

# VMware Cloud Director: Advanced Workshop [V10.2]

Course code: VMW\_VCDAW

This five-day, hands-on training course provides you with the advanced knowledge, skills, and tools to design and utilize a cloud solution based on VMware Cloud Director™. Besides learning about an advanced cloud architecture, you learn about the integration of VMware Cloud Director with the products VMware Cloud Director Availability™, VMware vRealize® Orchestrator™, VMware vRealize® Operations™ (including the Tenant App), VMware NSX-T® Data Center and VMware NSX® Advanced Load Balancer™ [Avi Networks]. This course covers the migration from VMware NSX® for vSphere® (NSX-V) to VMware NSX-T® Data Center in a VMware Cloud Director environment. You learn about how the NSX Advanced Load Balancer can be used and integrated in a service provider environment and how to configure the load balancing services using VMware NSX-T Data Center. Besides the advanced know-how of the vRealize Operations Tenant App and Cloud Availability, the course also discusses the extensibility and orchestration of workflows in Cloud Director. For all the topics covered in the class, intensive hands-on labs will be taken by the students to provide proper insights into all the products.

## Who is the course for

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

## What we teach you

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

- Describe the advanced architecture of a VMware Cloud Director environment
- Design Cloud Director Federation
- Explain use cases for CPOM
- Explain basic concepts of NSX-V and NSX-T design with VMware Cloud Director
- Discuss the integration of VMware NSX Advanced Load Balancer with VMware Cloud Director
- Explain use of migration tools from NSX-V to NSX-T Data Center
- Discuss the use cases for NSX Advanced Load Balancer
- Describe the architecture of VMware VMware Cloud Director Availability
- Discuss the use cases for migration with VMware Cloud Director Availability
- Describe the architecture of vRealize Operations in a Service Provider Environment
- Explain the use cases for vRealize Operations Tenant App
- Explain VMware Cloud Director orchestration and extensibility
- Explain use cases for XaaS Integration
- Discuss UI customization for Service Provider and Tenants

## Required skills

Completion of the following courses or equivalent knowledge is required:

- VMware NSX-T Data Center: Install, Configure, Manage
- VMware vRealize Automation: Orchestration and Extensibility
- VMware Cloud Director: Install, Configure, Manage

## Course outline

### 1 Course Introduction

- Introductions and course logistics
- Course objectives

### 2 Advanced VMware Cloud Director Architecture

- Explain the basic concepts and terminologies in a VMware Cloud Director environment
- Describe the basic architecture of a VMware Cloud Director environment
- Follow a proven process to design and deploy a cloud solution

#### GOPAS Praha

Kodaňská 1441/46  
101 00 Praha 10  
Tel.: +420 234 064 900-3  
[info@gopas.cz](mailto:info@gopas.cz)

#### GOPAS Brno

Nové sady 996/25  
602 00 Brno  
Tel.: +420 542 422 111  
[info@gopas.cz](mailto:info@gopas.cz)

#### GOPAS Bratislava

Dr. Vladimíra Clementisa 10  
Bratislava, 821 02  
Tel.: +421 248 282 701-2  
[info@gopas.sk](mailto:info@gopas.sk)



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- Gather and analyze business and application requirements
- Document design requirements, constraints, assumptions, and risks
- Use a systematic method to evaluate and document design decisions
- Explain the differences between conceptual, logical, and physical designs
- Describe the concepts of Provider SLAs
- Discuss the advantages of standardized and flexible cloud platforms
- Explain how you can use a building-block design approach with VMware products to architect a flexible but standardized cloud environment
- Impact on Monetization of service definitions
- Discuss the design and implications of a vSphere Design for the Cloud Platform
- Explain the use of Single vs. Stretched vs. Multi-Site deployments
- Design Cloud Director Federation
- Explain use cases for CPOM

## 3 NSX for vSphere Versus NSX-T Data Center and Migration

- Describe the NSX Management cluster architecture, components, and communication channels
- Identify the workflows involved in configuring the NSX Management cluster
- Validate and troubleshoot the NSX Management cluster formation
- Explain basic concepts of NSX-V and NSX-T design with VMware Cloud Director
- Discuss the use cases for Edge Services
- Discuss the use cases for Distributed Network Services
- Discuss the features available in NSX-V and NSX-T
- Explain the integration of external networks (such as MPLS, DirectConnect)
- Explain the integration of 3rd party network services (NON-VMware Edge Services, WAF)
- Discuss different migration scenarios
- Explain pre-requisites for migration from NSX-V to NSX-T

## 4 NSX Advanced Load Balancer

- Explain basic concepts of NSX Advanced Load Balancer
- Explain the integration of NSX Advanced Load Balancer with VMware Cloud Director
- Discuss the use cases for NSX Advanced Load Balancer
- Explain the load-balancing service offered by an NSX-T edge gateway

## 5 VMware Cloud Director Availability

- Describe the architecture of VMware Cloud Director Availability
- Explain the prerequisites of VMware Cloud Director Availability
- Discuss the implementation of VMware Cloud Director Availability
- Discuss the use cases for migration with VMware Cloud Director Availability
- Explain setup of data seeds for VMware Cloud Director Availability
- Discuss the use cases for Disaster Recover as a Service with VMware Cloud Director Availability

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[info@gopas.cz](mailto:info@gopas.cz)

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- Explain connectivity for VMware Cloud Director Availability to Cloud use cases
  - Understand requirements for VMware Cloud Director Availability OnPrem to Cloud failover and failback
- ## 6 vRealize Operations Manager and Tenant App
- Describe the architecture of vRealize Operations in a Service Provider
  - Describe the architecture of vRealize Operations Tenant App
  - Explain the use cases for vRealize Operations Tenant App
  - Explain use cases for vRealize Operations Manager in Service Provider environments
  - Discuss vRealize Operations Manager Management Packs
  - Explain advanced troubleshooting in service provider environments with vRealize Operations Manager
  - Discuss architecture and integration of vRealize Operations Manager Tenant App
  - Explain connectivity of the vRealize Operations Manager Tenant App
  - Discuss user and role management of the vRealize Operations Manager Tenant App
  - Describe billing policy definition in the vRealize Operations Manager Tenant App
- ## 7 VMware Cloud Director Orchestration
- Explain VMware Cloud Director orchestration
  - Explain vRealize Orchestrator use cases
  - Describe the architecture of vRealize Orchestrator in a Service Provider environment
  - Explain use cases for VMware Cloud Director blocking tasks
  - Explain use cases for XaaS Integration
  - Design workflows, objects
  - Discuss UI customization for Service Provider and Tenants
  - Explain integration of custom elements in VMware Cloud Director
  - Explain use cases for Extensibility SDK

**GOPAS Praha**  
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