Setting up LAB Environment

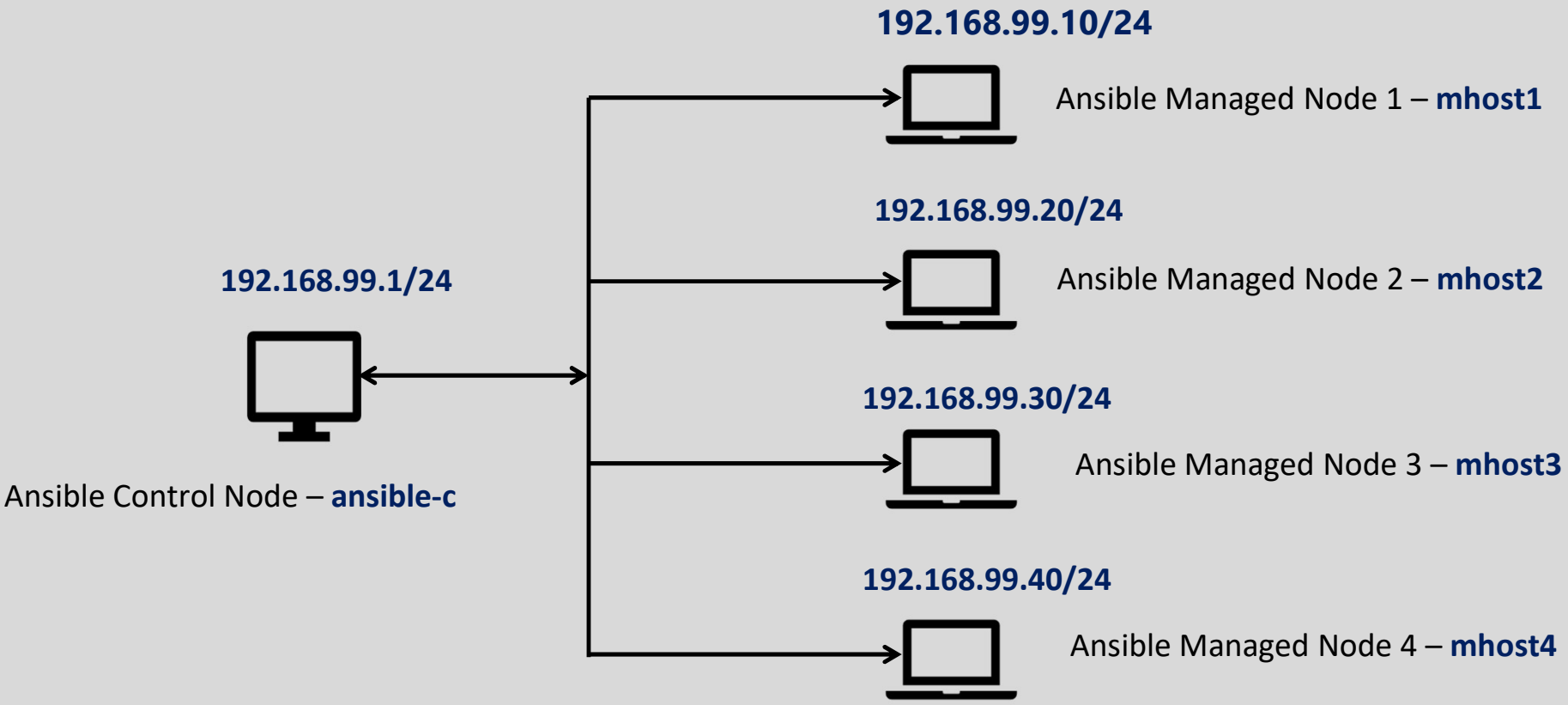
LAB Setup Details

- We will use 5 CentOS-8 VM's installed using Oracle VirtualBox.
- One Linux Machine with GUI (Workstation) and other 4 VM's will be installed with minimum install option not to use enough resources of host machine which is practical approach in case you don't have enough resources available on your host machine.
- Minimum of 8GiB RAM is needed on host machine,16 GiB is preferred.
- On Managed Nodes, we will leave some disk space free to add new partitions as a part of different tasks.

VM Name	Software Selection	RAM	Hard disk Size	Hostname	IP Address
ansible-c	Workstation	2+ GiB	25 GiB	ansible-c.example.com	192.168.99.1/24
mhost1	Minimum install	1.5 GiB	30 GiB	mhost1.example.com	192.168.99.10/24
mhost2	Minimum install	1.5 GiB	30 GiB	mhost2.example.com	192.168.99.20/24
mhost3	Minimum install	1.5 GiB	30 GiB	mhost3.example.com	192.168.99.30/24
mhost4	Minimum install	1.5 GiB	30 GiB	mhost4.example.com	192.168.99.40/24

- We will install **ansible-c** VM using auto partitioning scheme.
- On managed node VM's, We will configure manual partitions (Custom partitioning) and we will leave some disk space free for practice tasks about disk management**(/boot=300MiB, /home=10GiB, / = 12GiB, 7.71 GiB Free disk space).**

Setting Lab Environment



Configuring hosts file for Name Resolution on ansible-c

We will use hosts file for local name resolution for same . Later in this course we will configure managed hosts to provide local DNS functionality as a part of one of the important objectives of RHCE Exam.

vim /etc/hosts

```
192.168.99.10   mhost1.example.com      mhost1
192.168.99.20   mhost2.example.com      mhost2
192.168.99.30   mhost3.example.com      mhost3
192.168.99.40   mhost4.example.com      mhost4
```

:wq

To verify DNS functionality, execute

getent hosts mhost1.example.com (Forward DNS lookup for mhost1)

Installing Ansible Control Node

On RHEL/CentOS, Ansible package is available through **EPEL** (Extra packages for enterprise linux) repository. So first we need to install **epel-release** package to make EPEL repository available.

To install **epel-release** package, we need to connect VM to internet(Adding bridged interface) to use online repository and after package is installed, **ansible package** will become available and we will install **ansible**.

On the exam, you will not have internet connection, so they would/should provide you with required package to be installed for ansible.

dnf install epel-release	To make **EPEL repo** available
dnf provides ansible	To display **ansible** packages
dnf install ansible	Installing **ansible**
ansible --version	Displaying **ansible version**

At this time, ansible version 2.9 is latest and ansible 2.9 version will be installed by default. However for exam we need to use ansible engine 2.8.

We will install ansible 2.8 later before start doing tasks and we will practice all tasks on ansible version 2.8.

Setting up SSH key authentication

Before using ansible to manage remote hosts ,we will setup SSH key authentication between **ansible-c** and all other VM's.

To setup SSH private/public key authentication for root user, We will use for iteration on Ansible control node **(ansible-c).**

```
#ssh-keygen -t rsa
#for host in 1 2 3 4
 >do
 >ssh-copy-id mhost$host
 >done
```