**Puppet examples**

System Configuraiton:

1. Create 2 virtual machines based of ubuntu/CentOS operating system. (Install one and clone to create the 2nd VM)
2. Configure a Static IP address so that both the VM’s can communicate with each other.

Refer to: <http://www.configserverfirewall.com/ubuntu-linux/ubuntu-set-static-ip-address/>

1. Setup passwordless ssh and test the connectivity

Refer to: <https://help.ubuntu.com/community/SSH/OpenSSH/Keys>

**Complete installation Guide:** <http://www.learnitguide.net/2016/09/how-to-install-puppet-master-and-agent.html>

1. **Install Puppet on the Puppet Master Server**

On your Puppet master, run:

sudo apt-get install puppetserver

**Start and enable the puppetmaster service.**

systemctl start puppetmaster

systemctl enable puppetmaster

2. **Install Puppet on Agent Nodes**

On your Puppet agents, run:

sudo apt-get install puppet

/etc/puppet/puppet.conf is the Puppet Configuration file, edit the file to define the puppet master node "puppet" in the [agent] section.

[agent]

server = puppet1.kranthi.com

**Start and enable the puppet agent service.**

systemctl start puppet

systemctl enable puppet

**3. Install Java 8 and tomcat 8 on Ubuntu using Puppet**

Step 1: - Add the below properties in site.pp file

sudo vi /etc/puppet/manifests/site.pp

command => 'chgrp -R kkavuri /opt/tomcat && /opt/tomcat/bin/startup.sh',

cwd =>'/opt/tomcat/bin', }

}

class java { if $::osfamily == 'Debian' {

# Needed for update-java-alternatives package { 'java-common': ensure => present, notify => Exec['install'],

} }

exec { 'install': path => '/bin:/usr/sbin:/usr/bin:/sbin',

command => 'add-apt-repository -y ppa:openjdk-r/ppa && apt-get update && apt-get install -y openjdk-8-jdk',

user => 'root', }

} class {'java':}->class{'tomcat':}

Run the below command in a slave machine to check the status of Java and tomcat installed in a Slave machine

sudo puppet agent – t

4. **Use Puppet to install Maven on puppet2.kranthi.com**

Step 1: - Create a module directory on puppet master machine

sudo mkdir -p /etc/puppet/module

Step 2: - Download the maven to Desktop directory, extract it and copy it to module folder

Maven Folder - Download it from Wiselin’s GitHub repository – <https://github.com/Wiselin52/DevOps-CTU/blob/master/Exercise%20Files/maven.tar.gz>

To extract the maven folder, follow the below commands:

cd /home/kkavuri/Desktop

tar -xvf maven.tar.gz

Copy the extracted maven folder to module directory

sudo cp /home/kkavuri/maven\* /etc/puppet/module/

Step 3: - Add the below property in site.pp file

sudo vi /etc/puppet/manifests/site.pp

node ‘puppet2.kranthi.com’

{ include maven

}

Step 4: - Run the below command in a slave machine to check the status of maven installed in a Slave machine

sudo puppet agent -t

5. **Use Puppet to install Docker on puppet slave (puppet2.kranthi.com)**

On puppet1.kranthi.com puppet master, install the module gather-docker.

 (puppet module garther-docker).

Navigate to the files folder of /etc/puppet/modules/docker (create if required) and copy the file given in the below link to that location.

 Docker File :- https://github.com/Wiselin52/DevOps-CTU/blob/master/Exercise%20Files/dockerfile.txt

Add the following content to /etc/puppet/manifests/site.pp

node ‘puppet1.kranthi.com' {

class { 'docker': tcp\_bind => ['tcp://192.168.0.100:2375’,’tcp://127.0.0.1:2375’], socket\_bind => 'unix:///var/run/docker.sock',

} docker::image { 'ubuntu':

docker\_file => 'puppet:///docker/dockerfile' }

}

Note: The IP address 192.168.0.100 will vary based on your virtual machine’s ip address.

When puppet runs on puppet2.kranthi.com, Docker is basically run and if not already installed, will be automatically run on same.