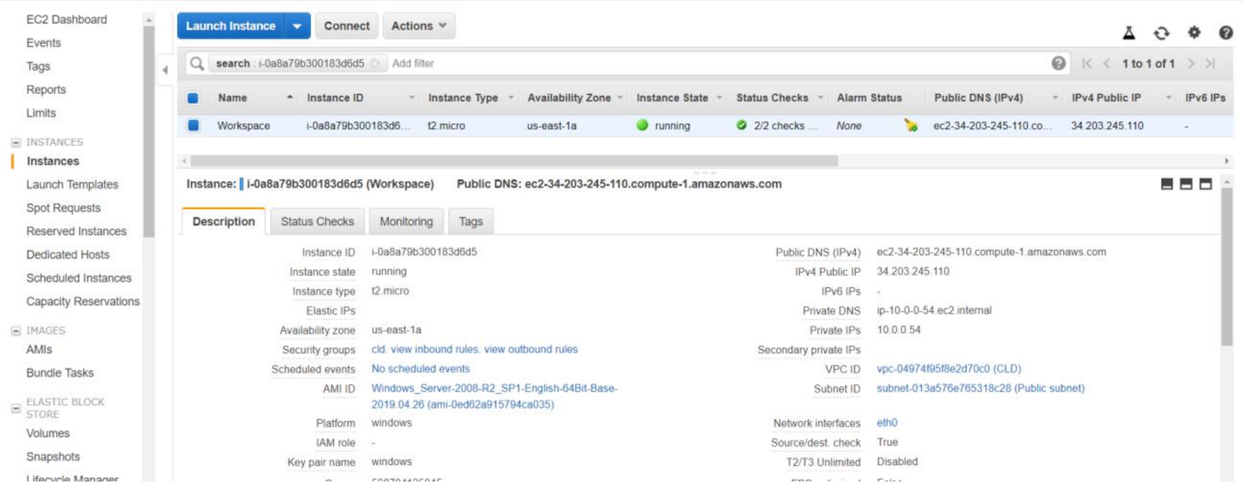
CLOUDERA DIRECTOR

Guide: https://docs.aws.amazon.com/cli/latest/userguide/installing.html

1. Create Workspace : (Windows 2008 or Preferable)



search : i-0a8a79b300183d6d5

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs
Workspace	i-0a8a79b300183d6...	t2.micro	us-east-1a	● running	✓ 2/2 checks ...	None	ec2-34-203-245-110.co...	34.203.245.110	-

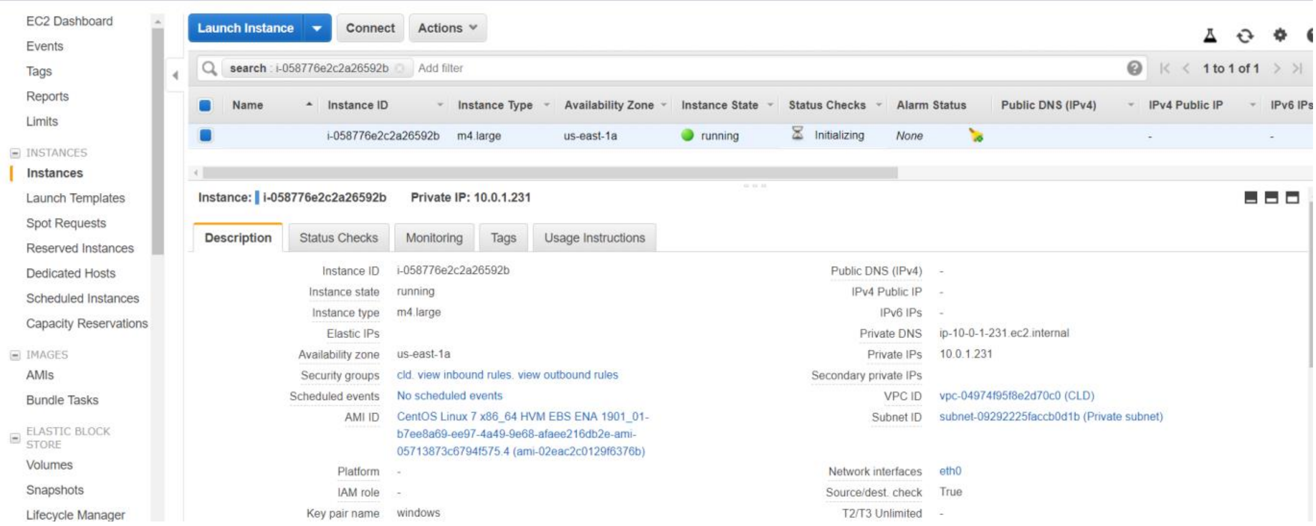
Instance: i-0a8a79b300183d6d5 (Workspace) **Public DNS:** ec2-34-203-245-110.compute-1.amazonaws.com

Instance ID	i-0a8a79b300183d6d5	Public DNS (IPv4)	ec2-34-203-245-110.compute-1.amazonaws.com
Instance state	running	IPv4 Public IP	34.203.245.110
Instance type	t2.micro	IPv6 IPs	-
Elastic IPs		Private DNS	ip-10-0-0-54.ec2.internal
Availability zone	us-east-1a	Private IPs	10.0.0.54
Security groups	cld. view inbound rules. view outbound rules	Secondary private IPs	
Scheduled events	No scheduled events	VPC ID	vpc-04974f95f8e2d70c0 (CLD)
AMI ID	Windows_Server-2008-R2_SP1-English-64Bit-Base-2019.04.26 (ami-0ed62a915794ca035)	Subnet ID	subnet-013a576e765318c28 (Public subnet)
Platform	windows	Network interfaces	eth0
IAM role	-	Source/dest. check	True
Key pair name	windows	T2/T3 Unlimited	Disabled

- Action> Image> Create Image> Save it for further use

2. Take a CENTOS machine form AWS AMI (CENTOS -7)

Select VPC and VPN (if needed)
Select Private subnet
Choose your VPC as a security group



search : i-058776e2c2a26592b

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs
	i-058776e2c2a26592b	m4.large	us-east-1a	● running	⌛ Initializing	None		-	-

Instance: i-058776e2c2a26592b **Private IP:** 10.0.1.231

Instance ID	i-058776e2c2a26592b	Public DNS (IPv4)	-
Instance state	running	IPv4 Public IP	-
Instance type	m4.large	IPv6 IPs	-
Elastic IPs		Private DNS	ip-10-0-1-231.ec2.internal
Availability zone	us-east-1a	Private IPs	10.0.1.231
Security groups	cld. view inbound rules. view outbound rules	Secondary private IPs	
Scheduled events	No scheduled events	VPC ID	vpc-04974f95f8e2d70c0 (CLD)
AMI ID	CentOS Linux 7 x86_64 HVM EBS ENA 1901_01-b7ee8a69-ee97-4a49-9e68-afaee216db2e-ami-05713873c6794f575.4 (ami-02eac2c0129f6376b)	Subnet ID	subnet-09292225faccb0d1b (Private subnet)
Platform	-	Network interfaces	eth0
IAM role	-	Source/dest. check	True
Key pair name	windows	T2/T3 Unlimited	-

- Action> Image> Create Image> Save it for further use

- Terminate this once AMI it is ready, since in this scenario we are deploying centos through CLI (refer Step No. powershell-10)

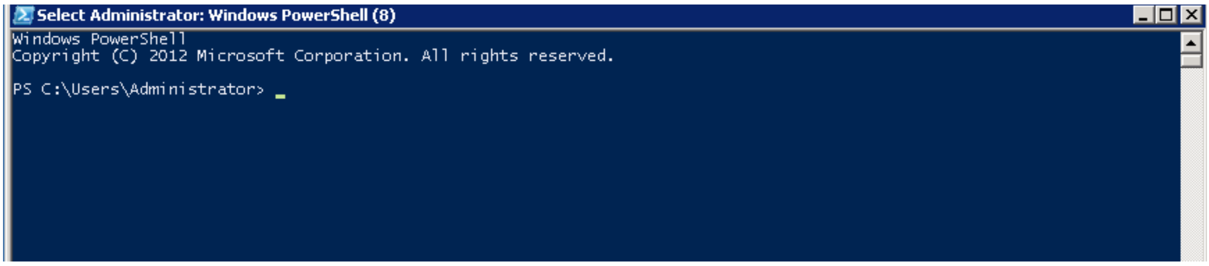
3. **Connect to Workspace/ Datacentre:**
    - Windows user can connect through directly RDP(CONNECT)
    - MAC user can connect through RDP tool
    - Ubuntu user can connect though Remmina

4. **After connection :**

- Open file manager> Server manager > disable > configure IE ESC. (off to both the option)
- Download all essentials files i.e Putty, Putty gen and browser(chrome)

POWERSHELL COMMANDS

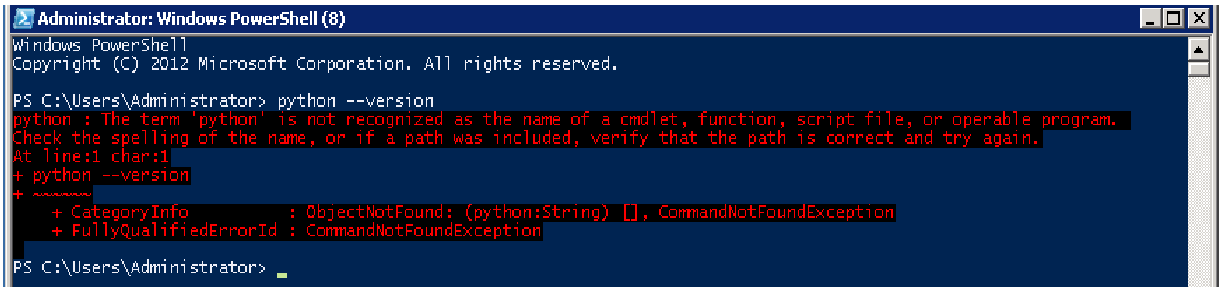
1. **Open PowerShell:**



```
Windows PowerShell
Copyright (C) 2012 Microsoft Corporation. All rights reserved.

PS C:\Users\Administrator> _
```

2. **PowerShell :**

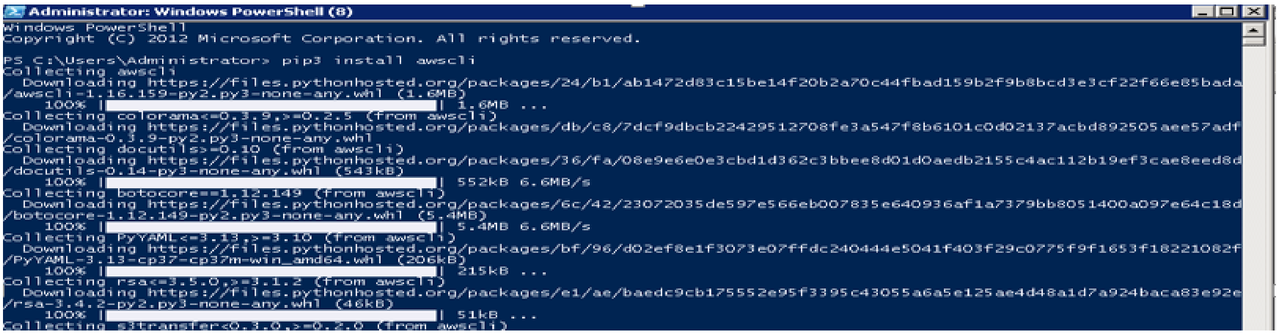
cmd: python –version



```
Windows PowerShell
Copyright (C) 2012 Microsoft Corporation. All rights reserved.

PS C:\Users\Administrator> python --version
python : The term 'python' is not recognized as the name of a cmdlet, function, script file, or operable program.
Check the spelling of the name, or if a path was included, verify that the path is correct and try again.
At line:1 char:1
+ python --version
+ ~~~~~~
    + CategoryInfo          : ObjectNotFound: (python:String) [], CommandNotFoundException
    + FullyQualifiedErrorId : CommandNotFoundException

PS C:\Users\Administrator> _
```

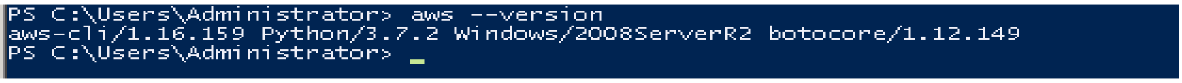
3. **Download python**: https://www.python.org/ftp/python/3.7.2/python-3.7.2-amd64.exe
    - Custom Installation, Add python 3.7 to path
    - Allow pip, Allow all user

4. > Pip3 install awscli



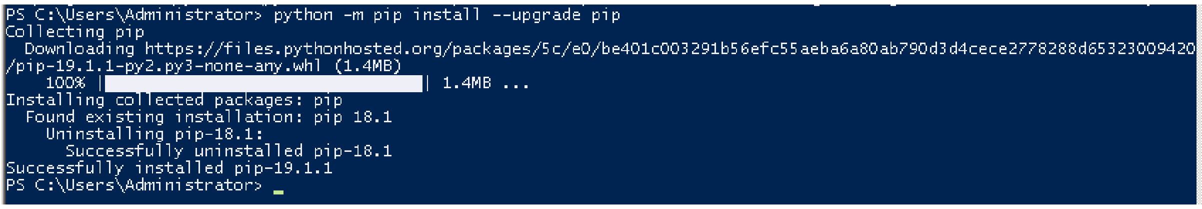
```
Windows PowerShell
Copyright (C) 2012 Microsoft Corporation. All rights reserved.

PS C:\Users\Administrator> pip3 install awscli
Collecting awscli
  Downloading https://files.pythonhosted.org/packages/24/b1/ab1472d83c15be14f20b2a70c44fbad159b2f9b8bcd3e3cf22f66e85bada
/awscli-1.16.159-py2.py3-none-any.whl (1.6MB)
    100% |████████████████████████████████| 1.6MB ...
Collecting colorama<=0.3.9,>=0.2.5 (from awscli)
  Downloading https://files.pythonhosted.org/packages/db/c8/7dcf9dbcb22429512708fe3a547f8b6101c0d02137acbd892505aee57adf
/colorama-0.3.9-py2.py3-none-any.whl
Collecting docutils>=0.10 (from awscli)
  Downloading https://files.pythonhosted.org/packages/36/fa/08e9e6e0e3cbd1d362c3bbee8d01d0aedb2155c4ac112b19ef3cae8eed8d
/docutils-0.14-py3-none-any.whl (543kB)
    100% |████████████████████████████████| 552kB 6.6MB/s
Collecting botocore==1.12.149 (from awscli)
  Downloading https://files.pythonhosted.org/packages/6c/42/23072035de597e566eb007835e640936af1a7379bb8051400a097e64c18d
/botocore-1.12.149-py2.py3-none-any.whl (5.4MB)
    100% |████████████████████████████████| 5.4MB 6.6MB/s
Collecting PyYAML<=3.13,>=3.10 (from awscli)
  Downloading https://files.pythonhosted.org/packages/bf/96/d02ef8e1f3073e07ffdc240444e5041f403f29c0775f9f1653f18221082f
/PyYAML-3.13-cp37-cp37m-win_amd64.whl (206kB)
    100% |████████████████████████████████| 215kB ...
Collecting rsa<=3.5.0,>=3.1.2 (from awscli)
  Downloading https://files.pythonhosted.org/packages/e1/ae/baedc9cb175552e95f3395c43055a6a5e125ae4d48a1d7a924baca83e92e
/rsa-3.4.2-py2.py3-none-any.whl (46kB)
    100% |████████████████████████████████| 51kB ...
Collecting s3transfer<0.3.0,>=0.2.0 (from awscli)
```

5. >aws –version



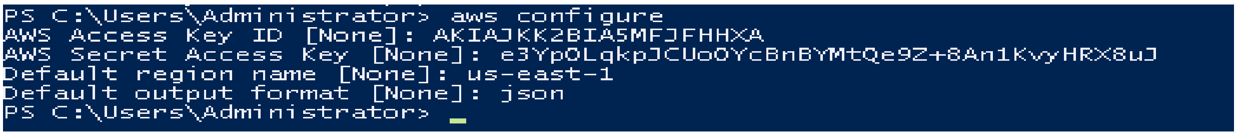
```
PS C:\Users\Administrator> aws --version
aws-cli/1.16.159 Python/3.7.2 Windows/2008ServerR2 botocore/1.12.149
PS C:\Users\Administrator> _
```

6. Upgrade pip: python -m pip install --upgrade pip



```
PS C:\Users\Administrator> python -m pip install --upgrade pip
Collecting pip
  Downloading https://files.pythonhosted.org/packages/5c/e0/be401c003291b56efc55aeba6a80ab790d3d4cece2778288d65323009420
/pip-19.1.1-py2.py3-none-any.whl (1.4MB)
    100% |████████████████████████████████| 1.4MB ...
Installing collected packages: pip
  Found existing installation: pip 18.1
    Uninstalling pip-18.1:
      Successfully uninstalled pip-18.1
Successfully installed pip-19.1.1
PS C:\Users\Administrator> _
```

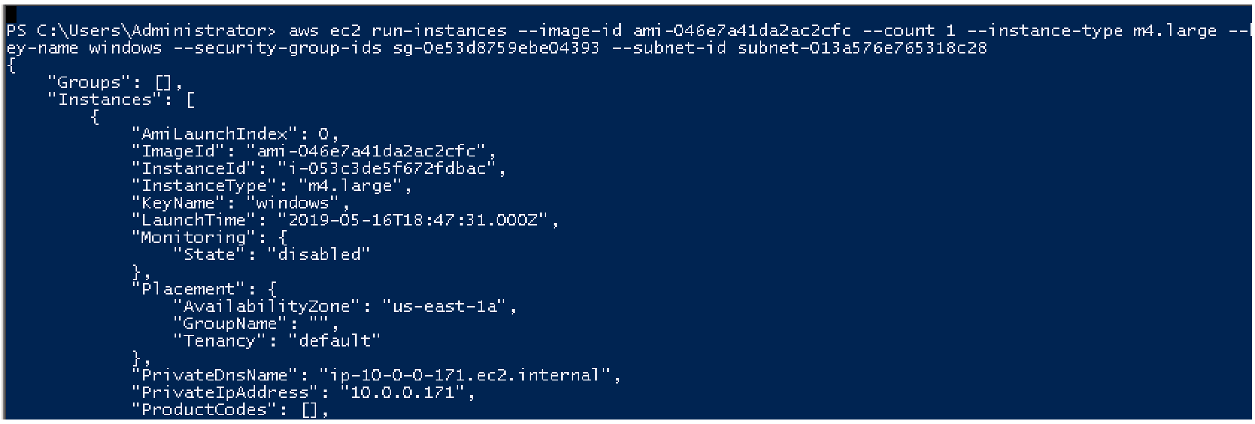
7. >aws configure : In this put access and secret access key which you will get from aws



```
PS C:\Users\Administrator> aws configure
AWS Access Key ID [None]: AKIAJKK2BIA5MFJFHHXA
AWS Secret Access Key [None]: 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
Default region name [None]: us-east-1
Default output format [None]: json
PS C:\Users\Administrator> _
```

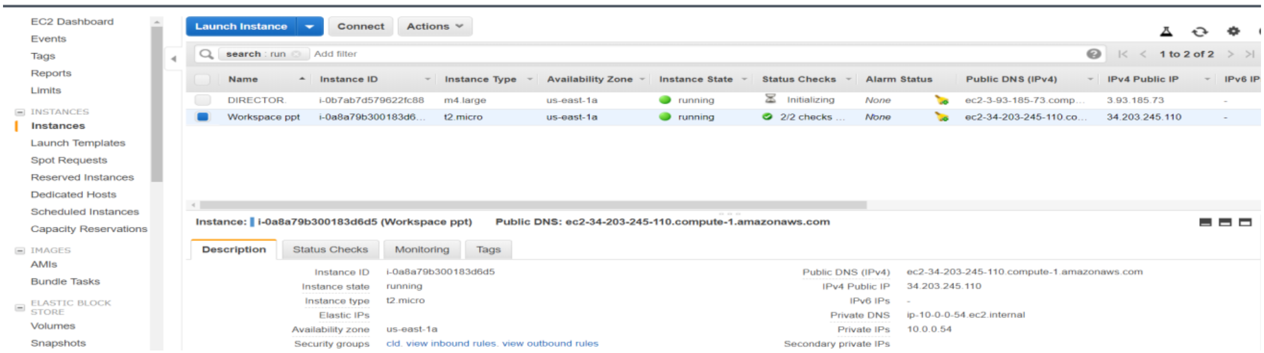
8. >aws ec2 describe-regions
9. >aws ec2 describe-instances

10. >aws ec2 run-instances --image-id (centos ami id) --count 1 --instance-type m4.large --key-name (xyz) --security-group-ids sg-0e53d8759ebe04393 --subnet-id subnet-013a576e765318c28



```
PS C:\Users\Administrator> aws ec2 run-instances --image-id ami-046e7a41da2ac2cfc --count 1 --instance-type m4.large --
ey-name windows --security-group-ids sg-0e53d8759ebe04393 --subnet-id subnet-013a576e765318c28
{
    "Groups": [],
    "Instances": [
        {
            "AmiLaunchIndex": 0,
            "ImageId": "ami-046e7a41da2ac2cfc",
            "InstanceId": "i-053c3de5f672fdbac",
            "InstanceType": "m4.large",
            "KeyName": "windows",
            "LaunchTime": "2019-05-16T18:47:31.000Z",
            "Monitoring": {
                "State": "disabled"
            },
            "Placement": {
                "AvailabilityZone": "us-east-1a",
                "GroupName": "",
                "Tenancy": "default"
            },
            "PrivateDnsName": "ip-10-0-0-171.ec2.internal",
            "PrivateIpAddress": "10.0.0.171",
            "ProductCodes": [],
```

11. Now go to AWS window and look you got an CENTOS instance ready:



Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IP
DIRECTOR.	i-0b7ab7d579622fc88	m4.large	us-east-1a	running	Initializing	None	ec2-3-93-185-73.comp...	3.93.185.73	-
Workspace ppt	i-0a8a79b300183d6...	t2.micro	us-east-1a	running	2/2 checks ...	None	ec2-34-203-245-110.co...	34.203.245.110	-

Instance: i-0a8a79b300183d6d5 (Workspace ppt) **Public DNS: ec2-34-203-245-110.compute-1.amazonaws.com**

Instance ID i-0a8a79b300183d6d5
Instance state running
Instance type t2.micro
Elastic IPs
Availability zone us-east-1a
Security groups cld. view inbound rules. view outbound rules

Public DNS (IPv4) ec2-34-203-245-110.compute-1.amazonaws.com
IPv4 Public IP 34.203.245.110
IPv6 IPs -
Private DNS ip-10-0-0-54.ec2.internal
Private IPs 10.0.0.54
Secondary private IPs

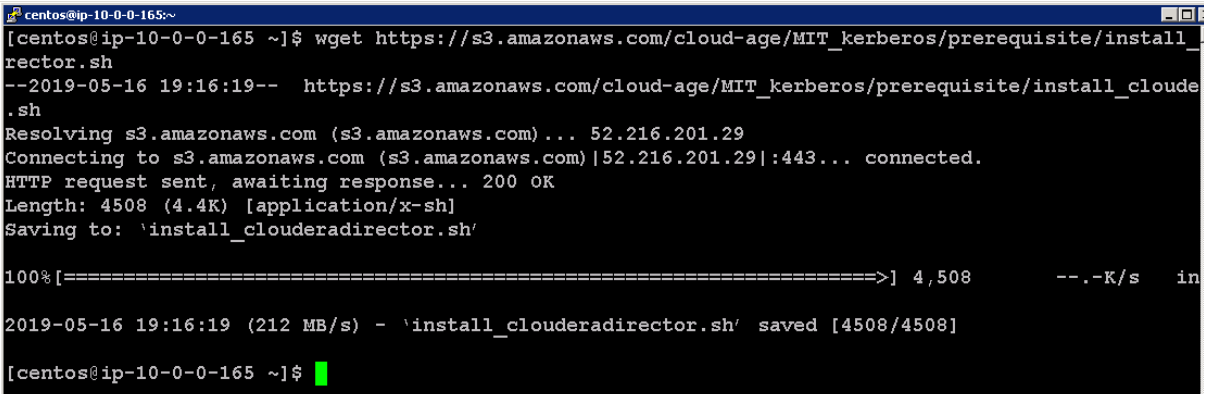
Putty commands/ RDP:

Connect to centos machine taking private ip:

1. sudo yum install wget -y
2. sudo yum install nano -y (if you will)
3. # install JDK

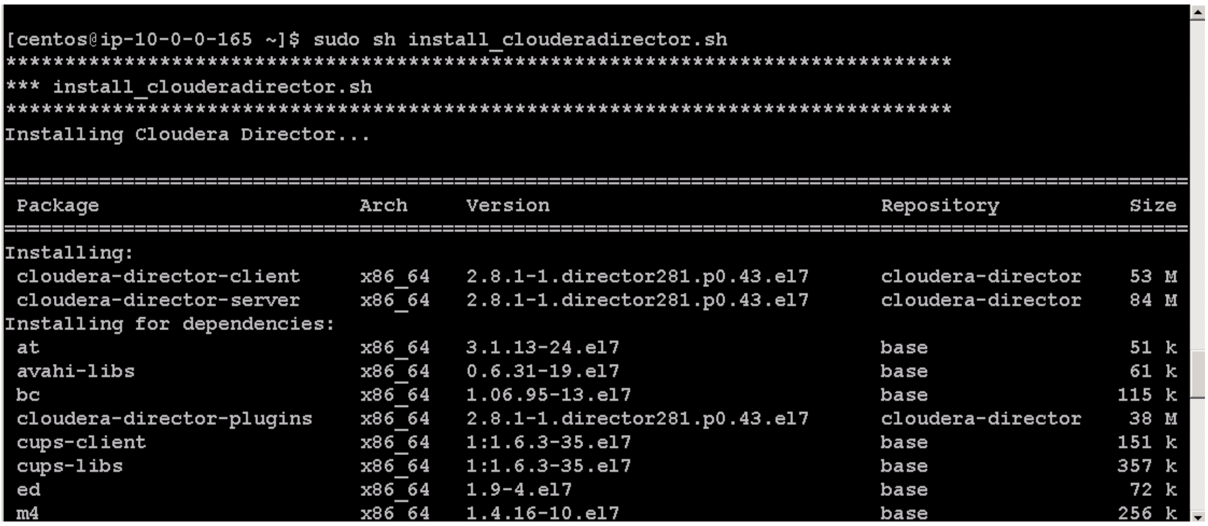
wget https://s3.amazonaws.com/cloud-age/jdk-8u162-linux-x64.rpm
sudo rpm -Uv jdk-8u162-linux-x64.rpm

4. # Run Cloudera Director Script.
   - wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/install_clouderadirector.sh

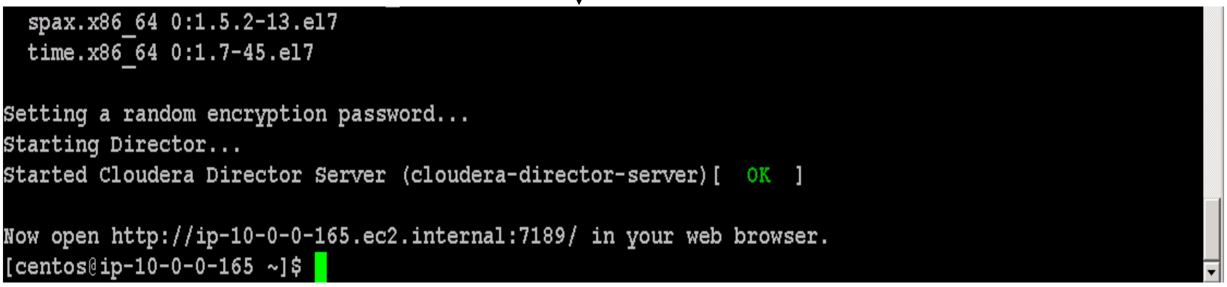


```
[centos@ip-10-0-0-165 ~]$ wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/install_
rector.sh
--2019-05-16 19:16:19--  https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/install_cloude
.sh
Resolving s3.amazonaws.com (s3.amazonaws.com)... 52.216.201.29
Connecting to s3.amazonaws.com (s3.amazonaws.com)|52.216.201.29|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 4508 (4.4K) [application/x-sh]
Saving to: 'install_clouderadirector.sh'

100%[===================================================================>] 4,508       --.-K/s   in

2019-05-16 19:16:19 (212 MB/s) - 'install_clouderadirector.sh' saved [4508/4508]

[centos@ip-10-0-0-165 ~]$ 
```

5. sudo sh install_clouderadirector.sh

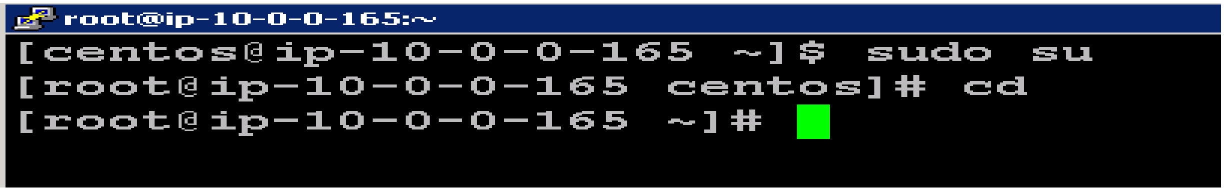


```
[centos@ip-10-0-0-165 ~]$ sudo sh install_clouderadirector.sh
********************************************************************************
*** install_clouderadirector.sh
********************************************************************************
Installing Cloudera Director...

====================================================================================================
 Package                      Arch      Version                            Repository           Size
====================================================================================================
Installing:
 cloudera-director-client     x86_64    2.8.1-1.director281.p0.43.el7      cloudera-director    53 M
 cloudera-director-server     x86_64    2.8.1-1.director281.p0.43.el7      cloudera-director    84 M
Installing for dependencies:
 at                           x86_64    3.1.13-24.el7                      base                 51 k
 avahi-libs                   x86_64    0.6.31-19.el7                      base                 61 k
 bc                           x86_64    1.06.95-13.el7                     base                115 k
 cloudera-director-plugins    x86_64    2.8.1-1.director281.p0.43.el7      cloudera-director    38 M
 cups-client                  x86_64    1:1.6.3-35.el7                     base                151 k
 cups-libs                    x86_64    1:1.6.3-35.el7                     base                357 k
 ed                           x86_64    1.9-4.el7                          base                 72 k
 m4                           x86_64    1.4.16-10.el7                      base                256 k
```



```
  spax.x86_64 0:1.5.2-13.el7
  time.x86_64 0:1.7-45.el7

Setting a random encryption password...
Starting Director...
Started Cloudera Director Server (cloudera-director-server)[  OK  ]

Now open http://ip-10-0-0-165.ec2.internal:7189/ in your web browser.
[centos@ip-10-0-0-165 ~]$ 
```

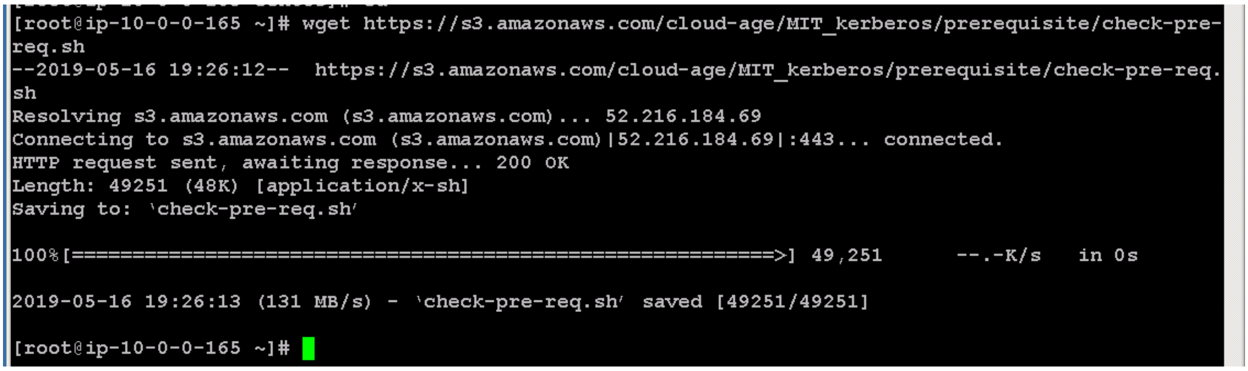
6. Run sudo su (enter) and cd(enter)



```
root@ip-10-0-0-165:~
[centos@ip-10-0-0-165 ~]$ sudo su
[root@ip-10-0-0-165 centos]# cd
[root@ip-10-0-0-165 ~]#
```

7. #check Prerequesites

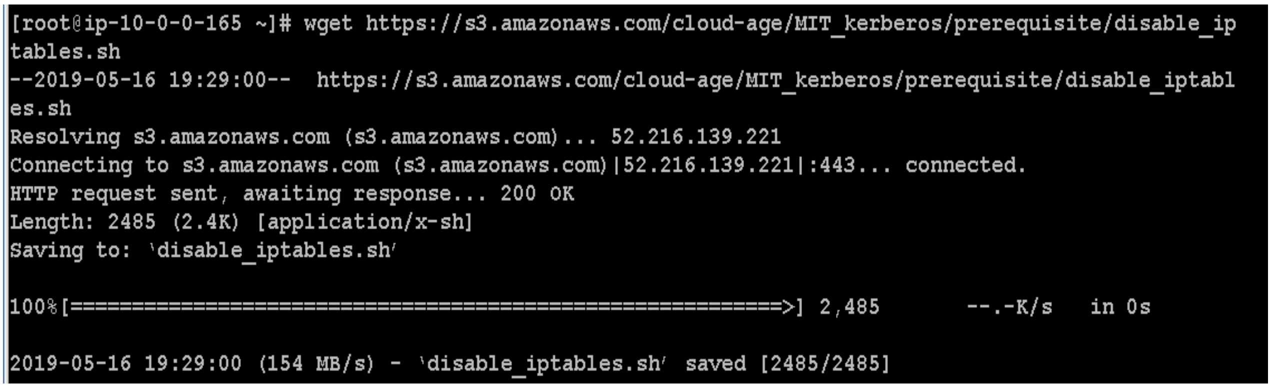
- wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/check-pre-req.sh



```
[root@ip-10-0-0-165 ~]# wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/check-pre-
req.sh
--2019-05-16 19:26:12--  https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/check-pre-req.
sh
Resolving s3.amazonaws.com (s3.amazonaws.com)... 52.216.184.69
Connecting to s3.amazonaws.com (s3.amazonaws.com)|52.216.184.69|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 49251 (48K) [application/x-sh]
Saving to: 'check-pre-req.sh'

100%[===========================================================>] 49,251      --.-K/s   in 0s

2019-05-16 19:26:13 (131 MB/s) - 'check-pre-req.sh' saved [49251/49251]

[root@ip-10-0-0-165 ~]#
```

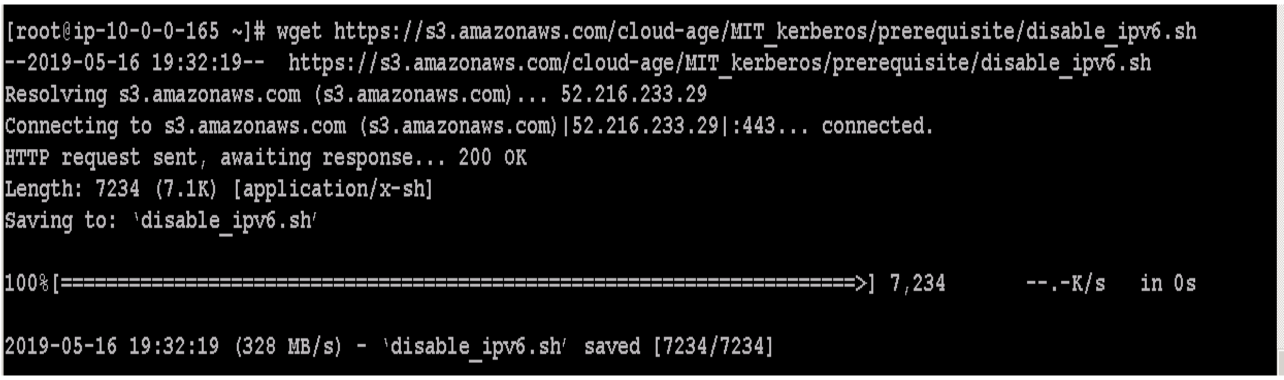
8. # Run all Prerequesites by typing./filename or sh filename

➢ wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/disable_iptables.sh



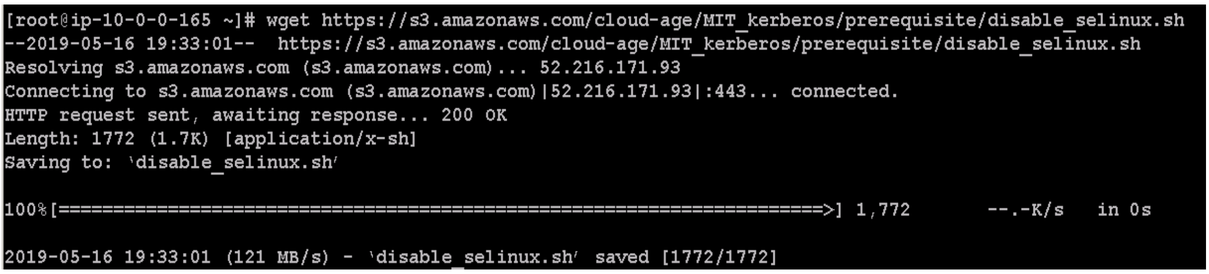
```
[root@ip-10-0-0-165 ~]# wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/disable_ip
tables.sh
--2019-05-16 19:29:00--  https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/disable_iptabl
es.sh
Resolving s3.amazonaws.com (s3.amazonaws.com)... 52.216.139.221
Connecting to s3.amazonaws.com (s3.amazonaws.com)|52.216.139.221|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 2485 (2.4K) [application/x-sh]
Saving to: 'disable_iptables.sh'

100%[==========================================================>] 2,485       --.-K/s   in 0s

2019-05-16 19:29:00 (154 MB/s) - 'disable_iptables.sh' saved [2485/2485]
```

➢ wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/disable_ipv6.sh



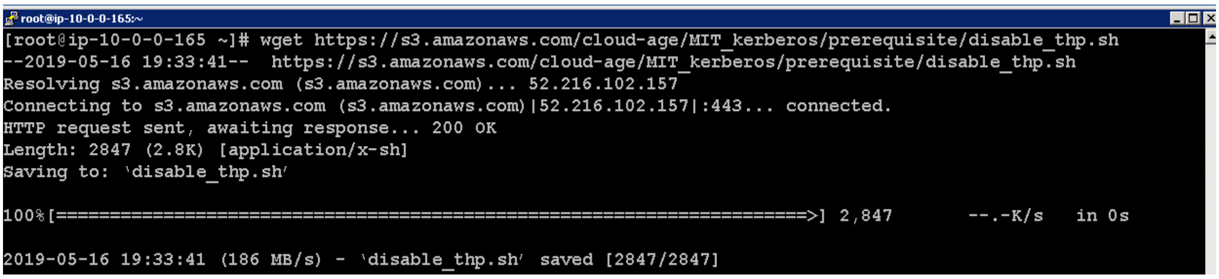
```
[root@ip-10-0-0-165 ~]# wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/disable_ipv6.sh
--2019-05-16 19:32:19--  https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/disable_ipv6.sh
Resolving s3.amazonaws.com (s3.amazonaws.com)... 52.216.233.29
Connecting to s3.amazonaws.com (s3.amazonaws.com)|52.216.233.29|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 7234 (7.1K) [application/x-sh]
Saving to: 'disable_ipv6.sh'

100%[=====================================================================>] 7,234       --.-K/s   in 0s

2019-05-16 19:32:19 (328 MB/s) - 'disable_ipv6.sh' saved [7234/7234]
```

➢ wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/disable_selinux.sh



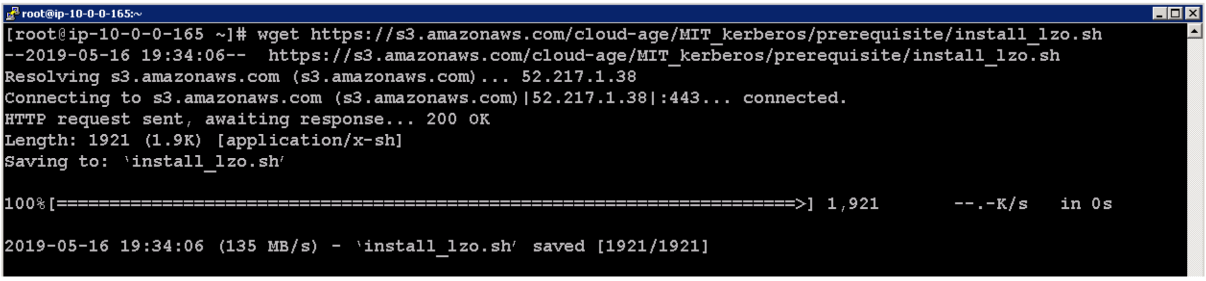
```
[root@ip-10-0-0-165 ~]# wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/disable_selinux.sh
--2019-05-16 19:33:01--  https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/disable_selinux.sh
Resolving s3.amazonaws.com (s3.amazonaws.com)... 52.216.171.93
Connecting to s3.amazonaws.com (s3.amazonaws.com)|52.216.171.93|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 1772 (1.7K) [application/x-sh]
Saving to: ‘disable_selinux.sh’

100%[======================================================================>] 1,772       --.-K/s   in 0s

2019-05-16 19:33:01 (121 MB/s) - ‘disable_selinux.sh’ saved [1772/1772]
```

- ➢ wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/disable_thp.sh



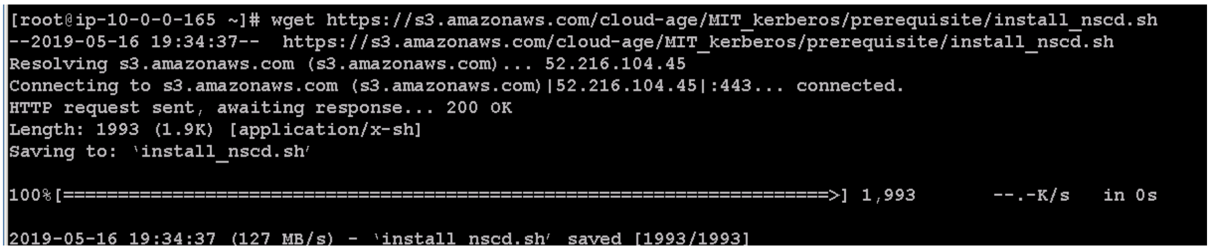
```
[root@ip-10-0-0-165 ~]# wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/disable_thp.sh
--2019-05-16 19:33:41--  https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/disable_thp.sh
Resolving s3.amazonaws.com (s3.amazonaws.com)... 52.216.102.157
Connecting to s3.amazonaws.com (s3.amazonaws.com)|52.216.102.157|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 2847 (2.8K) [application/x-sh]
Saving to: ‘disable_thp.sh’

100%[======================================================================>] 2,847       --.-K/s   in 0s

2019-05-16 19:33:41 (186 MB/s) - ‘disable_thp.sh’ saved [2847/2847]
```

- ➢ wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/install_lzo.sh



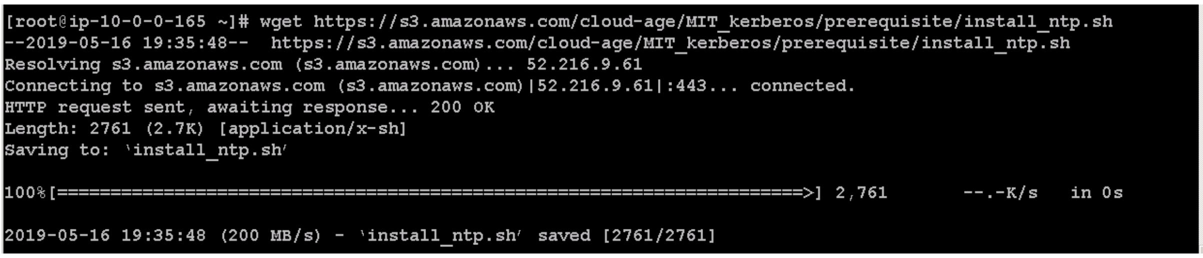
```
[root@ip-10-0-0-165 ~]# wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/install_lzo.sh
--2019-05-16 19:34:06--  https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/install_lzo.sh
Resolving s3.amazonaws.com (s3.amazonaws.com)... 52.217.1.38
Connecting to s3.amazonaws.com (s3.amazonaws.com)|52.217.1.38|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 1921 (1.9K) [application/x-sh]
Saving to: ‘install_lzo.sh’

100%[======================================================================>] 1,921       --.-K/s   in 0s

2019-05-16 19:34:06 (135 MB/s) - ‘install_lzo.sh’ saved [1921/1921]
```

- ➢ wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/install_nscd.sh



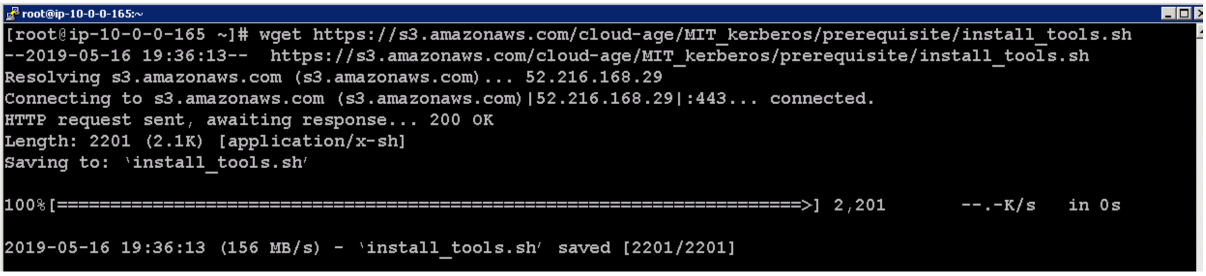
```
[root@ip-10-0-0-165 ~]# wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/install_nscd.sh
--2019-05-16 19:34:37--  https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/install_nscd.sh
Resolving s3.amazonaws.com (s3.amazonaws.com)... 52.216.104.45
Connecting to s3.amazonaws.com (s3.amazonaws.com)|52.216.104.45|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 1993 (1.9K) [application/x-sh]
Saving to: ‘install_nscd.sh’

100%[======================================================================>] 1,993       --.-K/s   in 0s

2019-05-16 19:34:37 (127 MB/s) - ‘install_nscd.sh’ saved [1993/1993]
```

- ➢ wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/install_ntp.sh



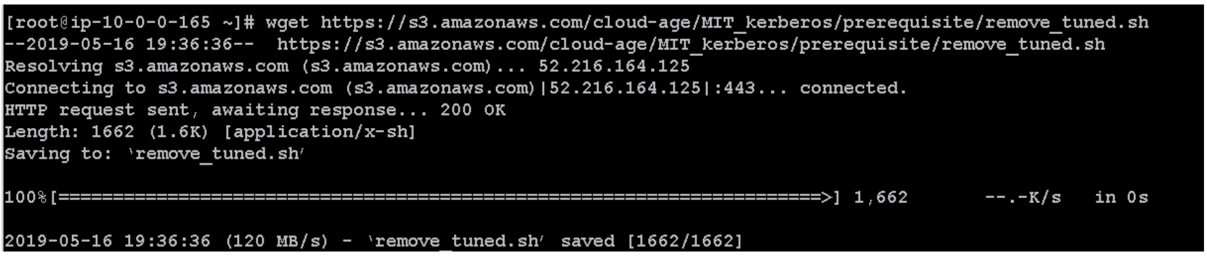
```
[root@ip-10-0-0-165 ~]# wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/install_ntp.sh
--2019-05-16 19:35:48--  https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/install_ntp.sh
Resolving s3.amazonaws.com (s3.amazonaws.com)... 52.216.9.61
Connecting to s3.amazonaws.com (s3.amazonaws.com)|52.216.9.61|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 2761 (2.7K) [application/x-sh]
Saving to: ‘install_ntp.sh’

100%[======================================================================>] 2,761       --.-K/s   in 0s

2019-05-16 19:35:48 (200 MB/s) - ‘install_ntp.sh’ saved [2761/2761]
```

- ➢ wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/install_tools.sh



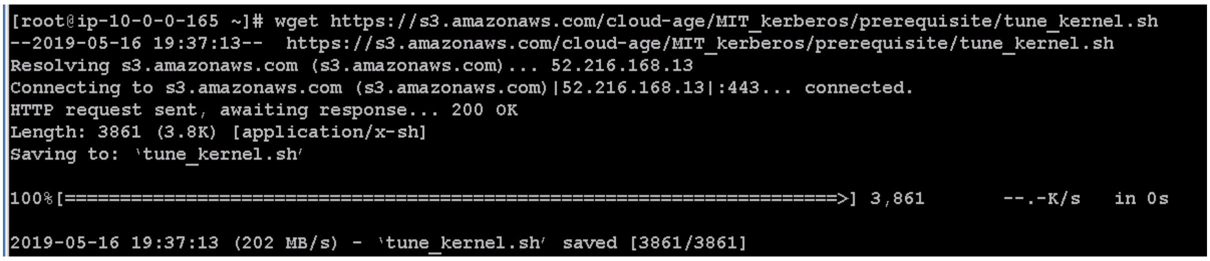
```
[root@ip-10-0-0-165 ~]# wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/install_tools.sh
--2019-05-16 19:36:13--  https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/install_tools.sh
Resolving s3.amazonaws.com (s3.amazonaws.com)... 52.216.168.29
Connecting to s3.amazonaws.com (s3.amazonaws.com)|52.216.168.29|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 2201 (2.1K) [application/x-sh]
Saving to: 'install_tools.sh'

100%[=====================================================================>] 2,201       --.-K/s   in 0s

2019-05-16 19:36:13 (156 MB/s) - 'install_tools.sh' saved [2201/2201]
```

- ➢ wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/remove_tuned.sh



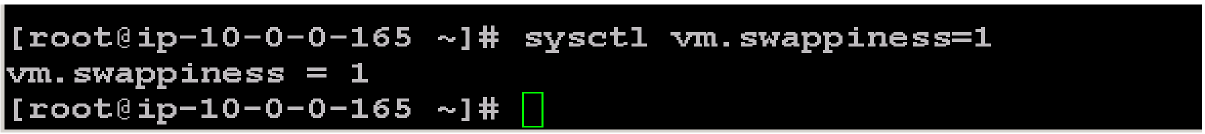
```
[root@ip-10-0-0-165 ~]# wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/remove_tuned.sh
--2019-05-16 19:36:36--  https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/remove_tuned.sh
Resolving s3.amazonaws.com (s3.amazonaws.com)... 52.216.164.125
Connecting to s3.amazonaws.com (s3.amazonaws.com)|52.216.164.125|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 1662 (1.6K) [application/x-sh]
Saving to: 'remove_tuned.sh'

100%[=====================================================================>] 1,662       --.-K/s   in 0s

2019-05-16 19:36:36 (120 MB/s) - 'remove_tuned.sh' saved [1662/1662]
```

- ➢ wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/tune_kernel.sh



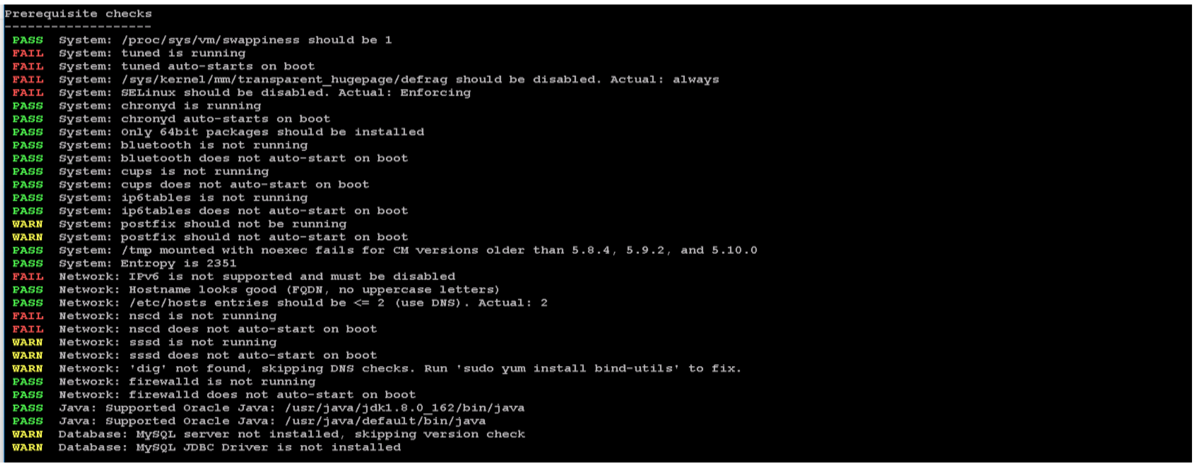
```
[root@ip-10-0-0-165 ~]# wget https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/tune_kernel.sh
--2019-05-16 19:37:13--  https://s3.amazonaws.com/cloud-age/MIT_kerberos/prerequisite/tune_kernel.sh
Resolving s3.amazonaws.com (s3.amazonaws.com)... 52.216.168.13
Connecting to s3.amazonaws.com (s3.amazonaws.com)|52.216.168.13|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 3861 (3.8K) [application/x-sh]
Saving to: 'tune_kernel.sh'

100%[=====================================================================>] 3,861       --.-K/s   in 0s

2019-05-16 19:37:13 (202 MB/s) - 'tune_kernel.sh' saved [3861/3861]
```

- ➢ sysctl vm.swappiness=1



```
[root@ip-10-0-0-165 ~]# sysctl vm.swappiness=1
vm.swappiness = 1
[root@ip-10-0-0-165 ~]#
```

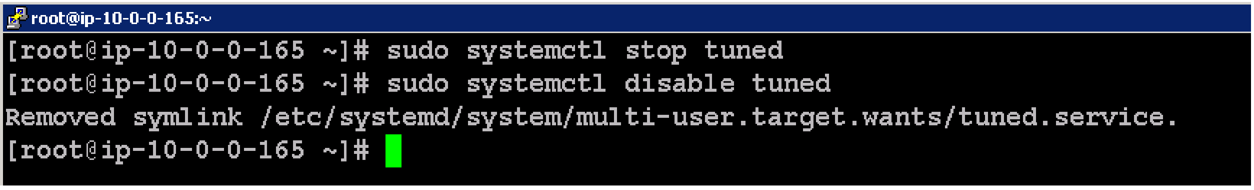
- ➢ sudo sh check-pre-req.sh



```
Prerequisite checks
-------------------
 PASS  System: /proc/sys/vm/swappiness should be 1
 FAIL  System: tuned is running
 FAIL  System: tuned auto-starts on boot
 FAIL  System: /sys/kernel/mm/transparent_hugepage/defrag should be disabled. Actual: always
 FAIL  System: SELinux should be disabled. Actual: Enforcing
 PASS  System: chronyd is running
 PASS  System: chronyd auto-starts on boot
 PASS  System: Only 64bit packages should be installed
 PASS  System: bluetooth is not running
 PASS  System: bluetooth does not auto-start on boot
 PASS  System: cups is not running
 PASS  System: cups does not auto-start on boot
 PASS  System: ip6tables is not running
 PASS  System: ip6tables does not auto-start on boot
 WARN  System: postfix should not be running
 WARN  System: postfix should not auto-start on boot
 PASS  System: /tmp mounted with noexec fails for CM versions older than 5.8.4, 5.9.2, and 5.10.0
 PASS  System: Entropy is 2351
 FAIL  Network: IPv6 is not supported and must be disabled
 PASS  Network: Hostname looks good (FQDN, no uppercase letters)
 PASS  Network: /etc/hosts entries should be <= 2 (use DNS). Actual: 2
 FAIL  Network: nscd is not running
 FAIL  Network: nscd does not auto-start on boot
 WARN  Network: sssd is not running
 WARN  Network: sssd does not auto-start on boot
 WARN  Network: 'dig' not found, skipping DNS checks. Run 'sudo yum install bind-utils' to fix.
 PASS  Network: firewalld is not running
 PASS  Network: firewalld does not auto-start on boot
 PASS  Java: Supported Oracle Java: /usr/java/jdk1.8.0_162/bin/java
 PASS  Java: Supported Oracle Java: /usr/java/default/bin/java
 WARN  Database: MySQL server not installed, skipping version check
 WARN  Database: MySQL JDBC Driver is not installed
```

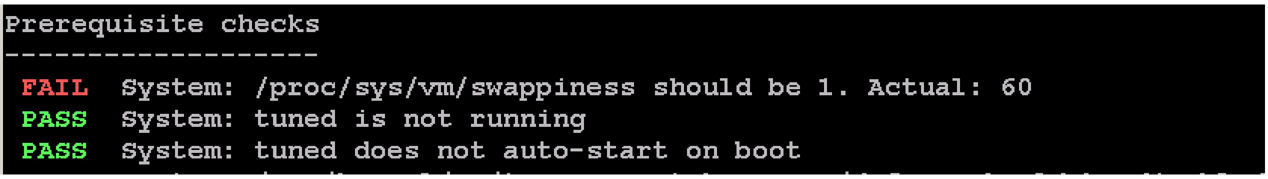
Nothing to worry about FAIL, we gona fix it out, relax.

- ➢ tuned is running (run this 2 commands in terminal.)



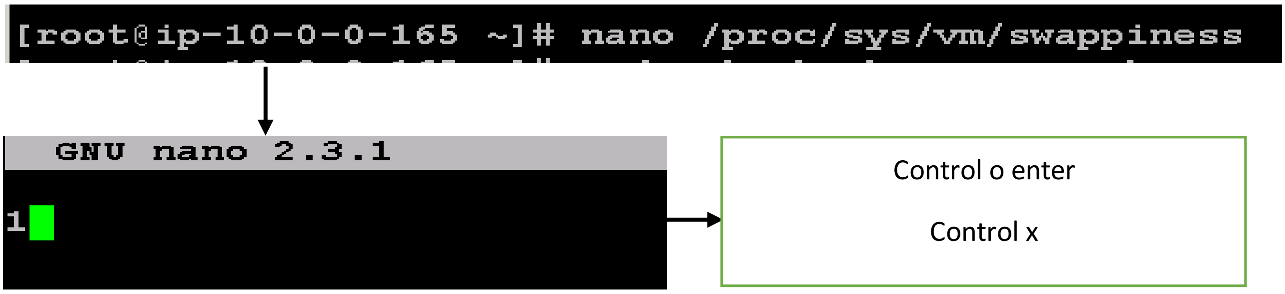
```
root@ip-10-0-0-165:~
[root@ip-10-0-0-165 ~]# sudo systemctl stop tuned
[root@ip-10-0-0-165 ~]# sudo systemctl disable tuned
Removed symlink /etc/systemd/system/multi-user.target.wants/tuned.service.
[root@ip-10-0-0-165 ~]#
```

- ➢ Note from the upper command tuned fail converts into pass- (sudo sh check-pre-req.sh) ↑



```
Prerequisite checks
-------------------
 FAIL  System: /proc/sys/vm/swappiness should be 1. Actual: 60
 PASS  System: tuned is not running
 PASS  System: tuned does not auto-start on boot
```

- ➢ Swappiness:



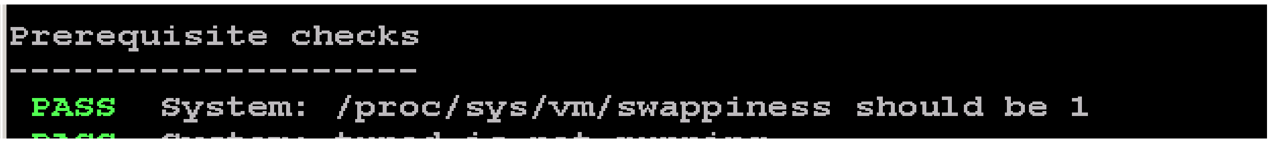
```
[root@ip-10-0-0-165 ~]# nano /proc/sys/vm/swappiness
```

```
  GNU nano 2.3.1

1
```

Control o enter

Control x

- ➢ Swappiness- (sudo sh check-pre-req.sh)run command by ↑

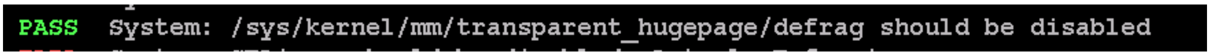


```
Prerequisite checks
-------------------
 PASS  System: /proc/sys/vm/swappiness should be 1
```

- ➢ From hadoop 2 script fire : hugepage/defrag line.

```
cat /sys/kernel/mm/transparent_hugepage/defrag
sudo sed -i '/exit 0/d' /etc/rc.local

sudo su -c 'cat >>/etc/rc.local <<EOL
if test -f /sys/kernel/mm/transparent_hugepage/enabled; then
  echo never > /sys/kernel/mm/transparent_hugepage/enabled
fi
if test -f /sys/kernel/mm/transparent_hugepage/defrag; then
   echo never > /sys/kernel/mm/transparent_hugepage/defrag
fi
exit 0
EOL'

sudo -i

source /etc/rc.local
```

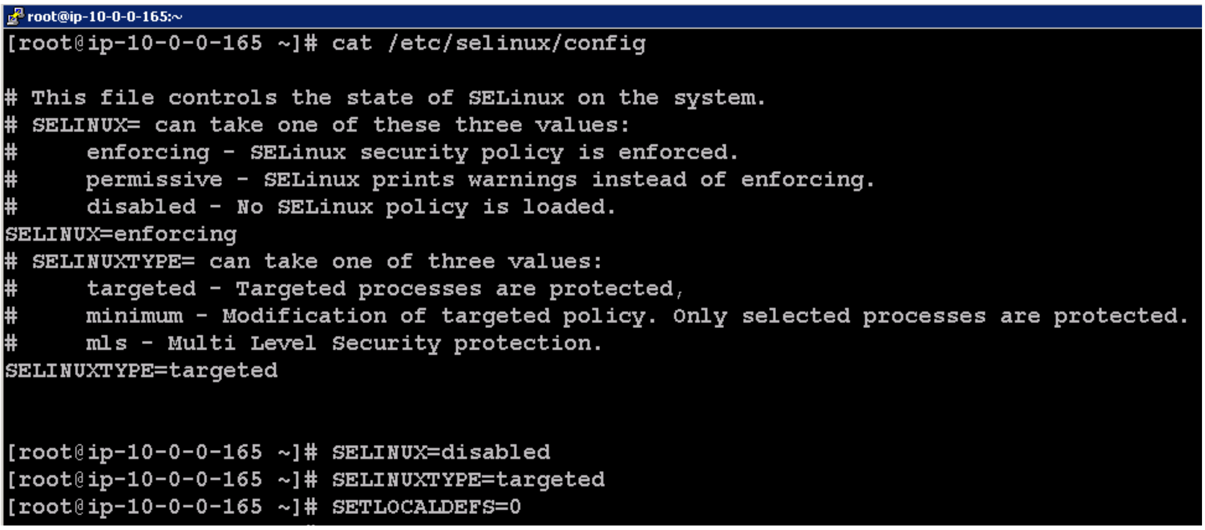
- ➢ Hugepack/ defrag fixed : (sudo sh check-pre-req.sh)run command by ↑



```
PASS  System: /sys/kernel/mm/transparent_hugepage/defrag should be disabled
```

- SELinux should be disabled (again hadoop2 script)
  - cat /etc/selinux/config

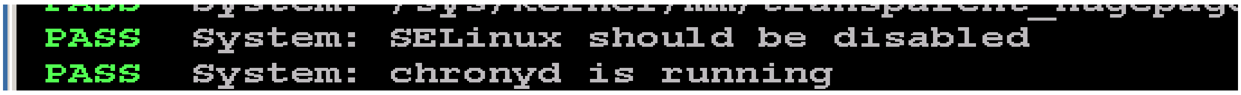
    SELINUX=disabled
    SELINUXTYPE=targeted
    SETLOCALDEFS=0



root@ip-10-0-0-165:~

```
[root@ip-10-0-0-165 ~]# cat /etc/selinux/config

# This file controls the state of SELinux on the system.
# SELINUX= can take one of these three values:
#     enforcing - SELinux security policy is enforced.
#     permissive - SELinux prints warnings instead of enforcing.
#     disabled - No SELinux policy is loaded.
SELINUX=enforcing
# SELINUXTYPE= can take one of three values:
#     targeted - Targeted processes are protected,
#     minimum - Modification of targeted policy. Only selected processes are protected.
#     mls - Multi Level Security protection.
SELINUXTYPE=targeted


[root@ip-10-0-0-165 ~]# SELINUX=disabled
[root@ip-10-0-0-165 ~]# SELINUXTYPE=targeted
[root@ip-10-0-0-165 ~]# SETLOCALDEFS=0
```

- setenforce 0 ↑ (sudo sh check-pre-req.sh)



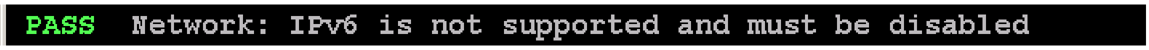
```
PASS   System: SELinux should be disabled
PASS   System: chronyd is running
```

- IPv6 is not supported and must be disabled
  - cat /proc/sys/net/ipv6/conf/all/disable_ipv6

```
sudo sysctl -p
sudo su -c 'cat >>/etc/sysctl.conf <<EOL
 net.ipv6.conf.all.disable_ipv6 =1
 net.ipv6.conf.default.disable_ipv6 =1
 net.ipv6.conf.lo.disable_ipv6 =1
 EOL'
```

OR nano /proc/sys/net/ipv6/conf/all/disable_ipv6
Write 1 instead of o

- sudo sh check-pre-req.sh ↑

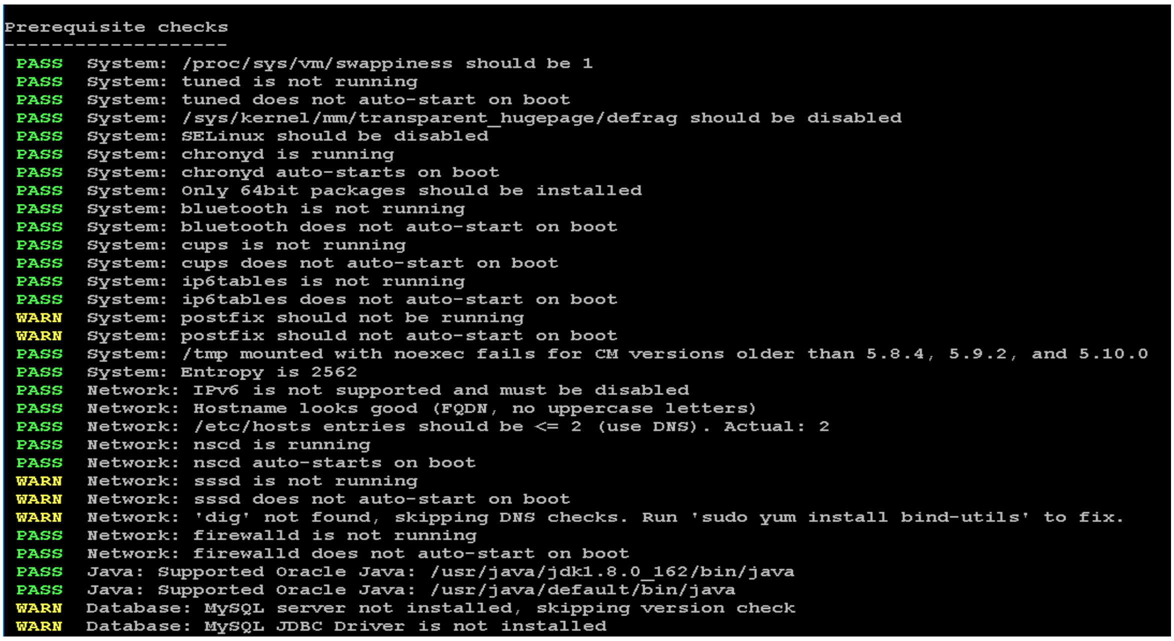


```
PASS  Network: IPv6 is not supported and must be disabled
```

- nscd is not running : run this command on terminal

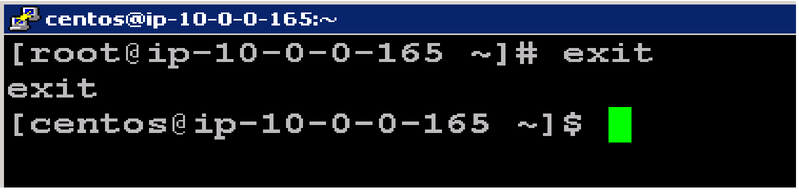
```
yum install nscd
service nscd start
chkconfig nscd on
```

- sudo sh check-pre-req.sh ↑



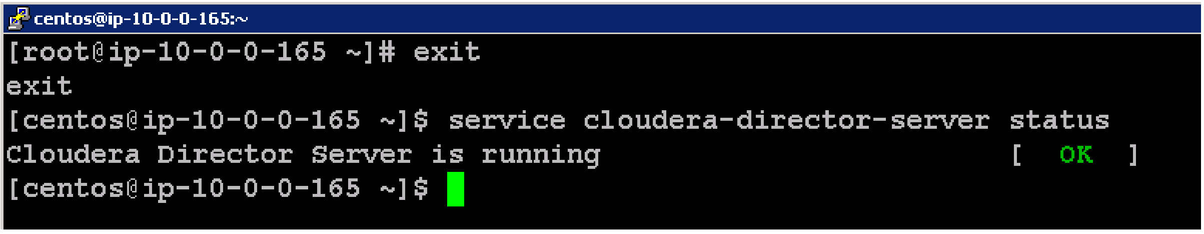
```
Prerequisite checks
--------------------
 PASS  System: /proc/sys/vm/swappiness should be 1
 PASS  System: tuned is not running
 PASS  System: tuned does not auto-start on boot
 PASS  System: /sys/kernel/mm/transparent_hugepage/defrag should be disabled
 PASS  System: SELinux should be disabled
 PASS  System: chronyd is running
 PASS  System: chronyd auto-starts on boot
 PASS  System: Only 64bit packages should be installed
 PASS  System: bluetooth is not running
 PASS  System: bluetooth does not auto-start on boot
 PASS  System: cups is not running
 PASS  System: cups does not auto-start on boot
 PASS  System: ip6tables is not running
 PASS  System: ip6tables does not auto-start on boot
 WARN  System: postfix should not be running
 WARN  System: postfix should not auto-start on boot
 PASS  System: /tmp mounted with noexec fails for CM versions older than 5.8.4, 5.9.2, and 5.10.0
 PASS  System: Entropy is 2562
 PASS  Network: IPv6 is not supported and must be disabled
 PASS  Network: Hostname looks good (FQDN, no uppercase letters)
 PASS  Network: /etc/hosts entries should be <= 2 (use DNS). Actual: 2
 PASS  Network: nscd is running
 PASS  Network: nscd auto-starts on boot
 WARN  Network: sssd is not running
 WARN  Network: sssd does not auto-start on boot
 WARN  Network: 'dig' not found, skipping DNS checks. Run 'sudo yum install bind-utils' to fix.
 PASS  Network: firewalld is not running
 PASS  Network: firewalld does not auto-start on boot
 PASS  Java: Supported Oracle Java: /usr/java/jdk1.8.0_162/bin/java
 PASS  Java: Supported Oracle Java: /usr/java/default/bin/java
 WARN  Database: MySQL server not installed, skipping version check
 WARN  Database: MySQL JDBC Driver is not installed
```

5. **Exit to home(root to centos):**



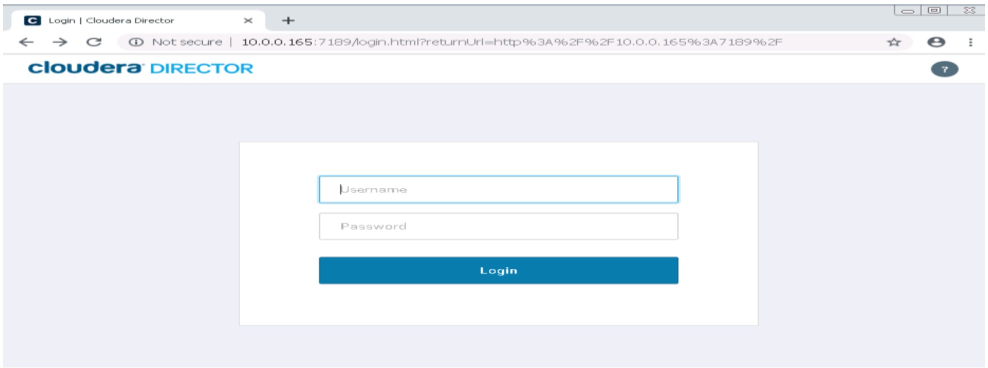
```
[root@ip-10-0-0-165 ~]# exit
exit
[centos@ip-10-0-0-165 ~]$
```

6. **service cloudera-director-server status**



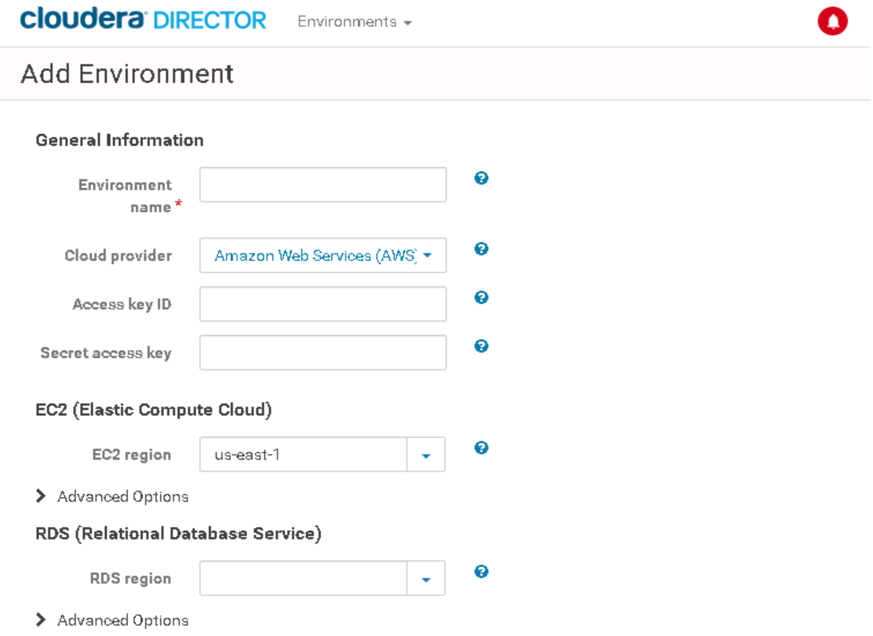
```
[root@ip-10-0-0-165 ~]# exit
exit
[centos@ip-10-0-0-165 ~]$ service cloudera-director-server status
Cloudera Director Server is running                        [  OK  ]
[centos@ip-10-0-0-165 ~]$
```

7. **Copy and paste private ip followed by port no 7189**
   - Ex: 10.0.0.xyz:7189 So, this is the login page of cloudera Director.
   - Credentials : Username: admin Passwords: admin



Login | Cloudera Director
Not secure
10.0.0.165:7189/login.html?returnUrl=http%3A%2F%2F10.0.0.165%3A7189%2F
cloudera DIRECTOR
Username
Password
Login

8. We are not going through this, by CLI we are actually doing this.



Add Environment

General Information

Environment name *

Cloud provider: Amazon Web Services (AWS) ▾

Access key ID

Secret access key

EC2 (Elastic Compute Cloud)

EC2 region: us-east-1

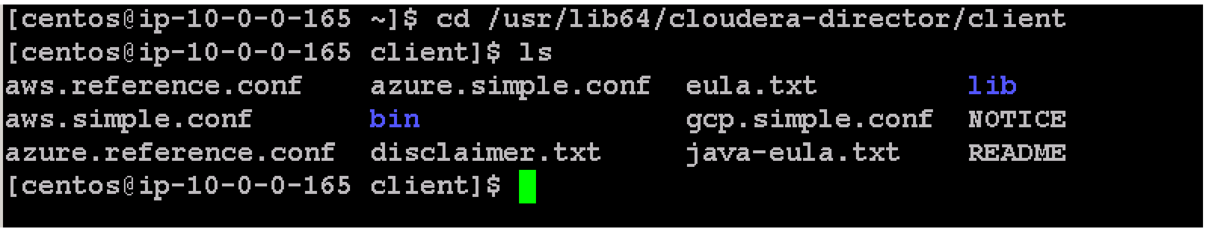
> Advanced Options

RDS (Relational Database Service)

RDS region

> Advanced Options

9. cd /usr/lib64/cloudera-director/client
   ls



```
[centos@ip-10-0-0-165 ~]$ cd /usr/lib64/cloudera-director/client
[centos@ip-10-0-0-165 client]$ ls
aws.reference.conf    azure.simple.conf  eula.txt         lib
aws.simple.conf       bin                gcp.simple.conf  NOTICE
azure.reference.conf  disclaimer.txt     java-eula.txt    README
[centos@ip-10-0-0-165 client]$ 
```

10. Download the aws.simple.conf to your local machine, either by scp or direct download from Github, it's easily available out there, and configure accordingly.
    - **AWS.SIMPLE.CONF (SCRIPT)**
    - Change ami id
    - Instance type
    - Security group id
    - Username : centos(or preferable)
    - privateKey: /home/centos/xyz.pem # with an absolute path to .pem file, ${HOME} may be used (refer: script)
    - after all changes done save it as cluster.conf (refer documents)

11. After configuration all, now it's time to make an **IMAGE**, create and ami of centos machine.

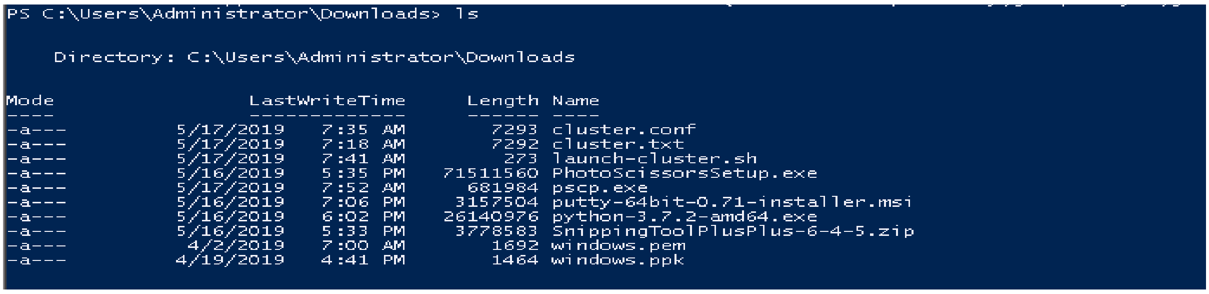
12. Come to powershell and hit this commands, as it will copy to your workspace machine

Powershell > cd .\Downloads

> .\pscp.exe –i .\xyz.ppk .\ launch-cluster.sh centos@10.0.0.165:/home/centos

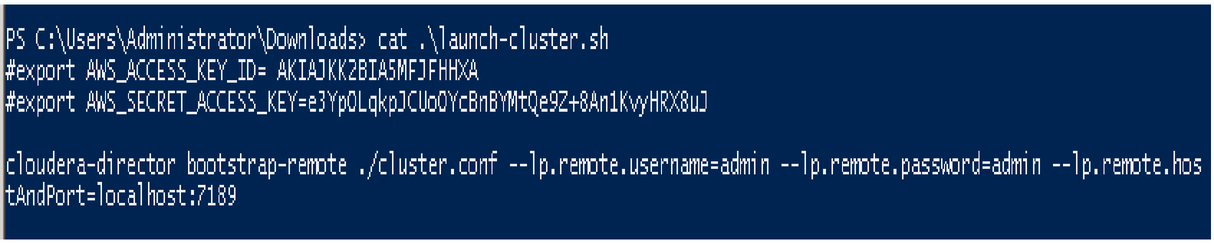
> .\pscp.exe –i .\ xyz.ppk .\ cluster.conf centos@10.0.0.165:/home/centos

> .\pscp.exe –i .\xyz.ppk .\xyz.pem centos@10.0.0.165:/home/centos



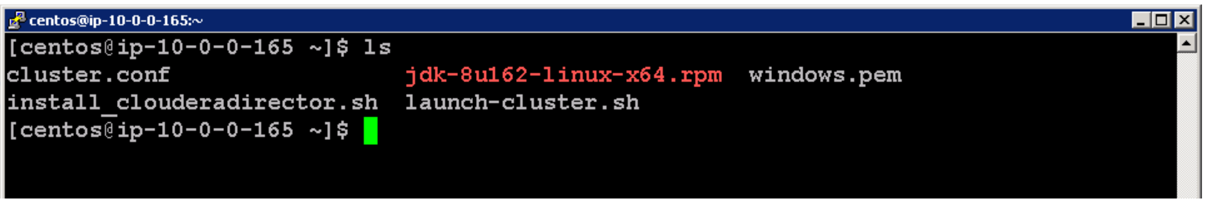
```
PS C:\Users\Administrator\Downloads> ls

    Directory: C:\Users\Administrator\Downloads

Mode                LastWriteTime     Length Name
----                -------------     ------ ----
-a---         5/17/2019   7:35 AM       7293 cluster.conf
-a---         5/17/2019   7:18 AM       7292 cluster.txt
-a---         5/17/2019   7:41 AM        273 launch-cluster.sh
-a---         5/16/2019   5:35 PM   71511560 PhotoScissorsSetup.exe
-a---         5/17/2019   7:52 AM     681984 pscp.exe
-a---         5/16/2019   7:06 PM    3157504 putty-64bit-0.71-installer.msi
-a---         5/16/2019   6:02 PM   26140976 python-3.7.2-amd64.exe
-a---         5/16/2019   5:33 PM    3778583 SnippingToolPlusPlus-6-4-5.zip
-a---          4/2/2019   7:00 AM       1692 windows.pem
-a---         4/19/2019   4:41 PM       1464 windows.ppk
```

13. Cat .\launch-cluster.sh



```
PS C:\Users\Administrator\Downloads> cat .\launch-cluster.sh
#export AWS_ACCESS_KEY_ID= AKIAJKK2BIA5MFJFHHXA
#export AWS_SECRET_ACCESS_KEY=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

cloudera-director bootstrap-remote ./cluster.conf --lp.remote.username=admin --lp.remote.password=admin --lp.remote.hos
tAndPort=localhost:7189
```

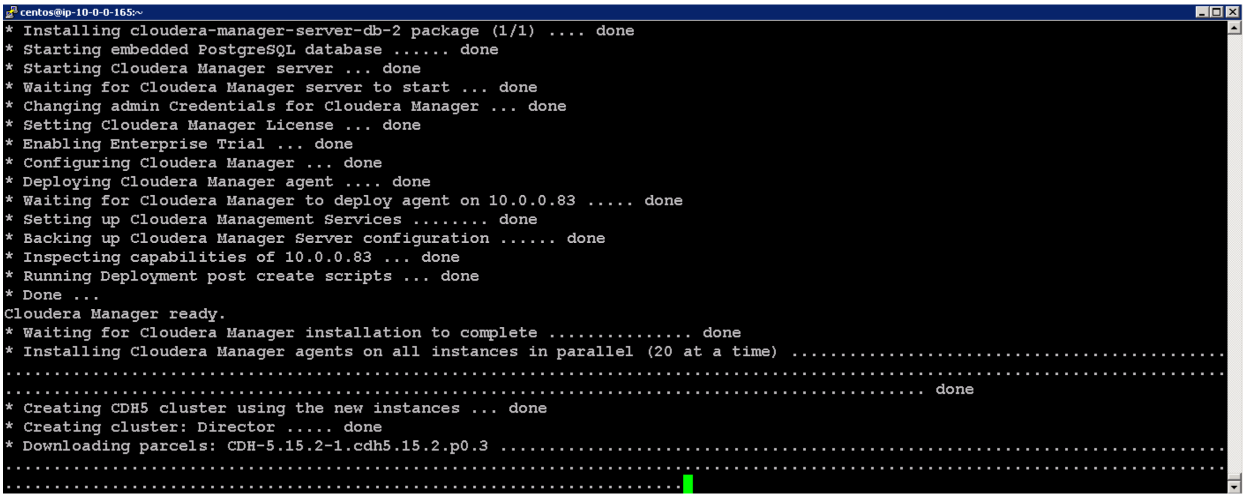
14. Now come to terminal and : ls and hit enter:



```
[centos@ip-10-0-0-165 ~]$ ls
cluster.conf               jdk-8u162-linux-x64.rpm  windows.pem
install_clouderadirector.sh  launch-cluster.sh
[centos@ip-10-0-0-165 ~]$
```

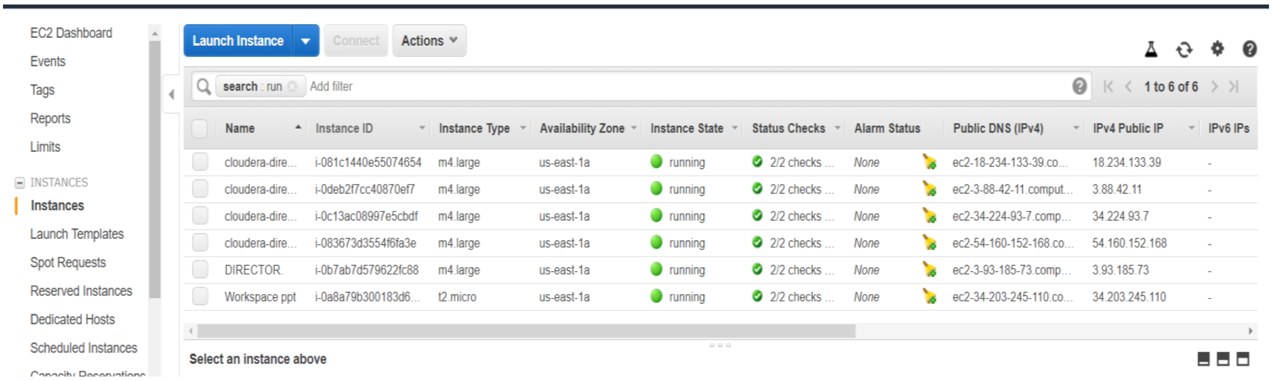
- Here, you’ll find all the files that you have done pscp.

15. Now, type sudo sh launcher-cluster.sh in terminal.



```
* Installing cloudera-manager-server-db-2 package (1/1) .... done
* Starting embedded PostgreSQL database ...... done
* Starting Cloudera Manager server ... done
* Waiting for Cloudera Manager server to start ... done
* Changing admin Credentials for Cloudera Manager ... done
* Setting Cloudera Manager License ... done
* Enabling Enterprise Trial ... done
* Configuring Cloudera Manager ... done
* Deploying Cloudera Manager agent .... done
* Waiting for Cloudera Manager to deploy agent on 10.0.0.83 ..... done
* Setting up Cloudera Management Services ........ done
* Backing up Cloudera Manager Server configuration ...... done
* Inspecting capabilities of 10.0.0.83 ... done
* Running Deployment post create scripts ... done
* Done ...
Cloudera Manager ready.
* Waiting for Cloudera Manager installation to complete ............... done
* Installing Cloudera Manager agents on all instances in parallel (20 at a time) .............................................
.............................................................................................................................
.............................................................................................. done
* Creating CDH5 cluster using the new instances ... done
* Creating cluster: Director ..... done
* Downloading parcels: CDH-5.15.2-1.cdh5.15.2.p0.3 ..........................................................................
.............................................................................................................................
.....................................................................
```

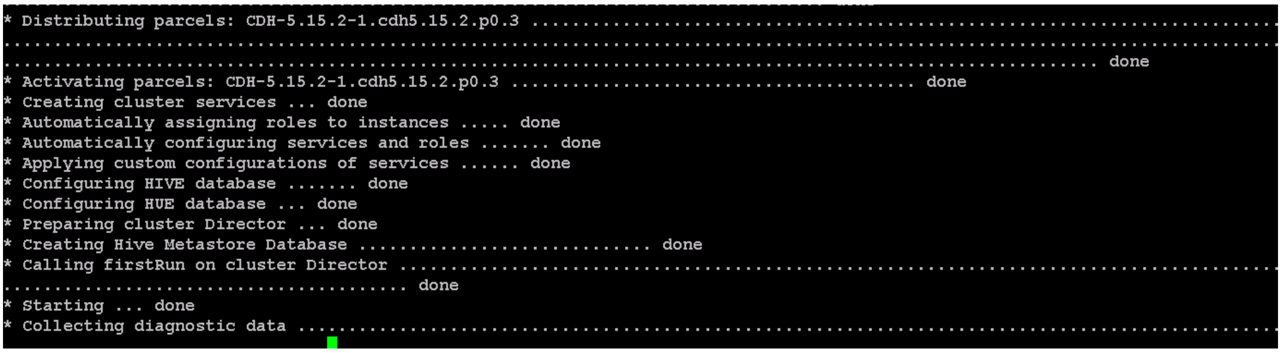
- Here you can see, cluster is getting ready, it’s launching instance (in aws) and installing all the components mentioned by you in the script.



	Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs
□	cloudera-dire...	i-081c1440e55074654	m4.large	us-east-1a	● running	✓ 2/2 checks ...	None	ec2-18-234-133-39.co...	18.234.133.39	-
□	cloudera-dire...	i-0deb2f7cc40870ef7	m4.large	us-east-1a	● running	✓ 2/2 checks ...	None	ec2-3-88-42-11.comput...	3.88.42.11	-
□	cloudera-dire...	i-0c13ac08997e5cbdf	m4.large	us-east-1a	● running	✓ 2/2 checks ...	None	ec2-34-224-93-7.comp...	34.224.93.7	-
□	cloudera-dire...	i-083673d3554f6fa3e	m4.large	us-east-1a	● running	✓ 2/2 checks ...	None	ec2-54-160-152-168.co...	54.160.152.168	-
□	DIRECTOR.	i-0b7ab7d579622fc88	m4.large	us-east-1a	● running	✓ 2/2 checks ...	None	ec2-3-93-185-73.comp...	3.93.185.73	-
□	Workspace ppt	i-0a8a79b300183d6...	t2.micro	us-east-1a	● running	✓ 2/2 checks ...	None	ec2-34-203-245-110.co...	34.203.245.110	-

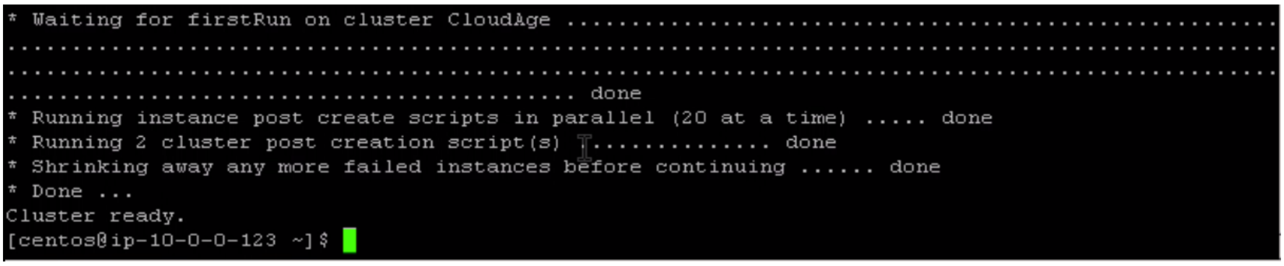
Select an instance above

- Here you can observe it has created new 4 instances in AWS



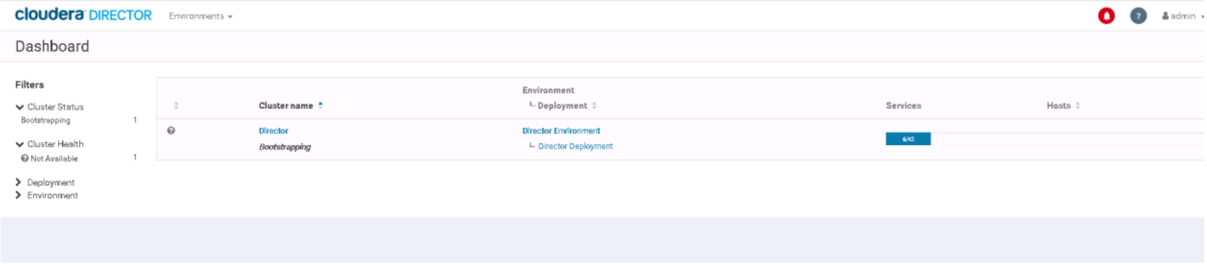
```
* Distributing parcels: CDH-5.15.2-1.cdh5.15.2.p0.3 ..........................................................
..............................................................................................................
.............................................................................................. done
* Activating parcels: CDH-5.15.2-1.cdh5.15.2.p0.3 ....................................... done
* Creating cluster services ... done
* Automatically assigning roles to instances ..... done
* Automatically configuring services and roles ....... done
* Applying custom configurations of services ...... done
* Configuring HIVE database ....... done
* Configuring HUE database ... done
* Preparing cluster Director ... done
* Creating Hive Metastore Database ............................ done
* Calling firstRun on cluster Director ........................................................................
........................................ done
* Starting ... done
* Collecting diagnostic data ..................................................................................
```

- Creating and configuration getting ready.



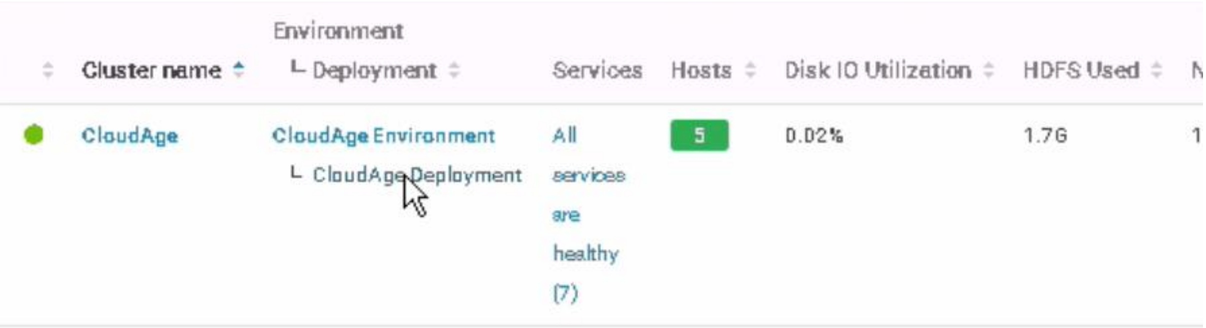
```
* Waiting for firstRun on cluster CloudAge ...........................................
.....................................................................................
.....................................................................................
.................................................... done
* Running instance post create scripts in parallel (20 at a time) ..... done
* Running 2 cluster post creation script(s) ............... done
* Shrinking away any more failed instances before continuing ...... done
* Done ...
Cluster ready.
[centos@ip-10-0-0-123 ~]$
```

- Cluster is ready. Can be seen from CLI(terminal)



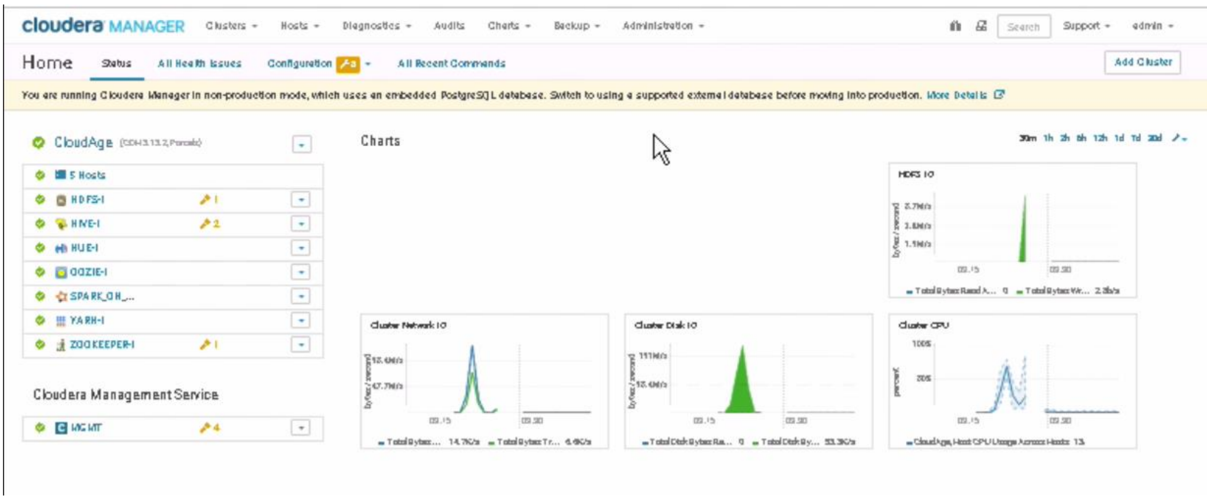
	Cluster name	Environment └ Deployment	Services	Hosts
❓	Director *Bootstrapping*	Director Environment └ Director Deployment	6/42	

- Once you logged in you will be able to see a such deployment bar



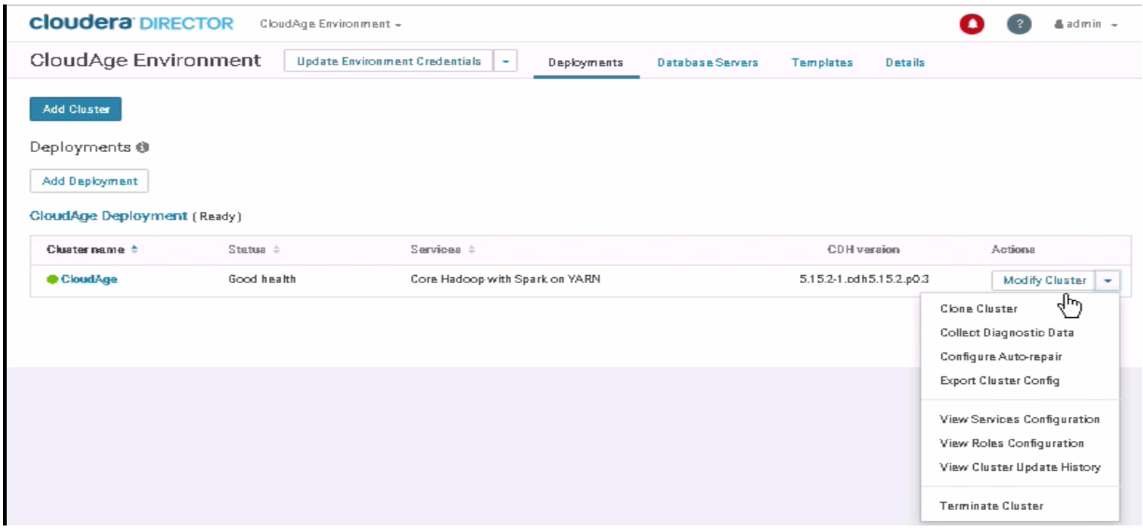
Cluster name	Environment └ Deployment	Services	Hosts	Disk IO Utilization	HDFS Used	N
● CloudAge	CloudAge Environment └ CloudAge Deployment	All services are healthy (7)	5	0.02%	1.7G	1

- Here, showing cluster is in good health(click on CloudAge Deployment)



You are running Cloudera Manager in non-production mode, which uses an embedded PostgreSQL database. Switch to using a supported external database before moving into production. More Details

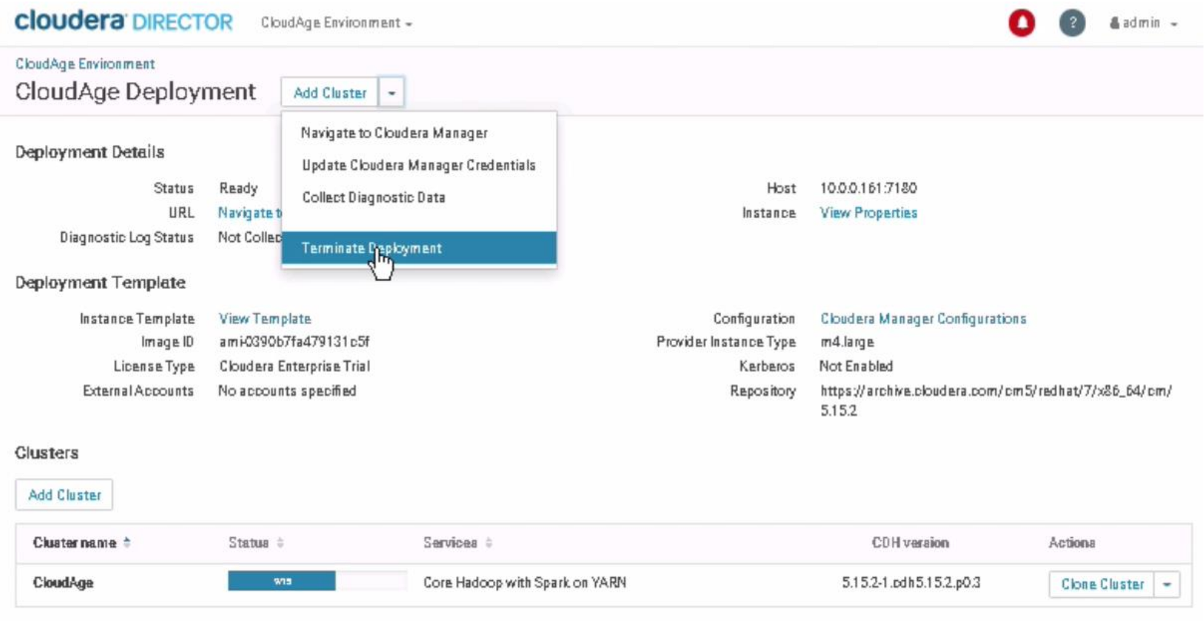
- This is the complete dashboard of your cluster
- Next, click on cloudera



CloudAge Deployment (Ready)

Cluster name	Status	Services	CDH version	Actions
● CloudAge	Good health	Core Hadoop with Spark on YARN	5.15.2-1.cdh5.15.2.p0.3	Modify Cluster

- Here you get certain options, under Modify cluster. i.e Clone , etc.



CloudAge Environment

CloudAge Deployment

Deployment Details

Status Ready
URL Navigate t
Diagnostic Log Status Not Collec
Host 10.0.0.161:7180
Instance View Properties

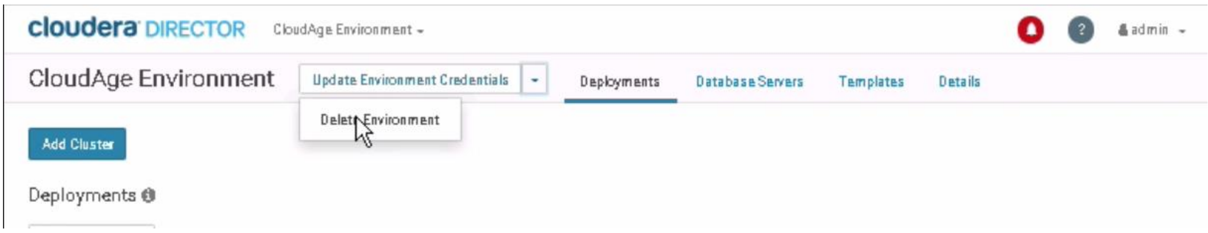
Deployment Template

Instance Template View Template
Image ID ami-0390b7fa479131c5f
License Type Cloudera Enterprise Trial
External Accounts No accounts specified
Configuration Cloudera Manager Configurations
Provider Instance Type m4.large
Kerberos Not Enabled
Repository https://archive.cloudera.com/cm5/redhat/7/x86_64/cm/5.15.2

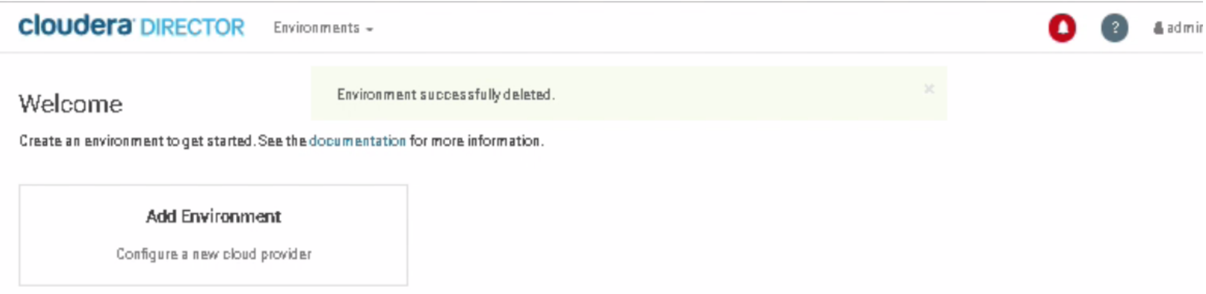
Clusters

Cluster name	Status	Services	CDH version	Actions
CloudAge	9/13	Core Hadoop with Spark on YARN	5.15.2-1.cdh5.15.2.p0.3	Clone Cluster

- For terminate deployment, you have to click on Add cluster tab and select last option, ie. Terminate Deployment



- After this you have to delete environment, by selecting update environment credentials



Environment successfully deleted.

Welcome

Create an environment to get started. See the documentation for more information.

- That’s it your Environment was deleted successfully.