
Tytuł szkolenia: VMware vSphere - Fast Track [V7] (EDU-VSFT7)

Kod szkolenia: VT-SP-FT7

Wprowadzenie

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.

Adresaci szkolenia

System administrators
System engineers

Cel szkolenia

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

Certifications

Attendance of this course meets the training requirement to achieve the following certification:

- VMware Certified Professional – Data Center Virtualization (VCP-DCV)

Czas i forma szkolenia

- 35 godzin (5 dni x 7 godzin), w tym wykłady i warsztaty praktyczne.

Plan szkolenia

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

- h. Install an ESXi host
- i. Use VMware Host Client™ to configure ESXi host settings
- j. Describe how to proactively manage your vSphere environment using VMware Skyline

3. Virtual Machines

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

4. vCenter Server

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

5. Configuring and Managing Virtual Networks

- a. Create and manage standard switches
- b. Describe the virtual switch connection types
- c. Configure virtual switch security, traffic-shaping and load-balancing policies
- d. Compare vSphere distributed switches and standard switches

6. Configuring and Managing Virtual Storage

- a. Identify storage protocols and storage device types
- b. Discuss ESXi hosts using iSCSI, NFS, and Fibre Channel storage
- c. Create and manage VMFS and NFS datastores
- d. Explain how multipathing works with iSCSI, NFS, and Fibre Channel storage
- e. Recognize the components of a VMware vSAN™ configuration

7. Virtual Machine Management

- a. Use templates and cloning to deploy new virtual machines
- b. Modify and manage virtual machines
- c. Create a content library and deploy virtual machines from templates in the library
- d. Use customization specification files to customize a new virtual machine
- e. Perform vSphere vMotion and vSphere Storage vMotion migrations
- f. Describe Enhanced vMotion Compatibility
- g. Create and manage virtual machine snapshots
- h. Examine the features and functions of VMware vSphere® Replication™
- i. Describe the benefits of vSphere Storage APIs – Data Protection

8. Resource Management and Monitoring

- a. Discuss CPU and memory concepts in a virtualized environment
- b. Describe what overcommitment of a resource means

- c. Describe methods for optimizing CPU and memory usage
- d. Use various tools to monitor resource use
- e. Create and use alarms to report certain conditions or events

9. vSphere Clusters

- a. Describe the functions of a vSphere DRS cluster
- b. Create a vSphere DRS cluster
- c. Monitor a vSphere cluster configuration
- d. Describe options for making a vSphere environment highly available
- e. Explain the vSphere HA architecture
- f. Configure and manage a vSphere HA cluster
- g. Examine the features and functions of VMware vSphere® Fault Tolerance
- h. Describe the function of the vSphere® Cluster Service

10. Network Scalability

- a. Configure and manage vSphere distributed switches
- b. Describe how VMware vSphere® Network I/O Control enhances performance
- c. Explain distributed switch features such as port mirroring and NetFlow

11. vSphere Lifecycle Management

- a. Recognize the importance of vCenter Server Update Planner
- b. Describe how VMware vSphere® Lifecycle Manager™ works
- c. Describe how to update ESXi hosts using baselines
- d. Validate ESXi host compliance using a cluster image
- e. Describe how to upgrade VMware Tools and VM hardware
- f. Describe VMware vSphere® Lifecycle Manager™ and VMware vSAN™ integration

12. Host and Management Scalability

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

13. Storage Scalability

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