

## Chapter 5 Working with Shells, Scripting, and Data Management (Domain 105)

THE FOLLOWING COMPTIA LINUX+/LPIC-1 EXAM OBJECTIVES ARE COVERED IN THIS CHAPTER:

- $\checkmark$  105.1 Customize and use the shell environment
- Set environment variables (e.g., PATH) at login or when spawning a new shell
- Write Bash functions for frequently used sequences of commands
- · Maintain skeleton directories for new user accounts
- Set command search path with the proper directory
- The following is a partial list of the used files, terms and utilities:
- source
- /etc/bash.bashrc
- /etc/profile
- env
- export
- set
- unset
- ~/.bash\_profile
- ~/.bash\_login
- ~/.profile
- ~/.bashrc
- ~/.bash\_logout
- function
- alias
- lists
- $\checkmark$  105.2 Customize or write simple scripts
- Use standard sh syntax (loops, tests)
- · Use command substitution
- Test return values for success or failure or other information provided by a command
- Perform conditional mailing to the superuser
- Correctly select the script interpreter through the shebang (#!) line
- Manage the location, ownership, execution and suid-rights of scripts
- · The following is a partial list of the used files, terms and utilities:
- for
- while

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- read
- seq
- exe
- ✓ 105.3 SQL data management
- · Use of basic SQL commands
- · Perform basic data manipulation
- The following is a partial list of the used files, terms and utilities:
- insert
- update
- select
- delete
- £.....
- where
- group by
- order by
- join
- 1. 1. Which command is used to read and execute commands from a file in the Bash shell?
- 1. run
- 2. execut
- 3. source
- 4. func
- 2. 2. You need a command to be executed on logout for all users. Within which file should this be placed (assume that all users are using Bash)?
- 1. ~/.bash\_logout
- 2./etc/bash.bash\_logout
- 3. /home/.bash\_logout
- 4. /etc/bash\_logout
- 3. 3. Which of the following commands removes an environment variable that has been set?
- 1. profile --unset
- 2. env -u
- 3. set -u
- 4. import
- 4. 4. When setting the shebang line of a shell script, which of the following commands will help to determine the location of the interpreter automatically?
- 1.#!/usr/bin/env bash
- 2.#!/bin/bash
- 3. #!env
- 4./bin/int bash
- $5.\ 5.\ When querying a database, which of the following SQL statements$  retrieves all data from a table called users?
- 1. SELECT ALL\_DATA FROM users;
- 2. QUERY ALL FROM users;
- 3. SELECT \* Table: Users;
- 4. SELECT \* FROM users;
- 6. 6. Which of the following best describes the PS1 environment variable?

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1. PS1 is used to set the location of the PostScript command.  
2. PS1 is used to define the default shell prompt for Bash.
3. PS1 is used as a per-system variable.
4. PS1 is user defined and does not have a default value or setting.
7. 7. Which of the following commands ensures that the -1a options are
   used when the 1s command is executed without other options?
 1. alias ls="ls -la"
2. ln -s ls ls -la
3. alias "ls -la" = ls
 4. set ls
8. 8. What is the order in which user configuration files are located on
 1. .bash_login, .profile, /etc/profile
2. .bash_profile, .bash_login, .profile
3. .profile, .bash_login, .bash_profile
4. .bash_login, .bash_profile, .profile
9. 9. Which variable within a Bash script is used to access the first
  command-line parameter?
1. $ARG
2. $0
3. $1
 4. $ARG0
10. 10. 10. Which of the following provides the end for an if conditional in a
 1. ex
2. }
3.]
4. fi
11. 11. Which of the following commands will delete all data from a table
  called virtualusers in MySQL on Linux?
 1. DELETE FROM VIRTUALUSERS;
2. DELETE FROM virtualusers;
3. DELETE * FROM virtualusers;
4 DELETE ALL FROM virtualusers;
12. 12. Which of the following commands displays the columns and
  column types within a given table?
 1. DESC
2. ASK
3. SELECT
4. DISPLAY
13. 13. Which of the following commands will print a list of six numbers
  beginning at o?
 1. list 0-5
2. seq 0 1 5
3. echo 0-5
4. seq 0 1 6
14. 14. When creating a shell script, which of the following commands is
   used to display the contents of variables?
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1. var_dump
2. echo
3. 1s
4. env
15. 15. A command has the following listing obtained with 1s -la:
       -rwsr-xr-x 1 suehring suehring 21 Nov 2 13:53 script.sh
   What does the s denote within the user permissions in the listing?
 1. The SUID bit has been set for this program.
2. This is a symlink.
3. The file will not be executable.
 4. The file is a special system file.
16. 16. Which of the following commands will execute a script and then
   exit the shell?
 1. run
2. source
4. exec
17. 17. Which sequence of characters will execute two commands but only
   if the first command exits successfully?
2. &*
3. &&
 4. &
18. 18. Which command within a shell script awaits user input and places
   that input into a variable?
 1. exec
19. 19. What characters are used to mark a sequence of commands as a
   function within a shell script?
 {\tt 1.} Parentheses to declare the function (optional) and curly braces to
   contain the commands
2. Curly braces to declare the function and parentheses to contain the
   commands
3. Square brackets to declare the function and curly braces to contain the
 4. Run quotes to denote the function
20. 20. Assume that you are retrieving data from a MySQL database and
   need the data to be displayed in ascending numeric order based on a
   column called "id." Which of the following commands added to the
   SELECT statement accomplishes this task?
 1. ORDER BY id ASC;
2. ORDER BY id:
3. GROUP BY id;
4. GROUP BY id ASC;
21. 21. Which character sequence denotes an alternate command to
   execute if the preceding command does not exit successfully?
 1. &&
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2.	
3.	II
4.	EL
	22. Which keyword(s) is/are used to begin an alternate condition within a Bash script?
1.	if
2.	else if
3.	elif
4.	elsif
	23. Which of the following commands removes a currently defined aliased command?
1.	remove
2.	rm
3.	unalias
4.	delete
	24. When sourcing a file in Bash, which chmod command would be necessary to provide the minimum privileges in order for the file to be sourced correctly, assuming that your current user owns the file?
1.	chmod 600
2.	chmod 755
3.	chmod 777
4-	chmod 400
	25. Assuming that a space-separated list of values has been defined as such LIST="one two three four", which of the following for loop constructs will iterate through the elements in the list?
	for LIST
	for VAR in LIST
	for VAR in \$LIST
4.	for \$LIST -> \$VAR
	26. Which type of join will be used in SQL when you see a statement such as table1.id = table2.id?
1.	Inner
2.	Outer
3.	Left outer
4.	Right outer
	27. Which test within a shell script while loop will examine one value to see if it is less than another?
1.	-less
2,	-lessThan
	-1t
4-	-lthan
	28. Which of the following tests will determine if a file exists in the context of a shell script?
1.	-a
2.	-e
3.	-m
4.	-i
20	29. Within which directory should you place files to have them
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created?
 1. /etc/userhome
 2. /etc/templateuser
 3. /etc/skel
 4./home/skel
30. 30. Which of the following represents the correct syntax for a SQL
   UPDATE statement?
 1. UPDATE  SET <column> = <newvalue> WHERE <column>
   = <value>
 2. UPDATE  WHERE <column> = <newvalue>
 3. UPDATE WHERE <column> = <newvalue>
 4. UPDATE FROM  VALUE (<value>)
31. \underline{\mathbf{31}}. Assume a MySQL table called AUTHENTICATION has three columns
   (id, username, password). Which of the following statements inserts
   a row into the table?

    INSERT id, username, password INTO AUTHENTICATION;

 2. INSERT INTO AUTHENTICATION VALUES ('user', 'pass');
 3. INSERT AUTHENTICATION ('', 'user', 'pass');
 4. INSERT INTO AUTHENTICATION (username, password) VALUES
   ('user','pass');
32. 32. Which option to Bash will cause the shell to be executed without
   reading the initialization files?
 1. --no-rc
 2. --no-init
 3. --norc
33. 33. Which of the following creates an array in a bash script?
 1. ARRAY=(val1 val2)
 2. ARRAY = "val1 val2"
 3. ARRAY_PUSH($ARRAY,"val1","val2");
 4. ARRAY{0} = "val1"
34. 34. Which option to declare statements displays output in a way that
   could then be used as input to another command?
 1. -0
 2. -n
35. \underline{35.} You need to create a function that will be available each time that
   you log in to the system. Within which file should this function be
   placed?
 1. .bash_profile
 2. .rc0
 3./etc/profile
 4..bash_run
36. 36. Which shell built-in command is used to display a list of read-only
   variables?
 1. ro
 2. readonly
 3. env-ro
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37.\,\underline{37.} Which of the following SQL keywords can be used with a GROUP
   BY clause?
 1. SELECT
 2. INSERT
3. UPDATE
4. DELETE
38.38. Which characters are used to denote the beginning and end of the
   test portion of a while loop in a shell script?
 1. Parentheses ( )
2. Curly braces { }
3. Square brackets [ ]
 4. Double-quotes " "
39.\ \underline{39.} When using the test built-in with one argument, what will be the
   return if its argument is not null?
 1. false
2. true
3. unknown
4. -1
40. 40. Which environment variable is used when changing directory with
   the tilde character, such as cd ~?
 1. HOMEDIR
2. HOMEPATH
3. HOME
 4. MAILPATH
41. 41. Which environment variable can be set if you wish to \log users out
   of their shell automatically after a certain period of inactivity?
1. TIMEOUT
2. TMOUT
4. IDLETIME
42. 42. When using a case statement within a shell script, which sequence
  denotes the ending of the case/switch statement?
 1. caseend
2. esac
3. endcase
4.}
43. 43. Which of the following commands will obtain the date in seconds
   since the epoch and place it into a variable called {\tt DATE} within a shell
 1. DATE="$(date +%s)"
2. DATE="date"
3. DATE="$(date)";
4. DATE="$date %s"
44. 44. Assume that you have a variable called $FILEPATH within a Bash
   shell script. Which characters can be used to ensure that the variable
   will be interpolated correctly regardless of where the variable appears
   within the script?
 1. Dollar sign $FILEPATH
2. Curly braces \{FILEPATH\}
3. Parentheses $(FILEPATH)
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4	. Square brackets \$[FILEPATH]
45	45. Which sequence is used to mark the beginning and end of the commands to execute within a for loop in a shell script?
1	Curly braces { }
2	. The keywords do and done
3	Semicolons;
4	Tabs
46	46. Which of the following tests will determine if a file exists and can be read by the user executing the test?
1	е
2	s
3	a
4	-r
47	. 47. Which option to the declare command will create a variable that i read-only?
1	r
2	-ro
3	p
4	x
48.	. 48. Which character sequence is used to provide a default case when used within a case statement in a shell script?
1	default:
2	=)
3	>
4	*)



NEXT Chapter 6 Understanding User Interfaces and Desktops (Domai...