



## **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:

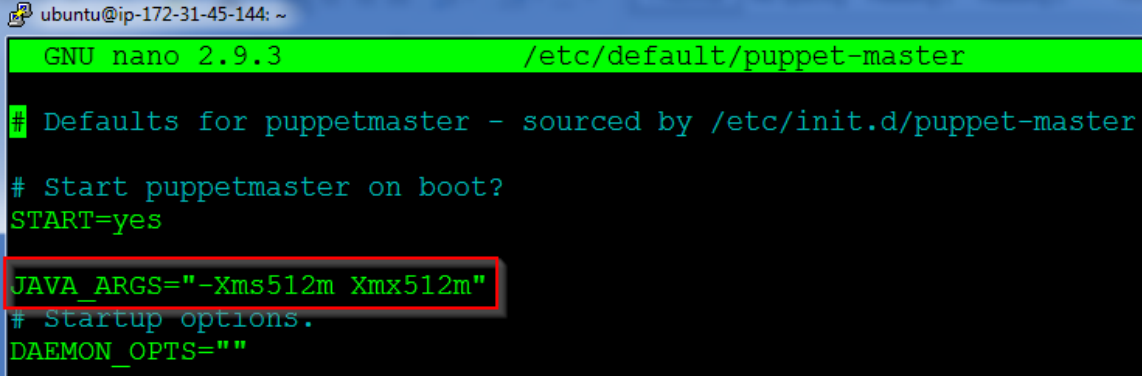
**Step 1:** Run the following commands for installing Puppet Agent:

```
$ 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:~$ █
```

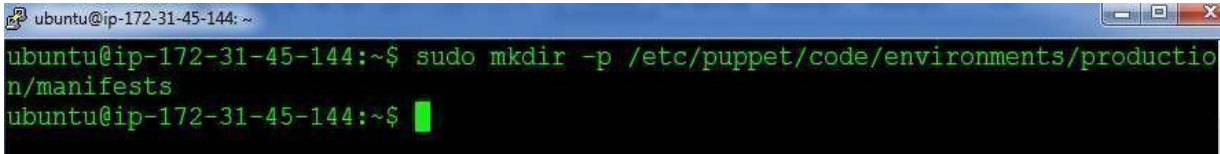
**Step 3:** Make changes to the hosts file which exists in /etc/hosts. And add the Puppet Master IP address along with the name "puppet"

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

```
ubuntu@ip-172-31-45-144: ~  
GNU nano 2.9.3 /etc/hosts  
1 27.0.0.1 localhost  
2 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:

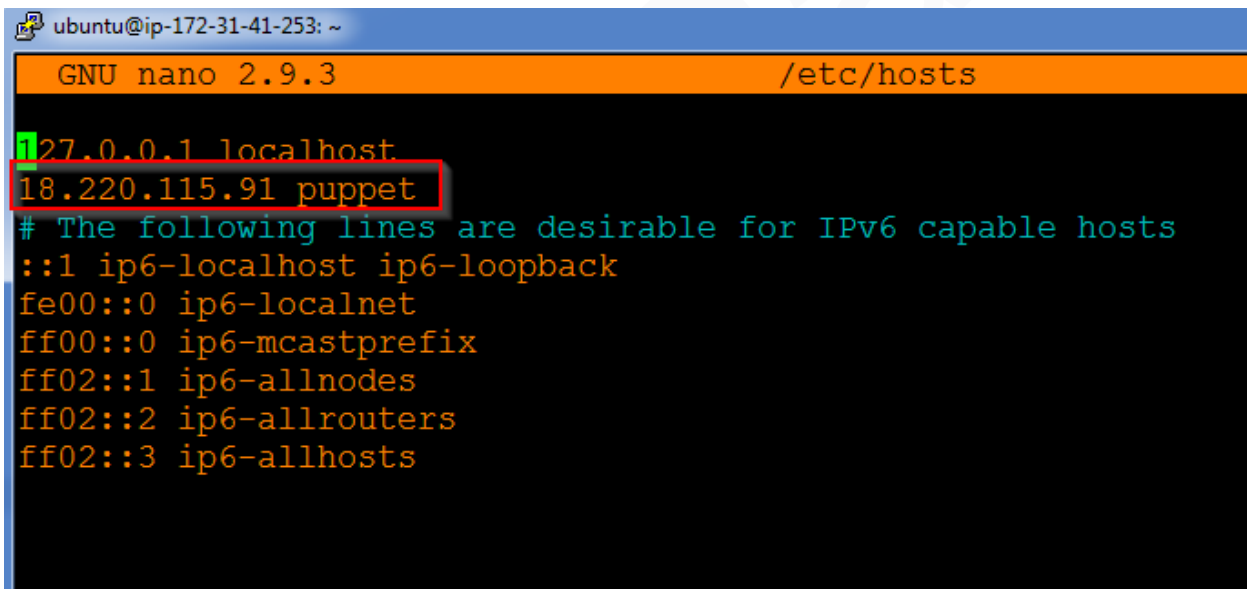
```
$ sudo mkdir -p /etc/puppet/code/environments/production/manifests
```



```
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  
27.0.0.1 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: ~  
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!