EDUSUM

#1 Online Certification Guide

LX0-103

Linux+

A Success Guide to Prepare-
CompTIA Linux+ Powered by LPI

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Introduction to LX0-103 Exam on CompTIA Linux+

Use this quick start guide to collect all the information about CompTIA Linux+ (LX0-103) certification exam. This study guide provides a list of objectives and resources that will help you prepare for items on the LX0-103 Linux+ Administrator exam. The Sample Questions will help you identify the type and difficulty level of the questions and the Practice Exams will make you familiar with the format and environment of an exam. You should refer this guide carefully before attempting your actual CompTIA Linux Plus LX0-103 certification exam.

The CompTIA Linux+ certification is mainly targeted to those candidates who want to build their career in Linux Administration domain. The CompTIA Linux+ Powered by LPI exam verifies that the candidate possesses the fundamental knowledge and proven skills in the area of CompTIA Linux Plus (LX0-103).

CompTIA LX0-103 Certification Details:

Exam Name	CompTIA Linux+ Powered by LPI
Exam Code	LX0-103
Exam Price	$206 (USD)
Duration	90 min
Number of Questions	60
Passing Score	500 / 800
Books / Training	CompTIA Linux+ Training Series
Schedule Exam	CompTIA Marketplace
Sample Questions	CompTIA Linux+ Sample Questions
Practice Exam	**CompTIA LX0-103 Certification Practice Exam**

CompTIA LX0-103 Exam Syllabus:

Topic	Details
System Architecture 14%	
Determine and configure hardware settings.	1. Enable and disable integrated peripherals 2. Configure systems with or without external peripherals such as keyboards 3. Differentiate between the various types of mass storage devices 4. Know the differences between coldplug and hotplug devices 5. Determine hardware resources for devices 6. Tools and utilities to list various hardware information (e.g., lsusb, lspci) 7. ools and utilities to manipulate USB devices 8. Conceptual understanding of sysfs, udev, dbus 9. The following is a partial list of the used files, terms and utilities: 1. /sys 2. /proc 3. /dev 4. modprobe 5. lsmod 6. lspci 7. lsusb
Boot the system.	1. Provide common commands to the boot loader and options to the kernel at boot time 2. Demonstrate knowledge of the boot sequence from BIOS to boot completion 3. Understanding of SysVinit and systemd 4. Awareness of Upstart 5. Check boot events in the log file 6. The following is a partial list of the used files, terms and utilities: 1. dmesg 2. BIOS 3. bootloader 4. kernel 5. initramfs 6. init 7. SysVinit 8. system
Change runlevels/boot targets and shutdown or reboot system.	1. Set the default runlevel or boot target 2. Change between runlevels/boot targets including single user mode

Topic	Details
	3. Shutdown and reboot from the command line 4. Alert users before switching runlevels/ boot targets or other major system events 5. Properly terminate processes 6. The following is a partial list of the used files, terms and utilities: 1. /etc/inittab 2. shutdown 3. init 4. /etc/init.d 5. telinit 6. system 7. systemctl 8. /etc/systemd/ 9. /usr/lib/system/ 10. wall
Linux Installation and Package Management 18%	
Design hard disk layout.	1. Allocate filesystems and swap space to separate partitions or disks 2. Tailor the design to the intended use of the system 3. Ensure the /boot partition conforms to the hardware architecture requirements for booting 4. Knowledge of basic features of LVM 5. The following is a partial list of the used files, terms and utilities: 1. /(root) filesystem 2. /var filesystem 3. /home filesystem 4. /boot filesystem 5. swap space 6. mount points 7. partitions
Install a boot manager.	1. Providing alternative boot locations and backup boot options 2. Install and configure a boot loader such as GRUB Legacy 3. Perform basic configuration changes for GRUB 2 4. Interact with the boot loader 5. The following is a partial list of the used files, terms and utilities: 1. menu.lst, grub.cfg and grub.conf 2. grub-install 3. grub-mkconfig

Topic	Details
	4. MBR
Manage shared libraries.	1. Identify shared libraries 2. Identify the typical locations of system libraries 3. Load shared libraries 4. The following is a partial list of the used files, terms and utilities: 1. ldd 2. ldconfig 3. /etc/ld.so.conf 4. LD_LIBRARY_PATH
Use Debian package management.	1. Install, upgrade and uninstall Debian binary packages 2. Find packages containing specific files or libraries that may or may not be installed 3. Obtain package information such as version, content, dependencies, package integrity and installation status (whether or not the package is installed) 4. The following is a partial list of the used files, terms and utilities: 1. /etc/apt/sources.list 2. dpkg 3. dpkg-reconfigure 4. apt-get 5. apt-cache 6. aptitude
Use RPM and YUM package management.	1. Install, re-install, upgrade and remove packages using RPM and YUM 2. Obtain information on RPM packages such as version, status, dependencies, integrity and signatures 3. Determine what files a package provides, as well as find which package a specific file comes from 4. The following is a partial list of the used files, terms and utilities: 1. rpm 2. rpm2cpio 3. /etc/yum.conf 4. /etc/yum.repos.d/ 5. yum 6. yumdownloader
GNU and Unix Commands 43%	

Topic	Details
Work on the command line.	1. Use single shell commands and one line command sequences to perform basic tasks on the command line 2. Use and modify the shell environment including defining, referencing and exporting environment variables 3. Use and edit command history 4. Invoke commands inside and outside the defined path 5. The following is a partial list of the used files, terms and utilities: 1. bash 2. echo 3. env 4. export 5. pwd 6. set 7. unset 8. man 9. uname 10. history 11. .bash_history
Process text streams using filters.	1. Send text files and output streams through text utility filters to modify the output using standard UNIX commands found in the GNU textutils package 2. The following is a partial list of the used files, terms and utilities: 1. cat 2. cut 3. expand 4. fmt 5. head 6. od 7. join 8. nl 9. paste 10. pr 11. sed 12. sort 13. split 14. tail 15. tr 16. unexpand 17. uniq 18. wc
Perform basic file management.	1. Copy, move and remove files and directories individually 2. Copy multiple files and directories recursively

Topic	Details
	3. Remove files and directories recursively 4. Use simple and advanced wildcard specifications in commands 5. Use find to locate and act on files based on type, size or time 6. Usage of tar, cpio and dd 7. The following is a partial list of the used files, terms and utilities: 1. cp 2. find 3. mkdir 4. mv 5. ls 6. rm 7. rmdir 8. touch 9. tar 10. cpio 11. dd 12. file 13. gzip 14. gunzip 15. bzip2 16. xz 17. file globbing
Use streams, pipes and redirects.	1. Redirecting standard input, standard output and standard error 2. Pipe the output of one command to the input of another command 3. Use the output of one command as arguments to another command 4. Send output to both stdout and a file 5. The following is a partial list of the used files, terms and utilities: 1. tee 2. xargs
Create, monitor and kill processes.	1. Run jobs in the foreground and background 2. Signal a program to continue running after logout 3. Monitor active processes 4. Select and sort processes for display 5. Send signals to processes 6. The following is a partial list of the used files, terms and utilities:

Topic	Details
	1. & 2. bg 3. fg 4. jobs 5. kill 6. nohup 7. ps 8. top 9. free 10. uptime 11. pgrep 12. pkill 13. killall 14. screen
Modify process execution priorities.	1. Know the default priority of a job that is created 2. Run a program with higher or lower priority than the default 3. Change the priority of a running process 4. The following is a partial list of the used files, terms and utilities: 1. nice 2. ps 3. renice 4. top
Search text files using regular expressions.	1. Create simple regular expressions containing several notational elements 2. Use regular expression tools to perform searches through a filesystem or file content 3. The following is a partial list of the used files, terms and utilities: 1. grep 2. egrep 3. fgrep 4. sed 5. regex(7)
Perform basic file editing operations using vi.	1. Navigate a document using vi 2. Use basic vi modes 3. Insert, edit, delete, copy and find text 4. The following is a partial list of the used files, terms and utilities: 1. vi

Topic	Details
	2. /, ? 3. h, j, k, l 4. i, o, a 5. c, d, p, y, dd, yy 6. ZZ, :w!, :q!, :e!
Devices, Linux Filesystems and Filesystem Hierarchy Standard 25%	
Create partitions and filesystems.	1. Manage MBR partition tables 2. Use various mkfs commands to create various filesystems such as: 1. ext2/ext3/ext4 2. XFS 3. VFAT 3. Awareness of ReiserFS and Btrfs 4. Basic knowledge of gdisk and parted with GPT 5. The following is a partial list of the used files, terms and utilities: 1. fdisk 2. gdisk 3. parted 4. mkfs 5. mkswap
Maintain the integrity of filesystems.	1. Verify the integrity of filesystems 2. Monitor free space and inodes 3. Repair simple filesystem problems 4. The following is a partial list of the used files, terms and utilities: 1. du 2. df 3. fsck 4. e2fsck 5. mke2fs 6. debugfs 7. dumpe2fs 8. tune2fs 9. xfs tools (such as xfs_ metadump and xfs_info)
Control mounting and unmounting of filesystems.	1. Manually mount and unmount filesystems 2. Configure filesystem mounting on bootup 3. Configure user mountable removeable filesystems 4. The following is a partial list of the used files, terms and utilities:

Topic	Details
	1. /etc/fstab 2. /media 3. mount 4. umount
Manage disk quotas.	1. Set up a disk quota for a filesystem 2. Edit, check and generate user quota reports 3. The following is a partial list of the used files, terms and utilities: 1. quota 2. edquota 3. repquota 4. quotaon
Manage file permissions and ownership.	1. Manage access permissions on regular and special files as well as directories 2. Use access modes such as suid, sgid and the sticky bit to maintain security 3. Know how to change the file creation mask 4. Use the group field to grant file access to group members 5. The following is a partial list of the used files, terms and utilities: 1. chmod 2. umask 3. chown 4. chgrp
Create and change hard and symbolic links.	1. Create links 2. Identify hard and/or soft links 3. Copying versus linking files 4. Use links to support system administration tasks 5. The following is a partial list of the used files, terms and utilities: 1. ln 2. ls
Find system files and place files in the correct location.	1. Understand the correct locations of files under the FHS 2. Find files and commands on a Linux system 3. Know the location and propose of important file and directories as defined in the FHS 4. The following is a partial list of the used files, terms and utilities:

Topic	Details
	1. find 2. locate 3. updatedb 4. whereis 5. which 6. type 7. /etc/updatedb.conf

LX0-103 Sample Questions:

01. Which of the following /etc/fstab entries represents a Read-Write file system that can be mounted by any user?
a) /dev/hdc1 /data ext3 noauto,users 0 0
b) /dev/hdc1 /data auto defaults 0 0
c) /dev/hdc1 /data auto noauto,user 0 0
d) /dev/hdc1 /data ext3 defaults 0 0

02. Which of the following commands will allow an administrator to change the priority of a running process?
a) bg
b) pstree
c) renice
d) fg

03. A user has inserted a USB drive but it has not been automatically mounted. Which of the following commands will show the device name of the USB drive?
a) mount -t usb
b) fdisk -l
c) usb_scan
d) partprobe

04. Which of the following is the correct way to upgrade an existing software package using yum?
a) yum new package
b) yum get package
c) yum retrieve package
d) yum update package

05. Which of the following will burn an ISO image to a writable SCSI CD-ROM drive located on SCSI address 0,1,0?
a) cdrecord -v -eject dev=0,1,0 data.iso
b) cdrecord -t scsi -eject -d=0,1,0 data.iso
c) cdrecord dev=0,1,0 -t=data.iso
d) cdrecord -V -dev 0,1,0 -eject data.iso

06. A technician wants to upgrade an existing package to a new software package called software.rpm. Which of the following commands will accomplish this?
a) rpm -el ./software.rpm
b) rpm -Ve ./software.rpm
c) rpm -ieh ./software.rpm
d) rpm -Uvh ./software.rpm

07. Which of the following key commands in vi allows a technician to append to the current line?
a) A
b) aa
c) p
d) a

08. Which of the following symbols redirects standard output?
a) <
b) =
c) &
d) >

09. Which of the following commands will replace the first instance of the string "linux" to "Linux" in the text file called history.txt and outputs the results to standard output?
a) sed r/linux/Linux/ history.txt
b) sed g/linux/Linux/ history.txt
c) sed s/linux/Linux/ history.txt
d) sed w/linux/Linux/ history.txt

10. Which of the following is the BEST way to direct the standard output of a program to both the screen and a file at the same time?
a) cat
b) tee
c) redirection (>)
d) echo

Answers to LX0-103 Exam Questions:

Question: 01 Answer: a	Question: 02 Answer: c	Question: 03 Answer: b	Question: 04 Answer: d	Question: 05 Answer: a
Question: 06 Answer: d	Question: 07 Answer: a	Question: 08 Answer: d	Question: 09 Answer: c	Question: 10 Answer: b

Note: If you find any typo or data entry error in these sample questions, we request you to update us by commenting on this page or write an email on feedback@edusum.com