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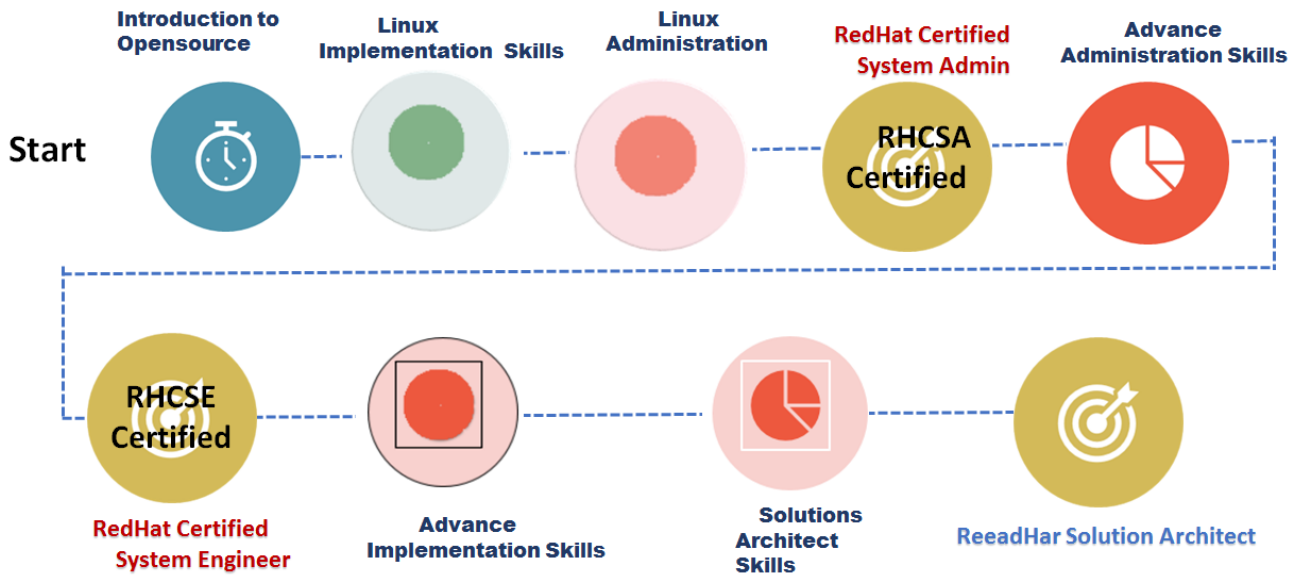
Linux Fundamental | Security | IAM | Apache | MySQL | Basic Shell Script | Samba | Backup| Network | Partitioning | Performance | Fine Tuning

14 Module | 30+ Labs | 1 Live Project | Placements Assistance

QUOTATION AND COURSE OUTLINE

TECHPLEDGE CERTIFIED LINUX ADMINISTRATOR

Learning Path – Linux Administrator



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Course Materials

TechPledge will provide a customized set of Lecture Notes for each class scheduled along with Recoded video. You will be given a PDF file which you may make copies from, email to your participants, or make available via internal website.

Learning Path for Linux Administrator

Linux Skilled Administrator is able to perform the core system administration skills required in Linux environments. At the TechPledge we provide the training which is always updated in line with the Linux Administrator Skills required by the industry and recommended by Domain Experts. Below is the patch for training

Evolve your Linux Administration Skills

- *Understand and use essential tools for handling files, directories, command-line environments, and documentation*
- *Create and configure file systems and file system attributes, such as permissions, encryption, access control lists, and network file systems*
- *Security, responsibility*

Manage Resources in Linux

- *Align requirements with cloud types and service models in Linux*
- *Control Linux services with the CLI*
- *Operate running systems, including booting into different run levels, identifying processes, starting and stopping virtual machines, and controlling services*
- *Configure local storage using partitions and logical volumes*

Administer Infrastructure Resource in Linux

- *Pillars of a great Linux Administration*
- *Manage security in Linux*
- *Manage performance and scalability in Linux*
- *Manage for efficiency and operations in Linux*
- *Manage for availability and recoverability in Linux*

Abilities Validated by the Training

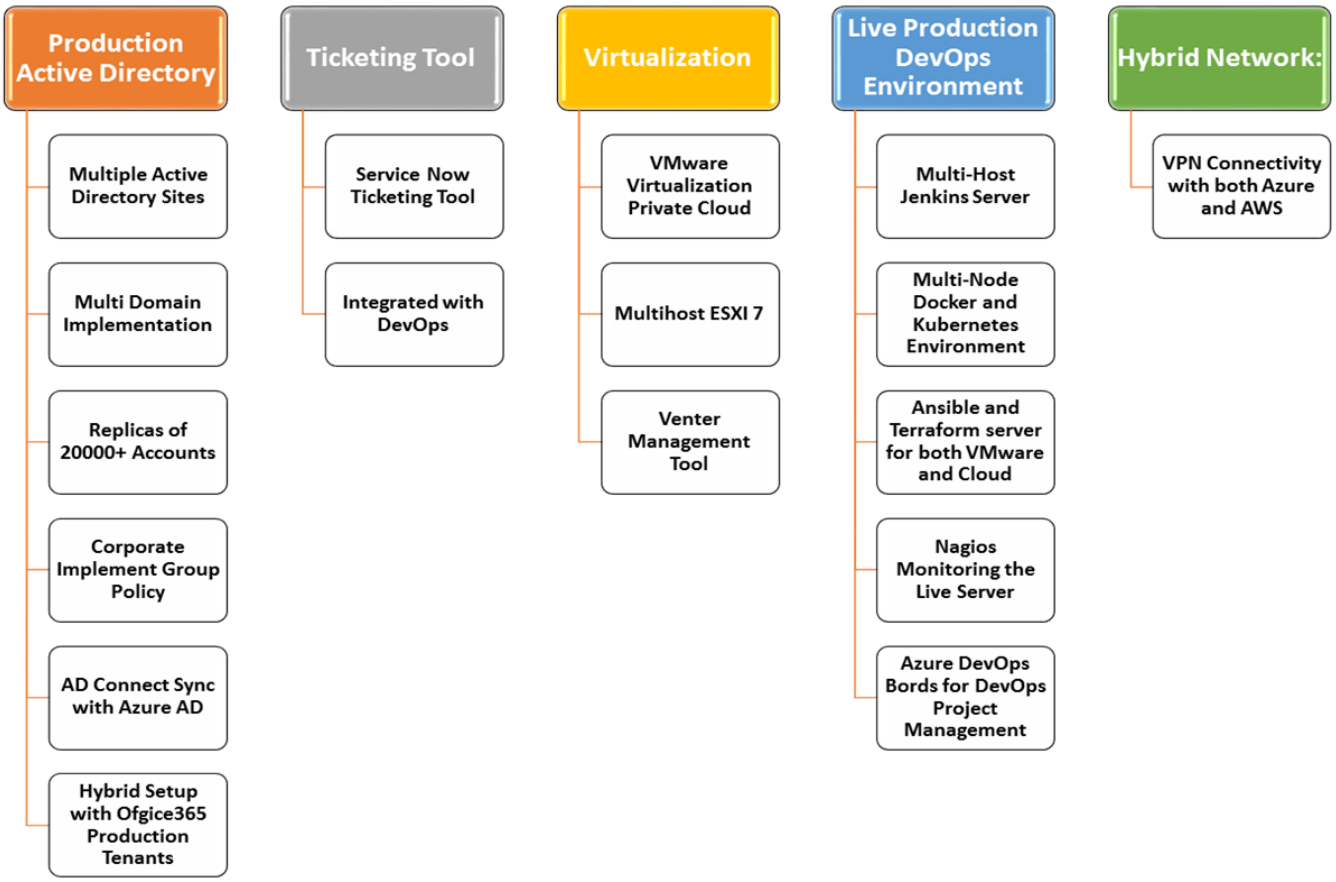
- Manage infrastructure
- Understand and use essential tools for handling files, directories, command-line environments, and documentation
- Operate running systems, including booting into different run levels, identifying processes, starting and stopping virtual machines, and controlling services
- Configure local storage using partitions and logical volumes
- Create and configure file systems and file system attributes, such as permissions, encryption, access control lists, and network file systems
- Deploy, configure, and maintain systems, including software installation, update, and core services
- Manage users and groups,
- Manage security, including basic firewall

Customer Immersion – Live Production Walkthrough

6 Hours Live walkthrough the complete Open Source Linux Infrastructure Integration and Migration Process in production environment with full setup of Infrastructure Like **AD, Linux Samba , Linux Apache and Tomcat , MySQL on Linux , Microsoft SQL , Microsoft Exchange, File Server , ADFS and** DevOps Tool Like **Jenkins , Ansible , Docker , AWS Code Deploy , AWS Code Pipeline , Azure Pipeline** and **Azure ARM** and Development Environment with Maven, Visual Studio and Python.

The Complete Setups is using **100** of **PowerShell** & **Linux Script** with **237 CI/CD scripts** (**Jason, Yamal**).

Below is the High-Level Setup Outline of our Customer Immersion Production Replicas. Student will get the access of this setup at end of the course for 6 hours with AD ID and Organization Email.



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Learn while doing with our Sandbox Environment

All the Labs is available on our cloud sandbox.

Azure Sandbox

- Connect with Azure Portal through the TechPledge Provide sandbox environment and play with it will all labs which you want to try.
- Create, destroy, and build Practical, scenario-based applications with ease. Our pre-configured, auto-provisioned servers allow you to try new skills, risk-free.

AWS Sandbox

- Connect with AWS Console through the TechPledge Provide sandbox environment and play with it will all labs which you want to try.
- Create, destroy, and build Practical, scenario-based applications with ease. Our pre-configured, auto-provisioned servers allow you to try new skills, risk-free.

Linux Sandbox

- Connect with Linux Self Pace Portal through the TechPledge Provide sandbox environment and play with it will all labs which you want to try.
- Create, destroy, and build Practical, scenario-based applications with ease. Our pre-configured, auto-provisioned servers allow you to try new skills, risk-free.

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Course Outline

Introduction to Open Source

- Introduction to the UNIX Operating System
- Features of Linux
- Linux vs Windows Operating System
- GNU Tools and Utilities
- Different flavors of Unix/Linux
- File System Layout in Unix/Linux
- SSH Protocol
- Linux Kernel
- Linux Shell
- How to use Shell
- Common Linux Command Introduction
- Control Terminal Color and Cursor

Introduction to Red Hat Enterprise Linux

- RedHat As a Company
- RedHat Products
- RedHat Certification
- RedHat Licensing
- RedHat Support Plan

Installing Linux

- Installation Options
- Server Install
- Workstation Install
- CD Install
- Kickstart Install
- Network Install
- Customizing the Install
- **Lab1:** Install Linux on Local Virtual Environment
- **Lab 2:** Provision Linux using Cloud Image

Booting Linux

- Firmware Phase
- Boot Loader Phase
- Kernel Phase
- Kernel Boot Parameters
- init Phase
- **Lab3:** Review the Linux Boot process

Key Filesystem Locations

- Boot Files
- User Files
- Administrator Files
- Configuration Files
- Log Files
- **Lab4:** Review the Critical System File location in Linux

Basic Linux Shell Command

- Basic Linux Command
- Types of Editor in Linux
- Different modes of the vi editor
- Commands for saving and exit,
- Help command on Linux
- **Lab5:** Run Basic command on Linux terminal
- **Lab 6:** Explore Help manual for Linux command

Linux Partition & Filesystem

- Partition Types
- View the Partition in Linux
- Create new partition in Linux
- Format the new Filesystem
- Filesystem Types
- Mounting
- Automount
- **Lab7:** Add an additional HDD and Partition the HDD with Mount on directory
- **Lab8:** Add an additional HDD and Partition the HDD as swap space
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File System and Linux File Security

- What is Files
- Directories and Sub-directories
- Naming convention of Files
- Piping, Input/output Redirection
- File Types
- File Security
- Assign the file permission
- Change the file ownership
- What is Superuser
- **Lab 9:** Create a Directory Structure for an Academic Organization and Implement Security
- **Lab 10:** Perform Basic File Operations like Create, View Contents, Copy, Rename and Delete

Identity Management in Linux

- Introduction to Users and Groups
- Decode the user information file

- Decode the group information file
- Decode the user password file
- Create Local users in Linux
- Change password for user
- Analyze the /etc/passwd file
- Change the default password policy for users
- Create Users with custom UID
- Create Service user account
- Create Group and add users as members
- Create user with Home Directories
- Configure Password Policy for all user
- Configure Password Policy for single user
- Configure Password Policy for all user
- Configure Finger information for user
- **Lab 11:** Create Basic Identities (User & Group) for an Academic Organization and Assign Permission on a Directory Structure create in Lab 1
- **Lab 12** :Perform Basic Operation on File & Directory like assign permission, change ownership

Automating Programs

- Run Levels
- /etc/rc.d Files
- Customization of Run Levels
- cron and anacron
- at
- **Lab 13:** Change the run level and review the impact
- **Lab 14**: Create the Schedule jobs using Cron to create a file
- **Lab 15**: Create the Schedule jobs using Anacron to create a file
- **Lab 16**: Create the Schedule jobs using at to create a file
-

Backup and Restore

- What is the Backup in Linux ?
- Backup directory and file in Linux
- Restore the file zip through using tar
- Zip the File
- Unzip the File
- **Lab 17:** Create backup of the directory containing critical file using tar and then recover it after accidental deletion of source directory
- **Lab 18:** Create backup of the directory containing critical file using tar and Zip it using zip command to compress the backup file.

Linux Firewall

- Understand the security tire (Edge, DMZ and Host level)
- Introduction to FirewallD
- Enable FirewallD

- Configure FirewallD
- Configure Firewall Zone
- Working with FirewallD CMDlets
- Construct a Rule set with FirewallD
- Open and Block Ports & Services
- **Lab 19:** Implement Zone level security with opening of traffic for HTTP and MySQL services
- **Lab 20:** Configure the rule to block and allow the traffic on the basic of IP network

Network Management

- Introduction to networking components
- Types of Network Devices
- Overview of Network Related command (Ifconfig, Ping, Trace, telnet)
- Attach New NIC
- Assign the IP address
- Controlling Network Services
- Install Network Management tool
- **Lab 21:** Add the new NIC in Linux and Initialize the NIC, Assig the IP , Subnet and Gateway
- **Lab 22:** Control the NIC (Up, down, inspect) using network management tool

Installing the Commonly Use Server

- Install and Configure Apache Web server
- Hist Website with Apache
- Start and Stop Apache Server
- Introduction to My SQL Database
- Install MySQL Database server in Linux
- Configure secure access with user and password
- Create Database and Object
- Access the MySQL
- Introduction to Java
- Install and Configure Java Virtual Machine in Linux
- Create and run sample Java Application
- **Lab 23:** Install Apache webserver in Linux, Add the custom code in Virtual Directory and access it from outside using IP address
- **Lab 24:** Install MySQL server in Linux, Configure secure installation , Access the Mysql Console and create sample database and table
- **Lab 25 :** Install Open JDK Java in Linux, Create a sample HelloWorld Java Application , compile and Execute the code

Linux Monitoring and Management

- VMStat
- Uptime
- Top

- PS
- Sysstat-iostat
- free
- Tcpdump
- Netstat
- swapon
- The /proc Pseudo Filesystem
- **Lab 26:** Execute the Various command to monitor the system performance and capture performance related logs.
- **Lab 27:** Execute the Various command to monitor the Network performance and Traffic and capture Network Packet related logs.

Linux Basic Shell Script

- Introduction tom Bash Shell script
- Create a sample shell script
- Shell script Input and output
- Shell script variable
- Shell Script Basic Operator
- Shell script If-else statement
- Develop sample shell script to Monitor the Linux system resources
- **Lab 28:** Create a sample Linux Bash shell script to Create a File and User with fix Value
- **Lab 29:** Create a sample Linux Bash shell script to Create a File and User with user input Value
- **Lab 30:** Run a sample performance monitoring script.

Infrastructure Project:

Setup the Web Infrastructure for the customer TPCS with Apache as FE and MySQL as Backend with secure access using Firewall D and implement the Monitoring of performance schedule and implement Backup system using crontab.

Course Fee

Call for Price