6.4.4 Practice Questions

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Score: 100%   Passing Score: 80%

▼ Question 1:   ✔ Correct

Which of the following situations is most likely to cause a dependency problem?

○ Several applications using the /usr/lib/biglib library.

➡ ◉ Installing two different packages that both include /usr/lib/graphlib.

○ Upgrading the kernel from 2.4.6 to 2.4.12.

○ Upgrading the library /usr/lib/biglib from version 1.4 to version 1.6.

Explanation

Installing two different packages that include the same library introduces the possibility of conflicting versions.

Generally, upgrading a library to a higher version is not a problem. Several applications using the same library will not usually cause conflicts. Upgrading the kernel and staying within the same minor revision level will usually not cause conflicts.

References

:≡ **6.4.3 Shared Libraries Facts**

q_sharedlib_lp5_01.question.fex

▼ Question 2:   ✔ Correct

Which of the following directories typically hold the dynamic libraries on your system? (Select TWO).

➡ ☑ /usr/lib/

➡ ☑ /usr/local/lib/

☐ /etc/ld.so.conf/

☐ /lib/ld.so/

Explanation

Dynamic libraries are typically stored in /usr/lib/ and /usr/local/lib/. Dynamic libraries are not integrated into the code of the application.

/lib/ld.so is a program (not a directory) that finds and loads the shared libraries needed by a program. /etc/ld.so.conf contains a colon-, space-, tab-, newline-, or comma-delimited list of directories in which to search for libraries.

References

▤ **6.4.3 Shared Libraries Facts**

q_sharedlib_lp5_02.question.fex

▼ Question 3:   ✔ Correct

Match the term on the left with its characteristic on the right. (Each term can be used more than once.)

Has a .so or .so.version extension.

✔ Dynamic Library

Increases the size of the application.

✔ Static Library

Has a .a filename extension.

✔ Static Library

Is typically stored in /usr/lib/ and /usr/local/lib/.

✔ Dynamic Library

Can degrade program load time if the library is already in use by another program.

✔ Dynamic Library

Explanation

Dynamic libraries are not integrated into the code of the application. Dynamic libraries:

- Have a **.so** or **.so.version** extension (.so stands for shared object).
- Are typically stored in **/usr/lib/** and **/usr/local/lib/**.
- Can degrade program load time if the library isn't already in use by another program.
- Are similar to Dynamic Link Libraries (DLLs) in Windows.

Static libraries are integrated into the code of the application when the code is compiled. Static Libraries:

- Have a .a filename extension.
- Are used when dynamic libraries are not available.
- Increase the size of the application.

References

:≡ **6.4.3 Shared Libraries Facts**

q_sharedlib_lp5_03.question.fex

▼ **Question 4:**   ✔ Correct

Which of the following commands displays all of the shared library information for the /bin/bash executable?

○ **ldconfig -p /bin/bash**

○ **ldd /bin/bash**

○ **ldconfig -N /bin/bash**

➡ ◉ **ldd -v /bin/bash**

Explanation

ldd -v /bin/bash displays all of the shared library information for the **/bin/bash** executable. The **ldd** command displays which libraries are used by another library. Be aware of the following **ldd** options:

- **-v** displays all information.
- **--version** displays the version number of **ldd**.
- **-u** displays unused direct dependencies.

ldconfig reloads the library cache every time you add or remove libraries and updates the symbolic links. Be aware of the following **ldconfig** options:

- **-N** updates symbolic links, but does not update the cache.
- **-p** displays the current library cache, including all the library directories and their respective libraries.
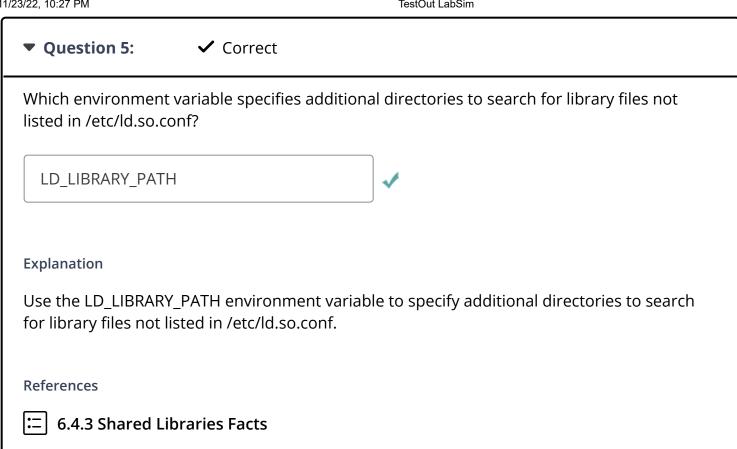
References

:≡ **6.4.3 Shared Libraries Facts**

q_sharedlib_lp5_04.question.fex

▼ **Question 5:**   ✔ Correct

Which environment variable specifies additional directories to search for library files not listed in /etc/ld.so.conf?

LD_LIBRARY_PATH   ✔

Explanation

Use the LD_LIBRARY_PATH environment variable to specify additional directories to search for library files not listed in /etc/ld.so.conf.

References

⊡ **6.4.3 Shared Libraries Facts**

q_sharedlib_lp5_05.question.fex

▼ **Question 6:**   ✔ Correct

What would you enter at the command prompt to display the shared library information for executables?

| ldd | ✔

Explanation

The **ldd** command displays which libraries are used by another library. Be aware of the following **ldd** options:

- **-v** displays all information.
- **--version** displays the version number of **ldd**.
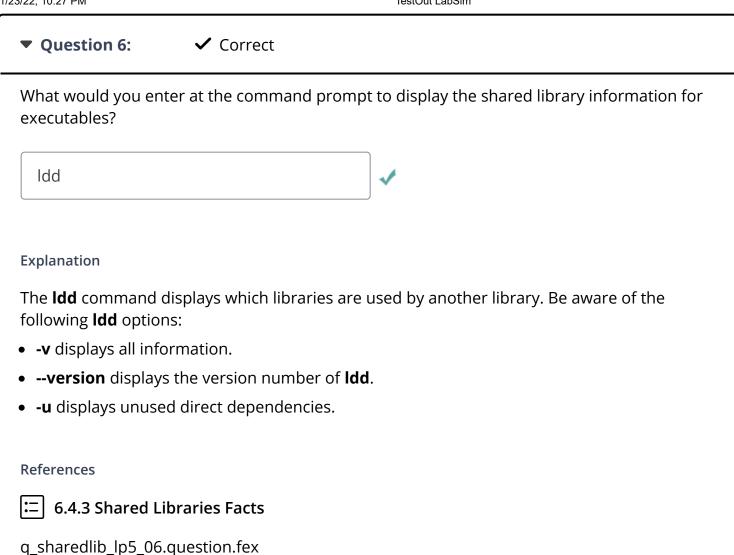- **-u** displays unused direct dependencies.

References

▤ **6.4.3 Shared Libraries Facts**

q_sharedlib_lp5_06.question.fex

▼ **Question 7:**   ✔ Correct

Which of the following commands reloads the libraries for the /bin/bash executable, but does not update the cache?

○ **ldd /bin/bash**

➡ ● **ldconfig -N /bin/bash**

○ **ldd -v /bin/bash**

○ **ldconfig -X /bin/bash**

Explanation

The **ldconfig** reloads the library cache every time you add or remove libraries and to update the symbolic links. Be aware of the following **ldconfig** options:

- **-N** updates symbolic links, but does not update the cache.
- **-X** updates the cache, but does not update symbolic links.

The **ldd** command displays which libraries are used by another library. Be aware of the following **ldd** options:

- **-v** displays all information.
- **--version** displays the version number of **ldd**.
- **-u** displays unused direct dependencies.

References

:≡ **6.4.3 Shared Libraries Facts**

q_sharedlib_lp5_07.question.fex

▼ **Question 8:**   ✔ Correct

What would you enter at the command prompt without options to reload the library cache every time libraries are added or removed and update the symbolic links?

| ldconfig | ✔

Explanation

The **ldconfig** command reloads the library cache every time libraries are added or removed and updates the symbolic links. This creates the necessary links and caches to the most recent shared libraries found in the directories specified on the command line, in the file **/**etc/ld.so.conf, and in the trusted directories (**/**lib and /usr/lib). Be aware of the following options:

- **-v** summarizes the directories and files it is registering as it reloads the cache.
- **-N** updates symbolic links, but does not update the cache.
- **-n** updates the links contained in the directories specified on the command line.
- **-X** updates the cache, but does not update symbolic links.
- **-f** changes the configuration file from the **/**etc/ld.so.conf default.
- **-C** changes the cache location for the /etc/ld.so.cache default.
- **-r** treats a new directory as if were the root directory. This is helpful when you are recovering a badly corrupted system or installing a new OS.
- **-p** displays the current library cache, including all the library directories and their respective libraries.

References

⊟ **6.4.3 Shared Libraries Facts**

q_sharedlib_lp5_08.question.fex

▼ Question 9:   ✔ Correct

Which of the following commands should you use to change the location of the default file used to search for libraries?

➡ ⦿ **ldconfig -f**

   ○ **ldconfig -p**

   ○ **ldconfig -n**

   ○ **ldconfig -r**

Explanation

Use the **ldconfig -f** command to change the configuration file from the /etc/ld.so.conf default. /etc/ld.so.conf contains a colon-, space-, tab-, newline-, or comma-delimited list of directories in which to search for libraries.

Be aware of the other **ldconfig** options:

- **-v** summarizes the directories and files it is registering as it reloads the cache.
- **-N** updates symbolic links, but does not update the cache.
- **-n** updates the links contained in the directories specified on the command line.
- **-X** updates the cache, but does not update symbolic links.
- **-C** changes the cache location for the /etc/ld.so.cache default.
- **-r** treats a new directory as if were the root directory. This is helpful when you are recovering a badly corrupted system or installing a new OS.
- **-p** displays the current library cache, including all the library directories and their respective libraries.

References

▤ **6.4.3 Shared Libraries Facts**

q_sharedlib_lp5_09.question.fex

▼ **Question 10:**   ✓ Correct

What is the full path and file name for the file that contains a colon-, space-, tab-, newline-, or comma-delimited list of directories in which to search for libraries?

| /etc/ld.so.conf | ✓ |

Explanation

/etc/ld.so.conf contains a colon-, space-, tab-, newline-, or comma-delimited list of directories in which to search for libraries. Some lines in the file begin with the **include** directive, which lists files that are to be included as if they were part of the part of the main file.

Use the **ldconfig -f** command to change the configuration file from the default of /etc/ld.so.conf.
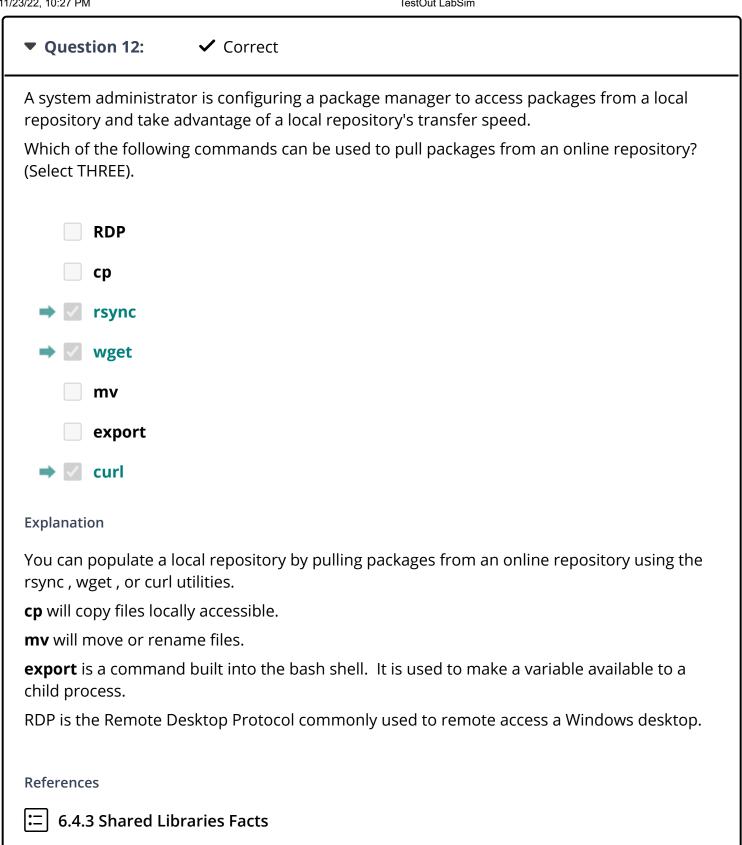
References

▤   **6.4.3 Shared Libraries Facts**

q_sharedlib_lp5_10.question.fex

▼ Question 11:   ✔ Correct

Which of the following methods should you use to configure dynamic libraries on a Linux system? (Select TWO).

➡️ ☑️ Use the LD_LIBRARY_PATH environment variable to specify additional directories to search for library files.

➡️ ☑️ Modify /etc/ld.so.conf to add the path of the libraries.

☐ Modify /etc/ld.so.cache to add the path of the libraries.

☐ Edit all files with the .a filename extension.

Explanation

Use the following methods for configuring dynamic libraries on a Linux system:

- Modify /etc/ld.so.conf to add the path of the libraries.
- Use the LD_LIBRARY_PATH environment variable to specify additional directories to search for library files.

/etc/ld.so.cache is a cached list of libraries found in the directories specified in /etc/ld.so.conf. The system uses this cached list instead of loading /etc/ld.so.conf every time a program runs. Static libraries have an .a file name extension and are used when shared libraries are not available.

References

:≡ **6.4.3 Shared Libraries Facts**

q_sharedlib_lp5_11.question.fex

▼ **Question 12:**   ✔ Correct

A system administrator is configuring a package manager to access packages from a local repository and take advantage of a local repository's transfer speed.

Which of the following commands can be used to pull packages from an online repository? (Select THREE).

☐ **RDP**

☐ **cp**

➡ ☑ **rsync**

➡ ☑ **wget**

☐ **mv**

☐ **export**

➡ ☑ **curl**

Explanation

You can populate a local repository by pulling packages from an online repository using the rsync , wget , or curl utilities.

cp will copy files locally accessible.

mv will move or rename files.

export is a command built into the bash shell. It is used to make a variable available to a child process.

RDP is the Remote Desktop Protocol commonly used to remote access a Windows desktop.

References

▤ **6.4.3 Shared Libraries Facts**

q_sharedlib_lp5_wget_curl_rsync.question.fex