Implementing and optimizing Operations Manager management packs

Looking beyond performance monitoring of ACS, Operations Manager can provide performance monitoring, application monitoring, and reporting for Windows computers and the network as a whole. To do so, a System Center management pack can be installed. The management pack contains additional information about monitoring points for Windows Server.

Management packs typically contain monitoring settings for applications and services. After a management pack is imported into a management group, System Center 2012 – Operations Manager immediately begins monitoring objects based on default configurations and thresholds that are set by the management pack.

Management packs provide information about how to monitor servers, applications, and services on a network. Management packs can also provide reports, tasks, and other components as defined by the management pack. For example, a management pack for a Windows Server might contain information on how to monitor disk performance. Management packs can be created by third parties to provide an integrated monitoring solution within Operations Manager.

Each management pack can contain any or all of the following parts:

- Monitors, which direct an agent to track the state of various parts of a managed component.
- Rules, which direct an agent to collect performance and discovery data, send alerts and events, and more.
- Tasks, which define activities that can be executed by either the agent or the console.
- Knowledge, which provides textual advice to help operators diagnose and fix problems.
- Views, which offer customized user interfaces for monitoring and managing this component.
- Reports, which define specialized ways to report on information about this managed component.
- Object discoveries, which identify objects to be monitored.
- Run As profiles, which allow you to run different rules, tasks, monitors, or discoveries under different accounts on different computers.

The management pack lifecycle includes the following stages:

Install the management pack in a nonproduction environment to ensure that the management pack is compatible and provides the desired functionality.

Customize the management pack. Create overrides, add knowledge, and make other changes to the management pack for your environment.

Deploy the management pack. Install the management pack and any changes in the production environment.

Maintain the management pack. As your environment changes, you may need to make changes to the management pack. For example, you may require additional monitoring, or the application being monitored may change.

IMPLEMENTING A MANAGEMENTPACK

Management packs are added through the Administration area of the Operations Manager console by clicking Import Management Packs. The Import Management Packs Wizard will begin and enable you to choose the location from which the management pack should be installed. You can choose an existing catalog or add from a file. Alternately, the Import-SCOMManagementPack cmdlet is used to import a management pack using Windows PowerShell.

Monitoring Windows servers requires the Windows Server Operating System Library, the Windows Server 2012 Operating System (Discovery), and the Windows Server 2012 Operating System (Monitoring) management packs. The Import Management Packs tool, shown in Figure 1-5, can resolve dependencies. For example, selecting the Windows Server 2012 Operating System (Monitoring) management pack requires that the additional management packs mentioned earlier be installed as well. The Import Management Packs tool can install those prerequisites
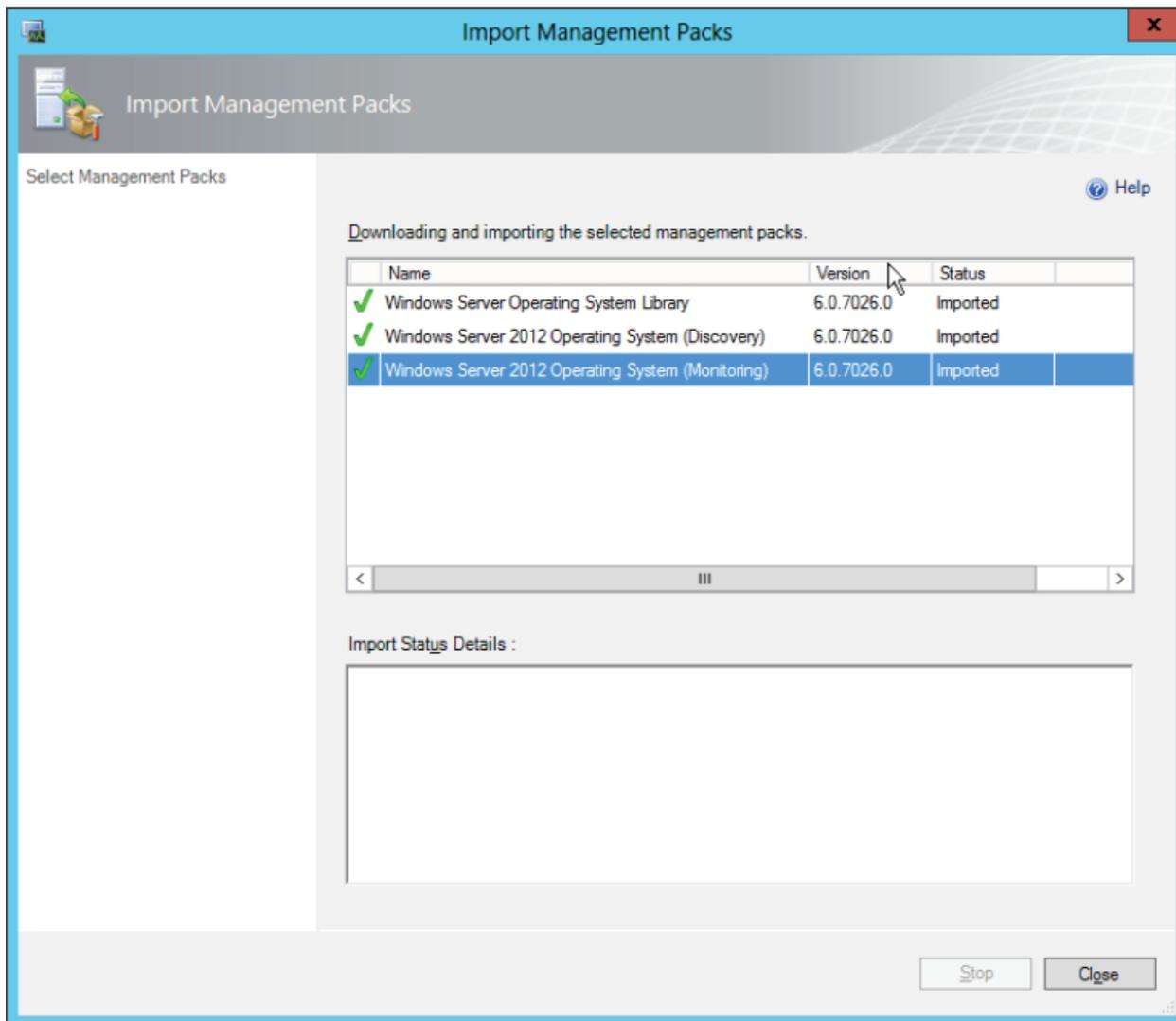
FIGURE 1-5 Importing a management pack with dependencies

MANAGEMENT PACK OPTIMIZATION

An important step in deploying management packs is optimizing them for your environment. When first installed, management packs perform discovery to find applicable objects for monitoring. Those objects are then monitored according to the rules set forth in the management pack. The default management pack rules may not be appropriate for your environment and should therefore be changed as necessary.

NOTE CREATE A NEW MANAGEMENT PACK When making changes to a management pack, it is recommended that you create a new management pack for the changes, rather than changing the default.

The overall process for optimizing a management pack is to examine the highest severity alerts first and then proceed to the lowest severity. Alerts should be examined to ensure that they are both valid and actionable. In other words, if you don't need to react when an event occurs, then it's probably not worth alerting. That's not to say that the event isn't noteworthy, so it may need to be logged but not alerted. Related to alerting is ensuring that only one alert is generated for a given event.

Management packs are customized through overrides. Overrides change the configuration of a monitor or diagnostic. When configuring an override, you choose whether the override will apply to all objects of the current class (such as all Windows Server 2012 computers), to a group, to a specific object of the current class, or to all objects of another class. This gives you the flexibility to gather objects for which you don't need alerts, such as nonproduction Windows servers.

Classes, sometimes called *targets*, are used to help define the items that can be discovered and managed. Groups are sets of objects that help define the scope of an override.

NOTE CLASSES AND GROUPS Classes can be applied for monitors, rules, discoveries, overrides, and tasks. Groups can define scope for overrides, views, user roles, and notifications.

MORE INFO USING CLASSES AND GROUPS See http://technet.microsoft.com/en-us/library/hh212771.aspx for more information on classes and groups for overrides, and see http://technet.microsoft.com/en-us/library/ hh212869.aspx for information on creating an override.

Another optimization for management packs is achieved through knowledge. Knowledge is used to provide notes and other information about a monitor or rule. Adding knowledge is accomplished in the Authoring workspace of the Operations Manager console within the properties settings for a given monitor or rule.