Name: Ayesha Aziz
Roll Number: P17-6072
Section: B

system administration Lab Task-5

```
aashii@ubuntu:~$ sudo docker run --name puppet-master   -it ubuntu
root@ccf73b0d3e3a:/# exit
exit
aashii@ubuntu:~$ sudo docker start puppet-master
puppet-master
aashii@ubuntu:~$ sudo docker exec -it puppet-master   bash
root@ccf73b0d3e3a:/# apt update
```



```
root@ccf73b0d3e3a:/# apt install inetutils-ping net-tools vim wget -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  alsa-topology-conf alsa-ucm-conf ca-certificates file libasound2
  libasound2-data libcanberra0 libexpat1 libgpm2 libidn11 libltdl7
  libmagic-mgc libmagic1 libmpdec2 libogg0 libpsl5 libpython3.8
  libpython3.8-minimal libpython3.8-stdlib libreadline8 libsqlite3-0
  libssl1.1 libtdb1 libvorbis0a libvorbisfile3 mime-support netbase openssl
  publicsuffix readline-common sound-theme-freedesktop vim-common vim-runtime
  xxd xz-utils
Suggested packages:
  libasound2-plugins alsa-utils libcanberra-gtk0 libcanberra-pulse gpm
  readline-doc ctags vim-doc vim-scripts
The following NEW packages will be installed:
  alsa-topology-conf alsa-ucm-conf ca-certificates file inetutils-ping
  libasound2 libasound2-data libcanberra0 libexpat1 libgpm2 libidn11 libltdl7
  libmagic-mgc libmagic1 libmpdec2 libogg0 libpsl5 libpython3.8
  libpython3.8-minimal libpython3.8-stdlib libreadline8 libsqlite3-0
  libssl1.1 libtdb1 libvorbis0a libvorbisfile3 mime-support net-tools netbase
  openssl publicsuffix readline-common sound-theme-freedesktop vim vim-common
  vim-runtime wget xxd xz-utils
0 upgraded, 39 newly installed, 0 to remove and 0 not upgraded.
```

Terminal 1 (Fri 08:28):

```
root@ccf73b0d3e3a: /
File  Edit  View  Search  Terminal  Help

ecause associated file /usr/share/man/man1/vim.1.gz (of link group editor) doesn
't exist
Processing triggers for libc-bin (2.31-0ubuntu9) ...
Processing triggers for ca-certificates (20190110ubuntu1) ...
Updating certificates in /etc/ssl/certs...
0 added, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...
done.
root@ccf73b0d3e3a:/# wget http://apt.puppetlabs.com/puppet6-release-bionic.deb
--2020-05-15 15:26:56--  http://apt.puppetlabs.com/puppet6-release-bionic.deb
Resolving apt.puppetlabs.com (apt.puppetlabs.com)... 13.35.183.25, 13.35.183.103
, 13.35.183.56, ...
Connecting to apt.puppetlabs.com (apt.puppetlabs.com)|13.35.183.25|:80... connec
ted.
HTTP request sent, awaiting response... 200 OK
Length: 11736 (11K) [application/x-debian-package]
Saving to: 'puppet6-release-bionic.deb'

puppet6-release-bio 100%[===================>]  11.46K  --.-KB/s    in 0.01s

2020-05-15 15:26:57 (1005 KB/s) - 'puppet6-release-bionic.deb' saved [11736/1173
6]

root@ccf73b0d3e3a:/#
```


Terminal 2 (Fri 08:31):

```
root@ccf73b0d3e3a: /
File  Edit  View  Search  Terminal  Help

root@ccf73b0d3e3a:/# dpkg  -i  puppet6-release-bionic.deb
Selecting previously unselected package puppet6-release.
(Reading database ... 7585 files and directories currently installed.)
Preparing to unpack puppet6-release-bionic.deb ...
Unpacking puppet6-release (6.0.0-8bionic) ...
Setting up puppet6-release (6.0.0-8bionic) ...
root@ccf73b0d3e3a:/# apt update
Get:1 http://security.ubuntu.com/ubuntu focal-security InRelease [107 kB]
Hit:2 http://archive.ubuntu.com/ubuntu focal InRelease
Get:3 http://archive.ubuntu.com/ubuntu focal-updates InRelease [107 kB]
Get:4 http://archive.ubuntu.com/ubuntu focal-backports InRelease [98.3 kB]
Get:5 http://apt.puppetlabs.com bionic InRelease [85.4 kB]
Get:6 http://apt.puppetlabs.com bionic/puppet6 all Packages [19.7 kB]
Get:7 http://apt.puppetlabs.com bionic/puppet6 amd64 Packages [46.7 kB]
Fetched 464 kB in 6s (83.0 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
All packages are up to date.
root@ccf73b0d3e3a:/#
```

Terminal — root@ccf73b0d3e3a: /

File Edit View Search Terminal Help

```
Get:5 http://apt.puppetlabs.com bionic InRelease [85.4 kB]
Get:6 http://apt.puppetlabs.com bionic/puppet6 all Packages [19.7 kB]
Get:7 http://apt.puppetlabs.com bionic/puppet6 amd64 Packages [46.7 kB]
Fetched 464 kB in 6s (83.0 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
All packages are up to date.
root@ccf73b0d3e3a:/# exit
exit
aashii@ubuntu:~$ sudo docker commit puppet-master puppet-6
[sudo] password for aashii:
sha256:3e331699305bc9930a03189463686077bb2c1e7d9f859c4613d84b4bad7cd5d3
aashii@ubuntu:~$ sudo docker images
REPOSITORY          TAG           IMAGE ID          CREATED
    SIZE
puppet-6            latest        3e331699305b      About a minute ago
    171MB
ubuntu-apache       latest        c7d904a59693      6 days ago
    283MB
ubuntu              latest        1d622ef86b13      3 weeks ago
    73.9MB
aashii@ubuntu:~$ sudo docker exec -it puppet-master    bash
root@ccf73b0d3e3a:/#
```

Terminal — root@ccf73b0d3e3a: /

File Edit View Search Terminal Help

```
root@ccf73b0d3e3a:/# apt install puppetserver
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  ca-certificates-java dbus fontconfig-config fonts-dejavu-core java-common
  krb5-locales libapparmor1 libavahi-client3 libavahi-common-data
  libavahi-common3 libbsd0 libcups2 libdbus-1-3 libfontconfig1 libfreetype6
  libgssapi-krb5-2 libjpeg-turbo8 libjpeg8 libk5crypto3 libkeyutils1
  libkrb5-3 libkrb5support0 liblcms2-2 libnspr4 libnss3 libpcsclite1
  libpng16-16 libx11-6 libx11-data libxau6 libxcb1 libxdmcp6 libxext6 libxi6
  libxrender1 libxtst6 openjdk-8-jre-headless puppet-agent ucf x11-common
Suggested packages:
  default-dbus-session-bus | dbus-session-bus default-jre cups-common
  krb5-doc krb5-user liblcms2-utils pcscd libnss-mdns fonts-dejavu-extra
  fonts-ipafont-gothic fonts-ipafont-mincho fonts-wqy-microhei
  fonts-wqy-zenhei fonts-indic
The following NEW packages will be installed:
  ca-certificates-java dbus fontconfig-config fonts-dejavu-core java-common
  krb5-locales libapparmor1 libavahi-client3 libavahi-common-data
  libavahi-common3 libbsd0 libcups2 libdbus-1-3 libfontconfig1 libfreetype6
  libgssapi-krb5-2 libjpeg-turbo8 libjpeg8 libk5crypto3 libkeyutils1
  libkrb5-3 libkrb5support0 liblcms2-2 libnspr4 libnss3 libpcsclite1
  libpng16-16 libx11-6 libx11-data libxau6 libxcb1 libxdmcp6 libxext6 libxi6
```

First terminal (Fri 09:39):

```
root@ccf73b0d3e3a: /
File  Edit  View  Search  Terminal  Help
root@ccf73b0d3e3a:/# /opt/puppetlabs/bin/puppetserver  ca setup
Generation succeeded. Find your files in /etc/puppetlabs/puppet/ssl/ca
root@ccf73b0d3e3a:/# service puppetserver start
root@ccf73b0d3e3a:/# service puppetserver status
 * puppetserver is running
root@ccf73b0d3e3a:/# netstat -ntulp
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
PID/Program name
tcp        0      0 0.0.0.0:8140            0.0.0.0:*               LISTEN

root@ccf73b0d3e3a:/#
```


Second terminal (Fri 09:44):

```
root@ccf73b0d3e3a: /
File  Edit  View  Search  Terminal  Help
# some more ls aliases
alias ll='ls -alF'
alias la='ls -A'
alias l='ls -CF'

# Alias definitions.
# You may want to put all your additions into a separate file like
# ~/.bash_aliases, instead of adding them here directly.
# See /usr/share/doc/bash-doc/examples in the bash-doc package.

if [ -f ~/.bash_aliases ]; then
    . ~/.bash_aliases
fi

# enable programmable completion features (you don't need to enable
# this, if it's already enabled in /etc/bash.bashrc and /etc/profile
# sources /etc/bash.bashrc).
#if [ -f /etc/bash_completion ] && ! shopt -oq posix; then
#    . /etc/bash_completion
#fi

PATH=$PATH:/opt/puppetlabs/bin
                                              101,31          Bot
```

Terminal 1 (Fri 09:46):

```
root@ccf73b0d3e3a:/# source ~/.bashrc
root@ccf73b0d3e3a:/# puppet --version
6.15.0
root@ccf73b0d3e3a:/# echo $PATH
/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/opt/puppetlabs/bin
root@ccf73b0d3e3a:/#
```


Terminal 2 (Fri 09:48):

```
    home           => '/var/www',
    password       => '*',
    password_max_age  => 99999,
    password_min_age  => 0,
    password_warn_days => 7,
    provider       => 'useradd',
    shell          => '/usr/sbin/nologin',
    uid            => 33,
root@ccf73b0d3e3a:/# puppet resource user root
user { 'root':
    ensure         => 'present',
    comment        => 'root',
    gid            => 0,
    home           => '/root',
    password       => '*',
    password_max_age  => 99999,
    password_min_age  => 0,
    password_warn_days => 7,
    provider       => 'useradd',
    shell          => '/bin/bash',
    uid            => 0,
}
root@ccf73b0d3e3a:/#
```

Trash

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task

ayesha2.txt

task1

test.c

ayesha

ayessshhha2

```
root@ccf73b0d3e3a: /                          ● ● ●
File  Edit  View  Search  Terminal  Help
root@ccf73b0d3e3a:/# puppet resource host
host { 'ccf73b0d3e3a':
  ensure   => 'present',
  ip       => '172.17.0.2',
  provider => 'parsed',
  target   => '/etc/hosts',
}
host { 'ip6-allnodes':
  ensure   => 'present',
  ip       => 'ff02::1',
  provider => 'parsed',
  target   => '/etc/hosts',
}
host { 'ip6-allrouters':
  ensure   => 'present',
  ip       => 'ff02::2',
  provider => 'parsed',
  target   => '/etc/hosts',
}
host { 'ip6-localnet':
  ensure   => 'present',
  ip       => 'fe00::0',
  provider => 'parsed',
  target   => '/etc/hosts',
```

file.py

message_passing_P17_6072...

AME.py

task.py

Trash

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task

ayesha2.txt

task1

test.c

ayesha

ayessshhha2

```
root@ccf73b0d3e3a: /                          ● ● ●
File  Edit  View  Search  Terminal  Help
  platform => "x86_64-linux",
  sitedir => "/opt/puppetlabs/puppet/lib/ruby/site_ruby/2.5.0",
  version => "2.5.8"
}
system_uptime => {
  days => 0,
  hours => 1,
  seconds => 4792,
  uptime => "1:19 hours"
}
timezone => UTC
virtual => docker
root@ccf73b0d3e3a:/#
root@ccf73b0d3e3a:/# facter -p | grep hostname
2020-05-15 16:52:35.480658 WARN  puppetlabs.facter - skipping external facts for
 "/opt/puppetlabs/puppet/cache/facts.d": No such file or directory
  /etc/hostname => {
  hostname => "ccf73b0d3e3a",
  mount => "/etc/hostname",
root@ccf73b0d3e3a:/# facter -p | grep fqdn
2020-05-15 16:53:51.076631 WARN  puppetlabs.facter - skipping external facts for
 "/opt/puppetlabs/puppet/cache/facts.d": No such file or directory
  fqdn => "ccf73b0d3e3a.localdomain",
root@ccf73b0d3e3a:/#
```

file.py

message_passing_P17_6072...

AME.py

task.py

```
hsperfdata_puppet   hsperfdata_root   jruby-5263   test01.pp
root@ccf73b0d3e3a:/tmp# vi test01.pp
root@ccf73b0d3e3a:/tmp# cat test01.pp
file { '/tmp/config-example':
        ensure => 'file',
        mode => '0664',
        owner => 'root',
        group => 'root',
        content => "hello world\n",
}
root@ccf73b0d3e3a:/tmp# puppet apply test01.pp
Notice: Compiled catalog for ccf73b0d3e3a.localdomain in environment production
in 0.02 seconds
Notice: /Stage[main]/Main/File[/tmp/config-example]/ensure: defined content as '
{md5}6f5902ac237024bdd0c176cb93063dc4'
Notice: Applied catalog in 0.03 seconds
root@ccf73b0d3e3a:/tmp# ls -lh
total 20K
-rw-rw-r-- 1 root    root      12 May 15 17:00 config-example
drwxr-x--- 2 puppet puppet 4.0K May 15 16:36 hsperfdata_puppet
drwxr-xr-x 2 root    root   4.0K May 15 15:45 hsperfdata_root
drwxr-x--- 2 puppet puppet 4.0K May 15 16:37 jruby-5263
-rw-r--r-- 1 root    root     133 May 15 16:59 test01.pp
root@ccf73b0d3e3a:/tmp#
```

```
file { '/tmp/config-example':
        ensure => 'file',
        mode => '0664',
        owner => 'root',
        group => 'root',
        content => "hello world\n",
}
~
~
~
~
~
~
~
~
~
~
~
~
~
~
                                        3,13-20        All
```

Terminal 1 (root@ccf73b0d3e3a: /tmp):

```
'0644'
Notice: Applied catalog in 0.02 seconds
root@ccf73b0d3e3a:/tmp# ls -lh
total 20K
-rw-r--r-- 1 root   root     12 May 15 17:00 config-example
drwxr-xr-x 2 puppet puppet 4.0K May 15 16:36 hsperfdata_puppet
drwxr-xr-x 2 root   root   4.0K May 15 15:45 hsperfdata_root
drwxr-xr-x 2 puppet puppet 4.0K May 15 16:37 jruby-5263
-rw-r--r-- 1 root   root    133 May 15 17:02 test01.pp
root@ccf73b0d3e3a:/tmp# chmod 600 config-example
root@ccf73b0d3e3a:/tmp# ls -lh
total 20K
-rw------- 1 root   root     12 May 15 17:00 config-example
drwxr-xr-x 2 puppet puppet 4.0K May 15 16:36 hsperfdata_puppet
drwxr-xr-x 2 root   root   4.0K May 15 15:45 hsperfdata_root
drwxr-xr-x 2 puppet puppet 4.0K May 15 16:37 jruby-5263
-rw-r--r-- 1 root   root    133 May 15 17:02 test01.pp
root@ccf73b0d3e3a:/tmp# puppet apply test01.pp
Notice: Compiled catalog for ccf73b0d3e3a.localdomain in environment production
in 0.02 seconds
Notice: /Stage[main]/Main/File[/tmp/config-example]/mode: mode changed '0600' to
'0644'
Notice: Applied catalog in 0.02 seconds
root@ccf73b0d3e3a:/tmp#
```


Terminal 2 (root@ccf73b0d3e3a: /tmp):

```
file { '/tmp/config-example':
        ensure => 'file',
        mode => '0644',
        owner => 'root',
        group => 'root',
        content => "hello ${hostname} \n",
}
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
-- INSERT --                                    6,32-39        All
```

Trash

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task

ayesha2.txt

task1

test.c

ayesha

ayessshhha2

file.py

message_passing_P17_6072...

AME.py

task.py

```
root@ccf73b0d3e3a: /tmp
File  Edit  View  Search  Terminal  Help
root@ccf73b0d3e3a:/tmp# vi test01.pp
root@ccf73b0d3e3a:/tmp# puppet apply test01.pp
Notice: Compiled catalog for ccf73b0d3e3a.localdomain in environment production
in 0.04 seconds
Notice: /Stage[main]/Main/File[/tmp/config-example]/content: content changed '{m
d5}6f5902ac237024bdd0c176cb93063dc4' to '{md5}855e51ee2d7eb6b2e0f2d497f13680ce'
Notice: Applied catalog in 0.08 seconds
root@ccf73b0d3e3a:/tmp# cat config-example
hello ccf73b0d3e3a
root@ccf73b0d3e3a:/tmp# netstat
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
Active UNIX domain sockets (w/o servers)
Proto RefCnt Flags       Type       State         I-Node   Path
unix  2      [ ]         STREAM     CONNECTED     127549
unix  3      [ ]         STREAM     CONNECTED     127756
unix  2      [ ]         STREAM     CONNECTED     124618
unix  3      [ ]         STREAM     CONNECTED     127755
unix  3      [ ]         STREAM     CONNECTED     124624
unix  3      [ ]         STREAM     CONNECTED     124623
root@ccf73b0d3e3a:/tmp#
```

Trash

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task

ayesha2.txt

task1

test.c

ayesha

ayessshhha2

file.py

message_passing_P17_6072...

AME.py

task.py

```
root@ccf73b0d3e3a: /tmp
File  Edit  View  Search  Terminal  Help
file { '/tmp/config-example':
        ensure => 'file',
        mode => '0644',
        owner => 'root',
        group => 'root',
        content => "hello ${hostname} \n",
}
package {'apache2':
        ensure => 'installed'
}
service { 'apache2':
        ensure => 'running'
        require => Package ['apache2']
}
~
~
~
~
~
~
~
~
~
~
~
-- INSERT --                                    13,32-39       All
```

```
root@ccf73b0d3e3a: /tmp

File  Edit  View  Search  Terminal  Help

root@ccf73b0d3e3a:/tmp# vi test01.pp
root@ccf73b0d3e3a:/tmp# puppet apply test01.pp
Notice: Compiled catalog for ccf73b0d3e3a.localdomain in environment production
in 1.20 seconds
Notice: Applied catalog in 0.06 seconds
root@ccf73b0d3e3a:/tmp# netstat -ntulp
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
PID/Program name
tcp        0      0 0.0.0.0:80              0.0.0.0:*               LISTEN
6339/apache2
tcp        0      0 0.0.0.0:8140            0.0.0.0:*               LISTEN
-
root@ccf73b0d3e3a:/tmp# service apache2 status
 * apache2 is running
root@ccf73b0d3e3a:/tmp#
```