

NETLOGIC TRAINING CENTER

Course Training

VMware vSphere: Optimize and Scalable [V6.5]

Course Content

This five-day course features intensive hands-on training that focuses on Optimizing and Scalable VMware vSphere® 6.5, which includes VMware ESXi™ 6.5 and VMware vCenter Server® 6.5. 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 center.

Course Objective

By the end of the course, you should be able to meet the following objectives:

- Configure and manage ESXi networking and storage for a large and sophisticated enterprise.
- Manage changes to the vSphere environment.
- Optimize the performance of all vSphere components.
- Troubleshoot operational faults and identify their root causes.
- Use VMware vSphere® ESXi™ Shell and VMware vSphere® Management Assistant (vMA) to manage vSphere.
- Use VMware vSphere® Auto Deploy™ to provision ESXi hosts.
- Learning conceptual for vSAN and vSAN for ISCSI
- Configure and manage Data protect with vSphere Data Protection (vDP) ®
- Monitoring vSphere environment with VRealize Log Insight®

Course Prerequisite

Completion of one of the following courses:

- VMware vSphere: Install, Configure, Manage [5.5 or 6]
- Or equivalent knowledge and administration experience with ESXi and vCenter Server

Course Pre-Test

Not Required

Course Details

Day 1

Item	Subject	Details	Personal Lab and devices	Workgroup Lab and devices
	VMware management resource	<ul style="list-style-type: none"> • Configure and manage ESXi networking and storage for a large and sophisticated enterprise. • Manage changes to the vSphere environment. • Optimize the performance of all vSphere components. • Troubleshoot operational faults and identify their root causes. • Use VMware vSphere® ESXi™ Shell and VMware vSphere® Management Assistant (vMA) to manage vSphere. • Use VMware vSphere® Auto Deploy™ to provision ESXi hosts. 	Theory and Lecture	
Break				
	Performance in a Virtualized Environment	<ul style="list-style-type: none"> • Understand the vSphere performance troubleshooting methodology • Understand software and hardware virtualization techniques and their effects on performance • Use vSphere performance monitoring tools 	Theory and Lecture	
	Summary challenge advance lab for Create Basic function and monitoring tool	Lab 1 - factory default network device for new configuration Lab 2 - Adding Active Directory Services and Creating Custom Roles Lab 3 - Using vSphere Management Assistant Lab 4 - VMware Monitoring Tools	(Lab 1 to 4) Real Device Catalyst 3560-CX 1 Unit Cisco UCS Server C-Series ESXi 6.5 trial version VMWare vSphere	

Day 2

Item	Subject	Details	Trainee Lab and devices	Workgroup Lab and devices
	Network Scalability	<ul style="list-style-type: none"> • Create, configure, and manage vSphere distributed switches • Migrate virtual machines from standard switches to distributed switches • Understand distributed switch features such as PVLANS, VMware vSphere® Network I/O Control, port mirroring, and NetFlow 	Theory and Lecture	
Break				
	Network Optimization	<ul style="list-style-type: none"> • Understand performance features of network adapters • Understand performance features of vSphere networking • Monitor key network performance metrics • Use vMA to manage virtual network configuration • Troubleshoot common network performance problems • 	Theory and Lecture	
	Scale Storage with vSAN	<ul style="list-style-type: none"> • Explain Virtual SAN (VSAN) Architecture • Identify Virtual SAN Network Requirement • Create and Delete VSAN Cluster • Manage VSAN Disk Groups • Monitoring VSAN Storage • Add and Remove VSAN Node • Determine use case for Virtual SAN Configuration • Identify Benefit of NFS4.1 • Explain and conceptual Virtual Volume (VVOLs) 	Theory and Lecture	
	Summary challenge advance lap for Policy Storage, vSAN iscsi and Backup	<p>Lab 1</p> <ul style="list-style-type: none"> - configure vDS and link aggregation with physical switch - Backing Up and Restoring vSphere Distributed Switches <p>Lab 2</p> <ul style="list-style-type: none"> - Monitoring Network Performance <p>Lab 3</p> <ul style="list-style-type: none"> - Policy-Based Storage - Conclusion vSAN - Conclusion vSAN for iscsi target and initiator 	<p>(Lab 1 to 3)</p> <p>Real Device</p> <p>Catalyst 3560-CX 1 Unit Cisco UCS Server C-Series ESXi 6.5 trial version VMWare vSphere</p>	

Day 3

Item	Subject	Details	Trainee Lab and devices	Workgroup Lab and devices
	Storage Scalability	<ul style="list-style-type: none"> • Configure storage multipathing • Understand vSphere storage APIs for array integration and storage awareness • Explain profile-driven storage • Add a storage policy to a virtual machine storage profile • Describe VMware vSphere® Storage DRS™ operation • Configure Storage DRS and VMware vSphere® Storage I/O Control 	Theory and Lecture	
Break				
	Storage Optimization	<ul style="list-style-type: none"> • Diagnose storage access problems • Understand how storage protocols, VMware vSphere® VMFS configuration, load balancing, and queuing affect performance • Monitor key storage performance metrics • Use vMA to manage virtual storage • Troubleshoot common storage performance problems 	Theory and Lecture	
	Data Protect via vSphere Data Protection (vDP)	<ul style="list-style-type: none"> • VMware Data Protection Overview • Explain VMware Data Protection Sizing Guidelines • Describe vSphere Replication Architecture • Install and Configure VMware Data Protection® • Create a Backup job with VMware Data Protection® • Perform a Live full / File-level Restore with VMware Data Protection • Create/Delete/Consolidate Virtual Machine Snapshots • Perform a Failback Operation Using vSphere Replication • Determine Backup solution for Given vSphere Implementation 	Theory and Lecture	
	Summary challenge advance lap for DataStore, Storage Monitoring and Protection	Lab 1 - Managing Datastore Clusters Lab 2 - Working with Virtual Volumes Lab 3 - Monitoring Storage Performance Lab 4 - installation and configure vDP - configure and tuning vDP	(Lab 1 to 3) Real Device Catalyst 3560-CX 1 Unit Cisco UCS Server C-Series ESXi 6.5 trial version VMware vSphere	

Day 4

Item	Subject	Details	Trainee Lab and devices	Workgroup Lab and devices
	CPU Optimization	<ul style="list-style-type: none"> Understand CPU scheduler and other features that affect CPU performance Monitor key CPU performance metrics Troubleshoot common CPU performance problems 	Theory and Lecture	
Break				
	Memory Optimization	<ul style="list-style-type: none"> Understand memory reclamation techniques and overcommitment Monitor key memory performance metrics Troubleshoot common memory performance problems 	Theory and Lecture	
	vFlash and Resource Pool	<ul style="list-style-type: none"> Explain vFlash Architecture Explain Use Case for Resource Pools Create and Remove Resource Pool Configure Resource Pool Attributes Add and Remove Virtual Machine from a Resource Pool Create and Delete vFlash Resource Pool Assign vFlash Resource to VMDKs 	Theory and Lecture	
	Summary challenge advance lap for Monitoring CPU , Memory performance and HA Issues troubleshooting	Lab 1 - Monitoring CPU Performance Lab 2 - Monitoring Memory Performance Lab 3 - Create Resource Pool and Management - Diagnosing vSphere HA Cluster Resource Issues	(Lab 1 to 3) Real Device Catalyst 3560-CX 1 Unit Cisco UCS Server C-Series ESXi 6.5 trial version VMWare vSphere	

Day 5

Item	Subject	Details	Trainee Lab and devices	Workgroup Lab and devices
	Virtual Machine and Cluster Optimization	<ul style="list-style-type: none"> Understand performance guidelines for virtual machines, resource allocation settings, VMware vSphere® Distributed Resource Scheduler™ clusters, resource pools, and VMware vSphere® High Availability admission control policies Troubleshoot virtual machine power-on failures Troubleshoot vSphere cluster problems 	Theory and Lecture	
	vRealize Log Insight	<ul style="list-style-type: none"> explain vRealize log insight® identify use case for vRealize log insight deploy vRealize log insight® configure vRealize log insight configure availability and scalability for vRNI use vRNI log to identify and Troubleshooting 		
Break				
	Host and Management Scalability	<ul style="list-style-type: none"> Understand how vCenter Linked Mode manages multiple vCenter Server inventories Explain VMware vSphere® Distributed Power Management™ Use Host Profiles to manage ESXi configuration compliance Use VMware vSphere® PowerCLI™ to perform vSphere administrative tasks Use Image Builder to create an ESXi installation image Use vSphere Auto Deploy to provision ESXi hosts 	Theory and Lecture	
	Summary challenge advance lap for PowerCLI and Host Profile	<p>Lab 1 - Host Profiles</p> <p>Lab 2 - Using vSphere PowerCLI</p> <p>Lab 3 - Using vSphere Auto Deploy on vCenter Server Appliance</p> <p>Lab 4 - installation and configure vRealize Log Insight - Monitoring and Tuning vRealize Log Insight</p>	<p>(Lab 1 to 3)</p> <p>Real Device Catalyst 3560-CX 1 Unit Cisco UCS Server C-Series ESXi 6.5 trial version VMWare vSphere</p>	

Course Post-Test

Not Required

Course Materials

Not include in this class training (but you can requested from sale team)

Course Devices Training (Per 1 Person)



Cisco Server UCS C-Series



Cisco Catalyst 3560-CX



Storage QNAP

