VMware vSphere: Configuration, Management & Comprehensive VCP Exam Preparation (VSVCPEP)

ID VSVCPEP **Price** CHF 4,980.—(excl. VAT) **Duration** 5 days

Who should attend

System administrators, system engineers, and system integrators

This course is part of the following Certifications

VMware Certified Professional – VMware vSphere Foundation Administrator (VCP-VVFA)

Prerequisites

The following prerequisites are required for this course:

- Experience in system administration of Microsoft Windows or Linux operating systems
- Basic knowledge and administrative experience with ESX and vCenter

Course Objectives

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

- Install and configure ESX hosts
- Deploy and configure vCenter
- Configure vCenter High Availability
- Use the vSphere Client to create the vCenter inventory and assign roles to vCenter users
- Create virtual networks with vSphere standard switches and distributed switches
- Configure and manage vSphere networks and storage for a large and demanding enterprise
- Create and configure data stores using storage technologies supported by vSphere
- Use the vSphere® Client™ to create virtual machines, templates, clones, and snapshots
- Configure vSphere Replication and restore replicated VMs
- Create content libraries for managing templates and deploying virtual machines
- Manage resource allocation for virtual machines using resource pools
- Use the vSphere Client to manage certificates
- Monitor the performance of vCenter, ESX, and VMs in the vSphere Client
- Migrate virtual machines with VMware vSphere® vMotion® and VMware vSphere® Storage vMotion®
- Create and configure a vSphere cluster enabled with VMware vSphere® High Availability and VMware vSphere® Distributed Resource Scheduler™
- Configure and manage a VMware Tools repository
- Use configuration profiles to manage ESX host compliance
- Manage the vSphere lifecycle to keep vCenter, ESX hosts, and virtual machines up to date
- Use Identity Federation to configure vCenter to use external identity sources
- Describe the role of the vSphere Supervisor in the use of Kubernetes clusters.

Course Content

Course introduction

- Introductions and course logistics
- Course objectives

Overview of vSphere and Virtualization

- Explain fundamental virtualization concepts
- Describe how vSphere fits into the software-defined data center and cloud infrastructure
- Recognize the user interfaces for accessing vSphere
- Explain how vSphere interacts with CPUs, memory, networks, storage, and GPUs

Installing and configuring ESX

- Install an ESX host
- Identify best practices for ESX user accounts
- Configure ESX host settings using DCUI and VMware Host Client

Deploying and configuring vCenter

- Recognize communication between ESX hosts and vCenter
- Deploy the vCenter Server appliance

- Configure vCenter settings
- Use the vSphere Client to add and manage license keys
- Create and organize vCenter inventory objects
- Recognize the rules for applying vCenter permissions
- View vCenter logs and events
- Create a vCenter backup plan
- Recognize the importance of vCenter High Availability
- Explain how vCenter High Availability works
- Use the vSphere Client to manage vSphere certificates

Configure vSphere networks

- Configure and view standard switch configurations
- Configure and view distributed switch configurations
- Recognize the difference between standard switches and distributed switches
- Explain how to set network policies for standard and distributed switches
- Configure and manage distributed vSphere switches
- Describe how VMware vSphere Network I/O Control improves performance
- Explain the features of distributed switches, such as port mirroring and NetFlow
- Define the vSphere Distributed Services Engine
- Describe the use cases and benefits of the vSphere Distributed Services Engine

Configuring vSphere Storage

- Recognize vSphere storage technologies
- Identify types of vSphere datastores
- Describe Fibre Channel components and addressing
- Describe iSCSI components and addressing
- Configure iSCSI storage on ESX
- Create and manage VMFS datastores
- Configure and manage NFS datastores
- Discuss vSphere support for NVMe and iSER technologies
- Describe the architecture and requirements of vSAN configuration
- Describe storage policy-based management
- Recognize components in the vSphere Virtual Volumes architecture

Provisioning virtual machines

- Create and deploy VMs
- Explain the importance of VMware Tools
- Identify the files that make up a VM
- Recognize the components of a VM
- Navigate the vSphere Client and review VM settings and options
- Modify VMs by dynamically increasing resources
- Create VM templates and deploy VMs from those templates
- Clone VMs
- Create customization specifications for guest operating systems
- Create local, published, and subscribed content libraries
- Deploy VMs from content libraries
- Manage multiple versions of VM templates in content libraries
- Recognize the role of a VMware Tools repository
- Configure a VMware Tools repository

Virtual machine management

- Recognize the types of VM migrations you can perform within a vCenter instance and between vCenter instances
- Migrate VMs using vSphere vMotion
- Describe the role of Enhanced vMotion Compatibility in migrations
- Migrate VMs using vSphere Storage vMotion
- Create a snapshot of a VM
- Manage, consolidate, and delete snapshots
- Describe CPU and memory concepts in the context of a virtualized environment
- Describe how VMs compete for resources
- Define CPU and memory shares, reservations, and limits
- Identify the backup and recovery solution for VMs
- Identify the components of the vSphere replication architecture
- Deploy and configure vSphere Replication
- Restore replicated VMs

Deploying and configuring vSphere clusters

- Create a vSphere cluster enabled for vSphere DRS and vSphere HA
- View information about a vSphere cluster
- Explain how vSphere DRS determines the placement of VMs on hosts in the cluster
- Recognize use cases for vSphere DRS settings
- Monitor a vSphere DRS cluster
- Create and manage resource pools in a cluster
- Describe how scalable shares work
- Describe how vSphere HA responds to different types of failures
- Identify options for configuring network redundancy in a vSphere HA cluster
- Recognize vSphere HA design considerations
- Recognize the use cases for different vSphere HA settings
- Configure a vSphere HA cluster
- Recognize when vSphere Fault Tolerance should be used
- Describe the function of vCLS

vSphere Lifecycle Management

- Enable vSphere Lifecycle Manager in a vSphere cluster

- Describe the features of vCenter Update Planner
- Perform vCenter upgrade pre-checks and interoperability reports
- Recognize the features of VMware vSphere® Lifecycle Manager™
- Distinguish between managing hosts using baselines and managing hosts using images
- Describe how to upgrade hosts using baselines
- Describe ESX images
- Verify ESX host compliance with a cluster image and upgrade ESX hosts
- Update ESX hosts with vSphere Lifecycle Manager
- Describe the automatic recommendations of vSphere Lifecycle Manager
- Use vSphere Lifecycle Manager to upgrade VMware Tools and VM hardware
- Use configuration profiles to manage ESX configuration compliance

vSphere Monitoring

- Monitor the key factors that can affect the performance of a virtual machine
- Describe the factors that affect vCenter performance
- Use vCenter tools to monitor resource usage
- Create custom alerts in vCenter
- Describe the benefits and features of VMware Skyline
- Recognize the use cases for VCF Operations

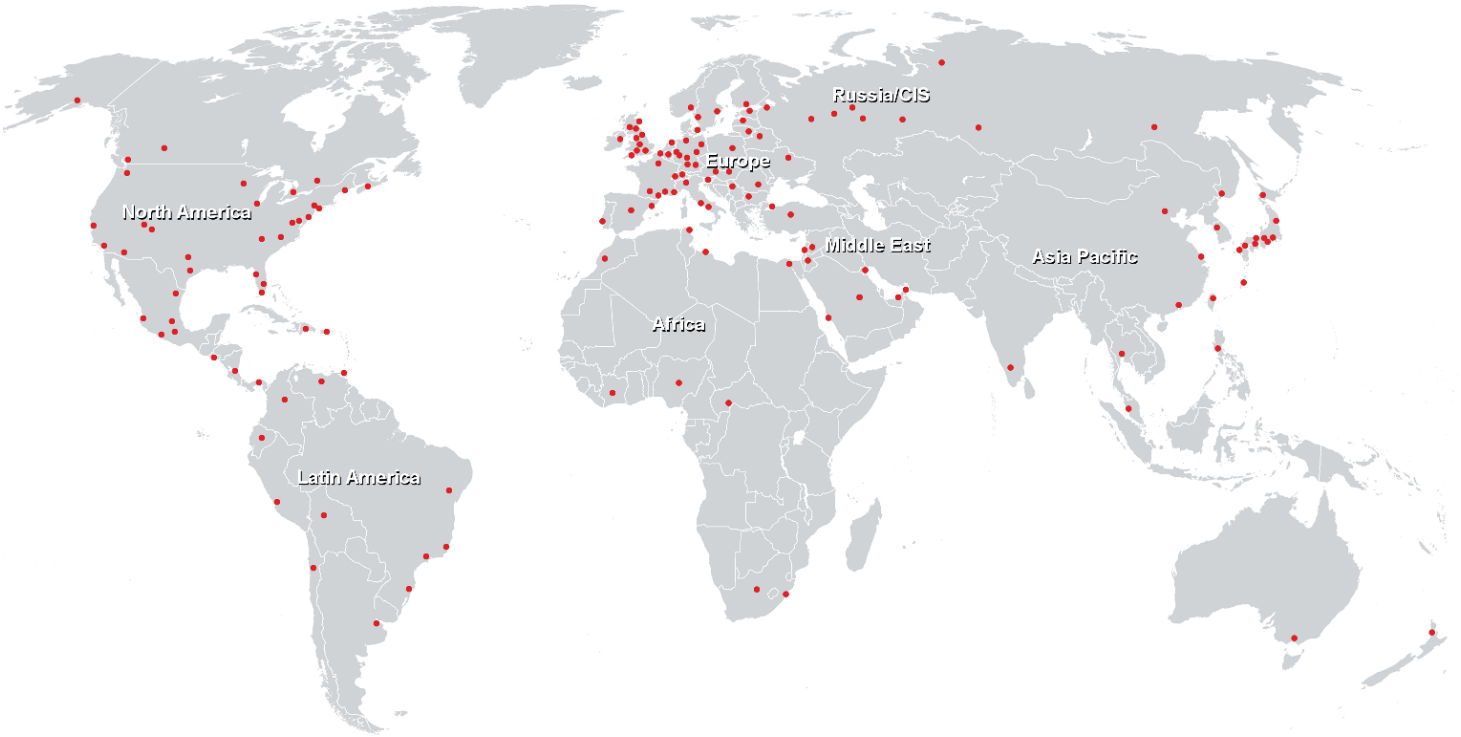
vSphere Security and Access Control

- Recognize strategies for securing vSphere components such as vCenter, ESX hosts, and virtual machines
- Describe vSphere support for security standards and protocols
- Describe identity federation and recognize its use cases
- Configure identity federation so that vCenter can use an external identity provider

vSphere Trusted Environments and VM Encryption

- Configure ESX host access and authentication
- Describe virtual machine security features
- Describe the components of a VM encryption architecture
- Create, manage, and migrate encrypted VMs
- List VM encryption events and alerts
- Describe the benefits and use cases of vSphere Trust Authority

Training Centres worldwide





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