

RH124 Report

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Chapter 12

Figure 1

Guided exercise for network validation

```
Last login: Sun Oct 23 16:39:49 2022 from 172.25.250.9
[student@servera ~]$ ip link
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN mode DEFAULT group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 8942 qdisc fq_codel state UP mode DEFAULT group default qlen 1000
    link/ether 52:54:00:00:fa:0a brd ff:ff:ff:ff:ff:ff
[student@servera ~]$ ip addr
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 8942 qdisc fq_codel state UP group default qlen 1000
    link/ether 52:54:00:00:fa:0a brd ff:ff:ff:ff:ff:ff
    inet 172.25.250.10/24 brd 172.25.250.255 scope global noprefixroute eth0
        valid_lft forever preferred_lft forever
    inet6 fe80::7664:264b:8b32:d700/64 scope link dadfailed tentative noprefixroute
        valid_lft forever preferred_lft forever
    inet6 fe80::5b0b:316b:561e:86ab/64 scope link noprefixroute
        valid_lft forever preferred_lft forever
[student@servera ~]$ ip -s link show enX
Device "enX" does not exist.
[student@servera ~]$ ip -s link show eth0
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 8942 qdisc fq_codel state UP mode DEFAULT group default qlen 1000
    link/ether 52:54:00:00:fa:0a brd ff:ff:ff:ff:ff:ff
    RX: bytes  packets  errors  dropped  overrun  mcast
    34080      298      0        0         0         0
    TX: bytes  packets  errors  dropped  carrier  collsns
    21406      203      0        0         0         0
[student@servera ~]$ ip route
default via 172.25.250.254 dev eth0 proto static metric 100
172.25.250.0/24 dev eth0 proto kernel scope link src 172.25.250.10 metric 100
[student@servera ~]$ ping -c3 172.25.250.254
PING 172.25.250.254 (172.25.250.254) 56(84) bytes of data.
64 bytes from 172.25.250.254: icmp_seq=1 ttl=64 time=0.648 ms
64 bytes from 172.25.250.254: icmp_seq=2 ttl=64 time=0.254 ms
^C
--- 172.25.250.254 ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 34ms
rtt min/avg/max/mdev = 0.254/0.451/0.648/0.197 ms
[student@servera ~]$ tracepath classroom.example.com
1?: [LOCALHOST] pmtu 8942
 1: workstation.lab.example.com 0.746ms
 1: workstation.lab.example.com 0.095ms
 2: classroom.example.com 0.550ms reached
Resume: pmtu 8942 hops 2 back 2
[student@servera ~]$ ss -lt
State      Recv-Q      Send-Q      Local Address:Port      Peer Address:Port
LISTEN     0            128         0.0.0.0:sunrpc           0.0.0.0:*
LISTEN     0            128         0.0.0.0:ssh              0.0.0.0:*
LISTEN     0            128         [::]:sunrpc             [::]:*
LISTEN     0            128         [::]:ssh                [::]:*
[student@servera ~]$ logout
Connection to servera closed.
[student@workstation ~]$ PS1='[Roger Zhang@h \w] > '
[Roger Zhang@workstation ~] >
```

Note: use ip command to view different network interface

Figure 2

Guided exercise for network configuration

```
student@workstation:~  
File Edit View Search Terminal Help  
ipv4.never-default: no  
[student@servera ~]$ nmcli dev status  
DEVICE TYPE STATE CONNECTION  
eth0 ethernet connected Wired connection 1  
lo loopback unmanaged --  
[student@servera ~]$ nmcli dev show eth0  
GENERAL.DEVICE: eth0  
GENERAL.TYPE: ethernet  
GENERAL.HWADDR: 52:54:00:00:FA:0A  
GENERAL.MTU: 8942  
GENERAL.STATE: 100 (connected)  
GENERAL.CONNECTION: Wired connection 1  
GENERAL.CON-PATH: /org/freedesktop/NetworkManager/ActiveConnection/1  
WIRED-PROPERTIES.CARRIER: on  
IP4.ADDRESS[1]: 172.25.250.10/24  
IP4.GATEWAY: 172.25.250.254  
IP4.ROUTE[1]: dst = 172.25.250.0/24, nh = 0.0.0.0, mt = 100  
IP4.ROUTE[2]: dst = 0.0.0.0/0, nh = 172.25.250.254, mt = 100  
IP4.DNS[1]: 172.25.250.254  
IP6.ADDRESS[1]: fe80::5b0b:316b:561e:86ab/64  
IP6.ADDRESS[2]: fe80::7664:264b:8b32:d700/64  
IP6.GATEWAY: --  
IP6.ROUTE[1]: dst = fe80::/64, nh = ::, mt = 100  
IP6.ROUTE[2]: dst = ff00::/8, nh = ::, mt = 256, table=255  
[student@servera ~]$ sudo nmcli con add con-name "static-addr" ifname eth0 type ethernet ipv4.method manual  
[sudo] password for student:  
Connection 'static-addr' (88fad57e-21e4-4994-ac4a-f670fea82b05) successfully added.  
[student@servera ~]$ sudo nmcli con mod "static-addr" ipv4.dns 172.25.250.254  
[student@servera ~]$ nmcli con show  
NAME UUID TYPE DEVICE  
Wired connection 1 81b08161-8925-3cb9-a94c-e3c827e2adc3 ethernet eth0  
static-addr 88fad57e-21e4-4994-ac4a-f670fea82b05 ethernet --  
[student@servera ~]$ nmcli con show --active  
NAME UUID TYPE DEVICE  
Wired connection 1 81b08161-8925-3cb9-a94c-e3c827e2adc3 ethernet eth0  
[student@servera ~]$ sudo nmcli con up "static-addr"  
Connection successfully activated (D-Bus active path: /org/freedesktop/NetworkManager/ActiveConnection/2)  
[student@servera ~]$ nmcli con show --active  
NAME UUID TYPE DEVICE  
static-addr 88fad57e-21e4-4994-ac4a-f670fea82b05 ethernet eth0  
[student@servera ~]$ sudo nmcli con mod "Wired connection 1" \> connection.autoconnect no  
[student@servera ~]$ sudo systemctl reboot  
Connection to servera closed by remote host.  
Connection to servera closed.  
[Roger Zhang@workstation ~] > lab net-configure finish  
Cleaning up the lab on servera:  
• Check servera..... SUCCESS  
• Activate Wired connection 1..... SUCCESS  
• Auto connect Wired connection 1..... SUCCESS  
• Remove static-addr..... SUCCESS  
• Remove /tmp/defprofile..... SUCCESS  
Lab finished.  
[Roger Zhang@workstation ~] > |
```

Note: create new network interface and switch to that interface

Figure 3

Finish Network Lab

```
student@workstation:~  
File Edit View Search Terminal Help  
o. Check serverb connectivity..... SUCCESS  
I . Storing the default profile..... SUCCESS  
  . Backup serverb hosts file..... SUCCESS  
  
[Roger Zhang@workstation ~] > ssh student@serverb  
Activate the web console with: systemctl enable --now cockpit.socket  
  
This system is not registered to Red Hat Insights. See https://cloud.redhat.com/  
To register this system, run: insights-client --register  
  
Last login: Sun Oct 23 16:42:46 2022 from 172.25.250.9  
[student@serverb ~]$ sudo -i  
[sudo] password for student:  
[root@serverb ~]# nmcli con add con-name lab ifname eth0 type ethernet ipv4.method manual ipv4.address  
172.25.250.11/24 ipv4.gateway 172.25.250.254  
Connection 'lab' (e38680be-a869-485c-9b03-2135c3eccb6e) successfully added.  
[root@serverb ~]# nmcli con mod "lab" ipv4.dns 172.25.250.254  
[root@serverb ~]# nmcli con mod "lab" connection.autoconnect yes  
[root@serverb ~]# nmcli con mod "Wired connection 1" connection.autoconnect no  
[root@serverb ~]# nmcli con mod "lab" +ipv4.addresses 10.0.1.1/24  
[root@serverb ~]# echo "10.0.1.1 private" >> /etc/hosts  
[root@serverb ~]# systemctl reboot  
Connection to serverb closed by remote host.  
Connection to serverb closed.  
[Roger Zhang@workstation ~] > ping serverb  
PING serverb.lab.example.com (172.25.250.11) 56(84) bytes of data.  
64 bytes from serverb.lab.example.com (172.25.250.11): icmp_seq=1 ttl=64 time=0.708 ms  
64 bytes from serverb.lab.example.com (172.25.250.11): icmp_seq=2 ttl=64 time=0.380 ms  
^C  
--- serverb.lab.example.com ping statistics ---  
2 packets transmitted, 2 received, 0% packet loss, time 27ms  
rtt min/avg/max/mdev = 0.380/0.544/0.708/0.164 ms  
[Roger Zhang@workstation ~] > lab net-review grade  
  
Grading the student's work on serverb:  
  
  . Check hosts file configuration..... PASS  
  . Check lab network connection exists..... PASS  
  . Check lab is marked active..... PASS  
  . Check lab autoconnect marked yes..... PASS  
  . Check lab IP address and netmask..... PASS  
  . Check lab second IP address and netmask..... PASS  
  . Check lab IPv4 gateway..... PASS  
  . Check lab IPv4 DNS..... PASS  
  
Overall lab grade..... PASS  
  
[Roger Zhang@workstation ~] > lab net-review finish  
  
Cleaning up the lab on serverb:  
  
  . Check serverb..... SUCCESS  
  . Reset original connection profile..... SUCCESS  
  . Remove lab connection profile..... SUCCESS  
  . Restore the /etc/hosts file on serverb..... SUCCESS  
  
Lab finished.  
  
[Roger Zhang@workstation ~] > 
```

Note: Create a network interface and add DNS config to it.

Chapter Review

In this chapter, I learnt the TCP/IP network model is a simplified, four-layered set of abstractions that describes how different protocols interoperate in order for computers to send traffic from one machine to another over the Internet. IPv4 is the primary network protocol used on the Internet today. IPv6 is intended as an eventual replacement for the IPv4 network protocol. By default, Red Hat Enterprise Linux operates in dual-stack mode, using both protocols in parallel. NetworkManager is a daemon that monitors and manages network configuration. The nmcli command is a command-line tool for configuring network settings with NetworkManager.

Chapter 13

Figure 4

Finishes file archive guided exercise

```
student@workstation:~
File Edit View Search Terminal Help
drwxr-xr-x. 7 root root 4096 Apr 23 2020 security
drwxr-xr-x. 3 root root 57 Apr 23 2020 selinux
-rw-r--r--. 1 root root 692252 Oct 30 2019 services
-rw-r--r--. 1 root root 216 Jan 17 2020 sestatus.conf
drwxr-xr-x. 2 root root 33 Apr 23 2020 setroubleshoot
----- 1 root root 1124 Oct 23 16:34 shadow
----- 1 root root 1262 Oct 23 16:34 shadow-
-rw-r--r--. 1 root root 68 May 7 2020 shells
drwxr-xr-x. 2 root root 62 Apr 23 2020 skel
drwxr-xr-x. 3 root root 74 May 7 2020 smartmontools
-rw-r--r--. 1 root root 138 Jan 13 2020 sos.conf
drwxr-xr-x. 3 root root 245 May 7 2020 ssh
drwxr-xr-x. 2 root root 19 Apr 23 2020 ssl
drwx----- 4 sssd sssd 31 Apr 23 2020 sssd
-rw-r--r--. 1 root root 41 Oct 23 16:34 subgid
-rw-r--r--. 1 root root 66 Oct 23 16:34 subgid-
-rw-r--r--. 1 root root 41 Oct 23 16:34 subuid
-rw-r--r--. 1 root root 66 Oct 23 16:34 subuid-
-rw-r----- 1 root root 1786 Feb 5 2020 sudo.conf
-r--r----- 1 root root 4424 May 7 2020 sudoers
drwxr-x---. 2 root root 33 May 7 2020 sudoers.d
-rw-r----- 1 root root 3181 Feb 5 2020 sudo-ldap.conf
drwxr-xr-x. 3 root root 24 Apr 23 2020 swid
drwxr-xr-x. 6 root root 4096 May 7 2020 sysconfig
-rw-r--r--. 1 root root 449 Apr 15 2020 sysctl.conf
drwxr-xr-x. 2 root root 28 Apr 23 2020 sysctl.d
drwxr-xr-x. 4 root root 150 Sep 1 2020 systemd
lrwxrwxrwx. 1 root root 14 Mar 31 2020 system-release -> redhat-release
-rw-r--r--. 1 root root 38 Mar 31 2020 system-release-cpe
-rw----- 1 tss tss 7046 Jun 10 2019 tcsd.conf
drwxr-xr-x. 2 root root 6 Jan 16 2019 terminfo
drwxr-xr-x. 2 root root 6 Apr 15 2020 tmpfiles.d
-rw-r--r--. 1 root root 750 Feb 27 2020 trusted-key.key
drwxr-xr-x. 3 root root 109 Apr 23 2020 tuned
drwxr-xr-x. 4 root root 68 May 7 2020 udev
drwxr-xr-x. 2 root root 45 Apr 23 2020 unbound
-rw-r--r--. 1 root root 587 Aug 12 2018 updatedb.conf
-rw-r--r--. 1 root root 28 Apr 23 2020 vconsole.conf
-rw-r--r--. 1 root root 1982 Jul 23 2019 vimrc
-rw-r--r--. 1 root root 1204 Jul 23 2019 virg
-rw-r--r--. 1 root root 4925 Nov 26 2019 wgetrc
drwxr-xr-x. 6 root root 70 Apr 23 2020 X11
-rw-r--r--. 1 root root 642 Dec 9 2016 xattr.conf
drwxr-xr-x. 4 root root 38 Apr 23 2020 xdg
drwxr-xr-x. 2 root root 6 Aug 12 2018 xinetd.d
drwxr-xr-x. 2 root root 57 Apr 23 2020 yum
lrwxrwxrwx. 1 root root 12 Feb 18 2020 yum.conf -> dnf/dnf.conf
drwxr-xr-x. 2 root root 46 Oct 23 16:34 yum.repos.d
[root@servera etc]# logout
[student@servera ~]$ logout
Connection to servera closed.
[Roger Zhang@workstation ~] > lab archive-manage finish

You have completed attempting the guided exercise.

· Deleting archive file and directory created..... SUCCESS

Lab finished.

[Roger Zhang@workstation ~] > 
```

Note: shows different ways of tar command using.

Figure 5

Guided Exercise: Transferring Files Between Systems Securely

```
student@workstation:~
File Edit View Search Terminal Help
drwxr-xr-x. 2 root root      57 Apr 23  2020 yum
lrwxrwxrwx. 1 root root      12 Feb 18  2020 yum.conf -> dnf/dnf.conf
drwxr-xr-x. 2 root root      46 Oct 23 16:34 yum.repos.d
[root@servera etc]# logout
[student@servera ~]$ logout
Connection to servera closed.
[Roger Zhang@workstation ~] > lab archive-manage finish

You have completed attempting the guided exercise.

  · Deleting archive file and directory created..... SUCCESS

Lab finished.

[Roger Zhang@workstation ~] > lab archive-transfer start

Starting lab.

Preparing servera for lab exercise work:

  · Verifying server is reachable: servera..... SUCCESS
  · Verifying server is reachable: serverb..... SUCCESS
  · Ensuring directory does not exist: /home/student/serverbackup SUCCESS

[Roger Zhang@workstation ~] > ssh student@servera
Activate the web console with: systemctl enable --now cockpit.socket

This system is not registered to Red Hat Insights. See https://cloud.redhat.com/
To register this system, run: insights-client --register

Last login: Sun Oct 23 23:11:38 2022 from 172.25.250.9
[student@servera ~]$ mkdir ~/serverbackup
[student@servera ~]$ scp -r root@serverb:/etc/ssh ~/serverbackup
The authenticity of host 'serverb (172.25.250.11)' can't be established.
ECDSA key fingerprint is SHA256:1H687jfusVXYAUzAuByFfx1U/LB4VS+6h04wRhXhmZU.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'serverb,172.25.250.11' (ECDSA) to the list of known hosts.
root@serverb's password:
moduli                                100% 564KB 69.5MB/s 00:00
ssh_config                            100% 1716  1.2MB/s 00:00
05-redhat.conf                        100% 831   642.9KB/s 00:00
01-training.conf                     100% 36    26.7KB/s 00:00
ssh_host_ed25519_key                  100% 387   1.1MB/s 00:00
ssh_host_ed25519_key.pub              100% 82    275.0KB/s 00:00
ssh_host_ecdsa_key                   100% 492   1.5MB/s 00:00
ssh_host_ecdsa_key.pub               100% 162   551.9KB/s 00:00
ssh_host_rsa_key                     100% 2578  7.3MB/s 00:00
ssh_host_rsa_key.pub                 100% 554   1.8MB/s 00:00
sshd_config                          100% 4474  12.8MB/s 00:00
[student@servera ~]$ logout
Connection to servera closed.
[Roger Zhang@workstation ~] > lab archive-transfer finish

You have completed attempting the guided exercise.

  · Deleting directory created..... SUCCESS

Lab finished.

[Roger Zhang@workstation ~] > 
```

Note: Uses scp command to transfer files between servers.

Figure 6

Lab: Archiving and Transferring Files

```
student@workstation:~  
File Edit View Search Terminal Help  
drwxr-xr-x. 2 student student 32 Apr 23 2020 xinitrc.d  
./configsync/etc/X11/xinit/xinitrc.d:  
total 4  
-rwxr-xr-x. 1 student student 203 Jun 22 2018 50-systemd-user.sh  
./configsync/etc/X11/xorg.conf.d:  
total 0  
./configsync/etc/xdg:  
total 0  
drwxr-xr-x. 2 student student 6 Aug 12 2018 autostart  
drwxr-xr-x. 2 student student 18 Apr 23 2020 systemd  
./configsync/etc/xdg/autostart:  
total 0  
./configsync/etc/xdg/systemd:  
total 0  
lrwxrwxrwx. 1 student student 18 Apr 15 2020 user -> ../../systemd/user  
./configsync/etc/xinetd.d:  
total 0  
./configsync/etc/yum:  
total 0  
lrwxrwxrwx. 1 student student 14 Feb 18 2020 pluginconf.d -> ../dnf/plugins  
lrwxrwxrwx. 1 student student 18 Feb 18 2020 protected.d -> ../dnf/protected.d  
lrwxrwxrwx. 1 student student 11 Feb 18 2020 vars -> ../dnf/vars  
./configsync/etc/yum.repos.d:  
total 8  
-rw-r--r--. 1 student student 358 May 7 2020 redhat.repo  
-rw-r--r--. 1 student student 365 May 7 2020 rhel_dvd.repo  
[Roger Zhang@workstation /tmp/savedconfig] > cd  
[Roger Zhang@workstation ~] > lab archive-review grade  
  
Grading the student's work on serverb:  
  
· Verifying /configsync on serverb..... PASS  
· Verifying archive (exists) on serverb..... PASS  
· Verifying the compression used..... PASS  
· Verifying archive content..... PASS  
· Verifying archive (exists) on workstation..... PASS  
· Verifying archive (copied)..... PASS  
· Verifying /tmp/savedconfig exists on workstation..... PASS  
· Verifying archive content..... PASS  
  
Overall lab grade..... PASS  
  
[Roger Zhang@workstation ~] > lab archive-review finish  
  
You have completed attempting the guided exercise.  
  
· Deleting directory/file created: serverb..... SUCCESS  
· Deleting directory/file created: workstation..... SUCCESS  
  
Lab finished.  
  
[Roger Zhang@workstation ~] > 
```

Note: uses rsync to sync file between server and use tar for archiving.

Chapter 14

Figure 7

Guided Exercise: Explaining and Investigating RPM Software Packages

```
/opt/rhcsa-script/mymotd
[student@servera ~]$ rpm -q -p rhcsa-script-1.0.0-1.noarch.rpm --scripts
preinstall scriptlet (using /bin/sh):
if [ "$1" == "2" ]; then
    if [ -e /etc/motd.orig ]; then
        mv -f /etc/motd.orig /etc/motd
    fi
fi
postinstall scriptlet (using /bin/sh):
#####
# Set up MOTD scripts                                     #
#####
cd /etc
# Save the old MOTD if it exists
if [ -e motd ]
then
    cp motd motd.orig
fi
# create the MOTD for the first time
cat /opt/rhcsa-script/mymotd > /etc/motd
postuninstall scriptlet (using /bin/sh):
# Restore the original MOTD if it was backed up
if [ -e /etc/motd.orig ]
then
    mv -f /etc/motd.orig /etc/motd
fi
[student@servera ~]$ rpm2cpio rhcsa-script-1.0.0-1.noarch.rpm | cpio -tv
-rw-r--r--  1 root    root          1056 Mar  6  2019 ./opt/rhcsa-script/mymotd
3 blocks
[student@servera ~]$ rpm2cpio rhcsa-script-1.0.0-1.noarch.rpm | cpio -idv
./opt/rhcsa-script/mymotd
3 blocks
[student@servera ~]$ ls -lR opt
opt:
total 0
drwxrwxr-x. 2 student student 20 Oct 23 23:30 rhcsa-script

opt/rhcsa-script:
total 4
-rw-r--r--. 1 student student 1056 Oct 23 23:30 mymotd
[student@servera ~]$ sudo rpm -ivh rhcsa-script-1.0.0-1.noarch.rpm
[sudo] password for student:
Verifying...                               ##### [100%]
Preparing...                               ##### [100%]
Updating / installing...
 1:rhcsa-script-1.0.0-1                      ##### [100%]
[student@servera ~]$ rpm -q rhcsa-script
rhcsa-script-1.0.0-1.noarch
[student@servera ~]$ logout
Connection to servera closed.
[Roger Zhang@workstation ~] > lab software-rpm finish

You have completed attempting the guided exercise.

  · Removing package: rhcsa-script..... SUCCESS
  · Removing files: servera..... SUCCESS

Lab finished.


[Roger Zhang@workstation ~] > █
```

Note: Use rpm to install packet

Figure 8

Guided Exercise: Installing and Updating Software Packages with Yum

```

 Red Hat
Activities Terminal
Oct 23 23:39
student@workstation:~ x
File Edit View Search Terminal Help
Install scap-security-guide-0.1.48-7.el8.noarch @rhel-8.2-for-x86_64-appstream-rpms
Install @security-tools
[root@servera ~]# yum history undo 11
Last metadata expiration check: 1:15:50 ago on Sun 23 Oct 2022 10:23:04 PM EDT.
Undoing transaction 11, from Sun 23 Oct 2022 11:36:53 PM EDT
Install libtool-ltdl-2.4.6-25.el8.x86_64 @rhel-8.2-for-x86_64-baseos-rpms
Install gc-7.6.4-3.el8.x86_64 @rhel-8.2-for-x86_64-appstream-rpms
Install guile-5:2.0.14-7.el8.x86_64 @rhel-8.2-for-x86_64-appstream-rpms
Install libatomic_ops-7.6.2-3.el8.x86_64 @rhel-8.2-for-x86_64-appstream-rpms
Dependencies resolved.
=====
Package Arch Version Repository Size
=====
Removing:
gc x86_64 7.6.4-3.el8 @rhel-8.2-for-x86_64-appstream-rpms 221 k
guile x86_64 5:2.0.14-7.el8 @rhel-8.2-for-x86_64-appstream-rpms 12 M
libatomic_ops x86_64 7.6.2-3.el8 @rhel-8.2-for-x86_64-appstream-rpms 75 k
libtool-ltdl x86_64 2.4.6-25.el8 @rhel-8.2-for-x86_64-baseos-rpms 69 k
Transaction Summary
=====
Remove 4 Packages

Freed space: 12 M
Is this ok [y/N]: y
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
Preparing : 1/1
Running scriptlet: guile-5:2.0.14-7.el8.x86_64 1/4
Erasing : guile-5:2.0.14-7.el8.x86_64 1/4
Running scriptlet: guile-5:2.0.14-7.el8.x86_64 1/4
Erasing : gc-7.6.4-3.el8.x86_64 2/4
Erasing : libatomic_ops-7.6.2-3.el8.x86_64 3/4
Erasing : libtool-ltdl-2.4.6-25.el8.x86_64 4/4
Running scriptlet: libtool-ltdl-2.4.6-25.el8.x86_64 4/4
Verifying : gc-7.6.4-3.el8.x86_64 1/4
Verifying : guile-5:2.0.14-7.el8.x86_64 2/4
Verifying : libatomic_ops-7.6.2-3.el8.x86_64 3/4
Verifying : libtool-ltdl-2.4.6-25.el8.x86_64 4/4
Removed:
gc-7.6.4-3.el8.x86_64 guile-5:2.0.14-7.el8.x86_64 libatomic_ops-7.6.2-3.el8.x86_64
libtool-ltdl-2.4.6-25.el8.x86_64
Complete!
[root@servera ~]# logout
[student@servera ~]$ logout
Connection to servera closed.
[Roger Zhang@workstation ~] > lab software-yum finish

Cleaning up the lab on servera:
· Removing lab packages from servera..... SUCCESS
Lab finished.
[Roger Zhang@workstation ~] >

```

Figure 9

Lab: Installing and Updating Software Packages

```
student@workstation:~$ sudo yum localinstall \
>
[sudo] password for student:
^C[sudo] yum localinstall rhcsa-script-1.0.0-1.noarch.rpm
[sudo] password for student:
Last metadata expiration check: 0:01:47 ago on Sun 23 Oct 2022 11:41:21 PM EDT.
Dependencies resolved.
=====
Package                Architecture      Version           Repository        Size
=====
Installing:
rhcsa-script            noarch            1.0.0-1           @commandline      7.6 k
=====
Transaction Summary
=====
Install 1 Package

Total size: 7.6 k
Installed size: 1.0 k
Is this ok [y/N]: y
Downloading Packages:
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing                : rhcsa-script-1.0.0-1.noarch      1/1
  Running scriptlet: rhcsa-script-1.0.0-1.noarch      1/1
  Installing        : rhcsa-script-1.0.0-1.noarch      1/1
  Running scriptlet: rhcsa-script-1.0.0-1.noarch      1/1
  Verifying         : rhcsa-script-1.0.0-1.noarch      1/1

Installed:
rhcsa-script-1.0.0-1.noarch

Complete!
[student@serverb ~]$ rpm -q rhcsa-script
rhcsa-script-1.0.0-1.noarch
[student@serverb ~]$ logout
Connection to serverb closed.
[Roger Zhang@workstation ~] > lab software-review grade

  • Verifying that repo exists: ..... PASS
  • Verifying that xsane-gimp is installed: ..... PASS
  • Verifying that httpd is installed: ..... PASS
  • Verifying CUPS is removed: ..... PASS
  • Verifying exercise package is installed: serverb..... PASS

Overall lab grade..... PASS

[Roger Zhang@workstation ~] > lab software-review finish

You have completed attempting the guided exercise.

  • Removing repo: /etc/yum.repos.d/errata.repo ..... SUCCESS
  • Removing package: rhcsa-script..... SUCCESS
  • Removing files: serverb..... SUCCESS
  • Remove package: xsane-gimp.....
```

Note: modify repo and install using rpm and yum.

Chapter Review

In this chapter, I learned: Red Hat Subscription Management provides tools to entitle machines to product subscriptions, get updates to software packages, and track information about support contracts and subscriptions used by the systems. Software is provided as RPM packages, which make it easy to install, upgrade, and uninstall software from the system. The `rpm` command can be used to query a local database to provide information about the contents of installed packages and install downloaded package files. `yum` is a powerful command-line tool that can be used to install, update, remove, and query software packages. Red Hat Enterprise Linux 8 uses Application Streams to provide a single repository to host multiple versions of an application's packages and its dependencies.

Chapter 15

Figure 10

Guided Exercise: Mounting and Unmounting File Systems

```
Red Hat
Activities Terminal
Oct 24 00:05
student@workstation:~
File Edit View Search Terminal Help

· Removing repo: /etc/yum.repos.d/errata.repo ..... SUCCESS
· Removing package: rhcsa-script..... SUCCESS
· Removing files: serverb..... SUCCESS
· Remove package: xsane-gimp..... SUCCESS
· Remove module package: httpd..... SUCCESS
· Reinstall cups.x86_64: ..... SUCCESS

lab finished.

Roger Zhang@workstation ~] > lab fs-mount start

Starting lab.

Preparing servera for lab exercise work:

· Verifying server is reachable: servera..... SUCCESS
· Ensuring directory does not exist: /mnt/newspace..... SUCCESS
· Creating new partition: /dev/vdb..... SUCCESS

Roger Zhang@workstation ~] > ssh student@servera
Activate the web console with: systemctl enable --now cockpit.socket

This system is not registered to Red Hat Insights. See https://cloud.redhat.com/
to register this system, run: insights-client --register

Last login: Sun Oct 23 23:36:07 2022 from 172.25.250.9
student@servera ~]$ sudo -i
sudo] password for student:
root@servera ~]# mkdir /mnt/newspace
root@servera ~]# lsblk -fp /dev/vdb
NAME FSTYPE LABEL UUID MOUNTPOINT
dev/vdb
-/dev/vdb1 xfs fc367733-cad4-437a-bb42-e6f61d4f8e01
root@servera ~]# mount UUID="fc367733-cad4-437a-bb42-e6f61d4f8e01" /mnt/newspace
root@servera ~]# lsblk -fp /dev/vdb
NAME FSTYPE LABEL UUID MOUNTPOINT
dev/vdb
-/dev/vdb1 xfs fc367733-cad4-437a-bb42-e6f61d4f8e01 /mnt/newspace
root@servera ~]# cd /mnt/newspace
root@servera newspace]# mkdir newdir
root@servera newspace]# touch newdir/newfile
root@servera newspace]# umount /mnt/newspace
mount: /mnt/newspace: target is busy.
root@servera newspace]# cd
root@servera ~]# umount /mnt/newspace
root@servera ~]# logout
student@servera ~]$ logout
Connection to servera closed.
Roger Zhang@workstation ~] > lab fs-mount finish

You have completed attempting the guided exercise.

· Deleting directory: /mnt/newspace..... SUCCESS
· Deleting partitions: /dev/vdb..... SUCCESS

lab finished.

Roger Zhang@workstation ~] >
```

Note: Use mount to mount virtual block device and umount afterwards

Figure 11

Guided Exercise: Locating Files on the System

```
student@workstation:~  
File Edit View Search Terminal Help  
/usr/bin/nsupdate  
/usr/bin/desktop-file-install  
/usr/bin/desktop-file-validate  
/usr/bin/gprof  
/usr/bin/ld.bfd  
/usr/bin/ld.gold  
/usr/bin/objcopy  
/usr/bin/objdump  
/usr/bin/ranlib  
/usr/bin/readelf  
/usr/bin/strip  
/usr/bin/at  
/usr/bin/simc_lsmlplugin  
/usr/bin/wget  
/usr/bin/firewall-offline-cmd  
/usr/bin/unzipsfx  
/usr/bin/unzip  
/usr/bin/zipinfo  
/usr/bin/ncat  
/usr/bin/mouse-test  
/usr/bin/zipcloak  
/usr/bin/zipnote  
/usr/bin/zipsplit  
/usr/bin/firewall-cmd  
/usr/bin/vdodmeventd  
/usr/bin/vdodumpconfig  
/usr/bin/vdoforcerebuild  
/usr/bin/vdoformat  
/usr/bin/vdoreadonly  
/usr/bin/vdosetuid  
/usr/bin/pinfo  
/usr/bin/blkparse  
/usr/bin/blktrace  
/usr/bin/strace  
/usr/bin/dos2unix  
/usr/bin/unix2dos  
/usr/bin/updatedb  
/usr/bin/lssusb  
[student@servera ~]$ find /home/student -mmin +120  
/home/student/.bash_logout  
/home/student/.bash_profile  
/home/student/.bashrc  
/home/student/.viminfo  
[student@servera ~]$ find /dev -type b  
/dev/vdd  
/dev/vdc  
/dev/vdb  
/dev/vda3  
/dev/vda2  
/dev/vda1  
/dev/vda  
[student@servera ~]$ logout  
Connection to servera closed.  
[Roger Zhang@workstation ~] > lab fs-locate finish  
  
You have completed attempting the guided exercise.  
  
Lab finished.  
  
[Roger Zhang@workstation ~] > █
```

Note: Use find and locate to perform various file finding procedures.

Figure 12

Lab: Accessing Linux File Systems

```
student@workstation:~  
File Edit View Search Terminal Help  
  
Lab finished.  
[Roger Zhang@workstation ~] > lab fs-review start  
Starting lab.  
Preparing serverb for lab exercise work:  
· Verifying server is reachable: serverb..... SUCCESS  
· Ensuring directory does not exists: /mnt/freespace..... SUCCESS  
· Creating new partition: /dev/vdb..... SUCCESS  
  
[Roger Zhang@workstation ~] > ssh student@serverb  
Activate the web console with: systemctl enable --now cockpit.socket  
  
This system is not registered to Red Hat Insights. See https://cloud.redhat.com/  
To register this system, run: insights-client --register  
  
Last login: Sun Oct 23 23:42:29 2022 from 172.25.250.9  
[student@serverb ~]$ su -  
Password:  
Last login: Sun Oct 23 23:17:07 EDT 2022 on pts/0  
[root@serverb ~]# lsblk -fp /dev/vdb  
NAME          FSTYPE LABEL UUID                                MOUNTPOINT  
/dev/vdb  
└─/dev/vdb1 xfs          0ab90285-46b6-4e4e-9fa9-3da0487d405b  
[root@serverb ~]# mkdir /mnt/freespace  
[root@serverb ~]# mount UUID="0ab90285-46b6-4e4e-9fa9-3da0487d405b" /mnt/freespace  
[root@serverb ~]# lsblk -fp /dev/vdb1  
NAME          FSTYPE LABEL UUID                                MOUNTPOINT  
/dev/vdb1 xfs          0ab90285-46b6-4e4e-9fa9-3da0487d405b /mnt/freespace  
[root@serverb ~]# du /usr/share > /mnt/freespace/results.txt  
[root@serverb ~]# updatedb  
[root@serverb ~]# locate rsyslog.conf > /mnt/freespace/search1.txt  
[root@serverb ~]# find /usr/share -size +50M -size <100M > /mnt/freespace/search2.txt  
[root@serverb ~]# logout  
[student@serverb ~]$ logout  
Connection to serverb closed.  
[Roger Zhang@workstation ~] > lab fs-review grade  
  
Grading the student's work on serverb:  
· Verifying /dev/vdb1 is mounted:..... PASS  
· Verifying disk usage report: /usr/share..... PASS  
· Verifying search result: rsyslog.conf..... PASS  
· Verifying search results: /usr/share(>50M & <100M)..... PASS  
  
Overall lab grade..... PASS  
  
[Roger Zhang@workstation ~] > lab fs-review finish  
  
You have completed attempting the guided exercise.  
· Deleting directory/files: /mnt/freespace..... SUCCESS  
· Deleting partitions: /dev/vdb..... SUCCESS  
  
Lab finished.  
[Roger Zhang@workstation ~] > 
```

Note: Use `du`, `lsblk`, `mount` to mount , find files.

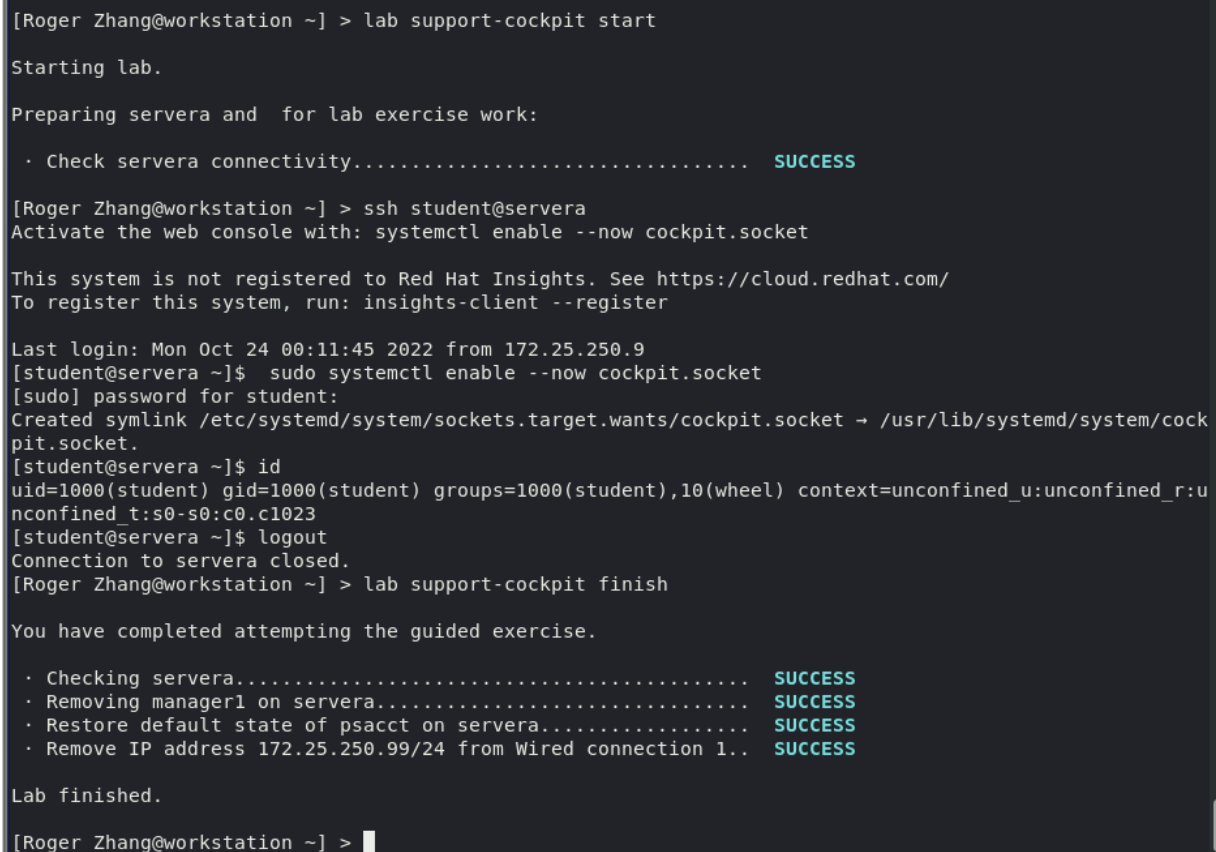
Chapter Review

In this chapter, I learned: Storage devices are represented by a special file type called block device. The `df` command reports total disk space, used disk space, and free disk space on all mounted regular file systems. The `mount` command allows the root user to manually mount a file system. All processes need to stop accessing the mount point in order to successfully unmount the device. The removable storage devices are mounted in the `/run/media` directory when using the graphical environment. The `find` command performs a real-time search in the local file systems to find files based on search criteria.

Chapter 16

Figure 13

Guided Exercise: Analyzing and Managing Remote Servers



```
[Roger Zhang@workstation ~] > lab support-cockpit start
Starting lab.
Preparing servera and  for lab exercise work:
  · Check servera connectivity..... SUCCESS

[Roger Zhang@workstation ~] > ssh student@servera
Activate the web console with: systemctl enable --now cockpit.socket

This system is not registered to Red Hat Insights. See https://cloud.redhat.com/
To register this system, run: insights-client --register

Last login: Mon Oct 24 00:11:45 2022 from 172.25.250.9
[student@servera ~]$ sudo systemctl enable --now cockpit.socket
[sudo] password for student:
Created symlink /etc/systemd/system/sockets.target.wants/cockpit.socket → /usr/lib/systemd/system/cockpit.socket.
[student@servera ~]$ id
uid=1000(student) gid=1000(student) groups=1000(student),10(wheel) context=unconfined_u:unconfined_r:unconfined_t:s0-s0:c0.c1023
[student@servera ~]$ logout
Connection to servera closed.
[Roger Zhang@workstation ~] > lab support-cockpit finish

You have completed attempting the guided exercise.

  · Checking servera..... SUCCESS
  · Removing manager1 on servera..... SUCCESS
  · Restore default state of psacct on servera..... SUCCESS
  · Remove IP address 172.25.250.99/24 from Wired connection 1.. SUCCESS

Lab finished.
[Roger Zhang@workstation ~] > 
```

Note: This exercise uses the web gui for fixing linux related issue.

Chapter review

In this chapter, I learned: Web Console is a web-based management interface to your server based on the open source Cockpit service. Web Console provides graphs of system performance, graphical tools

to manage system configuration and inspect logs, and an interactive terminal interfaces. Red Hat Customer Portal provides you with access to documentation, downloads, optimization tools, support case management, and subscription and entitlement management for your Red Hat products. `redhat-support-tool` is a command-line tool to query Knowledgebase and work with support cases from the server's command line. Red Hat Insights is a SaaS-based predictive analytics tool to help me identify and remediate threats to my systems' security, performance, availability, and stability.

Chapter 17

Figure 14

Lab: Managing Files from the Command Line

```
Starting lab.

Preparing serverb for lab exercise work:

· Creating /home/student/bin/manage-files on serverb..... SUCCESS

[Roger Zhang@workstation ~] > ssh student@serverb
Activate the web console with: systemctl enable --now cockpit.socket

This system is not registered to Red Hat Insights. See https://cloud.redhat.com/
To register this system, run: insights-client --register

Last login: Mon Oct 24 00:20:17 2022 from 172.25.250.9
[student@serverb ~]$ mkdir grading
[student@serverb ~]$ touch grading/grade{1,2,3}
[student@serverb ~]$ head -5 bin/manage-files > grading/manage-files.txt
[student@serverb ~]$ tail -3 bin/manage-files >> grading/manage-files.txt
[student@serverb ~]$ cd grading/
[student@serverb grading]$ cp manage-files.txt manage-files-copy.txt
[student@serverb grading]$ cd
[student@serverb ~]$ vim grading/manage-files-copy.txt
[student@serverb ~]$ vim grading/manage-files-copy.txt
[student@serverb ~]$ vim grading/manage-files-copy.txt
[student@serverb ~]$ ln grading/grade1 hardlink
[student@serverb ~]$ ln -s grading/grade2 softlink
[student@serverb ~]$ ls -l /boot > grading/longlisting.txt
[student@serverb ~]$ logout
Connection to serverb closed.
[Roger Zhang@workstation ~] > lab rhcsa-rh124-review1 grade

Grading the student's work on serverb:

· Verifying original files on serverb..... PASS
· Verifying if /home/student/grading exists on serverb..... PASS
· Verifying if the empty files exist on serverb..... PASS
· Evaluating the hard link on serverb..... PASS
· Evaluating the soft link on serverb..... PASS
· Evaluating the longlisting.txt file on serverb..... PASS
· Evaluating the manage-files-copy.txt on serverb..... PASS

Overall lab grade..... PASS

[Roger Zhang@workstation ~] > lab rhcsa-rh124-review1 finish

Completing the lab on serverb:

· Ensuring that the required environment is clean on serverb.. SUCCESS
· Deleting md5sum.txt from serverb..... SUCCESS
· Deleting /home/student/bin recursively from serverb..... SUCCESS
· Deleting links from serverb.....
```

Note: Uses vim, ln, mkdir to perform several file operations

Figure 15

Lab: Managing Users and Groups, Permissions and Processes

```
155 root      0 -20      0      0      0 I      0.0    0.0    0:00.00 kmpath_rdacd
156 root      0 -20      0      0      0 I      0.0    0.0    0:00.00 kaluad
158 root      0 -20      0      0      0 I      0.0    0.0    0:00.00 ipv6_addrconf
159 root      0 -20      0      0      0 I      0.0    0.0    0:00.00 kstrp
410 root      0 -20      0      0      0 I      0.0    0.0    0:00.00 rpciod
411 root      0 -20      0      0      0 I      0.0    0.0    0:00.00 kworker/u5:0
412 root      0 -20      0      0      0 I      0.0    0.0    0:00.00 xprtiod
520 root      0 -20      0      0      0 I      0.0    0.0    0:00.14 kworker/0:1H-kblockd
531 root      0 -20      0      0      0 I      0.0    0.0    0:00.00 ata_sff
534 root      20  0      0      0      0 S      0.0    0.0    0:00.00 scsi_eh_0
535 root      0 -20      0      0      0 I      0.0    0.0    0:00.00 scsi_tmf_0
536 root      20  0      0      0      0 S      0.0    0.0    0:00.00 scsi_eh_1
537 root      0 -20      0      0      0 I      0.0    0.0    0:00.00 scsi_tmf_1
578 root      0 -20      0      0      0 I      0.0    0.0    0:00.00 xfsalloc
579 root      0 -20      0      0      0 I      0.0    0.0    0:00.00 xfs_mru_cache
582 root      0 -20      0      0      0 I      0.0    0.0    0:00.00 xfs-buf/vda3
583 root      0 -20      0      0      0 I      0.0    0.0    0:00.00 xfs-conv/vda3
584 root      0 -20      0      0      0 I      0.0    0.0    0:00.00 xfs-cil/vda3
student@serverb ~]$ sudo su -
[sudo] password for student:
ast login: Mon Oct 24 00:20:28 EDT 2022 on pts/0
root@serverb ~]# groupadd -g 50000 database
root@serverb ~]# useradd -G database dbuser1
root@serverb ~]# passwd dbuser1
Changing password for user dbuser1.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: all authentication tokens updated successfully.
root@serverb ~]# chage -d 0 dbuser1
root@serverb ~]# chage -m 10 dbuser1
root@serverb ~]# chage -M 30 dbuser1
root@serverb ~]# vim /etc/sudoers.d/dbuser1
root@serverb ~]# su - dbuser1
dbuser1@serverb ~]$ echo "umask 007" >> .bash_profile
dbuser1@serverb ~]$ echo "umask 007" >> .bashrc
dbuser1@serverb ~]$ logout
root@serverb ~]# mkdir /home/student/grading/review2
root@serverb ~]# chown student:database /home/student/grading/review2
root@serverb ~]# chmod g+s /home/student/grading/review2
root@serverb ~]# chmod 775 /home/student/grading/review2
root@serverb ~]# chmod o+t /home/student/grading/review2
root@serverb ~]# logout
student@serverb ~]$ logout
Connection to serverb closed.
Roger Zhang@workstation ~] > lab rhcsa-rh124-review2 grade

Grading the student's work on serverb:

· Confirming termination of CPU intensive process on serverb... PASS
· Verifying if the database group exists on serverb... PASS
· Verifying if dbuser1 belongs to database group on serverb... PASS
· Evaluating password age dbuser1 on serverb... PASS
· Evaluating the properties of review2 directory on serverb... PASS
· Evaluating the sudo configuration of dbuser1 on serverb... PASS
· Evaluating the umask of dbuser1 on serverb... PASS

Overall lab grade... PASS

Roger Zhang@workstation ~] > 
```

Note: use top to find cpu consuming process and kill. Add user to sudoer file.

Figure 16

Lab: Configuring and Managing a Server

```
student@workstation:~
File Edit View Search Terminal Help
python36 x86_64 3.6.8-2.module+el8.1.0+3334+5cb623d7 rhel-8.2-for-x86_64-appstream-rpms 19 k
Installing dependencies:
python3-pip noarch 9.0.3-16.el8 rhel-8.2-for-x86_64-appstream-rpms 20 k
python3-setuptools noarch 39.2.0-5.el8 rhel-8.2-for-x86_64-baseos-rpms 163 k
Installing module profiles:
python36/common
Enabling module streams:
python36 3.6

Transaction Summary
=====
Install 3 Packages

Total download size: 201 k
Installed size: 466 k
Downloading Packages:
1/3): python3-pip-9.0.3-16.el8.noarch.rpm 2.3 MB/s | 20 kB 00:00
2/3): python3-setuptools-39.2.0-5.el8.noarch.rpm 16 MB/s | 163 kB 00:00
3/3): python36-3.6.8-2.module+el8.1.0+3334+5cb623d7.x86_64.rpm 1.7 MB/s | 19 kB 00:00
-----
Total 16 MB/s | 201 kB 00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
Preparing : 1/1
Installing : python3-setuptools-39.2.0-5.el8.noarch 1/3
Installing : python3-pip-9.0.3-16.el8.noarch 2/3
Installing : python36-3.6.8-2.module+el8.1.0+3334+5cb623d7.x86_64 3/3
Running scriptlet: python36-3.6.8-2.module+el8.1.0+3334+5cb623d7.x86_64 3/3
Verifying : python3-setuptools-39.2.0-5.el8.noarch 1/3
Verifying : python3-pip-9.0.3-16.el8.noarch 2/3
Verifying : python36-3.6.8-2.module+el8.1.0+3334+5cb623d7.x86_64 3/3

Installed:
python3-pip-9.0.3-16.el8.noarch python3-setuptools-39.2.0-5.el8.noarch
python36-3.6.8-2.module+el8.1.0+3334+5cb623d7.x86_64

Complete!
student@serverb ~]$ sudo timedatectl set-timezone Asia/Kolkata
student@serverb ~]$ logout
Connection to serverb closed.
Roger Zhang@workstation ~] > lab rhcsa-rh124-review3 grade

Grading the student's work on serverb:

• Verifying SSH keys on serverb..... PASS
• Evaluating root login settings on serverb..... PASS
• Evaluating password login settings on serverb..... PASS
• Verifying archives on on serverb..... PASS
• Verifying syslog custom configuration on serverb..... PASS
• Evaluating timezone on serverb..... PASS
• Verifying that zsh is installed on serverb..... PASS
• Verifying that python36 is enabled on serverb..... PASS

Overall lab grade..... PASS

Roger Zhang@workstation ~] > 
```

Note: Uses scp, tar to archive files. Change ssh config and reload sshd. Use yum to install packages.

Figure 17:

Lab: Managing Networks

```

[Roger Zhang@workstation ~] > lab rhcsa-rh124-review4 start
Starting lab.

Preparing serverb for lab exercise work:

· Backing up original network configuration files on serverb.. SUCCESS
· Recording the original hostname on serverb..... SUCCESS
· Backing up the original /etc/hosts file on serverb..... SUCCESS

[Roger Zhang@workstation ~] > ping -c2 172.25.250.211
PING 172.25.250.211 (172.25.250.211) 56(84) bytes of data.
64 bytes from 172.25.250.211: icmp_seq=1 ttl=64 time=1.07 ms
64 bytes from 172.25.250.211: icmp_seq=2 ttl=64 time=0.400 ms

--- 172.25.250.211 ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 2ms
rtt min/avg/max/mdev = 0.400/0.733/1.067/0.334 ms
[Roger Zhang@workstation ~] > ssh student@serverb
Activate the web console with: systemctl enable --now cockpit.socket

This system is not registered to Red Hat Insights. See https://cloud.redhat.com/
To register this system, run: insights-client --register

Last login: Mon Oct 24 00:55:38 2022
[student@server-review4 ~]$ logout
Connection to serverb closed.
[Roger Zhang@workstation ~] > lab rhcsa-rh124-review4 grade

Grading the student's work on serverb:

· Verifying the static connection on serverb..... PASS
· Verifying DNS on serverb..... PASS
· Verifying new IP addresses on serverb..... PASS
· Verifying the canonical name on serverb..... PASS
· Verifying the hostname on serverb..... PASS

Overall lab grade..... PASS

[Roger Zhang@workstation ~] > 

```

Note: Uses command line interface to setup network configurations and connect to the server.

Figure 18

Lab: Mounting Filesystems and Finding Files

```

File Edit View Search Terminal Help
This system is not registered to Red Hat Insights. See https://cloud.redhat.com/
To register this system, run: insights-client --register

Last login: Mon Oct 24 01:00:22 2022 from 172.25.250.9
[student@serverb ~]$ lsblk -fs
NAME FSTYPE LABEL UUID MOUNTPOINT
vda1
└─vda
vda2 vfat 399C-0F7D /boot/efi
└─vda
vda3 xfs root 3cd0d4ca-93f6-423b-a469-70ab2b10b667 /
└─vda
vdb1 xfs dc900ab0-f200-4dc7-83a0-b2e11303a5f1
└─vdb
vdc
vdd
[student@serverb ~]$ sudo mkdir /review5-disk
[sudo] password for student:
[student@serverb ~]$ sudo mount /dev/vdb1 /review5-disk
[student@serverb ~]$ find / -iname review5-path 2>/dev/null
/var/tmp/review5-path
[student@serverb ~]$ sudo vim /review5-disk/review5-path.txt
[student@serverb ~]$ find / -user contractor1 -group contractor -perm 640 2>/dev/null
/usr/share/review5-perms
[student@serverb ~]$ sudo vim /review5-disk/review5-perms.txt
[student@serverb ~]$ find / -size 100c 2>/dev/null
/dev/disk/by-uuid
/run/NetworkManager
/run/udev/tags/master-of-seat
/run/initramfs
/etc/audit
/etc/lvm
/usr/lib/python3.6/site-packages/ptyprocess
/usr/lib/python3.6/site-packages/dnf/conf
/usr/share/licenses/ethntool/LICENSE
/usr/share/doc/libuser
/usr/share/doc/python3-cryptography/docs/x509
/usr/share/doc/python3-jinja2/ext
/usr/share/doc/plymouth/AUTHORS
/usr/share/man/es/man8
/usr/share/vim/vim80/macros/maze/main.aap
/usr/share/cups/templates/de/classes-header.tmpl
/usr/share/cups/templates/printers-header.tmpl
/usr/libexec/plymouth
/opt/review5-size
[student@serverb ~]$ sudo vim /review5-disk/review5-size.txt
[student@serverb ~]$ logout
Connection to serverb closed.
[Roger Zhang@workstation ~] > lab rhcsa-rh124-review5 grade

Grading the student's work on serverb:

• Confirming if /review5-disk is mounted on serverb..... PASS
• Evaluating the first file content on serverb..... PASS
• Evaluating the second file content on serverb..... PASS
• Evaluating the third file content on serverb..... PASS

Overall lab grade..... PASS

[Roger Zhang@workstation ~] >

```

Note: mount filesystem and use find to search for files that are 100 bytes in size.

Chapter Review



CERTIFICATE OF ATTENDANCE

ruojia zhang

NAME

George Washington University

SCHOOL/UNIVERSITY

Red Hat System Administration I (RH124)

COURSE

2022年10月24日

DATE

A handwritten signature in black ink, appearing to read "Ken A", is written over a horizontal line.

KEN GOETZ

Vice president, Global Training Services at Red Hat



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