

# Assignment module 10:

## Samba & Mail services, Virtualization

### Question 1: Create a shared folder and configure samba

```
[root@localhost ~]#  
[root@localhost ~]# uname -a  
Linux localhost.localdomain 3.10.0-514.el7.x86_64 #1 SMP Tue Nov 22 16:42:41 UTC 2016 x86_64  
x86_64 x86_64 GNU/Linux  
[root@localhost ~]#  
[root@localhost ~]# pwd; whoami  
/root  
root  
[root@localhost ~]#  
[root@localhost ~]# yum install samba -y  
...  
Verifying : samba-client-4.4.4-9.el7.x86_64 15/16  
Verifying : samba-libs-4.4.4-9.el7.x86_64 16/16
```

Installed:

samba.x86\_64 0:4.4.4-14.el7\_3

Dependency Installed:

samba-common-tools.x86\_64 0:4.4.4-14.el7\_3

Dependency Updated:

libsmbclient.x86\_64 0:4.4.4-14.el7\_3 libwbclient.x86\_64 0:4.4.4-14.el7\_3  
samba-client.x86\_64 0:4.4.4-14.el7\_3 samba-client-libs.x86\_64 0:4.4.4-14.el7\_3  
samba-common.noarch 0:4.4.4-14.el7\_3 samba-common-libs.x86\_64 0:4.4.4-14.el7\_3  
samba-libs.x86\_64 0:4.4.4-14.el7\_3

Complete!

```
[root@localhost ~]#  
[root@localhost ~]#  
[root@localhost ~]# mkdir /sambadir  
[root@localhost ~]# ls -lhd /sambadir/  
drwxr-xr-x. 2 root root 4.0K May 30 08:18 /sambadir/  
[root@localhost ~]#  
[root@localhost ~]# chmod 770 /sambadir  
[root@localhost ~]#  
[root@localhost ~]# ls -lhd /sambadir/  
drwxrwx---. 2 root root 4.0K May 30 08:18 /sambadir/  
[root@localhost ~]#
```

```

[root@localhost ~]#
[root@localhost ~]# cd /smbadir/
[root@localhost sambadir]# touch file1 file2 file3
[root@localhost sambadir]# echo "Simple message to share via Samba service" > file1
[root@localhost sambadir]# cat file1
Simple message to share via Samba service
[root@localhost sambadir]# [root@localhost sambadir]#
[root@localhost sambadir]# useradd edureka
[root@localhost sambadir]# smbpasswd -a edureka
New SMB password:
Retype new SMB password:
Added user edureka.
[root@localhost sambadir]#
[root@localhost sambadir]# groupadd smbusers
[root@localhost sambadir]# ls -lhd /smbadir/
drwxrwx---. 2 root root 4.0K May 30 08:21 /smbadir/
[root@localhost sambadir]# chown :smbusers /smbadir
[root@localhost sambadir]# ls -lhd /smbadir/
drwxrwx---. 2 root smbusers 4.0K May 30 08:21 /smbadir/
[root@localhost sambadir]# usermod -G smbusers edureka
[root@localhost sambadir]#
[root@localhost sambadir]# vi /etc/samba/smb.conf
[root@localhost sambadir]#
[root@localhost sambadir]# tail -8 /etc/samba/smb.conf
[smbadir]
    comment = Centos7 Samba share
    path = /smbadir
    browseable = yes
    guest ok = yes
    public = yes
    writable = yes
    available = yes
[root@localhost sambadir]#
[root@localhost sambadir]# testparm /etc/samba/smb.conf
Load smb config files from /etc/samba/smb.conf
rlimit_max: increasing rlimit_max (1024) to minimum Windows limit (16384)
Processing section "[homes]"
Processing section "[printers]"
Processing section "[print$]"
Processing section "[smbadir]"
Loaded services file OK.
Server role: ROLE_STANDALONE

Press enter to see a dump of your service definitions
...
[root@localhost sambadir]#
[root@localhost sambadir]# yum install setroubleshoot-server -y

```

```

Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
* base: centos.digitalsuisse.com
* epel: mirror.spreitzer.ch
* extras: linuxsoft.cern.ch
* updates: linuxsoft.cern.ch
Package setroubleshoot-server-3.2.27.2-3.el7.x86_64 already installed and latest version
Nothing to do
[root@localhost sambadir]#
[root@localhost sambadir]# semanage fcontext -a -t samba_share_t "/sambadir(/.*)"?"
[root@localhost sambadir]# restorecon -R /sambadir
[root@localhost sambadir]#
[root@localhost sambadir]# firewall-cmd --permanent --add-service=samba
success
[root@localhost sambadir]# firewall-cmd --reload
success
[root@localhost sambadir]#
[root@localhost sambadir]# systemctl enable smb
Created symlink from /etc/systemd/system/multi-user.target.wants/smb.service to
/usr/lib/systemd/system/smb.service.
[root@localhost sambadir]#
[root@localhost sambadir]# systemctl start smb.service
[root@localhost sambadir]#
[root@localhost sambadir]# ifconfig wlp3s0
wlp3s0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.1.2 netmask 255.255.255.0 broadcast 192.168.1.255
    inet6 fe80::9b79:aca9:746d:3ebc prefixlen 64 scopeid 0x20<link>
    ether 60:67:20:3e:19:14 txqueuelen 1000 (Ethernet)
    RX packets 16634 bytes 11788107 (11.2 MiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 8902 bytes 2389855 (2.2 MiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

```

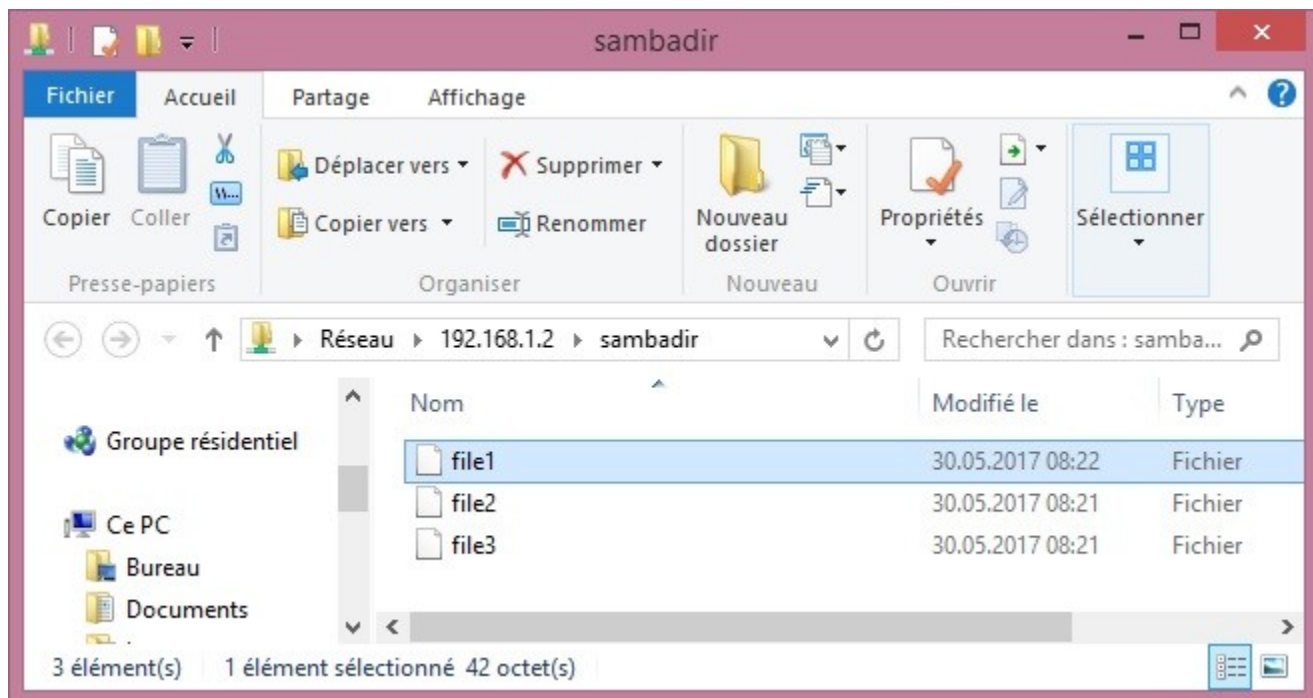
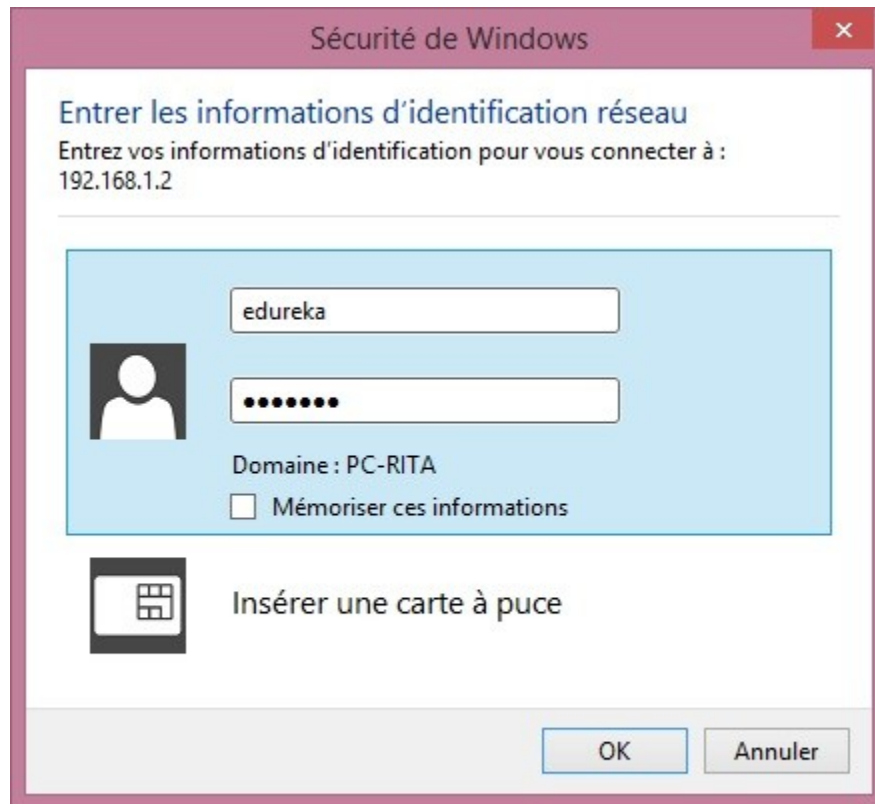
```

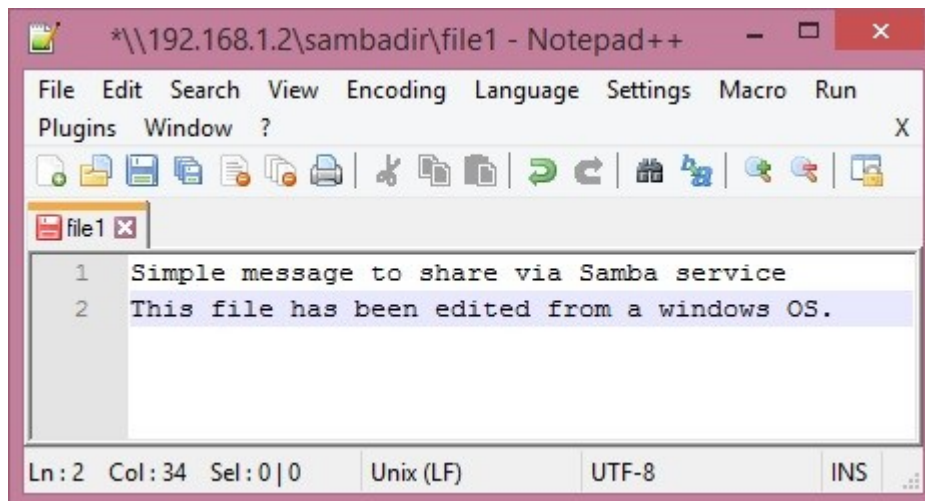
[root@localhost sambadir]# [root@localhost sambadir]# firewall-cmd --list-all
public (active)
  target: default
  icmp-block-inversion: no
  interfaces: wlp3s0
  sources:
services: dhcpv6-client samba ssh
  ports:
  protocols:
  masquerade: no
  forward-ports:
  sourceports:
  icmp-blocks:
  rich rules:

```

## **Question 2: Access the shared folder from Windows and Linux clients**

### **Access the shared folder from Windows Client:**





### Access the shared folder from Linux Client:

```
[root@localhost sambadir]#
[root@localhost sambadir]# yum install samba-client samba-winbind -y
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
* base: centos.digitalsuisse.com
* epel: mirror.spreitzer.ch
* extras: linuxsoft.cern.ch
* updates: linuxsoft.cern.ch
Package samba-client-4.4.4-14.el7_3.x86_64 already installed and latest version
Resolving Dependencies
--> Running transaction check
---> Package samba-winbind.x86_64 0:4.4.4-14.el7_3 will be installed
--> Processing Dependency: samba-winbind-modules = 4.4.4-14.el7_3 for package: samba-winbind-
4.4.4-14.el7_3.x86_64
--> Running transaction check
---> Package samba-winbind-modules.x86_64 0:4.4.4-14.el7_3 will be installed
--> Finished Dependency Resolution
```

Dependencies Resolved

```
=====
Package                Arch      Version      Repository    Size
=====
```

=====

Installing:

samba-winbind x86\_64 4.4.4-14.el7\_3 updates 485 k

Installing for dependencies:

samba-winbind-modules x86\_64 4.4.4-14.el7\_3 updates 109 k

Transaction Summary

=====

Install 1 Package (+1 Dependent package)

Total download size: 594 k

Installed size: 1.5 M

Downloading packages:

(1/2): samba-winbind-modules-4.4.4-14.el7\_3.x86\_64.rpm | 109 kB 00:00:00

(2/2): samba-winbind-4.4.4-14.el7\_3.x86\_64.rpm | 485 kB 00:00:01

-----

Total 354 kB/s | 594 kB 00:01

Running transaction check

Running transaction test

Transaction test succeeded

Running transaction

Installing : samba-winbind-modules-4.4.4-14.el7\_3.x86\_64 1/2

Installing : samba-winbind-4.4.4-14.el7\_3.x86\_64 2/2

Verifying : samba-winbind-modules-4.4.4-14.el7\_3.x86\_64 1/2

Verifying : samba-winbind-4.4.4-14.el7\_3.x86\_64 2/2

Installed:

samba-winbind.x86\_64 0:4.4.4-14.el7\_3

Dependency Installed:

samba-winbind-modules.x86\_64 0:4.4.4-14.el7\_3

Complete!

[root@localhost sambadir]#

[akmtir@localhost ~]\$ **whoami**

akmtir

[akmtir@localhost ~]\$

[akmtir@localhost ~]\$ **ls -l /sambadir/**

ls: cannot open directory /sambadir/: **Permission denied**

[akmtir@localhost ~]\$ **cd /sambadir/**

bash: cd: /sambadir/: **Permission denied**

[akmtir@localhost ~]\$

[akmtir@localhost ~]\$ **smbclient //192.168.1.2/sambadir -U edureka**

Enter edureka's password:

Domain=[SAMBA] OS=[Windows 6.1] Server=[Samba 4.4.4]

smb: \> ls

.	D	0	Tue May 30 08:21:34 2017
..	DR	0	Tue May 30 08:18:48 2017
file3	N	0	Tue May 30 08:21:34 2017
file1	N	42	Tue May 30 08:22:18 2017
file2	N	0	Tue May 30 08:21:34 2017

211339640 blocks of size 1024. 193413380 blocks available

smb: \>

### **Question 3: Configure a simple mail server**

```
[root@localhost ~]#
[root@localhost ~]# yum install postfix -y
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
* base: centos.digitalsuisse.com
* epel: mirror.spreitzer.ch
* extras: linuxsoft.cern.ch
* updates: linuxsoft.cern.ch
Package 2:postfix-2.10.1-6.el7.x86_64 already installed and latest version
Nothing to do
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]# firewall-cmd --permanent --add-service=smtp
success
[root@localhost ~]#
[root@localhost ~]# firewall-cmd --reload
success
[root@localhost ~]#
[root@localhost ~]# systemctl enable postfix
[root@localhost ~]#
[root@localhost ~]# systemctl restart postfix
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]# vi /etc/postfix/main.cf
[root@localhost ~]#
[root@localhost ~]# postfix check
[root@localhost ~]#
[root@localhost ~]# postconf -n
alias_database = hash:/etc/aliases
alias_maps = hash:/etc/aliases
command_directory = /usr/sbin
config_directory = /etc/postfix
daemon_directory = /usr/libexec/postfix
```

```

data_directory = /var/lib/postfix
debug_peer_level = 2
debugger_command = PATH=/bin:/usr/bin:/usr/local/bin:/usr/X11R6/bin ddd $daemon_directory/
$process_name $process_id & sleep 5
html_directory = no
inet_interfaces = all
inet_protocols = all
mail_owner = postfix
mailq_path = /usr/bin/mailq.postfix
manpage_directory = /usr/share/man
mydestination = $myhostname, localhost.$mydomain, localhost, $mydomain
mydomain = akram.com
myhostname = mail.akram.com
mynetworks = 192.168.1.0/24, 127.0.0.0/8
myorigin = $mydomain
newaliases_path = /usr/bin/newaliases.postfix
queue_directory = /var/spool/postfix
readme_directory = /usr/share/doc/postfix-2.10.1/README_FILES
sample_directory = /usr/share/doc/postfix-2.10.1/samples
sendmail_path = /usr/sbin/sendmail.postfix
setgid_group = postdrop
unknown_local_recipient_reject_code = 550
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]# setsebool -P allow_postfix_local_write_mail_spool on
[root@localhost ~]#
[root@localhost ~]# systemctl restart postfix.service
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]# adduser ureka
[root@localhost ~]#
[root@localhost ~]# echo testmail | mail -s "Test Mail" ureka@akram.com
[root@localhost ~]#
[root@localhost ~]# su - ureka
[ureka@localhost ~]$
[ureka@localhost ~]$ mail
Heirloom Mail version 12.5 7/5/10. Type ? for help.
"/var/spool/mail/ureka": 1 message 1 new
>N 1 root          Tue May 30 11:16 18/550  "Test Mail"
& 1
Message 1:
From root@akram.com Tue May 30 11:16:36 2017
Return-Path: <root@akram.com>
X-Original-To: ureka@akram.com
Delivered-To: ureka@akram.com
Date: Tue, 30 May 2017 11:16:36 +0200
To: ureka@akram.com

```



**Subject: Test Mail**

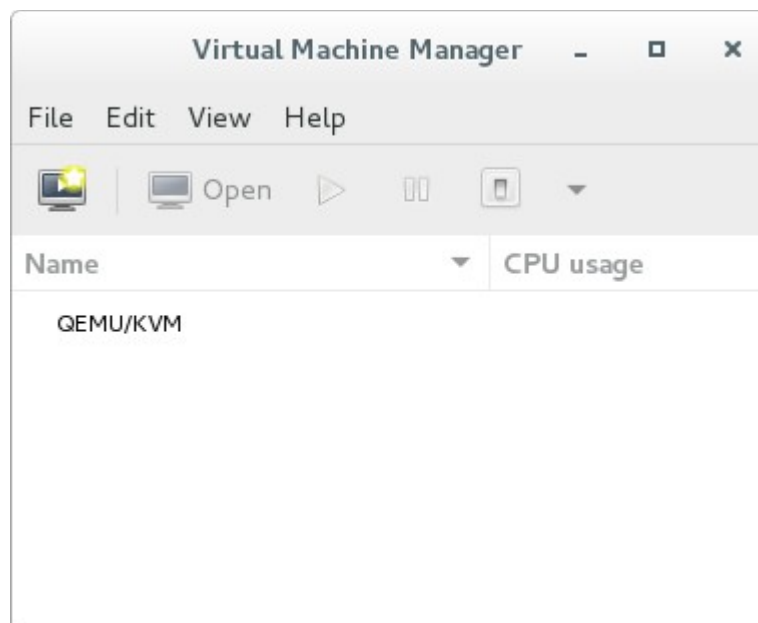
User-Agent: Heirloom mailx 12.5 7/5/10  
Content-Type: text/plain; charset=us-ascii  
From: root@akram.com (root)  
Status: R

**testmail**

**Question 4 : Configure two virtual environments in Centos7**

```
[root@localhost ~]#  
[root@localhost ~]# uname -a  
Linux localhost.localdomain 3.10.0-514.el7.x86_64 #1 SMP Tue Nov 22 16:42:41 UTC 2016 x86_64  
x86_64 x86_64 GNU/Linux  
[root@localhost ~]#  
[root@localhost ~]#  
[root@localhost ~]# virsh list --all  
Id   Name                               State  
-----
```

```
[root@localhost ~]#  
[root@localhost ~]# virt-manager  
[root@localhost ~]#
```



New VM

Create a new virtual machine  
Step 1 of 5

Connection: QEMU/KVM

Choose how you would like to install the operating system

- ☒ Local install media (ISO image or CDROM)
- ☐ Network Install (HTTP, FTP, or NFS)
- ☐ Network Boot (PXE)
- ☐ Import existing disk image

Cancel Back Forward

New VM

Create a new virtual machine  
Step 2 of 5

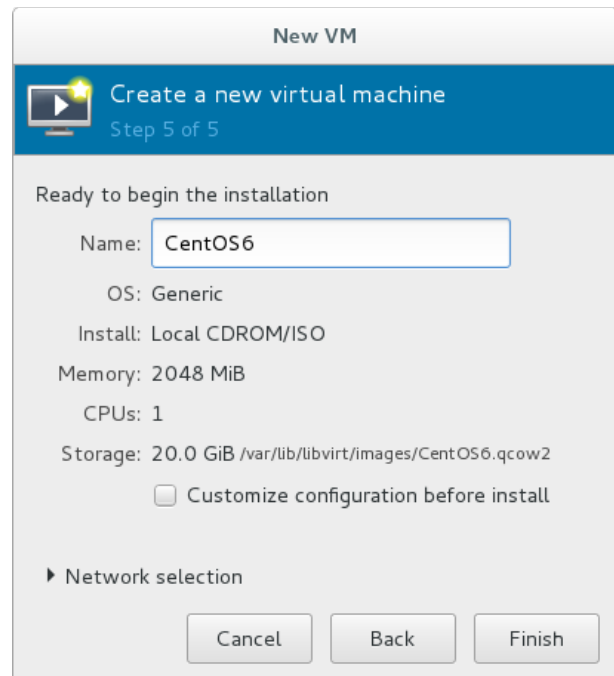
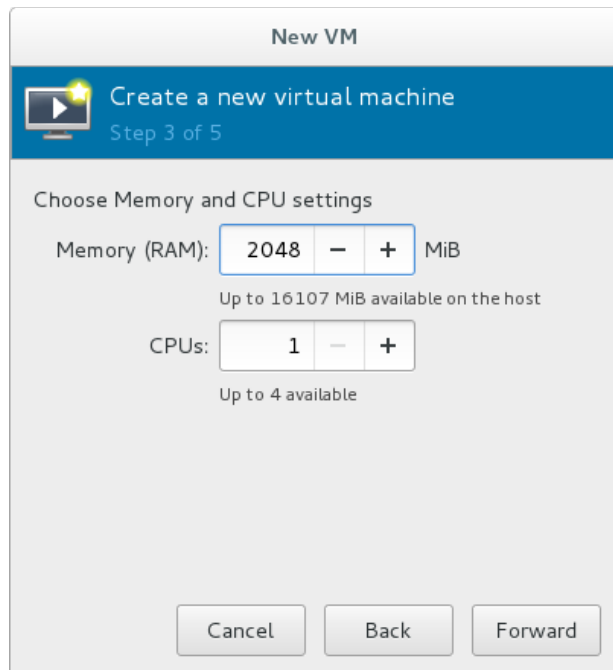
Locate your install media

☐ Use CDROM or DVD  
No media detected (/dev/sr0)

☒ Use ISO image:  
/home/akmtir/Downloads/CentOS-6. ▼ Browse...

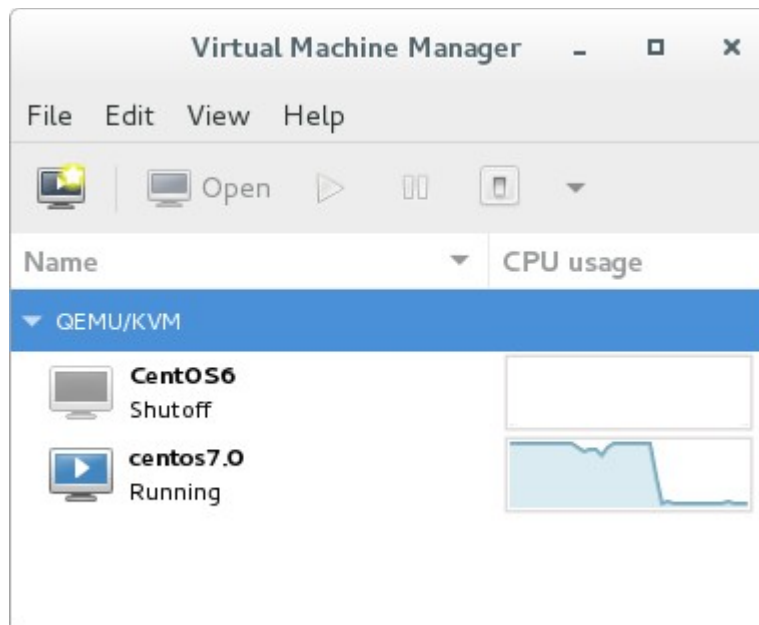
☒ Automatically detect operating system based on install media  
OS type: Unknown  
Version: Unknown

Cancel Back Forward



...





```
[root@localhost ~]#
```

```
[root@localhost ~]# virsh list --all
```

```
Id   Name                               State
```

```
-----
3    centos7.0                        running
-    CentOS6                          shut off
```

```
[root@localhost ~]#
```