**AWS DevOps:**

Youtube Video Links:

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<https://www.youtube.com/watch?v=Ea1K3NyXVVI> AWS EC2 || Create Linux Instance || Virtual Server in AWS | Cloud Computing

<https://www.youtube.com/watch?v=8xBGwdY0wDs> DevOps Overview Session || DevOps Training || SDLC || CI/CD

Unix Training Vidoes:

Linux vs Windows

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1. Linux is multiloging and multitasking OS. 65000 Users can connect to Linux OS at a time

2. In windows does support all these features, hence only a single user can login at any given time.

OS is an interface between Humans and Maschine.

Kernel:

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It is a component of OS.

It performs resource allocation and resource negiotiation

Kernal is placed in the OS

Linux Boot Process

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BIOS --> Basic Input/Output System executes MBR

MBR --> Master Boot Record

GRUB --> Grub Unified Bootloader executes Kernel

KERNEL --> Kernel executes sbin/init

INIT --> init executes Runlevel programs

RunLevel --> Runlevel programs are execute from /etc/rc.d/rc\*.d/

RunLevel

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0 : shutdown --> # init0

1 : simple user mode/rescue mode

2 : no networking

3 : commandline mode

4 : not in use

5 : GUI mode

6 : Reboot --> # init6

Basic Commands:

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uname -a

uname -r Kernal version

free -m

cat /proc/cpuinfo

lsblk to see no. of harddisk

df -h

cat /etc/os-release

history

top

uptime

w will show how many users are logged in and from where

date

cal

cal 2029

ls list

ls -ltr list/time/recursive

ls -la list all it will show hidden file or a directory

ls -ll long list

cat

cat >

whomai

sudu su -

rpa -qa | wc -l ==> to list the packages installed in OS

rpa (redhat package manager)

yum in CentOS

Packetmanager::

get-apt Debian and derivates

yum upgrade -y

yum takes care of packages + dependencies

the main configuration file of YUM is at /etc/yum.conf and the repors are at cd /etc/yumm.repos.d/

yum remove firefox

yum update firefo

yum list "" ==>> to list instaled packages

yum search telnet ==>> to search any package

yum info "vstfpd" ==>> to get information

yum info "telnet" ==>> to get information

yum check-update ==>>

shell: translates english literature into binary and vice versa

echo $SHELL

/bin/bash

There are multiple types of shell available

1. Bourne shell

2. Korn shell

3. POSIX shell

4. Bourne Again shell (Bash)

Path

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1. there are two kinds of path

a. absolute path (address will begin with root /var/logs/)

b. relative path (address which does not begin with root) cd ../../httpd

which command

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1. which chmod

/usr/bin/chmod

2. which reboot

/usr/sbin/reboot

3. which is a command that helps users locate the executable file associated with a given command including binaries, scripts, and aliases.

4. /usr/bin has a list of commands that a normal users can execute

5. /usr/sbin has a list of commands that a root user can execute

Interview Question:

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1. how to find if our server overload, optimal load, underload state?

==> uptime is a command to find load average. it has three values

2. what happens when a user is created

a. user is created

b. a default group is created

c. the user is assigned a directory under /home

d. some hidden environmental files are created

adduser mayur

to add a new user

id mayur

to list properties of user mayur

cd /etc/passwd

to list the users created

cd /etc/group

to list the groups created

cd /etc/passwd | grep mayur

cd /etc/passwd | egrep 'mayur|root'

to filter multiple entries

groupadd test

to create a new group

usermod -aG test mayur

to add user to this group

head -10

to list top 10 lines of a file

tail -3

to list bottom three lines of a file

cat /etc/group | wc -l

this is list the number of lines in a file

cat /etc/group | head -15 | tail -5

this will print the content from line 11 to 15

what is the difference between

cat /etc/group | grep mayur

vs

grep mayur /etc/group

==> In the first command /etc/group is being opened, which means a backgroud process has started.

==> Howver, in the second command no background process is started, meaning this command is more optimised or less resource intensive.

vi editor

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i ==> insert mode

wq! ==> write quit !

q! ==> quit ! without saving

Crontab

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'min' 'hours' 'day of the month' 'month' 'day of the week'

\* ==> min (0-59)

\* ==> hours (0-23)

\* ==> day of the month (1-31)

\* ==> month (1-12)

\* ==> day of the week (sun-sat), where Sunday is marked as 0

Crontab -e

Crontab -l

Crontab -r

Crontab -v

Question for Satyam:

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Load average concept

DAY2: AWS-Services

1. IAM: Identity Access Manager:

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IAM helps you to manage large number of aws account.

1) Admin Account : It has same previlges like AWS Root User

2) Power User : Power has same level of preveliges of Admin user but no user Administration access in AWS. EG. creating user, delete user, etc.

3) Normal User

GROUP CREATION:

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Policy Document is also called as permission.

2 Types

1. AWS managed: provided by AWS

2. Customer managed : custom created by admins

Policydoc is written in JSON (Java script object notification). That is basically a key-value pair.

ACCESS MGMT:

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Question:

1. install AWS CLI

2. S3: Simple Storage Service

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- We can create maximum of 100 Buckets in one AWS Account.

- One Bucket can store almost unlimited of data in the forms of "Objects"

- we can storage structured, unstructured, semi-structured data

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Data: 3 types

1. structured : any data which can stored in rows and columns ==> stored in RDBMS

2. semi-structured : any data which can stored in FlatFileSystem (eg. xml, json) ==> stored in DBMS

3. un-structured : any data which can stored in rows and columns () ==> stored

LAB1:

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1. Created AWS Account

2. Created Ubuntu maschine

3. Connected to the Linux maschine using Putty

4. IAM

1. created user1 user

2. reset password manually

3. assigned EC2 permissions

4. tested the user1 login in a new browser using user login

5. As root user created two more normal users and a group,

5. S3:

1. created a bucket

2. uploaded files to the bucket

3. read about buckets, S3, data structure, etc

DAY3 - EC2 Instance

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- Completed

AWS Organization:

Learn:

<https://www.youtube.com/playlist?list=PLdpzxOOAlwvLNOxX0RfndiYSt1Le9azze>

**CLOUD LECTURES**

1. EC2
2. S3
3. VPC
4. AWS Security and NACL
5. Route53
   1. AWS provides DNS as a Service.
   2. DNS keeps records.
   3. We can also purchase Domainname from AWS
   4. We can also use our pre bought domainname in Route53
   5. In hostedzones we create a DNS Record.
   6. Route53 also supports healthchecks on the webservers