uCertify

# Course Outline

## LPIC-1: Linux Administrator (101 and 102 exams)

20 May 2024

1. Course Objective
2. Pre-Assessment
3. Exercises, Quizzes, Flashcards & Glossary

   Number of Questions
4. Expert Instructor-Led Training
5. ADA Compliant & JAWS Compatible Platform
6. State of the Art Educator Tools
7. Award Winning Learning Platform (LMS)
8. Chapter & Lessons

   Syllabus

   Chapter 1: Introduction

   Chapter 2: Exploring Linux Command-Line Tools

   Chapter 3: Managing Software and Processes

   Chapter 4: Configuring Hardware

   Chapter 5: Managing Files

   Chapter 6: Booting, Initializing, and Virtualizing Linux

   Chapter 7: Configuring the GUI, Localization, and Printing

   Chapter 8: Administering the System

   Chapter 9: Configuring Basic Networking

   Chapter 10: Writing Scripts

   Chapter 11: Securing Your System

   Videos and How To
9. Practice Test

   Here's what you get

   Features
10. Live labs

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11. Post-Assessment

## 1. Course Objective

Create new career opportunities by being LPIC certified professional with the LPIC-1: Linux Administrator (101 and 102 exams) course and lab. The lab provides a hands-on learning experience in a safe and online environment. The Linux certification training course covers the objectives of both the 101-500 and 101-500 exams and offers an interactive learning experience in areas such as system architecture, GNU and UNIX commands, interfaces and desktops, and many more.

## 2. Pre-Assessment

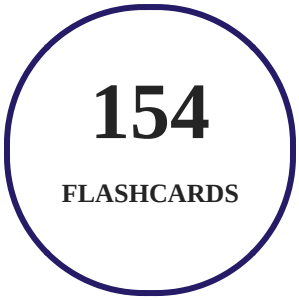
Pre-Assessment lets you identify the areas for improvement before you start your prep. It determines what students know about a topic before it is taught and identifies areas for improvement with question assessment before beginning the course.

## 3. Quiz

Quizzes test your knowledge on the topics of the exam when you go through the course material. There is no limit to the number of times you can attempt it.

## 4. flashcards

Flashcards are effective memory-aiding tools that help you learn complex topics easily. The flashcard will help you in memorizing definitions, terminologies, key concepts, and more. There is no limit to the number of times learners can attempt these. Flashcards help master the key concepts.




## 5. Glossary of terms

uCertify provides detailed explanations of concepts relevant to the course through Glossary. It contains a list of frequently used terminologies along with its detailed explanation. Glossary defines the key terms.

## 6. Expert Instructor-Led Training

uCertify uses the content from the finest publishers and only the IT industry's finest instructors. They have a minimum of 15 years real-world experience and are subject matter experts in their fields. Unlike a live class, you can study at your own pace. This creates a personal learning experience and gives you all the benefit of hands-on training with the flexibility of doing it around your schedule 24/7.

## 7. ADA Compliant & JAWS Compatible Platform

uCertify course and labs are ADA (Americans with Disability Act) compliant. It is now more accessible to students with features such as:

- Change the font, size, and color of the content of the course
- Text-to-speech, reads the text into spoken words
- Interactive videos, how-tos videos come with transcripts and voice-over
- Interactive transcripts, each word is clickable. Students can clip a specific part of the video by clicking on a word or a portion of the text.

JAWS (Job Access with Speech) is a computer screen reader program for Microsoft Windows that reads the screen either with a text-to-speech output or by a Refreshable Braille display. Student can easily navigate uCertify course using JAWS shortcut keys.

## 8. State of the Art Educator Tools

uCertify knows the importance of instructors and provide tools to help them do their job effectively. Instructors are able to clone and customize course. Do ability grouping. Create sections. Design grade scale and grade formula. Create and schedule assessments. Educators can also move a student from self-paced to mentor-guided to instructor-led mode in three clicks.

## 9. Award Winning Learning Platform (LMS)

uCertify has developed an award winning, highly interactive yet simple to use platform. The SIIA CODiE Awards is the only peer-reviewed program to showcase business and education technology's finest products and services. Since 1986, thousands of products, services and solutions have been recognized for achieving excellence. uCertify has won CODiE awards consecutively for last 7 years:

- **2014**
    1. Best Postsecondary Learning Solution

- **2015**
    1. Best Education Solution

2. Best Virtual Learning Solution
3. Best Student Assessment Solution
4. Best Postsecondary Learning Solution
5. Best Career and Workforce Readiness Solution
6. Best Instructional Solution in Other Curriculum Areas
7. Best Corporate Learning/Workforce Development Solution

- **2016**
    1. Best Virtual Learning Solution
    2. Best Education Cloud-based Solution
    3. Best College and Career Readiness Solution
    4. Best Corporate / Workforce Learning Solution
    5. Best Postsecondary Learning Content Solution
    6. Best Postsecondary LMS or Learning Platform
    7. Best Learning Relationship Management Solution

- **2017**
    1. Best Overall Education Solution
    2. Best Student Assessment Solution
    3. Best Corporate/Workforce Learning Solution
    4. Best Higher Education LMS or Learning Platform

- **2018**
    1. Best Higher Education LMS or Learning Platform
    2. Best Instructional Solution in Other Curriculum Areas
    3. Best Learning Relationship Management Solution

- **2019**
    1. Best Virtual Learning Solution
    2. Best Content Authoring Development or Curation Solution
    3. Best Higher Education Learning Management Solution (LMS)

- **2020**

1. Best College and Career Readiness Solution
2. Best Cross-Curricular Solution
3. Best Virtual Learning Solution

## 10. Chapter & Lessons

uCertify brings these textbooks to life. It is full of interactive activities that keeps the learner engaged. uCertify brings all available learning resources for a topic in one place so that the learner can efficiently learn without going to multiple places. Challenge questions are also embedded in the chapters so learners can attempt those while they are learning about that particular topic. This helps them grasp the concepts better because they can go over it again right away which improves learning.

Learners can do Flashcards, Exercises, Quizzes and Labs related to each chapter. At the end of every lesson, uCertify courses guide the learners on the path they should follow.

## Syllabus

### Chapter 1: Introduction

- Why Become Linux Certified?
- Who Should Buy This Course
- How This Course Is Organized
- The Exam Objectives
- Exam 101-500 Objectives
- Exam 102-500 Objectives

### Chapter 2: Exploring Linux Command-Line Tools

- Understanding Command-Line Basics
- Editing Text Files
- Processing Text Using Filters
- Using Regular Expressions
- Using Streams, Redirection, and Pipes
- Summary
- Exam Essentials

## Chapter 3: Managing Software and Processes

- Looking at Package Concepts
- Using RPM
- Using Debian Packages
- Managing Shared Libraries
- Managing Processes
- Summary
- Exam Essentials

## Chapter 4: Configuring Hardware

- Configuring the Firmware and Core Hardware
- Storage Basics
- Storage Alternatives
- Partitioning Tools
- Understanding Filesystems
- Formatting Filesystems
- Mounting Filesystems
- Managing Filesystems
- Summary
- Exam Essentials

## Chapter 5: Managing Files

- Using File Management Commands
- Managing File Ownership
- Controlling Access to Files
- Locating Files
- Summary
- Exam Essentials

## Chapter 6: Booting, Initializing, and Virtualizing Linux

- Understanding the Boot Process
- Looking at Firmware
- Looking at Boot Loaders
- The Initialization Process
- Using the systemd Initialization Process
- Using the SysV Initialization Process
- Stopping the System
- Notifying the Users
- Virtualizing Linux
- Summary
- Exam Essentials

## Chapter 7: Configuring the GUI, Localization, and Printing

- Understanding the GUI
- Understanding the X11 Architecture
- Managing the GUI
- Providing Accessibility

- Using X11 for Remote Access
- Using Remote Desktop Software
- Understanding Localization
- Setting Your Locale
- Looking at Time
- Configuring Printing
- Summary
- Exam Essentials

## Chapter 8: Administering the System

- Managing Users and Groups
- Managing Email
- Using Log and Journal Files
- Maintaining the System Time
- Summary
- Exam Essentials

## Chapter 9: Configuring Basic Networking

- Networking Basics
- Configuring Network Features
- Basic Network Troubleshooting
- Advanced Network Troubleshooting
- Summary
- Exam Essentials

## Chapter 10: Writing Scripts

- Shell Variables
- The Basics of Shell Scripting
- Advanced Shell Scripting
- Writing Script Programs
- Running Scripts in Background Mode
- Running Scripts Without a Console
- Sending Signals
- Job Control
- Running Like Clockwork
- Summary

- Exam Essentials

### Chapter 11: Securing Your System

- Administering Network Security
- Administering Local Security
- Exploring Cryptography Concepts
- Looking at SSH
- Using GPG
- Summary
- Exam Essentials

## 11. Practice Test

### Here's what you get

| 120 | 8 | 108 |
|---|---|---|
| PRE-ASSESSMENTS QUESTIONS | FULL LENGTH TESTS | POST-ASSESSMENTS QUESTIONS |

## Features

Each question comes with detailed remediation explaining not only why an answer option is correct but also why it is incorrect.

### Unlimited Practice

Each test can be taken unlimited number of times until the learner feels they are prepared. Learner can review the test and read detailed remediation. Detailed test history is also available.

Each test set comes with learn, test and review modes. In learn mode, learners will attempt a question and will get immediate feedback and complete remediation as they move on to the next question. In test mode, learners can take a timed test simulating the actual exam conditions. In review mode, learners can read through one item at a time without attempting it.

# 12. Live Labs

The benefits of live-labs are:

- Exam based practical tasks
- Real equipment, absolutely no simulations
- Access to the latest industry technologies
- Available anytime, anywhere on any device
- Break and Reset functionality
- No hardware costs

## Lab Tasks

**Exploring Linux Command-Line Tools**

- Using the type Command

- Displaying the Current Shell on the Ubuntu Distribution
- Using Filters
- Using the paste Command
- Employing the sort Command
- Using Regular Expressions
- Using the cat Command to Concatenate Files
- Using the sed Command to Modify a File's Text

**Managing Software and Processes**

- Investigating RPM App Package Issues
- Using the zypper search Command
- Displaying Process Information
- Sending a Job to the Background

**Configuring Hardware**

- Exploring Kernel Modules
- Making an Inventory of System Devices
- Creating a Logical Volume
- Identifying System Hardware
- Viewing Disk Usage

**Managing Files**

- Renaming a Directory Using the mv Command
- Understanding Compression
- Changing the Permissions of a File
- Finding System Files and Placing Files in the Correct Location

**Booting, Initializing, and Virtualizing Linux**

- Creating a RAM Disk
- Employing the service Command

**Configuring the GUI, Localization, and Printing**

- Checking a Display Server
- Viewing the System Locale

**Administering the System**

- Reviewing Account Settings
- Using usermod to Lock an Account
- Creating a New Group and Adding an Account to a Group
- Managing Users and Groups
- Maintaining the System Time
- Using the timedatectl Command to Set the System Time

**Configuring Basic Networking**

- Understanding Network Configuration on CentOS
- Finding the Network Information
- Finding Applications that are Providing TCP Network Services

**Writing Scripts**

- Redirecting the Output of a Command
- Running Scripts in Background Mode, in Foreground Mode, and Without a Console
- Writing a Bash Script to View the Password Information for System Users

**Securing Your System**

- Finding the System's Initialization Method
- Managing Services with systemctl

## Here's what you get

**39**

**LIVE LABS**

## 13. Post-Assessment

After completion of the uCertify course Post-Assessments are given to students and often used in conjunction with a Pre-Assessment to measure their achievement and the effectiveness of the exam.

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