



## Cloud CA

Cloud Essentials (Lovely Professional University)



Scan to open on Studocu

## Cloud CA 1

- Step-1 ip r

```
jai@jai-virtual-machine:~$ 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 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 fq_codel state UP group default qlen 1000
link/ether 00:0c:29:14:4f:49 brd ff:ff:ff:ff:ff:ff
altname enp2s1
inet 192.168.68.130/24 brd 192.168.68.255 scope global dynamic noprefixroute ens33
valid_lft 1355sec preferred_lft 1355sec
inet6 fe80::cc10:94db:6a6f:cd63/64 scope link noprefixroute
valid_lft forever preferred_lft forever
```

- Step-2 ip r

```
jai@jai-virtual-machine:~$ ip r
default via 192.168.68.2 dev ens33 proto dhcp metric 20100
169.254.0.0/16 dev ens33 scope link metric 1000
192.168.68.0/24 dev ens33 proto kernel scope link src 192.168.68.130 metric 100
```

- Step-3 cat /etc/netplan/01-network-manger.yaml

```
jai@jai-virtual-machine:~$ cat /etc/netplan/01-network-manger.yaml
cat: /etc/netplan/01-network-manger.yaml: No such file or directory
```

- Step-4 sudo nano /etc/netplan/01-network-manager-all.yaml

```
network:
version: 2
renderer: NetworkManager
ethernets:
eth0:
dhcp4: no
addresses: [172.23.207.254/20]
gateway4: 192.168.1.1
nameservers:
addresses: [8.8.8.8,8.8.8.4]
```

- Step-5 sudo netplan apply

```
jai@jai-virtual-machine:~$ sudo netplan apply
```

- Step-6 sudo systemctl restart NetworkManager

```
jai@jai-virtual-machine:~$ sudo systemctl restart NetworkManager
```

- Step-7 hostname -fqdn

```
jai@jai-virtual-machine:~$ hostname -fqdn
jai-virtual-machine
```

- Step-8 sudo nano /etc/hosts

```
127.0.0.1    localhost
127.0.1.1    jai-virtual-machine
```

# The following lines are desirable for IPv6 capable hosts

```
::1    ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
```

- Step-9 sudo hostnamectl set-hostname cloud

```
jai@jai-virtual-machine:~$ sudo hostnamectl set-hostname cloud
```

- Step-10 hostname -fqdn apache.cloud.u1

```
ai@jai-virtual-machine:~$ hostname -fqdn apache.cloud.u1
Usage: hostname [-b] {hostname|-F file}    set host name (from file)
hostname [-a|-A|-d|-f|-i|-l|-s|-y]      display formatted name
hostname                                display host name
```

{yp,nis,}domainname {nisdomain|-F file} set NIS domain name (from file)  
{yp,nis,}domainname display NIS domain name

dnsdomainname display dns domain name

hostname -V|--version|-h|--help print info and exit

Program name:

{yp,nis,}domainname=hostname -y  
dnsdomainname=hostname -d

Program options:

-a, --alias alias names  
-A, --all-fqdns all long host names (FQDNs)  
-b, --boot set default hostname if none available  
-d, --domain DNS domain name  
-f, --fqdn, --long long host name (FQDN)  
-F, --file read host name or NIS domain name from given file  
-i, --ip-address addresses for the host name  
-I, --all-ip-addresses all addresses for the host  
-s, --short short host name  
-y, --yp, --nis NIS/YP domain name

Description:

This command can get or set the host name or the NIS domain name. You can also get the DNS domain or the FQDN (fully qualified domain name). Unless you are using bind or NIS for host lookups you can change the FQDN (Fully Qualified Domain Name) and the DNS domain name (which is part of the FQDN) in the /etc/hosts file.

- **Step-11 sudo apt install bridge-utils**

```
jai@jai-virtual-machine:~$ sudo apt install bridge-utils
```

```
Reading package lists... Done
```

```
Building dependency tree... Done
```

```
Reading state information... Done
```

```
Suggested packages:
```

```
ifupdown
```

```
The following NEW packages will be installed:
```

```
bridge-utils
```

```
0 upgraded, 1 newly installed, 0 to remove and 215 not upgraded.
```

```
Need to get 34.4 kB of archives.
```

```
After this operation, 121 kB of additional disk space will be used.
```

```
Ign:1 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 bridge-utils amd64 1.7-1ubuntu3
```

```
Ign:1 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 bridge-utils amd64 1.7-1ubuntu3
```

```
Ign:1 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 bridge-utils amd64 1.7-1ubuntu3
```

```
Err:1 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 bridge-utils amd64 1.7-1ubuntu3
```

```
Temporary failure resolving 'in.archive.ubuntu.com'
```

```
E: Failed to fetch http://in.archive.ubuntu.com/ubuntu/pool/main/b/bridge-utils/bridge-utils_1.7-
```

```
1ubuntu3_amd64.deb Temporary failure resolving 'in.archive.ubuntu.com'
```

```
E: Unable to fetch some archives, maybe run apt-get update or try with --fix-missing?
```

- **Step-12 sudo brctl addbr cloudbro**

```
jai@jai-virtual-machine:~$ sudo brctl addbr cloudbro
```

```
sudo: brctl: command not found
```

- **Step-13 sudo brctl addif cloudbro ens33**

```
jai@jai-virtual-machine:~$ sudo brctl addif cloudbro ens33
```

```
sudo: brctl: command not found
```

- **Step-14 Sudo nano /etc/netplan/01-network-manager-all.yaml**

```
Stjai@jai-virtual-machine:~$ Sudo nano /etc/netplan/01-network-manager-all.yaml
```

```
Command 'Sudo' not found, did you mean:
```

```
command 'sudo' from deb sudo (1.9.9-1ubuntu2.4)
```

```
command 'sudo' from deb sudo-ldap (1.9.9-1ubuntu2.4)
```

```
command 'udo' from deb udo (6.4.1-6)
```

```
Try: sudo apt install <deb name>ep-14 Sudo nano /etc/netplan/01-network-manager-all.yaml
```

- Step-15 sudo netplan apply

```
jai@jai-virtual-machine:~$ sudo netplan apply
```

- Step-16 sudo systemctl restart NetworkManager

```
jai@jai-virtual-machine:~$ sudo systemctl restart NetworkManager
```

- Step-17 sudo apt install ntp

```
jai@jai-virtual-machine:~$ sudo apt install ntp
```

Reading package lists... Done

Building dependency tree... Done

Reading state information... Done

The following additional packages will be installed:

libevent-core-2.1-7 libevent-pthreads-2.1-7 libopts25 sntp

Suggested packages:

ntp-doc

The following packages will be REMOVED:

systemd-timesyncd

The following NEW packages will be installed:

libevent-core-2.1-7 libevent-pthreads-2.1-7 libopts25 ntp sntp

0 upgraded, 5 newly installed, 1 to remove and 215 not upgraded.

Need to get 949 kB of archives.

After this operation, 2,556 kB of additional disk space will be used.

Do you want to continue? [Y/n] y

Get:1 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libevent-core-2.1-7 amd64 2.1.12-stable-1build3 [93.9 kB]

Get:2 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libevent-pthreads-2.1-7 amd64 2.1.12-stable-1build3 [7,642 B]

Get:3 http://in.archive.ubuntu.com/ubuntu jammy/universe amd64 libopts25 amd64 1:5.18.16-4 [59.5 kB]

Get:4 http://in.archive.ubuntu.com/ubuntu jammy/universe amd64 ntp amd64 1:4.2.8p15+dfsg-1ubuntu2 [721 kB]

Get:5 http://in.archive.ubuntu.com/ubuntu jammy/universe amd64 sntp amd64 1:4.2.8p15+dfsg-1ubuntu2 [67.1 kB]

Fetched 949 kB in 12s (82.5 kB/s)

(Reading database ... 199545 files and directories currently installed.)

Removing systemd-timesyncd (249.11-0ubuntu3.12) ...

Selecting previously unselected package libevent-core-2.1-7:amd64.

(Reading database ... 199531 files and directories currently installed.)

Preparing to unpack .../libevent-core-2.1-7\_2.1.12-stable-1build3\_amd64.deb ...

Unpacking libevent-core-2.1-7:amd64 (2.1.12-stable-1build3) ...

Selecting previously unselected package libevent-pthreads-2.1-7:amd64.

Preparing to unpack .../libevent-pthreads-2.1-7\_2.1.12-stable-1build3\_amd64.deb ...

Unpacking libevent-pthreads-2.1-7:amd64 (2.1.12-stable-1build3) ...

Selecting previously unselected package libopts25:amd64.

Preparing to unpack .../libopts25\_1%3a5.18.16-4\_amd64.deb ...

Unpacking libopts25:amd64 (1:5.18.16-4) ...

Selecting previously unselected package ntp.

Preparing to unpack .../ntp\_1%3a4.2.8p15+dfsg-1ubuntu2\_amd64.deb ...

Unpacking ntp (1:4.2.8p15+dfsg-1ubuntu2) ...

Selecting previously unselected package sntp.

Preparing to unpack .../sntp\_1%3a4.2.8p15+dfsg-1ubuntu2\_amd64.deb ...

Unpacking sntp (1:4.2.8p15+dfsg-1ubuntu2) ...

Setting up libopts25:amd64 (1:5.18.16-4) ...

Setting up ntp (1:4.2.8p15+dfsg-1ubuntu2) ...

Created symlink /etc/systemd/system/network-pre.target.wants/ntp-systemd-netif.path → /lib/systemd/system/ntp-systemd-netif.path.

Created symlink /etc/systemd/system/multi-user.target.wants/ntp.service → /lib/systemd/system/ntp.service.

ntp-systemd-netif.service is a disabled or a static unit, not starting it.

Setting up libevent-core-2.1-7:amd64 (2.1.12-stable-1build3) ...

Setting up libevent-pthreads-2.1-7:amd64 (2.1.12-stable-1build3) ...

Setting up sntp (1:4.2.8p15+dfsg-1ubuntu2) ...

Processing triggers for man-db (2.10.2-1) ...

Processing triggers for dbus (1.12.20-2ubuntu4.1) ...

Processing triggers for libc-bin (2.35-0ubuntu3.1) ...

- Step-18 sudo systemctl enable ntp

```
jai@jai-virtual-machine:~$ sudo systemctl enable ntp
```

Synchronizing state of ntp.service with SysV service script with /lib/systemd/systemd-sysv-install.

Executing: /lib/systemd/systemd-sysv-install enable ntp

- **Step-19 sudo systemctl start ntp**

jai@jai-virtual-machine:~\$ sudo systemctl start ntp

- **Step-20 sudo apt install chrony**

jai@jai-virtual-machine:~\$ sudo apt install chrony

Reading package lists... Done

Building dependency tree... Done

Reading state information... Done

The following packages were automatically installed and are no longer required:

libevent-core-2.1-7 libevent-pthreads-2.1-7 libopts25 sntp

Use 'sudo apt autoremove' to remove them.

The following packages will be REMOVED:

ntp

The following NEW packages will be installed:

chrony

0 upgraded, 1 newly installed, 1 to remove and 215 not upgraded.

Need to get 290 kB of archives.

After this operation, 1,485 kB disk space will be freed.

Do you want to continue? [Y/n] y

Get:1 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 chrony amd64 4.2-2ubuntu2 [290 kB]

Fetched 290 kB in 3s (115 kB/s)

(Reading database ... 199616 files and directories currently installed.)

Removing ntp (1:4.2.8p15+dfsg-1ubuntu2) ...

Selecting previously unselected package chrony.

(Reading database ... 199562 files and directories currently installed.)

Preparing to unpack .../chrony\_4.2-2ubuntu2\_amd64.deb ...

Unpacking chrony (4.2-2ubuntu2) ...

Setting up chrony (4.2-2ubuntu2) ...

Creating config file /etc/chrony/chrony.conf with new version

Creating config file /etc/chrony/chrony.keys with new version

dpkg-statoverride: warning: --update given but /var/log/chrony does not exist

Created symlink /etc/systemd/system/chronyd.service → /lib/systemd/system/chrony.service.

Created symlink /etc/systemd/system/multi-user.target.wants/chrony.service → /lib/systemd/system/chrony.service.

Processing triggers for man-db (2.10.2-1) ...

- **Step-21 sudo apt install openjdk-11-jdk**

Reading package lists... Done

Building dependency tree... Done

Reading state information... Done

The following packages were automatically installed and are no longer required:

libevent-core-2.1-7 libevent-pthreads-2.1-7 libopts25 sntp

Use 'sudo apt autoremove' to remove them.

The following additional packages will be installed:

ca-certificates-java fonts-dejavu-extra java-common libatk-wrapper-java libatk-wrapper-java-jni libice-dev libpthread-stubs0-dev libsm-dev libx11-6 libx11-dev libx11-xcb1

libxau-dev libxcb1-dev libxdmcp-dev libxt-dev openjdk-11-jdk-headless openjdk-11-jre openjdk-11-jre-headless

x11proto-dev xorg-sgml-doctools xtrans-dev

Suggested packages:

default-jre libice-doc libsm-doc libx11-doc libxcb-doc libxt-doc openjdk-11-demo openjdk-11-source visualvm fonts-ipafont-gothic fonts-ipafont-mincho fonts-wqy-microhei

| fonts-wqy-zenhei

The following NEW packages will be installed:

ca-certificates-java fonts-dejavu-extra java-common libatk-wrapper-java libatk-wrapper-java-jni libice-dev libpthread-stubs0-dev libsm-dev libx11-dev libxau-dev libxcb1-dev

libxdmcp-dev libxt-dev openjdk-11-jdk openjdk-11-jdk-headless openjdk-11-jre openjdk-11-jre-headless x11proto-dev xorg-sgml-doctools xtrans-dev

The following packages will be upgraded:

libx11-6 libx11-xcb1

2 upgraded, 20 newly installed, 0 to remove and 213 not upgraded.

Need to get 122 MB/122 MB of archives.

After this operation, 275 MB of additional disk space will be used.

```

Do you want to continue? [Y/n] y
Get:1 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libx11-xcb1 amd64 2:1.7.5-1ubuntu0.3
[7,802 B]
Get:2 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 java-common all 0.72build2 [6,782 B]
Ign:3 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 openjdk-11-jre-headless amd64 11.0.21+9-
Oubuntu1~22.04
Get:4 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 ca-certificates-java all 20190909ubuntu1.2
[12.1 kB]
Get:5 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 fonts-dejavu-extra all 2.37-2build1 [2,041 kB]
Err:3 http://security.ubuntu.com/ubuntu jammy-updates/main amd64 openjdk-11-jre-headless amd64 11.0.21+9-
Oubuntu1~22.04
404 Not Found [IP: 185.125.190.39 80]
Get:6 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libatk-wrapper-java all 0.38.0-5build1 [53.1 kB]
Get:7 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libatk-wrapper-java-jni amd64 0.38.0-5build1 [49.0
kB]
Get:8 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 xorg-sgml-doctools all 1:1.11-1.1 [10.9 kB]
Get:9 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 x11proto-dev all 2021.5-1 [604 kB]
Ign:9 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 x11proto-dev all 2021.5-1
Get:10 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libice-dev amd64 2:1.0.10-1build2 [51.4 kB]
Get:11 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libpthread-stubs0-dev amd64 0.4-1build2 [5,516 B]
Get:12 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libsm-dev amd64 2:1.2.3-1build2 [18.1 kB]
Get:13 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libxau-dev amd64 1:1.0.9-1build5 [9,724 B]
Get:14 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libxdmcp-dev amd64 1:1.1.3-0ubuntu5 [26.5 kB]
Get:15 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 xtrans-dev all 1.4.0-1 [68.9 kB]
Get:16 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libxcb1-dev amd64 1.14-3ubuntu3 [86.5 kB]
Get:17 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libx11-dev amd64 2:1.7.5-1ubuntu0.3 [744
kB]
Get:18 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libxt-dev amd64 1:1.2.1-1 [396 kB]
Ign:19 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 openjdk-11-jre amd64 11.0.21+9-
Oubuntu1~22.04
Ign:20 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 openjdk-11-jdk-headless amd64 11.0.21+9-
Oubuntu1~22.04
Err:19 http://security.ubuntu.com/ubuntu jammy-updates/main amd64 openjdk-11-jre amd64 11.0.21+9-
Oubuntu1~22.04
404 Not Found [IP: 185.125.190.39 80]
Ign:21 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 openjdk-11-jdk amd64 11.0.21+9-
Oubuntu1~22.04
Err:20 http://security.ubuntu.com/ubuntu jammy-updates/main amd64 openjdk-11-jdk-headless amd64 11.0.21+9-
Oubuntu1~22.04
404 Not Found [IP: 185.125.190.39 80]
Get:9 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 x11proto-dev all 2021.5-1 [604 kB]
Err:21 http://security.ubuntu.com/ubuntu jammy-updates/main amd64 openjdk-11-jdk amd64 11.0.21+9-
Oubuntu1~22.04
404 Not Found [IP: 185.125.190.39 80]
Fetched 4,191 kB in 31s (137 kB/s)
E: Failed to fetch http://security.ubuntu.com/ubuntu/pool/main/o/openjdk-lts/openjdk-11-jre-headless_11.0.21%2b9-
Oubuntu1%7e22.04_amd64.deb 404 Not Found [IP: 185.125.190.39 80]
E: Failed to fetch http://security.ubuntu.com/ubuntu/pool/main/o/openjdk-lts/openjdk-11-jre_11.0.21%2b9-
Oubuntu1%7e22.04_amd64.deb 404 Not Found [IP: 185.125.190.39 80]
E: Failed to fetch http://security.ubuntu.com/ubuntu/pool/main/o/openjdk-lts/openjdk-11-jdk-headless_11.0.21%2b9-
Oubuntu1%7e22.04_amd64.deb 404 Not Found [IP: 185.125.190.39 80]
E: Failed to fetch http://security.ubuntu.com/ubuntu/pool/main/o/openjdk-lts/openjdk-11-jdk_11.0.21%2b9-
Oubuntu1%7e22.04_amd64.deb 404 Not Found [IP: 185.125.190.39 80]
E: Unable to fetch some archives, maybe run apt-get update or try with --fix-missing?
    • Step-22 sudo nano /etc/apt/sources.list.d/cloudstack.list
jai@jai-virtual-machine:~$ sudo nano /etc/apt/sources.list.d/cloudstack.list
    • Step-23 wget -O - https://download.cloudstack.org/release.asc |sudo tee
/etc/apt/trusted.gpg.d/cloudstack.asc
jai@jai-virtual-machine:~$ wget -O - https://download.cloudstack.org/release.asc |sudo tee
/etc/apt/trusted.gpg.d/cloudstack.asc
--2024-02-29 15:10:24-- https://download.cloudstack.org/release.asc
Resolving download.cloudstack.org (download.cloudstack.org)... 138.199.14.54, 138.199.14.22, 2a02:6ea0:dc00::16, ...

```

Connecting to download.cloudstack.org (download.cloudstack.org) | 138.199.14.54 |:443... failed: Connection refused.  
Connecting to download.cloudstack.org (download.cloudstack.org) | 138.199.14.22 |:443... failed: Connection refused.  
Connecting to download.cloudstack.org (download.cloudstack.org) | 2a02:6ea0:dc00::16 |:443... failed: Network is unreachable.  
Connecting to download.cloudstack.org (download.cloudstack.org) | 2a02:6ea0:dc00::17 |:443... failed: Network is unreachable.

- **Step-24 sudo apt update**

```
jai@jai-virtual-machine:~$ sudo apt update
Get:1 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:2 http://security.ubuntu.com/ubuntu jammy-security/main i386 Packages [412 kB]
Get:3 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [1,202 kB]
Hit:4 http://in.archive.ubuntu.com/ubuntu jammy InRelease
Get:5 http://in.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:6 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [218 kB]
Get:7 http://security.ubuntu.com/ubuntu jammy-security/restricted i386 Packages [33.7 kB]
Get:8 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [1,476 kB]
Get:9 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [244 kB]
Get:10 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [846 kB]
Get:11 http://security.ubuntu.com/ubuntu jammy-security/universe i386 Packages [596 kB]
Hit:12 http://in.archive.ubuntu.com/ubuntu jammy-backports InRelease
Get:13 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [161 kB]
Get:14 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [37.1 kB]
Get:15 http://in.archive.ubuntu.com/ubuntu jammy-updates/main i386 Packages [579 kB]
Get:16 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [1,420 kB]
Get:17 http://in.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [279 kB]
Get:18 http://in.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [1,504 kB]
Get:19 http://in.archive.ubuntu.com/ubuntu jammy-updates/restricted i386 Packages [35.3 kB]
Get:20 http://in.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [247 kB]
Get:21 http://in.archive.ubuntu.com/ubuntu jammy-updates/universe i386 Packages [691 kB]
Get:22 http://in.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1,052 kB]
Get:23 http://in.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [237 kB]
Get:24 http://in.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [42.1 kB]
Fetched 11.5 MB in 16s (719 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
218 packages can be upgraded. Run 'apt list --upgradable' to see them.
```

- **Step-25 sudo apt install cloudstack-management**

```
jai@jai-virtual-machine:~$ sudo apt install cloudstack-management
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package cloudstack-management
```

- **Step-26 sudo apt install mysql-server**

```
jai@jai-virtual-machine:~$ sudo apt install mysql-server
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
  libopts25 sntp
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  libaio1 libcgi-fast-perl libcgi-pm-perl libfcgi-bin libfcgi-perl libfcgi0ldbl libhtml-template-perl libmecab2 libprotobuf-lite23
  mecab-ipadic mecab-ipadic-utf8 mecab-utils
  mysql-client-8.0 mysql-client-core-8.0 mysql-common mysql-server-8.0 mysql-server-core-8.0
Suggested packages:
  libipc-sharedcache-perl mailx tinycd
The following NEW packages will be installed:
  libaio1 libcgi-fast-perl libcgi-pm-perl libfcgi-bin libfcgi-perl libfcgi0ldbl libhtml-template-perl libmecab2 libprotobuf-lite23
  mecab-ipadic mecab-ipadic-utf8 mecab-utils
  mysql-client-8.0 mysql-client-core-8.0 mysql-common mysql-server mysql-server-8.0 mysql-server-core-8.0
0 upgraded, 18 newly installed, 0 to remove and 218 not upgraded.
```

Need to get 29.1 MB of archives.  
After this operation, 242 MB of additional disk space will be used.  
Do you want to continue? [Y/n] y  
Get:1 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 mysql-common all 5.8+1.0.8 [7,212 B]  
Get:2 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-client-core-8.0 amd64 8.0.36-0ubuntu0.22.04.1 [2,692 kB]  
Get:3 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-client-8.0 amd64 8.0.36-0ubuntu0.22.04.1 [22.7 kB]  
Get:4 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libaio1 amd64 0.3.112-13build1 [7,176 B]  
Get:5 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libmecab2 amd64 0.996-14build9 [199 kB]  
Get:6 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libprotobuf-lite23 amd64 3.12.4-1ubuntu7.22.04.1 [209 kB]  
Get:7 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-server-core-8.0 amd64 8.0.36-0ubuntu0.22.04.1 [17.5 MB]  
Get:8 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-server-8.0 amd64 8.0.36-0ubuntu0.22.04.1 [1,437 kB]  
Get:9 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libcgi-pm-perl all 4.54-1 [188 kB]  
Get:10 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libfcgi0ldbl amd64 2.4.2-2build2 [28.0 kB]  
Get:11 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libfcgi-perl amd64 0.82+ds-1build1 [22.8 kB]  
Get:12 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libcgi-fast-perl all 1:2.15-1 [10.5 kB]  
Get:13 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libfcgi-bin amd64 2.4.2-2build2 [11.2 kB]  
Get:14 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libhtml-template-perl all 2.97-1.1 [59.1 kB]  
Get:15 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 mecab-utils amd64 0.996-14build9 [4,850 B]  
Get:16 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 mecab-ipadic all 2.7.0-20070801+main-3 [6,718 kB]  
Get:17 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 mecab-ipadic-utf8 all 2.7.0-20070801+main-3 [4,384 B]  
Get:18 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-server all 8.0.36-0ubuntu0.22.04.1 [9,460 B]  
Fetched 29.1 MB in 19s (1,571 kB/s)  
Preconfiguring packages ...  
Selecting previously unselected package mysql-common.  
(Reading database ... 199613 files and directories currently installed.)  
Preparing to unpack .../0-mysql-common\_5.8+1.0.8\_all.deb ...  
Unpacking mysql-common (5.8+1.0.8) ...  
Selecting previously unselected package mysql-client-core-8.0.  
Preparing to unpack .../1-mysql-client-core-8.0\_8.0.36-0ubuntu0.22.04.1\_amd64.deb ...  
Unpacking mysql-client-core-8.0 (8.0.36-0ubuntu0.22.04.1) ...  
Selecting previously unselected package mysql-client-8.0.  
Preparing to unpack .../2-mysql-client-8.0\_8.0.36-0ubuntu0.22.04.1\_amd64.deb ...  
Unpacking mysql-client-8.0 (8.0.36-0ubuntu0.22.04.1) ...  
Selecting previously unselected package libaio1:amd64.  
Preparing to unpack .../3-libaio1\_0.3.112-13build1\_amd64.deb ...  
Unpacking libaio1:amd64 (0.3.112-13build1) ...  
Selecting previously unselected package libmecab2:amd64.  
Preparing to unpack .../4-libmecab2\_0.996-14build9\_amd64.deb ...  
Unpacking libmecab2:amd64 (0.996-14build9) ...  
Selecting previously unselected package libprotobuf-lite23:amd64.  
Preparing to unpack .../5-libprotobuf-lite23\_3.12.4-1ubuntu7.22.04.1\_amd64.deb ...  
Unpacking libprotobuf-lite23:amd64 (3.12.4-1ubuntu7.22.04.1) ...  
Selecting previously unselected package mysql-server-core-8.0.  
Preparing to unpack .../6-mysql-server-core-8.0\_8.0.36-0ubuntu0.22.04.1\_amd64.deb ...  
Unpacking mysql-server-core-8.0 (8.0.36-0ubuntu0.22.04.1) ...  
Setting up mysql-common (5.8+1.0.8) ...  
update-alternatives: using /etc/mysql/my.cnf.fallback to provide /etc/mysql/my.cnf (my.cnf) in auto mode  
Selecting previously unselected package mysql-server-8.0.  
(Reading database ... 199827 files and directories currently installed.)  
Preparing to unpack .../00-mysql-server-8.0\_8.0.36-0ubuntu0.22.04.1\_amd64.deb ...  
Unpacking mysql-server-8.0 (8.0.36-0ubuntu0.22.04.1) ...  
Selecting previously unselected package libcgi-pm-perl.  
Preparing to unpack .../01-libcgi-pm-perl\_4.54-1\_all.deb ...  
Unpacking libcgi-pm-perl (4.54-1) ...  
Selecting previously unselected package libfcgi0ldbl:amd64.  
Preparing to unpack .../02-libfcgi0ldbl\_2.4.2-2build2\_amd64.deb ...  
Unpacking libfcgi0ldbl:amd64 (2.4.2-2build2) ...



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Selecting previously unselected package libfcgi-perl:amd64.
Preparing to unpack .../03-libfcgi-perl_0.82+ds-1build1_amd64.deb ...
Unpacking libfcgi-perl:amd64 (0.82+ds-1build1) ...
Selecting previously unselected package libcgi-fast-perl.
Preparing to unpack .../04-libcgi-fast-perl_1%3a2.15-1_all.deb ...
Unpacking libcgi-fast-perl (1:2.15-1) ...
Selecting previously unselected package libfcgi-bin.
Preparing to unpack .../05-libfcgi-bin_2.4.2-2build2_amd64.deb ...
Unpacking libfcgi-bin (2.4.2-2build2) ...
Selecting previously unselected package libhtml-template-perl.
Preparing to unpack .../06-libhtml-template-perl_2.97-1.1_all.deb ...
Unpacking libhtml-template-perl (2.97-1.1) ...
Selecting previously unselected package mecab-utils.
Preparing to unpack .../07-mecab-utils_0.996-14build9_amd64.deb ...
Unpacking mecab-utils (0.996-14build9) ...
Selecting previously unselected package mecab-ipadic.
Preparing to unpack .../08-mecab-ipadic_2.7.0-20070801+main-3_all.deb ...
Unpacking mecab-ipadic (2.7.0-20070801+main-3) ...
Selecting previously unselected package mecab-ipadic-utf8.
Preparing to unpack .../09-mecab-ipadic-utf8_2.7.0-20070801+main-3_all.deb ...
Unpacking mecab-ipadic-utf8 (2.7.0-20070801+main-3) ...
Selecting previously unselected package mysql-server.
Preparing to unpack .../10-mysql-server_8.0.36-0ubuntu0.22.04.1_all.deb ...
Unpacking mysql-server (8.0.36-0ubuntu0.22.04.1) ...
Setting up libmecab2:amd64 (0.996-14build9) ...
Setting up mysql-client-core-8.0 (8.0.36-0ubuntu0.22.04.1) ...
Setting up libfcgi0ldbl:amd64 (2.4.2-2build2) ...
Setting up libcgi-pm-perl (4.54-1) ...
Setting up libfcgi-bin (2.4.2-2build2) ...
Setting up libhtml-template-perl (2.97-1.1) ...
Setting up libprotobuf-lite23:amd64 (3.12.4-1ubuntu7.22.04.1) ...
Setting up mecab-utils (0.996-14build9) ...
Setting up mysql-client-8.0 (8.0.36-0ubuntu0.22.04.1) ...
Setting up libfcgi-perl:amd64 (0.82+ds-1build1) ...
Setting up libaio1:amd64 (0.3.112-13build1) ...
Setting up mecab-ipadic (2.7.0-20070801+main-3) ...
Compiling IPA dictionary for Mecab. This takes long time...
reading /usr/share/mecab/dic/ipadic/unk.def ... 40
emitting double-array: 100% |#####|
/usr/share/mecab/dic/ipadic/model.def is not found. skipped.
reading /usr/share/mecab/dic/ipadic/Noun.proper.csv ... 27328
reading /usr/share/mecab/dic/ipadic/Noun.adjv.csv ... 3328
reading /usr/share/mecab/dic/ipadic/Noun.place.csv ... 72999
reading /usr/share/mecab/dic/ipadic/Postp.csv ... 146
reading /usr/share/mecab/dic/ipadic/Adj.csv ... 27210
reading /usr/share/mecab/dic/ipadic/Prefix.csv ... 221
reading /usr/share/mecab/dic/ipadic/Interjection.csv ... 252
reading /usr/share/mecab/dic/ipadic/Noun.number.csv ... 42
reading /usr/share/mecab/dic/ipadic/Noun.demonst.csv ... 120
reading /usr/share/mecab/dic/ipadic/Noun.csv ... 60477
reading /usr/share/mecab/dic/ipadic/Noun.adverbial.csv ... 795
reading /usr/share/mecab/dic/ipadic/Noun.org.csv ... 16668
reading /usr/share/mecab/dic/ipadic/Postp-col.csv ... 91
reading /usr/share/mecab/dic/ipadic/Verb.csv ... 130750
reading /usr/share/mecab/dic/ipadic/Conjunction.csv ... 171
reading /usr/share/mecab/dic/ipadic/Symbol.csv ... 208
reading /usr/share/mecab/dic/ipadic/Noun.others.csv ... 151
reading /usr/share/mecab/dic/ipadic/Filler.csv ... 19
reading /usr/share/mecab/dic/ipadic/Noun.nai.csv ... 42
reading /usr/share/mecab/dic/ipadic/Auxil.csv ... 199
reading /usr/share/mecab/dic/ipadic/Others.csv ... 2
reading /usr/share/mecab/dic/ipadic/Noun.name.csv ... 34202
reading /usr/share/mecab/dic/ipadic/Noun.verbal.csv ... 12146

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reading /usr/share/mecab/dic/ipadic/Adverb.csv ... 3032
reading /usr/share/mecab/dic/ipadic/Suffix.csv ... 1393
reading /usr/share/mecab/dic/ipadic/Adnominal.csv ... 135
emitting double-array: 100% |#####|
reading /usr/share/mecab/dic/ipadic/matrix.def ... 1316x1316
emitting matrix : 100% |#####|
```

done!

update-alternatives: using /var/lib/mecab/dic/ipadic to provide /var/lib/mecab/dic/debian (mecab-dictionary) in auto mode

Setting up libcgi-fast-perl (1:2.15-1) ...

Setting up mysql-server-core-8.0 (8.0.36-0ubuntu0.22.04.1) ...

Setting up mecab-ipadic-utf8 (2.7.0-20070801+main-3) ...

Compiling IPA dictionary for Mecab. This takes long time...

reading /usr/share/mecab/dic/ipadic/unk.def ... 40

emitting double-array: 100% |#####|

/usr/share/mecab/dic/ipadic/model.def is not found. skipped.

reading /usr/share/mecab/dic/ipadic/Noun.proper.csv ... 27328

reading /usr/share/mecab/dic/ipadic/Noun.adjv.csv ... 3328

reading /usr/share/mecab/dic/ipadic/Noun.place.csv ... 72999

reading /usr/share/mecab/dic/ipadic/Postp.csv ... 146

reading /usr/share/mecab/dic/ipadic/Adj.csv ... 27210

reading /usr/share/mecab/dic/ipadic/Prefix.csv ... 221

reading /usr/share/mecab/dic/ipadic/Interjection.csv ... 252

reading /usr/share/mecab/dic/ipadic/Noun.number.csv ... 42

reading /usr/share/mecab/dic/ipadic/Noun.demonst.csv ... 120

reading /usr/share/mecab/dic/ipadic/Noun.csv ... 60477

reading /usr/share/mecab/dic/ipadic/Noun.adverbial.csv ... 795

reading /usr/share/mecab/dic/ipadic/Noun.org.csv ... 16668

reading /usr/share/mecab/dic/ipadic/Postp-col.csv ... 91

reading /usr/share/mecab/dic/ipadic/Verb.csv ... 130750

reading /usr/share/mecab/dic/ipadic/Conjunction.csv ... 171

reading /usr/share/mecab/dic/ipadic/Symbol.csv ... 208

reading /usr/share/mecab/dic/ipadic/Noun.others.csv ... 151

reading /usr/share/mecab/dic/ipadic/Filler.csv ... 19

reading /usr/share/mecab/dic/ipadic/Noun.nai.csv ... 42

reading /usr/share/mecab/dic/ipadic/Auxil.csv ... 199

reading /usr/share/mecab/dic/ipadic/Others.csv ... 2

reading /usr/share/mecab/dic/ipadic/Noun.name.csv ... 34202

reading /usr/share/mecab/dic/ipadic/Noun.verbal.csv ... 12146

reading /usr/share/mecab/dic/ipadic/Adverb.csv ... 3032

reading /usr/share/mecab/dic/ipadic/Suffix.csv ... 1393

reading /usr/share/mecab/dic/ipadic/Adnominal.csv ... 135

emitting double-array: 100% |#####|

reading /usr/share/mecab/dic/ipadic/matrix.def ... 1316x1316

emitting matrix : 100% |#####|

done!

update-alternatives: using /var/lib/mecab/dic/ipadic-utf8 to provide /var/lib/mecab/dic/debian (mecab-dictionary) in auto mode

Setting up mysql-server-8.0 (8.0.36-0ubuntu0.22.04.1) ...

update-alternatives: using /etc/mysql/mysql.cnf to provide /etc/mysql/my.cnf (my.cnf) in auto mode

Renaming removed key\_buffer and myisam-recover options (if present)

mysqld will log errors to /var/log/mysql/error.log

mysqld is running as pid 9137

Created symlink /etc/systemd/system/multi-user.target.wants/mysql.service → /lib/systemd/system/mysql.service.

Setting up mysql-server (8.0.36-0ubuntu0.22.04.1) ...

Processing triggers for man-db (2.10.2-1) ...

Processing triggers for libc-bin (2.35-0ubuntu3.1) ...