Red Hat Services Management and Automation (RH358) Training

Duration: **4 Day**

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Overview

Learn how to configure and manage essential services integrated with Red Hat Enterprise Linux, then use Ansible automation to perform the same work at scale.

Red Hat Services Management and Automation (RH358) is designed for IT professionals who already have experience administering Linux systems and want to expand their skills in deploying, configuring, and managing essential network services provided with Red Hat Enterprise Linux.

Participants first learn how to manually install, configure, and manage the basic configurations of services commonly used in enterprise environments. The course then demonstrates how these same operations can be automated with **Ansible**, transforming manual administration tasks into scalable, standardized, and repeatable automation processes.

The course covers DNS, DHCP, email transmission, printing, network file sharing, SQL databases, and web services. It also addresses advanced networking configurations for server environments.

This course is based on **Red Hat Ansible Automation Platform 2.4** and **Red Hat Enterprise Linux 9.4**.

Benefits for Organizations

RH358 helps IT teams develop the skills required to manage and automate common infrastructure services that support business-critical applications.

By standardizing and automating manual configuration activities with Ansible, organizations can:

- Reduce service deployment times.
- Automate repetitive configuration tasks.
- Improve infrastructure service reliability.
- Support compliance with defined architectural standards.
- Reduce the time IT teams spend on routine operations and allocate more resources to improvements and innovation.

Benefits for Participants

After completing RH358, participants should have the system administration skills required to configure and provide essential network services commonly used by servers and applications in enterprise data centers.

Participants will learn to:

- Install and configure essential network services manually.
- Manage DNS, DHCP, printing, and email transmission services.
- Configure basic MariaDB database services.
- Provide web services with Apache HTTP Server and Nginx.
- Configure network file storage with NFS and SMB.
- Access block-based network storage through iSCSI.

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- Implement advanced network interface configurations.
- Convert manual configuration procedures into Ansible Playbooks.
- Apply configurations across multiple systems in a scalable and repeatable manner.

Recommended Next Courses

After RH358, participants may continue developing their administration and automation skills with:

- **Developing Advanced Automation with Red Hat Ansible Automation Platform (DO374)**
- **Red Hat Enterprise Linux Diagnostics and Troubleshooting (RH342)**

Prerequisites

Participants are expected to have:

- **RHCSA-level Linux system administration skills**,
- **Working knowledge of Ansible**.

Knowledge and experience equivalent to **RH294** is recommended for the Ansible components of the course.

Who Should Attend

RH358 is particularly suitable for professionals who want to manage and automate the deployment, configuration, and operation of essential network services included with Red Hat Enterprise Linux.

The primary audience includes:

- Linux system administrators,
- Platform engineers,
- Developers,
- Other IT professionals with some previous Ansible experience.

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What You Will Learn

RH358 covers services and technologies including:

- Providing DNS services with Unbound and BIND9,
- IPv4 and IPv6 network autoconfiguration using DHCP and DHCPv6 servers,
- Configuring client email transmission,
- Managing printing services with IPP Everywhere and CUPS,
- Providing network file sharing with NFS and SMB,
- Running SQL database services with MariaDB,
- Providing web services with Apache HTTPD and Nginx,
- Configuring advanced server networking, including network bonding,
- Automating manual deployment and configuration activities with Ansible.

Outline

1. Managing Network Services

Review the essential tools and system administration skills required to manage network services and establish the foundation for the service management activities covered throughout the course.

2. Configuring Link Aggregation

Configure and troubleshoot advanced network interface capabilities. Implement link aggregation by working with network bonds.

3. Managing DNS and DNS Servers

Understand how the Domain Name System (DNS) operates and learn how to troubleshoot common DNS issues.

Configure name servers that operate as caching-only servers or as authoritative servers for a DNS zone.

4. Managing DHCP and IP Address Assignment

Explore services that automatically assign IPv4 and IPv6 addresses. Configure**DHCP, DHCPv6, and SLAAC** to support automatic network address configuration.

5. Managing Printers and Printing Files

Configure Linux systems to print to network printers that support the IPP Everywhere protocol. Manage existing print queues and perform essential printing administration tasks.

6. Configuring Email Transmission

Explore the basic operation of mail servers. Configure a server to send email through an outbound mail relay using system tools and **Postfix**.

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7. Configuring MariaDB SQL Databases

Understand the fundamentals of SQL-based relational databases.

Perform basic SQL queries for troubleshooting purposes and configure a simple**MariaDB database service**.

8. Configuring Web Servers

Provide web content using **Apache HTTP Server** or **Nginx**. Configure web servers with virtual hosts and TLS-based encryption.

9. Providing File-based Network Storage

Use NFS or SMB to provide file-based network-attached storage to client systems and manage essential network file-sharing configurations.

10. Accessing Block-based Network Storage

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