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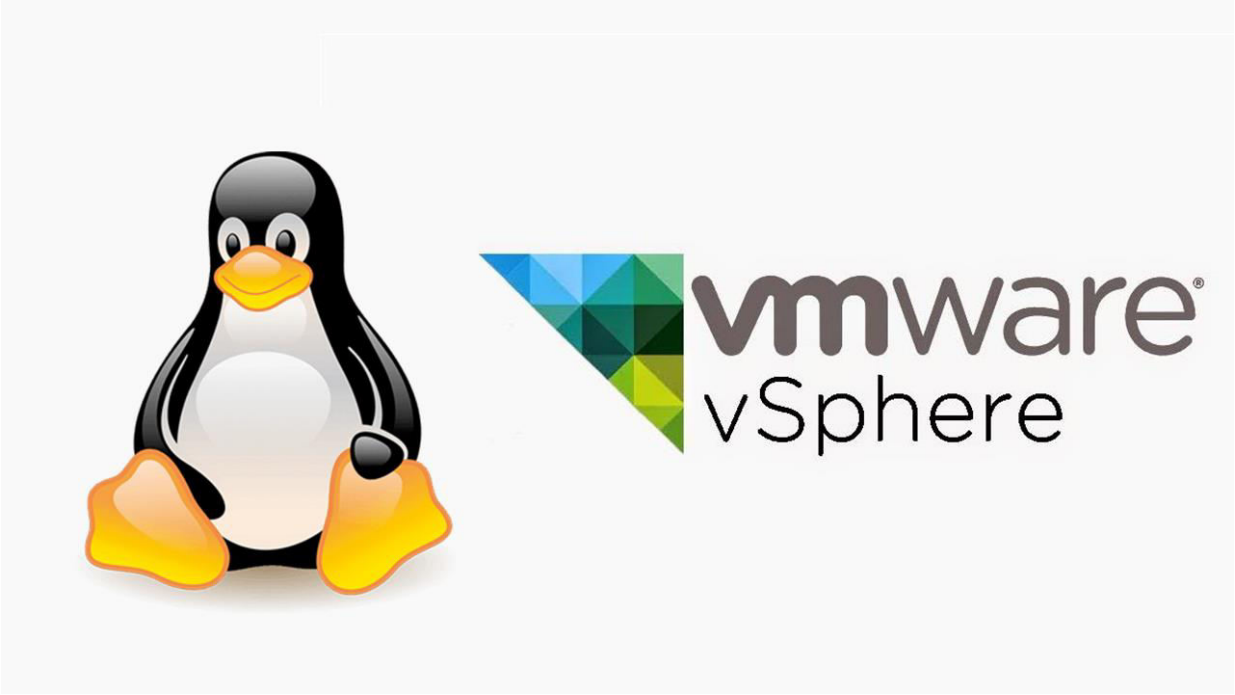

Linux + VMware vSphere

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Linux + VMware vSphere Combo Course

- **Course Overview:**

We have introduced combo course program of Linux and VMware vSphere to make you are eligible for fully Administrator job role. This Combo course will the best option for you to pursue if you're looking forward to establish your career in networking technology with a vast scope and growth.

This course features intensive hands-on training that focuses on installing, configuring, and managing VMware vSphere 6.7, which includes VMware ESX 6.7 and VMware vCenter Server 6.7. This course prepares you to administer a vSphere infrastructure for an organization of any size. It is the foundation for most other VMware technologies in the software-defined data centre.

Red Hat System Administration I (RH124)

- **Course Outline:**

1. Get started with Red Hat Enterprise Linux

- Describe and define open source
- Linux distributions
- Red Hat Enterprise Linux.

2. Access the command line

- Log into a Linux system and run simple commands using the shell.

3. Manage files from the command line

- Copy, move, create, delete, and organize files while working from the bash shell.

4. Get help in Red Hat Enterprise Linux

- Resolve problems by using local help systems.

5. Create, view, and edit text files

- Manage text files from command output or in a text editor.

6. Manage local users and groups

- Create, manage, and delete local users and groups, as well as administer local password policies.

7. Control access to files

- Set Linux file system permissions on files and interpret the security effects of different permission settings.

8. Monitor and manage Linux processes

- Evaluate and control processes running on a Red Hat Enterprise Linux system.

9. Control services and daemons

- Control and monitor network services
- System daemons using systemd.

10. Configure and secure SSH

- Configure secure command line service on remote systems, using OpenSSH.

11. Analyze and store logs

- Locate and accurately interpret logs of system events for troubleshooting purposes.

12. Manage networking

- Configure network interfaces and settings on Red Hat Enterprise Linux servers.

13. Archive and transfer files

- Archive and copy files from one system to another.

14. Install and update software

- Download, install, update, and manage software packages from Red Hat and yum package repositories.

15. Access Linux files systems

- Access, inspect, and use existing file systems on storage attached to a Linux server.

16. Analyze servers and get support

- Investigate and resolve issues in the web-based management interface, getting support from Red Hat to help solve problems.

Red Hat System Administration II (RH 134)

Course Outline:

1. Improve command line productivity

- Run commands more efficiently by using advanced features of the Bash shell, shell scripts, and various utilities provided by Red Hat Enterprise Linux.

2. Schedule future tasks

- Schedule commands to run in the future, either one time or on a repeating schedule.

3. Tune system performance

- Improve system performance by setting tuning parameters and adjusting scheduling priority of processes.

4. Control access to files with ACLs

- Interpret and set access control lists (ACLs) on files to handle situations requiring complex user and group access permissions.

5. Manage SELinux security

- Protect and manage the security of a server by using SELinux.

6. Manage basic storage

- Create and manage storage devices, partitions, file systems, and swap spaces from the command line.

7. Manage logical volumes

- Create and manage logical volumes containing file systems and swap spaces from the command line.

8. Implement advanced storage features

- Manage storage using the Stratis local storage management system and use VDO volumes to optimize storage space in use.

9. Access network-attached storage

- Use the NFS protocol to administer network-attached storage.

10. Control the boot process

- Manage the boot process to control services offered and to troubleshoot and repair problems.

11. Manage network security

- Control network connections to services using the system firewall and SELinux rules.

12. Install Red Hat Enterprise Linux

- Install Red Hat Enterprise Linux on servers and virtual machines.

13. Run Containers

- Obtain, run, and manage simple, lightweight services as containers on a single Red Hat Enterprise Linux server.

Red Hat System Administration III (RH 254)

- **Course Outline:**

1. Control services and daemons

- Review how to manage services and the boot-up process using systemctl.

2. Manage IPv6 networking

- Configure and troubleshoot basic IPv6 networking on Red Hat Enterprise Linux systems.

3. Configure link aggregation and bridging

- Configure and troubleshoot advanced network interface functionality including bonding, teaming, and local software bridges.

4. Control network port security

- Permit and reject access to network services using advanced SELinux and firewalld filtering techniques.

5. Manage DNS for servers

- Set and verify correct DNS records for systems and configure secure DNS caching.

6. Configure email delivery

- Relay all email sent by the system to an SMTP gateway for central delivery.

7. Provide block-based storage

- Provide and use networked iSCSI block devices as remote disks.

8. Provide file-based storage

- Provide NFS exports and SMB file shares to specific systems and users.

9. Configure MariaDB databases

- Provide a MariaDB SQL database for use by programs and database administrators.

10. Provide Apache HTTPD web service

- Configure Apache HTTPD to provide Transport Layer Security (TLS)-enabled websites and virtual hosts.

11. Write bash scripts

- Write simple shell scripts using bash.

12. Bash conditionals and control structures

- Use bash conditionals and other control structures to write more sophisticated shell commands and scripts.

13. Configure the shell environment

- Customize bash startup and use environment variables, bash aliases, and bash functions.

14. Comprehensive review

Practice and demonstrate knowledge and skills learned in this course.

VMware vSphere: Install, Configure, Manage [V6.7]

Course Outline:

1. **Course Introduction**

   - Introductions and course logistics
   - Course objectives
   - Describe the content of this course
   - Gain a complete picture of the VMware certification system
   - Familiarize yourself with the benefits of the VMware Education Learning Zone
   - Identify additional resources

2. **Introduction to vSphere and the Software-Defined Data Centre**

   - Describe the topology of a physical data centre
   - Explain the vSphere virtual infrastructure
   - Define the files and components of virtual machines
   - Describe the benefits of using virtual machines
   - Explain the similarities and differences between physical architectures and virtual architectures
   - Define the purpose of ESXi
   - Define the purpose of vCentre Server
   - Explain the software-defined data centre
   - Describe private, public, and hybrid clouds

3. **Creating Virtual Machines**

   - Introduce virtual machines, virtual machine hardware, and virtual machine files
   - Identify the files that make up a virtual machine
   - Discuss the latest virtual machine hardware and its features

- Describe virtual machine CPU, memory, disk, and network resource usage
- Explain the importance of VMware Tools™
- Discuss PCI pass-through, Direct I/O, remote direct memory access, and NVMe
- Deploy and configure virtual machines and templates
- Identify the virtual machine disk format

4. vCentre Server

- Introduce the vCentre Server architecture
- Deploy and configure vCentre Server Appliance
- Use vSphere Web Client
- Backup and restore vCentre Server
- Examine vCentre Server permissions and roles
- Explain the vSphere HA architectures and features
- Examine the new vSphere authentication proxy
- Manage vCentre Server inventory objects and licenses
- Access and navigate the new vSphere clients

5. Configuring and Managing Virtual Networks

- Describe, create, and manage standard switches
- Configure virtual switch security and load-balancing policies
- Contrast and compare vSphere distributed switches and standard switches
- Describe the virtual switch connection types
- Describe the new TCP/IP stack architecture
- Use VLANs with standard switches

6. Configuring and Managing Virtual Storage

- Introduce storage protocols and storage device types
- Discuss ESXi hosts using iSCSI, NFS, and Fibre Channel storage
- Create and manage VMFS and NFS data stores

- Describe the new features of VMFS 6.5
- Introduce vSAN
- Describe guest file encryption

7. Virtual Machine Management

- Use templates and cloning to deploy new virtual machines
- Modify and manage virtual machines
- Clone a virtual machine
- Upgrade virtual machine hardware to version 12
- Remove virtual machines from the vCentre Server inventory and datastore
- Customize a new virtual machine using customization specification files
- Perform vSphere vMotion and vSphere Storage vMotion migrations
- Create and manage virtual machine snapshots
- Create, clone, and export vApps
- Introduce the types of content libraries and how to deploy and use them

8. Resource Management and Monitoring

- Introduce virtual CPU and memory concepts
- Explain virtual memory reclamation techniques
- Describe virtual machine over commitment and resource competition
- Configure and manage resource pools
- Describe methods for optimizing CPU and memory usage
- Use various tools to monitor resource usage
- Create and use alarms to report certain conditions or events
- Describe and deploy resource pools
- Set reservations, limits, and shares
- Describe expandable reservations
- Schedule changes to resource settings
- Create, clone, and export vApps
- Use vCentre Server performance charts and esxtop to analyze vSphere performance

9. vSphere HA, vSphere Fault Tolerance, and Protecting Data

- Explain the vSphere HA architecture
- Configure and manage a vSphere HA cluster
- Use vSphere HA advanced parameters
- Define clusterwide restart ordering capabilities
- Enforce infrastructural or intra-app dependencies during failover
- Describe vSphere HA heartbeat networks and datastore heartbeats
- Introduce vSphere Fault Tolerance
- Enable vSphere Fault Tolerance on virtual machines
- Support vSphere Fault Tolerance interoperability with vSAN
- Examine enhanced consolidation of vSphere Fault Tolerance virtual machines
- Introduce vSphere Replication
- Use vSphere Data Protection to back up and restore data

10. vSphere DRS

- Describe the functions and benefits of a vSphere DRS cluster
- Configure and manage a vSphere DRS cluster
- Work with affinity and anti-affinity rules
- Describe the new capabilities for what-if analysis and proactive vSphere DRS
- Highlight the evolution of vSphere DRS using predictive data from VMware vRealize Operations Manager
- Perform preemptive actions to prepare for CPU or memory changes
- Describe the vCentre Server embedded vSphere Update Manager, VMware vSphere ESXi Image Builder CLI, and VMware vSphere Auto Deploy capabilities
- Use vSphere HA and vSphere DRS together for business continuity

11. vSphere Update Manager

- Describe the new vSphere Update Manager architecture, components, and capabilities
- Use vSphere Update Manager to manage ESXi, virtual machine, and vApp patching

- Install vSphere Update Manager and the vSphere Update Manager plug-in
- Create patch baselines
- Use host profiles to manage host configuration compliance
- Scan and remediate hosts

Prerequisites:

- System administration experience on Microsoft Windows or Linux operating systems
- Basic Knowledge on Networking and Storage
- Basic technical user skills with computer applications on some operating systems are expected.

Who Should Attend:

- Systems Administrators & System Engineers
- People who are looking forward to move their career in the Data centre Technologies.
- Configuring, installing, upgrading, and maintaining Linux systems using established standards and procedures
- Providing operational support
- Managing systems for monitoring system performance and availability
- Writing and deploying scripts for task automation and system administration

Number of Hours: 70hrs

Certification: RHCE, RHCSA, VCA & VCP

Key Features:

- One to One Training
- Online Training
- Fastrack & Normal Track

- Resume Modification
- Mock Interviews
- Video Tutorials
- Materials
- Real Time Projects
- Virtual Live Experience
- Preparing for Certification