DevOps Lab

Assignment 9:

Aim: To install and understand the usage of Configuration Management tools like Puppet.

Theory & Execution:

Configuration management tools are the modern, sensible way to manage infrastructure as code. There are many such tools available, all of which operate more or less the same way: you specify your desired configuration state, using editable text files and a model of the system's resources, and the tool compares the current state of each node with your desired state and makes any changes necessary to bring it in line.

Puppet is a tool that helps you manage and automate the configuration of servers. Puppet is two things: a language for expressing the desired state, and an engine that interprets code written in the Puppet language and applies it to the nodes to bring about the desired state.

Instead of Local VM, we will create a 2 EC2 instance for puppet master and client.
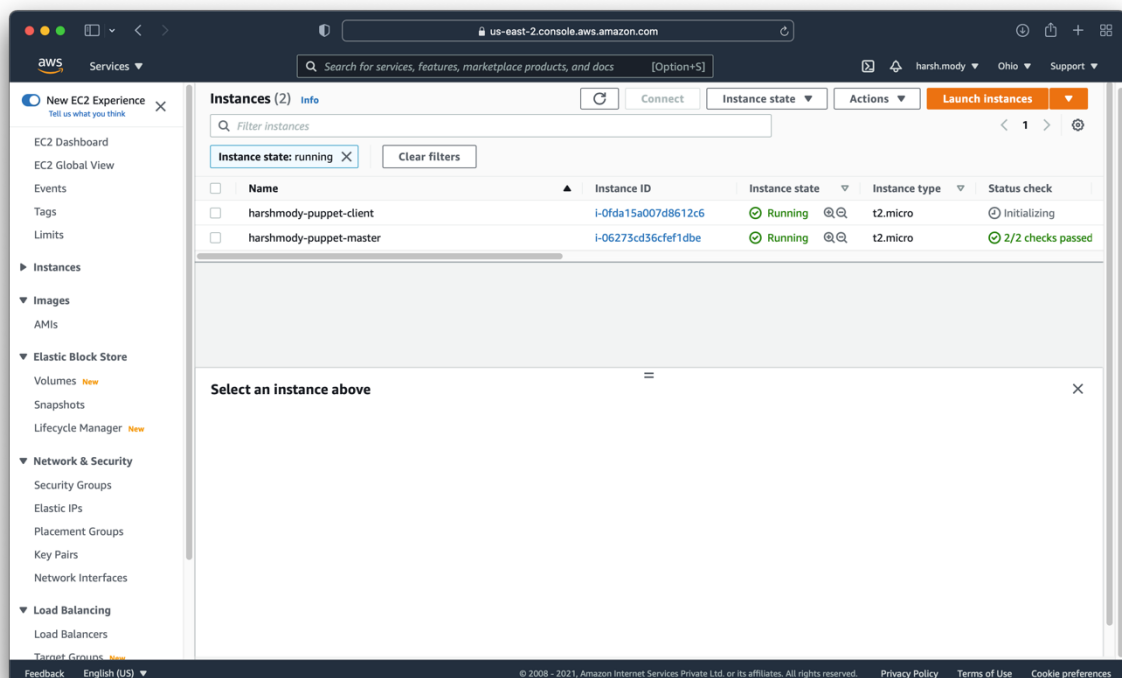
Install needed packages.

```
● ● ●   ▣ Downloads — root@ip-172-31-41-199:/home/centos — ssh -i harshmody.pem centos@ec2-18-221-3-...

[root@ip-172-41-199 centos]# yum install net-tools
CentOS-8 - AppStream                                  12 MB/s | 9.3 MB     00:00
CentOS-8 - Base                                       16 MB/s | 7.5 MB     00:00
CentOS-8 - Extras                                     24 kB/s |  10 kB     00:00
Package net-tools-2.0-0.51.20160912git.el8.x86_64 is already installed.
Dependencies resolved.
================================================================================
 Package          Architecture   Version                    Repository    Size
================================================================================
Upgrading:
 net-tools        x86_64         2.0-0.52.20160912git.el8    BaseOS       322 k

Transaction Summary
================================================================================
Upgrade  1 Package

Total download size: 322 k
Is this ok [y/N]: y
Downloading Packages:
net-tools-2.0-0.52.20160912git.el8.x86_64.rpm   1.7 MB/s | 322 kB     00:00
--------------------------------------------------------------------------------
Total                                            952 kB/s | 322 kB     00:00
warning: /var/cache/dnf/BaseOS-aaf4bfd8f51475f0/packages/net-tools-2.0-0.52.2016
0912git.el8.x86_64.rpm: Header V3 RSA/SHA256 Signature, key ID 8483c65d: NOKEY
CentOS-8 - Base                                   1.6 MB/s | 1.6 kB     00:00
Importing GPG key 0x8483C65D:
 Userid     : "CentOS (CentOS Official Signing Key) <security@centos.org>"
 Fingerprint: 99DB 70FA E1D7 CE22 7FB6 4882 05B5 55B3 8483 C65D
 From       : /etc/pki/rpm-gpg/RPM-GPG-KEY-centosofficial
Is this ok [y/N]: y
Key imported successfully
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing        :                                                        1/1
  Running scriptlet: net-tools-2.0-0.52.20160912git.el8.x86_64              1/1
  Upgrading        : net-tools-2.0-0.52.20160912git.el8.x86_64             1/2
  Running scriptlet: net-tools-2.0-0.52.20160912git.el8.x86_64             1/2
  Cleanup          : net-tools-2.0-0.51.20160912git.el8.x86_64            2/2
  Running scriptlet: net-tools-2.0-0.51.20160912git.el8.x86_64            2/2
  Verifying        : net-tools-2.0-0.52.20160912git.el8.x86_64            1/2
  Verifying        : net-tools-2.0-0.51.20160912git.el8.x86_64            2/2
```
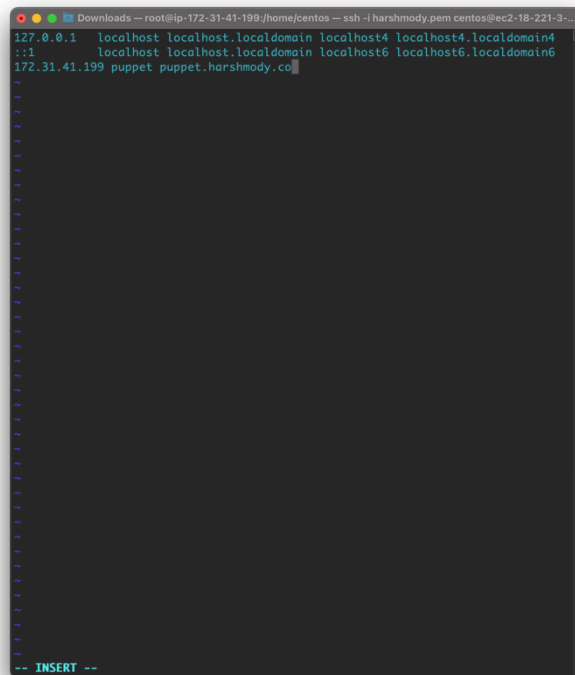
```
● ● ●   ▣ Downloads — root@ip-172-31-41-199:/home/centos — ssh -i harshmody.pem centos@ec2-18-221-3-...

[root@ip-172-31-41-199 centos]# iptables -F
[root@ip-172-31-41-199 centos]# service iptables save
iptables: Saving firewall rules to /etc/sysconfig/iptables:[  OK  ]
[root@ip-172-31-41-199 centos]# rpm -ivh http://yum.puppetlabs.com/puppetlabs-re
lease-el-6.noarch.rpm
Retrieving http://yum.puppetlabs.com/puppetlabs-release-el-6.noarch.rpm
warning: /var/tmp/rpm-tmp.7xq27v: Header V4 RSA/SHA1 Signature, key ID ef8d349f:
 NOKEY
Verifying...                          ################################# [100%]
Preparing...                          ################################# [100%]
        package puppetlabs-release-22.0-2.noarch is already installed
[root@ip-172-31-41-199 centos]# █
```

```
[root@ip-172-31-41-199 centos]# yum install puppet-server --skip-broken
Last metadata expiration check: 0:05:08 ago on Wed 27 Oct 2021 08:29:38 PM UTC.
Dependencies resolved.
Nothing to do.
Complete!
[root@ip-172-31-41-199 centos]#
```

```
[root@ip-172-31-36-145 centos]# yum install puppet --skip-broken
Last metadata expiration check: 0:05:21 ago on Wed 27 Oct 2021 08:29:44 PM UT
C.
Dependencies resolved.
Nothing to do.
Complete!
[root@ip-172-31-36-145 centos]#
```

Configure server and clients similarly

Run *service puppetmaster start* command to start server next. Similarly configure the client next. We then need to certify the puppet agents.

Conclusion: Thus, successfully understood the importance of Configuration Management tools like Puppet.