

Module Title : VMware vCloud Director: Install, Configure, Manage

Duration : 5 days

Overview

In this five-day course, you will focus on designing, installing, configuring, and managing VMware vCloud Director® 8.10 for service providers. You will learn about self-service provisioning, the creation of organizations, virtual data centers, and catalog services that include predefined virtual machines, and on-demand VMware NSX® networks as well as the integrated use of VMware Virtual SAN™. This course also covers interfacing vCloud Director with other systems through the use of various APIs.

Course Objectives

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

- Design a vCloud Director environment
- Deploy vCloud Director
- Manage vCloud Director to satisfy service provider needs
- Configure Virtual SAN and VMware vSphere® storage to enable multiple tiers in provider virtual data centers
- Create and manage vCloud Director organizations and vApps to satisfy business needs
- Create and manage vCloud Director catalogs
- Transfer virtual machine workloads from vSphere into and out of vCloud Director
- Configure networking for organizations and vApps with the help of NSX
- Use NSX to create hybrid cloud connectivity between a public cloud and a private cloud
- Create an interface between vCloud Director and Microsoft Active Directory servers

Target Audience

Cloud architects, systems engineers, data center administrators, and cloud administrators with experience in a service provider or managed services environment

Prerequisites

This course requires completion of the following course:

- VMware vSphere: Install, Configure, Manage [V6] or equivalent knowledge

This course recommends completion of the following e-learning courses:

- VMware vCloud Director: Fundamentals [V8.10]

- VMware Virtual SAN: Fundamentals [V6.2]
 - VMware Network Virtualization Fundamentals
- Substantial knowledge of TCP/IP networking is helpful.

Certifications

No certifications are tied to this course.

Course Delivery Options

- Classroom
- Live Online
- Onsite

Product Alignment

- vCloud Director 8.10
- Virtual SAN 6.2
- NSX 6.2

Course Modules

1 Course Introduction

- Introductions and course logistics
- Course objectives

2 Software-Defined Data Center

- Describe the evolution of the software-defined data center
- Describe vSphere
- Describe NSX
- Describe Virtual SAN

3 Cloud Computing and Cloud Director Overview

- Cloud computing overview
- Characteristics of cloud services
- Categories of cloud computing
- VMware offering to enable cloud-based services
- Cloud deployment environments

- VMware vCloud® Air™ network program overview
- Describe vCloud Director in relation to service provider or managed services environments

4 vCloud Director Architecture and Components

- vCloud Director architecture
- Review vCloud Director components and explain their functions
- Examine integration with other VMware products, such as VMware vRealize® Business for Cloud, VMware vRealize® Operations Manager™, NSX, and Virtual SAN
- vCloud Director terms: vApp and catalog
- vCloud Director terms: organization and virtual data center
- Network concepts
- vCloud Director supported storage

5 vCloud Providers

- Identify storage resources for vCloud Director
- Configure and manage storage for providers
- Examine provider space allocation to an organization
- Manage storage requirements for linked clones and shadow virtual machines
- Describe the use cases for Virtual SAN, VMware vSphere® Virtual Volumes™, and legacy storage

6 vCloud Director Organizations

- Create and manage organizations
- Organization virtual data center allocation models
- Recognize resource allocations for an organization
- Create and manage catalogs
- Manage vApps and vApp templates

7 vCloud Networking with NSX

- Describe the basic NSX components in relation to vCloud Director
- Describe the network types available in vCloud Director (external, org, vApp)
- Discuss the organization and vApp network traffic choices
- Examine the function of network pools
- Explain how to share content between organizations and vApps
- Describe options to connect a private cloud to a public cloud

- Review options for external connectivity with VPN

8 Basic Security

- Describe role-based access
- Create custom security roles
- Describe and configure LDAP integration with Active Directory
- Describe single sign-on
- Enable a SAML identity provider
- Describe two-factor authentication

9 Managing Cloud Resources

- Identify how vSphere fulfills vCloud Director requests
- Manage provider and organization virtual data centers

10 Managing vSphere Resources

- Manage VMware vCenter Server® instances
- Manage VMware ESXi™ hosts
- Manage vSphere datastores
- Manage stranded items
- Configure and manage resource pools at the vSphere level

11 Monitoring vCloud Components

- Monitor usage information at provider and organization virtual data centers
- Analyze vCloud Director logs to mirror vCloud Director cells
- Monitor vCloud Director environments with vRealize Operations Manager and VMware vRealize® Log Insight™
- Leverage vRealize Business for cost management

12 Organization Users

- Describe the catalog tasks available to organization users in various roles
- Describe the vApp tasks available to organization users in various roles

13 vCloud Director Installation

- vCloud Director setup overview
- vCloud Director hardware and software requirements

- vCloud Director supported platforms
- Network configuration prerequisites
- Install and configure the vCloud Director database
- Configure an Oracle database and a Microsoft SQL Server database
- Create SSL certificates
- Configure VMware NSX® Manager™ for a new vCloud Director installation
- Install and configure an AMQP broker
- Download and install the VMware public key
- vRealize Business integration with vCloud Director

14 vCloud Director Upgrade

- vCloud Director upgrade overview
- Upgrade prerequisites
- NSX requirements
- Additional information
- Best practice for upgrades