VMWARE : vSphere 6.5
OPTIMIZE AND SCALE

DATE: To be confirmed **CONTACT: academy@techlan.it** **STUDY BOOK:** **PRICE: Request**

COURSE OBJECTIVE:

This course will teach you advanced skills for configuring and maintaining a highly available and scalable virtual infrastructure. Through a mix of lecture and hands-on labs, you will configure and optimize the vSphere features that build a foundation for a truly scalable infrastructure, and you will discuss when and where these features have the greatest effect. Anyone who is ready to take their understanding of vSphere to a deeper level and learn how to use advanced features and controls will greatly benefit from this course.

Upon Completion of this course, you will be able to:

- 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
- Harden the vSphere environment against security threats
- Use VMware vSphere® Client™, VMware vSphere® Web Client, and VMware vSphere® ESXi™ Shell to manage vSphere
- Use VMware vSphere® Auto Deploy™ to provision ESXi hosts
- Use VMware vRealize® Log Insight™ to monitor system logs
- Deploy VMware vCenter® Server Appliance™ to be highly available and optimized for performance

PREREQUISIT:

It is recommended, but not required, that students have the following knowledge and skills:

Understanding of concepts presented in the VMware vSphere: Install, Configure, Manage [V6.5] course (5673)

Equivalent knowledge and administration experience with ESXi and vCenter Server

Experience with working at the command prompt is highly recommended

WHO SHOULD ATTEND

Experienced system administrators

System engineers

System integrators

TECHLAN

ACADEMY

COURSE CONTENT:

MODULE 1: Course Introduction
Introductions and course logistics
Course objectives
Additional resources for after this course
Other VMware Education offerings

MODULE 2: Network Scalability
Configure and manage vSphere distributed switches
Distributed switch features such as port mirroring, LACP, QoS tagging, and NetFlow

MODULE 3: Storage Scalability
vSphere storage APIs for array integration and storage awareness
Configure and assign virtual machine storage policies
Configure VMware vSphere Storage DRS and VMware vSphere Storage I/O Control
Create and use virtual volumes in vSphere

MODULE 4: Host and Management Scalability
Uses of VMware vCenter Converter
Use content libraries
Use host profiles
Use VMware vSphere ESXi Image Builder CLI and vSphere Auto Deploy

MODULE 5: CPU Optimization
CPU scheduler operation, NUMA support, and other features that affect CPU performance
Use esxtop to monitor key CPU performance metrics

MODULE 6: Memory Optimization
Ballooning, memory compression, and host-swapping techniques for memory reclamation when memory is overcommitted
Use esxtop to monitor key memory performance metrics

MODULE 7: Storage Optimization
Factors that affect storage performance
Use esxtop to monitor key storage performance metrics

MODULE 8: Network Optimization
Performance features of network adapters
Performance features of vSphere networking
Use esxtop to monitor key network performance metrics

LABS: To be confirmed

MODULE 9: Analyzing vSphere
How Proactive DRS enhances virtual machine availability
Use vRealize Log Insight to identify and troubleshoot issues

MODULE 10: vCenter Server Availability and Performance
Native high-availability features of vCenter Server and VMware Platform Services Controller
Configure vCenter Server and Platform Services Controller high availability
Understand what factors influence vCenter Server performance

MODULE 11: vSphere Security
Configure ESXi host access and authorization
Secure ESXi, vCenter Server, and virtual machines
Use VMware Certificate Authority to configure vSphere certificate management
Configure vSphere to encrypt virtual machines, core dumps, and VMware vSphere vMotion