# OS Patching STEPS from CaaS-Team:

**NOTE: Drop a notification in respective Flowdock channel before and after Patching/Activity.**

**Make sure to release the nodes (node by node) only once the previous node joins back to cluster.**Make sure all nodes back to cluster and they are healthy before releasing other node...

Make sure to check firewalld service after patching. It should be disabled on all CaaS servers as a vendor prerequisite **except for DTR PROD**.

If firewall is running, stop and disable it with below commands..

systemctl stop firewalld

systemctl disable firewalld

After stopping and disabling firewall, do docker daemon reload and docker engine restart with below commands..

systemctl daemon-reload

systemctl restart docker

## For DCOS-Bootstrap nodes:

Before patching starts:

Make sure /var/lib/docker mount point is present. Take screenshots of “df -h” and “lsblk”

systemctl stop docker

systemctl disable docker

After patching is completed:

Make sure server is rebooted after patching with “uptime”

Make sure /var/lib/docker mount point is present. Compare screenshots of “df -h” and “lsblk”

Make sure the hostname is as per standard naming convention with “cat /etc/hosts”

Make sure firewalld service is not running and should be in disabled state on all CaaS servers as a vendor prerequisite.

systemctl status firewalld

Check Docker version with “docker -v” it should be “Docker version 19.03.5, build 633a0ea”

Check OS version with “cat /etc/os-release” it should be Version 7.9

Check Kernel Version with “uname -r” it should be *3.10.0-1160.21.1.el7.x86\_64*

cat /etc/chrony.conf | grep makestep

It should be ***makestep 0.250 -1***

chronyc tracking

It should be ***Leap status : Normal***

once the ntp is in sync through "timedatectl"

systemctl enable docker

systemctl start docker

## For DCOS-Master nodes:

Before patching starts:

Make sure to release the leader Master at last

Make sure /var/lib/docker mount point is present. Take screenshots of “df -h” and “lsblk”

systemctl stop docker

systemctl disable docker

systemctl stop dcos-mesos-master.service

systemctl disable dcos-mesos-master.service

After patching is completed:

Make sure server is rebooted after patching with “uptime”

Make sure /var/lib/docker mount point is present. Compare screenshots of “df -h” and “lsblk”

Make sure the hostname is as per standard naming convention with “cat /etc/hosts”

Make sure firewalld service is not running and should be in disabled state on all CaaS servers as a vendor prerequisite.

systemctl status firewalld

Check Docker version with “docker -v” it should be “Docker version 19.03.5, build 633a0ea”

Check OS version with “cat /etc/os-release” it should be Version 7.9

Check Kernel Version with “uname -r” it should be *3.10.0-1160.21.1.el7.x86\_64*

cat /etc/chrony.conf | grep makestep

It should be ***makestep 0.250 -1***

chronyc tracking

It should be ***Leap status : Normal***

once the ntp is in sync through "timedatectl"

systemctl enable docker

systemctl start docker

systemctl enable dcos-mesos-master.service

systemctl start dcos-mesos-master.service

systemctl | grep dcos

wait until all dcos systemd components are in running state, then check on the DCOS-UI.

Once it is joined back to cluster, then you can release other node based on sequence numbers.

**If the Master agent is joined back to cluster and not able to see under masternodes, master.mesos component please follow the below steps:**

ls -Glah /etc/systemd/system/dcos.target.wants

ls -Glah /etc/systemd/system/dcos.target.wants | grep dcos-mesos-master

ln -s /etc/systemd/system/dcos-mesos-master.service /etc/systemd/system/dcos.target.wants/dcos-mesos-master.service

ls -Glah /etc/systemd/system/dcos.target.wants | grep dcos-mesos-master

systemctl stop dcos-diagnostics.socket && systemctl stop dcos-diagnostics.service

systemctl restart dcos-diagnostics.service

watch "systemctl | grep dcos"

systemctl | grep dcos

## For DCOS-public nodes:

Before patching starts:

Make sure /var/lib/docker mount point is present. Take screenshots of “df -h” and “lsblk”

Put it in “Drain” mode from DCOS Dashboard

systemctl stop docker

systemctl disable docker

systemctl stop dcos-mesos-slave-public.service

systemctl disable dcos-mesos-slave-public.service

After patching is completed:

Make sure server is rebooted after patching with “uptime”

Make sure /var/lib/docker mount point is present. Compare screenshots of “df -h” and “lsblk”

Make sure the hostname is as per standard naming convention with “cat /etc/hosts”

Make sure firewalld service is not running and should be in disabled state on all CaaS servers as a vendor prerequisite.

systemctl status firewalld

Check Docker version with “docker -v” it should be “Docker version 19.03.5, build 633a0ea”

Check OS version with “cat /etc/os-release” it should be Version 7.9

Check Kernel Version with “uname -r” it should be *3.10.0-1160.21.1.el7.x86\_64*

cat /etc/chrony.conf | grep makestep

It should be ***makestep 0.250 -1***

chronyc tracking

It should be ***Leap status : Normal***

once the ntp is in sync through "timedatectl"

systemctl enable docker

systemctl start docker

systemctl enable dcos-mesos-slave-public.service

systemctl start dcos-mesos-slave-public.service

systemctl | grep dcos

wait until all dcos systemd components are in running state, then check on the DCOS-UI.  
  
**If the public agent is joined back to cluster and not showing under nodes, please follow the below steps:**

ls -Glah /etc/systemd/system/dcos.target.wants

ls -Glah /etc/systemd/system/dcos.target.wants | grep dcos-mesos-slave-public  
ln -s /etc/systemd/system/dcos-mesos-slave-public.service /etc/systemd/system/dcos.target.wants/dcos-mesos-slave-public.service  
systemctl start dcos-mesos-slave-public.service

ls -Glah /etc/systemd/system/dcos.target.wants | grep dcos-mesos-slave-public  
systemctl stop dcos-diagnostics.socket && systemctl stop dcos-diagnostics.service

systemctl restart dcos-diagnostics.service

watch "systemctl | grep dcos"

systemctl | grep dcos

Put it in “Active” mode from DCOS Dashboard

Once it is joined back to cluster, then you can release other node based on sequence numbers.

## For etcd-nodes:

Before patching starts:

systemctl stop etcd3.service

systemctl disable etcd3.service

After patching is completed:

Make sure server is rebooted after patching with “uptime”

Make sure the hostname is as per standard naming convention with “cat /etc/hosts”

Make sure firewalld service is not running and should be in disabled state on all CaaS servers as a vendor prerequisite.

systemctl status firewalld

Check OS version with “cat /etc/os-release” it should be Version 7.9

Check Kernel Version with “uname -r” it should be *3.10.0-1160.21.1.el7.x86\_64*

cat /etc/chrony.conf | grep makestep

It should be ***makestep 0.250 -1***

chronyc tracking

It should be ***Leap status : Normal***

once the ntp is in sync through "timedatectl"

systemctl enable etcd3.service

systemctl start etcd3.service

check the journal logs for etcd3.service and \*\*make sure etcd3 service started in journal logs\*\* using below command:

journalctl -lfu etcd3.service

Once all 3 etcd nodes completed, check any pxctl command on any one of the private/worker nodes of the same cluster to make sure portworx is working fine.

## For DCOS-Private nodes:

Before patching starts:

Make sure /var/lib/docker mount point is present. Take screenshots of “df -h” and “lsblk”

Put it in “Drain” mode from DCOS Dashboard

systemctl stop docker

systemctl disable docker

systemctl stop portworx

systemctl disable portworx

systemctl stop dcos-mesos-slave.service

systemctl disable dcos-mesos-slave.service

After patching is completed:

Make sure server is rebooted after patching with “uptime”

Make sure /var/lib/docker mount point is present. Compare screenshots of “df -h” and “lsblk”

Make sure firewalld service is not running and should be in disabled state on all CaaS servers as a vendor prerequisite.

systemctl status firewalld

Check Docker version with “docker -v” it should be “Docker version 19.03.5, build 633a0ea”

Check OS version with “cat /etc/os-release” it should be Version 7.9

Check Kernel Version with “uname -r” it should be *3.10.0-1160.21.1.el7.x86\_64*

cat /etc/chrony.conf | grep makestep

It should be ***makestep 0.250 -1***

chronyc tracking

It should be ***Leap status : Normal***

once the ntp is in sync through "timedatectl"

systemctl enable docker

systemctl start docker

systemctl enable portworx

systemctl start portworx

systemctl enable dcos-mesos-slave.service

systemctl start dcos-mesos-slave.service

systemctl | grep dcos

wait until all dcos systemd components are in running state, then check on the DCOS-UI.

Once it is joined back to cluster, then you can release other node based on sequence numbers.

**If the Private agent is joined back to cluster and not able to see in dashboard please follow the below steps:**

ls -Glah /etc/systemd/system/dcos.target.wants

ls -Glah /etc/systemd/system/dcos.target.wants | grep dcos-mesos-slave

ln -s /etc/systemd/system/dcos-mesos-slave.service /etc/systemd/system/dcos.target.wants/dcos-mesos-slave.service

ls -Glah /etc/systemd/system/dcos.target.wants | grep dcos-mesos-slave

systemctl stop dcos-diagnostics.socket && systemctl stop dcos-diagnostics.service

systemctl restart dcos-diagnostics.service

watch "systemctl | grep dcos"

systemctl | grep dcos

systemctl restart portworx

Put it in “Active” mode from DCOS Dashboard

## For UCP- Worker nodes:

Before :

Make sure /var/lib/docker mount point is present. Take screenshots of “df -h” and “lsblk”

Put it in **Drain** mode

systemctl disable docker

systemctl stop portworx

systemctl disable portworx

After :

Make sure server is rebooted after patching with “uptime”

Make sure /var/lib/docker mount point is present. Compare screenshots of “df -h” and “lsblk”

Make sure firewalld service is not running and should be in disabled state on all CaaS servers as a vendor prerequisite.

systemctl status firewalld

Check Docker version with “docker -v” it should be “Docker version **19.03.11**”

Check OS version with “cat /etc/os-release” it should be Version 7.9

Check Kernel Version with “uname -r” it should be *3.10.0-1160.21.1.el7.x86\_64*

cat /etc/chrony.conf | grep makestep

It should be ***makestep 0.250 -1***

chronyc tracking

It should be ***Leap status : Normal***

once the ntp is in sync through "timedatectl"

systemctl enable docker

systemctl start docker

systemctl enable portworx

systemctl start portworx

Put it in **Active** mode

## For UCP- Manager nodes:

Before :

Make sure to release the Leader Manager at last “docker node ls”

Make sure /var/lib/docker mount point is present. Take screenshots of “df -h” and “lsblk”

systemctl stop docker

systemctl disable docker

After :

Make sure server is rebooted after patching with “uptime”

Make sure /var/lib/docker mount point is present. Compare screenshots of “df -h” and “lsblk”

Make sure the hostname is as per standard naming convention with “cat /etc/hosts”

Make sure firewalld service is not running and should be in disabled state on all CaaS servers as a vendor prerequisite.

systemctl status firewalld

Check Docker version with “docker -v” it should be “Docker version **19.03.11**”

Check OS version with “cat /etc/os-release” it should be Version 7.9

Check Kernel Version with “uname -r” it should be *3.10.0-1160.21.1.el7.x86\_64*

cat /etc/chrony.conf | grep makestep

It should be ***makestep 0.250 -1***

chronyc tracking

It should be ***Leap status : Normal***

once the ntp is in sync through "timedatectl"

systemctl enable docker

systemctl start docker