LPI 101-500

LPI LPIC-1 Certification Questions & Answers

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101-500

LPIC-1 Linux Administrator

60 Questions Exam – 500 / 800 Cut Score – Duration of 90 minutes




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#1 Online Certification Guide

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Discover More about the 101-500 Certification

Are you interested in passing the LPI 101-500 exam? First discover, who benefits from the 101-500 certification. The 101-500 is suitable for a candidate if he wants to learn about Linux Professional. Passing the 101-500 exam earns you the LPIC-1 Linux Administrator title.

While preparing for the 101-500 exam, many candidates struggle to get the necessary materials. But do not worry; your struggling days are over. The 101-500 PDF contains some of the most valuable preparation tips and the details and instant access to useful **101-500 study materials just at one click.**

LPI 101-500 LPIC-1 Certification Details:

Exam Name	LPIC-1 Linux Administrator
Exam Code	101-500
Exam Price	$200 (USD)
Duration	90 mins
Number of Questions	60
Passing Score	500 / 800
Books / Training	**LPIC 1 Version 5**
Schedule Exam	**Pearson VUE**
Sample Questions	**LPI LPIC-1 Sample Questions**
Practice Exam	**LPI 101-500 Certification Practice Exam**

101-500 Syllabus:

Topic	Details
System Architecture	
Determine and configure hardware settings	**Weight:** 2 **Description:** Candidates should be able to determine and configure fundamental system hardware. **Key Knowledge Areas:** - Enable and disable integrated peripherals.

Topic	Details
	- Differentiate between the various types of mass storage devices. - Determine hardware resources for devices. - Tools and utilities to list various hardware information (e.g. lsusb, lspci, etc.). - Tools and utilities to manipulate USB devices. - Conceptual understanding of sysfs, udev and dbus. **The following is a partial list of the used files, terms and utilities:** - /sys/ - /proc/ - /dev/ - modprobe - lsmod - lspci - lsusb
Boot the system	**Weight:**3 **Description:** Candidates should be able to guide the system through the booting process. **Key Knowledge Areas:** - Provide common commands to the boot loader and options to the kernel at boot time. - Demonstrate knowledge of the boot sequence from BIOS/UEFI to boot completion. - Understanding of SysVinit and systemd. - Awareness of Upstart. - Check boot events in the log files. **The following is a partial list of the used files, terms and utilities:** - dmesg - journalctl - BIOS - UEFI - bootloader - kernel - initramfs

Topic	Details
	- init - SysVinit - systemd
Change runlevels / boot targets and shutdown or reboot system	**Weight:** 3 **Description:** Candidates should be able to manage the SysVinit runlevel or systemd boot target of the system. This objective includes changing to single user mode, shutdown or rebooting the system. Candidates should be able to alert users before switching runlevels / boot targets and properly terminate processes. This objective also includes setting the default SysVinit runlevel or systemd boot target. It also includes awareness of Upstart as an alternative to SysVinit or systemd. **Key Knowledge Areas:** - Set the default runlevel or boot target. - Change between runlevels / boot targets including single user mode. - Shutdown and reboot from the command line. - Alert users before switching runlevels / boot targets or other major system events. - Properly terminate processes. - Awareness of acpid. **The following is a partial list of the used files, terms and utilities:** - /etc/inittab - shutdown - init - /etc/init.d/ - telinit - systemd - systemctl - /etc/systemd/ - /usr/lib/systemd/ - wall

Topic	Details
Linux Installation and Package Management	
Design hard disk layout	**Weight:** 2 **Description:** Candidates should be able to design a disk partitioning scheme for a Linux system. **Key Knowledge Areas:** - Allocate filesystems and swap space to separate partitions or disks. - Tailor the design to the intended use of the system. - Ensure the /boot partition conforms to the hardware architecture requirements for booting. - Knowledge of basic features of LVM. **The following is a partial list of the used files, terms and utilities:** - / (root) filesystem - /var filesystem - /home filesystem - /boot filesystem - EFI System Partition (ESP) - swap space - mount points - partitions
Install a boot manager	**Weight:** 2 **Description:** Candidates should be able to select, install and configure a boot manager. **Key Knowledge Areas:** - Providing alternative boot locations and backup boot options. - Install and configure a boot loader such as GRUB Legacy. - Perform basic configuration changes for GRUB 2. - Interact with the boot loader. **The following is a partial list of the used files, terms and utilities:**

Topic	Details
	- menu.lst, grub.cfg and grub.conf - grub-install - grub-mkconfig - MBR
Manage shared libraries	**Weight:** 1 **Description:** Candidates should be able to determine the shared libraries that executable programs depend on and install them when necessary. **Key Knowledge Areas:** - Identify shared libraries. - Identify the typical locations of system libraries. - Load shared libraries. **The following is a partial list of the used files, terms and utilities:** - ldd - ldconfig - /etc/ld.so.conf - LD_LIBRARY_PATH
Use Debian package management	**Weight:** 3 **Description:** Candidates should be able to perform package management using the Debian package tools. **Key Knowledge Areas:** - Install, upgrade and uninstall Debian binary packages. - Find packages containing specific files or libraries which may or may not be installed. - Obtain package information like version, content, dependencies, package integrity and installation status (whether or not the package is installed). - Awareness of apt. **The following is a partial list of the used files, terms and utilities:** - /etc/apt/sources.list - dpkg - dpkg-reconfigure

Topic	Details
	- apt-get - apt-cache
Use RPM and YUM package management	**Weight:** 3 **Description:** Candidates should be able to perform package management using RPM, YUM and Zypper. **Key Knowledge Areas:** - Install, re-install, upgrade and remove packages using RPM, YUM and Zypper. - Obtain information on RPM packages such as version, status, dependencies, integrity and signatures. - Determine what files a package provides, as well as find which package a specific file comes from. - Awareness of dnf. **The following is a partial list of the used files, terms and utilities:** - rpm - rpm2cpio - /etc/yum.conf - /etc/yum.repos.d/ - yum - zypper
Linux as a virtualization guest	**Weight:** 1 **Description:** Candidates should understand the implications of virtualization and cloud computing on a Linux guest system. **Key Knowledge Areas:** - Understand the general concept of virtual machines and containers - Understand common elements virtual machines in an IaaS cloud, such as computing instances, block storage and networking - Understand unique properties of a Linux system which have to changed when a system is cloned or used as a template - Understand how system images are used to deploy

Topic	Details
	virtual machines, cloud instances and containers - Understand Linux extensions which integrate Linux with a virtualization product - Awareness of cloud-init **The following is a partial list of the used files, terms and utilities:** - Virtual machine - Linux container - Application container - Guest drivers - SSH host keys - D-Bus machine id
GNU and Unix Commands	
Work on the command line	**Weight:** 4 **Description:** Candidates should be able to interact with shells and commands using the command line. The objective assumes the Bash shell. **Key Knowledge Areas:** - Use single shell commands and one line command sequences to perform basic tasks on the command line. - Use and modify the shell environment including defining, referencing and exporting environment variables. - Use and edit command history. - Invoke commands inside and outside the defined path. **The following is a partial list of the used files, terms and utilities:** - bash - echo - env - export - pwd - set - unset - type - which

Topic	Details
	- man - uname - history - .bash_history - Quoting
Process text streams using filters	**Weight:** 2 **Description:** Candidates should be able to apply filters to text streams. **Key Knowledge Areas:** - Send text files and output streams through text utility filters to modify the output using standard UNIX commands found in the GNU textutils package. **The following is a partial list of the used files, terms and utilities:** - bzcat - cat - cut - head - less - md5sum - nl - od - paste - sed - sha256sum - sha512sum - sort - split - tail - tr - uniq - wc - xzcat - zcat
Perform basic file management	**Weight:** 4

Topic	Details
	Description: Candidates should be able to use the basic Linux commands to manage files and directories. **Key Knowledge Areas:** - Copy, move and remove files and directories individually. - Copy multiple files and directories recursively. - Remove files and directories recursively. - Use simple and advanced wildcard specifications in commands. - Using find to locate and act on files based on type, size, or time. - Usage of tar, cpio and dd. **The following is a partial list of the used files, terms and utilities:** - cp - find - mkdir - mv - ls - rm - rmdir - touch - tar - cpio - dd - file - gzip - gunzip - bzip2 - bunzip2 - xz - unxz - file globbing
Use streams, pipes and redirects	**Weight:** 4 **Description:** Candidates should be able to redirect streams and connect them in order to efficiently process textual data. Tasks include redirecting standard input, standard output and standard error, piping the output of

Topic	Details
	one command to the input of another command, using the output of one command as arguments to another command and sending output to both stdout and a file. **Key Knowledge Areas:** - Redirecting standard input, standard output and standard error. - Pipe the output of one command to the input of another command. - Use the output of one command as arguments to another command. - Send output to both stdout and a file. **The following is a partial list of the used files, terms and utilities:** - tee - xargs
Create, monitor and kill processes	**Weight:** 4 **Description:** Candidates should be able to perform basic process management. **Key Knowledge Areas:** - Run jobs in the foreground and background. - Signal a program to continue running after logout. - Monitor active processes. - Select and sort processes for display. - Send signals to processes. **The following is a partial list of the used files, terms and utilities:** - & - bg - fg - jobs - kill - nohup - ps - top - free - uptime

Topic	Details
	- pgrep - pkill - killall - watch - screen - tmux
Modify process execution priorities	**Weight:** 2 **Description:** Candidates should be able to manage process execution priorities. **Key Knowledge Areas:** - Know the default priority of a job that is created. - Run a program with higher or lower priority than the default. - Change the priority of a running process. **The following is a partial list of the used files, terms and utilities:** - nice - ps - renice - top
Search text files using regular expressions	**Weight:**2 **Description:** Candidates should be able to manipulate files and text data using regular expressions. This objective includes creating simple regular expressions containing several notational elements as well as understanding the differences between basic and extended regular expressions. It also includes using regular expression tools to perform searches through a filesystem or file content. **Key Knowledge Areas:** - Create simple regular expressions containing several notational elements. - Understand the differences between basic and extended regular expressions. - Understand the concepts of special characters,

Topic	Details
	character classes, quantifiers and anchors. - Use regular expression tools to perform searches through a filesystem or file content. - Use regular expressions to delete, change and substitute text. **The following is a partial list of the used files, terms and utilities:** - grep - egrep - fgrep - sed - regex(7)
Basic file editing	**Weight:** 3 **Description:** Candidates should be able to edit text files using vi. This objective includes vi navigation, vi modes, inserting, editing, deleting, copying and finding text. It also includes awareness of other common editors and setting the default editor. **Key Knowledge Areas:** - Navigate a document using vi. - Understand and use vi modes. - Insert, edit, delete, copy and find text in vi. - Awareness of Emacs, nano and vim. - Configure the standard editor. **The following is a partial list of the used files, terms and utilities:** - vi - /, ? - h,j,k,l - i, o, a - d, p, y, dd, yy - ZZ, :w!, :q! - EDITOR

Topic	Details
Devices, Linux Filesystems, Filesystem Hierarchy Standard	
Create partitions and filesystems	**Weight:** 2 **Description:** Candidates should be able to configure disk partitions and then create filesystems on media such as hard disks. This includes the handling of swap partitions. **Key Knowledge Areas:** - Manage MBR and GPT partition tables - Use various mkfs commands to create various filesystems such as: • ext2/ext3/ext4 • XFS • VFAT • exFAT - Basic feature knowledge of Btrfs, including multi-device filesystems, compression and subvolumes. **The following is a partial list of the used files, terms and utilities:** - fdisk - gdisk - parted - mkfs - mkswap
Maintain the integrity of filesystems	**Weight:** 2 **Description:** Candidates should be able to maintain a standard filesystem, as well as the extra data associated with a journaling filesystem. **Key Knowledge Areas:** - Verify the integrity of filesystems. - Monitor free space and inodes. - Repair simple filesystem problems.

Topic	Details
	The following is a partial list of the used files, terms and utilities: - du - df - fsck - e2fsck - mke2fs - tune2fs - xfs_repair - xfs_fsr - xfs_db
Control mounting and unmounting of filesystems	**Weight:** 3 **Description:** Candidates should be able to configure the mounting of a filesystem. **Key Knowledge Areas:** - Manually mount and unmount filesystems. - Configure filesystem mounting on bootup. - Configure user mountable removable filesystems. - Use of labels and UUIDs for identifying and mounting file systems. - Awareness of systemd mount units. **The following is a partial list of the used files, terms and utilities:** - /etc/fstab - /media/ - mount - umount - blkid - lsblk
Manage file permissions and ownership	**Weight:** 3 **Description:** Candidates should be able to control file access through the proper use of permissions and ownerships. **Key Knowledge Areas:** - Manage access permissions on regular and special files

Topic	Details
	as well as directories. - Use access modes such as suid, sgid and the sticky bit to maintain security. - Know how to change the file creation mask. - Use the group field to grant file access to group members. **The following is a partial list of the used files, terms and utilities:** - chmod - umask - chown - chgrp
Create and change hard and symbolic links	**Weight:** 2 **Description:** Candidates should be able to create and manage hard and symbolic links to a file. **Key Knowledge Areas:** - Create links. - Identify hard and/or soft links. - Copying versus linking files. - Use links to support system administration tasks. **The following is a partial list of the used files, terms and utilities:** - ln - ls
Find system files and place files in the correct location	**Weight:** 2 **Description:** Candidates should be thoroughly familiar with the Filesystem Hierarchy Standard (FHS), including typical file locations and directory classifications. **Key Knowledge Areas:** - Understand the correct locations of files under the FHS. - Find files and commands on a Linux system. - Know the location and purpose of important file and directories as defined in the FHS.

Topic	Details
	The following is a partial list of the used files, terms and utilities: - find - locate - updatedb - whereis - which - type - /etc/updatedb.conf

Broaden Your Knowledge with LPI 101-500 Sample Questions:

Question: 1

A user who is a member of the custom admins group is attempting to read the contents of a file but is not the owner of the file. Rather than granting sudo access to this file, what is another way to grant read access, assuming that the file is currently marked with 640 permissions?
Note that you should choose the most appropriate answer to fulfill the need while minimizing additional privileges.

a) Grant root access to the user.
b) Run chmod 777 on the file.
c) Use chgrp to change group ownership to admins.
d) Use chown to change the ownership of the file to the individual user.

Answer: c

Question: 2

You have a set of libraries that were installed into /usr/local/lib and would like to ensure that the libraries are also available in /usr/lib. What is the preferred way to make the libraries available in this location?

a) Copy the libraries.
b) Create a symbolic link.
c) Move the libraries.
d) Create a script to synchronize the libraries between the two locations with rsync.

Answer: b

Question: 3

Kilo has just cloned 10 VMs from a clone system image. He needs to ensure that the clones can all run together on the same local network segment. What items should he check and modify if needed?

(Choose all that apply.)

a) NIC MAC address
b) VM template
c) Host name
d) CPU extensions
e) Machine ID

Answer: a, c, e

Question: 4

Steve is working on an open source software development team to create a new application. He's completed a new shared library the program will be using and has moved it to the correct location. What command should Steve employ to

update the system's library cache?

a) ldd
b) ldconfig
c) ldcache
d) ld.so
e) ld-linux-x86-64.so.2

Answer: b

Question: 5

Carol used the ps command to find the process ID of an application that she needs to stop. What command-line tool should she use to stop the application?

a) killall
b) pkill
c) TERM
d) kill
e) pgrep

Answer: d

Question: 6

Which signal number is used as SIGKILL when used with the kill command?

a) 1
b) 4
c) 9
d) 11

Answer: c

Question: 7

What command must you run to install GRUB Legacy to the MBR?

a) grub-mkconfig
b) grub2-mkconfig
c) update-grub
d) grub-install
e) No need to install

Answer: d

Question: 8

The program is a handy tool for repairing corrupted filesystems.

a) fsck
b) mount
c) umount
d) fdisk
e) mkfs

Answer: a

Question: 9

Which utility is used for formatting GPT disks?

a) gdisk
b) gptdisk
c) gpdisk
d) pgdisk

Answer: a

Question: 10

Which option to lsblk shows the UUID of each filesystem?

a) –u
b) -f
c) -o
d) -a

Answer: b

Avail the Study Guide to Pass LPI 101-500 LPIC-1 Exam:

- Find out about the 101-500 syllabus topics. Visiting the official site offers an idea about the exam structure and other important study resources. Going through the syllabus topics help to plan the exam in an organized manner.
- Once you are done exploring the **101-500 syllabus**, it is time to plan for studying and covering the syllabus topics from the core. Chalk out the best plan for yourself to cover each part of the syllabus in a hassle-free manner.
- A study schedule helps you to stay calm throughout your exam preparation. It should contain your materials and thoughts like study hours, number of topics for daily studying mentioned on it. The best bet to clear the exam is to follow your schedule rigorously.
- The candidate should not miss out on the scope to learn from the 101-500 training. Joining the LPI provided training for 101-500 exam helps a candidate to strengthen his practical knowledge base from the certification.
- Learning about the probable questions and gaining knowledge regarding the exam structure helps a lot. Go through the **101-500 sample questions** and boost your knowledge
- Make yourself a pro through online practicing the syllabus topics. 101-500 practice tests would guide you on your strengths and weaknesses regarding the syllabus topics. Through rigorous practicing, you can improve the weaker sections too. Learn well about time management during exam and become confident gradually with practice tests.

Career Benefits:

- Passing the 101-500 exam, helps a candidate to prosper highly in his career. Having the certification on the resume adds to the candidate's benefit and helps to get the best opportunities.