

VMware

Introduction

- **VMware Introduction and course logistics**
- **Course Objective**

VMware Virtualization Introduction

- Introduction to virtualization, virtual machine, and vSphere components
- Understanding concepts of server, network and storage virtualization.
- Describing where vSphere fits into the cloud architecture.
- Installing and using vSphere user interfaces.

Creating virtual machines

- Introduction to virtual machines, virtual machine hardware and virtual machine files.
- Identification of the files that make up a virtual machine.
- Understanding virtual machine CPU, memory disk and network resource usage.
- Importance of VMware tool.
- Deploy and configure virtual machines.

VMware vCenter Server

- Introduction to vCenter Server architecture
- Introduction to VMware Center Server Appliance
- Configuration and management of vCenter Server Appliance
- Manage vCenter Server inventory objects and licenses

Configuring and Managing Virtual Networks

- Describe, create and manage standard switches
- Describe and modify standard virtual switch properties
- Configure virtual switch load-balancing algorithms
- Use VLANs with standard switches

Configuring and Managing Virtual Storage

- Introduction to storage protocols and device names
- Configuration of ESXi with iSCSI, NFS, and Fibre Channel storage
- Creation and management of vSphere data stores
- Deployment and management of VMware vSphere Storage Appliance

Virtual Machine Management

- Use templates and cloning to deploy new virtual machines
- Modify and manage virtual machines
- Clone a virtual machine
- Remove virtual machines from the vCenter Server inventory and datastore
- Create and manage virtual machine snapshots

- Perform vSphere vMotion and vSphere Storage vMotion migrations

Data Protection

- Discussing a strategy for backing up ESXi hosts and vCenter Server
- Discussing solutions for backing up virtual machine efficiently

Access and Authentication Control

- Control user access through roles and permissions
- Configure and manage the ESXi firewall
- Configure ESXi lockdown mode
- Integrate ESXi with Active directory
- Explain VMware vShield Endpoint integration in vSphere

Resource Management and Monitoring

- Introduction to virtual CPU and memory concepts
- Describing methods for optimizing CPU and memory usage
- Configure and manage resource pools
- Monitor resource usage using vCenter Server performance graphs and alarms

High Availability and Fault Tolerance

- Introduction to new VMware vSphere High Availability architecture
- Configure and manage a vSphere HA cluster
- Introduction to VMware vSphere Fault Tolerance

- Describing VMware vSphere Replication

Scalability

- Configure and manage a VMware vSphere Distributed Resource Scheduler(DRS) cluster
- Configure Enhanced vMotion Compatibility
- Using vSphere HA and DRS together

Patch Management

- Use update manager to manage ESXi patching
- Install Update Manager and the Update Manager plug-in
- Creation of patch baselines
- Scan and remediate hosts

Installing VMware Components

- Introduction to ESXi installation
- Describing boot-from-SAN requirements
- Introduction to vCenter Server deployment options
- Describing vCenter Server hardware, software, and database requirements
- Installing vCenter Server(Windows-based