VMware VCloud Director: Install, Configure, Manage [V8.10]

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 organisations, 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 using various APIs. Product Alignment: vCloud Director 8.10, Virtual SAN 6.2, NSX 6.2

Target Audience:

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

Pre-requisites:

This course requires completion of the VMware vSphere: Install, Configure, manage course or have the following skills and knowledge:

- This course recommends the completion of the following e-learning courses:
- VMware vCloud Director: Fundamentals [V8.10]
- VMware Virtual SAN: Fundamentals [V6.2]
- VMware Network Virtualisation Fundamentals
- Substantial knowledge of TCP/IP networking is helpful.

Module 1: Course Introduction

- Introductions and course logistics
- Course objectives

Module 2: Software-Defined Data Center

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

Module 3: Cloud Computing and Cloud Director overview

- Cloud computing overview
- Characteristics or 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

Module 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: organisation and virtual data center
- Network concepts
- vCloud Director supported storage

Module 5: vCloud Providers

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

Module 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

Module 11: Monitoring vCloud components

- Monitor usage information at provider and organisation virtual data centers
- Analyse vCloud Director logs to mirror vCloud Director cells
- Monitor vCloud Director environments with vRealize Operations Manager and VMware vRealize® Log insight™

Module 12: vCloud Director API and Metadata

- Describe tools to access the API of vCloud Director
- Use of REST API in VMware vRealize Orchestrator
- Describe access to vCloud Director using VMware vSphere PowerCLI
- Create and update metadata on objects

Module 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

Course Completion:

After completing this course, students will be able to:

- 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 organisations 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 organisations 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 server

Module 6: vCloud Director Organisations

- Create and manage organisations
- Organisation virtual data center allocation models
- Recognise resource allocations for an organisation
- Create and manage catalogs
- Manage vApps and vApp templates

Module 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 organisation and vApp network traffic choices
- Examine the function of network pools
- Explain how to share content between organisations and vApps
- Describe options to connect a private cloud to a public cloud
- Review options for external connectivity with VPN

Module 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

Module 9: Managing Cloud Resources

- Identify how vSphere fulfils vCloud Director requests
- Manage provider and organisation virtual data centers

Module 14: vCloud Director Upgrade

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