1. You want to install a test environment to practice for the RHCSA exam. Which of the following distributions should you avoid?

   A. Fedora is an experimental/enthusiast version containing many components that may or may not make it into the RHEL distribution tree and onto the RHCSA exam.
   a. The most recent Fedora version
   b. CentOS 8
   c. Scientific Linux 8
   d. RHEL 8
   ----

2. Which of the following features is available in both RHEL and CentOS?

   D. All RHEL software updates are made available in CentOS as well.
   a. Hardware certification
   b. Software certification
   c. The right to make support calls
   d. Software updates
   ----

3. Why should you install the server with a GUI installation pattern?

   A. In particular, when working with virtual machines, you'll be happy to have a GUI at your disposal.
   a. To prepare for RHCSA, you need some tools that run in a GUI only.
   b. The minimal installation is incomplete.
   c. If you do not install a GUI immediately, it is hard to add it later.
   d. The Server with GUI is the default installation that is recommended by Red Hat.
   ----

4. Which is the default file system that is used in RHEL 8?

   C. XFS is used as the default file system. When Red Hat decided which file system to use as the default file system, Btrfs was not stable enough yet.
   a. Ext3
   b. Ext4
   c. XFS
   d. Btrfs
   ----

5. Which feature is supported in Ext4 but not in XFS?

   A. The size of an XFS file system cannot be reduced.
   a. Shrinking the file system
   b. Snapshots
   c. File system quota
   d. A maximum size that goes beyond 2 TB

6. Which of the following is not a reason why Fedora should be avoided?

C. The Fedora project tries to make a stable distribution as well. There are many Fedora users around the globe who use it as a
production distribution.
a. Fedora contains features that may or may not be available in future RHEL releases.
b. Fedora distributions show a much later state of development than RHEL.
c. Fedora software is not stable.
d. Software in Fedora may differ from the same software in RHEL.
----

6. Which of the following options is not available from the Installation Summary screen?
D. The Troubleshoot an Existing Installation option is available when booting from disk, not on the Installation Summary screen.
a. Time & Date
b. Keyboard
c. Language Support
d. Troubleshoot an Existing Installation
----

7. After setting the root password that you want to use, you cannot proceed in the installation. What is the most likely reason?
D. You are allowed to use an unsecure password; you just have to confirm it twice.
a. The password is unsecure, and unsecure passwords are not accepted.
b. The password does not meet requirements in the password policy.
c. You also need to create a user.
d. If an unsecure password is used, you need to click Done twice.
----

8. Which statement about the system language is not true?
D. Language settings can be changed after installation. This is done easily through the Settings option in the graphical interface.
a. You can change the system language from the Installation Summary screen.
b. You can change the system language directly after booting from the installation media.
c. When setting the installation language, you can also select a keyboard layout.
d. After installation, you cannot change the language settings.
----

9. When installing a server that uses LVM logical volumes, you'll get at least three storage volumes (partitions or LVM). Which of the following is not part of them?
B. Even if it makes sense having /var on a dedicated partition, this is not part of a default installation.
a. /boot
b. /var
c. /
d. swap

----

1. You do not want to buy an RHEL license, but you want to create an environment to practice for the exam. Which distribution should you use?
   1. Use CentOS to create an environment to practice for the exam without purchasing a RHEL license.

----

2. What happens to the network configuration if you don't specify anything during the installation?
   2. 32-bit RHEL does not support virtualization.

----

3. You want to install a minimal system. How much RAM do you need?
   3. You need 512 MB of RAM to install a minimal system.

----

4. Why is it a good idea to have Internet access on all servers you are installing?
   4. By default, updates and installation of additional software packages require Internet connectivity.

----

5. You want to install a virtual machine on a computer that does not have an optical disk drive. What is the easiest alternative to perform the installation?
   5. Use an ISO image to install a virtual machine on the computer.

----

6. Why is it a good idea to install a GUI?
   6. To manage virtualization in an easy way, you need virt-manager, which is a GUI utility.

----

7. What is the default file system on RHEL 8?
   7. XFS is the default file system on RHEL 8.

----

8. Can you install RHEL if you do not have Internet access?
   8. You can install RHEL if you do not have Internet access. But you cannot register with RHN, so you will not have access to repositories after the installation has finished.

----

9. What is the most important feature offered through RHN?
   9. Repository access is the most important feature offered through RHN.

----

10. Which installation pattern should you use if you have a very limited amount of disk space available?
    10. Use the Minimal Install pattern if you have a very limited amount of disk space available.
----

11. 1. You are looking for a variable that is set in a Bash login shell for all users. Which of the following files is the most likely location where this variable is set? (Choose two.)
    A and C. /etc/profile is the file that is processed for all users who are starting a login shell. A user-specific version exists as well, with the name ~/.bash_profile.
    a. /etc/profile
    b. /etc/basic
    c. ~/.bash_profile
    d. ~/.bashrc
    ----

12. 2. A user has created a script with the name myscript. He tries to run it using the command myscript, but it is not started. The user has verified that the script permissions are set as executable. Which of the following is the most likely explanation?
    C. On Linux, the current directory is not set in the PATH variable.
    a. An internal command is preventing the startup of the script.
    b. Users are not allowed to run scripts.
    c. The directory that contains the script is not in the PATH.
    d. The script does not have appropriate permissions.
    ----

13. 3. You need the output of the command ls to be used as input for the less command. Which of the following examples will do that for you?
    D. A pipe is used to process the output of the first command and use it as input of the second command.
    a. ls > less
    b. ls >> less
    c. ls >| less
    d. ls | less

14. 4. A user wants to remove her complete history. Which of the following approaches would do that?
    4. A. The command history -c removes the in-memory state from the history file of current history. Remove ~/.bash_history also to make sure that all history is removed. As an alternative to removing the .bash_history file, the user can type history -c, followed by history -w.
    a. Remove the ~/.bash_history file and type history -c.
    b. Type history -c.

c. Remove the ~/.bash_history file.
d. Type history -c and close the current shell.

----

15. 5. Which of the following is not a valid method to repeat a command from history?
5. D. Ctrl-X is not a valid history command.
a. Press Ctrl-r and start typing a part of the command.
b. Type ! followed by the first letters in the command.
c. Type ! followed by the number of the command as listed in history.
d. Press Ctrl-x followed by the number in history.

----

16. 6. For which of the following items can Bash completion be used?
6. D. Bash completion works for commands, files, variables and other names if configuration for that has been added (like hostnames forthe SSH command).
a. Commands
b. Files
c. Variables
d. All of the above

----

17. 7. Which of the following commands enables you to replace every occurrence of old with new in a text file that is opened with vi?
7. A. You need the command :%s/old/new/g to replace all instances of old with new. % means that it must be applied on the entire file. s stands for substitute. The g option is used to apply the command to not only the first occurrence in a line (which is the default behavior) but all occurrences in the line.
a. :%s/old/new/g
b. :%r/old/new/
c. :s/old/new/g
d. r:/old/new

----

18. 8. Which approach works best if during the login process you want to show a message to all users who have just logged in to a shell session on your server?
8. B. The /etc/motd file contains messages that are displayed after user login on a terminal session. If you want to show a message before users log in, edit the /etc/issue file.
a. Put the message in /etc/issue.
b. Put the message in /etc/motd.
c. Put the message in /etc/profile.
d. Put the message in /etc/bashrc.

----

19. 9. You are using man -k user, but you get the message "nothing appropriate." Which of the following solutions is most likely to fix this for you?

9. C. The man -k command uses a database to find the keywords you are looking for. On RHEL 8, this database is updated with the mandb command. On older versions of RHEL (prior to RHEL 7), the makewhatis command was used instead.

a. Type updatedb to update the mandb database.
b. Type makewhatis to update the mandb database.
c. Type mandb to update the mandb database.
d. Use man -K, not man -k

----

1. Under which directory would you expect to find nonessential program files?

1. D. Program files that are not required to boot a system are typically stored in a subdirectory below the /usr directory. In old versions of RHEL, essential binaries and system binaries were stored in /bin and /sbin, but on modern versions of RHEL, these directories are a symbolic link to /usr/bin and /usr/sbin.

a. /boot
b. /bin
c. /sbin
d. /usr

----

2. Under which directory would you expect to find log files?

2. C. The /var directory is used on Linux to store files that may grow unexpectedly.

a. /proc
b. /run
c. /var
d. /usr

----

3. Which of the following directories would typically not be mounted on its own dedicated device?

3. A. The /etc/ directory contains configuration files that are needed while your server boots. Putting /etc on a dedicated device would makeyour server unbootable.

a. /etc
b. /boot
c. /home
d. /usr

----

4. Which of the following commands would give the most accurate overview of mounted disk
   devices (without showing much information about mounted system devices as well)?

**4. C. The df -h command shows mounted devices and the amount of disk space currently in
use on these devices. The -T option helps in recognizing real file systems (as opposed to kernel
interfaces) because it shows the file system type as well.**

a. mount
b. mount -a

c. df -hT
d. du -h

----

5. Which command enables you to show all files in the current directory so that the newest
   files are listed last?

**5. C. The option -a shows hidden files, -l gives a long listing, -t sorts on modification time,
which by default shows newest files first, and -r reverts the sorting so that newest files are
shown last.**

a. ls -lRt

b. ls -lrt
c. ls -alrt
d. ls -alr

----

6. Which command enables you to copy hidden files as well as regular files from /home/$USER
   to the current directory?

**6. C. To copy hidden files as well as regular files, you need to put a . after the name of the
directory the files are in. Answer A copies hidden files as well, but it creates a subdirectory
$USER in the current directory.**

a. cp -a /home/$USER .

b. cp -a /home/$USER/* .
c. cp -a /home/$USER/. .
d. cp -a home/$USER. .

----

7.   Which command enables you to rename the file myfile to mynewfile?

7. A. The mv command enables you to move files and rename files.

a. mv myfile mynewfile
b. rm myfile mynewfile
c. rn myfile mynewfile
d. ren myfile mynewfile
----

8.   Which statement about hard links is not true?

8. D. In hard links, no difference exists between the first hard link and subsequent hard links.

a. Hard links cannot be created to directories.
b. Hard links cannot refer to files on other devices.
c. The inode keeps a hard link counter.
d. If the original hard link is removed, all other hard links become invalid.

----

9.   Which command creates a symbolic link to the directory /home in the directory /tmp?

9. C. The option -s is used to create a symbolic link. While creating a link, you first have to specify the source, and next you specify the destination.

 a. ln /tmp /home
b. ln /home /tmp
c. ln -s /home /tmp
d. ln -s /tmp /home
----

10. Which tar option enables you to add one single file to a tar archive?
10. C. Use the option -r to add one single file to an archive you have created with tar.
a. -a
b. -A
c. -r
d. -u

----

1. Which command was developed to show only the first ten lines in a text file?

1. A. The head command by default shows the first ten lines in a text file.

a. head
b. top
c. first
d. cat

----

2. Which command enables you to count the number of words in a text file?

2. D. The wc command shows the number of lines, words, and characters in a file.
a. count
b. list
c. ls -l
d. wc

----

3. Which key on your keyboard do you use in less to go to the last line of the current text file?

3. D. When using less, the G key brings you to the end of the current file.
a. End
b. Page Down
c. q
d. G

----

4. Which option is missing (...) from the following command, assuming that you want to filter the first field out of the /etc/passwd file and assuming that the character that is used as the field delimiter is a : | cut ... : -f 1 /etc/passwd

4. A. The -d option is used to specify the field delimiter that needs to be used to distinguish different fields in files while using cut.

a. -d
b. -c
c. -t
d. -x

----

5. Which option is missing (...) if you want to sort the third column of the output of the command ps aux| ps aux | sort ...

5. A. The sort command can sort files or command output based on specific keys. If no specific key is mentioned, sorting happens based on fields. The option -k3 will therefore sort the third field in the output of the ps aux command.

a. -k3

b. -s3

c. -k f 3

d. -f 3

6. Which of the following commands would only show lines in the file /etc/passwd that start with the text anna?

6. D. When used in a regular expression, the ^ sign in front of the text you are looking for indicates that the text has to be at the beginning of the line.

a. grep anna /etc/passwd
b. grep -v anna /etc/passwd

c. grep $anna /etc/passwd

d. grep ^anna /etc/passwd

7. Which regular expression do you use to make the previous character optional?

7. A. The ? regular expression is used to refer to zero or one of the previous characters. This makes the previous character optional, which can be useful. If the regular expression is colou?r, for example, you would get a match on color as well as colour.

a.   ?

b.   b. .

c.   c. *

d.   d. &

----

8. Which regular expression is used as a wildcard to refer to any single character?

8. B. The . is used as a regular expression to refer to any single character.

a. ?

b. .

c. *

d. &

----

9. Which command prints the fourth field of a line in the /etc/passwd file if the text user occurs in that line?

9. D. The awk command first needs to know which field separator should be used. This is specified with the -F : option. Then, it needs to specify a string that it should look for, which is /user/. To indicate that the fourth field of a matching file should be printed, you need to include the { print $4 } command.

a. awk '/user/ { print $4 }' /etc/passwd
b. awk -d : '/user/ { print $4 }' /etc/passwd
c. awk -F : '/user/ $4' /etc/passwd
d. awk -F : '/user/ { print $4 }' /etc/passwd

----

10. Which option would you use with grep to show only lines that do not contain the regular expression that was used?

10. B. Use grep -v to exclude from the results lines containing the regular expression.

a. -x

b. -v

c. -u

d. -q

Lectia 5

1. Which of the following is *not* an advantage of using a GUID partition table over using an MBR partition table?

a. Access time to a directory is quicker. (In GPT, there is no longer a need to differentiate between primary, extended, and logical partitions; in fact, it is not even possible.

Using logical partitions is not an advantage due to the limited number of primary partitions available on MBR disks.)

b. A total amount of 8 ZiB can be addressed by a partition.

c. With GUID partitions, a backup copy of the partition table is created automatically.

d. There can be up to 128 partitions in total.

----

2. You want to create a partition with a size of 1024^5 bytes. What size should it be?

a. 1 PB

b. 1 PiB(1 pebibyte (PiB) is 1024 × 1024 × 1024 × 1024 × 1024 bytes.)

c. 1 EB

d. 1 EiB

----

3. Which partition type is commonly used to create a Linux partition?

a. 81

b. 82

c. 83(Partition type 83 is normally used to create Linux partitions.)

d. 8e

4.What is the default disk device name you would expect to see in KVM virtual machines?

a. /dev/sda

b. /dev/hda

c. /dev/sda(KVM virtual machines use the virtio driver to address hard disks. This driver generates the device /dev/vda as the first disk device)

d. /dev/xsda

5.Which of the following statements is *not* true?

a. Do not ever use gdisk on an MBR disk.

b. fdisk offers support to manage GPT partitions as well.

c. Depending on your needs, you can create MBR and GPT partitions on the same disk. (A disk can have one partition table only. For that reason, it is not possible to have MBR and GPT partitions on the same disk.)

d. If your server boots from EFI, you must use GPT partitions.

----

6. Which of the following file systems is used as the default in RHEL8?

a. Ext4

b. XFS(XFS is used as the default file system; partitions can still be formatted with other file systems, like Ext4.)

c. btrfs

d. Ext3

----

7. Which command enables you to find current UUIDs set to the file systems on your server?

a. mount

b. df -h

c. lsblk

d. Blkid(The blkid command shows all file systems, their UUID, and if applicable, their label.)

----

8. What would you put in the device column of /etc/fstab to mount a file system based on its unique ID 42f419c4-633f-4ed7- b161-519a4dadd3da?

a. 42f419c4-633f-4ed7-b161-519a4dadd3da

b. /dev/42f419c4-633f-4ed7-b161-519a4dadd3da

c. ID=42f419c4-633f-4ed7-b161-519a4dadd3da

d. UUID=42f419c4-633f-4ed7-b161-519a4dadd3da(To mount a file system based on its UUID, use UUID=nnnn in the /etc/fstab device column.)

----

9. Which of the following /etc/fstab lines would perform a file system check on the file system, but only after the root file system has been checked successfully?

a. /dev/sda1 /data xfs defaults 1 1

b. /dev/sda1 /data xfs defaults 1 2

c. /dev/sda1 /data xfs defaults 1 1

d. /dev/sda1 /data xfs defaults 0 2

(To check a file system upon boot, but only after the root file system has been checked successfully, put a 2 in the sixth column in /etc/fstab.)

----

10. Which mount option would you use in /etc/fstab to specify that the file system can be mounted only after the network is available?

a. network

b. _netdev(The _netdev mount option is used to specify that the file system depends on the network to be present before it can be mounted.)

c. _network

d. netdev

Lectia 6

1. Which of the following is *not* a mandatory component in a .repo file that is used to indicate which repositories should be used?

a. [label]

b. name=

c. baseurl=

d. gpgcheck= (The gpgcheck= line indicates whether to check the integrity of packages in the repository using a GPG key. Although useful, this is not mandatory.)

----

2. Which installation source is used on RHEL if a server is not registered with RHN?

a. The installation medium is used.

b. No installation source is used.(If a RHEL system is not registered with RHEL, no repositories are available. This is important to realize for the RHCSA exam, because it means that you need to connect to a repository before you can install anything.)

c. The base RHN repository is used, without updates.

d. You have full access to RHN repositories, but the software you are using is not supported.

----

3. Which of the following should be used in the .repo file to refer to a repository that is in the directory /repo on the local file system?

a. file=/repo

b. baseurl=file://repo

c. baseurl=file:///repo (Use baseurl to specify which URL to use. If the URL is based on the local file system, it uses the URI file:// followed by the path on the local file system, which in this case is /repo. This explains why there are three slashes in the baseurl.)

d. file=http:///repo

----

4. Which of the following is true about GPG-based repository security?

a. If packages in the repository have been signed, you need to copy the GPG key to the correct location.

b. GPG package signing is mandatory.

c. GPG package signatures prevent packages in a repository from being changed.

d. GPG package signing is recommended on Internet repositories, but not required on local repositories that are for internal use only. (GPG package signing is used to set a checksum on packages, so that altered packages can easily be recognized. The main purpose of signing packages is to make it easy to protect packages on Internet repositories. For internal repositories that cannot be accessed by Internet users, the need to add GPG package signatures is less urgent.)

5. Which command enables you to search the package that contains the file semanage?

a. yum search semanage

b. yum search all semanage

c. yum provides semanage

d. yum whatprovides */semanage (Both the commands yum provides and yum whatprovides can be used to search for files within a specific package. The file pattern must be specified as */filename or as a full path, which is why answer D is the only correct answer. Without the */ in front of the filename, you may get a match that is based on the package description, not on the filename.)

----

6. Which YUM module component allows you to work with different versions side by side?

a. Application profile

b. Application stream (The yum module application stream allows for working with different versions of user space software side by side.)

c. Module version

d. RPM group

----

7. Which of the following commands allows you to install the devel profile of the PHP 7.1 application stream?

a. yum module install php:7.1 devel

b. yum module install php:7.1 --devel

c. yum module install php:7.1/devel (To install a specific profile from a yum module application stream, add the profile name to the application stream version using a /.)

d. yum module install php:7.1@devel

----

8. Which command should you use to install an RPM file that has been downloaded to your computer?

a. yum install (The yum install command installs individually downloaded RPM files while looking for package dependencies in the current repositories. This is better than using rpm -ivh, which does not consider the yum repositories. In earlier versions of RHEL, the yum localinstall command was used to install packages that were downloaded to the local file system, but this command is now deprecated.)

b. yum localinstall

c. rpm -ivh

d. rpm -Uvh

----

9. Which command enables you to find the RPM package a specific file belongs to?

a. rpm -ql /my/file

b. rpm -qlf /my/file

c. rpm -qf /my/file (Use the rpm -qf command to find which RPM package a specific file comes from.)

d. rom -qa /my/file

----

10. Which command enables you to analyze whether there are scripts in an RPM package file that you have just downloaded?

a. rpm -qs packagename.rpm

b. rpm -qps packagename.rpm

c. rpm -qp --scripts packagename.rpm (The --scripts option checks whether there are scripts in an RPM package. If you want to query the package file and not the database of installed RPMs, you need to add the -p option to the -q option, which is used to perform RPM queries.)

d. rpm -q --scripts packagename.rpm

Lectia 7

1.Which is the correct term for the description here?
"Used to refer to the physical screen you are currently looking at as a user"
a. Terminal
b. Console(The console is the screen you are working from. On the console, a terminal is started as the working environment. In the terminal, a shell is operational to interpret the commands you are typing.)
c. Shell
d. Interface

2.Which is the correct term for the description here?
"The environment from which a shell is used where users can enter their commands"
a. Terminal(The console is the screen you are working from. On the console, a terminal is started as the working environment. In the terminal, a shell is operational to interpret the commands you are typing.)
b. Console
c. Shell
d. Interface

3.Which is the correct term for the description here?
"The environment that offers a command line on which users type the commands they want to use"
a. Terminal
b. Console
c. Shell (The console is the screen you are working from. On the console, a terminal is started as the working environment. In the terminal, a shell is operational to interpret the commands you are typing.)
d. Interface

4.Which device file is associated with the virtual console that is opened after using the Alt-F6 key sequence?
a. /dev/console6
b. /dev/tty6 (The six virtual consoles that are available on Linux by default are numbered /dev/tty1 through /dev/tty6. The device /dev/pts/6 is used to refer to the sixth pseudo terminal, which is created by opening six terminal windows in a graphical environment.)
c. /dev/vty6

d. /dev/pts/6

----

5. Which of the following methods will open a pseudo terminal device? (Choose two.)
a. Log in using an SSH session
b. Press Alt-F2 to open a new nongraphical login
c. Right-click the graphical desktop and select Open in Terminal
d. Enter your username and password on a nongraphical console
(A pseudo terminal device is created when opening new terminals using SSH or from the graphical

interface.)

6.Sometimes a server reboot may be necessary to accomplish a task. Which of the following is *not* typically one of them?
a. To recover from serious problems such as server hangs and kernel panics
b. To apply kernel updates
c. To apply changes to kernel modules that are being used currently and therefore cannot be reloaded easily
d. To apply changes to the network configuration (Typically, a server reboot is only necessary after making changes to the kernel and kernel modules that are in use. Changing the

network configuration does not normally require a reboot, because it is possible to just restart the network service.)

7.Which of the following is true about remote access to Linux servers from a Windows environment?
a. Open a shell terminal on Windows and type ssh to access Linux servers remotely. The ssh command is available as a default part of the Windows operating system.
b. Configure Remote Access on Windows if you want to access Linux servers running the sshd process.
c. Install the PuTTY program on Windows to access sshd services on Linux from Windows. (Windows has no native support for SSH. You need to install PuTTY or similar software to remotely connect to Linux using SSH.)
d. You cannot remotely access Linux machines from Windows.

8.What is the name of the file in which the public key fingerprint of the SSH servers you have connected to in the past are stored?
a. /etc/ssh/remote_hosts
b. /etc/ssh/known_hosts
c. ~/.ssh/remote_hosts
d. ~/.ssh/known_hosts (Key fingerprints of hosts that you have previously connected to are stored in your home directory, in the subdirectory .ssh in a file with the name known_hosts.)

9.To allow graphical applications to be used through an SSH session, you can set a parameter in the /etc/ssh/ssh_config file. Using this parameter makes it unnecessary to use the -X command-line option each time an SSH session is initiated. Which of the following parameters should be used?
a. Host *
b. TunnelX11 yes

c. ForwardX11 yes (The ForwardX11 option in the /etc/ssh/ssh_config file enables support for graphical applications through SSH.)
d. Xclient yes

10.Which of the following statements about key-based SSH authentication is true?
a. After creating the key pair, you need to copy the private key to the remote server.
b. Use scp to copy the public key to the remote server.
c. Use ssh-copy-id to copy the public key to the remote server. (To initiate key-based remote authentication, you should copy the public key to the remote server. The most convenient way to do so is using the ssh-copy-id command.)
d. Use ssh-keygen on the server to generate a key pair that matches the client keys.