Best Practices for Enterprise Health and Performance Monitoring with SCOM

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Introduction to CMS Consulting Inc:
- Infrastructure Guardian, 24/7 Managed SCOM Service

System Center Operations Manager 2012
- What can it monitor?
- High level Server Topology

Operationalize SCOM 2012
- Architecture and Server Roles for Deployment
- Key concepts on tuning Management Packs
- Examples
Infrastructure Guardian remotely monitors an organization's infrastructure, including hardware, software and applications. Filtering through and assessing the severity and priority of alerts around the clock, potential issues are communicated with the client's IT staff to be addressed before they impact users. If an organization does not have the bandwidth or expertise to resolve the issues, a local service provider can be engaged to assist as required.
Simplify management with visibility across the stack
Decrease time to resolution with deep application insight
Improve insights with personalized reporting

**New for 2012**
- Application Performance Management
- Monitoring across public and private clouds
- Improved UNIX & Linux support
- Network Monitoring
- Customizable dashboards

**Benefits**
- Simplify management with visibility across the stack
- Decrease time to resolution with deep application insight
- Improve insights with personalized reporting
What SCOM 2012 Can Monitor

- Applications
  - .NET
  - Java
  - Custom
  - Distributed Apps
- Platform
  - Database
  - Messaging
  - Services
  - Linux/Unix
  - Virtual
- Servers
  - Windows
  - Switches
  - Devices
- Network
  - Routers
Expanded Visibility

Operations Manager 2007 R2
Expanded Visibility

Operations Manager 2012
Key Capabilities - Network

SCOM 2012 Key Capabilities for Network Managers:

- Monitor and Track the Health of Network Devices including:
  - Routers
  - Switches
  - SNMP Enabled devices

For:
- Availability
- Response time
- CPU Load
- Interface utilization
- Transmit errors
- Memory usage
Key Capabilities - Servers

**SCOM 2012 Key Capabilities for Server Managers:**

1. Advanced and in-depth monitoring of Microsoft and non-Microsoft workloads.
2. Spans physical, virtual and cloud computing models.
3. Baseline monitoring of health and performance of core operating system functionalities, including processor, logical and physical disks, memory, network interfaces and more.
4. Health monitoring of server hardware and storage.
5. Performance and usage trending.

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**Daily Roadmap**

Windows Server 2012 R2

Windows Server 2012

Windows Server 2008

Windows Small Business Server 2008 R2

Windows HPC Server 2008 R2

Windows Server 2008 R2

Windows Server 2008

Windows Server 2008 R2

Windows Server 2003

Windows Vista Business

Windows Vista Home Basic

Windows Vista Home Premium

Windows Vista Ultimate

Windows XP Professional

Windows XP Home Edition
Thousands of rules provide comprehensive health and performance monitoring of critical enterprise platforms.

Examples – Microsoft Exchange, Directory Services, Lync, SQL, Oracle, Apache, IIS, etc.

Intelligent event correlation through automation and IG analysts.
Distributed application monitoring includes all components and dependencies right down to the network layer.

Performance monitoring capabilities to the code level - ensuring availability of business-critical applications and services.

A complete view of overall application fitness.

Enable synthetic transactions – monitoring the user experience.

**SCOM 2012 Key Capabilities for Application Owners:**

- Distributed application monitoring
- Performance monitoring
- A complete view of overall application fitness
- Enable synthetic transactions
Predictable Performance and Availability of Critical Applications

View of application user's performance
Migration to SCOM 2012

- In-place upgrade
  - May require updates to 3rd party management packs
- Multi-homed installation
- New installation
Best Practices to Management Pack Tuning

- Systems Center Operations Manager - Management Pack Best Practices
- Create a custom Override Management Pack for each Management Pack installed
- Example: Import Exchange 2010 MP. Create a custom MP called “Exchange 2010 Overrides”
- Never store overrides in the “Default Management Pack”
- Create and use SCOM groups for your overrides vs targeting a specific instance (server/device)
- Always read and follow supporting documentation before importing a management pack
## Best Practices to Management Pack Tuning

### Override Properties

<table>
<thead>
<tr>
<th>Override</th>
<th>Parameter Name</th>
<th>Parameter Type</th>
<th>Default Value</th>
<th>Override Value</th>
<th>Effective Value</th>
<th>Change Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alert On State</td>
<td>Enumeration</td>
<td>The monitor is...</td>
<td>Medium</td>
<td>Medium</td>
<td>[No change]</td>
</tr>
<tr>
<td></td>
<td>Alert Priority</td>
<td>Enumeration</td>
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<td>Medium</td>
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<tr>
<td></td>
<td>Alert severity</td>
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<tr>
<td></td>
<td>Available Memory Threshold</td>
<td>Double</td>
<td>100</td>
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<td>100</td>
<td>Added</td>
</tr>
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<td></td>
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<td>True</td>
<td>[No change]</td>
</tr>
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<td></td>
<td>Generates Alert</td>
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<td>True</td>
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</tr>
<tr>
<td></td>
<td>Interval seconds</td>
<td>Integer</td>
<td>120</td>
<td>120</td>
<td>120</td>
<td>[No change]</td>
</tr>
</tbody>
</table>

**Details:**

**Available Memory Threshold (MB/Bytes)**

This new custom override will be created in the 'Default Management Pack'. Click 'Apply' to view the new effective value for this parameter.

### Management Pack

- **Select destination management pack:** *Default Management Pack*
Common Mistake – Do NOT import Management Pack via the online Catalog

Download and install the Management Pack documentation and MSI

Discover Prerequisites – SharePoint Foundation 2010 MP, SharePoint Server Farm admin account, Server Names

SharePointMP.config – Edit file and update the file with your SharePoint farm server details

Run Admin Task – SCOM will then discover and allow for monitoring of Sharepoint 2010

Infrastructure Guardian – Includes Management Pack deployment/maintenance
Prerequisite

- You must install the Microsoft SharePoint Foundation 2010 Management Pack before installing this Management Pack.
- Read the Microsoft SharePoint Foundation 2010 Management Pack guide before deploying this management pack.

Quick Start

Required Updates and Hotfixes

Refer to the Required Updates and Hotfixes section of the SharePoint Foundation 2010 Management Pack Guide, and make sure that you installed the necessary updates.

Get started

This section provides step by step instructions for setting up the environment, importing management packs, and configuring the system for monitoring using System Center Operation Manager 2007 SP1.


2. Identify all servers that are in the farm. You can identify all of the servers in the farm by using the Central Administration Web site. If your installation of SharePoint fails to install components on a particular server, it is recommended you troubleshoot the server or remove the server from the farm so the server does not appear in Central Admin; failing to do so may add complications in the management pack discovery.

Note: If discovery misses any server in the branch, discovery or monitoring may not function correctly.
Thank you...

- Visit the CMS and Infrastructure Guardian Booth (#304)
- Learn more about Operationalizing SCOM 2012, and leveraging the 24/7 Managed Service called Infrastructure Guardian
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