TAN DUC INFORMATION TECHNOLOGY SCHOOL JSC
Address: 103 Pasteur, Dist.1, HCMC
Tel: 08 38245819; 38239761
Email: traincert@tdt-tanduc.com
Website: www.tdt-tanduc.com; www.tanducits.com

Let's Reach for Excellence!

VMware vSphere: Fast Track [V7]

Duration: *5 days*

OVERVIEW

This five-day, intensive course takes you from introductory to advanced VMware vSphere® 7 management skills. Building on the installation and configuration content from our best-selling course, you will also develop advanced skills needed to manage and maintain a highly available and scalable virtual infrastructure. Through a mix of lecture and hands-on labs, you will install, configure and manage vSphere 7. You will explore the features that build a foundation for a truly scalable infrastructure and discuss when and where these features have the greatest effect. This course prepares you to administer a vSphere infrastructure for an organization of any size using vSphere 7, which includes VMware ESXi™ 7 and VMware vCenter Server® 7.

AUDIENCE

- System administrators
- System engineers

OBJECTIVES

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

- Describe the software-defined data center (SDDC)
- Explain the vSphere components and their function in the infrastructure
- Describe the benefits and capabilities of VMware Skyline
- Install and configure VMware ESXi™ hosts
- Deploy and configure VMware vCenter® Server Appliance™
- Use VMware vSphere® Client™ to manage the vCenter Server inventory and the vCenter Server configuration
- Manage, monitor, back up, and protect vCenter Server Appliance
- Create virtual networks with vSphere standard switches
- Describe the storage technologies supported by vSphere
- Configure virtual storage using iSCSI and NFS storage
- Create and manage VMware vSphere® VMFS datastores
- Use the vSphere Client to create virtual machines, templates, clones, and snapshots
- Create a content library and deploy virtual machines from templates in the library
- Manage virtual machine resource use and manage resource pools
- Migrate virtual machines with VMware vSphere® vMotion® and VMware vSphere® Storage vMotion®
- Create and manage a vSphere cluster that is enabled with VMware vSphere® High Availability and VMware vSphere® Distributed Resource Scheduler™
- Create virtual networks with VMware vSphere® Distributed Switch™ and enable distributed switch features
- Discuss solutions for managing the vSphere life cycle
- Use VMware vSphere® Lifecycle Manager™ to perform upgrades to ESXi hosts and virtual machines
- Use host profiles to manage ESXi configuration compliance
- Describe how vSphere storage APIs help storage systems integrate with vSphere
- Configure and use virtual machine storage policies

PREREQUISITES

This course has the following prerequisites:

- System administration experience on Microsoft Windows or Linux operating systems

COURSE OUTLINE

1. Course Introduction

- Introductions and course logistics
- Course objectives

2. Introduction to vSphere and the Software-Defined Data Center

- Explain basic virtualization concepts
- Describe how vSphere fits into the software-defined data center and the cloud infrastructure
- Explain how vSphere interacts with CPUs, memory, networks, and storage
- Recognize the user interfaces for accessing the vCenter Server system and ESXi hosts
- Describe the ESXi host architecture
- Navigate the Direct Console User Interface (DCUI) to configure an ESXi host
- Recognize ESXi host user account best practices
- Install an ESXi host
- Use VMware Host Client™ to configure ESXi host settings
- Describe how to proactively manage your vSphere environment using VMware Skyline

3. Virtual Machines

- Create and provision a virtual machine
- Explain the importance of VMware Tools™
- Install VMware Tools
- Identify the files that make up a VM
- Recognize the components of a VM
- Recognize virtual devices supported by a VM
- Describe the benefits and use cases for containers
- Identify the parts of a container system

4. vCenter Server

- Describe the vCenter Server architecture
- Discuss how ESXi hosts communicate with vCenter Server
- Deploy and configure vCenter Server Appliance
- Use the vSphere Client to manage the vCenter Server inventory
- Add data center, organizational objects, and hosts to vCenter Server
- Use roles and permissions to enable users to access objects in the vCenter Server inventory
- Back up vCenter Server Appliance
- Monitor vCenter Server tasks, events, and appliance health
- Use vCenter Server High Availability to protect a vCenter Server Appliance

5. Configuring and Managing Virtual Networks

- Create and manage standard switches

- Describe the virtual switch connection types
- Configure virtual switch security, traffic-shaping and load-balancing policies
- Compare vSphere distributed switches and standard switches

6. **Configuring and Managing Virtual Storage**
   - Identify storage protocols and storage device types
   - Discuss ESXi hosts using iSCSI, NFS, and Fibre Channel storage
   - Create and manage VMFS and NFS datastores
   - Explain how multipathing works with iSCSI, NFS, and Fibre Channel storage
   - Recognize the components of a VMware vSAN™ configuration
7. **Virtual Machine Management**
   - Use templates and cloning to deploy new virtual machines
   - Modify and manage virtual machines
   - Create a content library and deploy virtual machines from templates in the library
   - Use customization specification files to customize a new virtual machine
   - Perform vSphere vMotion and vSphere Storage vMotion migrations
   - Describe Enhanced vMotion Compatibility
   - Create and manage virtual machine snapshots
   - Examine the features and functions of VMware vSphere® Replication™
   - Describe the benefits of vSphere Storage APIs – Data Protection
8. **Resource Management and Monitoring**
   - Discuss CPU and memory concepts in a virtualized environment
   - Describe what overcommitment of a resource means
   - Describe methods for optimizing CPU and memory usage
   - Use various tools to monitor resource use
   - Create and use alarms to report certain conditions or events
9. **vSphere Clusters**
   - Describe the functions of a vSphere DRS cluster
   - Create a vSphere DRS cluster
   - Monitor a vSphere cluster configuration
   - Describe options for making a vSphere environment highly available
   - Explain the vSphere HA architecture
   - Examine the features and functions of VMware vSphere® Fault Tolerance
   - Describe the function of the vSphere® Cluster Service
10. **Network Scalability**
    - Configure and manage vSphere distributed switches
    - Describe how VMware vSphere® Network I/O Control enhances performance
    - Explain distributed switch features such as port mirroring and NetFlow
11. **vSphere Lifecycle Management**
    - Recognize the importance of vCenter Server Update Planner
    - Describe how VMware vSphere® Lifecycle Manager™ works
    - Describe how to update ESXi hosts using baselines
    - Validate ESXi host compliance using a cluster image
    - Describe how to upgrade VMware Tools and VM hardware

- Describe VMware vSphere® Lifecycle Manager™ and VMware vSAN™ integration

12. Host and Management Scalability

- Use host profiles to manage ESXi configuration compliance
- Create and manage resource pools in a cluster
- Describe how scalable shares work

13. Storage Scalability

- Explain why VMware vSphere® VMFS is a high-performance, scalable file system
- Explain VMware vSphere® Storage APIs - Array Integration, VMware vSphere® API for Storage
- Awareness™, and vSphere APIs for I/O Filtering
- Configure and assign virtual machine storage policies
- Create VMware vSAN™ storage policies
- Recognize components of the vSphere Virtual Volumes architecture
- Configure VMware vSphere® Storage DRS™ and VMware vSphere® Storage I/O Control