Monitoring and Operating a Private Cloud

Duration: 5 Days   Course Code: M20246   Version: D

Overview:

This course describes how to monitor and operate a cloud with Microsoft System Center 2012 R2. This course focuses on how to manage and administer a cloud environment, and it describes how you can monitor key infrastructure elements and applications that run within a cloud. It does not discuss planning and implementation, which is covered in 20247: Configuring and Deploying a Cloud with System Center 2012 R2.

Target Audience:

This course is intended for cloud administrators who are responsible for monitoring and protecting the cloud infrastructure. It is also intended for solution architects who are responsible for designing cloud architectures and extending existing cloud solutions. The primary audience for this course is administrators who create service requests.

Objectives:

- Describe the Cloud Model.

- Configure and optimize a Private Cloud.

- Deploy Cloud Services.

- Monitor Cloud Services.

- Configure Application Performance Monitoring in a Cloud Environment.

- Operate and extend Service Management in in a Cloud Environment.

- Automate Incident Creation, Remediation, and Change Requests in a Cloud Environment.

- Perform Problem Management in a Cloud Environment.

- Operate a Self-Service, Multi-Tenant Cloud with Windows Azure Pack.

- Configure High Availability, Protection and Recovery in a Cloud Environment.

- Optimize the Cloud Infrastructure.

- Configure SLAs, Dashboards, and Widgets in a Cloud Environment.

Prerequisites:

This course describes how to monitor and operate a cloud with System Center 2012 R2. Because this is an extensive technical domain that includes several individual products and technologies, it is strongly recommended administrators have prerequisite knowledge in the following areas:

- Windows Server 2012 experience.
- Active Directory Domain Services (AD DS) knowledge.
- Networking experience.
- Working knowledge of previous versions of System Center products.
- Knowledge of configuration of Microsoft SharePoint.
- Hyper-V knowledge.
- Microsoft Azure.
- Knowledge of cloud and data center management processes.
- Storage Area Network (SAN) Knowledge.

Content:

Module 1: Introduction to the Cloud Model

- Overview of the Cloud Computing Model
- Requirements for a Private Cloud
- Requirements for a Public or Hybrid Cloud
- Operating a Hybrid Cloud Infrastructure with System Center
- Maintaining the Health of a Cloud
- Integrating System Center Components
- Lab : Verifying the Private Cloud Infrastructure
- Verify the Infrastructure
- Verifying System Center Components

Module 2: Configuring a Private Cloud Environment

- Overview of System Center 2012 R2 Virtual Machine Manager
- Managing the Virtual Environment with Virtual Machine Manager
- Creating Clouds
- Lab : Configuring and Optimizing a Microsoft Private Cloud
- Configuring Network Resources
- Creating a Cloud
- Create a VM Network using Software Defined Networks Isolation
- Creating the Contoso Cloud Tenant for StockTrader Production

Module 3: Deploying Cloud Services

- Overview of Service Templates
- VMM Profiles
- Web Deploy Packages
- Overview of Server App-V
- Data-Tier Application Packages
- Deploying Services through App Controller
- Lab : Importing and Deploying the StockTrader Application
- Deploying a Single Tier Service
- Configuring Prerequisites
- Preparing the StockTrader Service Template
- Deploying the Service Template

Module 4: Monitoring Cloud Based Applications

- Overview of System Center 2012 R2 Operations Manager
- Agent Deployment in Operations Manager
- Configuring Custom Monitoring
- Monitoring the Network Infrastructure
- Monitoring Distributed Applications
- Lab : Monitoring Private Cloud Services
- Deploying an Agent
- Configuring Custom Monitoring
- Creating a Distributed Application Model
- Detecting and Recovering From a Failure

Module 5: Configuring Application Performance Monitoring

- Application Performance Monitoring
- Advanced Monitoring in APM
- Viewing Application Performance Data in Operations Manager
- Lab : Configuring Application Performance Monitoring
- Configuring Basic Monitoring in Application Performance Monitoring
- Customizing the Performance Thresholds
- Validating Monitoring
- Creating a Distributed Application Model for the DinnerNow Application.

Module 6: Operating and Extending Service Management in the Private Cloud

- Overview of Service ManagerConfiguring Security and User Roles
- Configuring Work Items
- Configuring Incident Queues
- Configuring Service Offerings for a Cloud
- Lab : Operating and Extending Service Management in a Cloud
- Configuring Security Roles
- Configuring Notifications
- Publish an Incident Service Offering
- Raising an Incident
- Creating a Change Request
- Creating a Release Record

Module 7: Automating Incident Creation, Remediation, and Change Requests

- Overview of System Center 2012 R2 Orchestrator
- Integrating Orchestrator with Operations Manager and Service Manager
- Lab : Automating Incident Creation, Remediation and Change Requests
- Configuring the Incident Template
- Configuring Incidents that affect the StockTrader Service
- Automatic Incident remediation and Change Requests

Module 8: Problem Management in the Private Cloud

- Overview of Problem Management
- Creating Custom Rules
- Lab : Automating Problem Management in the Private Cloud
- Manually Creating a Problem Record
- Creating a Custom Event Rule in Operations Manager
- Configuring Automated Problem Record Creation

Module 9: Operating a Self Service, Multi-Tenant Cloud with Windows Azure Pack

- Windows Azure Pack Key Concepts
- Administer Windows Azure Pack
- Windows Azure Pack Providers
- Lab : Operating a self-service multi-tenant cloud
- Preparing the environment
- Create a Plan and Tenant
- Provision a new Virtual Machine

Module 10: High Availability, Protection, and Recovery for the Cloud

- High Availability for a Cloud
- Protecting Data in the Private Cloud
- Recovering Data in the Private Cloud
- Lab : Cloud Protection and Recovery
- Configuring Manual Protection and Recovery of Key Service Data
- Configuring Automatic Protection and Recovery of Key Service Data
- Monitoring Protection Status

Module 11: Optimizing Your Cloud Infrastructure

- Using Virtual Machine Manager to Keep the Cloud Infrastructure Up-to-Date
- Using Configuration Manager to keep Virtual Machines up-to-date
- Using System Center Advisor to Optimize Cloud infrastructure
- Using Pro-Tips to Optimize Cloud infrastructure
- Lab : Optimizing your Cloud Infrastructure
- Configuring Update Baselines
- Configuring Pro-Tips

Module 12: Configuring SLAs, Dashboards, and Widgets

- Service Level Tracking
- Configuring and Deploying Widgets and Dashboards
- Publishing Real-Time State with Microsoft Visio Snap-in
- System Center Analytics
- Using Excel and SSRS to View Data
- Configuring Service Reporting
- Lab : Configuring SLAs, Dashboards, and Widgets
- Configuring Service Level Tracking
- Configuring Service Level Management for a cloud
- Configuring Microsoft Excel Analytics
- Configuring and running Service Reporting

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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