Simple provisioning

1. use links in topic learning links document to download and install vagrant for your computer operating system
vagrant -v
vagrant init

2. in a terminal run the following commands
 a) vagrant -v vagrant init
 b) vagrant box add precise32 http://files.vagrantup.com/precise32.box
 c) vagrant up
 d) vagrant ssh
 e) vagrant destroy

Above commands described
a) creates a vagrant provisioning script called 'Vagrantfile'
b) downloads a ubuntu linux image and installs it in virtualbox
c) vagrant up starts the ubuntu vm created in step a) and provisions it with the 'Vagrantfile' script
d) ssh into the running provisioned box

3) vagrant commands https://docs.vagrantup.com/v2/cli/index.html
4) puppet is built into vagrant by default

key points
to run the provided advanced script that provisions a Apache bigtop hadoop testing box then
a) must have vagrant version 2 (latest vagrant version)
b) must have virtualbox version 4.2
c) in the video the downloaded vagrant boxes and autogenerated files appear in the same directory as the vagrant and provision scripts, this is because I have set vagrant home to point to this directory
VAGRANT_HOME = /<path to directory you want to store vagrant box ect …>
on my ubuntu for this course video I have set
VAGRANT_HOME = /home/ubu/vagrant_provisioning

Advanced

The following scripts setup a centos box with apache bigtop for advanced hadoop development

The following Vagrant file and provisioning script need to be in the same directory
in this directory type vagrant up

advanced vagrant file

#Vagrantfile Start ----------

```
VAGRANTFILE_API_VERSION = "2"
Vagrant.configure("2") do |config|
  config.vm.box = "vagrant-centos"
  config.vm.box_url =
"https://github.com/2creatives/vagrant-centos/releases/download/v6.5.1/centos65-x86_64-20131205.box"
        config.vm.provider :virtualbox do |vb|
        vb.customize ["modifyvm", :id, "--memory", "2048"]
        end

  config.vm.define :bigtopcentos2 do |bigtopcentos2|

        bigtopcentos2.vm.box = config.vm.box
        bigtopcentos2.vm.box_url = config.vm.box_url
        bigtopcentos2.vm.network :private_network, ip: "10.10.10.22"
        bigtopcentos2.vm.provision :shell, :path => "provisionLatest.sh"
  end
end
```

#Vagrantfile END ----------

advanced provisioning script ‘provisionLatest.sh’

#PROVISIONING SCRIPT Start ----------

```
#Get the apache yum repo  java-1.7.0-openjdk-1.7.0.45-2.4.3.3.el6.x86_64
# yum install -y wget java-1.7.0-openjdk-devel.x86_64
yum install -y wget java-1.7.0-openjdk-1.7.0.45-2.4.3.3.el6.x86_64
yum install -y wget java-1.7.0-openjdk-devel-1.7.0.45-2.4.3.3.el6.x86_64
# get bigtop
wget -O /etc/yum.repos.d/bigtop.repo http://www.apache.org/dist/bigtop/stable/repos/centos6/bigtop.repo
#Now install the base components
yum install -y  hadoop\* mahout\* hive\* pig\*
# temp en var for now
sudo sh -c "cat >> .bashrc" <<'EOF'
export JAVA_HOME=/usr/lib/jvm/java-1.7.0-openjdk-1.7.0.45.x86_64/jre
EOF
source .bashrc
```

```
# init hadoop
/etc/init.d/hadoop-hdfs-namenode init
#Start each datanode
for i in hadoop-hdfs-namenode hadoop-hdfs-datanode ;
    do service $i start ;
done
#start services
/usr/lib/hadoop/libexec/init-hdfs.sh
service hadoop-yarn-resourcemanager start
service hadoop-yarn-nodemanager start
hadoop fs -ls -R /
# Make a directory so that vagrant user has a dir to run jobs inside of.
sudo -u hdfs hadoop fs -mkdir /user/vagrant
sudo -u hdfs hadoop fs -chown vagrant /user/vagrant
#get stuff
wget  http://apache.cbox.biz/hadoop/common/stable2/hadoop-2.2.0.tar.gz
wget  http://apache.cbox.biz/hive/hive-0.12.0/hive-0.12.0.tar.gz
wget ftp://mirror.reverse.net/pub/apache/maven/maven-3/3.1.1/binaries/apache-maven-3.1.1-bin.tar.gz
# set stuff up
tar -xvf hadoop-2.2.0.tar.gz
tar -xvf hive-0.12.0.tar.gz
tar -xvf apache-maven-3.1.1-bin.tar.gz
mv hive-0.12.0 hive
mv hadoop-2.2.0 hadoop
mv apache-maven-3.1.1 maven
# create final env settings centos
sudo sh -c "cat >> .bashrc" <<'EOF'
export HADOOP_HOME=/home/vagrant/hadoop
export HIVE_HOME=/home/vagrant/hive
export MAVEN_HOME=/home/vagrant/maven
PATH=$PATH:$JAVA_HOME/bin:$MAVEN_HOME/bin
export PATH
EOF
# classpath
cp /home/vagrant/hive/lib/hive-contrib-0.12.0.jar /home/vagrant/hadoop/lib/
cp /home/vagrant/hive/lib/hive-serde-0.12.0.jar /home/vagrant/hadoop/lib/
# set env var's
source .bashrc
#clean up
sudo rm *.tar.*
```