1. **Red Hat System Administration I (RH124)**

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12. **Red Hat Gluster Storage Administration (RH236)**

1. Red Hat System Administration I (RH124)

Course description

The first of two courses covering the core system administration tasks needed to manage Red Hat Enterprise Linux servers

Red Hat System Administration I (RH124) equips you with Linux® administration "survival skills" by focusing on foundational Linux concepts and core tasks. You will learn how to apply command-line concepts and enterprise-level tools, starting you on your journey toward becoming a full-time Linux system administrator

Course content summary

- Introduction to the command line
- Managing physical storage
- Install and configure software components and services
- Establish network connections and control firewall restrictions
- Monitor and manage running processes
- Manage and secure files and file systems
- Administer users and groups
- Review the system log files and journal for issues
- Troubleshoot problems and analyze systems with Red Hat Insights
- Remotely manage systems with SSH and the Web Console

Prerequisites for this course

Basic technical user skills with computer applications on some operating systems are expected.

Impact of this training

As a result of attending this course, you should be able to perform essential Linux administration tasks, including installation, establishing network connectivity, managing physical storage, and basic security administration.

2. Red Hat System Administration II (RH134)

Course description

Focuses on the key tasks needed to become a full-time Linux administrator

Red Hat System Administration II (RH134) builds upon and lends context to the foundational knowledge established in Red Hat System Administration I (RH124). This follow-on course demonstrates more detailed use cases for Red Hat® Enterprise Linux®, preparing you for the Red Hat Certified System Administrator exam (EX200).

Course content summary

- Install Red Hat Enterprise Linux using scalable methods
- Access security files, file systems, and networks
- Execute shell scripting and automation techniques
- Manage storage devices, logical volumes, and file systems
- Manage security and system access
- Control the boot process and system services

Prerequisites for this course

- Successful completion of Red Hat System Administration I (RH124) is recommended.

Impact on the individual

As a result of attending this course, you should be able to perform the key tasks needed to become a full-time Linux administrator. You will be introduced to more advanced administrative topics, such as storage management using LVM, SELinux management, and automated installation. This course goes deeper into enterprise Linux administration, including file systems and partitioning, logical volumes, SELinux, firewall configuration, and troubleshooting.

Recommended next exam or course

- Red Hat Certified System Administration exam (EX200)
- Red Hat System Administration III: Linux Automation (RH294)

3. Red Hat System Administration III: Linux Automation with Ansible (RH294)

Course description

Learn how to automate Linux system administration tasks with Ansible

Red Hat System Administration III: Linux Automation with Ansible (RH294) teaches the skills needed to manage large numbers of systems and applications efficiently and consistently. You will learn the techniques needed to use Ansible® to automate provisioning, configuration, application deployment, and orchestration.

Course content summary

- Install Ansible / Red Hat Ansible Engine on control nodes.
- Create and update inventories of managed hosts and manage connections to them.
- Automate administration tasks with Ansible Playbooks and ad hoc commands.
- Write effective playbooks at scale.
- Protect sensitive data used by Ansible with Ansible Vault.
- Reuse code and simplify playbook development with Ansible roles.

Prerequisites for this course

Pass the Red Hat Certified System Administrator (RHCSA) exam (EX200)

Impact on the individual

As a result of attending this course, you should be able to use Ansible for the purpose of automation, configuration, and management

Recommended next exam or course

- Red Hat Certified Engineer (RHCE) exam on Red Hat Enterprise Linux 8 (EX294)
- Advanced Automation: Ansible Best Practices (DO447)

4. Advanced Automation: Ansible Best Practices (DO447)

Course description

Take your Red Hat Ansible Automation skills to the next level and manage automation at scale

Advanced Automation: Ansible Best Practices (DO447) is for experienced Red Hat® Ansible® Automation users who want to take their Ansible skills to the next level, enabling scalable design and operation of Ansible Automation in the enterprise. You will explore better ways to automate tasks and use Red Hat Ansible Engine effectively, as well as how to leverage advanced features of Ansible to perform more complex tasks. You will also learn how to install and use Red Hat Ansible Tower to centrally coordinate your use of Ansible, control access to hosts and systems, and manage Ansible workflows through the web interface and the Red Hat Ansible Tower API.

Course content summary

- Investigate recommended practices for effective and efficient automation with Ansible.
- Perform rolling updates with your Ansible Automation operations.
- Use advanced features of Ansible to work with data, including filters and plugins.
- Control applications through their REST API with Ansible Playbooks.
- Implement Red Hat Ansible Tower to centrally coordinate and scale Red Hat Ansible Automation.
- Leverage capabilities of Red Hat Ansible Tower to manage complex automation workflows.
- Implement a CI/CD pipeline for your automation with Git and Red Hat Ansible Tower.

Prerequisites for this course

- Be a Red Hat Certified System Administrator (RHCSA®), or demonstrate equivalent Red Hat Enterprise Linux knowledge and experience
- Be a Red Hat Certified Specialist in Ansible Automation or Red Hat Certified Engineer (RHCE®) on Red Hat Enterprise Linux 8, or demonstrate equivalent Ansible experience

Impact on the individual

As a result of taking this course, you should be able to use Red Hat Ansible Tower to centrally manage your Red Hat Ansible Automation projects in a way that scales to large teams and complex enterprise installations.

Recommended next exam or course

- Ansible for Network Automation (DO457)
- Red Hat Security: Linux in Physical, Virtual, and Cloud (RH415)
- Red Hat Certified Specialist in Advanced Automation: Ansible Best Practices (EX447)

5. Introduction to Containers, Kubernetes, and Red Hat OpenShift (DO180)

Course description

Learn to build and manage containers for deployment on a Kubernetes and Red Hat OpenShift cluster

Introduction to Containers, Kubernetes, and Red Hat OpenShift (DO180) helps you build core knowledge in managing containers through hands-on experience with containers, Kubernetes, and the Red Hat® OpenShift® Container Platform. These skills are needed for multiple roles, including developers, administrators, and site reliability engineers.

This course is based on Red Hat OpenShift Container Platform 4.2.

Course content summary

- Understand container and OpenShift architecture.
- Create containerized services.
- Manage containers and container images.
- Create custom container images.
- Deploy containerized applications on Red Hat OpenShift.
- Deploy multi-container applications.

Prerequisites for this course

- Be able to use a Linux terminal session, issue operating system commands, and be familiar with shell scripting
- Have experience with web application architectures and their corresponding technologies
- Being a Red Hat Certified System Administrator (RHCSA®) is recommended, but not required

Impact on the individual

As a result of attending this course, you should be able to perform these basic tasks in Red Hat OpenShift Container Platform

Recommended next exam or course

- Preliminary Exam in Containers, Kubernetes, & Openshift (PE180)
- Red Hat OpenShift Development I: Containerizing Applications (DO288)
- OpenShift Enterprise Administration (DO280)

6. Red Hat OpenShift Administration I (DO280)

Course description

Create, configure, manage, and troubleshoot OpenShift clusters

Red Hat OpenShift Administration I (DO280) teaches you how to install and administer the <u>Red Hat® OpenShift® Container Platform</u>

This course is based on Red Hat® Enterprise Linux® 7.5 and Openshift Container Platform 4.2.

OpenShift is a containerized application platform that allows enterprises to manage container deployments and scale their applications using Kubernetes. OpenShift provides predefined application environments and builds upon Kubernetes to provide support for DevOps principles such as reduced time to market, infrastructure-as-code, continuous integration (CI), and continuous delivery (CD).

Course summary

- Describe the Red Hat OpenShift Container Platform cluster installation and update processes
- Troubleshoot application deployments
- Configure authentication using local users
- Control access to projects using role-based access control (RBAC)
- Configure service and container networking
- Configure pod scheduling using labels and selectors
- Limit compute resource usage
- Scale a cluster
- Monitor cluster events and alerts

Prerequisites for this course

- Become a <u>Red Hat Certified System Administrator</u>, or demonstrate equivalent Red Hat Enterprise Linux system administration experience
- Complete <u>Introduction to Containers, Kubernetes, and Red Hat OpenShift (DO180)</u>, or demonstrate equivalent experience with containers, Kubernetes, and OpenShift basics

Impact on the individual

After completing this course, you should be able to demonstrate the skills to establish a new OpenShift cluster, perform initial configuration of the cluster, and manage the cluster on a day-to-day basis. One major focus of the course is troubleshooting common problems that will be encountered beyond day one.

Recommended next exam or course

- <u>Red Hat Certified Specialist in OpenShift Administration (EX280)</u>
- <u>Red Hat OpenShift Administration II: High Availability (DO380)</u>
- <u>Red Hat Security: Securing Containers and OpenShift (DO425)</u>

7. Red Hat OpenStack Administration I: Core Operations for Cloud Operators (CL110)

Course description

Introduction to Red Hat OpenStack Platform and the deployment of virtual cloud servers and applications

Red Hat OpenStack Administration I: Core Operations for Cloud Operators (CL110) is designed for system administrators who are intending to implement a cloud computing environment using OpenStack. You will learn how to configure, use, and maintain Red Hat® OpenStack Platform.

Course content summary

The focus of Red Hat OpenStack Administration I: Core Operations for Cloud Operators (CL110) will be managing OpenStack using both the web-based dashboard and the command-line interface, in addition to managing instances and installing a proof-of-concept environment using Red Hat OpenStack Platform (RHOSP) director. Essential skills covered in the course include configuring Red Hat OpenStack Platform (using the director UI); managing users, projects, flavors, roles, images, networking, and block storage; setting quotas; and configuring images at instantiation.

- Launch an instance.
- Manage projects, quotas, and users.
- Manage networks, subnets, routers, and floating IP addresses.
- Create and manage block and object storage in the OpenStack framework.
- Customize instances with cloud-init.
- Deploy scalable stacks.
- Deploy Red Hat OpenStack Platform using RHOSP director.

Prerequisites for this course

- Become a Red Hat Certified System Administrator (RHCSA) or demonstrate equivalent experience

Impact on the individual

As a result of attending this course, you will understand the architecture of a private or hybrid OpenStack cloud infrastructure and will be able to create, manage, and troubleshoot software-defined network services, resources, servers, and applications for dynamically scalable business environments.

Recommended next exam or course

- Red Hat OpenStack Administration II (CL210)
- Choose to learn the OpenStack version that matches your company's infrastructure, either as currently built or as planned for upgrade in the near future.
  Red Hat strongly recommends pursuing the same Red Hat OpenStack Platform version when scheduling each course and exam in the OpenStack curriculum path. Red Hat OpenStack Administration II is based on OpenStack 10.0, but will also be available on OpenStack 13.0 soon, with the title of Red Hat OpenStack Administration II: Infrastructure Configuration for Cloud Administrators (CL210)
- Red Hat Ceph Storage Architecture and Administration (CEPH125)

8. Red Hat OpenStack Administration II: Infrastructure Configuration for Cloud Administrators (CL210)

Course description

Introduction to Red Hat OpenStack Platform configuration and administration of private cloud infrastructure using core OpenStack services

Red Hat OpenStack Administration II: Infrastructure Configuration for Cloud Administrators (CL210) teaches you how to implement a full-featured cloud computing environment using OpenStack. You will learn how to configure, administer, and manage Red Hat® OpenStack Platform infrastructure. The lessons and objectives taught in this course will prepare you for the Red Hat Certified System Administrator in Red Hat OpenStack exam (EX210).

This course is based on Red Hat OpenStack Platform 13.0 and Red Hat® Enterprise Linux® 7.5.

The focus of this course is on managing and using the OpenStack client command-line interface and the director and dashboard graphical web user interfaces to securely manage server instances, compute and storage resources, and user identities.

Course content summary

- Gain familiarity with overcloud service containerization technology.
- Learn about Open Virtual Networking (OVN) enhancement to OVS.
- Use identity service v3 (keystone) with external Red Hat IdM store.
- Manage the core control plane, including Pacemaker.
- Customize images, with techniques for multiple use cases.
- Manage block and object storage.
- Manage compute nodes, including tuning and hyperconvergence.
- Deploy multi-container stacks.
- Troubleshoot OpenStack.

Prerequisites for this course

- Be a Red Hat Certified System Administrator (RHCSA), or demonstrate equivalent experience by passing the online skills assessment
- Attend Red Hat OpenStack Administration I: Core Operations for Cloud Operators (CL110), or demonstrate equivalent experience

Impact on the individual

As a result of attending this course, you will know how to configure and manage an OpenStack installation featuring all of the common, core features and services used by enterprise private/hybrid cloud customers. You will also be able to choose and customize compute, storage, networking, deployment, and application support resources and services tailored to your enterprise needs.

Recommended next exam or course

Red Hat Certified System Administrator in Red Hat OpenStack exam (EX210)

9. Red Hat Application Development I: Programming in Java EE (JB183)

Course description

Helping Java SE developers write Java EE applications

Red Hat Application Development I: Programming in Java EE (JB183) exposes experienced Java Standard Edition (Java SE) developers to the world of Java Enterprise Edition (Java EE).

This course is based on Red Hat® Enterprise Application Platform 7.0.

In this course, you will learn about the various specifications that make up Java EE. Through hands-on labs, you will transform a simple Java SE command line application into a multi-tiered enterprise application using various Java EE specifications, including Enterprise Java Beans, Java Persistence API, Java Messaging Service, JAX-RS for REST services, Contexts and Dependency Injection (CDI), and JAAS for securing the application.

Course summary

- Generating multi-tiered Java EE applications.
- Packaging and deploying Java EE applications.
- Creating Enterprise Java Beans, including message-driven beans.
- Managing persistence.
- Creating REST services with JAX-RS.
- Implementing Contexts and Dependency Injection.
- Creating messaging applications with JMS.
- Securing Java EE applications with JAAS.

Prerequisites for this course

Recommended starting certification
Red Hat Certified System Administrator (RHCSA)

- Proficiency in developing Java SE applications, with 2+ years of experience required
- Proficiency in using an IDE such as Red Hat Developer Studio or Eclipse
- Experience with Maven is recommended but not required

Impact on the individual

As a result of attending this course, you should be able to describe most of the specifications in Java EE 7 and create a component with each specification. You will be able to convert a Java SE program into a multi-tiered Java EE application.

Recommended next exam or course
- Introduction to OpenShift Applications (DO101)
- Red Hat Certified Enterprise Application Developer Exam (EX183)

10. Red Hat JBoss Application Administration I (JB248)

Course description

Install, configure, and manage Red Hat JBoss Enterprise Application Platform

Red Hat JBoss Application Administration I teaches you the best practices for installing and configuring Red Hat® JBoss® Enterprise Application Platform (JBoss EAP) 7. Through hands-on labs, learn the essential, real-world tasks that a system administrator needs to know to effectively deploy and manage applications on JBoss EAP.

Course content summary

- Installing and run JBoss EAP 7 in standalone mode and domain mode
- Configuring a domain
- Deploying applications to JBoss EAP 7
- Configuring the datasource subsystem
- Configuring Java™ Message Service (JMS) and HornetQ
- Configuring the logging subsystem
- Configuring the web subsystem
- Implementing application security in JBoss EAP 7
- Configuring the batch subsystem
- An introduction to clustering

Prerequisites for this course

- Base experience with system administration on Microsoft Windows, UNIX, or Linux® operating systems
- Understanding of hardware and networking

Note: No prior knowledge of Java, scripting, or JBoss Developer Studio is required.

Impact of this training

As a result of attending this course, you should be able to manage JBoss EAP 7 in both standalone mode and a managed domain with both the EAP CLI and web console.

Recommended next exam or course

- Red Hat Certified Specialist in Enterprise Application Server Administration exam (EX248)
- A Red Hat Certified Specialist in Enterprise Application Server Administration certification has demonstrated the skills and knowledge to install, configure, monitor, manage, and deploy applications to JBoss Enterprise Application Platform and has passed the Red Hat Certified Specialist in Enterprise Application Server Administration exam (EX248).

11.Red Hat Virtualization (RH318)

Course description

Deploy, configure, manage, and migrate virtual environments

Red Hat Virtualization (RH318) teaches you the skills needed to deploy, administer, and operate virtual machines in your organization using Red Hat® Virtualization. Through numerous hands-on exercises, you will demonstrate the ability to deploy and configure the Red Hat Virtualization infrastructure and use it to provision and manage virtual machines. This offering also prepares you for the Red Hat Certified Specialist in Virtualization exam.

This course is based on Red Hat Enterprise Virtualization 4.3 and Red Hat Enterprise Linux® 7.6 and 8, as well as Red Hat Hyperconverged Infrastructure for Virtualization 1.6.

Course content summary

- Configure Red Hat Virtualization
- Configure networking and storage for use with Red Hat Virtualization
- Manage user accounts and access to the Red Hat Virtualization environment
- Install and manage virtual machines in Red Hat Virtualization
- Use templates for rapid virtual machine deployment
- Manage virtual machine snapshots and images
- Migrate virtual machines and explore high-availability options

Recommendations for this course

- Become a Red Hat Certified System Administrator (RHCSA®), or demonstrate equivalent experience
- Being a Red Hat Certified Engineer (RHCE®) is strongly recommended for Ansible® automation comprehension

Impact on the individual

As a result of attending this course, you should be able to create and deploy Red Hat Virtualization and virtual servers. Using a single, full-service management interface, Red Hat Virtualization Manager, you will be able to configure, manage, and migrate systems within the virtualization environment.

Recommended next exam or course

- Red Hat CloudForms Hybrid Cloud Management (CL220)
- Red Hat Certified Virtualization Administrator exam (EX318)

12. Red Hat Gluster Storage Administration (RH236)

Course description

Deploy scalable, highly available storage on off-the-shelf hardware and in cloud environments

This course is for senior system and storage administrators who are interested in deploying scalable, highly available storage on off-the-shelf hardware and in cloud environments.

This course is based on Red Hat Gluster Storage 3.

Students will learn how to install, configure, and maintain a cluster of Red Hat Storage servers. The course will also explore highly available common Internet file systems (CIFS) and network file systems (NFS) using Clustered Trivial DataBase (CTDB), unified file and object storage, and geo-replication. Finally, students will learn about the Hadoop plugin for Red Hat Storage, snapshots, and geo-replication.

This course can help you prepare for the Red Hat Certified Specialist in Gluster Storage Administration exam (EX236).

Course summary

- Install and configure Red Hat Storage Server
- Create and manage different volume types
- Learn about IP failover for NFS and SMB
- Explore georeplication
- Configure network encryption
- Manage tiering

Prerequisites for this course

- Red Hat Certified System Administrator (RHCSA) certification or an equivalent level of knowledge is highly recommended

Impact on the individual

As a result of attending this course, students should be able to describe the architecture of Gluster, install and operate a Gluster cluster, and integrate it with Red Hat Storage Console.

Recommended next exam or course

- Red Hat Certified Specialist in Gluster Storage Administration
- Demonstrate the skills and knowledge needed to implement flexible storage solutions for on-premise and hybrid cloud using Red Hat Storage Server.