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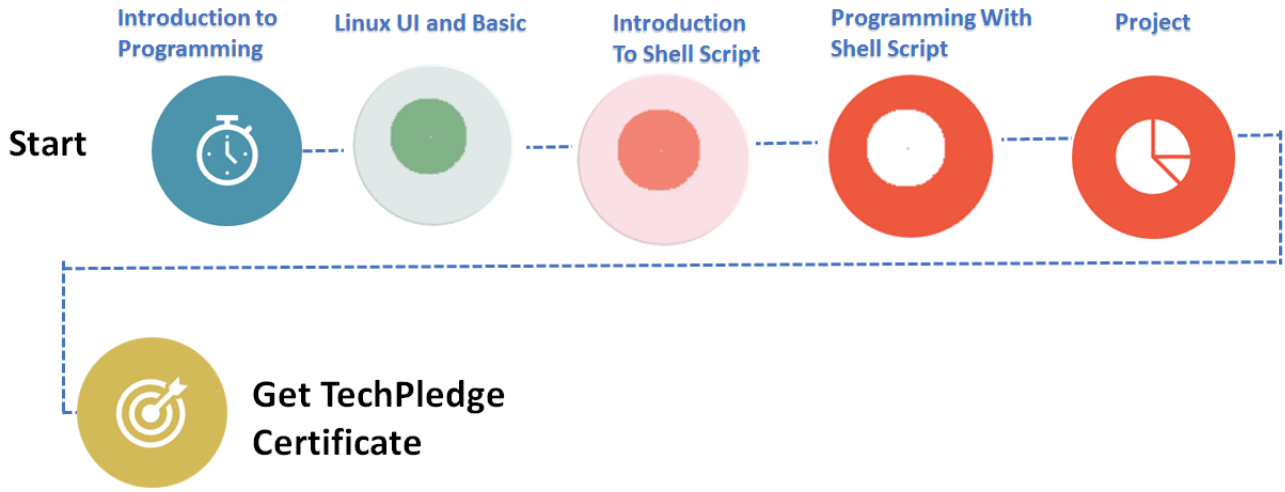
Linux Fundamental | Script Basic | Loop in Script | Control Statements | Script Operator | Functions | Advance Script

10 Module | 21 Labs | 1 Live Projects | Placements Assistance

QUOTATION AND COURSE OUTLINE

TECHPLEDGE CERTIFIED LINUX PROGRAMMER

TechPledge Certified Linux Shell Programmer Path



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.

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Learning Path for Linux Programmer

Linux Skill Programmer is able to develop the solutions to perform the task which require to automate the Linux System Management. At the TechPledge we provide the training which is always updated in line with the Linux Programmer Skills required by the industry and recommended by Domain Experts. Below is the patch for training

Evolve your Linux Basic Management 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*

Develop the Basic Script for Linux Administration in

- *Align requirements with Linux Admin Requirement*
- *Control Linux services with the CLI in Batch*
- *Create solutions using simple loop and case statement*
- *Create Solutions using user input*
- *Create Solutions using basic operators*

Develop the Solutions with Complex Scripting

- *Pillars of a great Linux Administration*
- *Develop for different Solutions in Linux*
- *Develop the solutions to monitor performance in Linux*
- *Bring efficiency in operations in Linux*
- *Develop the Complex Solutions for Linux*

Abilities Validated by the Training

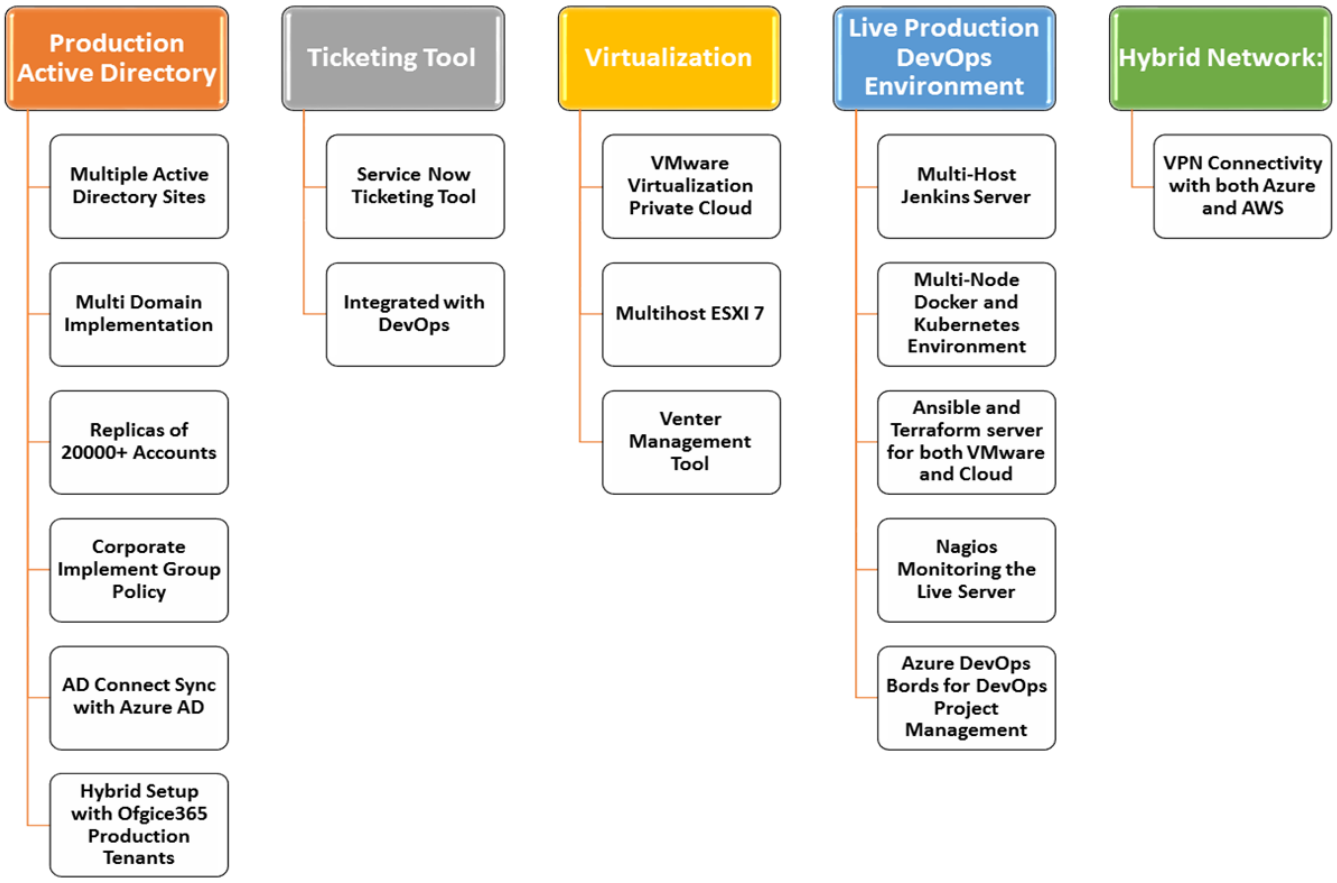
- Manage infrastructure
- Learn and handle Unix commands.
- Understanding of various Shells involved
- Writing Shell scripts to develop automated applications.
- Exposure to Real-time applications.

Customer Immersion – Live Production Walkthrough

6 Hours Live walkthrough the complete Open Source Linux Infrastructure Integration and Administration 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.

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

Basic Linux Command

- Create files in UNIX.
- Users Profiles. (. profile)
- File Permissions
- Create Directories.
- Hidden files
- Vi Editor.
- Nano Editor
- Create User and Group in Linux
- Change the Password for User
- Update the Linux System
- Brief overview of Linux repositories
- Install Software in Linux using Yum and Apt-Get
- Displaying Message
- **Lab 1:** Create a Directory Structure for an Academic Organization and Implement Security
- **Lab 2:** Perform Basic File Operations like Create, View Contents, Copy, Rename and Delete
- **Lab 3:** Create Basic Identities (User & Group) for an Academic Organization and Assign Permission on a Directory Structure create in Lab 1

Introduction to Shell Script

- What is Shell Script.?
- Scripting Language vs Programming Language
- Scheduling Job (at, batch, cron)
- Various flavors of Shell.
- How to write and execute a Shell script file,
- Importance of Shebang line.

- Arrays
- Functions
- Command line arguments.
- Special Variables

Create a Shell Script

- Create a Shell script
- Assign execute permission on script file
- **Lab 4:** Create Your first Linux shell script using basic Linux command module
- **Lab 5:** Create and Execute the Shell Script to Create a Directory Structure for an Academic Organization with Fix value
- **Lab 6:** Create a User using input from the user with shell script

Control Structures: Logical Expressions

- IF Statements
- ELSE and ELIF statement.
- Switch case
- Operators (Arithmetic / Logical)
- **Lab 7:** Create a shell script that will return the set of system information:
- **Lab 8:** Create a shell script that create file with user input with check if the user is already exist
- **Lab 9:** Create a shell script to create user with user input with check if the user is already exist in Linux user directory

Control Structures: Logical Expressions

- Arithmetic Operators
- Relational Operators
- Boolean Operators
- File test Operator
- **Lab 10:** Create a Shell script with simple arithmetic manipulation
- **Lab 11:** Create a shell script return true or false from give conditional parameter
- **Lab 12:** Create a Shell script with simple Relation test
- **Lab 13:** Create a Shell script with simple File test (File Exist, File empty , File Read access etc)

Control Structures: Loops

- For loop
- While loop
- Foreach
- **Lab 14:** Create a shell script with while loop which will create the user with details information and also check if the user preexists
- **Lab 15:** Create a shell script that Capture the utilization of CPU , memory and disk at regular interval as define by admin
- **Lab 16** Create a Shell script that will Create a password generator using shell scripting using For Loop

User Defined Functions:

- Function Call
- Function Definition
- Arguments to function
- Return value
- **Lab 17:** Create a simple Hello world Function and call it in another function

Menu Item

- Introduction to Menu Base program
- How to use Bash Menu Base program
- Create Sample Menu Based program
- **Lab 18:** Creating a simple menu
- **Lab 19**Select command with a case statement
- **Lab 20:C**eating nested bash menu
- **Lab 21:**Create a bash menu with an array

Development 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

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