# **Course Content**

# **Duration**

- 1. Shell Scripting
- 2. Python Scripting
- 3. Ansible yaml Scripting
- 4. AWS Automation with
  - AWS CLI
  - Shell Scripting
  - Python Scripting
  - Terraform

30 hrs

20 hrs

60 hrs

## **Shell Scripting Course details:**

#### **Introduction to Shell:**

**Basics of Shell** 

Hello world script

**Shebang line** 

**Variables** 

**Set and Unset a variable** 

**Types of variables** 

**Data Types** 

**Operations on strings** 

**Data Structures** 

### **Unix-commands:**

**Basic commands** 

Advance commands(cut, aws and sed)

### **Command Substitution:**

Assigning a command to a variable

Storing output to a variable

Assigning global value - using Export

#### **Command Line Arguments:**

Passing input in runtime.

Using input inside a program

#### **Conditional Statements:**

If

**If-else** 

**Nested if-else** 

#### **Loops and control statements:**

For loop

While loop

**Nested loops** 

**Break and continue** 

**Case statement** 

### **Functions:**

Creating a function
Calling a function in file
Calling a function in another file

### **Scheduler:**

Scheduling a job – using 'Crontab' Scheduling a job – using 'at'

### **Advance shell scripting:**

Regular expression
Working with Database
Working with Webservers and Application Servers

## **Python Scripting Course Details:**

### **Introduction:**

**History** 

**Difference between Programming and scripting** 

**Features** 

**Installation of Python on Windows and UNIX machines** 

**Setting up path** 

Simple hello world program

Variables

**Data types** 

Data structures (List, tuple, dictionaries, sets and arrays)

**Operations on strings** 

**Operators** 

### Input and output statements:

**Print** 

Raw\_input and input (for both 2.x and 3.x)

## **Conditional Statements:**

If

If-else

Nested if-else

## **Loops and control statements:**

For

While

**Nested loops** 

**Break** 

Continue

**Pass** 

## **Functions**

**Defining a function** 

**Calling a function** 

**Types of functions** 

**Function Arguments** 

Scope of the variable (global and local)

## **Modules:**

**Definition** 

**Creating modules** 

**Importing modules** 

Usage of modules(os, sys, subprocess, random json, yaml)

Reading xml files

## **Exception Handling:**

Definition

**Exception Handling (try except and try finally)** 

**Regular expressions:** 

Match

Search

**Find** 

**Findall** 

**Finditer** 

**Replace** 

Split

## **Oops concepts:**

**Class and object** 

Inheritance

**Data hiding** 

**Data abstraction** 

## **Working with Database and OS(Windows and Unix):**

**Connecting to Data base** 

**Executing DB queries** 

**Executing tasks of Unix and winnows using python** 



## **Ansible Automation with Playbooks Course Details**

Introduction to yaml

Writing simple playbooks with yaml

Tasks

**Variables** 

Input and output modules

**Conditional Statements** 

Loops

**Handlers** 

Roles

**Plugins** 

**Ansible-galaxy** 

### **AWS Automation Course Details:**

## **Introduction to AWS CLI:**

**AWS CLI** 

**AWS CLI Commands** 

Configuring the programmatic key on local host

## **Boto3**

**Boto3** introduction

**Boto3 configuration** 

Session

**Custom session** 

**Resource and client methods** 

Meta data method

**Usage of Resource and client methods** 

Usage of client using resource with Meta data

Basic scripts with boto3 using its methods

**Collections** 

Tags

**Filters** 

Waiters

**Paginators** 

### Lambda:

Introduction to lambda

Lambda features

Writing code using lambda

Trigging methods of Lambda(API Gateways, S3 events, Cloud watch and events etc..)

### **Terraform Course Details:**

#### **Introduction to Terraform**

- a. Introduction
- b. Difference between Configuration management tools and Terraform
- c. Terraform Installation on windows and Unix machines

#### **Terraform basics:**

- a. Terraform for AWS Setup
- **b.** Steps to write Terraform
- c. Provisioning aws services

### **Terraform Concepts:**

- a. Variables
- b. Input variables
- c. Output Variables
- d. Modules