

## PUPPET INSTALLATION ON UBUNTU

### Installing Puppet Master

**Step 1:** Run the following commands for installing Puppet Master

```
$ sudo apt-get update  
$ sudo apt-get install wget  
$ wget https://apt.puppetlabs.com/puppet-release-bionic.deb  
$ sudo dpkg -i puppet-release-bionic.deb  
$ sudo apt-get update  
$ apt policy puppet master  
$ sudo apt-get install puppet-master
```

### Installing Puppet Agent

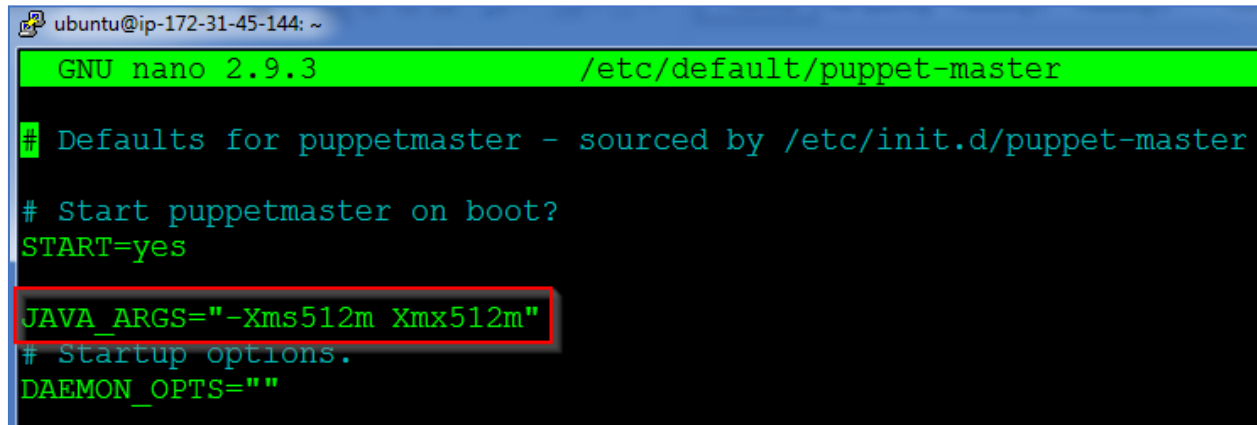
**Step 2:** Run the following commands for installing Puppet Agent

```
$ sudo apt-get update  
$ sudo apt-get install wget  
$ wget https://apt.puppetlabs.com/puppet-release-bionic.deb  
$ sudo dpkg -i puppet-release-bionic.deb  
$ sudo apt-get update  
$ apt policy puppet master  
$ sudo apt-get install puppet
```

## Configuring Puppet Master

**Step 1:** Add the following lines in the puppet-master configuration file

```
$ sudo nano /etc/default/puppet-master  
  
JAVA_ARGS="-Xms512m Xmx512m" //Add this Line  
  
$ sudo systemctl restart puppet-master
```



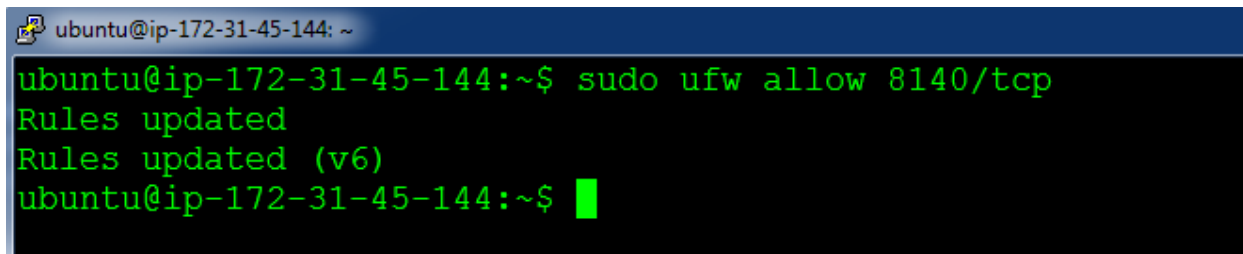
A terminal window showing the nano text editor editing the file /etc/default/puppet-master. The editor's title bar is green and shows 'GNU nano 2.9.3 /etc/default/puppet-master'. The content of the file is as follows:

```
# Defaults for puppetmaster - sourced by /etc/init.d/puppet-master  
  
# Start puppetmaster on boot?  
START=yes  
  
JAVA_ARGS="-Xms512m Xmx512m"  
  
# Startup options.  
DAEMON_OPTS=""
```

The line `JAVA_ARGS="-Xms512m Xmx512m"` is highlighted with a red rectangular box.

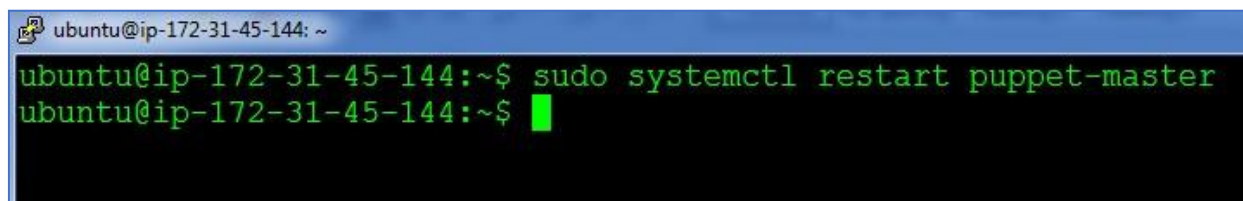
**Step 2:** Next open port 8140 on the Puppet Master's firewall

```
$ sudo ufw allow 8140/tcp
```



A terminal window showing the execution of the command to allow port 8140/tcp on the firewall. The prompt is `ubuntu@ip-172-31-45-144: ~`. The output is:

```
ubuntu@ip-172-31-45-144:~$ sudo ufw allow 8140/tcp  
Rules updated  
Rules updated (v6)  
ubuntu@ip-172-31-45-144:~$
```

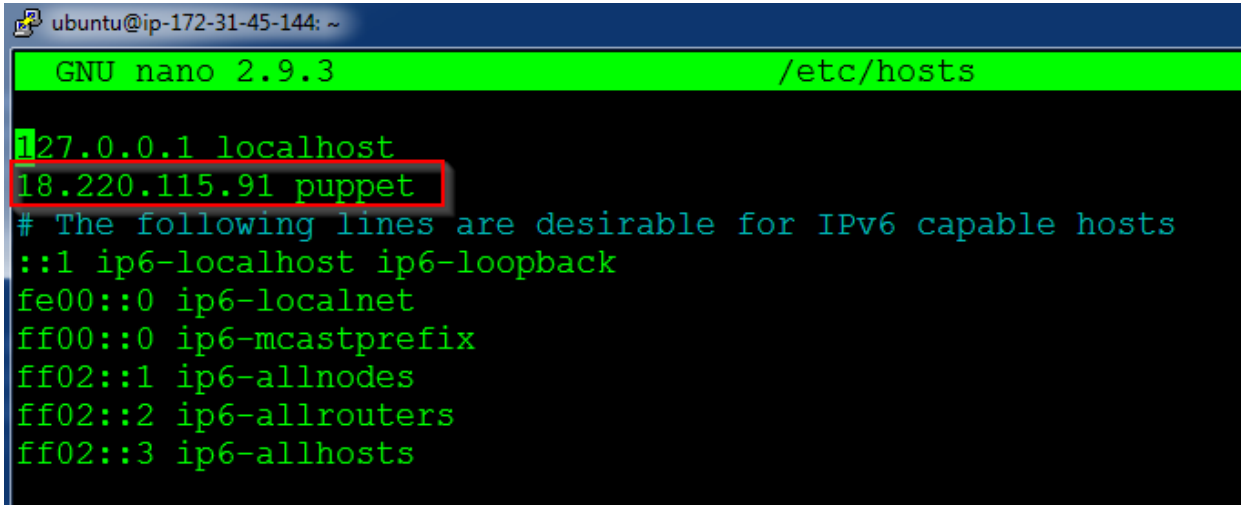


A terminal window showing the execution of the command to restart the puppet-master service. The prompt is `ubuntu@ip-172-31-45-144: ~`. The output is:

```
ubuntu@ip-172-31-45-144:~$ sudo systemctl restart puppet-master  
ubuntu@ip-172-31-45-144:~$
```

**Step 3:** Make changes to the hosts file which exists in `/etc/hosts`. And add the Puppet Master IP address along with the name “puppet”

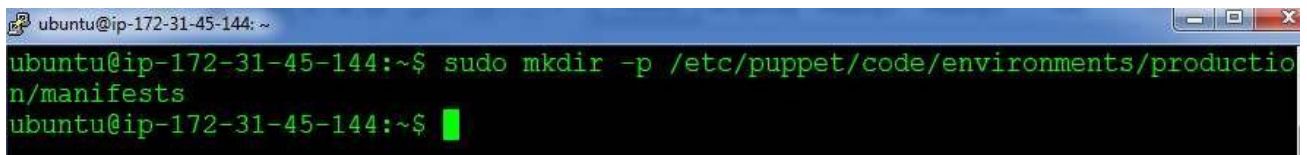
```
$ sudo nano /etc/hosts
```



```
ubuntu@ip-172-31-45-144: ~  
GNU nano 2.9.3 /etc/hosts  
127.0.0.1 localhost  
18.220.115.91 puppet  
# 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  
ff02::3 ip6-allhosts
```

**Step 4:** Create the following directory path:

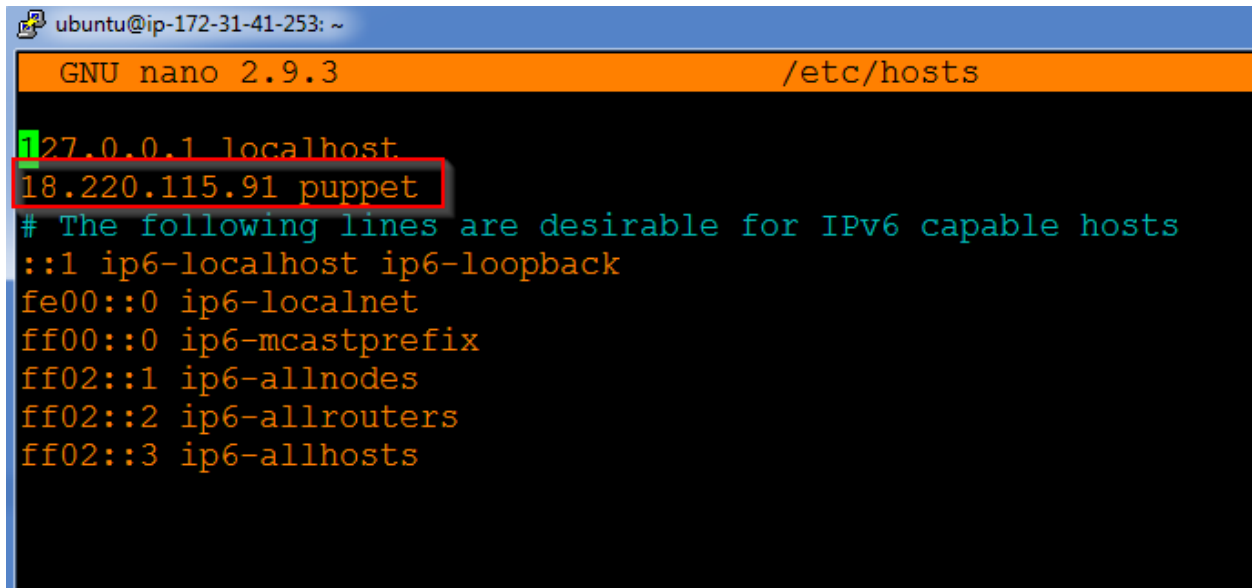
```
$ sudo mkdir -p /etc/puppet/code/environments/production/manifests
```



```
ubuntu@ip-172-31-45-144: ~  
ubuntu@ip-172-31-45-144:~$ sudo mkdir -p /etc/puppet/code/environments/production/manifests  
ubuntu@ip-172-31-45-144:~$
```

## Configuring Puppet Slave

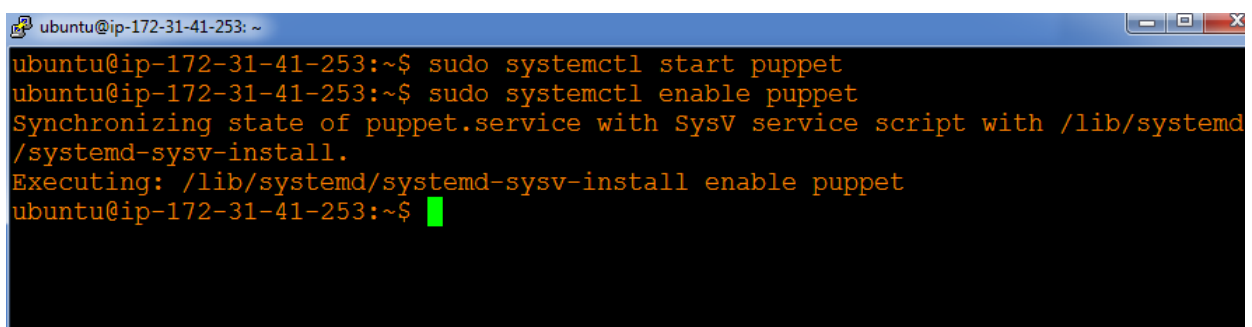
**Step 1:** Add the entry for Puppet Master in /etc/hosts



```
ubuntu@ip-172-31-41-253: ~  
GNU nano 2.9.3 /etc/hosts  
127.0.0.1 localhost  
18.220.115.91 puppet  
# 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  
ff02::3 ip6-allhosts
```

**Step 2:** Finally start the Puppet agent by using the following command. Also, enable the service, so that it starts when the computer starts

```
$ sudo systemctl start puppet  
$ sudo systemctl enable puppet
```

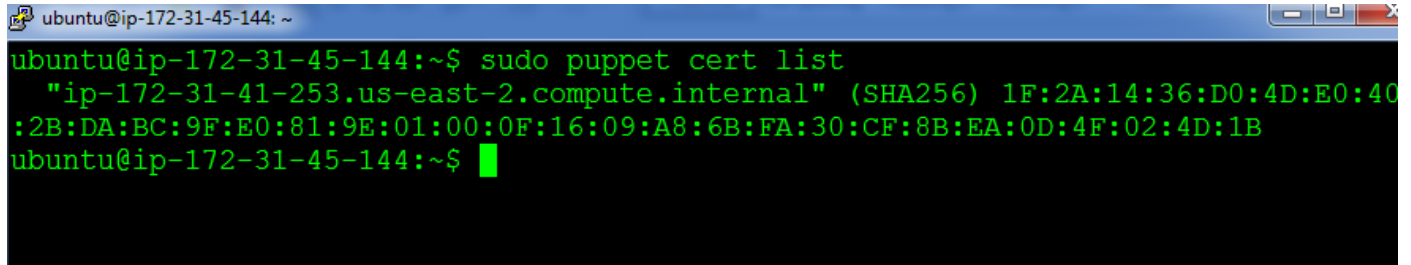


```
ubuntu@ip-172-31-41-253:~$ sudo systemctl start puppet  
ubuntu@ip-172-31-41-253:~$ sudo systemctl enable puppet  
Synchronizing state of puppet.service with SysV service script with /lib/systemd  
/systemd-sysv-install.  
Executing: /lib/systemd/systemd-sysv-install enable puppet  
ubuntu@ip-172-31-41-253:~$
```

## On Master

**Step 1:** Type the following command,

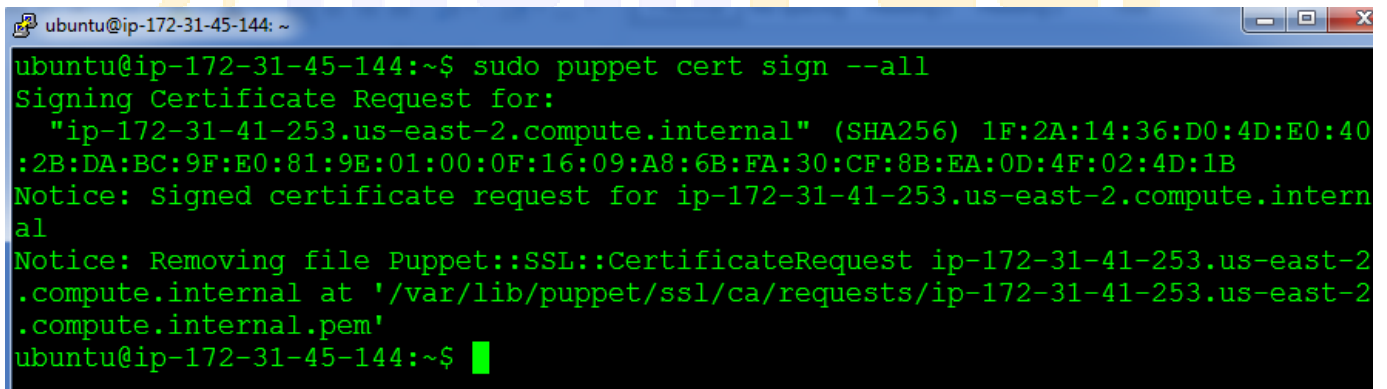
```
$ sudo puppet cert list
```



```
ubuntu@ip-172-31-45-144: ~  
ubuntu@ip-172-31-45-144:~$ sudo puppet cert list  
"ip-172-31-41-253.us-east-2.compute.internal" (SHA256) 1F:2A:14:36:D0:4D:E0:40  
:2B:DA:BC:9F:E0:81:9E:01:00:0F:16:09:A8:6B:FA:30:CF:8B:EA:0D:4F:02:4D:1B  
ubuntu@ip-172-31-45-144:~$
```

**Step 2:** Finally, sign the listed certificate using the following command:

```
$ sudo puppet cert sign --all
```



```
ubuntu@ip-172-31-45-144: ~  
ubuntu@ip-172-31-45-144:~$ sudo puppet cert sign --all  
Signing Certificate Request for:  
"ip-172-31-41-253.us-east-2.compute.internal" (SHA256) 1F:2A:14:36:D0:4D:E0:40  
:2B:DA:BC:9F:E0:81:9E:01:00:0F:16:09:A8:6B:FA:30:CF:8B:EA:0D:4F:02:4D:1B  
Notice: Signed certificate request for ip-172-31-41-253.us-east-2.compute.intern  
al  
Notice: Removing file Puppet::SSL::CertificateRequest ip-172-31-41-253.us-east-2  
.compute.internal at '/var/lib/puppet/ssl/ca/requests/ip-172-31-41-253.us-east-2  
.compute.internal.pem'  
ubuntu@ip-172-31-45-144:~$
```

You are now ready to use the Puppet cluster!