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Course Outline :: VMware Cloud Automation: Design and Deploy [V7.1]::

**Module Title    :    VMware Cloud Automation: Design and Deploy [V7.1]**
**Duration         :    5 days**

## Overview

This five-day course focuses on designing and deploying an enterprise cloud by using a distributed architecture deployment of VMware vRealize® Automation™. The lecture and labs concentrate on designing an enterprise cloud architecture and the effective implementation of a vRealize Automation distributed deployment according to VMware recommended best practices.

Product Alignment
- vSphere 6
- vRealize Automation 7
- VMware vRealize® Orchestrator™
- vRealize Log Insight
- vCloud Air

## Objectives

By the end of the course, you should be able to meet the following objectives:
- Apply enterprise design principles
- Design and deploy a tiered VMware vSphere® resource architecture for CPU, storage, and network  resources, including VMware NSX®
- Design and deploy a vRealize Automation distributed infrastructure for an enterprise cloud
- Design and deploy a CA certificate/single sign-on architecture that includes Active Directory integration to  support the enterprise cloud infrastructure
- Design and deploy an administration architecture of roles for an enterprise cloud
- Design and deploy a tenant-and-business group architecture for an enterprise cloud
- Design and deploy compute resources, reservation policies, network profiles, and reservations to support your enterprise cloud
- Use XaaS to extend vRealize Automation into other enterprise systems
- Integrate vRealize Automation with IP address management systems and asset management systems
- Describe VMware vCloud® Air™ integration for elastic clouds
- Describe the location and identity of all log files that relate to vRealize Automation troubleshooting
- Use VMware vRealize® Log Insight™ to manage and monitor distributed vRealize Automation deployments

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## Intended Audience

Experienced system administrators, cloud administrators, system integrators, and deployment consultants

## Prerequisites

This class requires understanding the concepts and topics presented in the following courses:

- VMware vSphere: Install, Configure, Manage
- VMware vRealize Automation: Install, Configure, Manage

## Outline

1. Course Introduction

    - Introductions and course logistics
    - Course objectives

2. Enterprise Design Principles

    - Create a design foundation for an enterprise cloud by identifying business requirements, typical business solutions, constraints, assumptions, and risks
    - Create a conceptual design for an enterprise cloud
    - Create a logical design for an enterprise cloud
    - Use key enterprise design principles to create a vSphere infrastructure for the enterprise cloud

3. Security Infrastructure

    - Design a certificate authority architecture
    - Create certificate signing requests for your vRealize Automation servers
    - Create certificates for your vRealize Automation servers
    - Use the VMware hardened virtual appliance
    - Use VMware Identity Manager™

4. vRealize Automation Distributed Architecture

    - Design and deploy the vRealize Automation solution in a highly available, distributed architecture
    - Use vRealize Orchestrator in external and internal clusters
    - Use cloudutil.exe and skills to control which DEM servers are used with specific endpoints
    - Describe the proper configuration of NSX load balancers for a highly available, distributed architecture

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5. Administration Role Architecture

- Design either an expanded administration role architecture or a compressed administration role architecture for an enterprise cloud

6. Tenants and Business Groups

- Design an optimum tenant and business group architecture for your enterprise cloud, using either a single-tenant or a multitenant model
- Describe the use of vRealize CloudClient in a multitenancy context

7. Cloud Resource Design

- Design an enterprise cloud that is based on a multitiered architecture
- Design naming standards in vRealize Automation to support your tenant-and-business group architecture
- Use composite blueprints in an enterprise deployment
- Use data center location in an enterprise deployment to control where systems are provisioned
- Design a unified self-service catalog
- Design service entitlements in an enterprise deployment
- Design and use governance and approvals

8. Extensibility and the Enterprise

- Describe vCloud Air and elastic clouds
- Describe the role of vRealize Orchestrator in vRealize Automation extensibility
- Use IaaS extensibility and the vRealize Automation event broker system
- Extend vRealize Automation to an asset management system
- Extend vRealize Automation to an IP address management system
- Use NSX on-demand components

9. Enterprise Management

- Use VMware vRealize® Operations Manager™ and the vRealize Automation management pack
- Use vRealize Log Insight in vRealize Automation enterprise management
- Manage costs
- Manage resource use
- Replace expired security certificates