Red Hat Services Management and Automation (RH358VT)

Modality: Virtual Classroom

Duration: 5 Days

About this Course:

Red Hat Services Management and Automation (RH358) is designed for IT professionals with some experience managing Linux® systems and want to learn more about how to manage and deploy network services included with Red Hat® Enterprise Linux which are particularly important in the modern IT data center. You will learn how to install, configure, and manage basic configurations of these services manually, and then use Red Hat Ansible® Engine to automate your work in a scalable, repeatable manner.

This course is based on Red Hat Ansible Engine 2.9 and Red Hat Enterprise Linux 8.1.

Course Objectives:

- Discuss and review key tools and skills needed to manage network services.
- Improve the redundancy or throughput of network connections of servers by configuring Linux network teaming between multiple network interfaces.
- Explain the operation of DNS service, troubleshoot DNS issues, and configure servers to act as a DNS caching nameserver or as an authoritative name server.
- Explain and configure services used for IPv4 and IPv6 address assignment including DHCP, DHCPv6, and SLAAC.
- Configure systems to print to a network printer that supports IPP Everywhere, as well as manage existing printer queues.
- Discuss how mail servers operate, then configure a server to use system tools and Postfix to send email messages through an outbound mail relay.
- Discuss the basic operation of SQL-based relational databases, perform basic SQL queries for troubleshooting, and be able to set up a simple MariaDB database service.
- Provide web content from Apache HTTPD or Nginx web servers, then configure them with virtual hosts and TLS-based encryption.
- Improve performance of your web servers by using Varnish to cache static content being served and HAProxy to terminate TLS connections and balance load between servers.
- Deliver simple file-based network shares to clients using the NFS and SMB protocols.

- Configure iSCSI initiators on your servers to access block-based storage devices provided by network storage arrays or Ceph storage clusters.

Audience:

Linux system administrators, site reliability engineers, and other IT professionals with some Ansible experience who are interested in learning how to manage and automate the deployment, configuration, and operation of key network services included with Red Hat Enterprise Linux 8.

Prerequisites:

Be a Red Hat Certified Engineer (RHCE) on Red Hat Enterprise Linux 8, or demonstrate equivalent skills in Linux system administration and Ansible automation.

Course Outline:

Module 1: Manage network services

Learning Module

Discuss and review key tools and skills needed to manage network services.

Module 2: Configure link aggregation

Learning Module

Improve the redundancy or throughput of network connections of servers by configuring Linux network teaming between multiple network interfaces.

Module 2: Manage DNS and DNS servers

Learning Module

Explain the operation of DNS service, troubleshoot DNS issues, and configure servers to act as a DNS caching nameserver or as an authoritative name server.

Module 3: Manage DHCP and IP address assignment

Learning Module

Explain and configure services used for IPv4 and IPv6 address assignment including DHCP, DHCPv6, and SLAAC.

Module 4: Manage printers and printing files

Learning Module

Configure systems to print to a network printer that supports IPP Everywhere, as well as manage existing printer queues.

Module 5: Configure email transmission

Learning Module

Discuss how mail servers operate, then configure a server to use system tools and Postfix to send email messages through an outbound mail relay.

Module 6: Configure MariaDB SQL databases

Learning Module

Discuss the basic operation of SQL-based relational databases, perform basic SQL queries for troubleshooting, and be able to set up a simple MariaDB database service.

Module 7: Configure web servers

Learning Module

Provide web content from Apache HTTPD or Nginx web servers, then configure them with virtual hosts and TLS-based encryption.

Module 8: Optimize web server traffic

Learning Module

Improve performance of your web servers by using Varnish to cache static content being served and HAProxy to terminate TLS connections and balance load between servers.

Module 9: Provide file-based network storage

Learning Module

Deliver simple file-based network shares to clients using the NFS and SMB protocols.

Module 10: Access block-based network storage

Learning Module

Configure iSCSI initiators on your servers to access block-based storage devices provided by network storage arrays or Ceph storage clusters.