

LINUX LPI-101 CERTIFICATION COURSE



The **Linux LPI-101 Course** is part one of an exam syllabus designed to lead to LPIC-1 Junior Level Administration certification.

Linux Professional Institute (LPI) promote and certify essential skills on Linux and Open Source technologies through the global delivery of comprehensive, top quality, vendor-independent exams.

The **LPI certification** program is arranged into three main levels by job tasks. eLearning Centre offers LPI Approved Training Material for the LPIC-1 (Level 1) and LPIC-2 (Level 2) certifications.

Open-source operating systems, most notably Linux, are rapidly gaining ground on more popular proprietary software. Much of this success is due to the efforts of the Linux Professional Institute (LPI).

Besides promoting the use of Linux-based, open-source and free software, LPI seeks to advance the skills of professionals who use these systems through its LPI certification program.

The LPI Certification Program is:

- Designed by a community of Linux professionals, volunteers, vendors and educators.
- Challenging: if you don't know the subjects you won't pass.
- Accessible and available at thousands of test centres around the world or at special events.
- Of high quality: relying on critical input from numerous Linux experts and employing scientific and industry-recognized psychometric processes.
- Distribution-neutral: verifying knowledge on any standard Linux system.
- Relevant: surveying thousands to determine the skills that need to be tested.
- Training-vendor independent: encouraging a variety of methods and approaches to test preparation.
- Supported and sponsored by a large number of Linux companies and projects.
- A certification the Linux community can respect and be proud of.

➤ [Linux LPI-101 Course Book:](#)

The course book covers the following Units:

• **Unit One – Introduction**

The following topics are covered: Course Format; Product Development; Structure; Conventions; Introduction to Labs; Introduction to Lab Solutions; and Lab Conventions.

• **Unit Two – Linux Overview**

The following topics are covered: What Is Linux?; The History of Linux; The Free Software Model; Proprietary Software Under Linux; The GNU General Public License; Lesser General Public License; Linux Features; Hardware; Loadable Device Modules; Software; GUI Window Managers; Programming Languages; Linux Advantages; GUIs Are Optional; Remote Administration is Easy; Rebooting is Uncommon; Viruses Are Almost Nonexistent; Greater Security; Linux Limitations; Linux Distribution Mechanism; Linux Distributions; Linux Standards; FHS and LSB; System Administration; Operational (vs. Administrative) Duties; Administrative (vs. Operational) Duties; Support; System Documentation and Providing User Support.

Price:
£275.00

Instalment Options:

You can spread the payments for this course over 4 monthly payments. 1 initial payment of £110.00, followed by 3 monthly payments of £55.00.

Course Format:

Linux LPI Course Book

Assessment:

Linux Professional Institute
LPI-101 Examination

Approximate Study Time:

120 Hours of Self Study

- **Unit Three – Installing a Linux System**

The following topics are covered: Installation Options; Getting Ready; Types of Servers and Workstations; Identify Your Hardware; Determine Network Settings; Installation Methods; Installing From a CD-ROM; Creating a Boot Floppy; Installing From a Network; General Installation Steps; Install or Upgrade; Disk Partitioning; Swap Space; File System Types; ext2fs; ext3fs; ReiserFS; XFS; JFS; Partitioning the Drive; fdisk; Drive and Partition Names; Commands; Partition Attributes; Partition ID Type; The fdisk Procedure; Other Partitioning Methods; Software Choices; Hardware Configuration; System Settings; X Window System Installation; Linux Boot Loaders; The 1024 Cylinder Limit; Boot Loaders: LILO, GRUB, and LOADLIN; System Initialisation; init and /etc/inittab; and Linux Boot Sequence.

- **Unit Four - Hardware**

The following topics are covered: Hardware; System Boot Procedure; POST; BIOS and CMOS; Drives; Floppy Drives; IDE Drives; SCSI, SCSI-1; SCSI-2; SCSI-3; SCSI Device Configuration; The SCSI BIOS; Peripheral Devices: AGP, ISA, and PCI; AGP; ISA; PCI; Hot Swappable Hardware; USB; IEEE 1394; PCMCIA and CardBus; Mobile Hardware; Other Peripherals; Addresses, Channels, and Ports; IRQ; I/O Addresses; DMA; COM Ports; Printer Ports (LPT); SCSI Device Numbering; Adding and Configuring Devices; Devices and Drivers; ISA/Plug and Play; Hard Drives; Network Interface Controllers; Adding RAM; Modems; UARTs; Audio Controllers; The Linux Kernel; The ALSA Project; OSS Commercial Sound Drivers; USB; and USB Modules.

- **Unit Five – Linux Usage**

The following topics are covered: Command Line Basics; Command Line Syntax; Common Commands; su and sudo; Navigating the Directory Tree; The ls Command; Hidden Files; The cd Command; The pwd Command; Viewing File Permissions; Symbolic Links (symlinks); Copying, Moving, and Removing Files; The cp Command; The mv Command; The rm Command; Creating and Deleting Directories; Working In the Linux Shell; User Environment Files; Environment; Using the bash Shell; Command History and Editing; and Recursive Commands.

- **Unit Six – Getting Help**

The following topics are covered: System Information; Identifying the System; System Default Files; man Pages and the man Command; Identifying and Communicating with Active Users; Communicating with Users; Login Prompts; Finding Files; The find Command; The locate Command; Locating Commands; and Identifying Files.

- **Unit Seven – vi**

The following topics are covered: Linux Text Editors: vi; Basic vi; vi modes; Moving Within a File; Advanced Functions; Global Replacement and Regular Expressions; The set Command; The .exrc File; Executing Commands; Splitting Windows; Diffs; Buffers; Listing Buffers; and Editing Buffers.

- **Unit Eight – File Systems**

The following topics are covered: File System Structure; File System Types; Making a File System; Mounting a File System; Command Line Mounting; Mounting with /etc/fstab; Mounting Microsoft (MS-DOS) Partitions; Mounting Removable Media in a GUI; Unmounting Partitions; Checking File Systems; Repairing Corrupted File Systems; The lost+found Directory; Managing File Systems; Kernel File Cache; Utilities; Disk Free (df); Disk Usage (du); Quota; User Disk Quota; Reporting on a User's Quota Status; Turning on Quota at Boot Time; Maintaining Quota; and The /proc File System.

- **Unit Nine – Files & Directories**

The following topics are covered: Standard Directories; The Linux File System; Access Control; Overview; Opening a file; File and Directory Permission; File Manipulation Permissions; Setting User and Group IDs; Programs; The Sticky Bit; File Permission Commands; chown; chgroup; chmod; chattr; Permissions and Ownership in a GUI; File-related Commands; Links; Why Use Links?; The ln Command; Hard Link; and Symbolic Link.

- **Unit Ten – The X Windows System**

The following topics are covered: The X Window System; X Client/Server Model; Gathering Information; Video Card; Monitor; Installing XFree86; Configuring the X Window System; XF86Setup; SaX; Starting Your X Window System; Adjusting the X Window System; The xwininfo Utility; The xvidtune Utility; X Resource Files; Xresources; .xsession; .xscreensaver; Remote X Clients; xhost; X Stations and X Terminals; Installing and Managing Fonts Under X; Understanding the Font Path; Adding Directories to the Font Path; Font Servers; Window Managers/Desktop Environments; xdm; Modifying xdm; Configuring and Using KDE; KDE Install; KDM; Configuring and Using GNOME; GDM; and Terminal Emulators.

- **Unit Eleven – Package Management**

The following topics are covered: Package Managers; Red Hat Package Manager (RPM); rpm Package Names; RPM Commands; The rpmrc File; Debian Package Manager; dselect; apt; Non-Debian Packages — alien; Installing Software from Source; Unpacking the Tarball; tar; gzip and gunzip; configure; make and make install; and Using Packages Without a Package Manager.

- **Unit Twelve – Managing Shared Libraries**

The following topics are covered: Managing Shared Libraries; System Library File Names and Locations; The libc and ld.so/ld-linux.so Libraries; Updating libc et al.; Other Files Related to Shared Libraries; Commands Related to System Libraries; Installing and Supporting Multiple Versions of a Shared Library; Over-riding the Shared Library; Loading Mechanism; and Errors Related to Missing or Damaged Shared Libraries.

- **Unit Thirteen – Text Processing**

The following Appendix are covered: Text Processing; The grep Family; Regular Expressions; Filters; sed; Addressing and Editing Commands; Redirecting Input, Output, and Errors; Input; Output; Errors; and Pipes.

- **Unit Fourteen – Processes**

The following Appendix are covered: Processes; The Linux Kernel; Programs and Processes; Processes and the Kernel; Daemons and Zombies; Key Attributes of a Process; Running Processes; Checking on Processes; Running top; nice and renice; Background jobs; Signals; Sending Signals; and Intercepting Signals.

Pre-Requirements:

There are no particular entry requirements for the course but we advise that all students have a good general knowledge of using PCs and general software. You will also require a copy of the Linux Operating System.

Course Duration & Support:

Students may register at any time. The courses are designed as self-study courses but if you have any problems you can email our email support. As the course is self study you can complete in as little or as long a time as you prefer, and we do not impose a cut-off date for study.

Assessment:

Assessment is from the Linux LPI-101 Examination. Examinations are 120 minutes in length each and have 60 questions in multiple choice/multiple answer format. The Exam is graded on a scale of 200 - 800 with a minimum passing score of 500.

Qualification:

On Completion of the Linux LPI-101 Course, you can apply for your **internationally recognised Linux Professional Institute LPI-101 Examination**.

Examinations must be sat at a registered Prometric or Pearson VUE testing centre and are currently £120.00 + VAT each. You can locate testing centres and schedule appointments on their Websites:



Prometric website – <http://www.prometric.com/>

Pearson VUE - <http://pearsonvue.com/>