Puppet for System Administrator

Duration: 4 days (8hrs/day)

Prerequisite: Basic Linux Command Line Knowledge

Course Objective: After completing this course students will show a mastery of the Puppet DSL and common design patterns providing them with solutions for problem solving techniques and a better understanding of Puppet Best Practices.

Lab Requirement: Koenig DC (CentOS)

Module 1 – Introduction to Puppet

What is Puppet and why to use Puppet

How It works

Deployment

Puppet Components

The Puppet Language

Module 2 - Installation

Prerequisite for Installation

Lab: Installation Configuration of Puppet Server (Master Node)

Lab: Install and configure Puppet Agent on nodes (Agent Nodes)

Lab: On server, sign the certificates for nodes.

Module 3 – Resources: File

Discussion about the File Resource

Getting help in Puppet

Get details of Resource from the system

Lab: Creating Our First Manifest

Lab: Local Manifests on client

Lab: How to write multiple resource in a single manifest

Lab: Configuring Tags

Lab: Recovering Overwritten Files

Lab: Disable Backup Overwritten Files

KOENIG
step forward

Module 4 – Resources: Packages & Services

Discussion about the Package and Service Resource.

Lab: Install and Uninstall the Packages

Lab: Install multiple package

Lab: To Install a specific version packages and Update the Package

Lab: Start and Stop the Service

Lab: Enabling the Service at boot time

Lab: To Reload a specific service

Module 5 - Resources: Users and Groups

Discussion about the User Resource

Lab: Adding and Removing User Account

Lab: Adding and Removing Group

Lab: Adding the user in Supplementary Group

Lab: SSH Access Control

Module 6 – Node Declaration, Facts and Facter

Organizing Manifests

Discussion about the Facts and Facter Tool

Lab: Creating node declaration on Puppet Master (Single Node and Multi Node Declaration)

Lab: Node Declaration using Regular Expression

Lab: Demonstration of using the Facts

Lab: Demonstration of Facter command examples

Module 7 – Learning Classes and Modules

Metaparameters, Resource References, and Ordering

Discussion about the Class and Modules

Lab: Demonstration of creating the Class

Lab: Creation of Webserver using Class

Lab: Module Structure I (Using local path)

Lab: Module Structure II (Using module path)

Lab: Managing Files using "filedemo" module

Lab: Managing Users and Groups using "localuser" module

Lab: Search and Install Module from the Forge

Lab: Using class inheritance and overriding

Module 8 – Configuring Profiles & Roles and working with Variables

Define the Use of Profiles and Roles

Lab: Creation of Profiles

Lab: Creation of Roles

Lab: Demonstration of working with variables

Module 9 – Postfix and Containment of Class

Discussion about the Postfix

Overview of the contain function

Lab: Demonstration of Postfix

Lab: Demonstrate the use of contain function

Module 10 – Bolt Orchestration Tool

Discussion about the Bolt Orchestration

Lab: Create a Bolt project and set up targets

Lab: set up Docker targets

Lab: Create your targets

Lab: Run a command on a target

Lab: Create an inventory file to group your targets

Lab: Write a Bolt plan

Lab: Run a script on your targets

Lab: Upload an HTML homepage to your targets

Module 11 – Configuring Hiera

Overview of Hiera

Hiera Hierarchies

Layered Hierarchies

Lab: Configuring Hiera

Module 12 – Conditional Statements

Understand and use these conditional statements:

If

Unless

Case

Selector

Lab: Using conditional statements.

Module 13 – Installation of Puppet Enterprise

Hardware Requirement for Trial use

Network Considerations

Lab: Installation steps of Puppet Enterprise

Module 14 – Troubleshooting and Standard Log Files

Discussion about the Troubleshooting Techniques

Overview of the location of standard Log Files