

Switches: --revision (-r) REV, --non-recursive (-N), --quiet (-q), --diff3-cmd CMD, --relocate, --username USER, --password PASS, --no-auth-cache, --non-interactive, --config-dir DIR

See [Switching a Working Copy](#), [Branching and Merging](#) and [svn switch](#)

Updating your working copy: svn update

As a good version control practice, it is recommended that you update your local working copy with the project repository everyday using:

svn update [PATH...]

The updated items listed with their current status indicated as follows:

- A = A file was added to your working copy.
- U = A file was updated to your working copy.
- D = A file was deleted from your working copy.
- R = A file was replaced in your working copy.
- G = A file was successfully merged.
- C = A file has merge conflicts that must be resolved by hand

Switches: --revision (-r) REV, --non-recursive (-N), --quiet (-q), --diff3-cmd CMD, --username USER, --password PASS, --no-auth-cache, --non-interactive, --config-dir DIR

See [Update Your Working Copy](#), [Merging Conflicts By Hand](#)

Branching and tagging

A project's trunk is usually used for the main line of development whereas branches are usually used for variations on that line. A branch is an ongoing line of development. In a Software Development Life Cycle, branches are often used when a public release of a software product is due, to allow testers to work on the release candidate so that new development can go on independently of the testing. Branches are also used for experimental work and a complete code rewrite. Tagging is a way of marking a group of file revisions as belonging together. Though branches and tags are created using the **SVN COPY** subcommand, branches and tags are different things. A branch represents multiple revisions while a tag represents a single revision.

The Subversion repository for your project hosted on this site supports branching and tagging your source files. Tagging and branching are easy and practical 'copy' operations for Subversion.

To create a branch or tag project files, type:

svn copy SRC DST -m "Type your message here"

See [Branching and Merging](#)

Related information

- [Subversion on open.collab.net](#)

Top

From <https://www.open.collab.net/scdocs/ddUsingSVN_command-line>

Pre commit hooks

Wednesday, June 13, 2018 8:38 PM

```
#####
#Pre commit hook to prevent commits in tags(linux):
```

```
#!/bin/sh
REPOS="$1"
TXN="$2"
SVNLLOOK=/opt/local/bin/svnlook
# Committing to tags is not allowed
$SVNLLOOK changed -t "$TXN" "$REPOS" | grep "^\U\W.*\tags\/*" && /bin/echo "Cannot commit to tags!" 1>&2 && exit 1
# All checks passed, so allow the commit.
exit 0
```

From https://stackoverflow.com/questions/464384/svn-pre-commit-hook-for-avoiding-changes-to-tags-subdirectories?utm_medium=organic&utm_source=google_rich_qa&utm_campaign=google_rich_qa

```
#####
#Here is my windows batch file pre-commit hook. If the user is an administrator the other checks will be skipped. It checks if the commit message is empty, and if the commit is to a tag.
```

Note: findstr is a nerfed alternative to grep on other platforms.

The way it checks if the commit is to a tag, it first checks if svnlook changed contains "tags/". It then checks if svnlook changed matches "^A.tags/[^\\$]", which means that it will check if you are adding a new folder under tags/.

Users are allowed to create new projects. The pre-commit hook allows a user to create the folders trunk/ tags/ and branches/. Users are not allowed to delete the folders trunk\ tags\ and branches\.

This will work for a single or multi-project repository.

```
#  
@echo off  
rem This pre-commit hook will block commits with no log messages and blocks commits on tags.  
rem Users may create tags, but not modify them.  
rem If the user is an Administrator the commit will succeed.  
rem Specify the username of the repository administrator  
rem commits by this user are not checked for comments or tags  
rem Recommended to change the Administrator only when an admin commit is necessary  
rem then reset the Administrator after the admin commit is complete  
rem this way the admin user is only an administrator when necessary  
set Administrator=Administrator  
setlocal  
rem Subversion sends through the path to the repository and transaction id.  
set REPOS=%1%  
set TXN=%2%  
:Main  
rem check if the user is an Administrator  
svnlook author %REPOS% -t %TXN% | findstr /r "%Administrator%" >nul  
if %errorlevel%==0 (exit 0)  
rem Check if the commit has an empty log message  
svnlook log %REPOS% -t %TXN% | findstr . > nul  
if %errorlevel% gtr 0 (goto CommentError)  
rem Block deletion of branches and trunk  
svnlook changed %REPOS% -t %TXN% | findstr /r "^.*/trunk/\$ ^^.*/branches/\$" >nul  
if %errorlevel%==0 (goto DeleteBranchTrunkError)  
rem Check if the commit is to a tag  
svnlook changed %REPOS% -t %TXN% | findstr /r "^.*/tags/\$" >nul  
if %errorlevel%==0 (goto TagCommit)  
exit 0  
:DeleteBranchTrunkError  
echo. 1>&2  
echo Trunk/Branch Delete Error: 1>&2  
echo Only an Administrator may delete the branches or the trunk. 1>&2  
echo Commit details: 1>&2  
svnlook changed %REPOS% -t %TXN% 1>&2  
exit 1  
:TagCommit  
rem Check if the commit is creating a subdirectory under tags/ (tags/v1.0.0.1)  
svnlook changed %REPOS% -t %TXN% | findstr /r "^.*/tags/[^\$]*\$" >nul  
if %errorlevel% gtr 0 (goto CheckCreatingTags)  
exit 0  
:CheckCreatingTags  
rem Check if the commit is creating a tags/ directory  
svnlook changed %REPOS% -t %TXN% | findstr /r "^.*/tags/\$" >nul  
if %errorlevel% == 0 (exit 0)  
goto TagsCommitError  
:CommentError  
echo. 1>&2  
echo Comment Error: 1>&2  
echo Your commit has been blocked because you didn't enter a comment. 1>&2  
echo Write a log message describing your changes and try again. 1>&2  
exit 1  
:TagsCommitError  
echo. 1>&2  
echo %cd% 1>&2  
echo Tags Commit Error: 1>&2  
echo Your commit to a tag has been blocked. 1>&2  
echo You are only allowed to create tags. 1>&2  
echo Tags may only be modified by an Administrator. 1>&2  
echo Commit details: 1>&2  
svnlook changed %REPOS% -t %TXN% 1>&2  
exit 1
```

From https://stackoverflow.com/questions/464384/svn-pre-commit-hook-for-avoiding-changes-to-tags-subdirectories?utm_medium=organic&utm_source=google_rich_qa&utm_campaign=google_rich_qa

Pre commit(py) hook example

Wednesday, June 13, 2018 9:00 PM

```
#!/bin/env python
" Example Subversion pre-commit hook. "

def command_output(cmd):
    " Capture a command's standard output. "
    import subprocess
    return subprocess.Popen(
        cmd.split(), stdout=subprocess.PIPE).communicate()[0]

def files_changed(look_cmd):
    """ List the files added or updated by this transaction.

"svnlook changed" gives output like:
U trunk/file1.cpp
A trunk/file2.cpp
"""

def filename(line):
    return line[4:]

def added_or_updated(line):
    return line[0] in ("A", "U")

def file_contents(filename, look_cmd):
    " Return a file's contents for this transaction. "
    return command_output(
        "%s %s" % (look_cmd % "cat", filename))

def contains_tabs(filename, look_cmd):
    " Return True if this version of the file contains tabs. "
    return "\t" in file_contents(filename, look_cmd)

def check_cpp_files_for_tabs(look_cmd):
    " Check C++ files in this transaction are tab-free. "
    def is_cpp_file(fname):
        import os
        return os.path.splitext(fname)[1] in ".cpp .cxx .h".split()

    cpp_files_with_tabs = [
        ff for ff in files_changed(look_cmd)
        if is_cpp_file(ff) and contains_tabs(ff, look_cmd)]
    if len(cpp_files_with_tabs) > 0:
        sys.stderr.write("The following files contain tabs:\n%s\n"
                        % "\n".join(cpp_files_with_tabs))
    return len(cpp_files_with_tabs)

def main():
    usage = """usage: %prog REPOS TXN
```

```
Run pre-commit options on a repository transaction.""""
from optparse import OptionParser
parser = OptionParser(usage=usage)
parser.add_option("-r", "--revision",
                  help="Test mode. TXN actually refers to a revision.",
                  action="store_true", default=False)
errors = 0
try:
    (opts, (repos, txn_or_rvn)) = parser.parse_args()
    look_opt = ("--transaction", "--revision")[opts.revision]
    look_cmd = "svnlook %s %s %s %s" % (
        "%s", repos, look_opt, txn_or_rvn)
    errors += check_cpp_files_for_tabs(look_cmd)
except:
    parser.print_help()
    errors += 1
return errors

if __name__ == "__main__":
    import sys
    sys.exit(main())
```

Access rules automation

Monday, December 3, 2018 2:32 PM

```
#!/bin/bash
cd /opt/csvn/data/conf;
dir=".
bash -x /opt/csvn/data/conf/DFLoc_Perm_Changer_Start.sh "svn_access_file" "DataFixSVNLocationStart" "DataFixSVNLocationEnd";

#!/bin/bash

today=`date '+%Y_%m_%d'`;

# input data
f2=$1
p1=$2
p2=$3

# temp file
out="$$.tmp"
cat $f2 > $out
cat $f2 > /opt/csvn/data/conf/bkp/$f2"_4PM""_$today"

pc=0;
function pp {
    a=0;
    b=0;
    lines=$(cat $f2 | egrep "($p1|$p2)");
    while read i; do
        if [ $(echo $i | grep "$p1" | wc -l) -gt 0 ]; then
            a=1;
        fi;
        if [ $(echo $i | grep "$p2" | wc -l) -gt 0 ] && [ $a -eq 1 ]; then
            b=$((b+1));
            echo $b > /opt/csvn/data/conf/DFLocPermPCount.txt;
            a=0;
        fi;
    done <<< "$lines"
    echo $b;
}
function lp {
    num=$1
    a=0
    b=0
    c=0
    d=0
    lines=$(cat $out | awk '{print NR,$0}' | egrep "($p1|$p2)");
    echo "$lines" > /opt/csvn/data/conf/DFLocPermLCount.txt;
    while read i; do
        if [ $(echo $i | grep "$p1" | wc -l) -gt 0 ]; then
            a=1;
            c=$(echo $i | awk '{print $1}')
        fi;
```

```

if [ $(echo $i | grep "$p2" | wc -l) -gt 0 ] && [ $a -eq 1 ]; then
    b=$((b+1));
    if [ $b -eq $num ]; then
        d=$(echo $i | awk '{print $1}')
        echo "$c;$d";
    else continue;
    fi;
    a=0;
fi;
done <<< "$lines"
}

pc=$(pp)
j=0;

until [ $j -eq $pc ]; do
j=$((j+1))
n=$((lp $j))
from=$(echo $n | cut -d";" -f1);
to=$(echo $n | cut -d";" -f2);
if [ $((to-from)) -lt 2 ]; then
    continue
else
    for k in $(seq $((from+1)) $((to-1)))
    do
        sed -i "$k s/=rw=/=r/" $out
    done
fi
done

cat $out > $f2
rm -rf $out

# Not Required
chmod -R 755 /opt/csvn/data/conf svn_access_file
chown -R opensrc:AdminGroup /opt/csvn/data/conf svn_access_file

```

Svn setup on linux

Tuesday, June 4, 2019 11:00 AM

<https://www.youtube.com/watch?v=hC1tRzPSg5A>

SVN server installation guide on centos / Redhat / Fedora

Steps

Step 1: Install & Configure Dependencies Softwares

Step 2: Download and configure CollabNetSubversionEdge

Step 3: Create SVN repository and User authentication

Step 1: Install & Configure Dependencies Softwares

1.1

Dependencies :java-1.7.0-openjdk , python-2.6 ,python-devel-2.6

Login to Server and Install dependency software package

#yum install python python-devel java-1.7.0

Note:Or you can download jdk from oracle website from below link ,Download JDK from below link and copy to target PC.

<http://www.oracle.com/technetwork/java/javase/downloads/index.html>

Installing jdk-7u45-linux-i586.rpm

#rpm -ivh jdk-7u45-linux-i586.rpm

1.2

The default location of jdk script and executable files : /usr/lib/jvm/java-1.7.0-openjdk-1.7.0.9.x86_64/

Run Java command to check the Java version

#java -version

Step 2: Download and Extract CollabNetSubversionEdge

2.1

Create a non root user account to run / install the SVN server, User can be renamed or use any suitable for your environment. In our guide we are using "svn".

#useradd svn

#passwd svn

2.2

Download the latest version of SVN server from below link , the download required user registration:<http://www.collab.net/downloads/subversion>

After downloading to your local PC, then copy the.tgz file to target PC /home/svn . Using Winscp or FTP.

2.3

Log in to target PC through seven user accounts as created in step 2.1 , if already logged in as root, then switch over to svn account:

#su - svn

2.4

Extract CollabNetSubversionEdge-4.x.x_linux-x86_64.tar.gz source file, In our guide we have uploaded to /home svn

\$tar -zxvf CollabNetSubversionEdge-4.x.x_linux-x86_64.tar.gz

Note: This will create a folder seven under the users home folder, i.e. /home svn/csvn.

2.5

Set the JAVA_HOME path in /home svn/csvn/data/conf/csvn.conf

\$vi /home/svn/csvn/data/conf/csvn.conf

Locate the JAVA_HOME and set it as JAVA_HOME=/usr/lib/jvm/java-1.7.0-openjdk-1.7.0.9.x86_64

Save and Exit!

2.6

Start SVN services , all service level scripts located in below location:/home/svn/csvn/bin

Start SVN service

\$/home/svn/csvn/bin/csvn start

Log in to browser based management console.from your desktop PC point to SVN server ip:3343/csvn and configure the Apache server before it can be run for the first time.

Non-SSL Address URL : <http://IPaddress:3343/csvn/>

Self signed based URL :<https://IPaddress:4434/csvn>

Username: admin

Password: admin

&

Start http console

\$/home/svn/csvn/bin/csvn-httd start

Optional :Install the application to start automatically when the server restarts.

\$ cd csvn/bin

\$ sudo -E ./csvn install

Step 3: Create SVN repository and User authentication

3.1

Create an SVN repository for a project . following directory structure will be create dynamically.

Tag : application version

Branch : Stable release

Trunk : Initial source code committed by developers

3.2

User Authentication, Active Directory user authentication can be integrated to avoid redundant users.

Login to Active Directory server and Create an account to bind for AD authentication integration with SVN server.

Start ->Administrative Tools -> Active Directory Users and Computers- > Users -> New – User

Active Directory – Users -> create an account with never expire option: -> delegate control> schema RO permission to SVN user .(You can Create User account of your choice)

3.3

Enable Advance Feature : View -> Advanced Features (Checked)

User account proprieties -> Attribute Editor -> distinguishedName -> Copy Value (CN=experts,CN=Users,DC=solutionsatexperts,DC=com)

3.4

Apply below settings to SVN server :

Settings:

Authentication Method : LDAP authentication against an LDAP server (checked)

LDAP Server Host :**x.x.x.x (Active Directory server IP)**

LDAP Server Port :**389**

LDAP Base DN :**Users,DC=solutionsatexperts,DC=com (demo.com)**

LDAP Bind DN :**CN=experts,OU=Users,DC=solutionsatexperts,DC=com**

LDAP Bind Password :**password (user account password of experts)**

LDAP search scope :**samAccountName**

LDAP Server Certification Verification : **checked**

Console LDAP Authentication :**checked**

3.5

Finally, try login to the SVN Server web console using a user account from Active Directory.

From <<http://www.solutionsatexperts.com/collabnetsubversionedge-server-installation-and-configuration/>>

SVN ADMIN TASKS

Wednesday, July 17, 2019 10:48 AM

<http://svnbook.red-bean.com/en/1.7/svn.ref.html>

Merge two SVN repositories

Wednesday, July 17, 2019 10:49 AM

There was a point in time when I created a copy of a project and it was then committed into another repository. This as such is not a big problem, but merging those repositories back together while keeping all the changes in the history is a challenge.

The challenge

Subversion does not support the combining of two repositories. This is because of the way subversion stores revisions. When you have two repositories to combine, it is important to understand that the revisions of the same directory of the two repositories can not merged into each other, but you can merge two repositories into one by importing the two repositories into two different directories in a repository. Lets assume we have the following source repositories, where repository A was the first, which was later moved to repository B.

Advertisements

```
repo_A
|-- branch
|-- tags
\-- trunk
    |-- file1.txt
    \-- file2.txt
repo_B
|-- branch
|-- tags
| |-- tag_1
| \-- tag_2
\-- trunk
    |-- file1.txt
    \-- file2.txt
```

Notice that both repositories contain the same files in the trunk. If we want to combine these repositories, we can not merge the two trunk directories into one, but what we can do is to merge both repositories and their history into one repository. The resulting repository might look like the following:

```
repo_combo
|-- branch
| \-- repo_A_trunk      (created from trunk of repository A)
|   |-- file1.txt
|   \-- file2.txt
|-- tags
| |-- tag_1            (the tag from repository B)
| \-- tag_2            (the tag from repository B)
\-- trunk             (the trunk from repository B)
    |-- file1.txt
    \-- file2.txt
```

Subversion does not have a fixed structure which allows you to place the “trunk” from repo_A wherever you want. This is just an example I used to merge them.

This is how it works

Advertisements

The following steps will explain the procedure to merge the two repositories. As you will see, this procedure will dump both repositories and merge them into a completely new repository.



It would be possible to import one repository directly into the other one but for safety reasons I decided not to do that. With this procedure you always have the possibility to go back to the two unchanged repositories in case something goes wrong or you forgot to merge something.

To start merging the repositories, we need a dump from each of them. This is done with the following commands:

```
svnadmin dump file:///path/to/repo_A/ >repo_A.dump
svnadmin dump file:///path/to/repo_B/ >repo_B.dump
```

This dump files contains all the commits from the whole repositories. This is actually a full copy of the complete repository in one single file. Earlier I explained the structure we want to go for; so the content of repository A should be in the “branch” directory of the new repository but without the “tags” and “branch” directories of repo_A.

So the next step is to filter the unneeded content out of the dump files. In this case the “tags” and “branch” are not needed, we only want the content of the “trunk” directory, and for repo_B we need the “trunk” and “tags”, but we don’t need the “branch” directory. This is done with the following command. For repo_A it defines only the content that should be included, while for repo_B it defines what should be excluded. These commands will also cause the dump to exclude revisions that do not contain any changes as well as renumbering the revisions. If you don’t want that, omit the appropriate parameter.

```
cat repo_A.dump | svndumpfilter include "trunk" --drop-empty-revs --renumber-revs >repo_A_trunk.dump
cat repo_B.dump | svndumpfilter exclude "branch" --drop-empty-revs --renumber-revs >repo_B_trunk_tags.dump
If you need any other directories from the dump as well, you need to adapt the filter accordingly. See the svndumpfilter manpage for details.
```

Now we need to build up the new repository structure as described above. To do so we need to create a new repository and check this out locally to build up the structure.

```
svnadmin create /path/to/repo_combined
svn checkout file:///path/to/repo_combined/ /path/to/checkout_combined
```

Create the structure of the new repository as usual with a new repository. After the directory structure has been created, it needs to be added and committed to the repository. All this is done with the following commands:

```
cd /path/to/checkout_combined
```

```
mkdir branch
mkdir branch/repo_A_trunk
mkdir tags
mkdir trunk
svn add *
svn commit -m "commit message for the structure of the new repository"
```

Now that we have the structure created we can load the dump into the new repository. When doing this, the parent directory you load it to needs to already exist. That's why we needed to create the parent directory ("branch/repo_A_trunk") before loading the dump.

```
svnadmin load repo_combined --parent-dir branch/repo_A_trunk --ignore-uuid <repo_A_trunk.dump
svnadmin load repo_combined --ignore-uuid <repo_B_trunk.dump
```

After this, the repository contains the "trunk" from repository A and from repository B, the "trunk" and "branch". Repository A is located at /branch/repo_A_trunk and the "trunk" from repository B is in the "trunk" of the new repository. By adding first repo_A and afterwards the repo_B dump, we keep the revisions in their chronological order.

To check this has all worked, just execute "svn update" in the already checked out directory. With "svn log -v" you will then be able to print the complete history.

Alternative structure

Of course, you can use the same procedure to create a structure like the following just by not filtering out anything, and load the repositories into the directories repo_A and repo_B.

```
repo_combined
|-- repo_A
|   |-- branch
|   |   |-- tags
|   |   |-- trunk
|   |       |-- file1.txt
|   |       `-- file2.txt
|-- repo_B
    |-- branch
    |   |-- tags
    |   |   |-- tag_1
    |   |   `-- tag_2
    |   |-- trunk
    |       |-- file1.txt
    |       `-- file2.txt
```

With this procedure you can create any structure you want, but keep in mind that you can not load a dump into a directory which does not already exist in the repository or which already contains files with the same names as those you would be importing.

From <<https://blog.tinned-software.net/merge-two-svn-repositories/>>

Change author of SVN commit

Wednesday, July 17, 2019 10:49 AM

What can you do when for some reason you have the wrong author in your SVN commit? You might think this is something that should never happen, but what if it did? There is a solution.

The good news is that this solution is not a bad hack into the deep, dark core of SVN. It is supported by SVN with one of the already included hooks. When you create an SVN repository, a complete directory structure is created for it. This directory structure contains all the revisions of the repository as well as the configuration and the hooks.

Advertisements

```
repository_name/
|- conf
|- db
|- format
|- hooks
|- locks
```

The hooks directory in a new repository contains a number of hooks which are not enabled. One of them is called “pre-revprop-change” which we will use to change the author. SVN supports more than just changing the author.

The hook itself does not provide the functionality to change the commit properties. It is more a controlling instance to allow or deny it. As mentioned, all the hooks are disabled by default. To enable the “pre-revprop-change” hook we have to go to the “hooks” directory and rename the file “pre-revprop-change.tmpl” to “pre-revprop-change”. We also have to make sure that this file is executable to enable the hook.

By default the hook only allows changing of the property svn:log, so you need to modify the hook or instead generate a hook file with the following content. The hook itself is a small shell script that should return the exit code “0” to allow the change operation, or anything else to deny it.

exit 0

When the line “exit 0” is placed at the beginning of the existing script or alone in a separate one, the hook will allow all property changes to the SVN repository. Now to change the author of a specific revision, execute the following command where “revision_number” is the revision that you want to change the author for and “new_username” is the new author/username you want to set.

```
svn propset --revprop -r <revision_number> svn:author <new_username>
```

Other properties can be changed in the same way. For example, the commit message with this command:

```
svn propset --revprop -r <revision_number> svn:log <new_commit_message>
```

I used this as a temporary solution to fix a problem that occurred during migration. To avoid any unwanted changes I disabled the hook again after I corrected the author.

From <<https://blog.tinned-software.net/change-author-of-last-svn-commit/>>

Changing an SVN commit message

Wednesday, July 17, 2019 10:50 AM

Changing an SVN commit message retroactively involves two steps. First, the repository must have a hook enabled. Then the svn client must issue a propset command.

On the subversion server:

```
cd /var/www/svn/myrepository/hooks  
cp pre-revprop-change.tmpl pre-revprop-change  
chmod u+x pre-revprop-change  
chown apache:apache pre-revprop-change
```

Line-by-line explanation:

Change to the subversion repository's hooks directory.

Copy the template file that is already there to a file without the .tmpl extension.

Make the file executable.

Change ownership of the file to the apache user (this is the user that Apache runs as on Fedora -like systems such as RHEL6).

Changes to log messages are now allowed.

Now an svn command can be issued on the client at the command line to revise the log message for a certain revision (in this case, revision 42):

```
svn propset -r 42 --revprop svn:log 'my new commit message'  
property 'svn:log' set on repository revision 42
```

Or

```
$ svn propedit -r N --revprop svn:log URL  
$ svn propset -r N --revprop svn:log "new log message" URL  
$ svnadmin setlog REPOS_PATH -r N FILE  
From <http://help.collab.net/topic/faq/changelog.html>
```

Splitting up an SVN repository

Wednesday, July 17, 2019 10:51 AM

When I was creating my SVN repository I was lazy and created just one repository for all my projects. This was easy to administrate and to use; only one repository to configure with user names and passwords, only one URL to remember, but over time this repository has grown, and at some point the whole thing has got quite messy. As SVN is not built to delete anything, it grows and you can't get rid of old projects or separate things anymore. You might end up having something similar to this in your SVN repository:

```
/  
|---project_A  
| |---trunk  
| |---branches  
| |---tags  
|---project_B  
| |---trunk  
| |---branches  
| |---tags  
---directory_1  
| |---project_C  
| | |---trunk  
| | |---branches  
| | |---tags  
| |---project_D  
| | |---trunk  
| | |---branches  
| | |---tags  
| .  
| .
```

That all works fine so far but when it comes to backup you have to store the complete repository and all its revision as one huge package. But if you want to, there is a way of splitting a single repository up. In this post I want to go through the way I cleaned up my repositories.

Advertisements

How does it work?

The whole procedure sounds fairly easy: you dump the complete directory, then you filter out what you don't want to have in it and at the end you import it again into a new repository. The whole procedure requires a lot of manual work and a couple of shell commands but at the end the result is great.

Dump the Repository

The first step is quite simple but must be run directly on the machine where the repository is located. The command "svnadmin dump" requires direct access to the repository directory.

```
svnadmin dump /path/to/repository/ >repository.dump
```

After that is finished, you will find the file 'repository.dump' containing a full dump of the complete repository.

Filter the SVN dump

The SVN dump as we have it now contains all revisions of the complete repository, but as we just want one project extracted we need to filter it out of the complete dump. We will do this using the "svndumpfilter" program. While this program will not modify the full dump in any way, you can repeat this step for each project you want to extract into its own repository without creating the complete dump again.

To filter the dump do the following.

```
cat repository.dump | svndumpfilter include "directory_1/project_C" >/project_C.dump
```

The parameter "--drop-empty-revs" causes all revisions that are not related to the filtered project to be removed from the dump. The parameter "--renumber-revs" renumerates revisions to avoid missing numbers caused by the first parameter.

The resulting dump file will now contain only the one project we filtered out. It's important to note at this point that the structure within the dump is still unchanged. If we import the dump as it is now, the "directory_1/project_C" will be still in the new repository. This brings us to our first problem. As we have filtered a sub-directory, the SVN entry to create this directory we filtered for is missing. So if we imported it, we would get an error like this:

```
svnadmin: File not found: transaction '0-0', path 'directory_1/project_C'
```

This error tells us that the path "directory_1" doesn't exist, so trying to create the directory "project_C" in it is not possible. This is something we have to correct by hand. Depending on how you plan to load the dump into the new repository there are 2 possibilities. To get the dump working for us, we need to edit the dump file as follows.



Short word about the right editor

Choose your editor with care, as the dump might be huge and loading big files is not a strong point of all editors. Also, some editors might try to modify the file even without asking. The editors "nano" or "pico" are very nice, but useless for this job, as they try to add a line break into lines if they are too long to show them in one line on the screen and this can result in a corrupt file. The "vi" editor is great for this job, but not everyone's favorite editor!

You will probably find something like this in one of the the first revisions. Each revision starts with a line like "Revision-number: 1".

```
PROPS-END  
Node-path: directory_1/project_C  
Node-action: add  
Node-kind: dir  
Prop-content-length: 10  
Content-length: 10
```

PROPS-END

```
Node-path: directory_1/project_C/trunk
Node-action: add
Node-kind: dir
Prop-content-length: 10
Content-length: 10
```

PROPS-END

This means that this revision has created the directories “directory_1/project_C/trunk” in one go. It first creates the “project_C” directory in “directory_1” that does not exist. This is exactly where we need to fix it.

Now if you want to keep the structure as it is, you simply need to add one of those PROPS blocks to let it create “directory_1” before “project_C” is created. You will then have something like this.

```
PROPS-END
Node-path: directory_1
Node-action: add
Node-kind: dir
Prop-content-length: 10
Content-length: 10
```

PROPS-END

```
Node-path: directory_1/project_C
Node-action: add
Node-kind: dir
Prop-content-length: 10
Content-length: 10
```

PROPS-END

```
Node-path: directory_1/project_C/trunk
Node-action: add
Node-kind: dir
Prop-content-length: 10
Content-length: 10
```

PROPS-END

If you don't want to keep the structure anyway, you can just delete the PROPS block with the “Node-path: directory_1/project_C” completely. If you have a separate revision that shows just one PROPS block with the “Node-path: directory_1/project_C” then you need to delete the complete Revision from the dump. That can be done by deleting from the “Revision-number: “ line to the next of those lines.

Change the project path in the repository

We have now filtered the project from “directory_1/project_C” into our dump. But we don't want it in the new repository under the path “directory_1/project_C”. So we need to change that in our dump. To remove the path and just have the trunk, tags, branches directly in the root of the new repository, run the following command. Please note that the “/” needs to be escaped here and so is shown as “\\“.

```
sed -i 's/Node-path: directory_1\\project_C\\Node-path: /g' project_C.dump
sed -i 's/Node-copyfrom-path: directory_1\\project_C\\Node-copyfrom-path: /g' project_C.dump
```

Import the dump into a new repository

The final step is to import the dump into a fresh new repository. To do this, we create a new repository (probably in the location of your other repositories). After the SVN repository is created, we load the prepared dump into the repository. This can be done with the following commands:

```
svnadmin create /path/to/project_C
svnadmin load /path/to/project_C/ --ignore-uuid <project_C.dump
```

The –ignore-uuid is an important parameter here. Every SVN repository has a universally unique identifier or UUID. The UUID is used by SVN clients to identify the repository. If you imported the dump without this parameter you would end up with two repositories with the same UUID.

With these last commands you have a separate repository. If you did not already, now might be the time to configure the new repositories user and access rights as well as block access to the extracted project in the old repository to avoid confusion.

From <<https://blog.tinned-software.net/splitting-up-an-svn-repository/>>

Hook (windows)

Thursday, July 25, 2019 12:14 PM

```
@ECHO OFF
:: Set all parameters. Even though most are not used, in case you want to add
:: changes that allow, for example, editing of the author or addition of log messages.
set repository=%1
set revision=%2
set userName=%3
set propertyName=%4
set action=%5

:: Only allow the log message to be changed, but not author, etc.
if /I not "%propertyName%" == "svn:log" goto ERROR_PROPNAME

:: Only allow modification of a log message, not addition or deletion.
if /I not "%action%" == "M" goto ERROR_ACTION

:: Make sure that the new svn:log message is not empty.
set blsEmpty=true
for /f "tokens=*" %%g in ('find /V "') do (
set blsEmpty=false
)
if "%blsEmpty%" == "true" goto ERROR_EMPTY

goto :eof

:ERROR_EMPTY
echo Empty svn:log messages are not allowed. >&2
goto ERROR_EXIT

:ERROR_PROPNAME
echo Only changes to svn:log messages are allowed. >&2
goto ERROR_EXIT

:ERROR_ACTION
echo Only modifications to svn:log revision properties are allowed. >&2
goto ERROR_EXIT

:ERROR_EXIT
exit /b 1
```

Svn lock

Friday, October 18, 2019 11:38 AM

<http://svnbook.red-bean.com/en/1.7/svn.advanced.locking.html>

Locking

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Locking

Subversion's copy-modify-merge version control model lives and dies on its data merging algorithms—specifically on how well those algorithms perform when trying to resolve conflicts caused by multiple users modifying the same file concurrently. Subversion itself provides only one such algorithm: a three-way differencing algorithm that is smart enough to handle data at a granularity of a single line of text. Subversion also allows you to supplement its content merge processing with external differencing utilities (as described in [the section called "External diff3"](#) and [the section called "External merge"](#)), some of which may do an even better job, perhaps providing granularity of a word or a single character of text. But common among those algorithms is that they generally work only on text files. The landscape starts to look pretty grim when you start talking about content merges of noncontextual file formats. And when you can't find a tool that can handle that type of merging, you begin to run into problems with the copy-modify-merge model.

Let's look at a real-life example of where this model runs aground. Harry and Sally are both graphic designers working on the same project, a bit of marketing collateral for an automobile mechanic. Central to the design of a particular poster is an image of a car in need of some bodywork, stored in a file using the PNG image format. The poster's layout is almost finished, and both Harry and Sally are pleased with the particular photo they chose for their damaged car—a baby blue 1967 Ford Mustang with an unfortunate bit of crumpling on the left front fender.

Now, as is common in graphic design work, there's a change in plans, which causes the car's color to be a concern. So Sally updates her working copy to HEAD, fires up her photo-editing software, and sets about tweaking the image so that the car is now cherry red. Meanwhile, Harry, feeling particularly inspired that day, decides that the image would have greater impact if the car also appears to have suffered greater impact. He, too, updates to HEAD, and then draws some cracks on the vehicle's windshield. He manages to finish his work before Sally finishes hers, and after admiring the fruits of his undeniable talent, he commits the modified image. Shortly thereafter, Sally is finished with the car's new finish and tries to commit her changes. But, as expected, Subversion fails the commit, informing Sally that her version of the image is now out of date.

Here's where the difficulty sets in. If Harry and Sally were making changes to a text file, Sally would simply update her working copy, receiving Harry's changes in the process. In the worst possible case, they would have modified the same region of the file, and Sally would have to work out by hand the proper resolution to the conflict. But these aren't text files—they are binary images. And while it's a simple matter to describe what one would expect the results of this content merge to be, there is precious little chance that any software exists that is smart enough to examine the common baseline image that each of these graphic artists worked against, the changes that Harry made, and the changes that Sally made, and then spit out an image of a busted-up red Mustang with a cracked windshield!

Of course, things would have gone more smoothly if Harry and Sally had serialized their modifications to the image—if, say, Harry had waited to draw his windshield cracks on Sally's now-red car, or if Sally had tweaked the color of a car whose windshield was already cracked. As is discussed in [the section called "The copy-modify-merge solution"](#), most of these types of problems go away entirely where perfect communication between Harry and Sally exists.^[21] But as one's version control system is, in fact, one form of communication, it follows that having that software facilitate the serialization of nonparallelizable editing efforts is no bad thing. This is where Subversion's implementation of the lock-modify-unlock model steps into the spotlight. This is where we talk about Subversion's *locking* feature, which is similar to the "reserved checkouts" mechanisms of other version control systems.

Subversion's locking feature exists ultimately to minimize wasted time and effort. By allowing a user to programmatically claim the exclusive right to change a file in the repository, that user can be reasonably confident that any energy he invests on unmergeable changes won't be wasted—his commit of those changes will succeed. Also, because Subversion communicates to other users that serialization is in effect for a particular versioned object, those users can reasonably expect that the object is about to be changed by someone else. They, too, can then avoid wasting their time and energy on unmergeable changes that won't be committable due to eventual out-of-dateness.

When referring to Subversion's locking feature, one is actually talking about a fairly diverse collection of behaviors, which include the ability to lock a versioned file^[22] (claiming the exclusive right to modify the file), to unlock that file (yielding that exclusive right to modify), to see reports about which files are locked and by whom, to annotate files for which locking before editing is strongly advised, and so on. In this section, we'll cover all of these facets of the larger locking feature.

The Three Meanings of "Lock"

In this section, and almost everywhere in this book, the words "lock" and "locking" describe a mechanism for mutual exclusion between users to avoid clashing commits. Unfortunately, there are two other sorts of "lock" with which Subversion, and therefore this book, sometimes needs to be concerned.

The second is *working copy locks*, used internally by Subversion to prevent clashes between multiple Subversion clients operating on the same working copy. This is the sort of lock indicated by an L in the third column of *svn status* output, and removed by the *svn cleanup* command, as described in [the section called "Sometimes You Just Need to Clean Up"](#).

Third, there are *database locks*, used internally by the Berkeley DB backend to prevent clashes between multiple programs trying to access the database. This is the sort of lock whose unwanted persistence after an error can cause a repository to be "wedged," as described in [the section called "Berkeley DB Recovery"](#).

You can generally forget about these other kinds of locks until something goes wrong that requires you to care about them. In this book, "lock" means the first sort unless the contrary is either clear from context or explicitly stated.

Creating Locks

In the Subversion repository, a *lock* is a piece of metadata that grants exclusive access to one user to change a file. This user is said to be the *lock owner*. Each lock also has a unique identifier, typically a long string of characters, known as the *lock token*. The repository manages locks, ultimately handling their creation, enforcement, and removal. If any commit transaction attempts to modify or delete a locked file (or delete one of the parent directories of the file), the repository will demand two pieces of information—that the client performing the commit be authenticated as the lock owner, and that the lock token has been provided as part of the commit process as a form of proof that the client knows which lock it is using.

To demonstrate lock creation, let's refer back to our example of multiple graphic designers working on the same binary image files. Harry has decided to change a JPEG image. To prevent other people from committing changes to the file while he is modifying it (as well as alerting them that he is about to change it), he locks the file in the repository using the *svn lock* command.

```
$ svn lock banana.jpg -n "Editing file for tomorrow's release."  
banana.jpg' locked by user 'harry'.  
$
```

The preceding example demonstrates a number of new things. First, notice that Harry passed the --message (-m) option to *svn lock*. Similar to *svn commit*, the *svn lock* command can take comments—via either --message (-m) or --file (-F)—to describe the reason for locking the file. Unlike *svn commit*, however, *svn lock* will not demand a message by launching your preferred text editor. Lock comments are optional, but still recommended to aid communication.

Second, the lock attempt succeeded. This means that the file wasn't already locked, and that Harry had the latest version of the file. If Harry's working copy of the file had been out of date, the repository would have rejected the request, forcing Harry to *svn update* and reattempt the locking command. The locking command would also have failed if the file had already been locked by someone else.

As you can see, the *svn lock* command prints confirmation of the successful lock. At this point, the fact that the file is locked becomes apparent in the output of the *svn status* and *svn info* reporting subcommands.

```
$ svn status  
  K banana.jpg  
$ svn info banana.jpg  
Path: banana.jpg  
Name: banana.jpg  
Working Copy Root Path: /home/harry/project  
URL: http://svn.example.com/repos/project/banana.jpg  
Repository Root: http://svn.example.com/repos/project  
Repository UUID: ebd2f264-5ef2-0310-a47a-87b0ce17a8ec  
Revision: 2198  
Node Kind: file  
Schedule: normal  
Last Changed Author: frank  
Last Changed Rev: 1950  
Last Changed Date: 2006-03-15 12:43:04 -0600 (Wed, 15 Mar 2006)  
Text Last Updated: 2006-06-08 19:23:07 -0500 (Thu, 08 Jun 2006)  
Properties Last Updated: 2006-06-08 19:23:07 -0500 (Thu, 08 Jun 2006)  
Checksum: 3b110d3b10638f5d1fe0f436a5a2a5  
Lock Token: opaquelocktoken:0cf0f600b-8819-0310-9e48-355b44d4a58e  
Lock Owner: harry  
Lock Created: 2006-06-14 17:20:31 -0500 (Wed, 14 Jun 2006)  
Lock Comment (1 line):  
Editing file for tomorrow's release.  
$
```

The fact that the `svn info` command, which does not contact the repository when run against working copy paths, can display the lock token reveals an important piece of information about those tokens: they are cached in the working copy. The presence of the lock token is critical. It gives the working copy authorization to make use of the lock later on. Also, the `svn status` command shows a K next to the file (short for locked), indicating that the lock token is present.

Regarding Lock Tokens

A lock token isn't an authentication token, so much as an *authorization* token. The token isn't a protected secret. In fact, a lock's unique token is discoverable by anyone who runs `svn info URL`. A lock token is special only when it lives inside a working copy. It's proof that the lock was created in that particular working copy, and not somewhere else by some other client. Merely authenticating as the lock owner isn't enough to prevent accidents.

For example, suppose you lock a file using a computer at your office, but leave work for the day before you finish your changes to that file. It should not be possible to accidentally commit changes to that same file from your home computer later that evening simply because you've authenticated as the lock's owner. In other words, the lock token prevents one piece of Subversion-related software from undermining the work of another. (In our example, if you really need to change the file from an alternative working copy, you would need to *break* the lock and relock the file.)

Now that Harry has locked `banana.jpg`, Sally is unable to change or delete that file:

```
$ svn delete banana.jpg
D    banana.jpg
$ svn commit -m "Delete useless file."
Deleting  banana.jpg
svn: E175002: Commit failed (details follow):
svn: E175002: Server sent unexpected return value (423 Locked) in response to
DELETE request for '/repos/project/!svn/wrk/64bad3a9-96f9-0310-818a-df4224ddc
35d/banana.jpg'
$
```

But Harry, after touching up the banana's shade of yellow, is able to commit his changes to the file. That's because he authenticates as the lock owner and also because his working copy holds the correct lock token:

```
$ svn status
M  K banana.jpg
$ svn commit -m "Make banana more yellow"
Sending  banana.jpg
Transmitting file data .
Committed revision 2201.
$ svn status
$
```

Notice that after the commit is finished, `svn status` shows that the lock token is no longer present in the working copy. This is the standard behavior of `svn commit`—it searches the working copy (or list of targets, if you provide such a list) for local modifications and sends all the lock tokens it encounters during this walk to the server as part of the commit transaction. After the commit completes successfully, all of the repository locks that were mentioned are released—even on files that weren't committed. This is meant to discourage users from being sloppy about locking or from holding locks for too long. If Harry haphazardly locks 30 files in a directory named `images` because he's unsure of which files he needs to change, yet changes only four of those files, the process will still release all 30 locks.

This behavior of automatically releasing locks can be overridden with the `--no-unlock` option to `svn commit`. This is best used for those times when you want to commit changes, but still plan to make more changes and thus need to retain existing locks. You can also make this your default behavior by setting the `no-unlock` runtime configuration option (see [the section called "Runtime Configuration Area"](#)).

Of course, locking a file doesn't oblige one to commit a change to it. The lock can be released at any time with a simple `svn unlock` command:

```
$ svn unlock banana.c
'banana.c' unlocked.
```

Discovering Locks

When a commit fails due to someone else's locks, it's fairly easy to learn about them. The easiest way is to run `svn status -u`:

```
$ svn status -u
M      23  bar.c
M  O      32  raisin.jpg
*       72  foo.h
Status against revision: 105
$
```

In this example, Sally can see not only that her copy of `foo.h` is out of date, but also that one of the two modified files she plans to commit is locked in the repository. The O symbol stands for "Other," meaning that a lock exists on the file and was created by somebody else. If she were to attempt a commit, the lock on `raisin.jpg` would prevent it. Sally is left wondering who made the lock, when, and why. Once again, `svn info` has the answers:

```
$ svn info ^/raisin.jpg
Path: raisin.jpg
Name: raisin.jpg
URL: http://svn.example.com/repos/project/raisin.jpg
Repository Root: http://svn.example.com/repos/project
Repository UUID: ebd2f264-5ef2-0310-a47a-87b0ce17a8ec
Revision: 105
Node Kind: file
Last Changed Author: sally
Last Changed Rev: 32
Last Changed Date: 2006-01-25 12:43:04 -0600 (Sun, 25 Jan 2006)
Lock Token: opaque locktoken:fc2b4dee-98f9-0310-abf3-653ff3226e6b
Lock Owner: harry
Lock Created: 2006-02-16 13:29:18 -0500 (Thu, 16 Feb 2006)
Lock Comment (1 line):
Need to make a quick tweak to this image.
$
```

Just as you can use `svn info` to examine objects in the working copy, you can also use it to examine objects in the repository. If the main argument to `svn info` is a working copy path, then all of the working copy's cached information is displayed; any mention of a lock means that the working copy is holding a lock token (if a file is locked by another user or in another working copy, `svn info` on a working copy path will show no lock information at all). If the main argument to `svn info` is a URL, the information reflects the latest version of an object in the repository, and any mention of a lock describes the current lock on the object.

So in this particular example, Sally can see that Harry locked the file on February 16 to "make a quick tweak." It being June, she suspects that he probably forgot all about the lock. She might phone Harry to complain and ask him to release the lock. If he's unavailable, she might try to forcibly break the lock herself or ask an administrator to do so.

Breaking and Stealing Locks

A repository lock isn't sacred—in Subversion's default configuration state, locks can be released not only by the person who created them, but by anyone. When somebody other than the original lock creator destroys a lock, we refer to this as *breaking the lock*.

From the administrator's chair, it's simple to break locks. The `svnlook` and `svnadmin` programs have the ability to display and remove locks directly from the repository. (For more information about these tools, see [the section called "An Administrator's Toolkit"](#).)

```
$ svnadmin lslocks /var/svn/repos
Path: /project2/images/banana.jpg
UUID Token: opaque locktoken:c32b4d88-e8fb-2310-abb3-153ff1236923
Owner: frank
Created: 2006-06-15 13:29:18 -0500 (Thu, 15 Jun 2006)
Expires:
Comment (1 line):
Still improving the yellow color.
Path: /project/raisin.jpg
UUID Token: opaque locktoken:fc2b4dee-98f9-0310-abf3-653ff3226e6b
Owner: harry
Created: 2006-02-16 13:29:18 -0500 (Thu, 16 Feb 2006)
Expires:
Comment (1 line):
Need to make a quick tweak to this image.
$ svnadmin rmlocks /var/svn/repos /project/raisin.jpg
Removed lock on '/project/raisin.jpg'.
$
```

The more interesting option is to allow users to break each other's locks over the network. To do this, Sally simply needs to pass the `--force` to the `svn unlock` command:

```
$ svn status -u
M      23  bar.c
```

```

M O 32 raisin.jpg
* 72 foo.h
Status against revision: 105
$ svn unlock raisin.jpg
svn: E195013: 'raisin.jpg' is not locked in this working copy
$ svn info raisin.jpg | grep URL
URL: http://svn.example.com/repos/project/raisin.jpg
$ svn unlock http://svn.example.com/repos/project/raisin.jpg
svn: warning: W160039: Unlock failed on 'raisin.jpg' (403 Forbidden)
$ svn unlock --force http://svn.example.com/repos/project/raisin.jpg
'raisin.jpg' unlocked.
$

Now, Sally's initial attempt to unlock failed because she ran svn unlock directly on her working copy of the file, and no lock token was present. To remove the lock directly from the repository, she needs to pass a URL to svn unlock. Her first attempt to unlock the URL fails, because she can't authenticate as the lock owner (nor does she have the lock token). But when she passes --force, the authentication and authorization requirements are ignored, and the remote lock is broken.

Simply breaking a lock may not be enough. In the running example, Sally may not only want to break Harry's long-forgotten lock, but relock the file for her own use. She can accomplish this by using svn unlock with --force and then svn lock back-to-back, but there's a small chance that somebody else might lock the file between the two commands. The simpler thing to do is to steal the lock, which involves breaking and relocking the file all in one atomic step. To do this, Sally passes the --force option to svn lock:
$ svn lock raisin.jpg
svn: warning: W160035: Path '/project/raisin.jpg' is already locked by user 'harry' in filesystem '/var/svn/repos/db'
$ svn lock --force raisin.jpg
'raisin.jpg' locked by user 'sally'.
$

In any case, whether the lock is broken or stolen, Harry may be in for a surprise. Harry's working copy still contains the original lock token, but that lock no longer exists. The lock token is said to be defunct. The lock represented by the lock token has either been broken (no longer in the repository) or stolen (replaced with a different lock). Either way, Harry can see this by asking svn status to contact the repository:
$ svn status
  K raisin.jpg
$ svn status -u
  B 32 raisin.jpg
Status against revision: 105
$ svn update
Updating ':':
  B raisin.jpg
Updated to revision 105.
$ svn status
$

If the repository lock was broken, then svn status --show-updates (-u) displays a B (Broken) symbol next to the file. If a new lock exists in place of the old one, then a T (sTolen) symbol is shown. Finally, svn update notices any defunct lock tokens and removes them from the working copy.
```

Locking Policies

Different systems have different notions of how strict a lock should be. Some folks argue that locks must be strictly enforced at all costs, releasable only by the original creator or administrator. They argue that if anyone can break a lock, chaos runs rampant and the whole point of locking is defeated. The other side argues that locks are first and foremost a communication tool. If users are constantly breaking each other's locks, it represents a cultural failure within the team and the problem falls outside the scope of software enforcement.

Subversion defaults to the "softer" approach, but still allows administrators to create stricter enforcement policies through the use of hook scripts. In particular, the pre-lock and pre-unlock hooks allow administrators to decide when lock creation and lock releases are allowed to happen. Depending on whether a lock already exists, these two hooks can decide whether to allow a certain user to break or steal a lock. The post-lock and post-unlock hooks are also available, and can be used to send email after locking actions. To learn more about repository hooks, see [the section called "Implementing Repository Hooks".](#)

Lock Communication

We've seen how `svn lock` and `svn unlock` can be used to create, release, break, and steal locks. This satisfies the goal of serializing commit access to a file. But what about the larger problem of preventing wasted time?

For example, suppose Harry locks an image file and then begins editing it. Meanwhile, miles away, Sally wants to do the same thing. She doesn't think to run `svn status -u`, so she has no idea that Harry has already locked the file. She spends hours editing the file, and when she tries to commit her change, she discovers that either the file is locked or that she's out of date. Regardless, her changes aren't mergeable with Harry's. One of these two people has to throw away his or her work, and a lot of time has been wasted.

Subversion's solution to this problem is to provide a mechanism to remind users that a file ought to be locked *before* the editing begins. The mechanism is a special property: `svn:needs-lock`. If that property is attached to a file (regardless of its value, which is irrelevant), Subversion will try to use filesystem-level permissions to make the file read-only—unless, of course, the user has explicitly locked the file. When a lock token is present (as a result of using `svn lock`), the file becomes read/write. When the lock is released, the file becomes read-only again.

The theory, then, is that if the image file has this property attached, Sally would immediately notice something is strange when she opens the file for editing: many applications alert users immediately when a read-only file is opened for editing, and nearly all would prevent her from saving changes to the file. This reminds her to lock the file before editing, whereby she discovers the preexisting lock:

```

$ /usr/local/bin/gimp raisin.jpg
gimp: error: file is read-only!
$ ls -l raisin.jpg
-r--r-- 1 sally sally 215589 Jun 8 19:23 raisin.jpg
$ svn lock raisin.jpg
svn: warning: W160035: Path '/project/raisin.jpg' is already locked by user 'harry' in filesystem '/var/svn/repos/db'
$ svn info http://svn.example.com/repos/project/raisin.jpg | grep Lock
Lock Token: opaquelocktoken:fc2b4dee-98f9-0310-abf3-653ff3226e6b
Lock Owner: harry
Lock Created: 2006-06-08 07:29:18 -0500 (Thu, 08 June 2006)
Lock Comment (1 line):
Making some tweaks. Locking for the next two hours.
$ 
```

From <<http://svnbook.red-bean.com/en/1.7/svn.advanced.locking.html>>

SVN STATUS SYMBOLS

Thursday, October 24, 2019 11:22 AM

The first column indicates that an item was added, deleted, or otherwise changed:

''	No modifications.
'A'	Item is scheduled for addition.
'D'	Item is scheduled for deletion.
'M'	Item has been modified.
'R'	Item has been replaced in your working copy. This means the file was scheduled for deletion, and then a new file with the same name was scheduled for addition in its place.
'C'	The contents (as opposed to the properties) of the item conflict with updates received from the repository.
'X'	Item is present because of an externals definition.
'I'	Item is being ignored (e.g., with the svn:ignore property).
'?'	Item is not under version control.
'!'	Item is missing (e.g., you moved or deleted it without using svn). This also indicates that a directory is incomplete (a checkout or update was interrupted).
'~'	Item is versioned as one kind of object (file, directory, link), but has been replaced by a different kind of object.

The second column tells the status of a file's or directory's properties:

''	No modifications.
'M'	Properties for this item have been modified.
'C'	Properties for this item are in conflict with property updates received from the repository.

The third column is populated only if the working copy directory is locked (see the section called "Sometimes You Just Need to Clean Up"):

''	Item is not locked.
'L'	Item is locked.

The fourth column is populated only if the item is scheduled for addition-with-history:

''	No history scheduled with commit.
'+'	History scheduled with commit.

The fifth column is populated only if the item is switched relative to its parent (see the section called "Traversing Branches"):

''	Item is a child of its parent directory.
'S'	Item is switched.

The sixth column is populated with lock information:

''	When --show-updates (-u) is used, this means the file is not locked. If --show-updates (-u) is not used, this merely means that the file is not locked in this working copy.
'K'	File is locked in this working copy.
'O'	File is locked either by another user or in another working copy. This appears only when --show-updates (-u) is used.
'T'	File was locked in this working copy, but the lock has been "stolen" and is invalid. The file is currently locked in the repository. This appears only when --show-updates (-u) is used.
'B'	File was locked in this working copy, but the lock has been "broken" and is invalid. The file is no longer locked. This appears only when --show-updates (-u) is used.

The seventh column is populated only if the item is the victim of a tree conflict:

''	Item is not the victim of a tree conflict.
'C'	Item is the victim of a tree conflict.

The eighth column is always blank. The out-of-date information appears in the ninth column (only if you pass the --show-updates (-u) option):

''	The item in your working copy is up to date.
'*'	A never revision of the item exists on the server.

R|

Friday, November 9, 2018 2:39 PM

VM's:

Environment	Component	IP Address	Host Name	username	password
DEV/SIT	IES/HIX/SSP	10.64.65.234		npanguluri	npanguluri@667/Riuhip@123

Others:

Component	URLs	username	password
Bamboo 20	http://10.64.65.20:8085/allPlans.action	npanguluri	2WrWitpi

ADMIN Console:

Environment	Component	Admin Console URLs	username	password
DEV/SIT	IES	https://10.64.65.213:9044/ibm/console/logon.jsp	npanguluri	equalTREEquite

ENGINE SERVER:

Environment	HOSTNAME	IP	username	Password	Admin Console URLs	username	Password
DEV/SIT(sudo ribapp)	DEVCCMEX01		npanguluri	P@ss1234!			

GAA57258-01-01-01-0000 - BCP code

Daily lead activities

Friday, November 9, 2018 3:24 PM

Daily:

- Morning Call at 11:30 AM IST.
- Production restarts & Validations.
- Sonar
- SVN Diffs
- Morning Handoff at 7:30 AM IST
- Evening Handoff at 7:30 PM IST
- Alert monitoring
- PTO and comp off Monitoring
- Daily Deployment schedule and Follow-ups (Morning & Evening)
- TCC Dashboard Monitoring.
- Daily activity tracking.
- Environment repointing validations (reviews)
- Properties Tracker Update
- Environment info sheet update.
- Code merge propagation plan publish after every branch creation.

Monday :

- Morning Deployment repointing & DB refresh Status mail

Thursday :

- Analytics Release notes Walkthrough
- PROD deployment instructions
- Weekend repointing & DB refreshes Mail

Friday:

- Weekend work planning mail & Follow-up with Dev & QA managers
- Tech Deployment Readiness call.

Saturday Morning :

- Production Deployments for patch releases.

Env validation

Thursday, July 6, 2017 10:24 AM

Environment Validation Triggers:

- 1) Basic validations after every deployment
- 2) Medium level validations after activities like DB Refresh or any specific configuration change request like TT-enable/disable, TAM-enable/disable, etc.
- 3) Extensive validations after new environment setup or environment repurpose.

Basic Validations Checklist:

- 1) Verify Bamboo plans
- 2) Check disk space and memory utilization in build server and application servers
- 3) Validate if all application URLs are up depending on TAM ON or OFF
- 4) Validate if all Mule instances are up and running
- 5) Validate if OPA Deployment Check is successful

Medium level Validations:

Along with Basic validations perform below:

- 1) Time Travel configuration in case of a TT environment
- 2) Respective TAM configurations for ON and OFF
- 3) Disk space and memory utilization on application servers, batch servers and mule server
- 4) Timestamp validation for all the newly installed applications
 - a) WAS - InstalledApps directory
 - b) Mule – apps directory for timestamp and total number of files
 - c) OPA – catalina.out for rule base load confirmation message
 - d) Batch Server – permissions for opconuser1 and scripts present in scripts folder
- 5) Verify application logins

Extensive Validations:

Along with Basic and Medium level validations, perform below:

- 1) Verify Datasource – ojdbc jar location, DB connection properties, test connections from console
- 2) Verify shared library classpaths values and their actual locations, classloader configuration
- 3) Verify application names in WAS console and Deployment Scripts. Delete any obsolete applications
- 4) Verify JVM Classpath Settings and their actual locations
- 5) Verify Web Container Timeout settings and all application specific server configurations
- 6) Verify property files with respect to DB connections, Mule urls and ports, OPA urls and ports, activeMQ url and ports, tibco port
- 7) Verify HPExtreme and ImageNow configurations
- 8) Verify log mounts
- 9) Verify application logins after deployment

Password encryption

Wednesday, April 12, 2017 1:25 PM

The screenshot shows a Windows Command Prompt window titled "Command Prompt". The command entered is "C:\Users\vpanguluri\Desktop>java -jar PasswordService.jar". The output displays a menu: "Please enter your option ##### press 1 to 'Encrypt' press 2 to 'Decrypt' 2". It then asks for a message to decrypt: "***** Enter your message for decryption *****". The decrypted message is shown as "KnXkIj7C05FPQyH1DcgRsgmKZoyVF2z I400Cp_123". The window is set against a dark background with a standard Windows taskbar at the bottom.

```
C:\Users\vpanguluri\Desktop>java -jar PasswordService.jar
#####
Please enter your option #####
press 1 to 'Encrypt'
press 2 to 'Decrypt'
2
*****
Enter your message for decryption *****
KnXkIj7C05FPQyH1DcgRsgmKZoyVF2z
Please find the decrypted message for : KnXkIj7C05FPQyH1DcgRsgmKZoyVF2z
I400Cp_123

C:\Users\vpanguluri\Desktop>
```

HPExstream License Renewal Document

Version: 1.0

Date: Sep 05, 2018

1 Document Control Information

1. Document Information

Document Identification	HPExstream License Renewal
Document Author	Saikrishna Vadlakondas
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3. Document Review/Approval History

Date	Name	Organization/Title	Comments
09/05/2018	Saikrishna Vadlakondas	Deloitte	Initial Submission

2 Introduction

1. Purpose

This documentation will help in applying license for HPExstream on both Linux and Windows.

License renewal Steps

1. HPExstream license installation on Linux Server:

- Login to HPExstream box
- Copy ekf and lic file in below two locations:
 - a. /Mount_HPEXstream/data/Tar
 - b. /Mount_HPEXstream/data/HP_Exstream_Engine_8_0_322_Linux_64_DB/Tar
- Edit the ews-config.xml file (from /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/installedApps/ENT-AP-UHAPP03Cell01/EngineService.ear/EngineService.war/WEB-INF) with the new key and restart Engine Service.
- Use ldd /Mount_HPEXstream/data/HP_Exstream_Engine_8_0_322_Linux_64_DB/Tar/Engine to confirm all the SOs are there.

2. HPExstream license installation on Windows Server:

- Login to HPExstream Console (Make sure you are on the master server)

URL: <http://ent-ut-uhlma02.uhip.ri.gov:8090/systeminfo?vendor=exstream&licenseTab=&selected=>



- Now click on Vendor Daemon Configuration.



- From the list, click on exstream



- From Vendor Daemon Actions, stop the daemon.
- Now go back to Vendor Daemon configuration screen and select Import license.



Click on choose File and select the license from the folder where the license is copied.

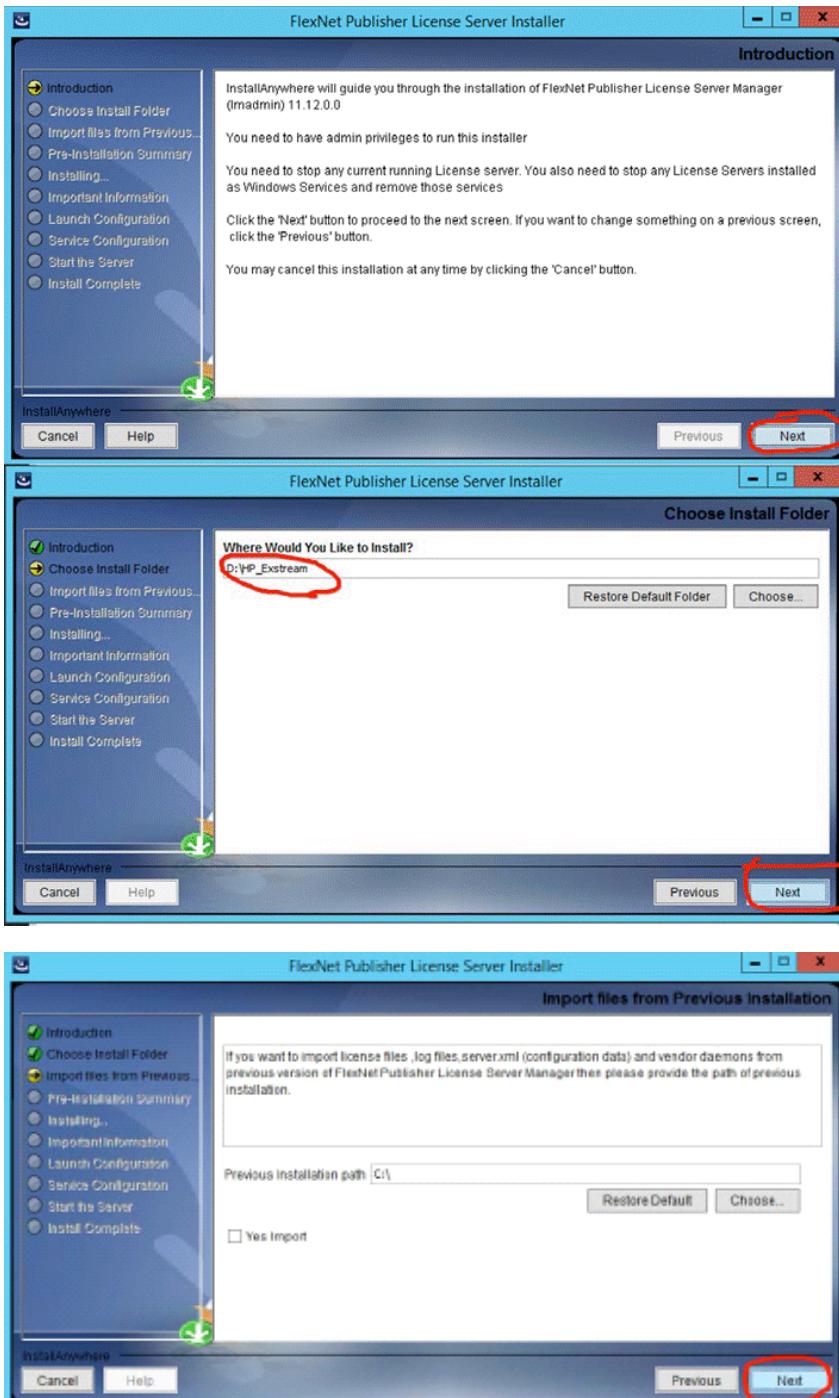
- Once the license is imported successfully, start the daemon from the Vendor daemon actions.

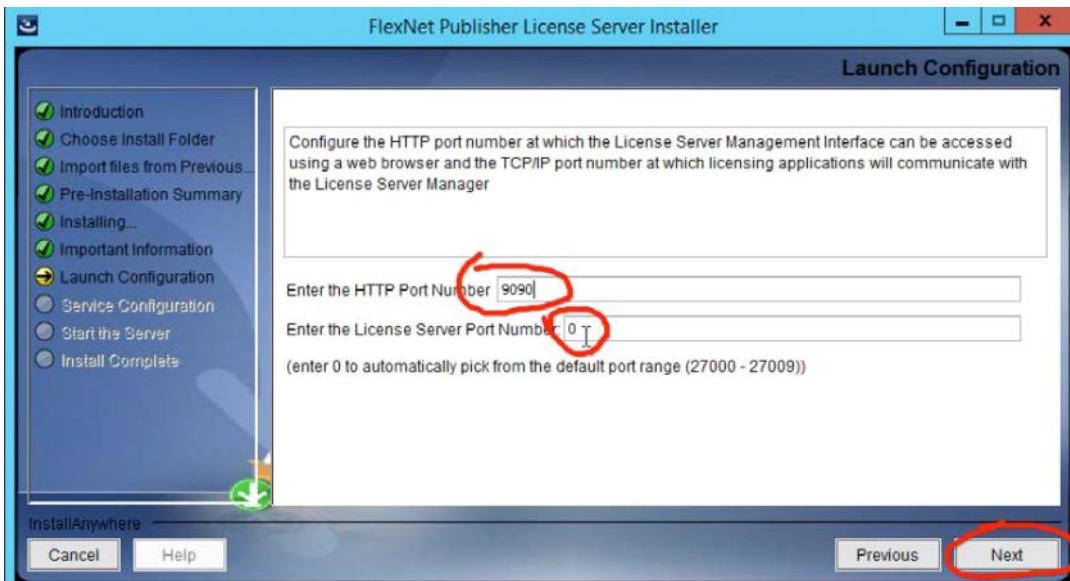
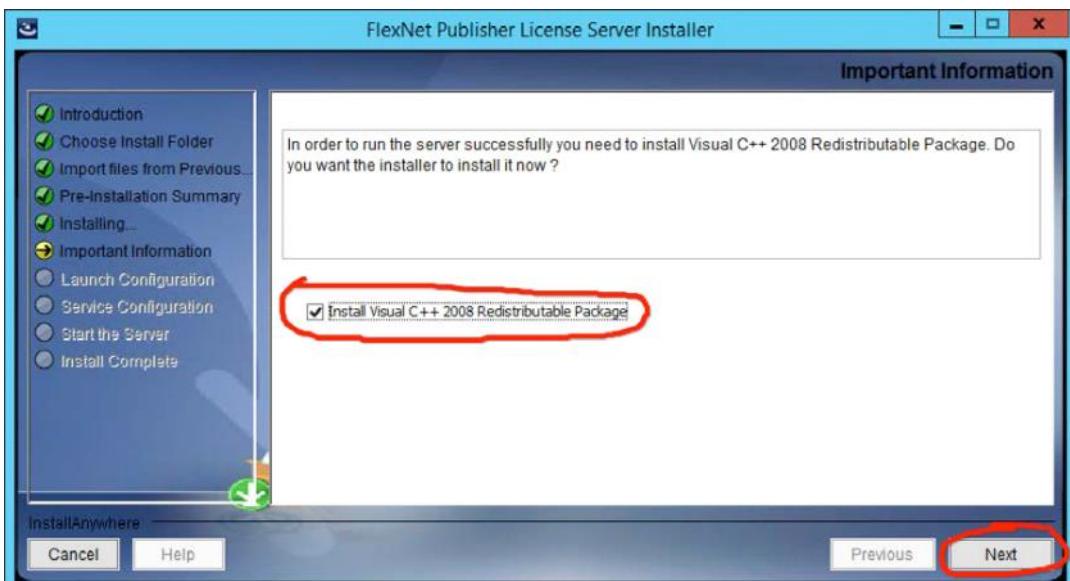
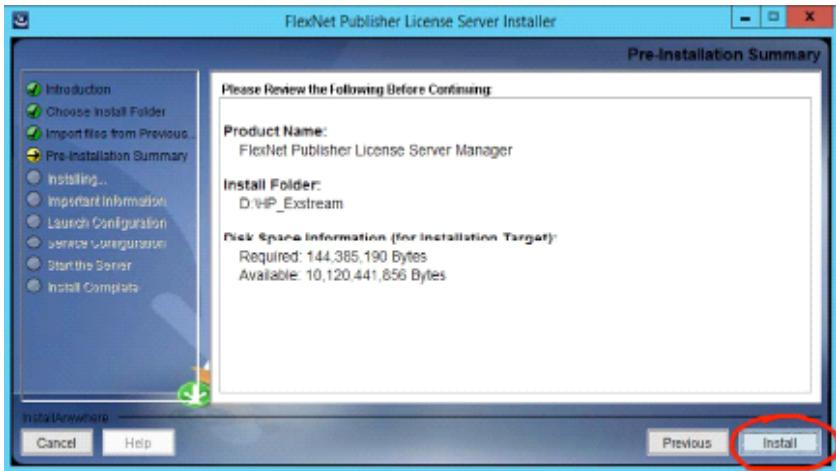
HP Exstream installation document

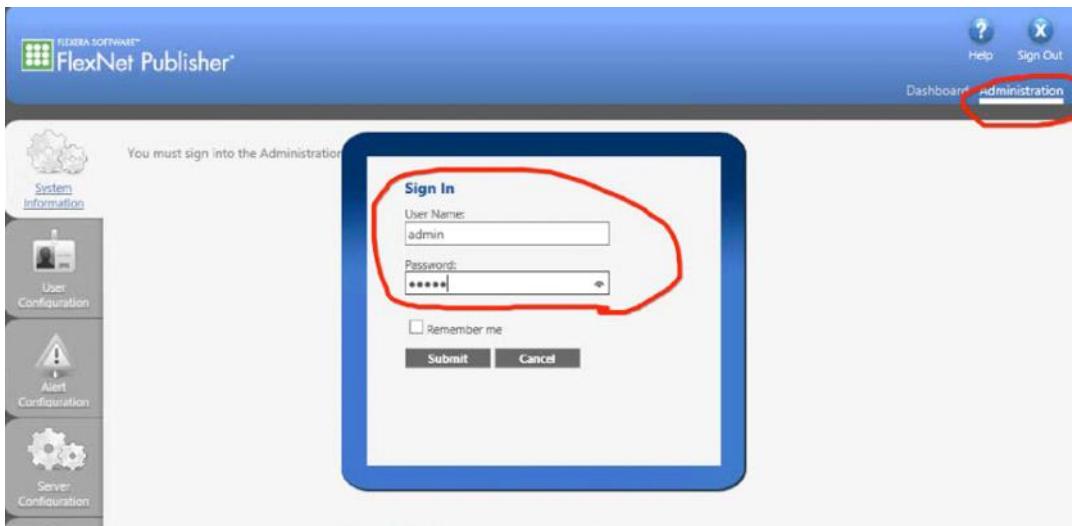
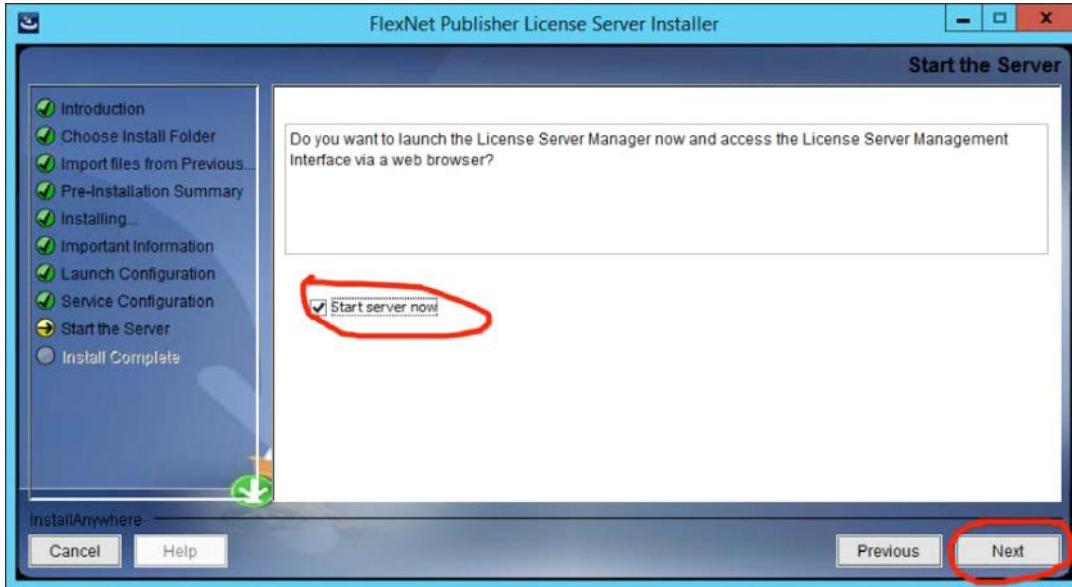
Friday, November 9, 2018 2:46 PM

HP Exstream License Install

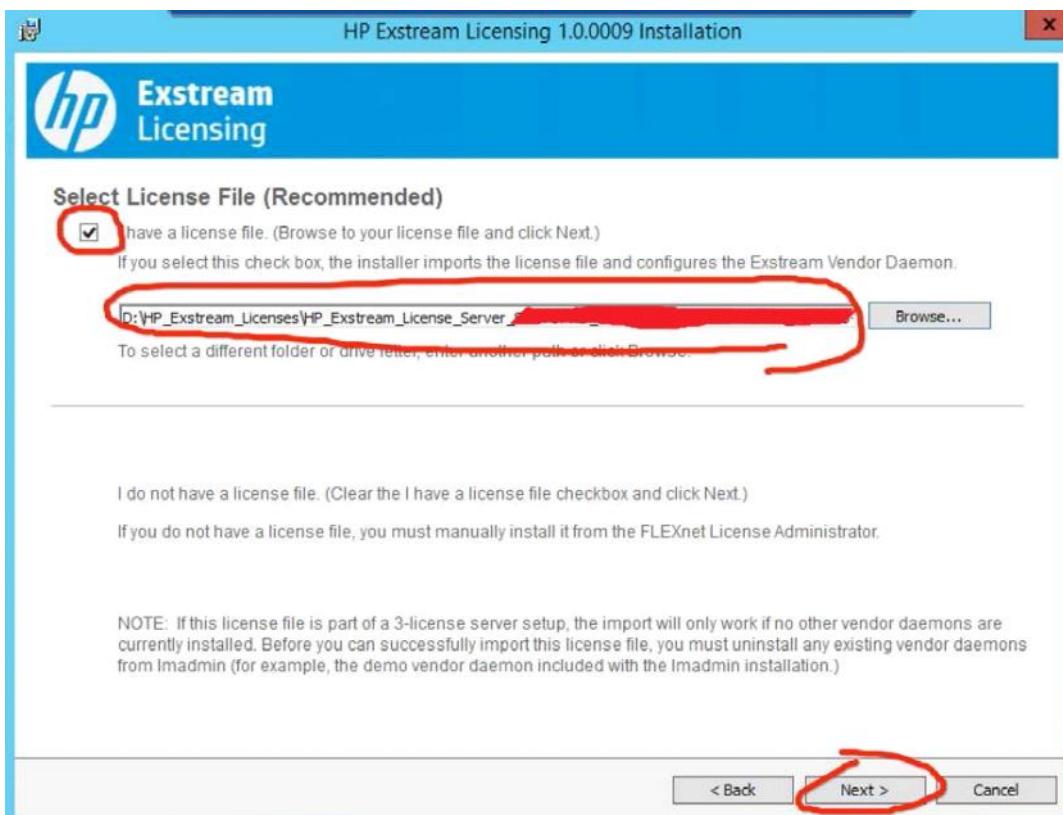
1. License server software package is called HP_Exstream_License_Server_Install_1_0_0009.zip
2. Copy that package over to the windows server under the D Drive as well as all Licenses that were sent to us. Currently these licenses reside under /opt/Sw/eligibility/HPXtrm or the equivalent Windows Share.
 - a. I placed the licenses under D:\HP_Exstream_Licenses
3. Unzip HP_Exstream_License_Server_Install_1_0_0009.zip under the D Drive.

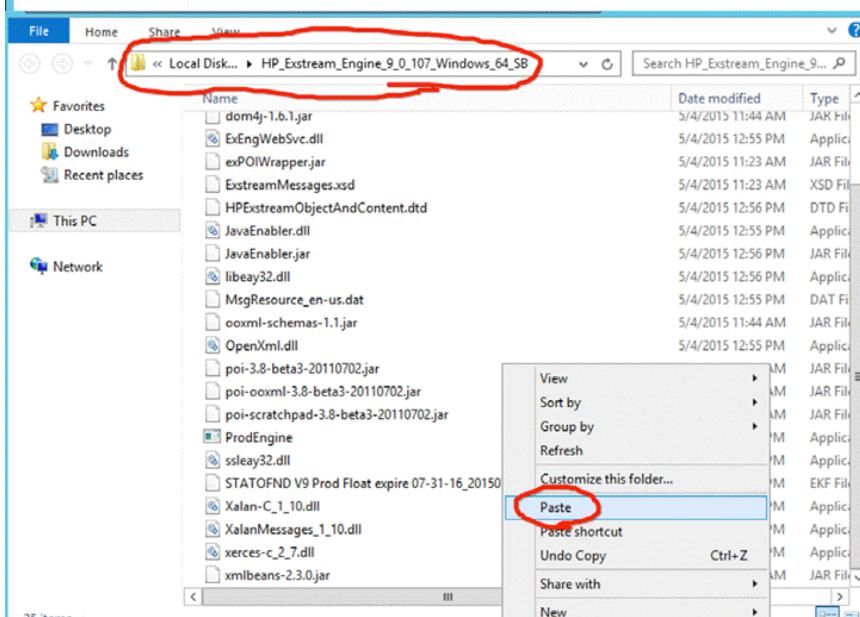
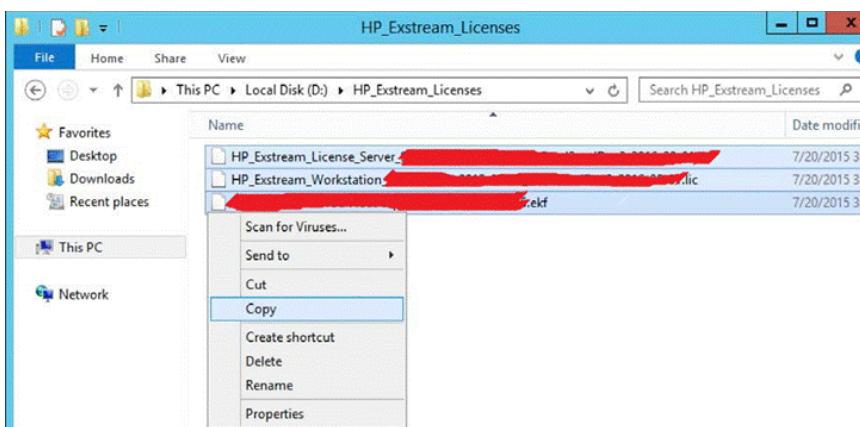
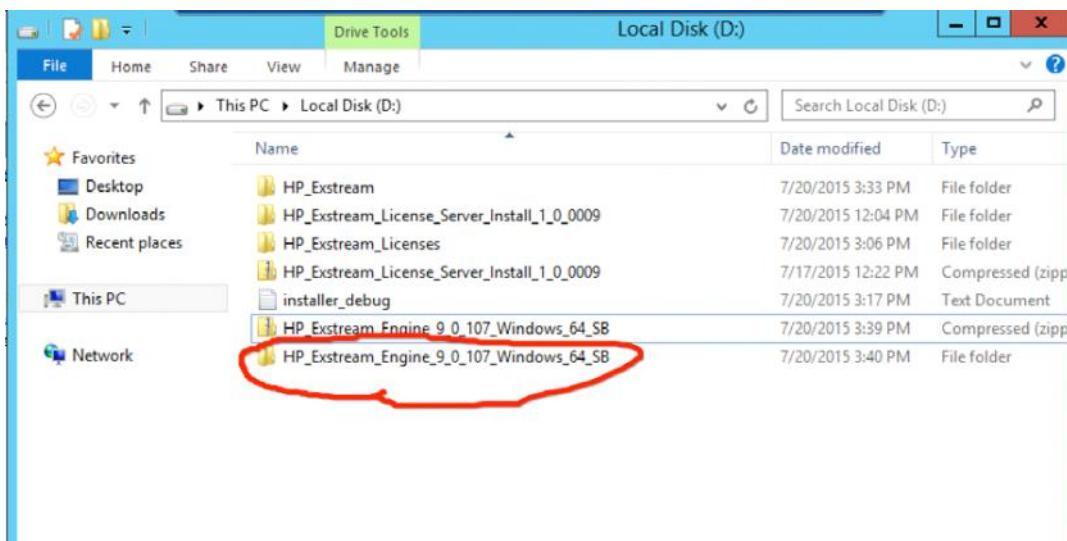






File Home Share View Manage					
	Name	Date modified	Type	Size	
★ Favorites					
Desktop	HP_Exstream_Licensing_Setup	11/4/2014 3:00 PM	Application	5,209 KB	
Downloads	LicenseServerInstallationReadMe_de-de	11/4/2014 3:00 PM	HTML Document	36 KB	
Recent places	LicenseServerInstallationReadMe_en-us	11/4/2014 3:00 PM	HTML Document	46 KB	
This PC	LicenseServerInstallationReadMe_es-mx	11/4/2014 3:00 PM	HTML Document	36 KB	
Network	LicenseServerInstallationReadMe_fr-fr	11/4/2014 3:00 PM	HTML Document	36 KB	
	LicenseServerInstallationReadMe_ja-jp	11/4/2014 3:00 PM	HTML Document	37 KB	
	LicenseServerInstallationReadMe_pt-br	11/4/2014 3:00 PM	HTML Document	35 KB	
	LicenseServerInstallationReadMe_zh-cn	11/4/2014 3:00 PM	HTML Document	33 KB	
	Imadmin-i86_n3-11_12_0_0	11/4/2014 3:00 PM	Application	92,294 KB	





To access FlexNet Publisher which lets you administer the License Manager go to: <http://hpxtmlic:9090>

Note for HP_Exstream to work the License File on the Server needs to match up with what is in the FlexNet Publisher configuration:

FLEXERA SOFTWARE®
FlexNet Publisher®

User Name: admin [?](#) [X](#)
Help Sign Out

Dashboard Administration

Vendor Daemon:exstream

Vendor Daemon Port in Use: 28000

Vendor Daemon Actions

Stop **Reread License Files**

Report Log Name: **Rotate Report Logs**

General Configuration

* License File or Directory:
exstream\HP_Exstream_License_Server_STATOFND_2015-09-10_Prod3andDev2.2016-08-01.lic

Vendor Daemon Location:
exstream/exstream

* Vendor Daemon Port:
 Use default port
 Use this port: 28000

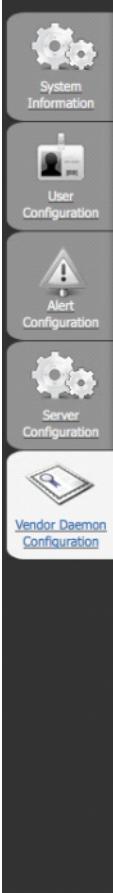
* Restart Retries:
10

Enable Date-based Versions

Vendor Daemon Log

Save **Cancel**

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Changes Pending



Hpxtreme cut over

Wednesday, January 22, 2020 10:04 AM

Hi Team,

Below are the steps for HPEstream cutover to 352 version in lower environments.

1. svn check in [HP_Exstream_Engine_8_0_322_Linux_64_DB](#) to [HP_Exstream_Engine_8_0_352_Linux_64_DB](#) in below locations for the environments that we are cutting over -
 - HIX\HIXProperties\BATCHES\EnvSpecificProperties\Correspondence\<Env_Name>\correspondence_print_batch.properties
 - IES\EnvSpecificProperties\Batches\<Env_Name>\correspondence.properties
 - IES\EnvSpecificProperties\Online\<Env_Name>\correspondence.properties
2. modify [HP_Exstream_Engine_8_0_322_Linux_64_DB](#) to [HP_Exstream_Engine_8_0_352_Linux_64_DB](#) in below file on Batch server for the environments that we are cutting over -
 - HIX Batches - correspondence.print_batch.properties
 - IES Batches - correspondence.properties
3. EWS config file entries and perform restart of engine services.
 - we need to update [HP_Exstream_Engine_8_0_322_Linux_64_DB](#) to [HP_Exstream_Engine_8_0_352_Linux_64_DB](#) for the below tags in the ews-config.xml
<EngineExecutableDBCS>/Mount_HPEstream/data/HP_Exstream_Engine_8_0_352_Linux_64_DB/Tar/Engine</EngineExecutableDBCS>
<MessageResourceFile>/Mount_HPEstream/data/HP_Exstream_Engine_8_0_352_Linux_64_DB/Tar/MsgResource_en-us.dat</MessageResourceFile>
 - update the license key in the below tags with 352 version license key (we got the same license key for 352 version)-
license key - BXPEsrgYJ-
Mc6aoOA5jZISxRsQL4iNQdRCqhYNxxqDMyDosUfh9DcXP9n8mb7BMc6aoORZjyZ3W0pkL4iNQdRCqh2Krz1HgyDSsUfDbJfXP9n8mb7BMc6aoOA5jIz3W0pkL4iNQdRCqh2Krz1HgyDSsUf46
<ProductKeySBCS>-BXPEsrgYJ-
Mc6aoOA5jZISxRsQL4iNQdRCqhYNxxqDMyDosUfh9DcXP9n8mb7BMc6aoORZjyZ3W0pkL4iNQdRCqh2Krz1HgyDSsUfDbJfXP9n8mb7BMc6aoOA5jIz3W0pkL4iNQdRCqh2Krz1HgyDSsUf46</ProductKeySBCS>
<ProductKeyDBCS>-BXPEsrgYJ-
Mc6aoOA5jZISxRsQL4iNQdRCqhYNxxqDMyDosUfh9DcXP9n8mb7BMc6aoORZjyZ3W0pkL4iNQdRCqh2Krz1HgyDSsUfDbJfXP9n8mb7BMc6aoOA5jIz3W0pkL4iNQdRCqh2Krz1HgyDSsUf46</ProductKeyDBCS>
4. Perform Pub file build and deployment on to the environments that we are cutting over.

Improvements

Thursday, February 27, 2020 11:40 AM

```
#####
##### JIRA STARTS #####
#####
##### creating jira using API:
http://localhost:8090/rest/api/2/issue/createmeta?projectKeys=JRA&issuetypeNames=Bug&expand=projects.issuetypes.fields
http://iira.ribidges.ri.gov/rest/api/2/issue/createmeta?projectKeys=RI-UHIP-Operations&issuetypeNames=Technology%20Task&expand=projects.issuetypes.fields
http://iira.ribidges.ri.gov/iira/projects/UHIPOPS/issues/UHIPOPS-27044?filter=allopenissues

project - RI-UHIP-Operations
Issue Type - Technology Task
#####
##### JIRA ENDS #####
#####
##### DOCKER STARTS #####
#####
```

support=xvoucher.com@email.xvoucher.com
docker run -d docker.io/consol/tomcat-7.0 --> to tun the tomcat in background
docker container ls -- . gives the containers list
docker run -d -name es docker.io/consol/tomcat-7.0 --> to run the container in background and by giving a specific name to the container
docker ps -a --> gives the list of all containers
docker stop <container_id> --> Will stop the container
docker rm \${docker ps -a -q -f status=existed} --> removes all the container in existed state
docker container prune --> removes all the container in existed state

docker exec -it <container_id> ls --> access folders inside the docker container
docker exec -it 51b27096017f /bin/bash --> to enter in container cli

to get the IPaddress of all docker containers:
docker inspect -f '{.Name} - {{.NetworkSettings.IPAddress}}' \$(docker ps -aq) --
or
docker inspect <container id> | grep "IPAddress"
or
docker inspect -f '{.Name} - {{range .NetworkSettings.Networks}}{{.IPAddress}}{{end}}' \$(docker ps -aq) --> If you are using docker-compose the use this command

```
#####
#cat Dockerfile
```

```
FROM tomcat:8.0-alpine
LABEL maintainer="deepak@softwareyoga.com"

ADD sample.war /usr/local/tomcat/webapps/

EXPOSE 8080
CMD ["catalina.sh", "run"]
```

21/oct/2019

```
docker run -it --rm -e MYSQL_ROOT_PASSWORD=something-silly-and-not-nearly-secure-enough mysql bash
root@36d99629e4ed:/usr/local/mysql# bash -x /entrypoint.sh mysqld --datadir=/var/lib/mysql --user=mysql
+ set -e
```

```
#####
##### DOCKER ENDS
#####
#####
```

```
print AdminControl.queryNames('cell= ENT-DV-UHAPP05Cell01,node=ENT-DV-UHAPP05Node01,type=ApplicationManager,process=HIX-MODEV,*')
#####
#          to get a cell name printed on the console:
AdminControl.getCell()
#####
#          to get the cell printed using print statement:
CellName = AdminControl.getCell()
print "Cell name = " + cellName
#####
#          to get a Node name printed on the console:
AdminControl.getNode()
#####
#          to get the cell printed using print statement:
CellName = AdminControl.getNode()
print "Node name = " + nodeName
#####
#          for listing all the installed App on a particular server.
for node in AdminConfig.list('Node').splitlines():
    nodeName = AdminConfig.showAttribute(node, 'name')
    for srv in AdminConfig.list('Server', node).splitlines():
        if AdminConfig.showAttribute(srv, 'serverType') == 'APPLICATION_SERVER':
            serverName = AdminConfig.showAttribute(srv, 'name')
            prop = AdminConfig.getid('/Node:%s/Server:%s/JavaProcessDef:/JavaVirtualMachine:/Property:java.awt.headless/' % (nodeName, serverName))
            if prop:
                AdminConfig.modify(prop, [ ['value','true']])
            else:
                jvm = AdminConfig.getid('/Node:%s/Server:%s/JavaProcessDef:/JavaVirtualMachine:' % (nodeName, serverName))
                AdminConfig.create('Property', jvm, [ ['name', 'java.awt.headless'], ['value', 'true'] ], 'systemProperties')
#####
#          My Custom Jython Script - file.py
AdminServerManagement.createApplicationServer("myNode", "Server1", "default")
AdminServerManagement.createApplicationServer("myNode", "Server2", "default")
#####
#          Use one of them as the first member of a cluster
AdminClusterManagement.createClusterWithFirstMember("myCluster", "APPLICATION_SERVER", "myNode", "Server1")
#####
#          Add a second member to the cluster
AdminClusterManagement.createClusterMember("myCluster", "myNode", "Server3")
#####
#          Install an application
AdminApplication.installAppWithClusterOption("DefaultApplication", "..\installableApps\DefaultApplication.ear", "myCluster")
#####
#          Start all servers and applications on the node
AdminServerManagement.startAllServers("myNode")
#####
#          Check if server exists or not?
Syntax
AdminServerManagement.checkIfServerExists(nodeName, serverName)
Example usage
AdminServerManagement.checkIfServerExists("myNode", "myServer")
#####
#          getJavaHome
Syntax
AdminServerManagement.getJavaHome(nodeName, serverName)
Example usage
AdminServerManagement.getJavaHome("myNode", "myServer")
#####
#          checkIfServerTemplateExists
Syntax
AdminServerManagement.checkIfServerTemplateExists(templateName)
Example usage
AdminServerManagement.checkIfServerTemplateExists("newServer")
#####
#          getServerProcessType
Syntax
AdminServerManagement.getServerProcessType(nodeName, serverName)
Example usage
AdminServerManagement.getServerProcessType("myNode", "server1")
#####
#          getServerPID
AdminServerManagement.getServerPID(nodeName, serverName)
```

```

Example usage
AdminServerManagement.getServerPID("ENT-UAT-UHAPP01Node01", "IR-HIX")
#####
#           listJVMProperties
Syntax
AdminServerManagement.listJVMProperties(nodeName, serverName, JVMProperty)
Example usage
AdminServerManagement.listJVMProperties("ENT-UAT-UHAPP01Node01", "IR-HIX", "")
#####
#           List ServersSyntax
AdminServerManagement.listServers(serverType, nodeName)
Example usage
AdminServerManagement.listServers("APPLICATION_SERVER", "myNode")
#####
#           listServerTemplates
Syntax
AdminServerManagement.listServerTemplates(templateVersion, serverType, templateName)
Example usage
AdminServerManagement.listServerTemplates("", "APPLICATION_SERVER", "default")
#####
#           listServerTypes
Syntax
AdminServerManagement.listServerTypes(nodeName)
Example usage
AdminServerManagement.listServerTypes("myNode")
#####
#           queryMBeans
Syntax
AdminServerManagement.queryMBeans(nodeName, serverName, mbeanType)
Example usage
AdminServerManagement.queryMBeans("myNode", "server1", "Server")
#####
#           showServerInfo
Syntax
AdminServerManagement.showServerInfo(nodeName, serverName)
Example usage
AdminServerManagement.showServerInfo("myNode", "myServer")
#####
#           viewProductInformation
Syntax
AdminServerManagement.viewProductInformation()
Example usage
AdminServerManagement.viewProductInformation()
#####
#           createApplicationServer
Syntax
AdminServerManagement.createApplicationServer(nodeName, serverName, templateName)
Example usage
AdminServerManagement.createApplicationServer("myNode", "myServer", "default")
#####
#           createAppServerTemplate
Syntax
AdminServerManagement.createAppServerTemplate(nodeName, serverName, newTemplateName)
Example usage
AdminServerManagement.createAppServerTemplate("myNode", "myServer", "myNewTemplate")
#####
#           createGenericServer
Syntax
AdminServerManagement.createGenericServer(nodeName, newServerName, templateName,
startCmdPath, startCmdArguments, workingDirectory, stopCmdPath, stopCmdArguments)
Example usage
[Windows]
AdminServerManagement.createGenericServer("myNode", "myServer", "default", "", "", "c:\temp", "", "")
[AIX][Linux][HP-UX][Solaris]
AdminServerManagement.createGenericServer("myNode", "myServer", "default", "", "", "/temp", "", "")
#####
#           createWebServer
Syntax
AdminServerManagement.createWebServer(nodeName, newServerName, port, serverInstallRoot, pluginInstallPath, configFilePath, [Windows]windowsServiceName,
errorLogPath, accessLogPath, webProtocol)
Example usage
AdminServerManagement.createWebServer("myNode", "myWebServer", "", "", "", "", "", "", "", "")
#####
#           deleteServer
Syntax
AdminServerManagement.deleteServer(nodeName, serverName)

```

```

Example usage
AdminServerManagement.deleteServer("myNode", "myServer")
#####
#           deleteServerTemplate
Syntax
AdminServerManagement.deleteServerTemplate(templateName)
Example usage
AdminServerManagement.deleteServerTemplate("newServerTemplate")
#####
#           startAllServers
Syntax
AdminServerManagement.startAllServers(nodeName)
Example usage
AdminServerManagement.startAllServers("myNode")
#####
#           startSingleServer
Syntax
AdminServerManagement.startSingleServer(nodeName, serverName)
Example usage
AdminServerManagement.startSingleServer("myNode", "myServer")
#####
#           stopAllServers
Syntax
AdminServerManagement.stopAllServers(nodeName)
Example usage
AdminServerManagement.stopAllServers("ENT-UAT-UHAPP01Node01")
#####
#           stopSingleServer
Syntax
AdminServerManagement.stopSingleServer(nodeName, serverName, className, displayName, classpath, otherAttributeList)
Example usage
AdminServerManagement.stopSingleServer("myNode", "myServer")
#####
                                         Server settings configuration scripts
#####
#configureAdminService
configureAdminService
This script configures settings for the AdminService interface. The AdminService interface is the server-side interface to the application server administration functions.

```

Table 1. configureAdminService argument descriptions. Run the script with the node name, server name, local connection protocol, and remote connection protocol.

Argument	Description
nodeName	Specifies the name of the node of interest.
serverName	Specifies the name of the server of interest.
localAdminProtocol	Specifies the type of connector to use to connect the AdminService interface to the application server for local connection.
remoteAdminProtocol	Specifies the type of connector to use to connect the AdminService interface to the application server for remote connection.
otherAttributeList	Optionally specifies additional attributes in the following format: [{"enabled": "true"}, {"pluginConfigService": "(cells/timmieNode02Cell/nodes/timmieNode01/servers/server1 server.xml#PluginConfigService_1183122130078)"}]
Syntax:	
	AdminServerManagement.configureAdminService(nodeName, serverName, localAdminProtocol, remoteAdminProtocol, otherAttributeList)
Example usage	
	AdminServerManagement.configureAdminService("myNode", "myServer", "IPC", "SOAP", [{"enabled": "true"}, {"pluginConfigService": "(cells/timmieNode02Cell/nodes/timmieNode01/servers/server1 server.xml#PluginConfigService_1183122130078)"}])
#configureApplicationServerClassloader	
Syntax	
	AdminServerManagement.configureApplicationServerClassloader(nodeName, serverName, policy, mode, libraryName)
Example usage	
	AdminServerManagement.configureApplicationServerClassloader("myNode", "myServer", "MULTIPLE", "PARENT_FIRST", "myLibraryReference")
#configureDynamicCache	

This script configures the dynamic cache service in your server configuration. The dynamic cache service works within an application server JVM, intercepting calls to cacheable objects. For example, the dynamic cache service intercepts calls through a servlet service method or a command execute method, and either stores the output of the object to the cache or serves the content of the object from the dynamic cache.

Table 3. configureDynamicCache argument descriptions. Run the script with the node name, server name, default priority, cachesize, external cache group name, and external cache group type arguments.

Argument	Description
nodeName	Specifies the name of the node of interest.
serverName	Specifies the name of the server of interest.
defaultPriority	Specifies the default priority for cache entries, determining how long an entry stays in a full cache. Specify an integer between 1 and 255.
cacheSize	Specifies a positive integer as the value for the maximum number of entries that the cache holds. Enter a cache size value in this field that is between the range of 100 through 200000.

externalCacheGroupName The external cache group name needs to match the ExternalCache property as defined in the servlet or JavaServer Pages (JSP) file cachespec.xml file. When external caching is enabled, the cache matches pages with its Universal Resource Identifiers (URI) and pushes matching pages to the external cache. The entries can then be served from the external cache, instead of from the application server.
externalCacheGroupType Specifies the external cache group type.
otherAttributeList Optionally specifies additional configuration options for the dynamic cache service in the following format: [[{"cacheProvider", "myProvider"}, {"diskCacheCleanupFrequency", 2}, {"flushToDiskOnStop", "true"}]]

Syntax

```
AdminServerManagement.configureDynamicCache(nodeName, serverName, defaultPriority, cacheSize, externalCacheGroupName, externalCacheGroupType, otherAttributeList)
```

Example usage

```

AdminServerManagement.configureDynamicCache("myNode", "myServer", 2, 5000, "EsilInvalidator", "SHARED", [{"cacheProvider", "myProvider"}, {"diskCacheCleanupFrequency", 2}, {"flushToDiskOnStop", "true"}])
#####
# My Custom Jython Script - file.py
#
AdminServerManagement.createApplicationServer("myNode", "Server1", "default")
AdminServerManagement.createApplicationServer("myNode", "Server2", "default")

# Use one of them as the first member of a cluster
AdminClusterManagement.createClusterWithFirstMember("myCluster", "APPLICATION_SERVER",
  "myNode", "Server1")

# Add a second member to the cluster
AdminClusterManagement.createClusterMember("myCluster", "myNode", "Server3")

# Install an application
AdminApplication.installAppWithClusterOption("DefaultApplication",
  "..\installableApps\DefaultApplication.ear", "myCluster")

# Start all servers and applications on the node
AdminServerManagement.startAllServers("myNode")
#####
#Display the nodes in your environment
bin>wsadmin -lang jython -c "AdminNodeManagement.listNodes()"
wsadmin>AdminNodeManagement.listNodes()
#####
# To start a Application on a cluster:
wsadmin>AdminApplication.startApplicationOnCluster("myApplication", "myCluster", "true")
#####

```

```
#####
wsadmin -c "$AdminApp install /opt/Repository_App/l3/HIXMainlTR3.ear {-appname HIXMainlTR3}"
```

create a file called my.jacl (or a python file if you prefer) with these commands:

```
"$AdminApp install c:\\myApps\\App1.ear {-appname myapp}"
"$AdminApp install c:\\myApps\\App1.ear {-appname yourapp}"
and invoke it with the simple command:
wsadmin -f my.jacl
```

Stop/start application though cmd:

Identify the application manager MBean for the server where the application resides, and assign it to the appManager variable

```
appManager = AdminControl.queryNames('cell=ENT-DV-UHAPP01Cell01,node=ENT-DV-UHAPP01Node01,type=ApplicationManager,process=server1,*')
```

to print app Manager on console after executing above cmd, execute below cmd:
 print appManager

```
Output(DEV1)
WebSphere:name=ApplicationManager,process=server1,platform=proxy,node=ENT-DV-UHAPP01Node01,version=
8.5.0.1,type=ApplicationManager,mbeanIdentifier=ApplicationManager,cell=ENT-DV-UHAPP01Cell01,spec=1.0
```

START appl:
 AdminControl.invoke(appManager, 'startApplication', 'HIXMainlTR3_DEV1')

Stop App:
 AdminControl.invoke(appManager, 'stopApplication', 'HIXMainlTR3_DEV1')

To know what application on that aprticular profile:
 AdminApp.list()

or

create a file like below:

File name : Applist.py

file body:

```
apps = AdminApp.list()
```

```
print "Application installed on Appsrv01:/n" + apps
```

now run cmd like below:

```
<AppSrv01_bin>./wsadmin.sh -lang jython -f Applist.py
```

Installing Application on a server:

```
SYNTAX: AdminApp.install('location_of_ear.ear', ['-node nodeName -cell cellName -server serverName']) - jython  
AdminConfig.save()
```

AdminApp.isAppReady('application1') --- to know the status of application installation. if the output is true you can start the application.

```
AdminControl.invoke(appManager, 'startApplication', 'HIXMainITR3_DEV1') - start the app.
```

```
SYNTAX: $AdminApp install "location_of_ear.ear" {-node nodeName -cell cellName -server serverName} - jacl
```

ex:

```
AdminApp.install('c:/MyStuff/application1.ear', ['-cluster cluster1'])
```

```
AdminApp.install('location_of_ear.ear', ['-node nodeName -cell cellName -server serverName'])
```

Unstalling Application on a server:

SYNTAX:

Ex:

uninstallin app:

```
AdminApp.uninstall('HIXMainITR3_IR')
```

```
AdminConfig.save()
```

```
AdminNodeManagement.syncActiveNodes()
```

Insatllin app on dev1:

```
installappdev1.py
```

```
AdminApp.uninstall('HIXMainITR3_DEV1')
```

```
AdminConfig.save()
```

```
AdminNodeManagement.syncActiveNodes()
```

```
DEV3 - AdminApp.install('/opt/IBM/WebSphere/AppServer/profiles/Dmgr01/config/temp/upload/1445420998063/HIXMainITR3_DEV3.ear', ['-nopreCompileJSPs -  
distributeApp -nouseMetaDataFromBinary -nodeployejb -apppname HIXMainITR3_DEV3 -createMBeansForResources -noreloadEnabled -nodeployws -validateinstall warn -  
noprocessEmbeddedConfig -filepermission .*\.dll=755#.*.so=755#.*.a=755#.*.sl=755 -noallowDispatchRemoteInclude -noallowServiceRemoteInclude -  
asyncRequestDispatchType DISABLED -nouseAutoLink -noenableClientModule -clientMode isolated -novalidateSchema -MapModulesToServers [[ HIXWeb HIXWeb.war,WEB-  
INF/web.xml WebSphere:cell=ENT-DV-UHAPP01Cell01,node=ENT-DV-UHAPP01Node01,server=server1 ]] -MapWebModToVH [[ HIXWeb HIXWeb.war,WEB-INF/web.xml  
default_host ]] -MetadataCompleteForModules [[ HIXWeb HIXWeb.war,WEB-INF/web.xml true ]]]' )
```

```
DEV4 - AdminApp.install('/opt/IBM/WebSphere/AppServer/profiles/Dmgr01/config/temp/upload/1445944560179/HIXMainITR3_DEV3.ear', ['-nopreCompileJSPs -  
distributeApp -nouseMetaDataFromBinary -nodeployejb -apppname HIXMainITR3_DEV4 -createMBeansForResources -noreloadEnabled -nodeployws -validateinstall warn -  
noprocessEmbeddedConfig -filepermission .*\.dll=755#.*.so=755#.*.a=755#.*.sl=755 -noallowDispatchRemoteInclude -noallowServiceRemoteInclude -  
asyncRequestDispatchType DISABLED -nouseAutoLink -noenableClientModule -clientMode isolated -novalidateSchema -MapModulesToServers [[ HIXWeb HIXWeb.war,WEB-  
INF/web.xml WebSphere:cell=ENT-DV-UHAPP01Cell01,node=ENT-DV-UHAPP01Node01,server=server4 ]] -MapWebModToVH [[ HIXWeb HIXWeb.war,WEB-INF/web.xml  
default_host ]] -MetadataCompleteForModules [[ HIXWeb HIXWeb.war,WEB-INF/web.xml true ]]]' )
```

```
AdminConfig.save()
```

```
AdminApp.isAppReady('HIXMainITR3_DEV1')
```

```
AdminControl.invoke(appManager, 'startApplication', 'HIXMainITR3_DEV1')
```

```
AdminApp.install('/opt/IBM/WebSphere/AppServer/profiles/Dmgr01/config/temp/upload/1445420998063/HIXMainITR3_DEV3.ear', ['-nopreCompileJSPs -distributeApp -  
nouseMetaDataFromBinary -nodeployejb -apppname HIXMainITR3_DEV1 -createMBeansForResources -noreloadEnabled -nodeployws -validateinstall warn -  
noprocessEmbeddedConfig -filepermission .*\.dll=755#.*.so=755#.*.a=755#.*.sl=755 -noallowDispatchRemoteInclude -noallowServiceRemoteInclude -  
asyncRequestDispatchType DISABLED -nouseAutoLink -noenableClientModule -clientMode isolated -novalidateSchema -MapModulesToServers [[ HIXWeb HIXWeb.war,WEB-  
INF/web.xml WebSphere:cell=ENT-DV-UHAPP01Cell01,node=ENT-DV-UHAPP01Node01,server=server1 ]] -MapWebModToVH [[ HIXWeb HIXWeb.war,WEB-INF/web.xml  
default_host ]] -MetadataCompleteForModules [[ HIXWeb HIXWeb.war,WEB-INF/web.xml true ]]]'
```

```
AdminControl.invoke('WebSphere:name=DeploymentManager,process=dmgr,platform=common,node=ENT-DV-UHAPP01CellManager01,diagnosticProvider=true,version=8.5.0.1,type=DeploymentManager,mbeanIdentifier=DeploymentManager,cell=ENT-DV-UHAPP01Cell01,spec=1.0', 'multiSync', '[false]', '[java.lang.Boolean]')
```

```
Perf01 - AdminApp.install('/opt/IBM/WebSphere/AppServer/profiles/Dmgr01/config/temp/upload/1446536971836/HIXMainITR3.ear', ['-nopreCompileJSPs -distributeApp -
```

```
nouseMetaDataFromBinary -nodeployejb -appname HIXMainITR3_PERF1 -createMBeansForResources -noreloadEnabled -nodeployws -validateinstall warn -  
noprocessEmbeddedConfig -filepermission .*\*.dll=755#\*\*,\so=755#\*\*,\a=755#\*\*,\sl=755 -noallowDispatchRemoteInclude -noallowServiceRemoteInclude -  
asyncRequestDispatchType DISABLED -nouseAutoLink -noenableClientModule -clientMode isolated -novalidateSchema -MapModulesToServers [[ HIXWeb HIXWeb.war,WEB-  
INF/web.xml WebSphere:cell=ENT-UAT-UHAPP04Cell01,cluster=Cluster01 ]] -MapWebModToVH [[ HIXWeb HIXWeb.war,WEB-INF/web.xml default_host ]] -  
MetadataCompleteForModules [[ HIXWeb HIXWeb.war,WEB-INF/web.xml true ]]]'
```

to cretae a profile on a different cell name:

```
./manageprofiles.sh -create -profileName AppSrv02 -profilePath /opt/IBM/WebSphere/AppServer/profiles/AppSrv02 -templatePath  
/opt/IBM/WebSphere/AppServer/profileTemplates/default -cellName ENT-IR-UHAPPR2Cell01 -hostName ENT-IR-UHAPPR2
```

to cretae a profile on a different node name:

ex: MNO DEV

```
./manageprofiles.sh -create -profileName AppSrv02 -profilePath /opt/IBM/WebSphere/AppServer/profiles/AppSrv02 -templatePath  
/opt/IBM/WebSphere/AppServer/profileTemplates/default -cellName ENT-IR-UHAPPR1Cell01 -hostName ENT-IR-UHAPPR2 -nodeName ENT-IR-UHAPPR1Node02 > prf.log
```

to delete a profile completely from a WAS:

1,

Give the below command from

```
./manageprofiles.sh -delete -profileName profile_name
```

Ex : ./manageprofiles.sh -delete -profileName AppSrv02

2,

```
./manageprofiles.sh -validateAndUpdateRegistry
```

```
./stopServer.sh server1 -username wasadmin -password wasadmin; ./startServer.sh server1
```

to run a wsadmin cmd out side wsadmin console or prompt:

```
wsadmin.sh -lang jython -c 'AdminApp.list()'
```

to list the servers on a particular node:

```
./wsadmin.sh -c "AdminServerManagement.listServers('APPLICATION_SERVER', 'myNode01')"  
ex: ./wsadmin.sh -c "AdminServerManagement.listServers('APPLICATION_SERVER', 'ENT-DV-UHAPP05Node01')"
```

If you want to list the configuration IDs for all of the servers, of every type, in your cell, you can use a call something like:

```
./wsadmin.sh -c "AdminServerManagement.listServers( , )"
```

to get JVM info give the below cmd at wsadmin prompt:

```
AdminTask.showJVMProperties(['-nodeName ENT-DV-UHAPP05Node01 -serverName HIX-MODEV'])
```

output:

```
wsadmin>AdminTask.showJVMProperties(['-nodeName ENT-DV-UHAPP05Node01 -serverName HIX-MODEV'])  
'[ [classpath /opt/IBM/HSR/HIX-MODEV/properties] [bootClasspath ] [verboseModeClass false] [verboseModeGarbageCollection false] [verboseModeJNI false] [initialHeapSize  
1024] [maximumHeapSize 4096] [runHProf false] [hprofArguments ] [debugMode false] [debugArgs -agentlib:jdwp=transport=dt_socket,server=y,suspend=n,address=7777]  
[genericJvmArguments ] [executableJarFileName ] [disableJIT false] [osName ] [internalClassAccessMode ALLOW] ]'
```

From

```
./wsadmin.sh -lang jython -c AdminTask.showJVMProperties(['-nodeName ENT-IR-UHAPPR2Node01 -serverName server1'])
```

WAS Profile Backup

Friday, August 26, 2016 2:22 PM

```
profile backup - ./backupConfig.sh profilebackup_10-OCT-15.zip -nostop
```

Profile creation

Monday, January 30, 2017 3:50 PM

MODEV

Not working

1a,
to creatae a profile on a different node name:
ex: MNO DEV RIBA

./manageprofiles.sh -create -profileName AppSrv02 -profilePath /opt/IBM/WebSphere/AppServer/profiles/AppSrv02 -templatePath /opt/IBM/WebSphere/AppServer/profileTemplates/default-cellName ENT-DV-UHAPP05Cell01 -hostName ENT-DV-UHAPP05 -nodeName ENT-DV-UHAPP05Node02 > prf.log

check prf.log and check for errors. (INSTCONFSUCCESS: Success)

2,
Start Node and Server and federate the node to DMGR
go to below path:
/opt/IBM/WebSphere/AppServer/profiles/AppSrv02/bin
execute belwo command:
CMD: ./addNode.sh ENT-DV-UHAPP05 8879

1a,
to creatae a profile on a different node name:
ex: MNO DEV RIBA

./manageprofiles.sh -create -profileName AppSrv02 -profilePath /opt/IBM/WebSphere/AppServer/profiles/AppSrv02 -templatePath /opt/IBM/WebSphere/AppServer/profileTemplates/default-cellName ENT-DV-UHAPP05Cell02 -hostName ENT-DV-UHAPP05 -nodeName ENT-DV-UHAPP05Node02 > prf.log

check prf.log and check for errors. (INSTCONFSUCCESS: Success)

2,
Start Node and Server and federate the node to DMGR
go to below path:
/opt/IBM/WebSphere/AppServer/profiles/AppSrv02/bin
execute belwo command:
CMD: ./addNode.sh ENT-DV-UHAPP05 8879

to delete a profile completely from a WAS:

1,
Give the below command from (stop the server before giving below command)
./manageprofiles.sh -delete -profileName profile_name

Ex : ./manageprofiles.sh -delete -profileName AppSrv02
2,
./manageprofiles.sh -validateAndUpdateRegistry

./stopServer.sh server1 -username wasadmin -password wasadmin; ./startServer.sh server1

Cell Name - ENT-DV-UHAPP05Cell01
Node Name - ENT-DV-UHAPP05Node01
Host Name - ENT-DV-UHAPP05

`\${ORACLE_JDBC_DRIVER_PATH}/ojdbc6.jar
jdbc:oracle:thin:@10.64.66.12:1521:MNORIB
jdbc/chimes

<http://10.64.33.80:9085/SELoginAccess.jsp?fromIndex=true>

```
cd /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/bin;./stopManager.sh -user wasadmin -password wasadmin@MODEV;cd /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin;./stopNode.sh -user wasadmin -password wasadmin@MODEV;cd /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/bin;./startManager.sh;cd /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin;./startNode.sh;cd /opt/IBM/WebSphere/AppServer/profiles/AppSrv02/bin;./startNode.sh;
```

```
#Dmgr01
rm -rf /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/wstemp/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/temp/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/logs/dmgr/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/logs/ffdc/*
#AppSrv02
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/wstemp/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/temp/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/ffdc/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/nodeagent/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/EngineServer/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/HIX-MODEV/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/IES-MODEV/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/SSP-MODEV/*
#AppSrv02
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv02/wstemp/*
```

```

rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv02/temp/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv02/logs/ffdc/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv02/logs/nodeagent/*
rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv02/logs//logs/server1/*
#rm -rf /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/*
#rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/*
#rm -rf /opt/IBM/WebSphere/AppServer/profiles/AppSrv02/*
#rm -rf /tmp/*

```

Creating a new profile on a new Cell.

1,

to create a profile on a different cell/node name:

ex: MNO DEV RIBA

```

./manageprofiles.sh -create -profileName AppSrv02 -profilePath /opt/IBM/WebSphere/AppServer/profiles/AppSrv02 -templatePath /opt/IBM/WebSphere/AppServer/profileTemplates/default-cellName ENT-DV-UHAPP05Cell02 -hostName ENT-DV-UHAPP05 -nodeName ENT-DV-UHAPP05Node02 > /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/prf.log

```

check :

prf.log and check for errors. (INSTCONFSUCCESS: Success)

2,

a, Start Node

b, Start server

c, Federate the node to DMGR

e.g.: ./addNode.sh ENT-DV-UHAPP05 8879

(go to below path:

/opt/IBM/WebSphere/AppServer/profiles/AppSrv02/bin

execute below command:

CMD: ./addNode.sh ENT-DV-UHAPP05 8879)

3,(IES-PRODP)

Server Configurations.

Nodeagent Heap size 1024-2048

Clone the deployment plan

WAS.sh Commands

```
#####
##### Stopping & Starting Deployment Manager, Node Agent & JVM #####
##### stopManager.sh #####
##### You can stop the Deployment Manager using above command.
```

startManager.sh

You can start the Deployment Manager using above command.

startServer.sh

To start the JVM, you can use startServer.sh with server name like below.

Note: Node Agent must be started prior to starting JVM.

stopServer.sh

You can shut down JVM by executing above command along with JVM name.

stopNode.sh

To stop the respective Node Agent you have to go to that profile and execute stopNode.sh to stop the Node Agent.

startNode.sh

Go to respective profile and execute startNode.sh to start the Node Agent.

serverStatus.sh

To find out JVM's status you can use this script with –all argument. This must be executed in respective profile level. If you execute this in DMGR profile level it will just show the status of DMGR.

example: `./serverStatus.sh -all`

```
#####
##### cd /opt/IBM/WebSphere/AppServer/bin
##### ./managesdk.sh -enableProfile -profileName sitwhixAppSrv -sdkName 1.8_64 -user ribapp -password 'R!bA66@r0GC3'
```

Backup & Restore

```
#####
##### backupConfig.sh #####
#####
```

One of the first things to learn while working in production support is to how to take a backup. When nothing works – backup helps. You can use this script to take a backup of your WebSphere environment configuration. As a best practice, you can use “–nostop” argument so it takes a backup without stopping Deployment Manager.

```
[root@localhost bin]# ./backupConfig.sh -nostop
ADMU0116I: Tool information is being logged in file
    /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/backupConfig.log
ADMU0128I: Starting tool with the AppSrv01 profile
ADMU5001I: Backing up config directory
    /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/config to file
    /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/WebSphereConfig_2015-04-12.zip
....
```

ADMU5002I: 933 files successfully backed up

```
#####
##### restoreConfig.sh #####
#####
```

If you have changed configuration and things are not as expected and there is a time to restore your configuration. Well, you can use backup file to restore the configuration.

```
[root@localhost bin]# ./restoreConfig.sh WebSphereConfig_2015-04-12.zip -nostop
ADMU0116I: Tool information is being logged in file
    /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/logs/restoreConfig.log
ADMU0128I: Starting tool with the AppSrv01 profile
ADMU5502I: The directory /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/config
already exists; renaming to
    /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/config.old
ADMU5504I: Restore location successfully renamed
ADMU5505I: Restoring file WebSphereConfig_2015-04-12.zip to location
    /opt/IBM/WebSphere/AppServer/profiles/AppSrv01/config
....
```

ADMU5506I: 933 files successfully restored

ADMU6001I: Begin App Preparation -

ADMU6009I: Processing complete.

ADMU6002I: Begin Asset Preparation -

ADMU6009I: Processing complete.

Getting version & fix pack information

#####
versionInfo.sh

To find out WAS version, build level, package, architecture & installed features installed on your server.

```
[root@localhost bin]# ./versionInfo.sh
WVER0010I: Copyright (c) IBM Corporation 2002, 2012; All rights reserved.
WVER0012I: VersionInfo reporter version 1.15.1.48, dated 2/8/12
```

IBM WebSphere Product Installation Status Report

Report at date and time April 12, 2015 3:18:41 AM PDT

Installation

```
Product Directory /opt/IBM/WebSphere/AppServer
Version Directory /opt/IBM/WebSphere/AppServer/properties/version
DTD Directory /opt/IBM/WebSphere/AppServer/properties/version/dtd
Log Directory /var.ibm/InstallationManager/logs
Product List
```

NDTRIAL installed

Installed Product

```
Name IBM WebSphere Application Server Network Deployment
Version 8.5.5.0
ID NDTRIAL
Build Level gm1319.01
Build Date 5/14/13
Package com.ibm.websphere.NDTRIAL.v85_8.5.5000.20130514_1044
Architecture x86-64 (64 bit)
Installed Features IBM 64-bit WebSphere SDK for Java
    WebSphere Application Server Full Profile
    EJBDeploy tool for pre-EJB 3.0 modules
    Embeddable EJB container
    Stand-alone thin clients and resource adapters
```

End Installation Status Report

Note: you may be interested in following supported arguments.

-fixpacks: To display fixpacks information

-long: To display all fixpacks and ifixes

-ifixes: To display ifixes information

#####
getHistoryReport.sh

If you are performing auditing or just want to list out components, fixes, refresh pack with dates, you can run this command, which will generate historyReport.html in current working directory, which is usually bin folder.

#####
getVersionReport.sh

To display build version and build date about WebSphere installation. Often asked by IBM support guys to investigate if any suspected issue with particular version.

#####
Clearing the Cache

There might be various reasons to clear the cache the most obvious one would be after an upgrade. There are two caches that you should consider clearing 1) JVM 2) OSGi.

clearClassCache.sh

To clear JVM's class cache, you can execute above script.

Note: JVM's must be stopped prior to clearing class caches.

osgiCfgInit.sh

Execute above command to clear OSGi profile & server cache.

```
[root@localhost bin]# ./osgiCfgInit.sh
```

OSGi profile cache successfully cleaned for /opt/IBM/WebSphere/AppServer/profiles/Dmgr01.

OSGi server cache successfully cleaned for /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/servers/dmgr.

```
[root@localhost bin]#
```

Note: don't forget to stop the running processes prior to clearing caches.

#####
Managing Profiles

#####
managesdk.sh

You can toggle the version if you have installed multiple SDK. You can also use this script to find out available associated SDK to your profile. Below example shows list of available SDK.

```
[root@localhost bin]# ./managesdk.sh -listAvailable
CWSDK1003I: Available SDKs :
CWSDK1005I: SDK name: 1.6_64
CWSDK1001I: Successfully performed the requested managesdk task.
[root@localhost bin]#
pmt.sh
```

PMT (Profile Management Tool) can be used to create WebSphere profiles in GUI mode. Creating profiles using PMT is very easy – all you got to do is create the desired level of profile and follow the wizard. You got to try it!

syncNode.sh

For some reason if you can't perform Node Sync through Administration Console, you can use syncNode.sh from profile level. Node Agent must be stopped prior to use this script. You have to pass argument for DMGR host & SOAP port number.

Ex: ./syncNode.sh localhost 8879

localhost = Deployment Manager hostname

8879 = DMGR SOAP Port number

R|

Tuesday, September 11, 2018 10:22 AM

UATL

Tuesday, September 11, 2018 10:22 AM

To terminate UATLHIX server using wsadmin:

```
AdminControl.invoke('WebSphere:name=NodeAgent,process=nodeagent,platform=common,node=npdwashx01-  
Node07,diagnosticProvider=true,version=.5.5.11,type=NodeAgent,mbeanIdentifier=NodeAgent,cell=NPDWASDM01-Cell01,spec=1.0', 'terminate', '[uatlhxmember01]')  
AdminControl.invoke('WebSphere:name=NodeAgent,process=nodeagent,platform=common,node=npdwashx02-Node07,diagnosticProvider=true,version=  
8.5.5.11,type=NodeAgent,mbeanIdentifier=NodeAgent,cell=NPDWASDM01-Cell01,spec=1.0', 'terminate', '[uatlhxmember02]')  
AdminConfig.list('ClusterMember', AdminConfig.getid( '/Cell:NPDWASDM01-Cell01/ServerCluster:uatlhx'))
```

Interview Questions

Friday, February 19, 2021 9:29 AM

Do I Need A Web Server If I Have A Websphere Application Server?

Answer :

Web Server and WebSphere application server provide two different functionalities. WebSphere application server does have an inbuilt web server functionality but it is recommended to use a separate web server for many reasons.

Some of them are:

By separating web and application server activities, your application serving environment is more secure.

Using the webserver you can loadbalance the requests between multiple application servers.

How Do I Connect My Application To Talk To A Database?

Answer :

To achieve this, you need to create a JDBC provider and datasource. The JDBC provider object encapsulates the specific JDBC driver implementation class for access to the specific vendor database of your environment. The data source object supplies your application with connections for accessing the database. The best way to learn more about this task is, login to administration console-> guided activities-> connecting to a database.

What Happens If My Dmgr Is Not Running?

Answer :

DMGR is the single point of failure in WebSphere network deployment model. Even if DMGR is down, rest of the server will continue to run and serve the applications. However, any changes you make in this situation are not saved to master configuration repository.

Question 22. I Installed A New Application, What Do I Need To Do Before I Can Access It From The Web Server Url?

Answer :

When you install a new application or update an application, your web server needs to be aware of the changes. Which means you need to update the web server plug-in configuration file. So after a successful installation of an application with mapping to web server, you need to regenerate the plug-in configuration file and propagate it to web server.

Question 24. I've Made Some Changes To My Applications Web.xml , How And Where Should I Update This File?

Answer :

You can do this from the administration console. Go to enterprise applications->select your application and click update. On the next panel, you'll have an option to update the entire application, a single module or even a single file or multiple files.

Select the single file option and specify the file's path you like to update. Specify a relative path to the file that starts from the root of the war/ear file. So it looks something like this : app1.war/WEB-INF/web.xml

From <<https://www.wisdomjobs.com/e-university/ibm-websphere-application-server-interview-questions-answers.html>>

Question 23. I Don't Have Websphere Installed On My Web Server How Do I Add To The Websphere Administration Console ?

Answer :

If you like to add your web server to that WebSphere administration console, you can do that by creating an unmanaged node and then add from servers->web servers

From <<https://www.wisdomjobs.com/e-university/ibm-websphere-application-server-interview-questions-answers.html>>

Question 25. How To Choose Websphere Over Other Application Servers?

Answer :

Selecting application server is part of architectural process when infrastructure is defined. It depends on several factors:

- External systems your application will be interacting.
- Type of application you have.
- Target availability of system.
- Corporate standards
- Budget.

From <<https://www.wisdomjobs.com/e-university/ibm-websphere-application-server-interview-questions-answers.html>>

Question 26. How Many Ways Can You Deploy Applications In Websphere?

Answer :

1. Directly copy files to deployed application folder in websphere- hot deployment.
2. use websphere specific ant tasks and building automated scripts for deploying application.
3. through administration console.

From <<https://www.wisdomjobs.com/e-university/ibm-websphere-application-server-interview-questions-answers.html>>

Question 27. What Is The Difference Between Web Server And Application Server?

Answer :

- **ApplicationServer:** takes care of Security, Transaction, Multithreading, Resource pooling, load balancing, clustering, performance, highly availability, scalability, etc. Exposes business logic to client applications through various protocols, possibly including HTTP. Supports deployment of .war and .ear files
- Application server = webserver + EJB container.

- **Webserver:** handles HTTP protocol. Receives HTTP request, it responds with an HTTP response.

From <<https://www.wisdomjobs.com/e-university/ibm-websphere-application-server-interview-questions-answers.html>>

Question 30. How Would Use Ensure Websphere Server Logs Are Created On A Different Drive Than The Installation Root?

Answer :

Change the WebSphere server's server variables using the Administrative Console or use scripts.

From <<https://www.wisdomjobs.com/e-university/ibm-websphere-application-server-interview-questions-answers.html>>

#####
Question 34. Is There Any Difference Between Weblogic And Websphere?

Answer :

Websphere tends to focus more on integration, connectivity and web services. It has rich implementation of J2EE, better performance, more extensive integration and transaction management. In terms of transaction weblogic is having default transaction attribute as 'supports', but websphere does not have any default transaction attribute.

#####
Question 35. How To Implement Jdbc-odbc Bridge Driver (type 1) In Websphere?

Answer :

If you use JDBC type (1) driver you don't need to add any driver in websphere. You simply create DSN and use it locally, same we use java class, if you use Type(2) and Type(4) so first go to admin console then go to connection, then add driver there fill other info like conn. size, uname pass, max conn. and connect it to your applications.

#####
Question 32. What Development Environment(s) Are Available To Develop Applications For Websphere?

Answer :

IBM provides several industrial strength development environments based on Eclipse development framework the current IDE is Rational Developer for Websphere. Applications can also be developed with the Websphere Application Server Toolkit and third party tools like Jbuilder, and Eclipse/ANT etc.

#####
Question 33. What Are The Different Application Servers And Web Servers Supporting J2ee Technologies?

Answer :

JBoss is an Application Server that supports J2EE

IBM Websphere and BEA WebLogic servers are a combination of Application Server, Web Server & container

Jakarta Tomcat is a Servlet container and a Web server.

Apache Sever is a Web server

#####
Question 12. What Is Websphere Plug-in For Web Server And Where Do I Need To Install The Plug-in?

Answer :

It is common practice to have web and app servers on different machines. WebSphere provides a plug-in which enables web server to talk to application server, this is known as web server plug-in. Web server plug-in will have a configuration file named plugin-config.xml which will have references to all the servers, clusters, applications, virtual hosts of the websphere application server. You can generate this configuration file from administration console, servers->web servers. Select a web server and click generate plugin configuration file and then propagate the plugin. This plug-in needs to be installed on the web server machine

From <<https://www.wisdomjobs.com/e-university/ibm-websphere-application-server-interview-questions-answers.html>>

#####
Question 8. What Does Node Agent Do In Websphere Application Server?

Answer :

We will have one node agent per one node. The node agent acts as a mediator between the Deployment manager and the node.

#####
Question 9. Explain The Architecture Of Web Sphere.?

Answer :

WebSphere architecture consists of one or more computer systems which are called nodes. Nodes are available within WebSphere cell. A WebSphere cell can have one node. On this node all the needed softwares are installed. If a WebSphere cell contains more than one node, then all the software components are distributed among the nodes. The software components that are installed in one node can share in the distributed environment. This distribution enables for scalability, reliability.

The following are the components:

A web server which provides the services of HTTP

A database server for data persistence

WebSphere Application Server (WAS)

#####
Question 6. What Is A Profile In Websphere Application Server?

Answer :

When you install WebSphere application server, executable files and configurations files are separated. This allows you to install the product once and create multiple sets of configurations which uses the same underlying core executables of the websphere application server installation. These are the profiles in websphere application server. As you know, there are many types of profiles and you

can create multiple profiles.

From <<https://www.wisdomjobs.com/e-university/ibm-websphere-application-server-interview-questions-answers.htm>>

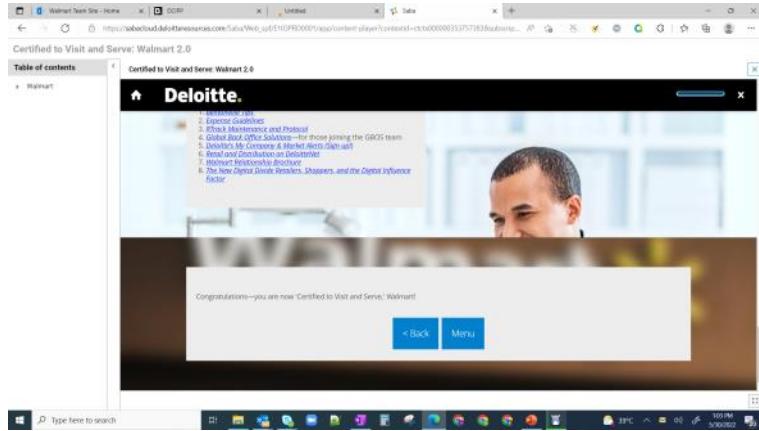
```
#####
#####
```

#####
#####

Walmart

Monday, May 30, 2022 11:42 AM

Walmart Account details:



Walmart Email ID - Naga.Panguluri@walmart.com

<https://workspace.wal-mart.com/>

Username - vn545la
RSA Passcode - 198411+OTP
Password - Qj[R]1HdRlx

A screenshot of a Microsoft Outlook inbox. A new email from "Bhadrappa, Ashok" is selected. The subject is "RE: CE-POD5-KT Sprint Approval - Message (HTML)". The email body contains a Zoom meeting invitation with a link: "https://us02web.zoom.us/j/8101092000?pwd=...". The "Participants" section shows "Panguluri, Naga (Host, me)" and "Bhadrappa, Ashok". The "Reply", "Reply All", and "Forward" buttons are visible at the bottom right.

RE: CE-POD5-KT Sprint Approval

Bhadrappa, Ashok
To: Varun Tandon
Cc: Aradhya, Pallavi Aradhya; Guntur V, S Madhav; Madiya, Sejal; Parthiban Meenakchisundaram
Cc: Deloitte-Phaniraju Aradhya <paradhya@deloitte.com>; Guntur V, S Madhav <sgunturuvenkata@deloitte.com>
Subject: EXT: CE-POD5-KT Sprint Approval

EXTERNAL: Report suspicious emails to [Email Abuse](#).

Hi Parthiban,

Can you please approve the KT Sprint for CE-POD5 team. Below are the line items that were covered as part of POD5 KT.

CE Pod 5	1	0	Knowledge Transfer	Sprint backlog dashboard	4/21/2022	5/24/2022	
----------	---	---	--------------------	--------------------------	-----------	-----------	--

Below mentioned points are planned and covered during the KT Sprint.

- Legacy Ads – Platform System Architecture
- Current Ads – Platform System Architecture
- Ads-Platform Components Overview
- Code Walkthrough on Ads-Platform Components
- Code set up on Developers Local Machine
- Running the code on developers machine and testing some of the basic flows
- WCNP Deployment Pipeline walkthrough
- Media Math DSP Requirement Walkthrough



Zoom Meeting You are viewing Bhadrappa, Ashok's screen View Options

Panguluri, Naga Bhadrappa, Ashok

Panguluri, Naga Bhadrappa, Ashok

Participants (2)

PN Panguluri, Naga (Host, me)

Bhadrappa, Ashok

File Message Help Acrobat Tell me what you want to do

Sensitivity Share to Teams Mark Unread Find Zoom Report Phishing ...

Confidential \ No Additional Protection

POD4 - Sprint 3 Retrospective - Sprint Ending 5/24/2022

Bhadrappa, Ashok
To: Varun Tandon
Cc: vilas.goyal@walmart.com, Gunturu V. S Madhav, Aradhyula, Pallavi Aradhyula

You forwarded this message on 5/30/2022 3:22 PM.

This message was sent with High importance.

Sprint_3_Retro.pdf

ITCEFEEDS-187	[FK feeds scheduler] Upload Category file to Azure containers	1
ITCEFEEDS-179	[FK feeds scheduler] Update value of brand Id in the brands output file	2
ITCEFEEDS-176	[FK feeds scheduler]- Add profile support to FK scheduler app	2
ITCEFEEDS-189	[FK feeds scheduler] Test Automation for Category File Evaluation	2
ITCEFEEDS-178	[FK feeds scheduler] Add JUnits for Brands Processor	3
ITCEFEEDS-177	[FK feeds scheduler] Add JUnits for Product Processor	3
ITCEFEEDS-194	[FK feeds scheduler] Add WCNP Secret Manager to the FK Scheduler App	3
ITCEFEEDS-195	[FK feeds scheduler] Automation for input /output feeds comparison for Products and Brands	3
ITCEFEEDS-196	[FK feeds scheduler] Automation for input /output feeds comparison for Category	2
ITCEFEEDS-164	[FK feeds scheduler] Flipkart 1P Feed SSP Submission & Approval	1
Total Story Points Planned		28
Total Story Points Delivered		28
Total Story Points Spill Over to Next Sprint		0

Regards,
Ashok Bhadrappa

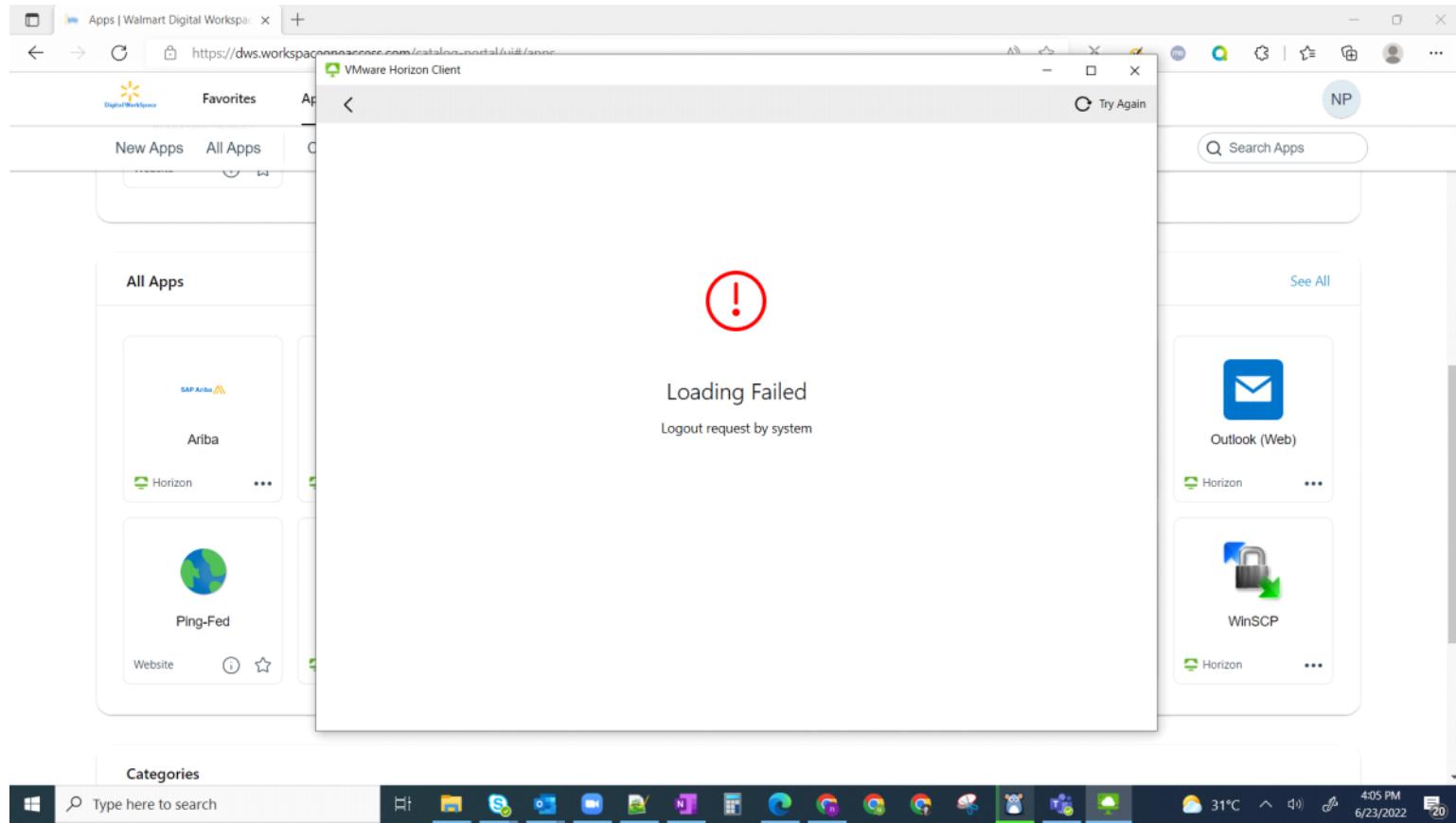


OneOps level2

Tuesday, June 7, 2022 7:51 PM

Junk

Thursday, June 23, 2022 4:05 PM



Teams links

Tuesday, June 28, 2022 10:01 AM

Weekly update doc: <https://amedeloitte.sharepoint.com/:x/r/sites/DeliveryFoundry/Shared%20Documents/General/Deliverables/Sprint%20Deliverables.xlsx?d=w191a7b6700044be185aa236d563a1108&csf=1&web=1&e=FRbQxP>

KT

Friday, July 1, 2022 12:49 PM

FQDN url ?