EDUSUM

#1 Online Certification Guide

LPI 102-500

LPI LPIC-1 102 Certification Questions & Answers

Exam Summary – Syllabus –Questions

102-500

LPIC-1 Linux Administrator

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

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Know Your 102-500 Certification Well:

The 102-500 is best suitable for candidates who want to gain knowledge in the LPI Linux System Administration. Before you start your 102-500 preparation you may struggle to get all the crucial LPIC-1 102 materials like 102-500 syllabus, sample questions, study guide.

But don't worry the 102-500 PDF is here to help you prepare in a stress free manner.
The PDF is a combination of all your queries like-

- What is in the 102-500 syllabus?
- How many questions are there in the 102-500 exam?
- Which Practice test would help me to pass the 102-500 exam at the first attempt?

Passing the 102-500 exam makes you LPIC-1 Linux Administrator. Having the LPIC-1 102 certification opens multiple opportunities for you. You can grab a new job, get a higher salary or simply get recognition within your current organization.

LPI 102-500 LPIC-1 102 Certification Details:

Exam Name	LPIC-1 Linux Administrator
Exam Code	102-500
Exam Price	$200 (USD)
Duration	90 mins
Number of Questions	60
Passing Score	500 / 800
Schedule Exam	**LPI Marketplace**
Sample Questions	**LPI LPIC-1 Sample Questions**
Practice Exam	**LPI 102-500 Certification Practice Exam**

102-500 Syllabus:

Topic	Details
Shells and Shell Scripting	
Customize and use the shell environment	**Weight:** 4 **Description:** Candidates should be able to customize shell environments to meet users' needs. Candidates should be able to modify global and user profiles. **Key Knowledge Areas:** - 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
Customize or write simple scripts	**Weight:** 4 **Description:** Candidates should be able to customize existing scripts, or write simple new Bash scripts. **Key Knowledge Areas:** - Use standard sh syntax (loops, tests). - Use command substitution. - Test return values for success or failure or other information provided by a command. - Execute chained commands. - Perform conditional mailing to the superuser. - Correctly select the script interpreter through the shebang (#!)

Topic	Details
	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 - test - if - read - seq - exec - || - &&
User Interfaces and Desktops	
Install and configure X11	**Weight:** 2 **Description:** Candidates should be able to install and configure X11. **Key Knowledge Areas:** **-** Understanding of the X11 architecture. - Basic understanding and knowledge of the X Window configuration file. - Overwrite specific aspects of Xorg configuration, such as keyboard layout. - Understand the components of desktop environments, such as display managers and window managers. - Manage access to the X server and display applications on remote X servers. - Awareness of Wayland. **The following is a partial list of the used files, terms and utilities:** **-** /etc/X11/xorg.conf - /etc/X11/xorg.conf.d/ - ~/.xsession-errors - xhost - xauth - DISPLAY - X
Graphical Desktops	**Weight:** 1

Topic	Details
	Description: Candidates should be aware of major Linux desktops. Furthermore, candidates should be aware of protocols used to access remote desktop sessions. **Key Knowledge Areas:** - Awareness of major desktop environments - Awareness of protocols to access remote desktop sessions **The following is a partial list of the used files, terms and utilities:** - KDE - Gnome - Xfce - X11 - XDMCP - VNC - Spice - RDP
Accessibility	**Weight:** 1 **Description:** Demonstrate knowledge and awareness of accessibility technologies. **Key Knowledge Areas:** - Basic knowledge of visual settings and themes. - Basic knowledge of assistive technology. **The following is a partial list of the used files, terms and utilities:** - High Contrast/Large Print Desktop Themes. - Screen Reader. - Braille Display. - Screen Magnifier. - On-Screen Keyboard. - Sticky/Repeat keys. - Slow/Bounce/Toggle keys. - Mouse keys. - Gestures. - Voice recognition.
Administrative Tasks	
Manage user and group accounts and related system files	**Weight:** 5 **Description:** Candidates should be able to add, remove, suspend and change user accounts. **Key Knowledge Areas:** - Add, modify and remove users and groups.

Topic	Details
	- Manage user/group info in password/group databases. - Create and manage special purpose and limited accounts. **The following is a partial list of the used files, terms and utilities:** - /etc/passwd - /etc/shadow - /etc/group - /etc/skel/ - chage - getent - groupadd - groupdel - groupmod - passwd - useradd - userdel - usermod
Automate system administration tasks by scheduling jobs	**Weight:** 4 **Description:** Candidates should be able to use cron and systemd timers to run jobs at regular intervals and to use at to run jobs at a specific time. **Key Knowledge Areas:** - Manage cron and at jobs. - Configure user access to cron and at services. - Understand systemd timer units. **The following is a partial list of the used files, terms and utilities:** - /etc/cron.{d,daily,hourly,monthly,weekly}/ - /etc/at.deny - /etc/at.allow - /etc/crontab - /etc/cron.allow - /etc/cron.deny - /var/spool/cron/ - crontab - at - atq - atrm - systemctl - systemd-run
Localisation and internationalisation	**Weight:** 3 **Description:** Candidates should be able to localize a system in a

Topic	Details
	different language than English. As well, an understanding of why LANG=C is useful when scripting. **Key Knowledge Areas:** - Configure locale settings and environment variables. - Configure timezone settings and environment variables. **The following is a partial list of the used files, terms and utilities:** - /etc/timezone - /etc/localtime - /usr/share/zoneinfo/ - LC_* - LC_ALL - LANG - TZ - /usr/bin/locale - tzselect - timedatectl - date - iconv - UTF-8 - ISO-8859 - ASCII - Unicode
Essential System Services	
Maintain system time	**Weight:** 3 **Description:** Candidates should be able to properly maintain the system time and synchronize the clock via NTP. **Key Knowledge Areas:** - Set the system date and time. - Set the hardware clock to the correct time in UTC. - Configure the correct timezone. - Basic NTP configuration using ntpd and chrony. - Knowledge of using the pool.ntp.org service. - Awareness of the ntpq command. **The following is a partial list of the used files, terms and utilities:** - /usr/share/zoneinfo/ - /etc/timezone - /etc/localtime - /etc/ntp.conf - /etc/chrony.conf

Topic	Details
	- date - hwclock - timedatectl - ntpd - ntpdate - chronyc - pool.ntp.org
System logging	**Weight:** 4 **Description:** Candidates should be able to configure rsyslog. This objective also includes configuring the logging daemon to send log output to a central log server or accept log output as a central log server. Use of the systemd journal subsystem is covered. Also, awareness of syslog and syslog-ng as alternative logging systems is included. **Key Knowledge Areas:** - Basic configuration of rsyslog. - Understanding of standard facilities, priorities and actions. - Query the systemd journal. - Filter systemd journal data by criteria such as date, service or priority. - Configure persistent systemd journal storage and journal size. - Delete old systemd journal data. - Retrieve systemd journal data from a rescue system or file system copy. - Understand interaction of rsyslog with systemd-journald. - Configuration of logrotate. - Awareness of syslog and syslog-ng. **Terms and Utilities:** - /etc/rsyslog.conf - /var/log/ - logger - logrotate - /etc/logrotate.conf - /etc/logrotate.d/ - journalctl - systemd-cat - /etc/systemd/journald.conf - /var/log/journal/
Mail Transfer Agent (MTA) basics	**Weight:** 3 **Description:** Candidates should be aware of the commonly available MTA programs and be able to perform basic forward and

Topic	Details
	alias configuration on a client host. Other configuration files are not covered. **Key Knowledge Areas:** - Create e-mail aliases. - Configure e-mail forwarding. - Knowledge of commonly available MTA programs (postfix, sendmail, exim) (no configuration). **Terms and Utilities:** - ~/.forward - sendmail emulation layer commands - newaliases - mail - mailq - postfix - sendmail - exim
Manage printers and printing	**Weight:** 2 **Description:** Candidates should be able to manage print queues and user print jobs using CUPS and the LPD compatibility interface. **Key Knowledge Areas:** - Basic CUPS configuration (for local and remote printers). - Manage user print queues. - Troubleshoot general printing problems. - Add and remove jobs from configured printer queues. **The following is a partial list of the used files, terms and utilities:** - CUPS configuration files, tools and utilities - /etc/cups/ - lpd legacy interface (lpr, lprm, lpq)
Networking Fundamentals	
Fundamentals of internet protocols	**Weight:** 4 **Description:** Candidates should demonstrate a proper understanding of TCP/IP network fundamentals. **Key Knowledge Areas:** - Demonstrate an understanding of network masks and CIDR notation. - Knowledge of the differences between private and public "dotted quad" IP addresses.

Topic	Details
	- Knowledge about common TCP and UDP ports and services (20, 21, 22, 23, 25, 53, 80, 110, 123, 139, 143, 161, 162, 389, 443, 465, 514, 636, 993, 995). - Knowledge about the differences and major features of UDP, TCP and ICMP. - Knowledge of the major differences between IPv4 and IPv6. - Knowledge of the basic features of IPv6. **The following is a partial list of the used files, terms and utilities:** **-** /etc/services - IPv4, IPv6 - Subnetting - TCP, UDP, ICMP
Persistent network configuration	**Weight:** 4 **Description:** Candidates should be able to manage the persistent network configuration of a Linux host. **Key Knowledge Areas:** **-** Understand basic TCP/IP host configuration. - Configure ethernet and wi-fi network using NetworkManager. - Awareness of systemd-networkd. **The following is a partial list of the used files, terms and utilities:** **-** /etc/hostname - /etc/hosts - /etc/nsswitch.conf - /etc/resolv.conf - nmcli - hostnamectl - ifup - ifdown
Basic network troubleshooting	**Weight:** 4 **Description:** Candidates should be able to troubleshoot networking issues on client hosts. **Key Knowledge Areas:** **-** Manually configure network interfaces, including viewing and changing the configuration of network interfaces using iproute2. - Manually configure routing, including viewing and changing routing tables and setting the default route using iproute2. - Debug problems associated with the network configuration. **The following is a partial list of the used files, terms and utilities:**

Topic	Details
	- ip - hostname - ss - ping - ping6 - traceroute - traceroute6 - tracepath - tracepath6 - netcat - ifconfig - netstat - route
Configure client side DNS	**Weight:** 2 **Description:** Candidates should be able to configure DNS on a client host. **Key Knowledge Areas:** - Query remote DNS servers. - Configure local name resolution and use remote DNS servers. - Modify the order in which name resolution is done. - Debug errors related to name resolution. - Awareness of systemd-resolved. **The following is a partial list of the used files, terms and utilities:** - /etc/hosts - /etc/resolv.conf - /etc/nsswitch.conf - host - dig - getent
Security	
Perform security administration tasks	**Weight:** 3 **Description:** Candidates should know how to review system configuration to ensure host security in accordance with local security policies. **Key Knowledge Areas:** - Audit a system to find files with the suid/sgid bit set. - Set or change user passwords and password aging information. - Being able to use nmap and netstat to discover open ports on a system. - Set up limits on user logins, processes and memory usage.

Topic	Details
	- Determine which users have logged in to the system or are currently logged in. - Basic sudo configuration and usage. **The following is a partial list of the used files, terms and utilities:** - find - passwd - fuser - lsof - nmap - chage - netstat - sudo -/etc/sudoers - su - usermod - ulimit - who, w, last
Setup host security	**Weight:** 3 **Description:** Candidates should know how to set up a basic level of host security. **Key Knowledge Areas:** - Awareness of shadow passwords and how they work. - Turn off network services not in use. - Understand the role of TCP wrappers. **The following is a partial list of the used files, terms and utilities:** - /etc/nologin - /etc/passwd - /etc/shadow - /etc/xinetd.d/ - /etc/xinetd.conf - systemd.socket - /etc/inittab - /etc/init.d/ - /etc/hosts.allow - /etc/hosts.deny
Securing data with encryption	**Weight:** 4 **Description:** The candidate should be able to use public key techniques to secure data and communication. **Key Knowledge Areas:** - Perform basic OpenSSH 2 client configuration and usage. - Understand the role of OpenSSH 2 server host keys.

Topic	Details
	- Perform basic GnuPG configuration, usage and revocation. - Use GPG to encrypt, decrypt, sign and verify files. - Understand SSH port tunnels (including X11 tunnels). **The following is a partial list of the used files, terms and utilities:** - ssh - ssh-keygen - ssh-agent - ssh-add - ~/.ssh/id_rsa and id_rsa.pub - ~/.ssh/id_dsa and id_dsa.pub - ~/.ssh/id_ecdsa and id_ecdsa.pub - ~/.ssh/id_ed25519 and id_ed25519.pub - /etc/ssh/ssh_host_rsa_key and ssh_host_rsa_key.pub - /etc/ssh/ssh_host_dsa_key and ssh_host_dsa_key.pub - /etc/ssh/ssh_host_ecdsa_key and ssh_host_ecdsa_key.pub - /etc/ssh/ssh_host_ed25519_key and ssh_host_ed25519_key.pub - ~/.ssh/authorized_keys - ssh_known_hosts - gpg - gpg-agent - ~/.gnupg/

LPI 102-500 Sample Questions:

Question: 1

Which of the following summarizes the organization of the X configuration file?

a) The file contains multiple sections, one for each screen. Each section includes subsections for individual components (keyboard, video card, and so on).
b) Configuration options are entered in any order desired. Options relating to specific components (keyboard, video card, and so on) may be interspersed.
c) The file begins with a summary of individual screens. Configuration options are preceded by a code word indicating the screen to which they apply.
d) The file is broken into sections, one or more for each component (keyboard, video card, and so on). The file also has one or more sections that define how to combine the main sections.
e) The file is a rare binary configuration file that must be accessed using SQL database tools.

Answer: d

Question: 2

Which of the following tasks are most likely to be handled by a cron job?

(Select two.)

a) Starting an important server when the computer boots
b) Finding and deleting old temporary files
c) Scripting supervised account creation
d) Monitoring disk partition space status and emailing a report
e) Sending files to a printer in an orderly manner

Answer: b, d

Question: 3

What is an advantage of a font server?

a) It provides faster font displays than are otherwise possible.
b) It can simplify font maintenance on a network with many X servers.
c) It's the only means of providing TrueType support for XFree86 4.x.
d) It enables the computer to turn a bitmapped display into an ASCII text file.
e) It enables X to use font smoothing, which isn't possible with core fonts.

Answer: b

Question: 4

Which of the following entries are found in the /etc/hosts file?

a) Mappings of IP addresses to hostnames
b) A list of hosts allowed to access this one remotely
c) A list of users allowed to access this host remotely
d) Passwords for remote web administration
e) A list of port numbers and their associated protocols

Answer: b

Question: 5

Which of the following configuration files does the logrotate program consult for its settings?

a) /etc/logrotate.conf
b) /usr/sbin/logrotate/logrotate.conf
c) /usr/src/logrotate/logrotate.conf
d) /etc/logrotate/.conf
e) ~/.logrotate

Answer: a

Question: 6

For best SSH server security, how should you set the Protocol option in /etc/ssh/sshd_config?

a) Protocol 1
b) Protocol 2
c) Protocol 1, 2
d) Protocol 2, 1
e) Protocol *

Answer: b

Question: 7

Ordinary users report being unable to log onto a computer, but root has no problems doing so. What might you check to explain this situation?

a) A misbehaving syslogd daemon
b) A login process that's running as root
c) The presence of an /etc/nologin file
d) The presence of an SUID bit on /bin/login
e) Inappropriate use of shadow passwords

Answer: c

Question: 8

How can you learn what programs are currently accessing the network on a Linux system?

a) Type ifconfig -p eth0.
b) Examine /proc/network/programs.
c) Type netstat -p.
d) Examine /etc/xinetd.conf.
e) Type dmesg | less.

Answer: c

Question: 9

In what environment variable is the current working directory stored?

a) PATH
b) CWD
c) PWD
d) PRESENT
e) WORKING

Answer: c

Question: 10

Which environment variable stores the format for the command prompt?

a) PROMPT
b) PSI
c) PAGER
d) PS1
e) None of these variables store the format for the command prompt.

Answer: d

Study Guide to Crack LPI LPIC-1 102 102-500 Exam:

- Getting details of the 102-500 syllabus, is the first step of a study plan. This pdf is going to be of ultimate help. Completion of the syllabus is must to pass the 102-500 exam.
- Making a schedule is vital. A structured method of preparation leads to success. A candidate must plan his schedule and follow it rigorously to attain success.
- Joining the LPI provided training for 102-500 exam could be of much help. If there is specific training for the exam, you can discover it from the link above.
- Read from the 102-500 sample questions to gain your idea about the actual exam questions. In this PDF useful sample questions are provided to make your exam preparation easy.
- Practicing on 102-500 practice tests is must. Continuous practice will make you an expert in all syllabus areas.