

VMWARE SYLLABUS

Introduction to Virtualization:-

- **What is Virtualization?**
- **Introduction to VMware vSphere Hypervisor ESXi 6.5 and vSphere vCenter**
- **Deploy an ESXi host and configure basic settings**
- **Installing ESXi**
- **Configuration of ESXi from DCUI**
- **Connect to ESXi host using**
- **Configure ESXi host using vSphere client**
- **Configure host setting: IP addressing, DNS, Licensing, Time Synchronization, etc.**
- **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**
- **Create VM and install guest OS**
- **Explain the importance of VMware Tools**
- **Deploy and configure virtual machines and templates**
- **Identify the virtual machine disk format**
- **Using vCenter Server**
- **Deploy and configure vCenter Server Appliance**
- **Use vSphere Web Client**
- **Back up and restore vCenter Server**
- **Examine vCenter Server permissions and roles**
- **Manage vCenter Server inventory objects and licenses**
- **Access and navigate the new vSphere clients**
- **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 vCenter Server inventory and datastore**
- **Customize a new virtual machine using customization specification files**
- **Perform vSphere vMotion and vSphere Storage vMotion migrations**

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- **Create and manage virtual machine snapshots**
- **Create, clone, and export vApps**
- **Introduce the types of content libraries and how to deploy and use them**
- **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**
- **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 datastores**
- **Describe the new features of VMFS 6.5**
- **Introduce vSAN**
- **Describe guest file encryption**
- **Resource Management and Monitoring**
- **Introduce virtual CPU and memory concepts**
- **Explain virtual memory reclamation techniques**
- **Describe virtual machine overcommitment 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 vCenter Server performance charts and esxtop to analyze vSphere performance**
- **vSphere HA, vSphere Fault Tolerance, and Protecting Data**
- **Explain the vSphere HA architecture**
- **Configure and manage a vSphere HA cluster**
- **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**

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- **Introduce vSphere Replication**
- **Use vSphere Data Protection to back up and restore data**
- **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 vCenter 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**
- **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 a patch baseline**
- **Attach a Baseline and Scan for Updates**
- **Stage the Patches onto the ESXi Hosts**
- **Scan and remediate the hosts**