

## Configuring and Deploying a Private Cloud with System Center 2012

### Configuring and Deploying a Private Cloud with System Center 2012

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

#### Détails

- **Code** : CDPCS-C12
- **Durée** : 4 jours ( 28 heures )
- **Public**
  - Data center administrators
- **Pré-requis**
  - Previous work with Microsoft Operations Framework (MOF)

#### Objectifs

- 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.

#### Programme

##### Module 1: Planning for the Private Cloud

- Lessons
  - Understanding the Private Cloud
  - Requirements for Deploying a Private Cloud
  - Designing the Private Cloud Infrastructure
  - Overview of System Center 2012 Components
  - 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
- After completing this module, students will be able to:
  - Describe the private cloud
  - Describe the requirements for deploying a private cloud
  - Design a private cloud infrastructure
  - Describe the System Center 2012 components
  - Deploy Hyper-V clustering with VMM

##### Module 2: Configuring and Deploying the Private Cloud with System Center 2012 -Virtual Machine Manager

- Lessons
  - Overview of VMM Architecture and Components
  - Installing and Upgrading VMM
  - Configuring VMM Security and Roles
  - 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
- After completing this module, students will be able to:

- Describe VMM architecture and components.
- Install and upgrade VMM.
- Configure VMM security and roles.
- Understand host groups.

##### Module 3: Extending and Maintaining the Private Cloud Infrastructure

- Lessons
  - Overview of the PXE and Update Server Roles
  - Deploying Bare-Metal Hyper-V Host Servers
  - Configuring the Update Server Role
  - 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
- After completing this module, students will be able to:
  - Describe how VMM integrates with WDS and WSUS to provide PXE and Update server roles
  - Describe how to deploy bare-metal Hyper-V host servers
  - Describe how to maintain updates within the VMM infrastructure
  - Configure the Update server role
  - Create and use a software update compliance baseline

##### Module 4: Configuring Application Delivery

- Lessons
  - Dynamic Application Deployment Overview
  - Web Deployment Packages
  - Server Application Virtualization Overview
  - Configuring Server App-V Components

- 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
- After completing this module, students will be able to:
  - Describe dynamic application deployment
  - Create web deployment packages by using the Web Deployment Tool
  - Describe server application virtualization
  - Configure the Server App-V agent and sequencer
  - Sequence and then test a Server App-V virtualized application

## Module 5: Creating the Private Cloud Building Blocks

- Lessons
  - Configuring Guest Operating System Profiles
  - Configuring Hardware Profiles
  - Configuring SQL Server Using SQL Server Profiles
  - Configuring Application Profiles
  - Configuring Virtual Machine Templates
  - 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
- After completing this module, students will be able to:
  - Configure guest operating system profiles
  - Configure hardware profiles
  - Deploy SQL Server using SQL Server profiles
  - Configure application profiles for a deployment
  - Configure virtual machine templates
  - Configure the self-service user role

## Module 6: Deploying and Accessing a Private Cloud

- Lessons
  - Understanding Private Cloud Computing
  - Installing and Configuring App Controller
  - 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
- After completing this module, students will be able to:
  - Describe private cloud computing
  - Install and configure App Controller
  - Create and manage services and service templates

## Module 7: Monitoring the Private Cloud Infrastructure

- Lessons
  - Operations Manager Architecture and Security
  - Upgrading Operations Manager 2007 R2
  - Configuring Notifications
  - Configuring Management Packs
  - 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
- After completing this module, students will be able to:
  - Describe Operations Manager architecture and security considerations
  - Upgrade from Operations Manager 2007 R2 to System Center 2012 – Operations Manager
  - Describe the notification options available in Operations Manager
  - Install, configure, and upgrade management packs
  - Install and configure Operations Manager integration with VMM and DPM

## Module 8: Extending and Customizing Monitoring of the Private Cloud Infrastructure

- Lessons
  - Configuring the SharePoint Server Portal
  - Monitoring Templates
  - 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
- After completing this module, students will be able to:
  - Integrate Operations Manager data into a SharePoint portal
  - Describe how to use monitoring templates
  - Implement distributed application monitoring

## Module 9: Implementing Service Management for the Private Cloud

- Lessons
  - Service Manager Architecture Overview
  - Upgrading to System Center 2012 – Service Manager
  - Understanding Service Manager Work Items
  - Configuring Service Manager Connectors
  - 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
- After completing this module, students will be able to:
  - Setup and configure the core components of Service Manager
  - Plan an upgrade from Service Manager 2010 R2 to System Center 2012 – Service Manager
  - Describe the various work items and their relationships with each other
  - Configure the Service Manager connectors.

- Configure notifications

## Module 10: Protecting the Private Cloud Infrastructure

- Lessons
  - Planning DPM Deployment
  - DPM Architecture and Components
  - Upgrading DPM
  - Configuring DPM for the Private Cloud
  - Configuring Application Protection for the Private Cloud
  - 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
- After completing this module, students will be able to:
  - Describe Data Protection Manager architecture and security considerations.
  - Plan an upgrade from Data Protection Manager 2010 R2 to System Center 2012 – Data Protection Manager.
  - Configure the components required to provide protection for the private cloud infrastructure.
  - Configure protection of key applications within the private cloud infrastructure.
  - Restore key applications within the private cloud infrastructure.

## Module 11: Automating and Standardizing the Private Cloud

- Lessons
  - Orchestrator Architecture and Components Overview

- Deploying and Configuring Core Components
- Managing Runbooks
- 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
- After completing this module, students will be able to:
  - Describe key components of System Center Orchestrator.
  - Describe how to deploy and configure key Orchestrator components in a private cloud.
  - Configure the System Center integration packs in Orchestrator.
  - Create runbooks.
  - Configure Service Manager to execute runbooks.

## Module 12: Configuring the Cloud Services Process Pack

- Lessons
  - Implementing the Cloud Services Process Pack
  - 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
- After completing this module, students will be able to:
  - Describe the service catalog and how to implement it in Service Manager.
  - Implement a Cloud Services Process Pack.
  - Configure service request fulfillment.
  - Configure service offerings.
  - Use service level management.

### Modalités

- **Type d'action** :Acquisition des connaissances
- **Moyens de la formation** :Formation présentielle – 1 poste par stagiaire – 1 vidéo projecteur – Support de cours fourni à chaque stagiaire
- **Modalités pédagogiques** :Exposés – Cas pratiques – Synthèse
- **Validation** :Exercices de validation – Attestation de stages