**Lab 07**

**Laboratory Exercise**

**LAB EXERCISE**

**Time to Complete**

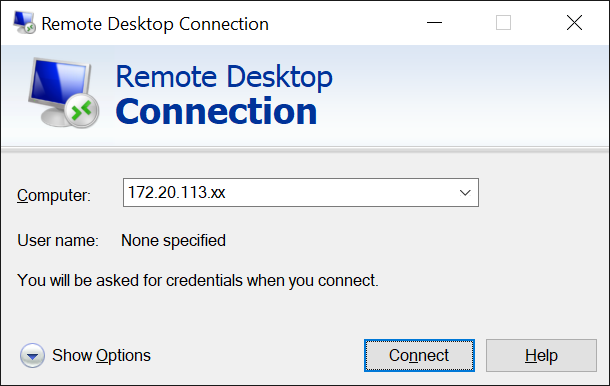
Approximately 60 Minutes

**What You Need**

* You need to complete lab 6 exercises so that 2 new Puppet Clients are setup for use in this lab exercise. If you have yet to create the 2 containers, please create them immediately so that you can perform lab 07.

From your machine logged-in to RP VPN, run Remote Desktop Connection to connect to the ubuntu Linux Virtual Machine (VM). Please login based on your assigned VM as shown below:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/N** | **Name** | **VM** | **IP Address** | **User Name** | **Password** |
| 1 | LEOW TANG QING | PDC2-Ubuntu-03 | 172.20.113.184 | dockeradm | docker!2 |
| 2 | LIM SHEN HUI | PDC2-Ubuntu-02 | 172.20.113.183 | dockeradm | docker!2 |
| 3 | LIN JINGZHOU | PDC2-Ubuntu-04 | 172.20.113.185 | dockeradm | docker!2 |
| 4 | MUHAMMAD FAISAL BIN SHAIK HASSAN | PDC2-Ubuntu-05 | 172.20.113.186 | dockeradm | docker!2 |
| 5 | LYNN LEE QING XIA | PDC2-Ubuntu-06 | 172.20.113.187 | dockeradm | docker!2 |
| 6 | NG CHEE KIONG | PDC2-Ubuntu-07 | 172.20.113.188 | dockeradm | docker!2 |
| 7 | PARAMASIVAM S/O VANNU GOPAL | PDC2-Ubuntu-08 | 172.20.113.189 | dockeradm | docker!2 |
| 8 | SAHLATUL-FARIHAH BINTE M ASARI | PDC2-Ubuntu-09 | 172.20.113.190 | dockeradm | docker!2 |
| 9 | SHAIKH FAID BIN OMAR | PDC2-Ubuntu-10 | 172.20.113.191 | dockeradm | docker!2 |
| 10 | CHIU JING XIONG | PDC2-Ubuntu-11 | 172.20.113.192 | dockeradm | docker!2 |
| 11 | KELLY WONG XUE YEE | PDC2-Ubuntu-12 | 172.20.113.193 | dockeradm | docker!2 |
| 12 | LIM SI YING | PDC2-Ubuntu-01 | 172.20.113.182 | dockeradm | docker!2 |
| 13 | LIN LI YI | PDC2-Ubuntu-14 | 172.20.113.195 | dockeradm | docker!2 |
| 14 | MUHAMMAD MUQTADIR BIN SADIQ BASHA | PDC2-Ubuntu-15 | 172.20.113.196 | dockeradm | docker!2 |
| 15 | NUR HIDAYAH BTE RAMLEE | PDC2-Ubuntu-16 | 172.20.113.197 | dockeradm | docker!2 |
| 16 | NUR NADIA ASHBOLLAH BINTE | PDC2-Ubuntu-17 | 172.20.113.198 | dockeradm | docker!2 |
| 17 | NUR THAQIFAH AQILAH BINTE JURAIMI | PDC2-Ubuntu-18 | 172.20.113.199 | dockeradm | docker!2 |
| 18 | RAUDHATUNNISHA BTE RAMLI | PDC2-Ubuntu-19 | 172.20.113.200 | dockeradm | docker!2 |
| 19 | SITI NUR ALYSHYIA BINTE HASHIM | PDC2-Ubuntu-20 | 172.20.113.201 | dockeradm | docker!2 |
| 20 | TAN TEE BING | PDC2-Ubuntu-21 | 172.20.113.202 | dockeradm | docker!2 |



Replace xx with the IP address of the VM that you have been assigned.

**Part 1: Installed puppet bolt on your VM.**

1. In part 1 lab, you will need to

* Install puppet bolt package on your VM
  1. Installed puppet bolt on your VM.

Open **Terminal** and enter the following command to login as a superuser.

dockeradm@sddo-vm: **su - root**

\*password: **ubuntu**

root@sddo-vm :

Download the bolt package appropriate to your operating system and architecture.

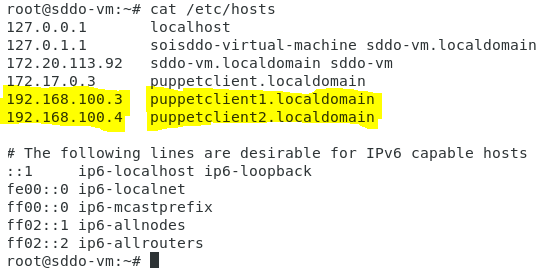
root@sddo-vm: **wget https://apt.puppet.com/puppet-tools-release-bionic.deb**

root@sddo-vm: **dpkg -i puppet-tools-release-bionic.deb**

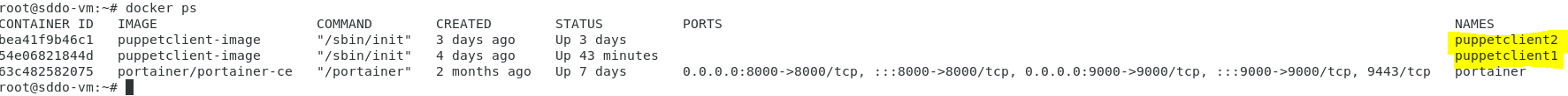
root@sddo-vm: **apt-get update**

root@sddo-vm: **apt-get install puppet-bolt**

1.2 Check that 2 containers previously created during lesson 6 are running.

You should see at least 2 clients being specified in sddo-vm /etc/hosts file  
root@sddo-vm: **cat /etc/hosts**

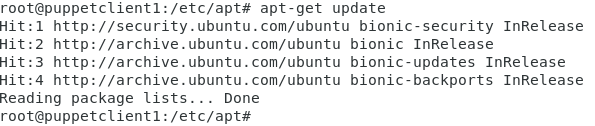
root@sddo-vm: docker ps



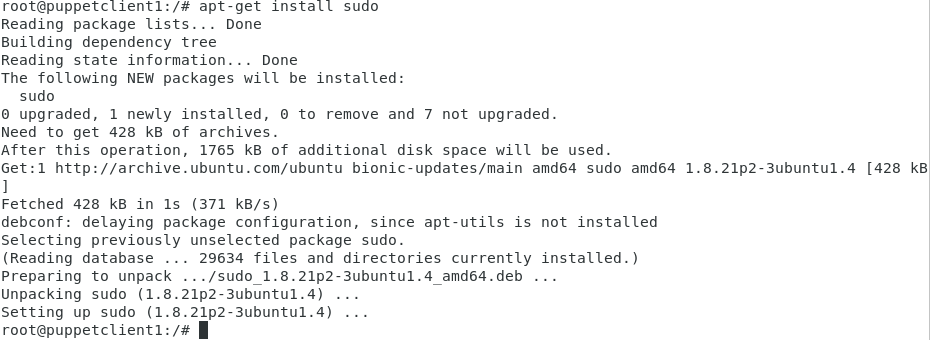
1. Now, we are ready to work on the containers
   1. Access first container puppetclient1, install package sudo and add new user

root@sddo-vm: docker exec -it puppetclient1 /bin/bash

root@puppetclient1: **apt-get update**



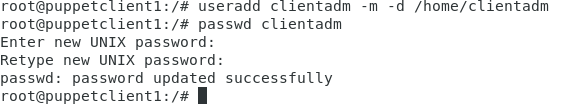
root@puppetclient1: **apt-get install sudo**



* 1. Add a new user and set its password

root@puppetclient1: **useradd clientadm -m -d /home/clientadm**

root@puppetclient1: **passwd clientadm**



(set the password as user123)

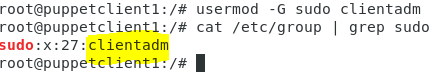
* 1. Add the user to sudo group, issue the following commands and observe the output.

root@puppetclient1: cat /etc/group |grep sudo



root@puppetclient1: usermod -G sudo clientusr

root@puppetclient1: cat /etc/group |grep sudo



* 1. Repeat the same steps (2.1, 2.2 & 2.3) for puppetclient2 container.

3. Now, we are ready to use puppet bolt command

3.1 Use bolt command run

To view content of /etc/shadow of remote puppetclient1

root@sddo-vm: **bolt command run ‘cat /etc/shadow’ -t puppetclient1 -u clientadm -p user123 - -no-host-key-check - -run-as root**

Paste the output

To list directory /opt of both puppetclient1 and puppetclient2

root@sddo-vm: **bolt command run ‘ls /opt’ -t puppetclient1,puppetclient2 -u clientadm -p user123 - -no-host-key-check**

Paste the output

3.2 Use bolt script run

root@sddo-vm: cd /root

root@sddo-vm: nano testscript.sh



root@sddo-vm: **bolt script run ‘/root/testscript.sh -t puppetclient1,puppetclient2 -u clientadm -p user123 - -no-host-key-check**

Paste the output

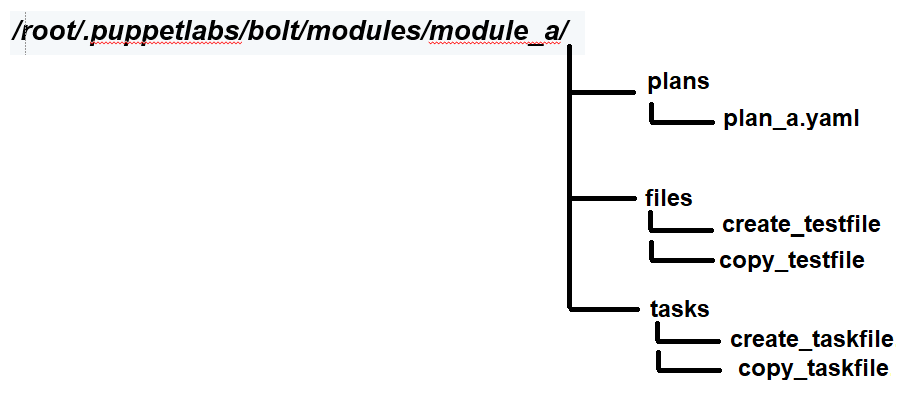
root@puppetclient1: **ls /tmp/myfile**



root@puppetclient2: **ls /tmp/myfile**



3.3 let us build the following directories and files structure:

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root@sddo-vm: **cd /root/.puppetlabs/bolt/modules**

root@sddo-vm: **mkdir module\_a**

root@sddo-vm: **cd module\_a**

root@sddo-vm: **mkdir plans files tasks**

3.4 Create task files

root@sddo-vm: **cd ../tasks**

root@sddo-vm: **nano create\_taskfile**

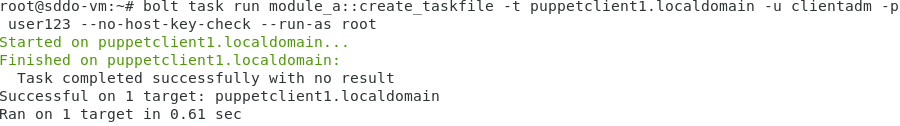


root@sddo-vm: **nano copy\_taskfile**

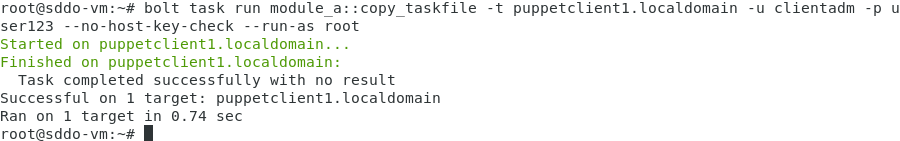


3.5 Now, let us run the bolt task from sddo-vm on clientpuppet1

root@sddo-vm: **bolt task run module\_a::create\_taskfile -t puppetclient1.localdomain -u clientadm -p user123 - -no-host-key-check - -run-as root**



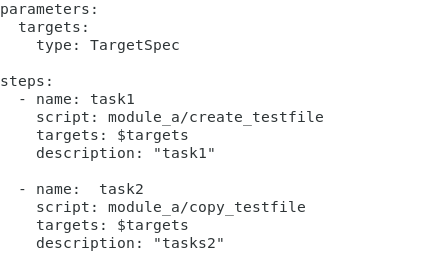
root@sddo-vm: **bolt task run module\_a::copy\_taskfile -t puppetclient1.localdomain -u clientadm -p user123 - -no-host-key-check - -run-as root**



3.6 Create plan file

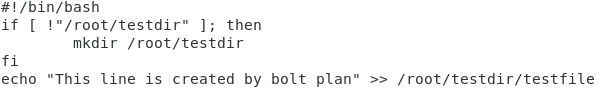
root@sddo-vm: **cd /root/.puppetlabs/bolt/modules/plans**

root@sddo-vm: **nano plan\_a.yaml**



root@sddo-vm: **cd ../files**

root@sddo-vm: **nano create\_testfile**

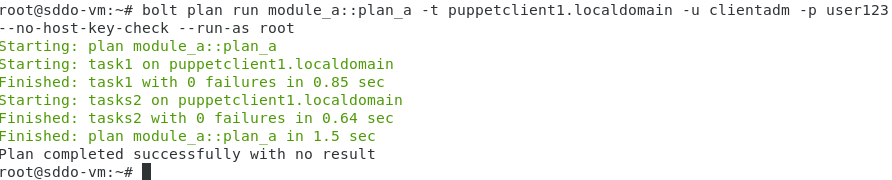


root@sddo-vm: **nano copy\_testfile**



3.7 Now, let us run the bolt plan from sddo-vm on clientpuppet1

root@sddo-vm: **bolt plan run module\_a::plan\_a -t puppetclient1.localdomain -u clientadm -p user123 - -no-host-key-check - -run-as root**



Check on puppetclient1:

root@sddo-vm: **docker exec -it puppetclient1 /bin/bash**

root@puppetclient1: **cd /root/testdir**

root@puppetclient1: **ls**



root@puppetclient1: **cat testfile**



root@puppetclient1: **cat testfile.bak**



**--End of Lab Exercise --**