Module 4: Hands-On:
Puppet Installation on Ubuntu

Installing Puppet Master:

We need to use Ubuntu 18.04, ami with t2.micro and security group as All Traffic.

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
```
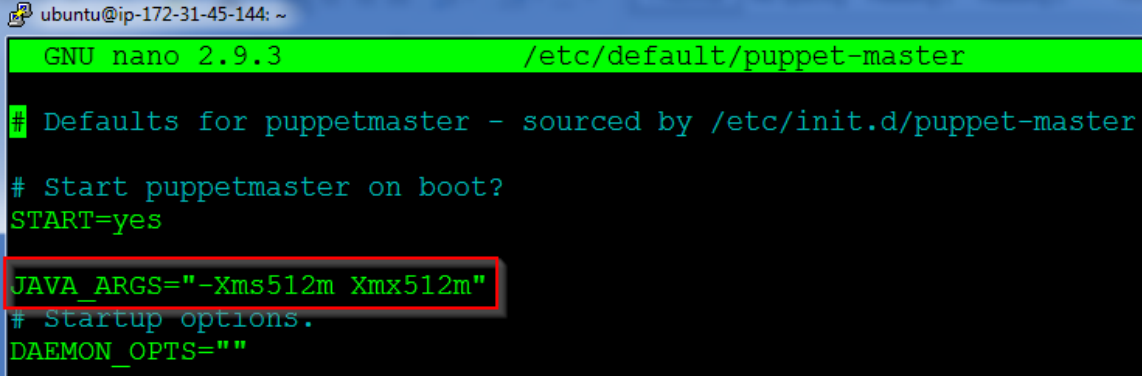
Installing Puppet Agent:

Step 1: 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
```

```
ubuntu@ip-172-31-45-144: ~

  GNU nano 2.9.3                    /etc/default/puppet-master

# Defaults for puppetmaster - sourced by /etc/init.d/puppet-master

# Start puppetmaster on boot?
START=yes

JAVA_ARGS="-Xms512m Xmx512m"
# Startup options.
DAEMON_OPTS=""
```

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

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

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

```
ubuntu@ip-172-31-45-144: ~
ubuntu@ip-172-31-45-144:~$ sudo systemctl restart puppet-master
ubuntu@ip-172-31-45-144:~$
```
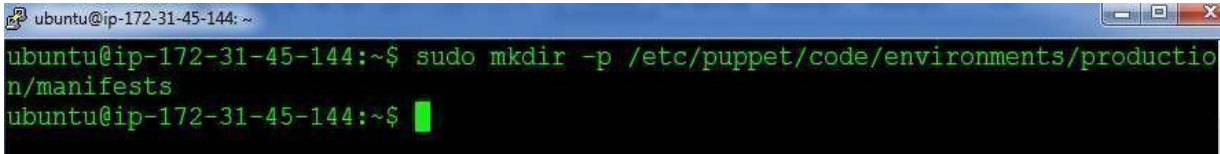
Step 3: Make changes to the hosts file which exists in /etc/hosts. And add the Puppet Master IP address along with the name "puppet"

```
$ 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
```

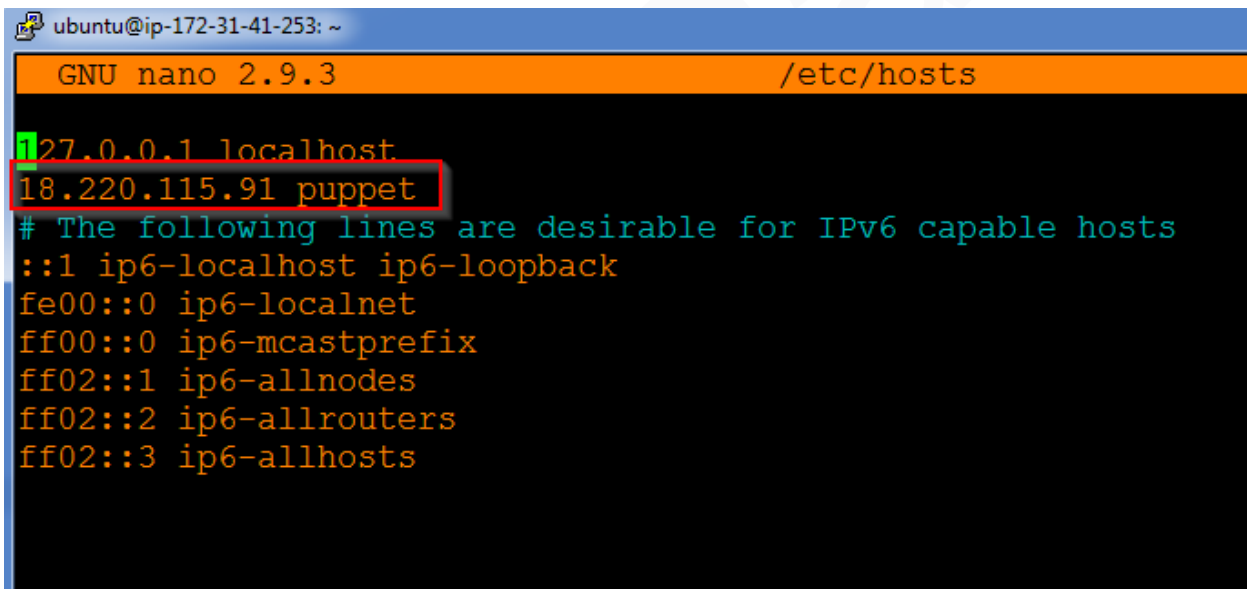**Step 4:** Create the following directory path:

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

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

Configuring Puppet Slave:

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

```
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
```

On Master:

Step 1: Type the following command:

```
$ sudo puppet cert list
```


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

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


You are now ready to use the Puppet cluster!