5 Days

VMware vSphere : Install, Configure, Manage [v6.5]

VMware vSphere: Install, Configure, Manage [v6.5] training program is the upgraded version of ICM 6.0 that characterize installing, configuring and managing the vSphere 6.5 infrastructure. Having been built on the Software-Defined Data Center (SDDC), the knowledge to this program will help you attain application virtualization, data center simplification and operational efficiency in an enterprise of any size.

The vSphere 6.5 infrastructure is inclusive of VMware ESXi™ 6.5 and VMware vCenter Server® 6.5 that will be helpful in managing virtual machine, creating and optimizing templates, clones, and snapshots. This course is advisable to Network/IT Administrators or consultants who marshal vSphere platforms on behalf of their clients.

*Note – The New Foundation exam is required which is now 2V1-602.

Certifications

This course prepares you for the following certification:

VMware Certified Professional 6.5 – Data Center Virtualization (VCP6.5-DCV)

Course Details

Course Outline

1. Course Introduction

- Introduction to course logistics
- Defining course objectives
- Content Description for the course
- 360-degree purview of the VMware certification system
- Building affinity with the VMware Education Learning Zone
- Exploring supplementary resources

2. Overview of vSphere and the Software-Defined Data Center(SDDC)

- Describing the anatomy of a physical data center
- Explaining vSphere virtual infrastructure
- Files and component description of virtual machines
- Describing the aids of using virtual machines
- Determining similarities and differences between physical and virtual frameworks
- Defining the purpose of ESXi
- Defining the purpose of vCenter Server
- Describing the software-defined data center
- Exploring private, public, and hybrid clouds

3. Creating Virtual Machines

- Introduction to virtual machines, virtual machine hardware, and virtual machine files
- Identification of files that fabricate a virtual machine
- Determine state-of-the-art virtual machine hardware and its features
- Explain virtual machine CPU, memory, disk, and network resource usage
- Define the importance of VMware Tools™
- Confer PCI pass-through, Direct I/O, remote direct memory access, and NVMe
- Create and optimize virtual machines and templates
- Explore the virtual machine disk format

4. vCenter Server

- Introduction to vCenter Server architecture
- Managing and shaping vCenter Server Appliance
- Utilizing vSphere Web Client
- Backup and restore vCenter Server
- Examining vCenter Server permissions and roles
- Explaining the vSphere HA architectures and features
- Examining the new vSphere authentication proxy
- Deploying vCenter Server inventory objects and licenses
- Access and navigation to new vSphere clients

5. Configuration and Management of Virtual Networks

- Describing, creating, and managing standard switches
- Configuring virtual switch security and load-balancing policies
- Comparison between vSphere distributed switches and standard switches
- Describing the virtual switch connection types
- Describing the new TCP/IP stack architecture
- Using VLANs with standard switches

6. Configuration and Management of Virtual Storage

- Introduction to storage protocols and storage device types
- Describing ESXi hosts using iSCSI, NFS, and Fibre Channel storage
- Creating and configuring VMFS and NFS data stores
- Description of new features of VMFS 6.5
- Introduction to Virtual SAN
- Description of guest file encryption

7. Virtual Machine Management

- Usage of templates and cloning to create new virtual machines
- Modify and configure virtual machines
- Clone a virtual machine
- Elevation of virtual machine hardware to version 12
- Removal of virtual machines from the vCenter Server inventory and datastore
- Customization of a new virtual machine using customization specification files
- Performing vSphere vMotion and vSphere Storage vMotion migrations
- Creating and managing virtual machine snapshots
- Creating, cloning, and exporting vApps
- Introduction to the types of content libraries and exploring ways to use them

8. Resource Management and Monitoring

- Introduction to virtual CPU and memory concepts
- Explaining virtual memory recovery techniques
- Describing virtual machine over commitment and resource competition
- Configuring and managing resource pools
- Describing methods for optimizing CPU and memory usage
- Deploying various tools to monitor resource usage
- Generate and routine alarms for reporting certain conditions or events
- Exploring resource pools
- Setting reservations, limits, and shares
- Describing expandable reservations
- Scheduling changes to resource settings
- Creating, cloning, and exporting vApps
- Using vCenter Server performance charts and desktop for vSphere performance analysis

9. vSphere HA and vSphere Fault Tolerance

- Explaining the vSphere HA architecture
- Configuring and managing a vSphere HA cluster
- Using vSphere HA advanced parameters
- Defining cluster wide restart ordering capabilities
- Imposing infrastructural or intra-app dependencies during failover
- Describing vSphere HA heartbeat networks and data store heartbeats
- Enable vSphere Fault Tolerance on virtual machines
- Introduce vSphere Fault Tolerance
- Support vSphere Fault Tolerance interoperability with Virtual SAN
- Examining enhanced alliance of vSphere Fault Tolerance virtual machines
- Introduction to vSphere Replication
- Using vSphere Data Protection to back up and restore data

10. Host Scalability

- Defining the features and benefits of a vSphere DRS cluster
- Configuration and management a vSphere DRS cluster
- Working with affinity and anti-affinity rules
- Describing new capabilities for what-if analysis and proactive vSphere DRS
- Emphasis on the evolution of vSphere DRS using predictive data from VMware vRealize® Operations Manager™
- Performing preemptive actions to prepare for CPU or memory changes
- Describing the vCenter Server embedded vSphere Update Manager, VMware vSphere® ESXi™ Image Builder CLI, and VMware vSphere® Auto Deploy capabilities
- Combined use of vSphere HA and vSphere DRS for business sustainability

11. vSphere Update Manager and Host Maintenance

- Defining the new vSphere Update Manager architecture, components, and capabilities
- Using vSphere Update Manager to control ESXi, virtual machine and vApp patching
- Installing vSphere Update Manager and the vSphere Update Manager plug-in
- Creating patch baselines
- Utilizing host profiles to manage host configuration compliance
- Scanning and repairing hosts

Who Should Attend

The VMware ICM 6.5 training is ideal for those working with the profiles of:

- Network Administrators
- vSphere Consultants
- System Engineers
- Technical Personnel

Pre Requisite

Required prerequisites for VMware ICM 6.5 course include completion of one of the following:

- Deploy an ESXi host
- Experience of System administration on Linux operating systems or Microsoft Windows.
- Conceptual Knowledge in the VMware Data Center Virtualization Fundamentals course for VCA-DCV certification

Exams

VMware Certified Associate (VCA) [VCA]

VMware Certified Professional (VCP) [VCP6.5-DCV]

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