

# Module 8

Extending and Customizing  
Monitoring of the Cloud  
Infrastructure

## Module Overview

- Configuring System Center Advisor
- Configuring the SharePoint Server Portal
- Monitoring Templates
- Distributed Application Monitoring

## Lesson 1: Configuring System Center Advisor

- System Center Advisor Overview
- Configuring System Center Advisor
- Reviewing Configuration Assessment

## System Center Advisor Overview

- Microsoft System Center Advisor supports the following platforms:
  - Windows Server 2008
  - Windows Server 2008 R2
  - Windows Server 2012
  - Exchange Server 2010 and later
  - Lync Server 2010 and later
  - SharePoint Server 2012 and later
  - SQL Server 2008 and later

## Configuring System Center Advisor

- When configuring System Center Advisor with Operations Manager you:
  - Register with System Center Advisor
  - Add the computer groups that include monitored agents
- Advisor alerts can be viewed in the Operations Console and in the Advisor Portal

## Reviewing Configuration Assessment

- From the Advisor Console you can view:
  - View alerts to see any detected issues.
  - View and manage the gateways and agents. This includes information such as the last time data was updated to the service or when an agent last communicated to a gateway.
  - View update account settings including access to the console.
  - View the current configuration of servers within your environment
  - View the historical changes to a server configuration.

## Lesson 2: Configuring the SharePoint Server Portal

- Dashboard View Integration with SharePoint Server
- Installing the Operations Manager Web Part
- Configuring the Operations Manager Web Part

## Dashboard View Integration with SharePoint Server



Web Browser



SharePoint  
Server 2010



Operations Manager  
Web Console

**You can display Operations Manager dashboard views  
in a SharePoint Server site**

## Installing the Operations Manager Web Part

### **Prerequisites for using the Operations Manager Web Part:**

- Operations Manager web console
- SharePoint Server 2010
- SharePoint administrator permissions

### **To install the Operations Manager Web Part:**

1. Copy the installation files to the SharePoint server
2. Run the installation script
3. Verify installation in site collection features
4. Add an Operations Manager web console Environment for the SharePoint site

## Configuring the Operations Manager Web Part

### **Add the dashboard URL to the SharePoint site Web Part**

Shared credentials allow users to access a dashboard when they do not have permissions to access the dashboard

### **To configure shared credentials:**

1. Create the AD DS user for shared credentials
2. Create a Target Application ID in SharePoint Central Administration
3. Run `add-OperationsManager-WebConsole-Environment.ps1` to configure the Web Part

## Lesson 3: Monitoring Templates

- Management Pack Authoring
- Monitoring Database Availability and Performance
- Monitoring Port Availability
- Monitoring Processes
- Monitoring Windows Services
- Web Application Transaction Monitoring
- Web Application Availability Monitoring
- Monitoring .NET Applications
- Monitoring UNIX/Linux Log Files
- Monitoring UNIX/Linux Processes
- Demonstration: Creating a Windows Service Monitor

## Management Pack Authoring

### **Create your own management packs to extend the Operations Manager capabilities**

#### **You can create:**

- Attributes
- Overrides
- Monitors
- Object discoveries
- Rules
- Service level tracking
- Tasks
- Views

Management pack templates simplify the process for monitoring common objects

## Monitoring Database Availability and Performance

### **Use the OLE DB Data Source template to monitor databases**

#### **OLE DB Data Source template monitors:**

- Success of the database connection or query
- Time to connect to the database
- Time to complete the query
- Time to fetch results of the query

#### **Two Run As profiles are available:**

- Use the Simple Authentication profile for a non-Windows username and password
- Use the Synthetic Transaction profile for AD DS credentials

## Monitoring Port Availability

### **Use the TCP Port template to monitor the availability of services and applications that are listening on a TCP port.**

#### **TCP Port template monitors the:**

- Target host reachable
- Connection accepted
- Connection timeout
- DNS resolution

## Monitoring Processes

**Use the Process Monitoring template to monitor processes.**

**Scenarios for process monitoring:**

- Critical processes
- Long-running processes
- Unwanted processes

## Monitoring Windows Services

**Use the Windows Service template to monitor services**

Note: Windows Services have additional information that is not available for processes

**Windows Services template monitors:**

- Memory and CPU utilization
- Only services with an Automatic startup type (optional)



## Web Application Transaction Monitoring

**Use the Web Application Transaction Monitoring template to monitor availability and performance of web applications**

**Advanced monitoring can be based on:**

- Http Status Code
- Content Match
- Response Time

Use Web Recorder to record a session in the application.

## Web Application Availability Monitoring

**When configuring the Web Application Availability Monitoring template you can:**

- Add URLs to be monitored manually or from a CSV file
- Modify the monitoring configuration for all URLs
- Add alerting and performance data collection
- Specify the internal locations from where the URLs should be monitored

## Monitoring .NET Applications

**Use the NET Application Performance Monitoring template to monitor availability and performance of .NET applications.**

**You can configure:**

- Monitoring of applications on multiple servers
- Server-side monitoring
- Client-side monitoring

Implement .NET application monitoring in a controlled process.

## Monitoring UNIX/Linux Log Files

**When configuring the UNIX/Linux Log File Monitoring template you can:**

- Add a specific UNIX or Linux computer to monitor
- Add a group of UNIX or Linux computers to monitor
- Add the path to the log file to be monitored
- Add the expression to be monitored in the log file
- Add the Run As Account that should be used for credentials
- Configure the severity of the alert that is generated
- Test the monitor before implementing it

## Monitoring UNIX/Linux Processes

### **When configuring the UNIX/Linux Process Monitoring template you can:**

- Manually enter the process name or scan a UNIX/Linux computer.
- Configure the severity of the alert to be generated.
- Generate an alert when the number of process instances is great or less than a specified number.

## Demonstration: Creating a Windows Service Monitor

In this demonstration you will see how to create a Windows Service Monitor in Operations Manager.

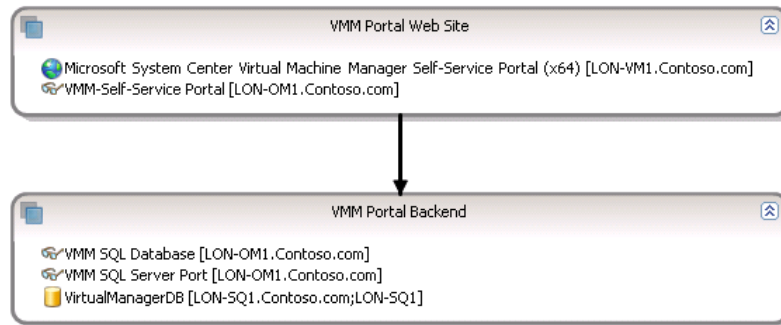


#### Lesson 4: Distributed Application Monitoring

- Distributed Application Monitoring
- Creating Distributed Applications
- Distributed Application Templates

## Distributed Application Monitoring

**Distributed application monitoring provides you with a complete overview of an application by combining the monitoring of its parts into a single component.**



## Creating Distributed Applications

**You can use the following tools to create distributed applications:**

- Distributed Application Designer
- System Center Operations Manager 2007 R2 Authoring Console
- Visual Studio Authoring Extensions

## Distributed Application Templates

**Distributed Application Designer includes templates that simplify creation of distributed applications.**

**The distributed application templates are:**

- 3-Tier Application (360)
- Line of Business Web Application
- Messaging
- Blank (Advanced)

## Lab: Extending and Customizing Monitoring

- Exercise 1: Creating Custom Monitoring
- Exercise 2: Creating a Distributed Application
- Exercise 3: Configuring Service Level Tracking
- Exercise 4: Creating Views for Private Cloud Infrastructure
- Exercise 5: Configuring SharePoint Integration

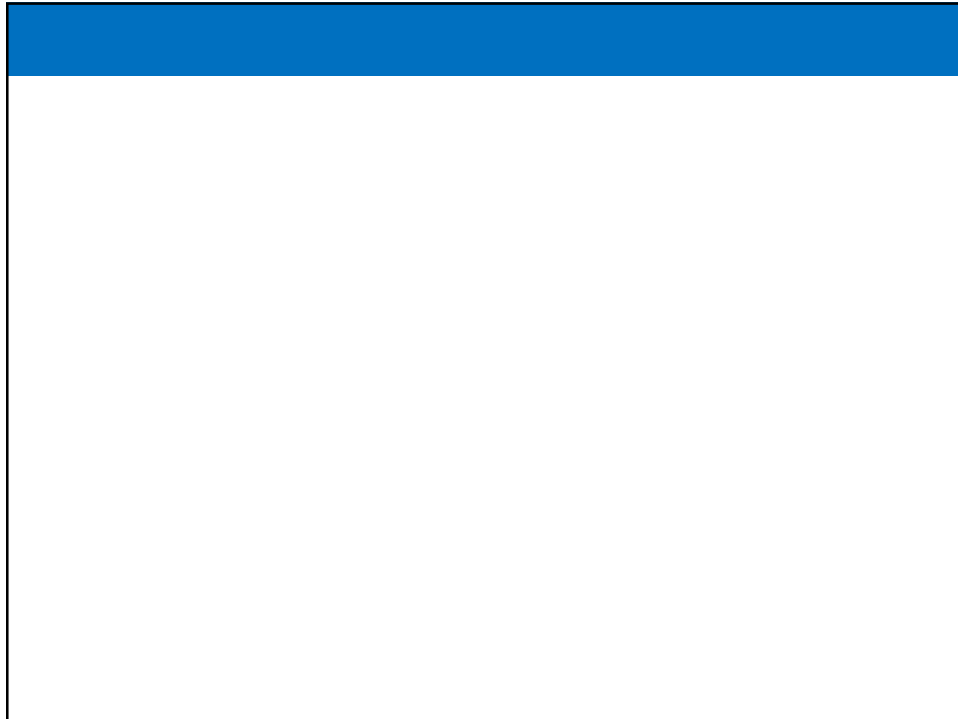
Logon Information

**Virtual Machines:** 20247D-LON-DC1, 20247D-LON-SQ1, 20247D-LON-OM1, 20247D-LON-AP1, 20247D-LON-VM1

**User Name:** Contoso\Administrator

**Password:** Pa\$\$w0rd

Estimated Time: 90 minutes



## Lab Scenario

Contoso, Ltd has implemented Operations Manager to monitor private cloud infrastructure. The management packs for infrastructure components such as Microsoft System Center 2012 R2 Data Protection Manager (DPM) and VMM have already been imported.

The default monitors and views for monitoring the infrastructure components are useful, but you would like to extend Operations Manager capabilities by customizing monitoring.

This includes creating custom monitors, custom views, and making a dashboard view available on a SharePoint Server site.

## Lab Review

- Where are the files that you need to configure SharePoint Server integration with Operations Manager located?
- What is a watcher node?

## Module Review and Takeaways

- Review Question(s)
- Real-world Issues and Scenarios
- Tools