VMware vCloud: Design Best Practices

Course Overview
This course is designed to guide students through the decision points and policy choices available for designing and implementing a VMware vCloud® environment. Students will learn to appreciate the effects of design choices in VMware vSphere®, VMware vCloud® Director™, VMware® vCenter™ Chargeback™, and the VMware® vShield Edge™ capability that is included with vCloud Director. The course culminates in a comprehensive workshop on VMware cloud design.

Course Objectives
By the end of the course, you should have an understanding of the VMware cloud and be able to do the following:

- Evaluate and design a multitenant environment to address both private cloud and public cloud customer needs.
- Configure vCloud providers that can accommodate heterogeneous server, storage, and network resources.
- Design a network infrastructure optimized for vCloud.
- Integrate vCloud Director security with existing LDAP systems and design appropriate security hierarchies with security roles.
- Design a vCenter Chargeback implementation.

Design Labs
The course is built on four design labs. In the final, 6-hour lab, students will design a complete Cloud architecture on either the service provider model or the private enterprise model.

- vCloud architecture network design lab
- vCloud architecture provider design lab
- vCloud architecture security design lab
- vCloud architecture design lab

Delivery Methods
- Instructor-led training
- Onsite training

Course Duration
- Three days of instructor-led training
- 60% lecture, 40% case-study activities

Target Audience
Sales partners, customers, consultants, and sales engineers who are responsible for designing public and private cloud architectures with VMware products.

Course Suitability
- ☐ Administrator
- ☐ Expert
- ☒ Engineer
- ☒ Advanced
- ☐ Architect
- ☐ Professional
- ☐ Fundamentals

Prerequisites
- Completion of VMware vCloud: Deploy and Manage the VMware Cloud
- VCP-level knowledge of vSphere
- General-purpose vSphere design experience, with special emphasis on networking and storage
- Exposure to the features and functionality of vCloud Director, vSphere, vShield Edge, and vCenter Chargeback

Pricing
Contact your VMware representative or a VMware Authorized Training Center for pricing information.

More Information
Courses are conveniently scheduled around the world. Go to http://www.vmware.com/education to find the class that is right for you.

Onsite training is also available for customers who prefer to bring a VMware Certified Instructor to their own facilities. For additional information about onsite classes, including facility requirements, go to http://www.vmware.com/education.
Course Modules

1 Course Introduction
   - Introductions and course logistics
   - Course objectives

2 VMware vCloud Director Architecture Review
   - Components of VMware cloud infrastructure
   - Logical constructs in vCloud Director
   - Cloud architecture fundamentals

3 VMware vCloud Architecture Models
   - Service provider (public cloud) model
   - Enterprise (private cloud) model
   - Hybrid model
   - Management clusters and resource groups
   - Load balancing
   - Roles and communications in multicell architectures

4 Designing Networks
   - General network design principles
   - Connectivity between networks and clouds
   - Virtual switches
   - Port groups
   - Network pools
   - VLANs

5 Designing Providers
   - Designing storage
   - Storage tiering
   - Linked clones and fast provisioning
   - Virtual datacenters
   - Resource pools
   - Organization and provider virtual datacenters
   - Providers and networking

6 Designing Organizations
   - Organization creation and resource pools in the provider virtual datacenters
   - Accessing multiple provider virtual datacenters from one organization
   - Organization administrator rights and responsibilities
   - VMware vSphere® vApps™
   - Catalogs
   - Organization networks and external networks

7 Designing Security
   - Authentication and authorization
   - Role-based access controls
   - Organization administrators
   - Organization security and LDAP integration
   - Predefined roles
   - Custom roles
   - Five-way vShield Edge device firewall

8 Designing Chargeback
   - Modules of consumption
   - vCenter Chargeback metrics
   - vCenter Chargeback server configuration
   - vCenter Chargeback data collectors

9 VMware vCloud Architecture Design Review
   - Multitenancy
   - Network design
   - Storage design
   - Provider design
   - Organization design
   - Security design
   - Chargeback design