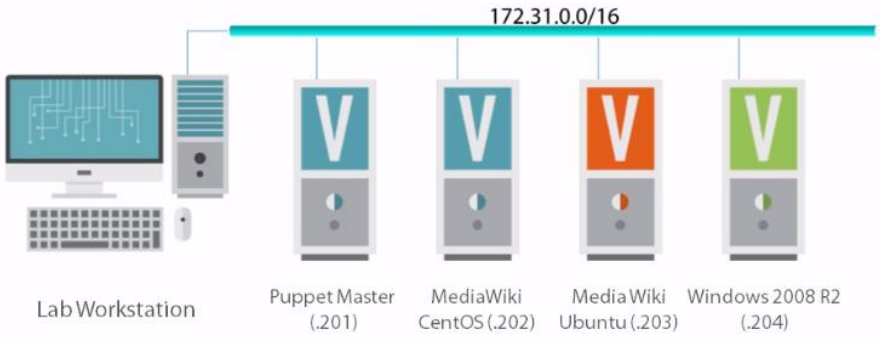
Lab Logical Topology



Lab Server Details

Role	Hostname	Operating System	RAM	Storage	IP Address
Puppet Master	puppetmaster	CentOS 6.5	2 GB	20 GB	172.31.0.201/16
MediaWiki	wiki	CentOS 6.5	2 GB	20 GB	172.31.0.202/16
MediaWiki	wikitest	Ubuntu 14.04.1 LTS	2 GB	20 GB	172.31.0.203/16
Administrator server	winadmin	Windows 2008 R2	2 GB	40 GB	172.31.0.204/16

Quick Overview of Installation Steps:

- Install Vitual Box(https://www.virtualbox.org/)
- Install Vagrant(https://www.vagrantup.com/)
- Download centos and Ubuntu Boxes

Downloading centos and Ubuntu:

Refer https://github.com/vasu34k123/Puppet

Booting Puppet Master:

Adding CentOS BOX to vagrant:
Cd puppet-fundamentals-lab
Vagrant box add centos65-base ventos65.box

Once done issue following commands:
Cd puppetmaster
Vagrant up
Vagrant ssh

For modifying configuration files and for version controlling,we need editor tool and GIT.
Sudo yum –y install nano git ntp
Sudo service ntpd start
Sudo chkconfig ntpd on
Chkconfig | grep ntpd

Note:vagrant box list for finding box list.
If config for testing Ethernet.

Installing puppet master:

Involves 2 tasks.
Task 1) Add puppet repo:for finding puppet binaries
Task 2) Install puppet server

Task 1➔sudo yum –y install http://yum.puppetlabs.com/puppetlabs-release-el-6-noarch.rpm
Task 2➔sudo yum –y install puppet-server

Chk the installation using following command:
Puppet master –version

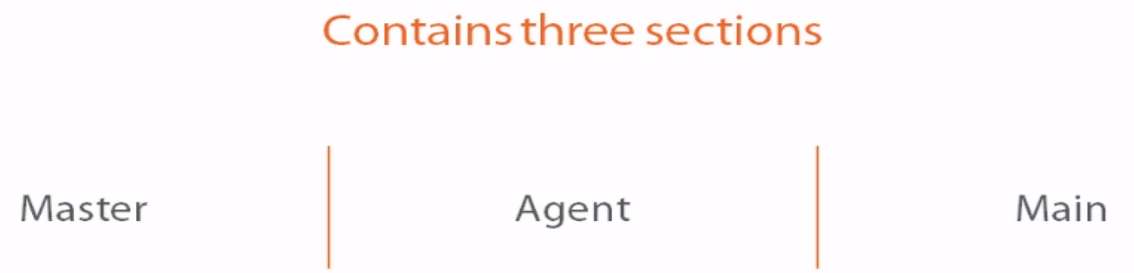
Setting Up Directory Environment:

Puppet programs are stored in files called manifests.
Puppet loads site manifest by default(/etc/puppet/manifests/site.pp)

Directory Environements allow you to maintain test,development and production environments separelty in puppet master.

We can control the environments from below location
/etc/puppet/environments/production/environment.conf

Puppet configuration file: contains below components



Issue following commands:

```
[vagrant@puppetmaster ~]$ sudo mkdir -p /etc/puppet/environments/production/{
modules,manifests}
```

Cd /etc/puppet/environments/production/
Sudo nano environment.conf

Add below lines in .conf file:
Modulepath = /etc/puppet/environments/production/modules
Environment_timeout = 5s

Cd /etc/puppet
Sudo nano puppet.conf

Under [main]:
Add below line.
dns_alt_names = puppet,puppetmaster,puppetmaster.srini.com

[master]
Environmentpath = $confdir/environments
Basemodulepath = $confdir/modules:/opt/puppet/share/modules

PUPPET MASTER SECURITY:

SELINUX:

Sudo setenforce permissive

Sudo sed –I ‘s\=enforcing\=permissive\g’ /etc/sysconfig/selinux

Sudo getenforce

Puppet Master SSL certificates:

Sudo puppet master --verbose --no-daemonize

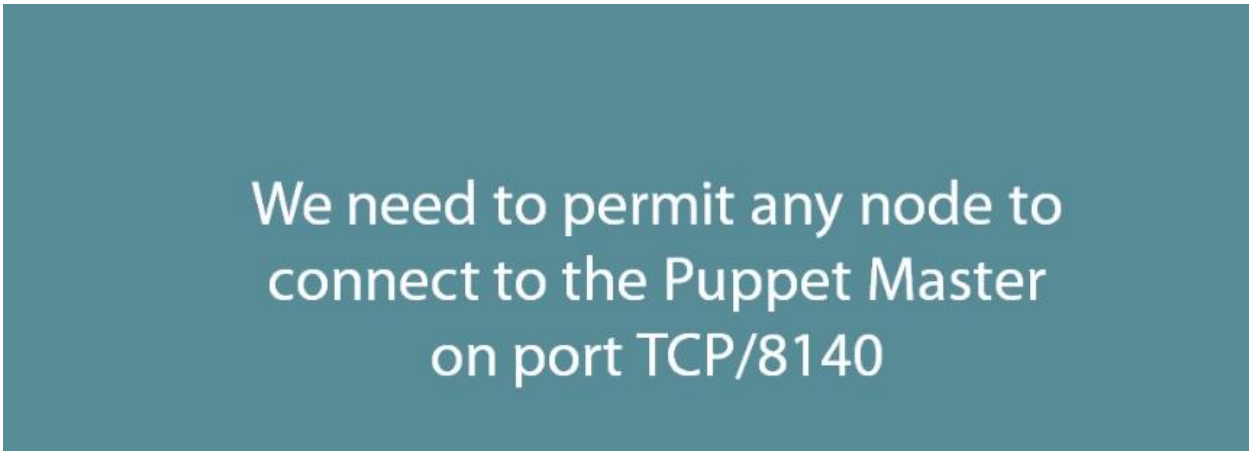
```
Info: Creating a new SSL key for ca
Info: Creating a new SSL certificate request for ca
Info: Certificate Request fingerprint (SHA256): 7D:95:FC:4D:B1:EE:3E:C9:61:BB:D2:13:53:B6:29:B5
:AC:EA:39:2B:B4:09:BC:15:7C:F5:7F:E2:59:61:24:A6
Notice: Signed certificate request for ca
Info: Creating a new certificate revocation list
Info: Creating a new SSL key for puppetmaster
Info: csr_attributes file loading from /etc/puppet/csr_attributes.yaml
Info: Creating a new SSL certificate request for puppetmaster
Info: Certificate Request fingerprint (SHA256): 52:E8:FE:30:E2:54:5A:B7:8D:59:2D:93:9D:F9:21:8B
:33:2B:9D:84:5B:5C:2F:BD:C0:84:5B:DE:03:76:70:D1
Notice: puppetmaster has a waiting certificate request
Notice: Signed certificate request for puppetmaster
Notice: Removing file Puppet::SSL::CertificateRequest puppetmaster at '/var/lib/puppet/ssl/ca/r
equests/puppetmaster.pem'
Notice: Removing file Puppet::SSL::CertificateRequest puppetmaster at '/var/lib/puppet/ssl/cert
ificate_requests/puppetmaster.pem'
```

Note:Above command shld be issued only once.

Verify the cert keys using following commands:

Sudo ls –la /var/lib/puppet/ssl

IPTABLES:



Iptables configuration is stored in /etc/sysconfig/iptables

To allow 8140 port restart your iptables:
Sudo service iptables restart

Modify iptables data .
Sudo nano /etc/sysconfig/iptables

```
  GNU nano 2.0.9              File: /etc/sysconfig/iptables                 Modified

# Firewall configuration written by system-config-firewall
# Manual customization of this file is not recommended.
*filter
:INPUT ACCEPT [0:0]
:FORWARD ACCEPT [0:0]
:OUTPUT ACCEPT [0:0]
-A INPUT -m state --state ESTABLISHED,RELATED -j ACCEPT
-A INPUT -p icmp -j ACCEPT
-A INPUT -i lo -j ACCEPT
-A INPUT -m state --state NEW -m tcp -p tcp --dport 22 -j ACCEPT

-A INPUT -j REJECT --reject-with icmp-host-prohibited
-A FORWARD -j REJECT --reject-with icmp-host-prohibited
COMMIT
```

Modify file like below:

```
# Firewall configuration written by system-config-firewall
# Manual customization of this file is not recommended.
*filter
:INPUT ACCEPT [0:0]
:FORWARD ACCEPT [0:0]
:OUTPUT ACCEPT [0:0]
-A INPUT -m state --state ESTABLISHED,RELATED -j ACCEPT
-A INPUT -p icmp -j ACCEPT
-A INPUT -i lo -j ACCEPT
-A INPUT -m state --state NEW -m tcp -p tcp --dport 22 -j ACCEPT
-A INPUT -m state --state NEW -m tcp -p tcp --dport 8140 -j ACCEPT
-A INPUT -j REJECT --reject-with icmp-host-prohibited
-A FORWARD -j REJECT --reject-with icmp-host-prohibited
COMMIT
```

Restart ur IPtables

Sudo service iptables restart

Installing Apache and passenger:

Puppet master runs a ruby on rails application.

Apache software for listening to nodes.

Type the following command to issue the dependents:

```
[vagrant@puppetmaster puppet]$ sudo yum -y install httpd httpd-devel mod_ssl ruby-devel rubyge
ms gcc gcc-c++ libcurl-devel openssl-devel
```

After succesfull installation issue below ommand.

Sudo gem install rack passenger

Sudo passenger-install-apache2-module

```
        AllowOverride all
        # MultiViews must be turned off.
        Options -MultiViews
        # Uncomment this if you're on Apache >= 2.4:
        #Require all granted
    </Directory>
  </VirtualHost>

And that's it! You may also want to check the Users Guide for security and
optimization tips, troubleshooting and other useful information:

  /usr/lib/ruby/gems/1.8/gems/passenger-4.0.56/doc/Users guide Apache.html
  https://www.phusionpassenger.com/documentation/Users%20guide%20Apache.html

Enjoy Phusion Passenger, a product of Phusion (www.phusion.nl) :-)
https://www.phusionpassenger.com

Phusion Passenger is a trademark of Hongli Lai & Ninh Bui.
[vagrant@puppetmaster puppet]$ sudo mkdir -p /usr/share/puppet/rack/puppetmasterd/{public,tmp}
[vagrant@puppetmaster puppet]$ sudo cp /usr/share/puppet/ext/rack/config.ru /usr/share/puppet/
rack/puppetmasterd/
[vagrant@puppetmaster puppet]$ sudo chown puppet:puppet /usr/share/puppet/rack/puppetmasterd/c
onfig.ru
[vagrant@puppetmaster puppet]$ ls -la /usr/share/puppet/rack/puppetmasterd/config.ru
-rw-r--r--. 1 puppet puppet 1229 Dec 23 00:35 /usr/share/puppet/rack/puppetmasterd/config.ru
[vagrant@puppetmaster puppet]$
```

Download as follows for git:

```
[vagrant@puppetmaster puppet]$ sudo mkdir -p /usr/share/puppet/rack/puppetmasterd/{public,tmp
[vagrant@puppetmaster puppet]$ sudo cp /usr/share/puppet/ext/rack/config.ru /usr/share/puppet
rack/puppetmasterd/
[vagrant@puppetmaster puppet]$ sudo chown puppet:puppet /usr/share/puppet/rack/puppetmasterd/
onfig.ru
[vagrant@puppetmaster puppet]$ ls -la /usr/share/puppet/rack/puppetmasterd/config.ru
-rw-r--r--. 1 puppet puppet 1229 Dec 23 00:35 /usr/share/puppet/rack/puppetmasterd/config.ru
[vagrant@puppetmaster puppet]$ cd ~
[vagrant@puppetmaster ~]$ git clone https://github.com/benpiper/puppet-fundamentals-puppetmas
er
Initialized empty Git repository in /home/vagrant/puppet-fundamentals-puppetmaster/.git/
remote: Counting objects: 4, done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 4 (delta 0), reused 4 (delta 0)
Unpacking objects: 100% (4/4), done.
[vagrant@puppetmaster ~]$ ls
puppet-fundamentals-puppetmaster
[vagrant@puppetmaster ~]$ cd puppet-fundamentals-puppetmaster/
[vagrant@puppetmaster puppet-fundamentals-puppetmaster]$ ls -la
total 20
drwxr-xr-x. 3 vagrant vagrant 4096 Dec 23 00:39 .
drwx------. 5 vagrant vagrant 4096 Dec 23 00:38 ..
drwxrwxr-x. 8 vagrant vagrant 4096 Dec 23 00:39 .git
-rw-rw-r--. 1 vagrant vagrant 1969 Dec 23 00:39 puppetmaster.conf
-rw-rw-r--. 1 vagrant vagrant  103 Dec 23 00:39 README.md
[vagrant@puppetmaster puppet-fundamentals-puppetmaster]$
```

$ Nano puppetmaster.conf

=>cross check passenger version.

Sudo cp puppetmaster.conf /etc/httpd/conf.d/puppetmaster.conf

Sudo service httpd start

```
[vagrant@puppetmaster ~]$ git clone https://github.com/benpiper/puppet-fundamentals-puppetmast
er
Initialized empty Git repository in /home/vagrant/puppet-fundamentals-puppetmaster/.git/
remote: Counting objects: 4, done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 4 (delta 0), reused 4 (delta 0)
Unpacking objects: 100% (4/4), done.
[vagrant@puppetmaster ~]$ ls
puppet-fundamentals-puppetmaster
[vagrant@puppetmaster ~]$ cd puppet-fundamentals-puppetmaster/
[vagrant@puppetmaster puppet-fundamentals-puppetmaster]$ ls -la
total 20
drwxr-xr-x. 3 vagrant vagrant 4096 Dec 23 00:39 .
drwx------. 5 vagrant vagrant 4096 Dec 23 00:38 ..
drwxrwxr-x. 8 vagrant vagrant 4096 Dec 23 00:39 .git
-rw-rw-r--. 1 vagrant vagrant 1969 Dec 23 00:39 puppetmaster.conf
-rw-rw-r--. 1 vagrant vagrant  103 Dec 23 00:39 README.md
[vagrant@puppetmaster puppet-fundamentals-puppetmaster]$ nano puppetmaster.conf
[vagrant@puppetmaster puppet-fundamentals-puppetmaster]$ sudo cp puppetmaster.conf /etc/httpd/
conf.d/puppetmaster.conf
[vagrant@puppetmaster puppet-fundamentals-puppetmaster]$ sudo service httpd start
Starting httpd: httpd: Could not reliably determine the server's fully qualified domain name, u
sing 127.0.0.1 for ServerName
                                                           [  OK  ]
[vagrant@puppetmaster puppet-fundamentals-puppetmaster]$ sudo chkconfig httpd on
[vagrant@puppetmaster puppet-fundamentals-puppetmaster]$
```

>>Sudo chkconfig httpd on

Note: puppet cert generate learn.localdomain"