PUPPET TASKS

DEVOPS MASTER ARCHITECT WORKSHOP

TASK 1: HOW TO DO PUPPET MASTER INSTALLATION

- Activity: Install Puppet master on ubuntu 18.04 system

- Definition of Done:
  - Create a GitHub repository for Puppet tasks alone . Create a sub folder for the task and upload screenshot.(puppetserver status output)

#	Steps	Commands
1	Clone the repository	git clone https://github.com/AnjuMeleth/DevOpsMasterPuppet.git
2	Run the Puppet Master installation script	sh puppetmasterinstall.sh
3	Edit the file /etc/default/puppetserver	sudo vi /etc/default/puppetserver JAVA_ARGS="-Xms512m -Xmx512m -XX:MaxPermSize=256m"
4	Open port 8140	sudo ufw allow 8140
5	Edit hosts file to enter the ipaddress of the master with a DNS name puppet	sudo vi /etc/hosts
6	Start the puppetserver	sudo systemctl start puppetserver sudo systemctl status puppetserver

TASK 2:HOW TO INSTALL A PACKAGE IN PUPPET MASTER LOCALLY

- Activity: Install a tree package in the puppet master locally
- Definition of Done:
  - Tree package is installed. Create a sub folder for the tasks and upload screenshot(version of tree)

#	Steps	Commands
1	Go to manifests folder /etc/puppetlabs/code/environments/production/manifests/	cd /etc/puppetlabs/code/environments/production/manifests/
2	Create a file site.pp	sudo vi site.pp
3	Run the manifests	sudo /opt/puppetlabs/bin/puppet apply site.pp
4	Check the version of tree installed	tree --version

TASK 3: HOW TO DO PUPPET AGENT INSTALLATION ON A SLAVE

- Activity: Install Puppet agent on ubuntu 18.04 system

- Definition of Done:
  - Puppet agent is installed . Create a sub folder for the task and upload screenshot.(puppet status output)

#	Steps	Commands
1	Clone the repository	git clone https://github.com/AnjuMeleth/DevOpsMasterPuppet.git
2	Run the Puppet agent installation script	sh puppetagentinstall.sh
3	Open port 8140	sudo ufw allow 8140
4	Edit hosts file to enter the ipaddress of the master and agent with a DNS name puppet and puppet-agent	sudo vi /etc/hosts
5	Start the puppet agent	sudo systemctl start puppet sudo systemctl enable puppet

TASK 4: HOW TO SIGN CERTIFICATES ON PUPPET MASTER

- Activity: Sign the certificates of the puppet agent on the master

- Definition of Done:
  - Sign the agent certificate on the master. Create a sub folder for the task and upload screenshot.(signed certificates output)

#	Steps	Commands
1	On Puppet master list the certificate list	sudo /opt/puppetlabs/bin/puppetserver ca list
2	Sign the slave certifcate	sudo /opt/puppetlabs/bin/puppetserver ca sign --all
3	List the certificates once again	sudo /opt/puppetlabs/bin/puppetserver ca list

TASK 5:HOW TO INSTALL A PACKAGE IN PUPPET SLAVE

- Activity: Install a tree package in the puppet slave
- Definition of Done:
  - Tree package is installed. Create a sub folder for the tasks and upload screenshot(version of tree on puppet slave)

#	Steps	Commands
1	Go to manifests folder /etc/puppetlabs/code/environments/production/manifests/	cd /etc/puppetlabs/code/environments/production/manifests/
2	Create a file site.pp	sudo vi site.pp
3	Go to puppet agent and run the manifests	sudo /opt/puppetlabs/bin/puppet agent -t
4	If getting an error certificate doesn't match private key delete the certificate from the agent	cd /etc/puppetlabs/puppet/ssl/certs/ sudo rm -rf <certificate name>
5	Delete the certificate from master	sudo /opt/puppetlabs/bin/puppetserver ca list --all sudo /opt/puppetlabs/bin/puppetserver ca clean --certname <certificate name>

TASK 5 : HOW TO INSTALL A PACKAGE IN PUPPET SLAVE CONTD…

6	Run the puppet agent run	sudo /opt/puppetlabs/bin/ puppet agent -t
7		sudo /opt/puppetlabs/bin /puppetserver ca list
8		sudo /opt/puppetlabs/bin /puppetserver ca sign --all
9		sudo /opt/puppetlabs/bin /puppet agent -t

TASK 6 :HOW TO INSTALL PDK

- Activity:
  - Install PDK in puppet master
- Definition of Done:
  - No screenshots to be uploaded

#	Steps	Commands
1	Get the executable	wget https://apt.puppet.com/puppet-tools-release-bionic.deb
2	Unpack	sudo dpkg -i puppet-tools-release-bionic.deb
3	Perform apt update	sudo apt-get update
4	Install PDK IN puppet master	sudo apt-get install pdk
5	Verify the PDK installation	pdk --version

TASK 7 :HOW TO CREATE A MODULE IN PUPPET

- Activity:
  - Create an Nginx module and apply it on Puppet slave
- Definition of Done:
  - Nginx is running on the slave. Create a sub-folder and upload the screenshot(Nginx running)

#	Steps	Commands
1	Create a folder and go to the folder	mkdir modules cd modules
2	Create a puppet module nginx	pdk new module anju-nginx
3	Edit init.pp file in manifests folder of the nginx module	vi init.pp
4	Build the module. Make sure you are in the nginx module	pdk build nginx
5	Install module in our default path. Make sure you are in modules folder	sudo /opt/puppetlabs/bin/puppet module install ./nginx/pkg/anju-nginx-0.1.0.tar.gz
6	View the module in the path /etc/puppetlabs/code/environments/production/modules	cd /etc/puppetlabs/code/environments/production/modules
7	Edit the main manifest file in the default manifests path	sudo vi site.pp
8	Run the puppet agent in slave	sudo /opt/puppetlabs/bin/puppet agent -t

TASK 8 :HOW TO RUN SPECIFIC MANIFESTS

- Activity:
  - Create a example.txt file in slave when using development environment and testing environment
- Definition of Done:
  - Create a sub folder and upload the relevant screenshot.(example.txt file created in slave)

#	Steps	Commands
1	Create Testing environment and development environment.	cd /etc/puppetlabs/code/environments/ sudo mkdir testing sudo mkdir development
2	Create manifests folder inside the testing and development directories	sudo mkdir manifests
3	Create a file in the manifests folder	sudo vi site.pp
4	In the slave edit puppet.conf file in /etc/puppetlabs/puppet	sudo vi puppet.conf [agent] environment = development
5	Run the puppet agent	sudo /opt/puppetlabs/bin/puppet agent -t
6		

TASK 9: HOW TO DEPLOY AN APPLICATION ON A PUPPET SLAVE

- Activity:
  - Deploy the containerized spring pet clinic application on the puppet slave
- Definition of Done:
  - View the spring pet clinic application in port number 8083. Upload the relevant screenshot

#	Steps	Commands
1	Edit the manifest file in production environment	sudo vi site.pp
2	Run the puppet agent in the slave	sudo /opt/puppetlabs/bin/puppet agent -t