

# Hybrid Cloud and Datacenter Monitoring with Operations Management Suite

## Course Outline

### Module 1: Overview of System Center 2016

In this module, you will learn about the different components in System Center 2016 including how they are placed within the architecture.

#### Lessons

- Overview of Operations Manager.
- Overview of Orchestrator.
- Overview of Data Protection Manager.
- Overview of Virtual Machine Manager.
- Overview of Service Manager.

#### Lab : Reviewing System Center Components

- Review the Operations Manager Console and confirm version information.
- Review the Orchestrator Console and confirm version information.
- Review the Data Protection Manager Console and confirm version information.
- Review the Virtual Machine Manager Console and confirm version information.
- Review the Service Manager Console and confirm version information.

After completing this module, students will be able to:

- Describe the key features and functionality of Operations Manager.
- Describe the key features and functionality of Orchestrator.
- Describe the key features and functionality of Data Protection Manager.
- Describe the key features and functionality of Virtual Machine Manager.
- Describe the key features and functionality of Service Manager.

### Module 2: Upgrading to System Center 2016

This module provides the knowledge that you require to successfully upgrade an existing System Center 2012 R2 environment to System Center 2016. This includes the prerequisite tasks that you should complete before upgrading, the order in which the upgrade is performed, and how to verify a successful upgrade to System Center 2016.

#### Lessons

- Upgrading Orchestrator.
- Upgrading Service Manager.

- Upgrading Data Protection Manager.
- Upgrading Operations Manager.
- Upgrading Virtual Machine Manager.

#### **Lab : Upgrading to System Center 2016**

- Upgrading Orchestrator to System Center 2016.
- Upgrading Service Manager to System Center 2016.
- Upgrading Data Protection Manager to System Center 2016.
- Upgrading Operations Manager to System Center 2016.
- Upgrading Virtual Machine Manager to System Center 2016.

After completing this module, students will be able to:

- Upgrade Orchestrator to System Center 2016.
- Upgrade Service Manager to System Center 2016.
- Upgrade Data Protection Manager to System Center 2016.
- Upgrade Operations Manager to System Center 2016.
- Upgrade Virtual Machine Manager to System Center 2016.

#### **Module 3: Integrating System Center 2016 with Operations Management Suite**

If you have invested in System Center with components such as Operations Manager, Configuration Manager, and Service Manager, you can enhance Operations Management Suite (OMS) further by integrating them with OMS. In this module you are provided with a brief overview of OMS including its core features and architectural components. You will also learn some of the key benefits that can be achieved by integrating System Center with OMS..

##### **Lessons**

- Overview of Operations Management Suite.
- Overview of System Center 2016 Integration with OMS.

After completing this module, students will be able to:

- Describe the key features and functionalities of OMS.
- Describe the integration of System Center with OMS.

#### **Module 4: Introducing Operations Management Suite**

Microsoft Operations Management Suite (OMS) is comprised of many separate components that integrate together to provide a comprehensive management and monitoring solution for the hybrid-cloud and datacenter environment. Although you can install each component as a separate entity, you can take advantage of several benefits when you configure integration between the components. In this module, you will learn about the components that make up the OMS product including how they are placed within it.

## Lessons

- Core Concepts of Managing a Hybrid Cloud.
- Overview of Operations Management Suite.
- Overview of System Center 2016 Integration with OMS..
- Overview of Key Azure Concepts in Relation to OMS

After completing this module, students will be able to:

- Describe the core concepts relating to managing a hybrid cloud.
- Describe the key features and functionalities of OMS.
- Describe the integration of Microsoft System Center with OMS.
- Describe the key concepts of Microsoft Azure in the context of OMS.

## Module 5: Configuring Operations Management Suite

Before you can use Operations Management Suite (OMS) to monitor the hybrid cloud and datacenter environment, there are a number of configuration tasks that should be performed. This includes creating an OMS workspace, connecting data sources and configuring accounts for automation. This also includes adding Solution Packs to OMS to extend its monitoring capabilities. In this module, you will learn some of key configuration tasks that should be performed in order to operate OMS and customize it for your environment.

## Lessons

- Configuring an OMS Workspace.
- Configuring Data Sources.
- Configuring Accounts.
- Configuring Other Features.
- Windows PowerShell and OMS.

## Lab : Configure Operations Management Suite for first-time use

- Initial Configuration.
- Advanced Configuration.
- Confirm the OMS Agent and Operations Manager are connected to OMS.
- Add Solution Packs to OMS.

After completing this module, students will be able to:

- Configure an OMS workspace.
- Configure data sources in OMS.
- Configure accounts in OMS.
- Configure other features in OMS.

- Configure Windows PowerShell for OMS.

## **Module 6: Operating Operations Management Suite**

In this module, you will see how to operate OMS from both the OMS web portal, and through the OMS REST API. This enables you to integrate OMS with custom programs, or operate OMS normally as part of your operational toolkit.

### **Lessons**

- Operating Log Search.
- Analyzing OMS Search Data.
- Integrating with OMS.

### **Lab : Operating OMS**

- Operating OMS Log Analytics.
- Creating custom visualizations in OMS.
- Log search, alerts, and Power BI

After completing this module, students will be able to:

- Use Log Search to filter and alert on data collected in OMS.
- Analyze OMS search data and create custom views.
- Use Windows PowerShell and the REST API to integrate with OMS.

## **Module 7: Overview of Operations Management Suite Automation and Control**

This module focuses on the key features and capabilities available in the Automation and Control Solution Pack for OMS. This includes the Change Tracking solution and the Update Management solution.

### **Lessons**

- Overview of the Change Tracking solution in OMS.
- Overview of the Update Management solution in OMS.

After completing this module, students will be able to:

- Understand the key features of the Change Tracking solution in OMS.
- Understand the key features of the Update Management solution in OMS.

## **Module 8: Configuration of Operations Management Suite Automation and Control**

This module focusses on the key configuration steps that should be completed after adding the Change Tracking and Update Management solutions to your OMS environment.

### **Lessons**

- Configuring the Change Tracking solution in OMS.
- Configuring the Update Management solution in OMS.

### **Lab : Configuring Operations Management Suite Automation and Control**

- Configure the Change Tracking Solution Pack.
- Configure the Update Management Solution Pack.

After completing this module, students will be able to:

- Configure the Change Tracking solution in OMS.
- Configure the Update Management solution in OMS.

### **Module 9: Operating Operations Management Suite Automation and Control**

In this module, you will learn how to operate the various dashboards and views in both the Change Tracking and Update Management dashboards. This includes using the dashboards for specific scenarios such as correlating change tracking information with security and auditing information. You will also learn how to customize queries to create custom dashboards and define alert rules that can be used to notify you when there are changes to business-critical applications and services.

#### **Lessons**

- Operating the Change Tracking solution in OMS.
- Operating the Update Management solution in OMS.

### **Lab : Operating Operations Management Suite Automation and Control**

- Operate the Change Tracking Solution Pack.
- Operate the Update Management Solution Pack.

After completing this module, students will be able to:

- Operate the Change Tracking solution in OMS.
- Operate the Update Management solution in OMS.

### **Module 10: Overview of Operations Management Suite Insight and Analytics**

The Insight and Analytics Solution Pack for Microsoft Operations Management Suite (OMS) is built on the Log Analytics engine and provides two solutions. You can use these solutions to help address issues with workload performance and availability, map dependencies between applications and servers, and monitor network traffic from all locations relevant to the workload and its dependencies. This module provides you with an overview of the Insight and Analytics Solution Pack. This includes Service Maps and Network Performance Monitor.

#### **Lessons**

- Overview of the Service Map solution in OMS.
- Overview of the Network Performance Monitor solution in OMS.

After completing this module, students will be able to:

- Understand the key features of the Service Map solution in OMS.
- Understand the key features of the Network Performance Monitor solution in OMS.

## **Module 11: Configuring Operations Management Suite Insight and Analytics**

This module focuses on the key configuration tasks that you must complete in both the Service Map and Network Performance Monitor solutions that the Insight and Analytics Solution Pack includes.

### **Lessons**

- Configuring the Service Map Solution in OMS.
- Configuring the Network Performance Monitor Solution in OMS.

### **Lab : Configuring the Operations Management Suite Insight and Analytics Solution Packs**

- Adding the Insight and Analytics Solution Pack and deploying Agents.
- Configuring Networks in the Network Performance Monitor dashboard.
- Configuring Network Performance Monitor Rules.

After completing this module, students will be able to:

- Configure the Service Map solution in OMS.
- Configure the Network Performance Monitor solution in OMS.

## **Module 12: Operating Operations Management Suite Insight and Analytics**

In this module, you will learn how to operate the Service Map and Network Performance Monitor solutions from the Insight and Analytics solution pack. You will learn how to review application dependencies between monitored computers using the Service Map dashboard including detailed information provided in the properties for each computer. You will also learn how to review information such as changes and security events related to monitored computers in the Service Map dashboard. In the Network Performance Monitor dashboard, you will learn how to isolate and investigate networking issues detected such as bottlenecks, packet loss, and network latency. This module also covers how to review health events triggered by network monitoring rules to determine why a network is performing poorly and what can be done to transform an unhealthy network to a healthy one.

### **Lessons**

- Operating the Service Map Solution in OMS.
- Operating the Network Performance Monitor Solution in OMS.

### **Lab : Operating the Operations Management Suite Insight and Analytics Solution Packs**

- Using Network Performance Monitor to troubleshoot a networking issue.
- Using Service Map to review application dependency.

After completing this module, students will be able to:

- Operate the Service Map solution in OMS.
- Operate the Network Performance Monitor solution in OMS.

### **Module 13: Overview of Operations Management Suite Protection and Recovery**

In this module, you will learn about the key features and capabilities of the Protection and Recovery Solution Pack for Microsoft Operations Management Suite (OMS). This includes both the Backup and Microsoft Azure Site Recovery Solution Packs. You will learn the key differences between the solutions offered in OMS and traditional backup and recovery solutions. You will also learn how this solution can automate several protection and recovery tasks that you would normally perform manually.

#### **Lessons**

- Overview of the OMS Backup Solution.
- Overview of the Azure Site Recovery Solution.

After completing this module, students will be able to:

- Understand the key features of the Backup solution in OMS.
- Understand the key features of the Azure Site Recovery solution in OMS.

### **Module 14: Configuring Operations Management Suite Protection and Recovery**

In this module, you will learn how to perform the key configuration tasks in both the OMS Backup and Azure Site Recovery solutions. The module describes the prerequisites required for each solution and the configuration steps necessary to enable backup and replication of important data in the environment.

#### **Lessons**

- Configuring the OMS Backup Solution.
- Configuring the Azure Site Recovery Solution.

#### **Lab : Configuring the environment for the Protection and Recovery Solution Pack**

- Configure OMS Backup.
- Configure Azure Site Recovery.

After completing this module, students will be able to:

- Configure the OMS Backup Solution.
- Configure the Azure Site Recovery Solution.

### **Module 15: Operating Operations Management Suite Protection and Recovery**

In this module, you will learn how to use the OMS Backup and Azure Site Recovery solutions to protect and recover workloads, files and virtual machines. This includes using Azure Backup Server to protect and recover workloads such as Microsoft SQL Server and an Office SharePoint farm. You will also learn how to configure and use Recovery Plans in Azure Site Recovery to replicate data between on-premises and Azure.

### Lessons

- Operating the OMS Backup Solution.
- Operating the Azure Site Recovery Solution.

### Lab : Operating the environment for the Protection and Recovery Solution Pack

- Protect and Recover Data in Azure Backup Server.
- Replicate on-premises virtual machines to Azure using Azure Site Recovery.

After completing this module, students will be able to:

- Operate the OMS Backup Solution.
- Operate the Azure Site Recovery Solution.

### Module 16: Overview of Operations Management Suite Security and Compliance

In this module, you will learn about some of the key security and compliance features in OMS, including the Security and Audit solution and the Antimalware Assessment solution.

### Lessons

- Overview of the Security and Audit solution in OMS.
- Overview of the Antimalware Assessment solution in OMS.

### Module 17: Configuring Operations Management Suite Security and Compliance

This module focuses on some of the key configurations that many customers undertake after implementing the Security and Compliance solution in OMS.

### Lessons

- Configuring OMS to Collect Security Logs from Third Party Applications and Appliances.
- Mapping Security Log data with Operations Manager Audit Collection Services.

After completing this module, students will be able to:

- Collect Security Logs from third-party applications and appliances.
- Map Security Log data in OMS with Operations Manager Audit Collection Services.

### Module 18: Operating Operations Management Suite Security and Compliance

In this module, you will learn how to use the various views and dashboards available in the Antimalware Assessment Solution and the Security and Audit Solution. This includes creating custom queries that you can use to obtain detailed information from the data that OMS collects.

### Lessons

- Operating the Security and Audit Solution.
- Operating the Antimalware Assessment Solution.