

# VMware Cloud: Deploy and Manage a vSphere Cloud

## Course Overview

In this five-day course, you will explore the VMware technologies that allow you to deploy and manage your private on-premise cloud and securely connect to other clouds. You will learn about the newest features and enhancements in VMware vCenter Server® 6.5, VMware ESXi™ 6.5, and VMware vSAN™ 6.5. You will learn about the configuration and use of the vRealize Automation platform, including self-service provisioning and the creation of catalog services that include predefined virtual machines and software components, and creating approval cycles and managing machine lifecycles to conserve resources. This course also details logical routing to enable you to dynamically route between different virtual environments, and you will learn how to use gateway services, firewall configurations, and security services to help secure and optimize your cloud environment with VMware NSX®.

## Course Objectives

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

- Discuss the key enhancements made to VMware vSphere® 6.5 and vSAN 6.5
- Describe the VMware vRealize® Automation™ (vRA) architecture and use cases
- Manage vRealize Automation entities on VMware and third-party virtual, cloud, and physical infrastructures
- Configure and manage catalogs and blueprints
- Configure and manage business groups and reservations for compute resources on VMware, Microsoft, Amazon, and other platforms
- Use the self-service portal to request and manage machines in accordance with vRealize Automation approval and governance policies
- Manage and monitor machines and resource reclamation
- Configure and deploy VMware NSX® distributed router appliances to establish east-west connectivity
- Configure and deploy VMware NSX® Edge™ services gateway appliances to establish north-south connectivity
- Configure NSX Edge firewall rules to restrict network traffic
- Configure VMware NSX distributed firewall rules to restrict network traffic
- Configure Service Composer policies

## Target Audience

Experienced system, network administrators and engineers or system integrators responsible for implementing a cloud infrastructure.

## Prerequisites

This course requires completion of one of the following prerequisites:

- Understanding of concepts presented in the VMware vSphere: Install, Configure, Manage [V6.0] or VMware vSphere: Fast Track [V6.0] and VMware vSAN: Deploy and Manage [V6.2] course or equivalent knowledge and administration experience with VMware ESXi, VMware vCenter Server, and VMware vSAN.

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Experience working at the command line is helpful.

The course material presumes that a student can perform the following tasks with no assistance or guidance before enrolling in this course:

- Install and configure VMware ESX®/ESXi
- Install vCenter Server
- Create vCenter Server objects, such as data centers and folders
- Create and manage vCenter Server roles and permissions
- Create and modify a standard switch
- Create and modify a distributed switch
- Connect an ESX/ESXi host to NAS, iSCSI, or Fibre Channel storage
- Create a VMware vSphere® VMFS datastore
- Enable VMware vSphere® vMotion® on an ESX/ESXi host
- Use a wizard or a template to create a virtual machine
- Modify a virtual machine's hardware
- Migrate a virtual machine with vSphere vMotion
- Migrate a virtual machine with VMware vSphere® Storage vMotion®
- Configure and manage a VMware vSphere® Distributed Resource Scheduler™ cluster with resource pools
- Configure and manage a VMware vSphere® High Availability cluster
- Configure a Virtual SAN Cluster
- Deploy Virtual Machines onto a Virtual SAN datastore
- Understanding of enterprise switching and routing
- Knowledge of TCP/IP services
- Experience with firewalls and firewall rule sets
- Understanding of concepts presented in the VMware Data Center Virtualization Fundamentals course or VCA-DCV certification

## Certifications

No certifications are tied to this course.

## Course Delivery Options

- Classroom
- Live Online
- [On Demand](#)
- [Onsite](#)

## Product Alignment

- ESXi 6.5
- vCenter Server 6.5
- vSAN 6.6
- vRA 7
- NSX 6.2

## Course Modules

### 1 Course Introduction

- Introductions and course logistics
- Course objectives
- Describe the software-defined data center

### 2 New Features in vSphere 6.5 and vSAN 6.5

- Use vSphere Client, VMware Host Client, and the vCenter Server Appliance shell
- Discuss the new features and enhancements in vSphere 6.5
- Describe the VMware vSAN™ enhancements in the following areas: Scalability, Performance, Availability, Space efficiency, Operational, Usability

### 3 vRealize Automation Overview and Architecture

- Explain the purpose of vRealize Automation
- Explain the concepts of vRealize Automation administration and self-service provisioning
- Describe where vRealize Automation fits in the VMware product line
- Discuss use cases for vRealize Automation
- Identify the components of a vRealize Automation simple deployment
- Identify the components of a vRealize Automation enterprise deployment
- Identify the component design options for vRealize Automation
- Identify how vRealize Automation integrates with other VMware products

### 4 Authentication, Fabric, and Tenants

- Describe identity management in vRealize Automation
- Identify the authentication methods available in vRealize Automation
- Identify the appropriate roles for specific tasks in vRealize Automation
- Create tenants
- Explain multitenant leading practices
- Define relationships between vRealize Automation entities
- Identify and configure vRealize Automation endpoints
- Identify how vRealize Automation discovers compute resources
- Identify fabric groups, business groups, and reservations

- Create and manage reservations for compute resources

### 5 Converged Blueprints and Catalog Management

- Define blueprints
- Identify the process and options for configuring a blueprint
- Create a blueprint with a single virtual machine
- Create a blueprint with multiple virtual machines
- Identify the role of the service catalog
- Define catalog items
- Use entitlements to manage catalog items

### 6 Consuming Catalog Services

- Request a single-machine service
- Monitor the service provisioning status
- Reconfigure a provisioned machine
- Manage snapshots
- Identify roles involved in creating approval policies
- Identify approval policy level
- Identify approval phases
- Create and apply approval policies for catalog items
- Use custom properties to modify the provisioning process
- Use property groups to group sets of custom properties
- Use the property dictionary to modify the provisioning process

### 7 Application Authoring

- Understand the lifecycle of a vRealize Automation Application deployment
- Author an application blueprint
- Deploy an application blueprint from the service catalog

### 8 Monitoring and Reclamation

- Identify how to monitor resource use
- Demonstrate how to reclaim resources
- Demonstrate how to manage machine leases
- Monitor system events

### 9 VMware NSX Logical Routing

- Describe the VMware NSX logical router



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### 10 NSX Edge Gateway Services

- Describe virtual private networking
- Configure L2 VPN
- Configure IPsec VPN
- Configure SSL VPN-Plus

### 11 VMware NSX Firewall and Security Services

- Describe the NSX Edge firewall
- Describe the VMware NSX distributed firewall
- Describe the Service Composer

## Contact

If you have questions or need help registering for this course, click [here](#).