MOC 10751 A Configuring and Deploying a Private Cloud with System Center 2012

Course Summary

Description

This course describes private cloud configuration and deployment with Microsoft System Center 2012.

Objectives
At the end of this course, students will be able to:

- Produce a high-level design that accounts for requirements for the private cloud environment.
- Configure and deploy the application fabric.
- Configure a PXE server, an update server, and a software update baseline
- Configure Microsoft Server Application Virtualization (App-V) so that it can be used to sequence and deploy an application virtually.
- Build the core components necessary for delivering services on the fabric.
- Allocate resources to the private cloud and grant access to the private cloud.
- Understand how to monitor the private cloud using Operations Manager.
- Understand the tools necessary to extend and customize Operations Manager for a private cloud environment.
- Set up, configure, and integrate the core components of Service Manager into the private cloud fabric.
- Configure a service catalog, and then publish it to the Self-Service Portal.
- Gain the knowledge necessary to deploy and configure DPM in a private cloud.
- Deploy and configure Microsoft System Center 2012 - Orchestrator in a private cloud, and then integrate it with other System Center 2012 components.

Topics

- Planning for the Private Cloud
- Configuring and Deploying the Private Cloud with System Center 2012 -Virtual Machine Manager
- Extending and Maintaining the Private Cloud Infrastructure
- Configuring Application Delivery
- Creating the Private Cloud Building Blocks
- Deploying and Accessing a Private Cloud
- Monitoring the Private Cloud Infrastructure
- Extending and Customizing Monitoring of the Private Cloud Infrastructure
- Implementing Service Management for the Private Cloud
- Protecting the Private Cloud Infrastructure
- Automating and Standardizing the Private Cloud
- Configuring the Cloud Services Process Pack

Audience

Data center administrators responsible for designing, installing and configuring a private cloud infrastructure.

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Course Summary

Prerequisites

Before attending this course, students must have:

- Windows Server 2008 R2 operating system
- Active Directory Domain Services (AD DS)
- Microsoft SharePoint
- Windows Server 2008 Hyper-V
- VMM Service Manager
- Oracle Opalis
- Data Protection Manager
- Operations Manager
- Networking and storage experience
- Familiarity with data center management processes
- Previous work with IT Infrastructure Library (ITIL)
- Previous work with Microsoft Operations Framework (MOF)

Duration

Five days

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Course Outline

I. Planning for the Private Cloud

This module describes the core components of a private cloud and the prerequisites for deploying a private cloud.

A. Understanding the Private Cloud
B. Requirements for Deploying a Private Cloud
C. Designing the Private Cloud Infrastructure
D. Overview of System Center 2012 Components
E. Deploying Hyper-V Clustering with VMM

Lab: Planning for the Private Cloud

- Deploying the Virtual Machine Manager Agent
- Creating a Hyper-V Host Cluster Using VMM

II. Configuring and Deploying the Private Cloud with System Center 2012 -Virtual Machine Manager

This module describes how to configure infrastructure components by using System Center 2012 -Virtual Machine Manager

A. Overview of VMM Architecture and Components
B. Installing and Upgrading VMM
C. Configuring VMM Security and Roles
D. Understanding Host Groups

Lab: Configuring and Deploying the Private Cloud Infrastructure

- Reviewing and Configuring Hosts
- Configuring Host Groups
- Configuring User Roles and Run As Accounts
- Configuring the Library
- Preparing the Private Cloud Infrastructure
- Deploying a New Virtual Machine

III. Extending and Maintaining the Private Cloud Infrastructure

This module describes how to integrate features provided by Windows Deployment Services (WDS) and Windows Server Update Services (WSUS) to help extend and manage the VMM private cloud infrastructure resources.

A. Overview of the PXE and Update Server Roles
B. Deploying Bare-Metal Hyper-V Host Servers
C. Configuring the Update Server Role
D. Creating and Using an Update Baseline

Lab: Maintaining the Private Cloud Infrastructure

- Configuring a PXE Server in VMM
- Configuring a Host Profile
- Configuring an Update Server Role in VMM
- Configuring a Software Update Baseline in VMM

IV. Configuring Application Delivery

This module explains how to use the Microsoft Web Deployment Tool and Server App-V to dynamically deploy applications in the private cloud.

A. Dynamic Application Deployment Overview
B. Web Deployment Packages
C. Server Application Virtualization Overview
D. Configuring Server App-V Components
E. Sequencing and Deploying Virtual Applications

Lab: Configuring Virtual Application Delivery

- Configuring the Server App-V Sequencer
- Configuring the Server App-V Agent
- Sequencing an Application
- Testing the Server App-V Package Deployment

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Course Outline (cont'd)

V. Creating the Private Cloud Building Blocks
This module explains how to prepare and deploy the underlying infrastructure components that are used as building blocks for delivering private cloud services.

A. Configuring Guest Operating System Profiles
B. Configuring Hardware Profiles
C. Configuring SQL Server Using SQL Server Profiles
D. Configuring Application Profiles
E. Configuring Virtual Machine Templates
F. Configuring the Self-Service User Role

Lab: Creating the Private Cloud Building Blocks

- Configuring Profiles
- Configuring Virtual Machine Templates
- Configuring a Service Template
- Configuring a User Role
- Deploying the StockTrader Application Service

VI. Deploying and Accessing a Private Cloud
This module explains private clouds, System Center 2012 - App Controller, and private cloud services.

A. Understanding Private Cloud Computing
B. Installing and Configuring App Controller
C. Creating and Managing Services and Service Templates

Lab: Deploying and Accessing a Private Cloud

- Creating and Configuring a Private Cloud
- Configuring App Controller
- Creating, Deploying and Managing Services

VII. Monitoring the Private Cloud Infrastructure
This module explains how to monitor the private cloud infrastructure by using System Center 2012 - Operations Manager.

A. Operations Manager Architecture and Security
B. Upgrading Operations Manager 2007 R2
C. Configuring Notifications
D. Configuring Management Packs
E. Configuring Integration with System Center 2012

Lab: Monitoring the Private Cloud Infrastructure

- Deploying Agents
- Deploying and Configuring Monitoring Management Packs
- Configuring Notifications
- Configuring VMM Integration
- Configuring DPM Integration

VIII. Extending and Customizing Monitoring of the Private Cloud Infrastructure
This module explains how to use Operations Manager templates to monitor various applications and implement distributed application monitoring.

A. Configuring the SharePoint Server Portal
B. Monitoring Templates
C. Distributed Application Monitoring

Lab: Extending and Customizing Monitoring

- Creating Custom Monitoring
- Creating a Distributed Application
- Configuring Service Level Management
- Creating Views for Private Cloud Infrastructure
- Configuring SharePoint Integration

IX. Implementing Service Management for the Private Cloud
This module explains how to setup, configure, and integrate the core components of System Center 2012 - Service Manager into the private cloud infrastructure.

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Course Outline (cont'd)

A. Service Manager Architecture Overview
B. Upgrading to System Center 2012 - Service Manager
C. Understanding Service Manager Work Items
D. Configuring Service Manager Connectors
E. Configuring Service Manager Notifications

Lab: Implementing Service Management for the Private Cloud

- Configuring Service Manager Basic Settings
- Configuring Service Manager Connectors
- Configuring the Self-Service Portal
- Configuring Notifications

X. Protecting the Private Cloud Infrastructure

This module describes how to deploy and configure Data Protection Manager in a private cloud.

A. Planning DPM Deployment
B. DPM Architecture and Components
C. Upgrading DPM
D. Configuring DPM for the Private Cloud
E. Configuring Application Protection for the Private Cloud
F. Restoring Applications to the Private Cloud

Lab: Protecting the Private Cloud Infrastructure

- Configuring the Storage Pool
- Deploying DPM Protection Agents
- Creating and Configuring Protection Groups
- Configuring SQL Server Self-Service Recovery
- Restoring Data from a SQL Server Protection Group
- Performing Self-Service Recovery to Recover SQL Server Data

XI. Automating and Standardizing the Private Cloud

This module explains how to deploy and configure System Center Orchestrator in a private cloud and integrate it with other System Center 2012 components.

A. Orchestrator Architecture and Components Overview
B. Deploying and Configuring Core Components
C. Managing Runbooks
D. Configuring Integration Packs

Lab: Automating the Private Cloud

- Creating a Runbook Server and Configuring Integration Packs
- Configuring a Template to Deploy Agents on a New Virtual Machine
- Creating a Runbook to Protect All Resources on a Virtual Machine

XII. Configuring the Cloud Services Process Pack

This modules describes how to implement the Cloud Services Process Pack and use service level management.

A. Implementing the Cloud Services Process Pack
B. Service Level Management

Lab: Configuring the Cloud Service Process Pack

- Installing the Cloud Service Process Pack
- Configuring User Roles and Settings
- Configuring Service Offerings
- Creating an Incident Request
- Configuring Service Level Management

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