

# Partner Content: Linux Essentials SMT



Cisco Networking Academy  
Mind Wide Open

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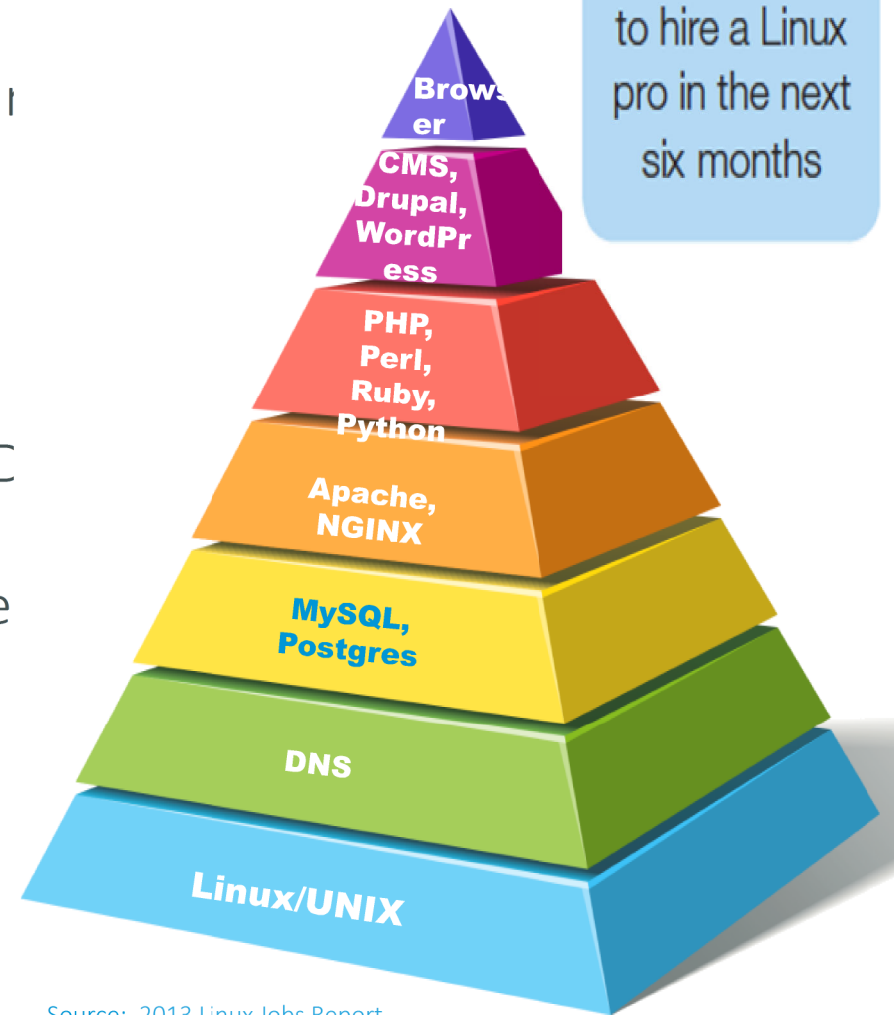
Engaging Partners for Innovation  
& Change

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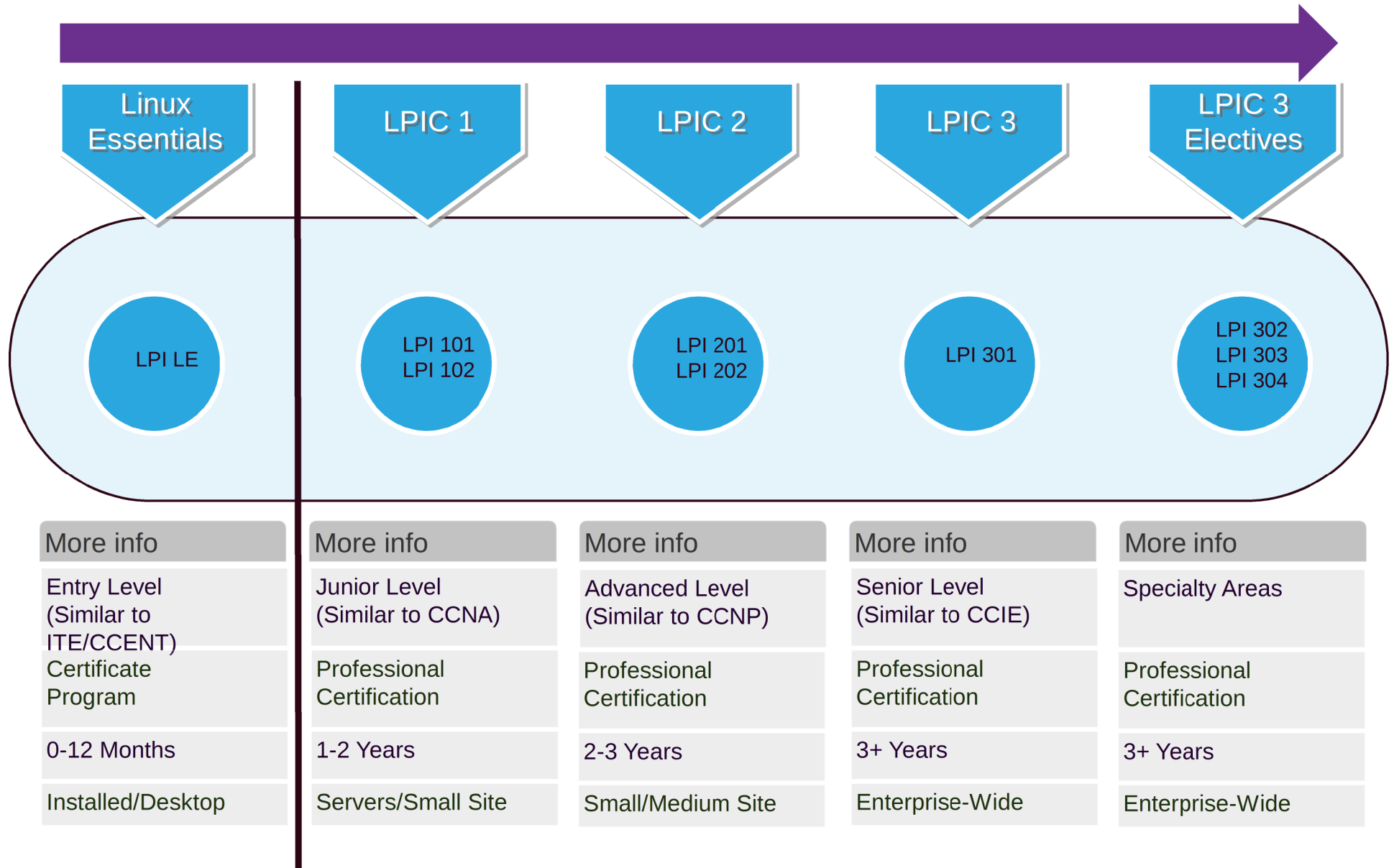
# Why Linux Essentials?

- Linux essential foundation for many IT jobs
- Most Cisco DC, UC, and management software runs on or requires Linux knowledge
- Linux is essential in “app” development
- Demand for Linux spurred by open cloud development and the growing need for Big C solutions, plus the use of embedded technologies in smartphones, cars, and other products
- 95% of LPI institutions are also NetAcad institutions



Source: [2013 Linux Jobs Report](#)

# Linux Pathway



# Linux Essentials SMT/Pilot

- Curriculum developed by Network Development Group (NDG) for Linux Professional Institute (LPI)
- Instructor-led online curriculum
- Aligns with Linux Essentials Certificate of Achievement
- Targeted to entry-level Linux professionals

# Linux Essentials Course Overview

## Course Modules

Module 1 - Running Linux As an Operating System
<a href="#">Chapter 1</a>
<a href="#">Chapter 1 Exam</a> must submit the assignment
Module 2 - Evaluate Available Applications
<a href="#">Chapter 2</a>
<a href="#">Chapter 2 Exam</a> must submit the assignment
Module 3 - Buzzword Bingo
<a href="#">Chapter 3</a>
<a href="#">Chapter 3 Exam</a> must submit the assignment
Module 4 - Command Line Basics
<a href="#">Chapter 4</a>
<a href="#">Lab 4</a>
<a href="#">Chapter 4 Exam</a>

**Chapter quizzes, labs, & final exams**

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LE001

Linux Essentials Demo

Change Home Page Layout

Understanding the Linux command line can be a powerful skill for Information Communication Technology (ICT) professionals. The skills taught in the Linux Essentials course are applicable to a wide range of ICT careers from network engineers to software developers to Linux administrators. For more information visit our [Jobs Initiative site](#).

Go to the [Modules List](#) to get started!



## Course on NetSpace

Linux Essentials

CHAPTER 5  
Introduction  
Linux Essentials Exam Objectives  
man Pages  
Viewing man pages  
Controlling the man Page Display  
Sections of the man Page  
man Page SYNOPSIS Section  
Searching Within a man Page  
man Pages Categorized by Sections  
Determining Which Section  
Specifying a Section  
Searching Sections  
Searching man Pages by Keyword  
Info Command  
Displaying Info Documentation for a Command  
Moving Around While Viewing an Info Document  
Exploring Info Documentation  
Additional Sources of Help  
Using the --help Option

### 5.2 Linux Essentials Exam Objectives

This chapter will cover the topics for the following Linux Essentials exam objectives:

Topic 2: Finding Your Way on a Linux System (weight: 8)

**2.2: Using the Command Line to Get Help**

Weight: 2

Description: Running help commands and navigation of various help systems

Key Knowledge Areas:

- man
- info

The following is a partial list of the used files, terms, and utilities:

- man
- info
- man pages
- /usr/share/doc
- locate

Things that are nice to know:

- apropos
- whatis
- whereis

**New interface**

Linux Terminal

Show/Hide

Ubuntu 12.10 localhost tty

localhost login: sysadmin (automatic login)

Welcome to Ubuntu 12.10 (GNU/Linux 3.8.0-34-generic x86\_64)

\* Documentation: <https://help.ubuntu.com/>

The programs included with the Ubuntu system are free software;  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/\*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by  
applicable law.

sysadmin@localhost:~\$

Reset Restart Help

**Linux terminal for hands-on testing**

# Linux Essentials: Course Features

**4.1 Introduction**

If you are like most people, you are probably most familiar with using a Graphical User Interface (GUI) to control your computer. Introduced to the masses by Apple on the Macintosh computer and popularized by Microsoft, a GUI provides an easy, discoverable way to manage your system. Without a GUI, some tools for graphics and video would not be practical.

Prior to the popularity of the GUI, the Command Line Interface (CLI) was the preferred way to control a computer. The CLI relies solely on keyboard input. Everything you want the computer to do is relayed by typing commands rather than clicking on icons.

If you have never used a CLI, at first it may prove challenging because it requires memorizing commands and their options. However, a CLI provides more precise control, greater speed and the ability to easily automate tasks through scripting (see sidebar). Although Linux does have many GUI environments, you will be able to control Linux much more effectively by using the Command Line Interface.

**Built-in virtual machine for students to “play” with new skills**

Consider This...

Scripting is the process of taking a series of CLI commands, placing them in a file and having the system execute each of the commands. It is an excellent way of combining a series of complex operations into a single operation (from the user's perspective). In other words,

**4.2 Linux Essentials Exam Objectives**

This chapter will cover the topics for the following Linux Essentials exam objectives.

Topic 2: Finding Your Way on a Linux System (weight: 6)

2.1: Basics of using the Linux command line.

Weight: 2

Description: Basics of using the Linux command line.

Key Knowledge Areas:

- Basic shell
- Formatting commands
- Working with Options
- Variables
- Globbing
- Quoting

The following is a partial list of the used files, terms, and utilities:

- echo
- PATH environment variable
- history
- which

The following is a partial list of the used files, terms, and utilities:

- Substitutions
- & && and control operators

**Learner-directed exams & lab activities**

**Cisco Networking Academy**

Linux101

Question 1

The main purpose of using glob characters is to be able to provide a command a list of filenames. True or False?

☐ True

☒ False

**Mid-term and final exams to identify learner strengths and areas for improvement**

**Send us feedback**

Bug Report

Question

Feedback

Typo

Bug Report

**Feedback and help functionality: learners can report bugs, suggest improvements, search repository**

Feedback goes to NDG or LPI resource

# Frequently asked questions

- How do I get access to the Linux course?

Step 1: Cisco Academies can register with the LPI Academy to become eligible to teach Linux Essentials. Send an email to: [academysupport@lpi.org](mailto:academysupport@lpi.org)

Step 2: Register instructors that will utilize the NDG Linux Essentials curriculum with LPI. If they are not already in NetSpace, add them to NetSpace.

- How long will it take to complete the course?
  - You can use the material based on the needs of the academic institution and students. It is anticipated it will take a full semester or a quarter based on your unique students.
  - The content can be included in a Linux course or as a module in an OS course.



# Linux Essentials Outline

Module	Title	Topics Covered
Module 1	Running Linux As an Operating System	<ul style="list-style-type: none"><li>• Linux evolution and popular operating systems</li><li>• Choosing an operating system</li></ul>
Module 2	Evaluate Available Applications	<ul style="list-style-type: none"><li>• Major open source applications</li><li>• Understanding open source software and licensing</li></ul>
Module 3	Buzzword Bingo	<ul style="list-style-type: none"><li>• ICT skills and working in Linux</li></ul>
Module 4	Command Line Basics	<ul style="list-style-type: none"><li>• Basics of using the Linux command line</li></ul>
Module 5	Getting Help	<ul style="list-style-type: none"><li>• Using the command line to get help</li></ul>
Module 6	Listing Files and Directories	<ul style="list-style-type: none"><li>• Using directories and listing files</li><li>• Creating, moving and deleting Files</li></ul>
Module 7	Archiving and Un-archiving Files	<ul style="list-style-type: none"><li>• Archiving files on the command line</li></ul>
Module 8	Pipes, Redirection, and REGEX	<ul style="list-style-type: none"><li>• Searching and extracting data from files</li></ul>
Module 9	Scripting Commands	<ul style="list-style-type: none"><li>• Turning commands into a script</li></ul>
Module 10	Understanding Computer Hardware	<ul style="list-style-type: none"><li>• Understanding computer hardware</li></ul>
Module 11	Linux Data Locations	<ul style="list-style-type: none"><li>• Where data is stored</li></ul>
Module 12	Poking Around the Network	<ul style="list-style-type: none"><li>• Your computer on the network</li></ul>
Module 13	See Who Is on Your System	<ul style="list-style-type: none"><li>• Basic security and identifying user types</li></ul>
Module 14	Create a New User	<ul style="list-style-type: none"><li>• Creating users and groups</li></ul>
Module 15	Ownership and Permissions	<ul style="list-style-type: none"><li>• Managing file permissions and ownership</li></ul>
Module 16	Securing Files and Directories with Special Permissions	<ul style="list-style-type: none"><li>• Special directories and files</li></ul>



# Frequently asked questions

- Is there a certificate of completion or letter?

LPI Academy and NDG are currently developing a process to distribute course completion documents and letters. We will provide more information when the qualifications and processes have been defined.

- Do I need any additional equipment for the course?

No additional equipment is required for this course.

# Who should I contact if I have any other questions about Linux Essentials?

All questions, comments, and feedback should be directed to

[academysupport@lpi.org](mailto:academysupport@lpi.org)

... Your friendly Algonquin College Professor!

Thank you.



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