



NDG Linux Courses Overview

Developed by NDG

NDG Linux Courses: From Zero Knowledge to Certification Skills

1. NDG Linux Unhatched for new learners

- Aligns to CompTIA A+ Exam 220-902 Area 2.1

2. NDG Linux Essentials for beginners

- Aligns to LPI.org Linux Essentials Professional Development Certificate




3. NDG Linux I aligned to LPIC-1 / Linux+

- Aligns to exam 101 for LPI.org LPIC-1 Certification
- Aligns to exam LX0-103 CompTIA Linux+ powered by LPI Certification

4. NDG Linux II aligned to LPIC-1 / Linux+

- Aligns to exam 102 for LPI.org LPIC-1 Certification
- Aligns to exam LX0-104 for CompTIA Linux+ powered by LPI Certification

NDG Linux Course Charges

Course Title		Cost to Instructors	Cost to Students
NDG Linux Unhatched		FREE	FREE
NDG Linux Essentials		FREE	FREE
NDG Linux I		FREE	\$39.95*
NDG Linux II		FREE	\$39.95*

Why is NDG charging a fee?

The fee is to sustain the course offerings.

How long is access?

Institutions set the course start and end dates. (Maximum timeframe is six months).

Is the fee discounted?

Yes, Cisco Networking Academies receive a substantial discount from NDG retail price.

Linux Skills Are In Demand



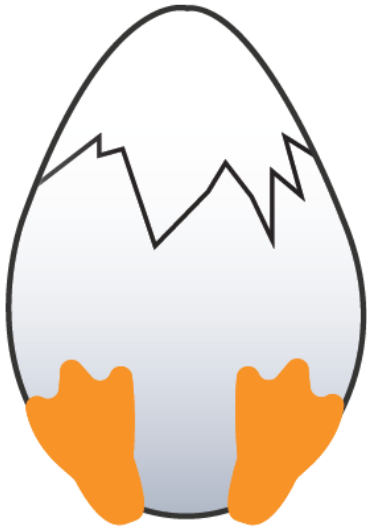
93% of hiring managers plan to hire a Linux professional in the next six months

and almost **90%** said it's difficult to find experienced Linux pros.

This means lots of job opportunities for those with Linux skills.

-2014 Linux Job Report, Linux Foundation & Dice

NDG Linux Unhatched Course Content



- Designed to be a short, introductory course.
 - Eight (8) Hour Course
 - One (1) Chapter
 - One (1) Assessment
- Aligns to CompTIA A+ Exam 220-902 Area 2.1
- Three ways to access material:
 - Cisco NetAcad Course
 - NDG Website
 - IT Essentials

NDG Linux Unhatched Aligned to CompTIA A+ 900 Series

Basic Linux Commands

- *ls*
- *grep*
- *cd*
- *shutdown*
- *pwd*
- *passwd*
- *mv*
- *Cp*
- *rm*
- *chmod*
- *chown*
- *iwconfig/ifconfig*
- *ps*
- *su/sudo*
- *apt-get*
- *vi*
- *dd*



2.0 Other Operating Systems and Technologies

2.1 Identify common features and functionality of the Mac OS and Linux operating systems.

• Best practices

- Scheduled backups
- Scheduled disk maintenance
- System updates/App Store
- Patch management
- Driver/firmware updates
- Antivirus/anti-malware updates

• Tools

- Backup/Time Machine
- Restore/snapshot
- Image recovery
- Disk maintenance utilities
- Shell/Terminal
- Screen sharing

- Force Quit

• Features

- Multiple desktops/Mission Control
- Key Chain
- Spot Light
- iCloud
- Gestures
- Finder
- Remote Disc
- Dock
- Boot Camp

• Basic Linux commands

- *ls*
- *grep*

- *cd*

- *shutdown*
- *pwd* vs. *passwd*
- *mv*
- *cp*
- *rm*
- *chmod*
- *chown*
- *iwconfig/ifconfig*
- *ps*
- *su/sudo*
- *apt-get*
- *vi*
- *dd*

How to Access Unhatched – Cisco NetAcad Course



Cisco Networking Academy



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**Networking Academy Maintenance Service
Program Terms and Conditions Updated** [Show](#)

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Manage

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[Teach More Courses](#)

[NDG Linux Essentials 1016](#)

Partner: NDG Linux Essentials - DTP
Cisco Virtual Academy



Actions



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[NDG Linux Unhatched](#)

New Template (Blank)
Net Dev Group



[NDG Linux Essentials 0916m](#)

Partner: NDG Linux Essentials - DTP



New C++ Programming Course

In collaboration with C++ Institute, CPA: Programming in C++ teaches basic programming skills

[See Course](#)



I'm Learning

The new student experience is here!

Let us know what you think.

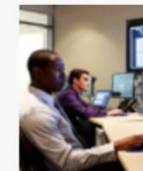
[See Details](#)



Teach Intro to Cybersecurity

Teach your students about cybersecurity and the related career opportunities.

[See Cybersecurity](#)



Share Idea

How to Access Unhatched – NDG Website

www.netdevgroup.com/try/unhatched



NDG ONLINE ▾

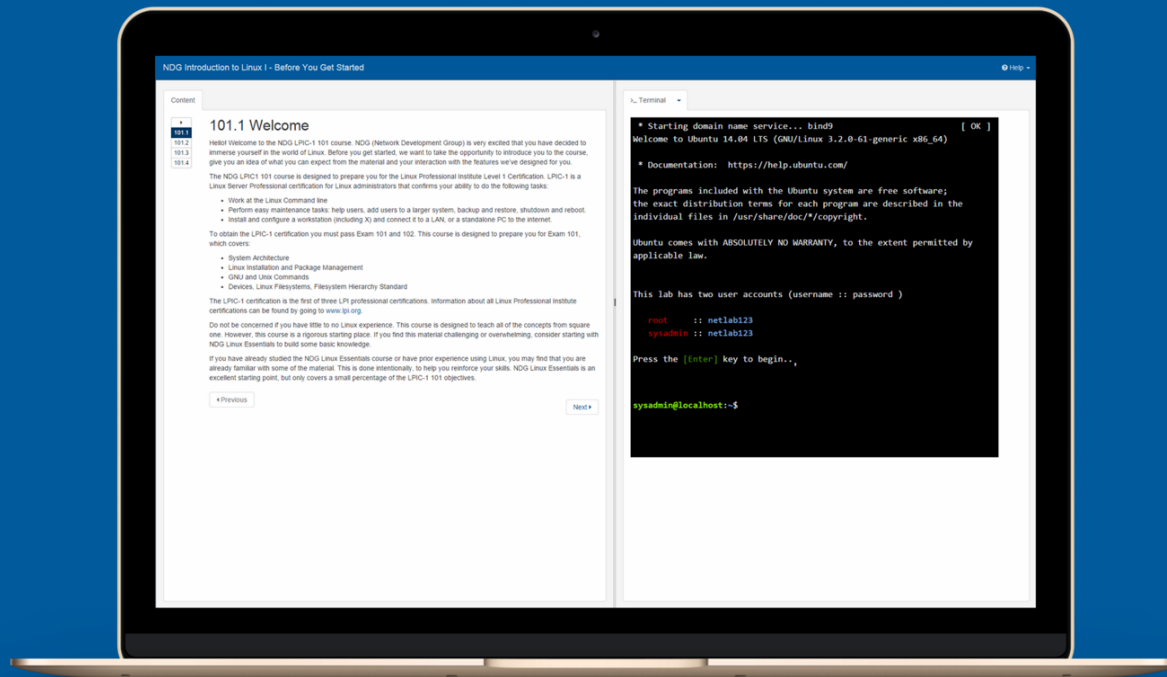
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CONTACT

TRY LINUX UNHATCHED



First Name


Last Name


Email


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→ NEXT STEP

How to Access Unhatched – IT Essentials

- ▼ **Course Completion**
 -  **Course Feedback** 100 pts

- ▼ **Final Exam** Prerequisites: Course Completion
 -  **Final Exam** 100 pts

- ▼ **Career Resources for NetAcad Alumni**
 -  **Career Resources for NetAcad Alumni**

- ▼ **NDG Linux CompTIA A+**
 -  **NDG Linux Module for CompTIA A+**

NDG Linux Essentials Course Content







- Designed to be a full semester course
 - With lectures, content, labs and assessments
- Sixteen (16) chapters
- Thirteen (13) lab exercises
 - Four (4) challenge labs
- Virtual machine for learner via LMS
- Assessments
 - Chapter, midterm and final
- Instructor presentations for each chapter

NDG Linux Essentials Course Modules

Title of Chapter	LPI Linux Essentials Certificate Objective Covered
1 Introduction to Linux	1.1 Linux Evolution and Popular Operating Systems 4.1 Choosing an Operating System
2 Open Source Applications and Licenses	1.2 Major Open Source Applications 1.3 Understanding Open Source Software and Licensing
3 Using Linux	1.4 ICT Skills and Working in Linux
4 Command Line Skills	2.1 Command Line Basics
5 Getting Help	2.2 Using the Command Line to Get Help
6 Working with Files and Directories	2.3 Using Directories and Listing Files 2.4 Creating, Moving and Deleting Files
7 Archiving and Compression	3.1 Archiving Files on the Command Line
8 Pipes, Redirection, and REGEX	3.2 Searching and Extracting Data from Files
9 Basic Scripting	3.3 Turning Commands into a Script
10 Understanding Computer Hardware	4.2 Understanding Computer Hardware
11 Managing Packages and Processes	4.3 Where Data is Stored
12 Network Configuration	4.4 Your Computer on the Network
13 System and User Security	5.1 Basic Security and Identifying User Types
14 Managing Users and Groups	5.2 Creating Users and Groups
15 Ownership and Permissions	5.3 Managing File Permissions and Ownership
16 Special Permissions, Links and File Locations	5.4 Special Directories and Files

Certification Alignment

COURSE TITLE	CERTIFICATION EXAM ALIGNMENT
NDG Linux Unhatched	 CompTIA A+ (Linux Knowledge)
NDG Linux Essentials	 Linux Essentials Professional Development Certificate
NDG Linux Series	 LPIC-1: Linux Server Professional Certification
	 CompTIA Linux+ Powered by LPI

NDG Linux I Aligned to LPIC-1 (101 Exam)



- Designed to be a full semester course
 - With lectures, content, labs and assessments
- Higher level of rigor than Linux Essentials
- 1st in series of two courses
- 27 chapters
- 24 lab exercises
- Assessments
 - Chapter, midterm and final
- Current release is English only





NDG Linux I Course Modules

Title of Chapter	Linux Professional Institute LPIC-1 101 Certification Objectives
Before You Get Started	Course Introduction
1 Using the Shell	103.1 Work on the command line
2 Getting Help	103.1 Work on the command line
3 Text Utilities	103.2 Process text streams using filters
4 Configuring the Shell	103.1 Work on the command line
5 File Manipulation	103.3 Process basic file management
6 File Globbing	103.3 Process basic file management
7 Finding Files	103.3 Process basic file management 104.7 Find system files and place files in the correct location
8 Regular Expressions	103.7 Search text files using regular expressions
9 The vi Editor	103.8 Perform basic file editing operations using vi
10 Standard Text Streams and Redirection	103.4 Use streams, pipes and redirects
11 Managing Processes	103.5 Create, monitor and kill processes 103.6 Modify process execution priorities
12 Archive Commands	103.3 Process basic file management
13 File Permissions and Ownership	104.5 Manage file permissions and ownership

NDG Linux I Course Modules Continued

Title of Chapter	Linux Professional Institute LPIC-1 101 Certification Objectives
14 File Systems Links	104.6 Create and change hard and symbolic links
15 Hardware Configuration	101.1 Determine and configure hardware settings
16 The Boot Process	101.2 Boot the system
17 Bootloaders	102.2 Install a boot manager
18 Runlevels	101.3 Change runlevels and shutdown or reboot system
19 Designing a Scheme	102.1 Design hard disk layout
20 Creating Partitions	102.1 Design hard disk layout 104.1 Create partitions and filesystems
21 Mounting Filesystems	102.1 Design hard disk layout 104.3 Control mounting and unmounting of filesystems
22 Maintaining Integrity	104.2 Maintain the integrity of filesystems
23 Fixing Filesystems	104.2 Maintain the integrity of filesystems
24 Disk Quotas	104.4 Manage disk quotas
25 RPM Package Management	102.5 Use RPM and YUM package management
26 Debian Software Management	102.4 Use Debian package management
27 Managing Shared Libraries	102.3 Manage shared libraries

Certification Alignment

COURSE TITLE	CERTIFICATION EXAM ALIGNMENT
NDG Linux Unhatched	 CompTIA A+ (Linux Knowledge)
NDG Linux Essentials	 Linux Essentials Professional Development Certificate
NDG Linux Series	 LPIC-1: Linux Server Professional Certification
	 CompTIA Linux+ Powered by LPI

NDG Linux II aligned to LPIC-1 (102 Exam)







- Designed to be a full semester course
 - With lectures, content, labs and assessments
- 2nd course in series
- 19 chapters
- 19 lab exercises
- Assessments
 - Chapter, midterm and final
- Current release is English only

NDG Linux II Course Modules

Title of Chapter	Linux Professional Institute LPIC-1 102 Certification Objectives
1 Shell Customization	105.1 Customize and use the shell environment
2 Introduction to Shell Scripts	105.2 Customize or write simple scripts
3 SQL	105.3 SQL data management
4 X Windows Components	106.1 Install and configure X11
5 Configuring Display Managers	106.2 Setup a display manager
6 Accessibility	106.3 Accessibility
7 User and Group Accounts	107.1 Manage user and group accounts and related system files
8 Scheduling Jobs	107.2 Automate system administration tasks by scheduling jobs
9 Localization	107.3 Localization and internationalization
10 System Time	108.1 Maintain system time
11 Logging	108.2 System logging
12 Email Configuration	108.3 Mail Transfer Agent (MTA) basics
13 Printer Management	108.4 Manage printers and printing
14 Networking Fundamentals	109.1 Fundamental of internet protocols
15 Network Configuration	109.2 Basic network configuration
	109.4 Configure client side DNS
16 Troubleshooting Networks	109.3 Basic network troubleshooting
17 Account Security	110.1 Perform security administration tasks
18 Host Security	110.2 Setup host security
19 Encryption	110.3 Securing data with encryption

Certification Alignment

COURSE TITLE	CERTIFICATION EXAM ALIGNMENT
NDG Linux Unhatched	 CompTIA A+ (Linux Knowledge)
NDG Linux Essentials	 Linux Essentials Professional Development Certificate
NDG Linux Series	 LPIC-1: Linux Server Professional Certification
	 CompTIA Linux+ Powered by LPI

Course Home Page in Cisco NetAcad

linux101c

🏠 > linux101c

- Home
- Modules
- Assignments
- Grades
- Help & Resources
- Collaborations

NDG Linux Essentials

This introduction to Linux course is offered by the Network Development Group (NDG). The skills taught in this course are applicable to a wide range of careers including networking, software development and Linux administration.

This course aligns to the Linux Professional Institute (LPI) Linux Essentials Professional Development Certificate. To learn more about this certificate, visit www.lpi.org/LE .

How marketable are Linux skills? Before you begin this course, please take a few minutes to review the Linux jobs posted on the Cisco Networking Academy job site www.netacadadvantage.com.

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

Need Help? Click on [Help & Resources](#) in the menu on the left.



 View Course Stream

Coming Up  View Calendar

Nothing for the next week

Recent Feedback

Nothing for now

Course Content With Virtual Machine - Learn by Doing!

Content

Objectives

Key Terms

3.6 head Command

The purpose of the `head` command is to view the beginning of a file or output. By default, the `head` command will display the first ten lines of a file's contents. For example, the following command displays the first ten lines of the `alpha.txt` file:

```
sysadmin@localhost:~/test$ head alpha.txt
A is for Apple
B is for Bear
C is for Cat
D is for Dog
E is for Elephant
F is for Flower
G is for Grapes
H is for Happy
I is for Ink
J is for Juice
```

There are several options for the `head` command that are useful. For instance, there is the ability to use a number as an option to indicate how many lines of output to display. For example, to display the first three lines of the `alpha.txt` file execute:

```
sysadmin@localhost:~/test$ head -3 alpha.txt
A is for Apple
B is for Bear
C is for Cat
```

There is also an option, `-n`, which takes an argument for the number of lines to display. So, the following would also display the first three lines of the `alpha.txt` file:

>_ Ubuntu PC

```
sysadmin@localhost:~/test$
```

Lab Exercises To Reinforce Skills

Content

Step 3

Change the `LC_NUMERIC` locale variable to `C.UTF-8` by executing the following command:

```
export LC_NUMERIC="C.UTF-8"
```

```
sysadmin@localhost:~$ export LC_NUMERIC="C.UTF-8"
```

[◀ Previous](#)

[Next ▶](#)

>_ Ubuntu PC

```
sysadmin@localhost:~$ locale
LANG=
LANGUAGE=
LC_CTYPE="POSIX"
LC_NUMERIC="POSIX"
LC_TIME="POSIX"
LC_COLLATE="POSIX"
LC_MONETARY="POSIX"
LC_MESSAGES="POSIX"
LC_PAPER="POSIX"
LC_NAME="POSIX"
LC_ADDRESS="POSIX"
LC_TELEPHONE="POSIX"
LC_MEASUREMENT="POSIX"
LC_IDENTIFICATION="POSIX"
LC_ALL=
sysadmin@localhost:~$ locale -a
C
C.UTF-8
POSIX
sysadmin@localhost:~$ export LC_NUMERIC="C.UTF-8"
sysadmin@localhost:~$
```

Assessments: Chapter Quizzes, Midterm and Final

Courses ▾ ▾

Grades

Calendar

NDG101

Home > NDG101 > Assignments > Chapter 04 Exam

Time elapsed: 58 seconds

Home

Modules

Assignments

Grades

Help & Resources

Collaborations

1

Question 3

A pair of single quotes (') will prevent the shell from interpreting any metacharacter.
True or False?

True

False

Question 4

A pair of double quotes (") will prevent the shell from interpreting any metacharacter.
True or False?

Instructor Lecture Materials – PowerPoint Per Chapter

Module 3: User and System Administration

Chapter 7: User and Group Accounts



User and Group Accounts

- Linux is a multiuser operating system, allowing multiple users to access the system simultaneously.
- User and group accounts facilitate this by controlling the access allowed for different types of users.
- To execute the commands in this section, root privileges are required.



Online Support Built Into Curriculum



- 9.1
- 9.2
- 9.3
- 9.4
- 9.5

9.3 Command Mode Actions

The standard convention for editing content with word processors is to use copy, cut, and paste. The `vi` program has none of these, instead `vi` uses the following three commands:

Standard	Vi	Meaning
cut	d	delete
copy	y	yank
paste	P p	put

The motions learned from the previous page are used to specify where the action is to take place, always beginning with the present cursor location. Either of the following general formats for action commands is acceptable:

action [count] motion

[count] action motion

Delete

Delete removes the indicated text from the page and saves it into the buffer, the buffer being the equivalent of the "clipboard" used in Windows or Mac OSX. The following table provides some common usage examples:

- Frequently Asked Questions
- Submit Feedback
- Start Tour

```
* Starting domain name service... bind9 [ OK ]
Welcome to Ubuntu 14.04 LTS (GNU/Linux 3.13.0-79-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.

This lab has two user accounts (username :: password )

root      :: netlab123
sysadmin  :: netlab123

Press the [Enter] key to begin...
```

NDG Online Tool To Submit Issues

NDG Introduction to Linux I - Chapter 9: The vi Editor Help

Content Objectives Key Terms

9.3 Command Mode Actions

The standard convention for editing content with word processing software is to use the `vi` program. The `vi` program has none of these, instead `vi` uses the following:

Standard	Vi
cut	d
copy	y
paste	P p

The motions learned from the previous page are used to specify a location, always beginning with the present cursor location. Either of the following commands is acceptable:

```
action [count] motion
```

```
[count] action motion
```

Delete

Delete removes the indicated text from the page and saves it into the buffer, the buffer being the equivalent of the "clipboard" used in Windows or Mac OSX. The following table provides some common usage examples:

```
... bind9 [ OK ]
U/Linux 3.13.0-79-generic x86_64)
.ubuntu.com/
Ubuntu system are free software;
r each program are described in the
doc/*/copyright.
WARRANTY, to the extent permitted by
(username :: password )
sysadmin :: netlab123
Press the [Enter] key to begin...
```

Send us feedback ✕

Type

Feedback

Content (required)

Perhaps the searching section should have it's own page.

[Next →](#)

How to Purchase Course Access Codes

Academy Can Purchase In Bulk

i-i-test

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Help Center

[NDG Introduction to Linux I](#) / [Help Center](#)

Frequently Asked Questions

1. [How do I activate exams properly using the activation tool?](#)
2. [Students are claiming they cannot open the Midterm, Final Exam or the Comprehensive Final Exam, what do I do?](#)
3. [Does this course align to any certification?](#)
4. [What are the minimum requirements for viewing the content of this course?](#)
5. [How can I, as an instructor, view exam questions?](#)
6. [Are any teaching materials provided, such as PowerPoint presentations?](#)
7. [Are the chapter modules and lab content available to download for offline use?](#)
8. [How are the points earned for the labs?](#)
9. [I have a suggestion for some improvements/changes to the course that could provide benefit to the student's learning experience. How can I submit my suggestions?](#)
10. [I am experiencing an error of some kind in the course, how can I report it?](#)
11. [I can't type into the terminal, the loading icon is stuck and/or my terminal is a blank screen. What do I do?](#)
12. [Will the files that I save onto the Linux virtual machine be saved for next use?](#)
13. [Is the Linux VM capable of being connected to the Internet?](#)
14. [Why is the virtual machine not accepting a common command that is an actual command used in another Linux environment?](#)

Resources

- [Assessment Tool](#)
- [Teaching Materials](#)
- [Purchase Course Access Codes](#)

Help

- [Feedback](#)
- [Terms](#)



Academy Can Purchase In Bulk

i-i-test

🏠 > i-i-test

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- Modules
- Assignments
- Grades
- Outcomes
- Syllabus
- Pages
- People
- Files
- Discussions
- Quizzes
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- Collaborations
- [Help & Resources](#)
- Settings







Purchase Bulk Course Access Codes [Help Center](#) / Purchase Bulk Course Access Codes

Why Do I Need Course Access Codes?

This course is offered for a fee by Network Development Group, Inc. The fee, in the form of a course access code, must be entered in order to access this course. The fee may be paid by the learner, or your educational institution may prefer to purchase the access codes and distribute them to the learner.

Click the Buy Now button to go to the order page. Enter the number of course access codes you would like to purchase. Complete the checkout with a valid payment method and the access codes will be emailed to you.

Click Buy Now to Begin

Or give the following URL to the purchasing agent for your institution:
<https://content.netdevgroup.com/buy/6096/>

Learners Can Purchase Individually

Enter Course Access Code

This course is offered for a fee by [Network Development Group, Inc.](#)

You may purchase a course access code below or one may have been provided to you. The NetSpace course start and end date is controlled by the institution. Course access is set to a maximum of six months. The six months begins when the course access code is activated.

Purchase Course Access Code

You may access this course by purchasing a course access code from [Network Development Group](#). You can learn more about this course at <https://netdevgroup.com/c/topic1-s1>.

A course access code

- consists of 8 characters (combination of letters and numbers)
- is **NOT** case sensitive

[\\$ Buy Course](#)

Demo Course



[Launch Demo](#)

If you are unable to find your access code and are enrolled in a class, please contact your instructor for assistance. If you purchased course access but do not have an access code, please contact the organization that sold you access to the course.

NDG Linux Course Summary

- Linux Unhatched aligned to A+ Basics
- Linux Essentials for Beginners
- Linux I Aligned to LPIC-1 / Linux+
- Linux II Aligned to LPIC-1 / Linux+
- Goal: Job Skills and Career Pathway in Linux

