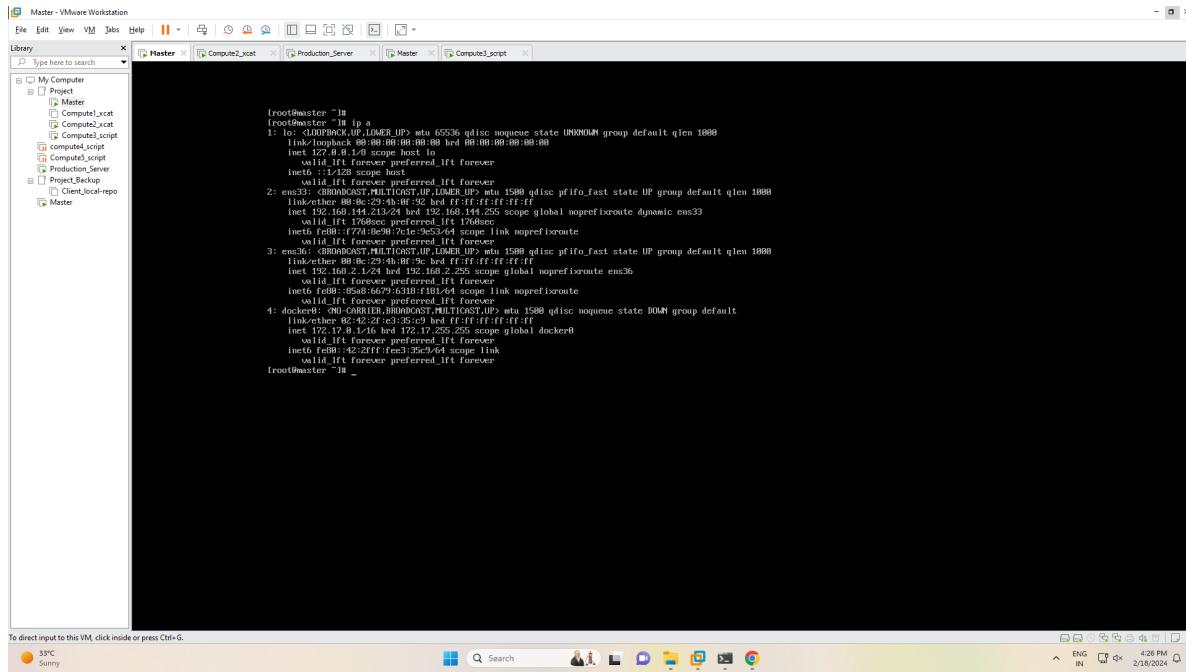


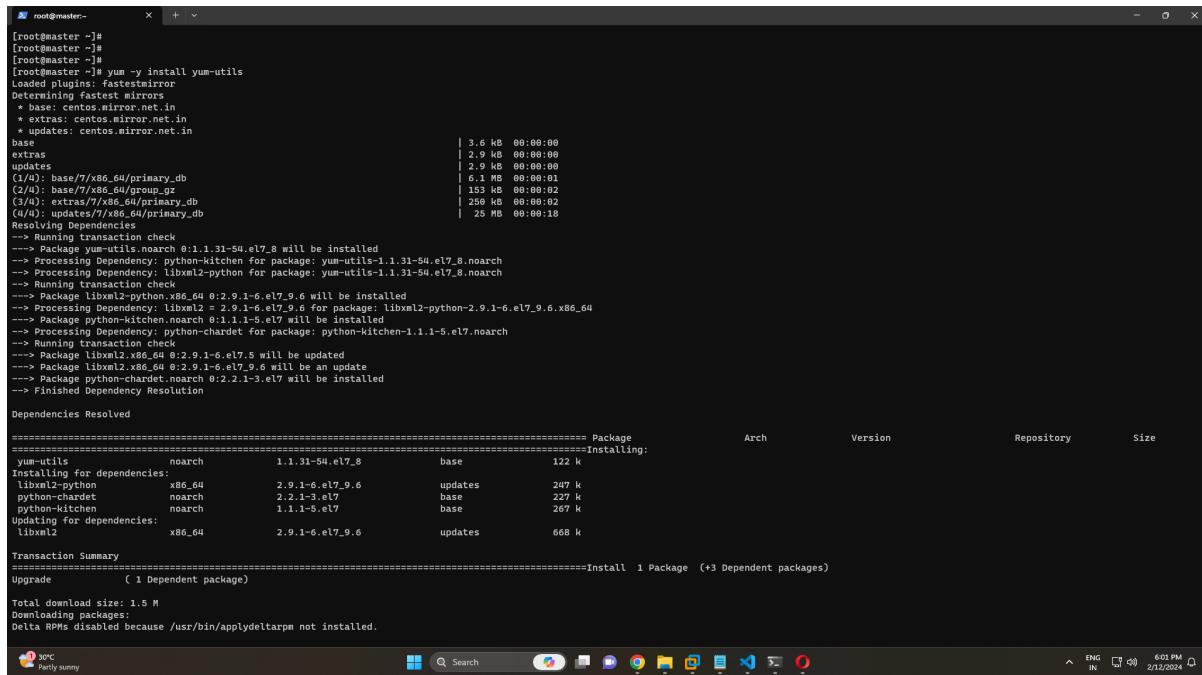
## PROJECT STEPS

### 1) Xcat Boot Master



```
root@master ~$ ls
root@master ~$ ifconfig
root@master ~$ ip link
root@master ~$ ip link show
root@master ~$ ip link show dev eth0
root@master ~$ ip link show dev eth1
root@master ~$ ip link show dev ens36
root@master ~$ ip link show dev docker0
root@master ~$
```

yum -y install yum-utils



```
[root@master ~]# 
[root@master ~]# 
[root@master ~]# 
[root@master ~]# yum -y install yum-utils
Loaded plugins: fastestmirror
Determining fastest mirrors
 * base: centos.mirror.net.in
 * extras: centos.mirror.net.in
 * updates: centos.mirror.net.in
base
extras
updates
(1/4): base/7/x86_64/primary_db | 3.6 kB  00:00:00
(2/4): base/7/x86_64/repodata.gz | 2.9 kB  00:00:00
(3/4): updates/7/x86_64/primary_db | 6.1 MB  00:00:01
(4/4): updates/7/x86_64/primary_db | 153 kB  00:00:02
                                           | 298 kB  00:00:02
                                           | 25 MB  00:00:18
Resolving Dependencies
--> Running transaction check
--> Package yum-utils.noarch 0:1.1.31-54.el7_8 will be installed
--> Processing Dependency: python-kitchen for package: yum-utils-1.1.31-54.el7_8.noarch
--> Adding Dependency: libxml2-python2.9.1-6.el7_9.6 for package: yum-utils-1.1.31-54.el7_8.noarch
--> Running transaction check
--> Package libxml2-python.x86_64 0:2.9.1-6.el7_9.6 will be installed
--> Processing Dependency: libxml2 = 2.9.1-6.el7_9.6 for package: libxml2-python-2.9.1-6.el7_9.6.x86_64
--> Processing Dependency: python-kitchen.noarch 0:1.1.1-5.el7 will be installed
--> Processing Dependency: python-chardet for package: python-kitchen-1.1.1-5.el7.noarch
--> Processing Dependency: python-setuptools for package: python-kitchen-1.1.1-5.el7.noarch
--> Package libxml2.x86_64 0:2.9.1-6.el7_9.6 will be updated
--> Package libxml2.x86_64 0:2.9.1-6.el7_9.6 will be an update
--> Package python-chardet.noarch 0:2.2.1-3.el7 will be installed
--> Finished Dependency Resolution

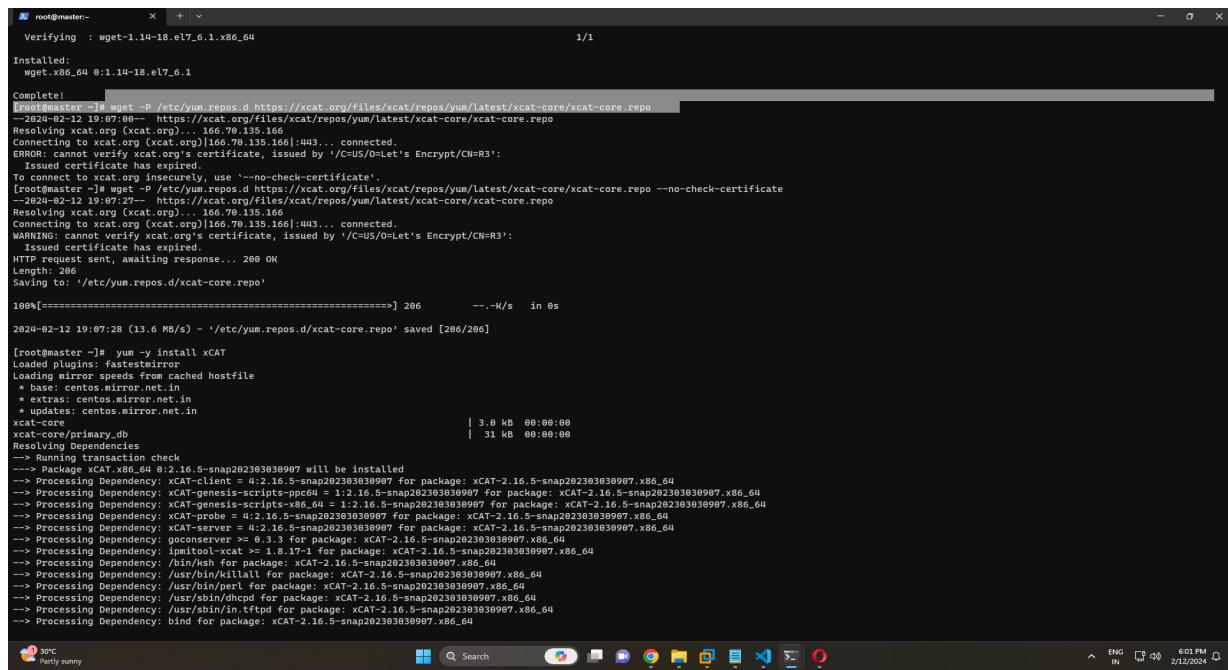
Dependencies Resolved

=====
==== Packages =====
==== Repository =====
==== Size =====
yum-utils      noarch    1.1.31-54.el7_8    base      122 k
=====
==== Installing =====
=====
==== Transaction Summary =====
==== Install 1 Package (+3 Dependent packages)
=====
Total download size: 1.5 M
Downloading packages:
Delta RPMs disabled because /usr/bin/applydeltarpm not installed.

Transaction Summary
Upgrades          ( 1 Dependent package)

ENG IN 6:01 PM 2/12/2024
```

```
wget -P /etc/yum.repos.d https://xcat.org/files/xcat/repos/yum/latest/xcat-core/xcat-core.repo
```



```
[root@master- ~]# wget -P /etc/yum.repos.d https://xcat.org/files/xcat/repos/yum/latest/xcat-core/xcat-core.repo
Verifying : wget-1.14-18.el7_6.1.x86_64                                         1/1
Installed:
  wget.x86_64 0:1.14-18.el7_6.1

Complete!
[root@master- ~]# wget -P /etc/yum.repos.d https://xcat.org/files/xcat/repos/yum/latest/xcat-core/xcat-core.repo
--2024-02-12 19:07:00--  https://xcat.org/files/xcat/repos/yum/latest/xcat-core/xcat-core.repo
Resolving xcat.org (xcat.org)... 166.78.135.166
Connecting to xcat.org (xcat.org)|166.78.135.166|:443... connected.
ERROR: cannot verify xcat.org's certificate, issued by '/C=US/O=Let's Encrypt/CN=R3':
  Issued certificate has expired.
To connect to xcat.core securely, use '--no-check-certificate'.
[root@master- ~]# wget -P /etc/yum.repos.d https://xcat.org/files/xcat/repos/yum/latest/xcat-core/xcat-core.repo --no-check-certificate
--2024-02-12 19:07:27--  https://xcat.org/files/xcat/repos/yum/latest/xcat-core/xcat-core.repo
Resolving xcat.org (xcat.org)|166.78.135.166|:443... connected.
Connecting to xcat.org (xcat.org)|166.78.135.166|:443... connected.
WARNING: certificate verify failed: self signed certificate in certificate chain
Issued certificate has expired.
HTTP request sent, awaiting response... 200 OK
Length: 266
Saving to: '/etc/yum.repos.d/xcat-core.repo'

100%[=====] 266      --.-K/s   in 0s

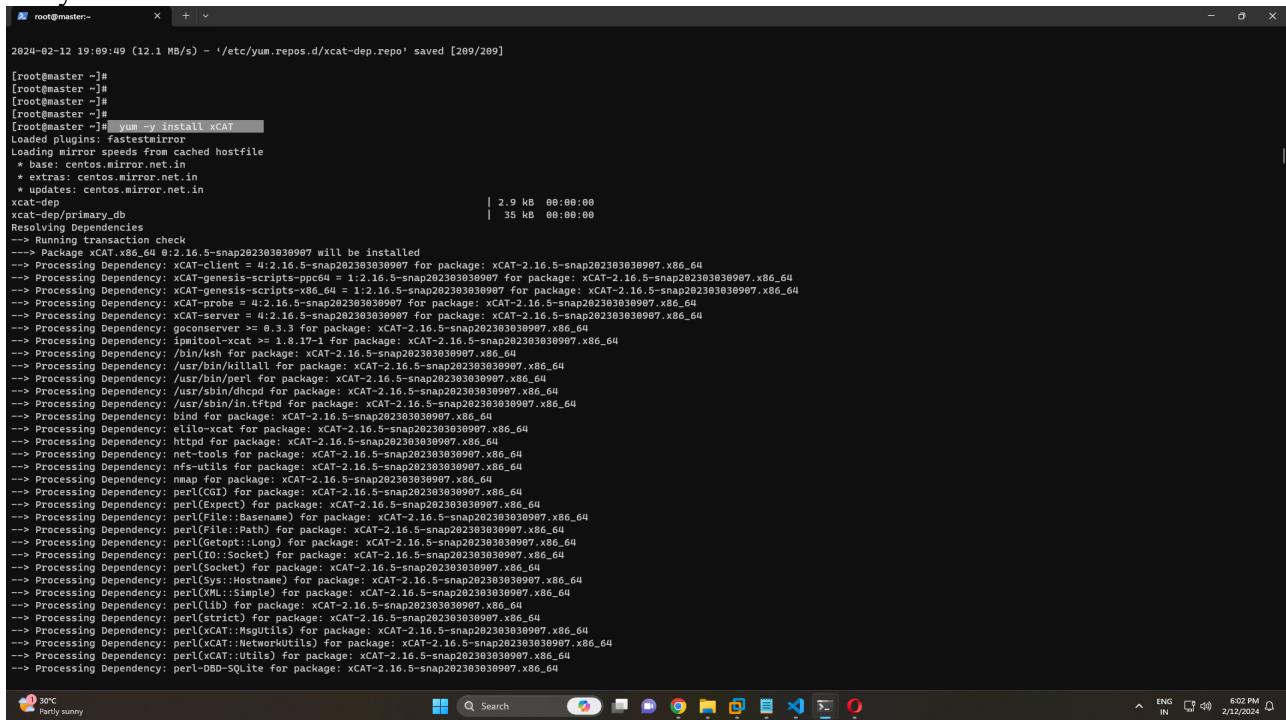
2024-02-12 19:07:28 (13.6 MB/s) - '/etc/yum.repos.d/xcat-core.repo' saved [266/266]

[root@master- ~]# yum -y install xCAT
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile
 * base: centos.mirror.net.in
 * extras: centos.mirror.net.in
 * updates: centos.mirror.net.in
xcat-core
xcat-dep/primary_db
Resolving Dependencies
--> Running transaction check
--> Package xCAT-x86_64:2.16.5-snap2023030309097 will be installed
--> Processing Dependency: xCAT-client = 4:2.16.5-snap2023030309097 for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: xCAT-genesis-scripts-ppc64 = 1:2.16.5-snap2023030309097 for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: xCAT-probe = 4:2.16.5-snap2023030309097 for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: xCAT-server = 4:2.16.5-snap202303030309097 for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: goconserver >= 0.3.3 for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: ipmitool-xcat >= 1.8.17-1 for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: /bin/ksh for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: /usr/bin/perl for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: /usr/sbin/dhcpd for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: /usr/sbin/in.tftpd for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: bind for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: bind for package: xCAT-2.16.5-snap2023030309097.x86_64

[root@master- ~]#
```

```
wget -P /etc/yum.repos.d https://xcat.org/files/xcat/repos/yum/xcat-dep/rh7/x86_64/xcat-dep.repo
```

```
yum -y install xCAT
```

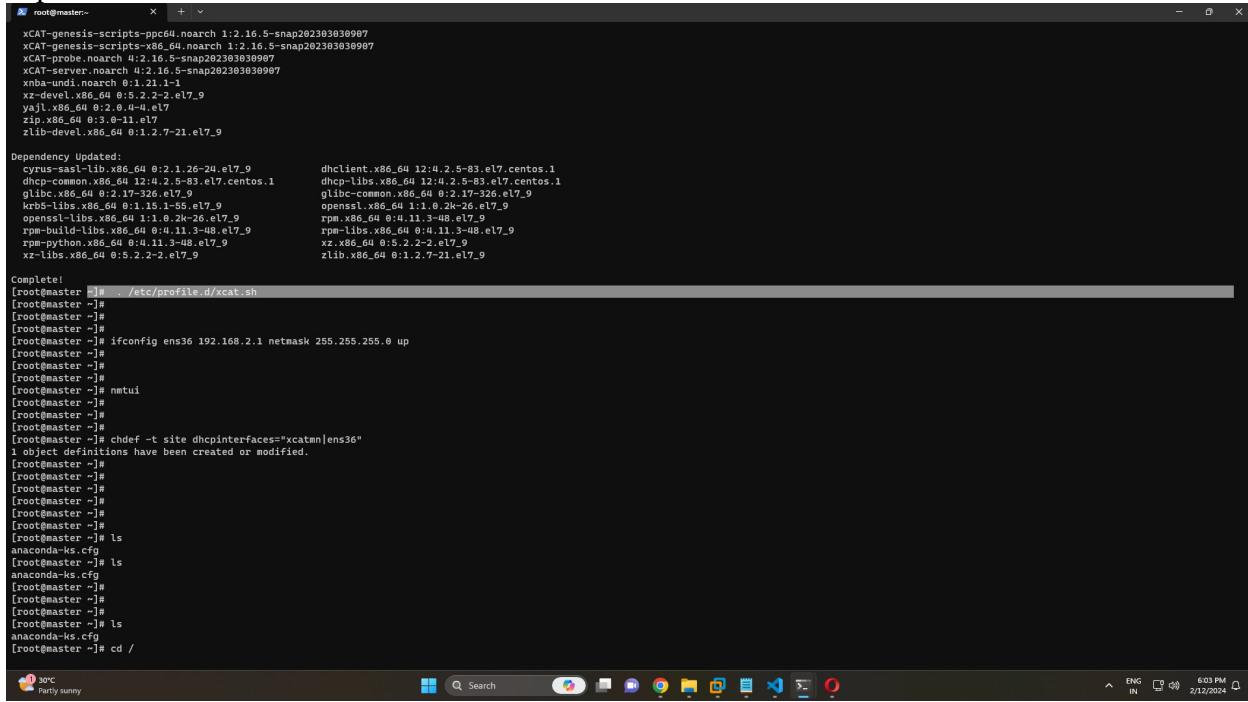


```
[root@master- ~]# wget -P /etc/yum.repos.d https://xcat.org/files/xcat/repos/yum/xcat-dep/rh7/x86_64/xcat-dep.repo
2024-02-12 19:09:49 (12.1 MB/s) - '/etc/yum.repos.d/xcat-dep.repo' saved [289/289]

[root@master- ~]#
[root@master- ~]#
[root@master- ~]#
[root@master- ~]# yum -y install xCAT
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile
 * base: centos.mirror.net.in
 * extras: centos.mirror.net.in
 * updates: centos.mirror.net.in
xcat-dep
xcat-dep/primary_db
Resolving Dependencies
--> Running transaction check
--> Package xCAT-x86_64:2.16.5-snap2023030309097 will be installed
--> Processing Dependency: xCAT-client = 4:2.16.5-snap2023030309097 for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: xCAT-genesis-scripts-ppc64 = 1:2.16.5-snap2023030309097 for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: xCAT-probe = 4:2.16.5-snap2023030309097 for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: xCAT-server = 4:2.16.5-snap202303030309097 for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: goconserver >= 0.3.3 for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: ipmitool-xcat >= 1.8.17-1 for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: /bin/ksh for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: /usr/bin/perl for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: /usr/sbin/dhcpd for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: /usr/sbin/in.tftpd for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: bind for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: bind for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: elilo-xcat for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: httpd for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: net-tools for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: nfs-utils for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: nmap for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: perl(CGI) for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: perl(ExtUtils::Build) for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: perl(File::Basename) for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: perl(File::Path) for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: perl(Getopt::Long) for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: perl(IO::Socket) for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: perl(Socket) for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: perl(Sys::Hostname) for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: perl(XML::Simple) for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: perl(libr) for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: perl(Mail::Sendmail) for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: perl(XCAT::MsUtil) for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: perl(XCAT::NetworkUtil) for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: perl(XCAT::Util) for package: xCAT-2.16.5-snap2023030309097.x86_64
--> Processing Dependency: perl(DBD::SQLite for package: xCAT-2.16.5-snap2023030309097.x86_64

[root@master- ~]#
```

```
./etc/profile.d/xcat.sh
```

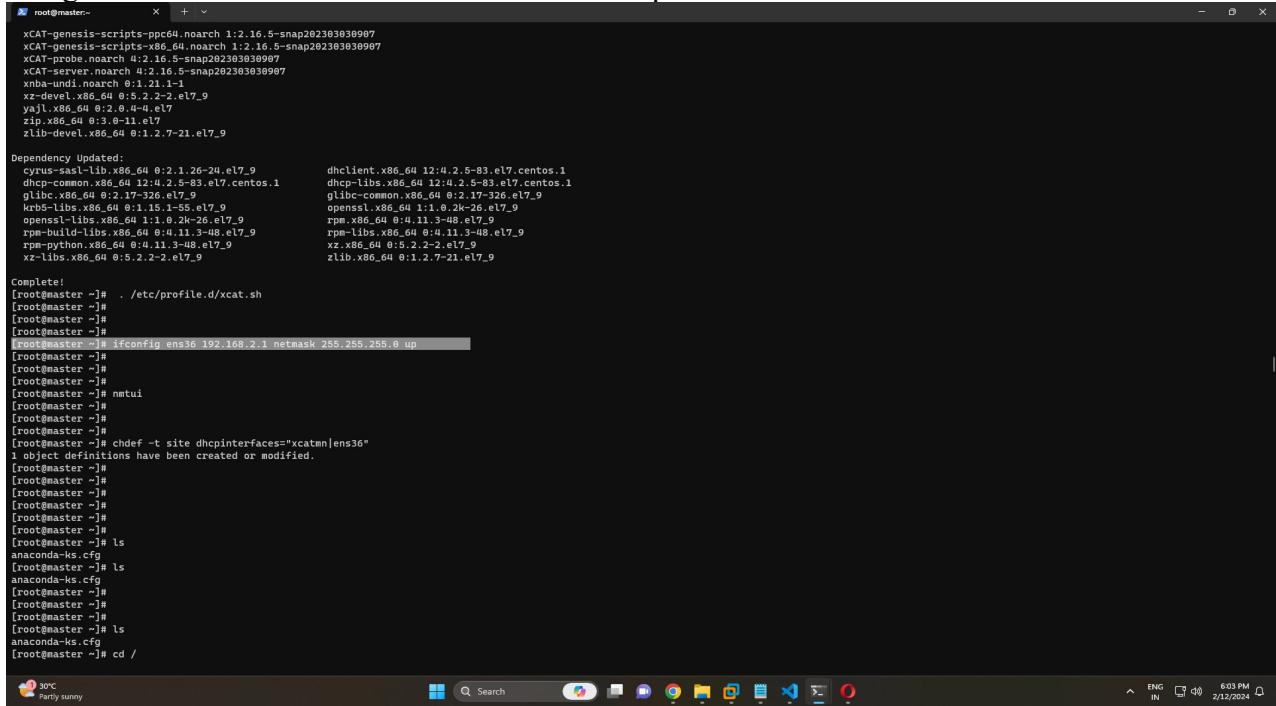


```
root@master:~ x + ~
xCAT-genesis-scripts-ppc64.noarch 1:2.16.5-snap202303030907
xCAT-probe.noarch 4:2.16.5-snap202303030907
xCAT-server.noarch 4:2.16.5-snap202303030907
xiba-undi.noarch 0:1.21.1-1
xz-devel.x86_64 0:5.2.2-2.el7_9
yaml.x86_64 0:2.0.0-4.el7
zip.x86_64 0:3.0-11.el7
zlib-devel.x86_64 0:1.2.7-21.el7_9

Dependency Updated:
cyrus-sasl-1-lib.x86_64 0:2.1.26-24.el7_9 dhclient.x86_64 1:2.4.2.5-83.el7.centos.1
dhclient.x86_64 1:2.4.2.5-83.el7.centos.1 dhcp-libs.x86_64 1:2.4.2.5-83.el7.centos.1
glibc.x86_64 0:2.17-326.el7_9 glibc-common.x86_64 0:2.17-326.el7_9
krb5-libs.x86_64 0:1.15.1-55.el7_9 openssl.x86_64 1:1.0.2k-26.el7_9
openssl.x86_64 1:1.0.2k-26.el7_9 rpm.x86_64 0:4.11.3-48.el7_9
rpm-build-libs.x86_64 0:4.11.3-48.el7_9 rpm-libs.x86_64 0:4.11.3-48.el7_9
rpm-python.x86_64 0:4.11.3-48.el7_9 xz.x86_64 0:5.2.2-2.el7_9
xz-libs.x86_64 0:5.2.2-2.el7_9 zlib.x86_64 0:1.2.7-21.el7_9

Complete!
[root@master ~]# . /etc/profile.d/xcat.sh
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# ifconfig ens36 192.168.2.1 netmask 255.255.255.0 up
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# nmtui
[root@master ~]#
[root@master ~]#
[root@master ~]# chdef -t site dhcpointerfaces="xcatmn|ens36"
1 object definitions have been created or modified.
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# ls
[root@master ~]#
[root@master ~]# anaconda-ks.cfg
[root@master ~]# ls
[root@master ~]#
[root@master ~]# anaconda-ks.cfg
[root@master ~]# ls
[root@master ~]#
[root@master ~]# cd /
```

```
ifconfig ens34 192.168.1.1 netmask 255.255.255.0 up
```



```
root@master:~ x + ~
xCAT-genesis-scripts-ppc64.noarch 1:2.16.5-snap202303030907
xCAT-probe.noarch 4:2.16.5-snap202303030907
xCAT-server.noarch 4:2.16.5-snap202303030907
xiba-undi.noarch 0:1.21.1-1
xz-devel.x86_64 0:5.2.2-2.el7_9
yaml.x86_64 0:2.0.0-4.el7
zip.x86_64 0:3.0-11.el7
zlib-devel.x86_64 0:1.2.7-21.el7_9

Dependency Updated:
cyrus-sasl-1-lib.x86_64 0:2.1.26-24.el7_9 dhclient.x86_64 1:2.4.2.5-83.el7.centos.1
dhcp-common.x86_64 0:2.17-326.el7_9 dhcp-libs.x86_64 1:2.4.2.5-83.el7.centos.1
glibc.x86_64 0:2.17-326.el7_9 glibc-common.x86_64 0:2.17-326.el7_9
krb5-libs.x86_64 0:1.15.1-55.el7_9 openssl.x86_64 1:1.0.2k-26.el7_9
openssl.x86_64 1:1.0.2k-26.el7_9 rpm.x86_64 0:4.11.3-48.el7_9
rpm-build-libs.x86_64 0:4.11.3-48.el7_9 rpm-libs.x86_64 0:4.11.3-48.el7_9
rpm-python.x86_64 0:4.11.3-48.el7_9 xz.x86_64 0:5.2.2-2.el7_9
xz-libs.x86_64 0:5.2.2-2.el7_9 zlib.x86_64 0:1.2.7-21.el7_9

Complete!
[root@master ~]# . /etc/profile.d/xcat.sh
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# ifconfig ens36 192.168.2.1 netmask 255.255.255.0 up
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# nmtui
[root@master ~]#
[root@master ~]#
[root@master ~]# chdef -t site dhcpointerfaces="xcatmn|ens36"
1 object definitions have been created or modified.
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# ls
[root@master ~]#
[root@master ~]# anaconda-ks.cfg
[root@master ~]# ls
[root@master ~]#
[root@master ~]# anaconda-ks.cfg
[root@master ~]# ls
[root@master ~]#
[root@master ~]# cd /
```

```
chdef -t site dhcpointerfaces="xcatmn|ens34"
```

```
copycds /root/CentOS-7-x86_64-DVD-1908.iso
```

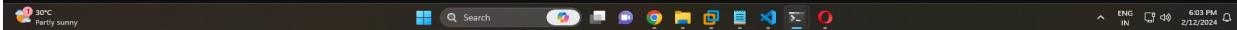
```
lsdef -t osimage
```

```
[root@master-] ~ + v
xx-libs.x86_64 0:5.2.2-2.el7_9          zlib.x86_64 0:1.2.7-21.el7_9

Compiles!
[root@master -]# . /etc/profile.d/xcat.sh
[root@master -]#
[root@master -]#
[root@master -]#
[root@master -]# ifconfig ens36 192.168.2.1 netmask 255.255.255.0 up
[root@master -]#
[root@master -]#
[root@master -]#
[root@master -]# nmtui
[root@master -]#
[root@master -]#
[root@master -]# dhcdef -t site dhcpinterfaces=xcaten|ens36
1) No definitions have been created or modified.
[root@master -]#
[root@master -]#
[root@master -]#
[root@master -]# ls
anaconda-ks.cfg
[root@master -]# ls
anaconda-ks.cfg
[root@master -]#
[root@master -]#
[root@master -]# ls
anaconda-ks.cfg
[root@master -]# cd /
[root@master -]# ls
bin  CentOS-7-x86_64-Minimal-2009.iso  etc  install  lib64  mnt  proc  run  srv  tftpboot  usr
home  lib  media  opt  root  sbin  sys  var
[root@master -]# mv CentOS-7-x86_64-Minimal-2009.iso -
[root@master -]#
[root@master -]#
[root@master -]#
[root@master -]# ls
bin  dev  home  lib  media  opt  root  sbin  sys  tmp  var
home  lib  lib64  mnt  proc  run  srv  tftpboot  usr
[root@master -]# cd -
[root@master -]#
[root@master -]#
[root@master -]#
[root@master -]#
[root@master -]# ls
anaconda-ks.cfg  CentOS-7-x86_64-Minimal-2009.iso
[root@master -]#
```



```
[root@master-] ~ + v
[root@master -]#
[root@master -]#
[root@master -]#
[root@master -]# ls
CentOS-7-x86_64-Minimal-2009.iso
[root@master -]#
[root@master -]#
[root@master -]# tabedit site
39L, 997C written
[root@master -]#
[root@master -]#
[root@master -]#
[root@master -]#
[root@master -]# ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback brd 00:00:00:00:00:00
    inet 127.0.0.1/8 brd 127.0.0.1 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 brd :: scope host host
        valid_lft forever preferred_lft forever
        valid_lft forever preferred_lft forever
2: ens36: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 00:0c:29:4b:0f:92 brd ff:ff:ff:ff:ff:ff
    inet 192.168.1.100 brd 192.168.1.255 scope global noprefixroute dynamic ens36
        valid_lft 171sec preferred_lft 171sec
        inet6 fe80::fe80:6e99%7c1:9e53/64 scope link noprefixroute
            valid_lft forever preferred_lft forever
3: ens36: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 00:0c:29:4b:0f:9c brd ff:ff:ff:ff:ff:ff
    inet 192.168.1.101 brd 192.168.1.255 scope global noprefixroute dynamic ens36
        valid_lft 171sec preferred_lft 171sec
        inet6 fe80::fe80:6e99%7c1:9e53/64 scope link noprefixroute
            valid_lft forever preferred_lft forever
[root@master -]# nmtui
[root@master -]#
[root@master -]#
[root@master -]#
[root@master -]# copycds CentOS-7-x86_64-Minimal-2009.iso
Copying media to /install/centos7.9/x86_64
Media copy operation successful
[root@master -]# ./copycds
centos7.9-x86_64-install-compute (osimage)
centos7.9-x86_64-netboot-compute (osimage)
centos7.9-x86_64-stationte-compute (osimage)
[root@master -]# yum install -y chrony
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile
* base: centos.mirror.net.in
* extras: centos.mirror.net.in
* updates: centos.mirror.net.in
Package chrony-3.4-1.el7.x86_64 already installed and latest version
Nothing to do
[root@master -]#
[root@master -]#
[root@master -]#
```



```
[root@master ~]# tabedit site
[39L, 957C written]
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 brd 0.0.0.0 scope host lo
        valid_lft forever preferred_lft forever
        inet6 ::1/128 brd 0.0.0.0 scope host lo
            valid_lft forever preferred_lft forever
2: ens32: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 00:0c:29:4b:0f:92 brd ff:ff:ff:ff:ff:ff
    inet 192.168.1.104/24 brd 192.168.1.255 scope global noprefixroute dynamic ens32
        valid_lft 1718sec preferred_lft 1718sec
        inet6 fe80::f77d:8e98%7:1c:9e53/64 scope link noprefixroute
            valid_lft forever preferred_lft forever
3: ens36: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 00:0c:29:4b:0f:9c brd ff:ff:ff:ff:ff:ff
    inet 192.168.2.1/24 brd 192.168.2.255 scope global noprefixroute dynamic ens36
        valid_lft forever preferred_lft forever
        inet6 fe80::85a8:6679%6:138:1f81/64 scope link noprefixroute
            valid_lft forever preferred_lft forever
[root@master ~]# nmctl
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# copycds CentOS-7-x86_64-Minimal-2009.iso
Copying media to /install/centos7.9/x86_64
Media copy operation successful
[root@master ~]# ls -l /osimage
centos7.9-x86_64-install-compute (osimage)
centos7.9-x86_64-reboot-compute (osimage)
centos7.9-x86_64-statellite-compute (osimage)
[root@master ~]# yum install -y chrony
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile
 * base: centos.mirror.net.in
 * extras: centos.mirror.net.in
 * updates: centos.mirror.net.in
Package chrony-3.4-1.el7.x86_64 already installed and latest version
Nothing to do
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# ls /install/
centos7.9  postscripts  prescriptions  winpostsripts
[root@master ~]# mddef -t node hpc001 mac=00:58:56:2A:C2:14 groups=all ip=192.168.2.2 arch=x86_64
1 object definitions have been created or modified.
[root@master ~]# chtab key=system passwd.username=root passwd.password=abc123
```

```
root@master:~ + - x
root@master:~ valid_lft forever preferred_lft forever
3: ens36: BROADCAST,MULTICAST,UP,LOWER_UP mtu 1500 qdisc pfifo_fast state UP group default qlen 1000 link/ether 00:0c:29:4b:0f:9c brd ff:ff:ff:ff:ff:ff
inet 192.168.2.1/24 brd 192.168.2.255 scope global noprefixroute ens36
    valid_lft forever preferred_lft forever
    inet6 fe80::85a8:6679:181/64 scope link noprefixroute
        valid_lft forever preferred_lft forever
[root@master ~]# nmctl
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# copycds CentOS-7-x86_64-Minimal-2009.iso
Copying media to /install/centos7.9/x86_64
Media copy operation successful
[root@master ~]# lsdef -t osimage
centos7.9-x86_64-install-compute (osimage)
centos7.9-x86_64-netboot-compute (osimage)
centos7.9-x86_64-station-compute (osimage)
[root@master ~]# yum install -y chrony
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile
 * base: centos.mirror.net.in
 * extras: centos.mirror.net.in
 * updates: centos.mirror.net.in
Package chrony-3.4-1.el7.x86_64 already installed and latest version
Nothing to do
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# ls /install/
centos7.9 postscripts prescripts winpostscripts
[root@master ~]# mkdef -t node hpc001 mac=00:56:26:2A:C2:14 groups=all ip=192.168.2.2 arch=x86_64
1 object definitions have been created or modified.
[root@master ~]# chtab key=system passwd.username=root passwd.password=abc123
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# tabdump passwd
$key,username,password,cryptmethod,authdomain,comments,disable
"system","root","$abc123",,,,
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# makehosts
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# makenetworks
Warning: [master]: The network entry '192.168.144.0-255.255.255.0' already exists in xCAT networks table. Cannot create a definition for '192.168.144.0-255.255.255.0'
[root@master ~]#
[root@master ~]#
```

```
root@master:~ + - 
    valid_lft forever preferred_lft forever
3: ens36 <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000   link/ether 00:0c:29:4b:0f:9c brd ff:ff:ff:ff:ff:ff
    inet 192.168.2.1/24 brd 192.168.2.255 scope global noprefixroute ens36
        valid_lft forever preferred_lft forever
        inete fe80::85a8:6679:8318:f1b1/64 scope global noprefixroute
            valid_lft forever preferred_lft forever
[root@master ~]# mtui
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# copycds CentOS-7-x86_64-Minimal-2009.iso
Copying media to /install/centos7.9/x86_64
Media copy operation successful
[root@master ~]# lsdef -o osimage
[root@master ~]# [root@master ~]# centos7.9-x86_64-install-compute (osimage)
centos7.9-x86_64-postcompute (osimage)
centos7.9-x86_64-statellite-compute (osimage)
[root@master ~]# yum install -y chrony
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile
 * base: centos.mirror.net.in
 * extras: centos.mirror.net.in
 * updates: centos.mirror.net.in
Package chrony-3.4-1.el7.x86_64 already installed and latest version
Nothing to do
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# ls /install/
centos7.9  postscripts  prescripts  winpostscripts
[root@master ~]# mkdef -t node hpc001 mac=00:50:56:2A:C2:14 groups=all ip=192.168.2.2 arch=x86_84
1 object definitions have been created or modified.
[root@master ~]# chtab key=system passwd.username=root passwd.password=abc123
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# tabdump passwd
#key,username,password,cryptmethod,authdomain,comments,disabled
"system","root","abc123",...
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# makehosts
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# makenetworks
Warning: [master]: The network entry '192_168_144_0-255_255_255_0' already exists in xCAT networks table. Cannot create a definition for '192_168_144_0-255_255_255_0'
[root@master ~]#
[root@master ~]#
```



```
root@master:~ + - 
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile
 * base: centos.mirror.net.in
 * extras: centos.mirror.net.in
 * updates: centos.mirror.net.in
Package chrony-3.4-1.el7.x86_64 already installed and latest version
Nothing to do
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# ls /install/
centos7.9  postscripts  prescripts  winpostscripts
[root@master ~]# mkdef -t node hpc001 mac=00:50:56:2A:C2:14 groups=all ip=192.168.2.2 arch=x86_84
1 object definitions have been created or modified.
[root@master ~]# chtab key=system passwd.username=root passwd.password=abc123
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# tabdump passwd
#key,username,password,cryptmethod,authdomain,comments,disabled
"system","root","abc123",...
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# makehosts
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# makenetworks
Warning: [master]: The network entry '192_168_144_0-255_255_255_0' already exists in xCAT networks table. Cannot create a definition for '192_168_144_0-255_255_255_0'
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# makedhcp
Renamed existing dhcp configuration file to /etc/dhcp/dhcpd.conf.xcatbak

The dhcp server must be restarted for OMAPI function to work
Warning: [master]: No dynamic range specified for 192.168.2.0. If hardware discovery is being used, a dynamic range is required.
Warning: [master]: No dynamic range specified for 192.168.144.0. If hardware discovery is being used, a dynamic range is required.
[root@master ~]# systemctl restart dhcpcd
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# makedhcp -n
Renamed existing dhcp configuration file to /etc/dhcp/dhcpd.conf.xcatbak

Warning: [master]: No dynamic range specified for 192.168.2.0. If hardware discovery is being used, a dynamic range is required.
Warning: [master]: No dynamic range specified for 192.168.144.0. If hardware discovery is being used, a dynamic range is required.
[root@master ~]#
[root@master ~]#
```



```
[root@master-]# mkdef -t node hpc001 mac=00:50:56:2A:C2:14 groups=all ip=192.168.2.2 arch=x86_64
1 object definitions have been created or modified.
[root@master-]# chtab key=system passwd.username=root passwd.password=abc123
[root@master-]#
[root@master-]#
[root@master-]#
[root@master-]# tabdump passwd
#key,username,password,cryptmethod,authdomain,comments,disable
"system","root","abc123",...
[root@master-]#
[root@master-]#
[root@master-]#
[root@master-]#
[root@master-]# makehosts
[root@master-]#
[root@master-]#
[root@master-]#
[root@master-]# makenetworks
Warning: [master]: The network entry '192_168_144_0-255_255_255_0' already exists in xCAT networks table. Cannot create a definition for '192_168_144_0-255_255_255_0'
[root@master-]#
[root@master-]#
[root@master-]# makedhcp -n
Renamed existing dhcp configuration file to /etc/dhcp/dhcpd.conf.xcatbak

The dhcp server must be restarted for OMAPI function to work
Warning: [master]: No dynamic range specified for 192.168.2.0. If hardware discovery is being used, a dynamic range is required.
Warning: [master]: No dynamic range specified for 192.168.144.0. If hardware discovery is being used, a dynamic range is required.
[root@master-]# systemctl restart dhcpd
[root@master-]#
[root@master-]#
[root@master-]#
[root@master-]# makedhcp -n
Renamed existing dhcp configuration file to /etc/dhcp/dhcpd.conf.xcatbak

Warning: [master]: No dynamic range specified for 192.168.2.0. If hardware discovery is being used, a dynamic range is required.
Warning: [master]: No dynamic range specified for 192.168.144.0. If hardware discovery is being used, a dynamic range is required.
[root@master-]#
[root@master-]#
[root@master-]# makedhcp -a
[root@master-]# makedns -n
Handling master.demo.lab in /etc/hosts.
Handling localhost in /etc/hosts.
Handling hpc001 in /etc/hosts.
Handling localhost in /etc/hosts.
Getting reverse zones, this may take several minutes for a large cluster.
Completed getting reverse zones.
Updating zones.
Completed updating zones.
Restarting named

30°C
Partly sunny
ENG IN 6:04 PM 2/12/2024
```

```
[root@master-]# mkdef -t node hpc001 mac=00:50:56:2A:C2:14 groups=all ip=192.168.2.2 arch=x86_64
1 object definitions have been created or modified.
[root@master-]# chtab key=system passwd.username=root passwd.password=abc123
[root@master-]#
[root@master-]#
[root@master-]#
[root@master-]# tabdump passwd
#key,username,password,cryptmethod,authdomain,comments,disable
"system","root","abc123",...
[root@master-]#
[root@master-]#
[root@master-]#
[root@master-]#
[root@master-]# makehosts
[root@master-]#
[root@master-]#
[root@master-]#
[root@master-]# makenetworks
Warning: [master]: The network entry '192_168_144_0-255_255_255_0' already exists in xCAT networks table. Cannot create a definition for '192_168_144_0-255_255_255_0'
[root@master-]#
[root@master-]#
[root@master-]# makedhcp -n
Renamed existing dhcp configuration file to /etc/dhcp/dhcpd.conf.xcatbak

The dhcp server must be restarted for OMAPI function to work
Warning: [master]: No dynamic range specified for 192.168.2.0. If hardware discovery is being used, a dynamic range is required.
Warning: [master]: No dynamic range specified for 192.168.144.0. If hardware discovery is being used, a dynamic range is required.
[root@master-]# systemctl restart dhcpd
[root@master-]#
[root@master-]#
[root@master-]#
[root@master-]# makedhcp -n
Renamed existing dhcp configuration file to /etc/dhcp/dhcpd.conf.xcatbak

Warning: [master]: No dynamic range specified for 192.168.2.0. If hardware discovery is being used, a dynamic range is required.
Warning: [master]: No dynamic range specified for 192.168.144.0. If hardware discovery is being used, a dynamic range is required.
[root@master-]#
[root@master-]#
[root@master-]# makedhcp -a
[root@master-]# makedns -n
Handling master.demo.lab in /etc/hosts.
Handling localhost in /etc/hosts.
Handling hpc001 in /etc/hosts.
Handling localhost in /etc/hosts.
Getting reverse zones, this may take several minutes for a large cluster.
Completed getting reverse zones.
Updating zones.
Completed updating zones.
Restarting named

30°C
Partly sunny
ENG IN 6:04 PM 2/12/2024
```



```
[root@master- ~]# xCAT log is stored in /var/log/xcat/cluster.log...
...leases file is less than 100M...
===== SUMMARY =====
[MNN]: Checking on MN...
  DNS nameserver 192.168.144.2 can not resolve 192.168.2.1
    Checking NTP service is configured...
[FAIL]      Checking DNS service is configured...
[FAIL]      chronyd did not synchronize.

[WARN]
[root@master- ~]# vim /etc/chrony.conf
[root@master- ~]#
[root@master- ~]#
[root@master- ~]#
[root@master- ~]# systemctl start chronyd
[root@master- ~]#
[root@master- ~]#
[root@master- ~]# systemctl status chronyd
● chronyd.service - NTP client/server
   Loaded: loaded (/usr/lib/systemd/system/chronyd.service; enabled; vendor preset: enabled)
     Active: active (running) since Mon 2024-02-12 19:02:38 IST; 1h 5min ago
       Docs: man:chronyd(8)
             man:chrony.conf(5)
   Main PID: 784 (chronyd)
  CGroup: /system.slice/chronyd.service
          └─784 /usr/sbin/chronyd

Feb 12 19:02:38 master.demo.lab systemd[1]: Starting NTP client/server...
Feb 12 19:02:38 master.demo.lab chronyd[784]: chronyd version 3.4 starting (+CMDMON +NTP +REFCLO...UG)Feb 12 19:02:38 master.demo.lab chronyd[784]: Frequency 0.000 +/- -1000000.000 ppm read from /var...iftFeb 12 19:02:38 master.demo.lab systemd[1]: Started NTP client/server.
Feb 12 19:05:03 master.demo.lab chronyd[784]: Source 144.24.146.96 replaced with 192.46.210.39
Feb 12 19:39:24 master.demo.lab chronyd[784]: Source 192.46.212.117 replaced with 192.46.215.141
hint: Some lines were ellipsized, use -l to show in full.

[root@master- ~]#
[root@master- ~]#
[root@master- ~]#
[root@master- ~]# tabedit site
[root@master- ~]#
[root@master- ~]#
[root@master- ~]#
[root@master- ~]#
[root@master- ~]# makehosts
[root@master- ~]#
[root@master- ~]#
[root@master- ~]#
[root@master- ~]# makenetworks
Warning: [master]: The network entry '192_168_2_0-255_255_255_0' already exists in xCAT networks table. Cannot create a definition for '192_168_2_0-255_255_255_0'
Warning: [master]: The network entry '192_168_144_0-255_255_255_0' already exists in xCAT networks table. Cannot create a definition for '192_168_144_0-255_255_255_0'
[root@master- ~]#
[root@master- ~]#
[root@master- ~]#
```

```
root@master:~# Feb 12 19:11:34 master.demo.lab systemd[1]: Stopping firewalld - dynamic firewall daemon...
root@master:~# Feb 12 19:11:35 master.demo.lab systemd[1]: Stopped firewalld - dynamic firewall daemon.
[root@master ~]#
[root@master ~]#
[root@master ~]# chdef -t node hpc001 mac=00:0C:29:0F:A7:F6
1 object definitions have been created or modified.
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# lsdef -t node hpc001
Object name: hpc001
    arch=x86_64
    currchain=boot
    currstate=install centos7.9-x86_64-compute
    groups=compute
    ip=192.168.2.2
    mac=00:0C:29:0F:A7:F6
    netboot=xnba
    os=centos7.9
    postbootscripts=otherpkgs
    postscripts=syslog,remoteshell,syncfiles
    profile=compute
    provmethod=centos7.9-x86_64-install-compute
[root@master ~]#
[root@master ~]#
[root@master ~]# systemctl status dhcpd
● dhcpd.service - DHCPv4 Server Daemon
   Loaded: loaded (/usr/lib/systemd/system/dhcpd.service; enabled; vendor preset: disabled)
   Active: active (running) since Mon 2024-02-12 20:10:10 IST; 18min ago
     Docs: man:dhcpd(8)
           man:dhcpd.conf(5)
 Main PID: 5695 (dhcpd)
   Status: "Dispatching packets..."
   CGroup: /system.slice/dhcpd.service
           └─5695 /usr/sbin/dhcpd -f -cf /etc/dhcp/dhcpd.conf -user dhcpd -group dhcpd --no-pid

Feb 12 20:21:48 master.demo.lab dhcpd[5695]: DHCPDISCOVER from 00:0c:29:0f:a7:f6 via ens36: netw...sesFeb 12 2
0:22:50 master.demo.lab dhcpd[5695]: DHCPDISCOVER from 00:0c:29:0f:a7:f6 via ens36: netw...sesFeb 12 20:22:52
master.demo.lab dhcpd[5695]: DHCPDISCOVER from 00:0c:29:0f:a7:f6 via ens36: netw...sesFeb 12 20:22:56 master.d
emo.lab dhcpd[5695]: DHCPDISCOVER from 00:0c:29:0f:a7:f6 via ens36: netw...sesFeb 12 20:23:04 master.demo.lab
dhcpd[5695]: DHCPDISCOVER from 00:0c:29:0f:a7:f6 via ens36: netw...sesFeb 12 20:28:05 master.demo.lab dhcpd[56
95]: DHCPDISCOVER from 00:0c:29:0f:a7:f6 via ens36: netw...sesFeb 12 20:28:07 master.demo.lab dhcpd[5695]: DHC
PDISCOVER from 00:0c:29:0f:a7:f6 via ens36: netw...sesFeb 12 20:28:11 master.demo.lab dhcpd[5695]: DHC
PDISCOVER from 00:0c:29:0f:a7:f6 via ens36: netw...sesFeb 12 20:28:19 master.demo.lab dhcpd[5695]: DHC
PDISCOVER from 00:0c:29:0f:a7:f6 via ens36: netw...sesFeb 12 20:28:44 master.demo.lab dhcpd[5695]: DHC
PREQUEST for 192.168.144.206 from 00:0c:29:4b:0f...06.Hint: Some lines were ellipsized, use -l to show in full.
[root@master ~]#
[root@master ~]# systemctl status dhcpd -l
● dhcpd.service - DHCPv4 Server Daemon
   Loaded: loaded (/usr/lib/systemd/system/dhcpd.service; enabled; vendor preset: disabled)
   Active: active (running) since Mon 2024-02-12 20:10:10 IST; 18min ago
```



```
root@master:~# Feb 12 19:11:34 master.demo.lab systemd[1]: Stopping firewalld - dynamic firewall daemon...
root@master:~# Feb 12 19:11:35 master.demo.lab systemd[1]: Stopped firewalld - dynamic firewall daemon.
[root@master ~]#
[root@master ~]#
[root@master ~]# chdef -t node hpc001 mac=00:0C:29:0F:A7:F6
1 object definitions have been created or modified.
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# lsdef -t node hpc001
Object name: hpc001
    arch=x86_64
    currchain=boot
    currstate=install centos7.9-x86_64-compute
    groups=compute
    ip=192.168.2.2
    mac=00:0C:29:0F:A7:F6
    netboot=xnba
    os=centos7.9
    postbootscripts=otherpkgs
    postscripts=syslog,remoteshell,syncfiles
    profile=compute
    provmethod=centos7.9-x86_64-install-compute
[root@master ~]#
[root@master ~]#
[root@master ~]# systemctl status dhcpd
● dhcpd.service - DHCPv4 Server Daemon
   Loaded: loaded (/usr/lib/systemd/system/dhcpd.service; enabled; vendor preset: disabled)
   Active: active (running) since Mon 2024-02-12 20:10:10 IST; 18min ago
     Docs: man:dhcpd(8)
           man:dhcpd.conf(5)
     Main PID: 5695 (dhcpd)
       Status: "Dispatching packets..."
      CGroup: /system.slice/dhcpd.service
              └─5695 /usr/sbin/dhcpd -f -cf /etc/dhcp/dhcpd.conf -user dhcpd -group dhcpd --no-pid

Feb 12 20:21:48 master.demo.lab dhcpd[5695]: DHCPDISCOVER from 00:0c:29:0f:a7:f6 via ens36: netw...sesFeb 12 0:22:50 master.demo.lab dhcpd[5695]: DHCPDISCOVER from 00:0c:29:0f:a7:f6 via ens36: netw...sesFeb 12 20:22:52 master.demo.lab dhcpd[5695]: DHCPDISCOVER from 00:0c:29:0f:a7:f6 via ens36: netw...sesFeb 12 20:22:56 master.d emo.lab dhcpd[5695]: DHCPDISCOVER from 00:0c:29:0f:a7:f6 via ens36: netw...sesFeb 12 20:23:04 master.demo.lab dhcpd[5695]: DHCPDISCOVER from 00:0c:29:0f:a7:f6 via ens36: netw...sesFeb 12 20:28:05 master.demo.lab dhcpd[5695]: DHCPDISCOVER from 00:0c:29:0f:a7:f6 via ens36: netw...sesFeb 12 20:28:07 master.demo.lab dhcpd[5695]: DHC PDISCOVER from 00:0c:29:0f:a7:f6 via ens36: netw...sesFeb 12 20:28:11 master.demo.lab dhcpd[5695]: DHC PDISCOVER from 00:0c:29:0f:a7:f6 via ens36: netw...sesFeb 12 20:28:19 master.demo.lab dhcpd[5695]: DHC PDISCOVER from 00:0c:29:0f:a7:f6 via ens36: netw...sesFeb 12 20:28:44 master.demo.lab dhcpd[5695]: DHC PREQUEST for 192.168.144 .206 from 00:0c:29:4b:0f...06.Hint: Some lines were ellipsized, use -l to show in full.
[root@master ~]#
[root@master ~]# systemctl status dhcpd -l
● dhcpd.service - DHCPv4 Server Daemon
   Loaded: loaded (/usr/lib/systemd/system/dhcpd.service; enabled; vendor preset: disabled)
   Active: active (running) since Mon 2024-02-12 20:10:10 IST; 18min ago
```



Search



```
root@master:~ X + | - □ ×
valid_lft forever preferred_lft forever
inet6 fe80::85a8:6679:6318:f181/64 scope link noprefixroute
    valid_lft forever preferred_lft forever
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# mkdef -t node hpc001 mac=00:0C:29:0F:A7:F6 groups=compute ip=192.168.2.2 arch=x86_84
Warning: [master]: A definition for 'hpc001' already exists. No changes will be made. Run again with '-f' option to force replace.
Error: [master]: 0 object definitions have been created or modified.
[root@master ~]# mkdef -f node hpc001 mac=00:0C:29:0F:A7:F6 groups=compute ip=192.168.2.2 arch=x86_84
Error: [master]: noderange can not contain spaces.

Usage: mkdef - Create xCAT data object definitions.

mkdef [-h | --help] [-t object-types]

mkdef [-V | --verbose] [-t object-types] [--template template-object-name]
      [-o object-names] [-z|--stanza]
      [-d | --dynamic] [-w attr==val [-w attr==val] ...]
      [-f | --force] [noderange] [attr=val [attr=val...]]]

The following data object types are supported by xCAT:

auditlog boottarget eventlog firmware group kit kitcomponent kitrepo monitoring network node notification osd
istro osdistroupdate osimage pdu policy rack route site taskstate zone zvmlv

Use the '-h' option together with the '-t <object-types>' option to
get a list of valid attribute names for each object type.

[root@master ~]# mkdef -t node hpc001 mac=00:0C:29:0F:A7:F6 groups=compute ip=192.168.2.2 arch=x86_84
-f
1 object definitions have been created or modified.
[root@master ~]#
[root@master ~]#
[root@master ~]# lsdef -t node hpc001
Object name: hpc001
    arch=x86_84
    groups=compute
    ip=192.168.2.2
    mac=00:0C:29:0F:A7:F6
    postbootscripts=otherpkgs
    postscripts=syslog,remoteshell,syncfiles
[root@master ~]#
[root@master ~]# systemctl status firewalld
● firewalld.service - firewalld - dynamic firewall daemon
   Loaded: loaded (/usr/lib/systemd/system/firewalld.service; disabled; vendor preset: enabled)
     Active: inactive (dead)
       Docs: man:firewalld(1)
```



```
root@master:~      + | - X
Use the '-h' option together with the '-t <object-types>' option to
get a list of valid attribute names for each object type.

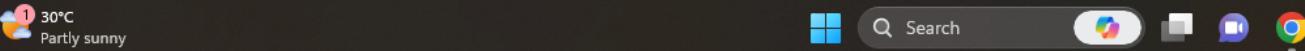
[root@master ~]# mkdef -t node hpc001 mac=00:0C:29:0F:A7:F6 groups=compute ip=192.168.2.2 arch=x86_64
-f
1 object definitions have been created or modified.
[root@master ~]#
[root@master ~]#
[root@master ~]# lsdef -t node hpc001
Object name: hpc001
arch=x86_64
groups=compute
ip=192.168.2.2
mac=00:0C:29:0F:A7:F6
postbootscripts=otherpkgs
postscripts=syslog,remoteshell,syncfiles
[root@master ~]#
[root@master ~]# systemctl status firewalld
● firewalld.service - firewalld - dynamic firewall daemon
   Loaded: loaded (/usr/lib/systemd/system/firewalld.service; disabled; vendor preset: enabled)
     Active: inactive (dead)
       Docs: man:firewalld(1)

Feb 12 19:02:38 master.demo.lab systemd[1]: Starting firewalld - dynamic firewall daemon...
Feb 12 19:02:39 master.demo.lab systemd[1]: Started firewalld - dynamic firewall daemon.
Feb 12 19:02:39 master.demo.lab firewalld[726]: WARNING: AllowZoneDrifting is enabled. This is c...ow.Feb 12 1
9:11:34 master.demo.lab systemd[1]: Stopping firewalld - dynamic firewall daemon...
Feb 12 19:11:35 master.demo.lab systemd[1]: Stopped firewalld - dynamic firewall daemon.
Hint: Some lines were ellipsized, use -l to show in full.
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# ls /install/centos7.9/x86_64/
CentOS_BuildTag  EULA  images  LiveOS  repodata          RPM-GPG-KEY-CentOS-Testing-7
EFI              GPL   isolinux Packages  RPM-GPG-KEY-CentOS-7  TRANS.TBL
[root@master ~]# ls /install/centos7.9/x86_64/Packages/
acl-2.2.51-15.el7.x86_64.rpm
aic94xx-firmware-30-6.el7.noarch.rpm
aide-0.15.1-13.el7.x86_64.rpm
alsa-firmware-1.0.28-2.el7.noarch.rpm
alsa-lib-1.1.8-1.el7.x86_64.rpm
alsa-tools-firmware-1.1.0-1.el7.x86_64.rpm
atk-2.28.1-2.el7.x86_64.rpm
audit-2.8.5-4.el7.x86_64.rpm
audit-libs-2.8.5-4.el7.x86_64.rpm
authconfig-6.2.8-30.el7.x86_64.rpm
avahi-0.6.31-20.el7.x86_64.rpm
avahi-autoipd-0.6.31-20.el7.x86_64.rpm
avahi-libs-0.6.31-20.el7.x86_64.rpm
basesystem-10.0-7.el7.centos.noarch.rpm

30°C
Partly sunny
```



```
root@master:~# 
root@master:~# 
root@master:~# 
root@master:~# ls
anaconda-ks.cfg  CentOS-7-x86_64-DVD-2009.iso  CentOS-7-x86_64-Minimal-2009.iso
root@master:~# 
root@master:~# 
root@master:~# 
root@master:~# 
root@master:~# 
root@master:~# 
root@master:~# 
root@master:~# copycds CentOS-7-x86_64-DVD-2009.iso
Copying media to /install/centos7.9/x86_64
Media copy operation successful
root@master:~# mkdef -t node hpc002 mac=00:50:56:2C:CD:BC groups=compute ip=192.168.2.3 arch=x86_84
1 object definitions have been created or modified.
root@master:~# chtab key=system passwd.username=root passwd.password=abc123
root@master:~# 
root@master:~# tabdump passwd
#key,username,password,cryptmethod,authdomain,comments,disable
"system","root","abc123",,,,
"omapi","xcat_key","YUdLbHBVNVVOYklFUGxHOGtWSXQySzuSE9RU29FQjA",,,,
root@master:~# 
root@master:~# 
root@master:~# 
root@master:~# 
root@master:~# tabedit site
No file modifications detected, not restoring.
root@master:~# 
root@master:~# 
root@master:~# 
root@master:~# lsdef -t osimage
centos7.9-x86_64-install-compute  (osimage)
centos7.9-x86_64-netboot-compute  (osimage)
centos7.9-x86_64-statelive-compute (osimage)
root@master:~# nodeset compute ^Cimage=centos7.7-x86_64-install-compute
root@master:~# 
root@master:~# 
root@master:~# 
root@master:~# chdef -t node hpc002 netboot=xnba
1 object definitions have been created or modified.
root@master:~# 
root@master:~# 
root@master:~# 
root@master:~# nodeset hpc002 osimage=centos7.9-x86_64-install-compute
hpc002: install centos7.9-x86_64-compute
Warning: [master]: The hostname hpc002 of node hpc002 could not be resolved.
root@master:~# lsdef -t node hpc002
Object name: hpc002
    arch=x86_64
    currchain=boot
```



The screenshot shows a terminal window running on a Windows operating system. The taskbar at the bottom of the screen includes icons for the Start button, File Explorer, Task View, Action Center, and several pinned applications like Microsoft Edge, File Explorer, and others.

```
[root@master ~]# 
[root@master ~]# 
[root@master ~]# copycds CentOS-7-x86_64-DVD-2009.iso
Copying media to /install/centos7.9/x86_64
Media copy operation successful
[root@master ~]# mkdef -t node hpc002 mac=00:50:56:2C:CD:BC groups=compute ip=192.168.2.3 arch=x86_64
1 object definitions have been created or modified.
[root@master ~]# chtab key=system passwd.username=root passwd.password=abc123
[root@master ~]#
[root@master ~]# tabdump passwd
#key,username,password,cryptmethod,authdomain,comments,disable
"system","root","abc123",,,,
"omapi","xcat_key","YUdLbHBVNVVOYklFUGxHOGtWSXQySzhuse9RU29FQja=",,,,
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# tabedit site
No file modifications detected, not restoring.
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# lsdef -t osimage
centos7.9-x86_64-install-compute (osimage)
centos7.9-x86_64-netboot-compute (osimage)
centos7.9-x86_64-statefile-compute (osimage)
[root@master ~]# nodeset compute ^Cimage=centos7.7-x86_64-install-compute
[root@master ~]#
[root@master ~]#
[root@master ~]# chdef -t node hpc002 netboot=xnba
1 object definitions have been created or modified.
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# nodeset hpc002 osimage=centos7.9-x86_64-install-compute
hpc002: install centos7.9-x86_64-compute
Warning: [master]: The hostname hpc002 of node hpc002 could not be resolved.
[root@master ~]# lsdef -t node hpc002
Object name: hpc002
    arch=x86_64
    currchain=boot
    currstate=install centos7.9-x86_64-compute
    groups=compute
    ip=192.168.2.3
    mac=00:50:56:2C:CD:BC
    netboot=xnba
    os=centos7.9
    postbootscripts=otherpkgs
    postscripts=syslog,remoteshell,syncfiles
    profile=compute
```

1 30°C  
Partly sunny



```
[root@master ~]# 
[root@master ~]# 
[root@master ~]# copycds CentOS-7-x86_64-DVD-2009.iso
Copying media to /install/centos7.9/x86_64
Media copy operation successful
[root@master ~]# mkdef -t node hpc002 mac=00:50:56:2C:CD:BC groups=compute ip=192.168.2.3 arch=x86_64
1 object definitions have been created or modified.
[root@master ~]# chtab key=system passwd.username=root passwd.password=abc123
[root@master ~]#
[root@master ~]# tabdump passwd
#key,username,password,cryptmethod,authdomain,comments,disable
"system","root","abc123",,,,
"omapi","xcat_key","YUdlbHBVNVVOYklFUGxHOGtWSXQySzuSE9RU29FQjaA",,,,
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# tabedit site
No file modifications detected, not restoring.
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# lsdef -t osimage
centos7.9-x86_64-install-compute (osimage)
centos7.9-x86_64-netboot-compute (osimage)
centos7.9-x86_64-statelite-compute (osimage)
[root@master ~]# nodeset compute ^Cimage=centos7.7-x86_64-install-compute
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# chdef -t node hpc002 netboot=xnba
1 object definitions have been created or modified.
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# nodeset hpc002 osimage=centos7.9-x86_64-install-compute
hpc002: install centos7.9-x86_64-compute
Warning: [master]: The hostname hpc002 of node hpc002 could not be resolved.
[root@master ~]# lsdef -t node hpc002
Object name: hpc002
    arch=x86_64
    currchain=boot
    currstate=install centos7.9-x86_64-compute
    groups=compute
    ip=192.168.2.3
    mac=00:50:56:2C:CD:BC
    netboot=xnba
    os=centos7.9
    postbootscripts=otherpkgs
    postscripts=syslog,remoteshell,syncfiles
    profile=compute
```



Search



```
[root@master ~]#
[root@master ~]#
[root@master ~]# copycds CentOS-7-x86_64-DVD-2009.iso
Copying media to /install/centos7.9/x86_64
Media copy operation successful
[root@master ~]# mkdef -t node hpc002 mac=00:56:2C:CD:BC:groups=compute ip=192.168.2.3 arch=x86_64
1 object definitions have been created or modified.
[root@master ~]# chtab key=system passwd.username=root passwd.password=abc123
[root@master ~]#
[root@master ~]# tabdump passwd
#key,username,password,cryptmethod,authdomain,comments,disable
"system","root","abc123",,,,
"omapi","xcat_key","YUdLbHBVNVVOYkLFUGxHOGtWSXQySzuSE9RU29FQjA=",,,,
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# tabedit site
No file modifications detected, not restoring.
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# lsdef -t osimage
centos7.9-x86_64-install-compute (osimage)
centos7.9-x86_64-netboot-compute (osimage)
centos7.9-x86_64-statelite-compute (osimage)
[root@master ~]# nodeset compute ^Cimage=centos7.7-x86_64-install-compute
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# chdef -t node hpc002 netboot=xnba
1 object definitions have been created or modified.
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# nodeset hpc002 osimage=centos7.9-x86_64-install-compute
hpc002: install centos7.9-x86_64-compute
Warning: [master]: The hostname hpc002 of node hpc002 could not be resolved.
[root@master ~]# lsdef -t node hpc002
Object name: hpc002
arch=x86_64
currchain=boot
currstate=install centos7.9-x86_64-compute
groups=compute
ip=192.168.2.3
mac=00:56:2C:CD:BC
netboot=xnba
os=centos7.9
postbootscripts=otherpkgs
postscripts=syslog,remoteshell,syncfiles
profile=compute
```



Search

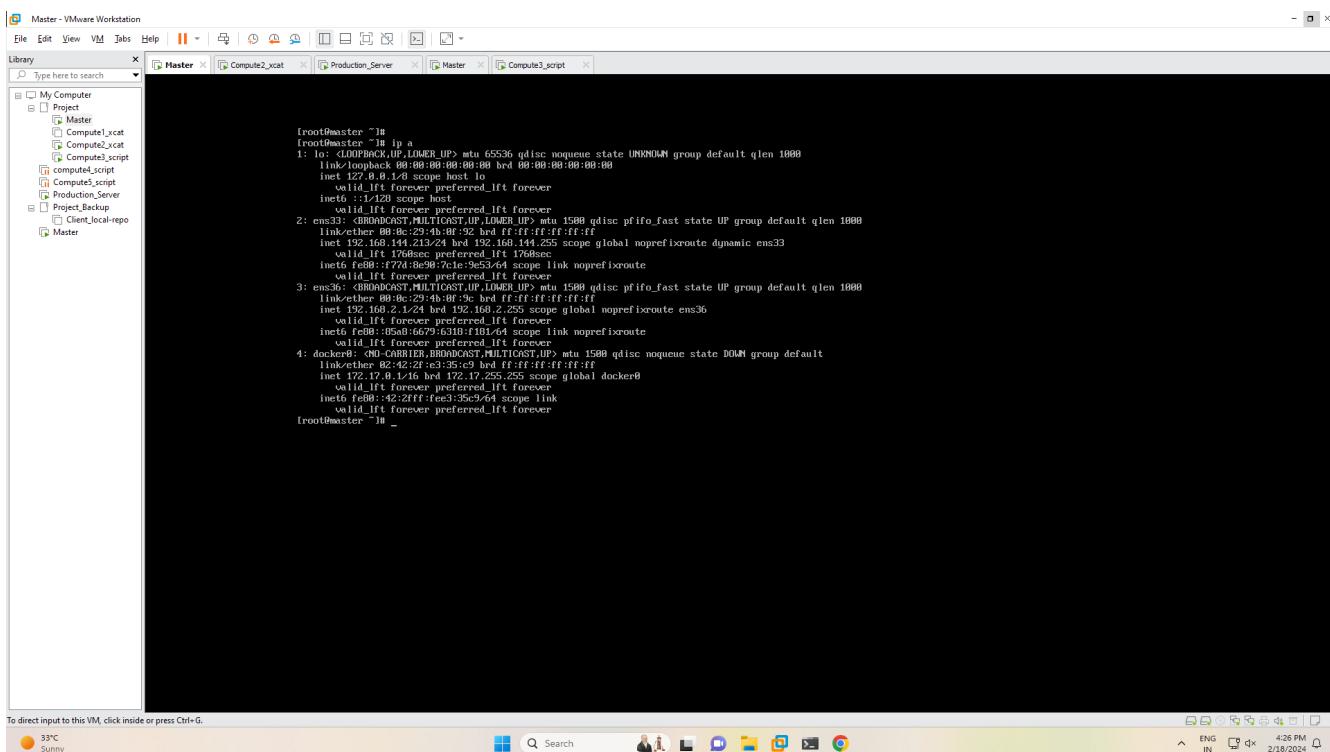


```
root@master:~          + | - X
1 object definitions have been created or modified.
[root@master ~]# chtab key=system passwd.username=root passwd.password=abc123
[root@master ~]#
[root@master ~]# tabdump passwd
#key,username,password,cryptmethod,authdomain,comments,disable
"system","root","abc123",,,,
"omapi","xcat_key","YUdLbHBVNVOYklFUGxHOGtWSXQySzuSE9RU29FQjA",,,,
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# tabedit site
No file modifications detected, not restoring.
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# lsdef -t osimage
centos7.9-x86_64-install-compute (osimage)
centos7.9-x86_64-netboot-compute (osimage)
centos7.9-x86_64-statelite-compute (osimage)
[root@master ~]# nodeset compute ^Cimage=centos7.7-x86_64-install-compute
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# chdef -t node hpc002 netboot=xnba
1 object definitions have been created or modified.
[root@master ~]#
[root@master ~]#
[root@master ~]#
[root@master ~]# nodeset hpc002 osimage=centos7.9-x86_64-install-compute
hpc002: install centos7.9-x86_64-compute
Warning: [master]: The hostname hpc002 of node hpc002 could not be resolved.
[root@master ~]# lsdef -t node hpc002
Object name: hpc002
arch=x86_64
currchain=boot
currstate=install centos7.9-x86_64-compute
groups=compute
ip=192.168.2.3
mac=00:56:2C:CD:BC
netboot=xnba
os=centos7.9
postbootscripts=otherpkgs
postscripts=syslog,remoteshell,syncfiles
profile=compute
provmethod=centos7.9-x86_64-install-compute
[root@master ~]# makehosts
[root@master ~]#
[root@master ~]#
[root@master ~]# nodeset hpc002 osimage=centos7.9-x86_64-install-compute
hpc002: install centos7.9-x86_64-compute
```



Search





Compute\_xcat - VMware Workstation

File Edit View VM Tabs Help | Type here to search

Library Master Compute\_xcat

```
hpc002:~ root
Password: 
root@hpc002 ~% 
root@hpc002 ~% 
root@hpc002 ~% ls
ancacal-ks.cfg original-ks.cfg
root@hpc002 ~% 
root@hpc002 ~% 
root@hpc002 ~% ls
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 brd 127.255 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: ens33: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 00:56:9c:00:00:00 brd ff:ff:ff:ff:ff:ff
    inet 192.168.2.255 brd 192.168.2.255 scope global dynamic ens33
        valid_lft 43147sec
        preferred_lft 43147sec
    inet6 fe80::256:9cff:fe2c:cdbe/64 scope link
        valid_lft forever preferred_lft forever
root@hpc002 ~% 
root@hpc002 ~% 
```

To direct input to this VM, click inside or press Ctrl+G.

VMware Tools enables many features and improves mouse movement, video and performance. Log in to the guest operating system and click "Install Tools".

Install Tools Remind Me Later Never Remind Me

32°C Sunny 3:52 PM 2/12/2024 ENG IN

Compute3\_script - VMware Workstation

File Edit View VM Tabs Help | Type here to search

Library Master Compute2\_xcat Master

```
root@hpc003 ~% 
root@hpc003 ~% ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 brd 127.255 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: ens33: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 00:59:56:25:00:00 brd ff:ff:ff:ff:ff:ff
    inet 192.168.2.4/24 brd 192.168.2.255 scope global dynamic ens33
        valid_lft 33952sec
        preferred_lft 33952sec
    inet6 fe80::259:56ff:fe25:65a5/64 scope link
        valid_lft forever preferred_lft forever
root@hpc003 ~% 
```

To direct input to this VM, click inside or press Ctrl+G.

33°C Sunny 4:31 PM 2/18/2024 ENG IN



```
[root@master ~]# [root@master ~]# [root@master ~]# lsfdef -t node hpc001
Object name: hpc001
arch=x86_64
curchain=boot
currstate=install centos7.9-x86_64-compute
groups=compute
ip=192.168.2.2
mac=00:56:56:20:CD:BC
netboot=symbolic
os=centos7.9
postbootscripts=otherpkgs
postscripts=syslog,remoteshell,syncfiles
profile=compute
provmethod=centos7.9-x86_64-install-compute
status=failed
statustime=02-12-2024 20:58:49
[root@master ~]# lsfdef -t node hpc002
Object name: hpc002
arch=x86_64
curchain=boot
currstate=boot
groups=compute
ip=192.168.2.3
mac=00:56:56:2C:CD:BC
netboot=pxe
os=centos7.9
postbootscripts=otherpkgs
postscripts=syslog,remoteshell,syncfiles
profile=compute
provmethod=centos7.9-x86_64-install-compute
status=booted
statustime=02-15-2024 05:36:35
[root@master ~]# lsfdef -t node hpc003
Object name: hpc003
arch=x86_64
groups=compute
ip=192.168.2.4
mac=00:56:56:25:65:A5
netboot=pxe
postbootscripts=otherpkgs
postscripts=syslog,remoteshell,syncfiles
status=booted
statustime=02-15-2024 05:37:03
[root@master ~]#
```

