ApplianceWatch 1.2 for Microsoft® Operations Manager
Installation and Setup Guide for MOM 2005

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Preface

About this guide

This guide describes how to install the ApplianceWatch for Microsoft Operations Manager (MOM) management pack. The management pack contains the required files and registry settings to support NetApp storage system and NetApp Operations Manager (earlier known as DataFabric Manager) monitoring via MOM.

Before installing this product, you must have:

- Ensured that your configuration is supported by referring to the *Compatibility and Configuration Guide for NetApp's FCP and iSCSI Products*, available on the NetApp on the Web™ (NOW) site at http://now.netapp.com/NOW/knowledge/docs/san/fcp_iscsi_config/.
- your storage system according to the instructions in the documentation for your specific storage system.
- Configured your storage system according to the instructions in the following documents:
  - *Data ONTAP® Software Setup Guide*
  - *iSCSI Support Kit* for your specific host
  - *SAN Setup Overview for FCP*
  - *SAN Host Attach Kit for Fibre Channel Protocol* for your specific host
  - Any SAN switch documentation for your specific FCP switch, which you can find at http://now.netapp.com/NOW/knowledge/docs/san/

Audience

This guide is for system and network administrators responsible for monitoring NetApp storage systems and NetApp Operations Manager servers via the MOM.

Terminology

This guide uses the following terms:

- NetApp storage products (filers, FAS appliances, and NearStore® systems) are all *storage systems*—also sometimes called filers or storage appliances.
- *Enter* refers to pressing one or more keys on the keyboard and then pressing the Enter key.
- *Type* refers to pressing one or more keys on the keyboard.

Command conventions

In examples that illustrate commands executed on a UNIX workstation, the command syntax and output shown in this guide might differ from what you see on your display, depending on your version of UNIX.

Keyboard conventions

When describing key combinations, this guide uses the hyphen (-) to separate individual keys that you press at the same time. For example, *Ctrl-D* means pressing the Control and D keys simultaneously. This guide uses the term *Enter* to refer to the key that generates a carriage return, although the key is named Return on some keyboards.

Typographic conventions

The following table describes typographic conventions used in this guide.

Convention	Type of information
Italic font	Words or characters that require special attention. Placeholders for information you must supply. For example, if the guide says to enter the `arp -d` *`hostname`* command, you enter the characters *arp -d* followed by the actual name of the host. Book titles in cross-references.
`Monospaced` font	Command and daemon names. Information displayed on the system console or other computer monitors. The contents of files.
`Bold monospaced` font	Words or characters you type. What you type is always shown in lowercase letters, unless you must type it in upper case.

Special messages

This guide contains special messages that are described as follows:

Note

A note contains important information that helps you install or operate the system efficiently.

CAUTION

An attention contains instructions that you must follow to avoid damage to the equipment, a system crash, or loss of data.

Overview of ApplianceWatch for MOM 1

About this chapter

This chapter provides a brief overview of the ApplianceWatch for MOM management pack, and lists the prerequisites for installing it.

Topics in this chapter

This chapter discusses the following topic(s):

- "What ApplianceWatch for MOM is" on page 2

What ApplianceWatch for MOM is

What is Appliance Watch for MOM?

MOM is an enterprise level software tool designed to monitor events, collect performance statistics, and report alert conditions across a Microsoft OS-based enterprise

ApplianceWatch for MOM is designed to be installed on the MOM server and to interpret SNMP traps from NetApp systems, thus allowing MOM's standard event classification and response rules to be applied to NetApp systems.

Support matrix for ApplianceWatch for MOM includes the following:

- Data ONTAP 7.2.4 and earlier releases
- NetApp Operations Manager (earlier known as DataFabric Manager) 3.6 and earlier releases
- MOM 2000 and MOM 2005

ApplianceWatch for MOM components

The ApplianceWatch for MOM management pack contains the required files and registry settings to support NetApp storage systems and NetApp Operations Manager monitoring via MOM. Follow the instructions in this document to install the management pack.

The ApplianceWatch for MOM installation package installs the following files on the MOM server:

- dfm.mof - converted NetApp Operations Manager MIB file.
- netapp.mof - converted NetApp storage system MIB file.
- license.txt - licensing information for ApplianceWatch for MOM..
- netapp.akm - ApplianceWatch for MOM management pack.
- installMOF.bat - batch file to register dfm.mof and netapp.mof files with Windows Management Instrumentation (WMI). Microsoft's mofcomp.exe must be installed on the computer.
- uninstall.exe - uninstall program to remove NetApp support for MOM.

Installing ApplianceWatch for MOM 2

About this chapter

This chapter describes how to install ApplianceWatch for MOM.

Topics in this chapter

This chapter discusses the following topic:

- "Before you begin" on page 4
- "Configuring the global security setting for MOM 2005" on page 8
- "Installing the ApplianceWatch for MOM support files" on page 9
- "Installing the ApplianceWatch for MOM management pack" on page 13
- "Verifying the management pack installation" on page 14

Before you begin

Prerequisites

Before installing the management pack, ensure you meet the following prerequisites:

- MOM server is installed on the computer.
- You have administrative privileges on the computer on which the management pack is to be installed.
- You have the privileges required to provision the NetApp storage systems and NetApp Operations Manager being monitored via ApplianceWatch for MOM.
- Simple Network Management Protocol (SNMP) and WMI SNMP Provider are installed on the MOM server, and the SNMP trap service is properly configured.

The use of a registry key for the MOM Server

To enable MOM to monitor NetApp storage systems and NetApp Operations Manager, a registry key is required on the MOM server. This registry key is created during the MOM management pack installation.

MOM uses this registry key to discover NetApp *Computer Groups*, which enable the MOM server to monitor NetApp storage systems and NetApp Operations Manager.

The registry key created by this installation package is **HKEY_LOCAL_MACHINE\SOFTWARE\Network Appliance\ ApplianceWatch for MOM**, and contains the following values:

- dfm - dfm.mof
- netapp - netapp.mof
- management pack - netapp.akm
- installpath - <install directory>
- version - <version>

Provisioning SNMP and SNMP trap services

Before installing ApplianceWatch for MOM, you must install SNMP and SNMP trap services. You should:

1. Verify that these items are installed. See "Verifying SNMP and SNMP trap services are installed" on page 5.

2. Install the services on the MOM server, if they are not already installed. See "Adding SNMP and WMI SNMP Provider to the MOM server" on page 5.
3. Configure the SNMP service. See "Configuring the SNMP service" on page 5.
4. Configure SNMP trap service. See "Configuring the SNMP trap service" on page 6.

Verifying SNMP and SNMP trap services are installed: Follow these instructions to determine if SNMP and SNMP trap services are already installed on the MOM server.

Step	Action
1	From the MOM server desktop, right-click My Computer and select Manage.
2	Expand Services and Applications; then click Services.
3	Verify that SNMP Service and SNMP Trap Service appear in the list of services. If they are not installed, see "Adding SNMP and WMI SNMP Provider to the MOM server" on page 5 to install them.

Adding SNMP and WMI SNMP Provider to the MOM server: Follow these instructions to add SNMP and WMI SNMP Provider to the MOM server if they are not already installed.

Step	Action
1	Open the Add/Remove software control panel.
2	Select the Add/Remove Windows components.
3	Select Management and Monitoring Tools.
4	Select Simple Network Management Protocol and WMI SNMP Provider.
5	Click OK.

Configuring the SNMP service: Follow these instructions to install the SNMP service on the MOM server.

Step	Action
1	From the MOM server desktop, right-click My Computer and select Manage.
2	Expand Services and Applications; then click Services.
3	Right-click SNMP Trap Service and select Properties.
4	Click the General tab.
5	Select the Automatic startup type.
6	Click the Traps tab.
7	Type *public* in the Community Name drop-down list and select Add to List.
8	Click the Security tab.
9	Select Accept SNMP Packets from any Host.
10	Click Apply; then click OK.

Configuring the SNMP trap service: Follow these instructions to install the SNMP trap service on the MOM server.

Step	Action
1	From the MOM server desktop, right-click My Computer and select Manage.
2	Expand Services and Applications; then click Services.
3	Right-click SNMP Trap Service and select Properties.
4	Click the General tab.
5	Select the Automatic startup type.
6	Click Apply; then click OK.

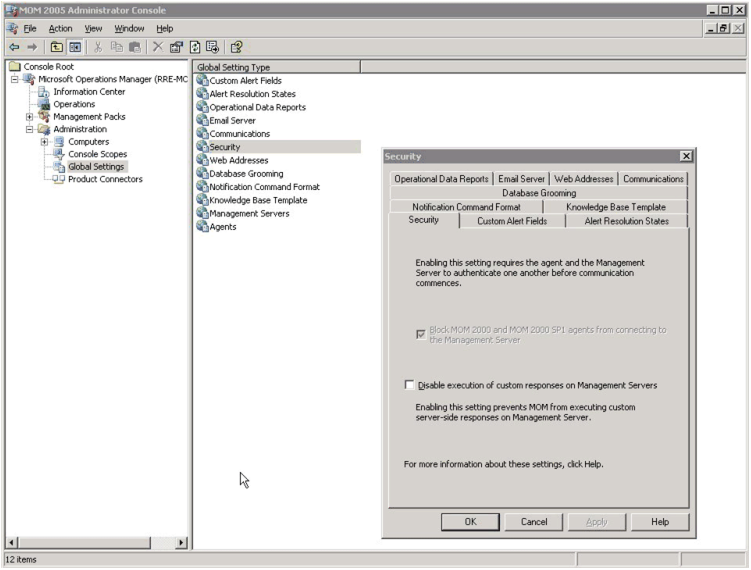
Installation process overview

The ApplianceWatch for MOM installation process consists of the following main steps:

1. Downloading the ApplianceWatch for MOM management pack from NetApp on the Web (NOW).
2. Configuring the global security setting for MOM 2005.
3. Installing the ApplianceWatch for MOM support files.
4. Installing the ApplianceWatch for MOM management pack.
5. Configuring the appropriate devices to forward all SNMP traps to the MOM server:
   - To directly monitor storage systems from MOM, configure each storage system to forward all SNMP traps to the MOM server.
   - To monitor the storage systems via NetApp Operations Manager, configure NetApp Operations Manager to forward all SNMP traps to the MOM server.

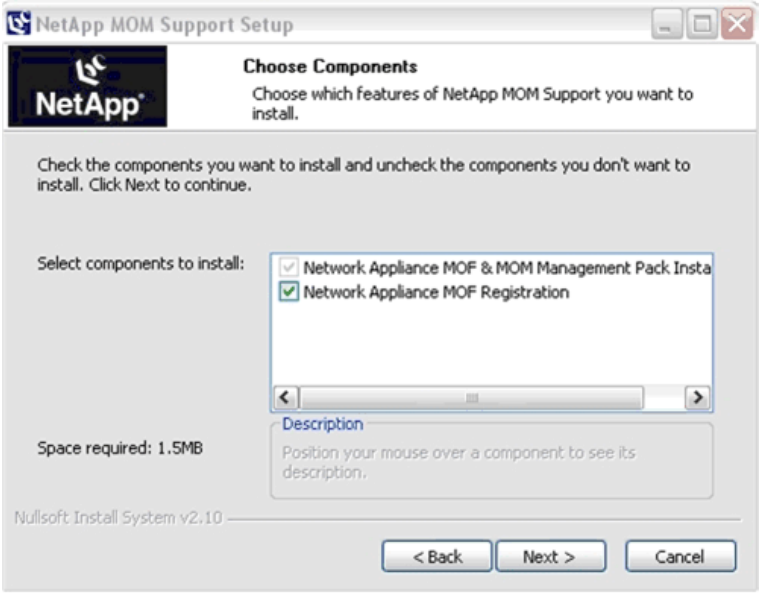
Configuring the global security setting for MOM 2005

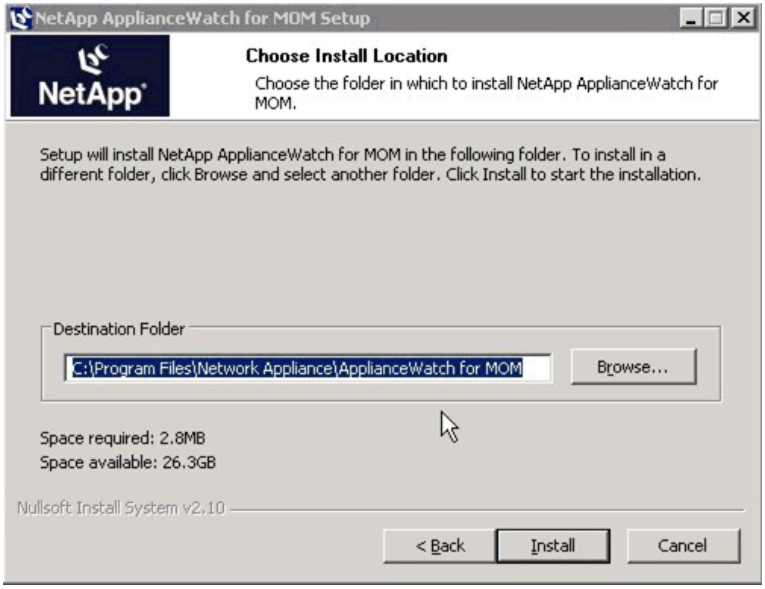
Before installing the management pack for MOM 2005, modify the required global security setting in the MOM Administrator Console by following this procedure.

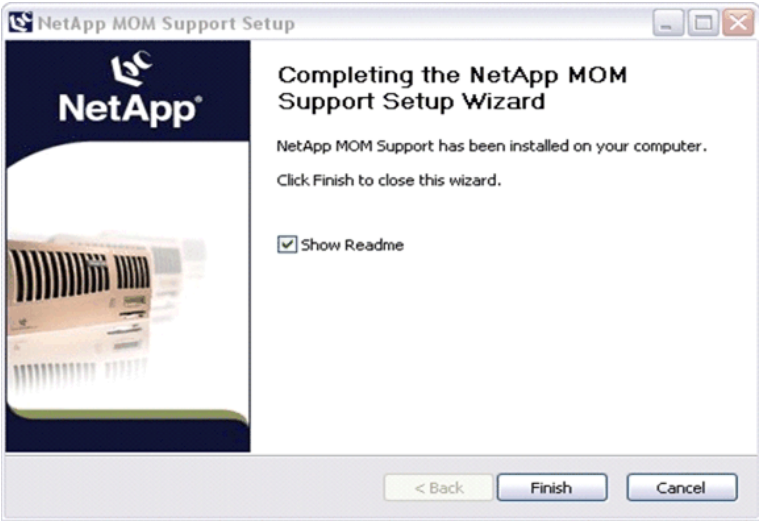
Step	Action
1	Open the MOM 2005 Administrator Console.
2	In the left pane under Management Packs, expand the Administration folder.
3	Select Global Settings.
4	In the right pane, right-click Security and select Properties from the pop-up menu. **Result:** The Security box appears. 
5	Click the Security tab and clear the Disable execution of custom responses on Management Servers check box.
6	Click Apply; then click OK.

Installing the ApplianceWatch for MOM support files

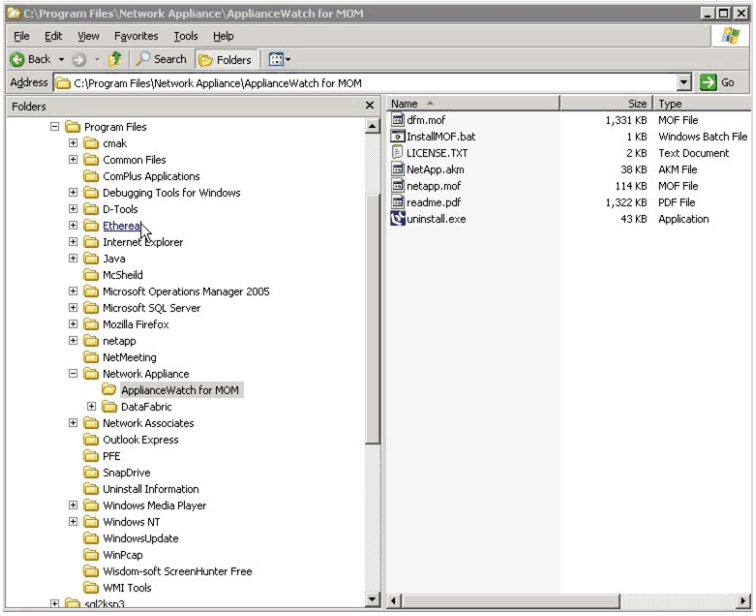
Follow these steps to install the ApplianceWatch for MOM support files.

Step	Action
1	Copy the awMOM2005setup-1-2-win.exe file to a directory on the computer running MOM server.
2	Double-click awMOM2005setup-1-2-win.exe. **Result:** The Choose Components dialog box appears. 
3	Select Network Appliance MOF Registration. **Result:** The Netapp .mof files are registered with WMI. **Note** The MOM server will not be able to monitor NetApp storage systems and NetApp Operations Manager without registering the .mof files.

Step	Action
4	Click Next. **Result:** The Choose Install Location dialog box appears. 
5	Type the install directory in the Destination Folder field, or click Browse to select a directory.
6	Click Install. **Result:** The NetApp support files are installed.

Step	Action
7	Click Show Details to view the installed files, and click Next to continue. **Result:** The Completing the NetApp MOM Support Setup Wizard dialog box appears. 
8	Select Show Readme to view the Readme file; then click Finish.

Step	Action
9	Verify that the installation is complete by opening Windows Explorer and navigating to the install directory. The following files should appear.



Installing the ApplianceWatch for MOM management pack

After you install the NetApp support files, follow these steps to install the ApplianceWatch for MOM management pack.

Step	Action
1	Open the MOM Administrator Console.
2	Right-click Management Packs and select Import/Export Management Pack from the pop-up menu. Click Next. **Result:** The Import or Export Management Packs dialog box appears.
3	Select Import Management Packs and/or reports, click Next. **Result:** The Select a Folder and Choose Import Type dialog box appears.
4	Enter the path where you installed the NetApp support files, or click Browse and locate the correct path; the default is **c:\Program Files\Network Appliance\ApplianceWatch for MOM**. Click Next. **Result:** The Select Management Packs dialog box appears, and the file **NetApp.akm** appears in the Please select one or more Management Packs to import dialog box.
5	Select **NetApp.akm**, then select Update existing Management Pack and Backup existing Management Pack. Click Next.
6	Verify that you have selected to install **NetApp.akm** and click Finish to install the management pack.

Verifying the management pack installation

After you install the ApplianceWatch for MOM management pack, follow these steps to verify the installation.

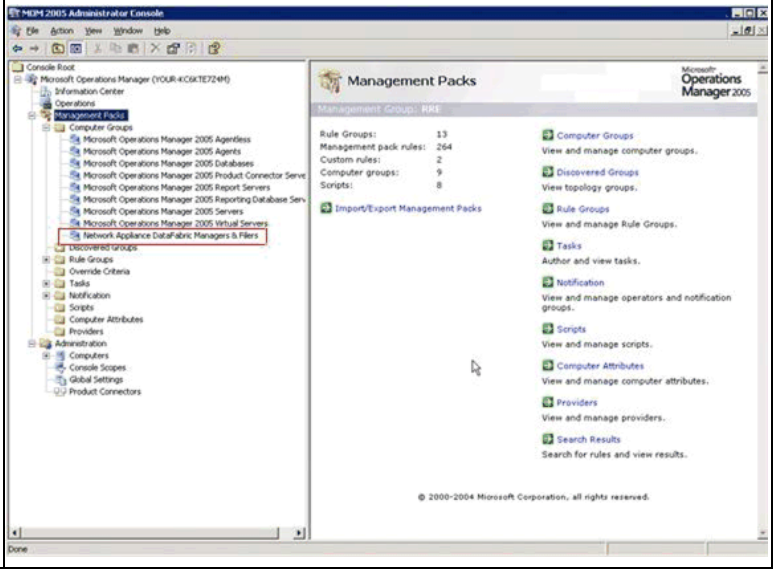
The NetApp Management Pack contains the following entries in the MOM Administrator Console. Verify that each entry exists after installation.

- Computer Group
- Rules Group
- Scripts
- Computer Attributes
- Providers

Verifying the Computer Group entries

Follow these steps to verify that the NetApp Computer Group entries exist. The Computer Group identifies how MOM discovers and manages NetApp storage systems and NetApp Operations Manager.

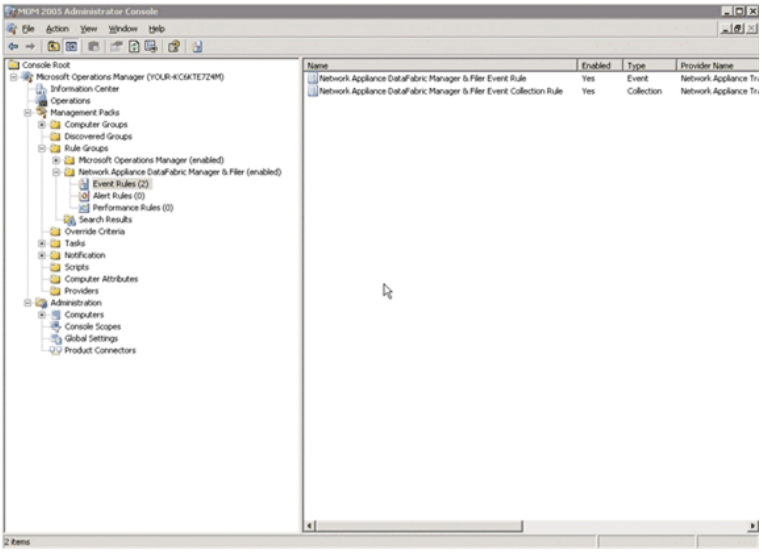
Step	Action
1	Open the MOM 2005 Administrator Console.
2	Expand the Management Packs item in the left pane.
3	Expand the Computer Groups folder. **Result:** The list of computer groups appears.

Step	Action
4	Verify that the NetApp Operations Manager & Filers entry appears. 

Verifying the Rules Group entries

Follow these steps to verify that the NetApp rules are installed. The rules developed for NetApp are used to execute a processing script when MOM receives an event (SNMP trap) from a NetApp Operations Manager or storage system.

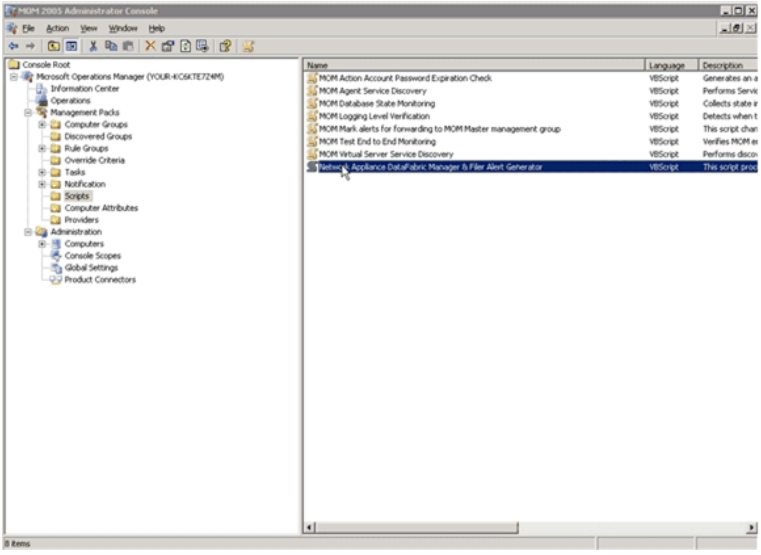
Step	Action
1	In the MOM 2005 Administrator Console, expand the Management Packs item.
2	Expand the Rules Groups folder.

Step	Action
3	Expand the Network Appliance Operations Manager & Filer folder. **Result:** The NetApp rules appear. 

Verifying the Script entries

Follow these steps to verify that the NetApp script is installed. This script is used to process the SNMP trap events that are specific to NetApp by converting them into the appropriate MOM alert and inserting the alert into the MOM database.

Step	Action
1	In the MOM 2005 Administrator Console, expand the Management Packs item.
2	Select Scripts. **Result:** The list of scripts appears in the right pane.

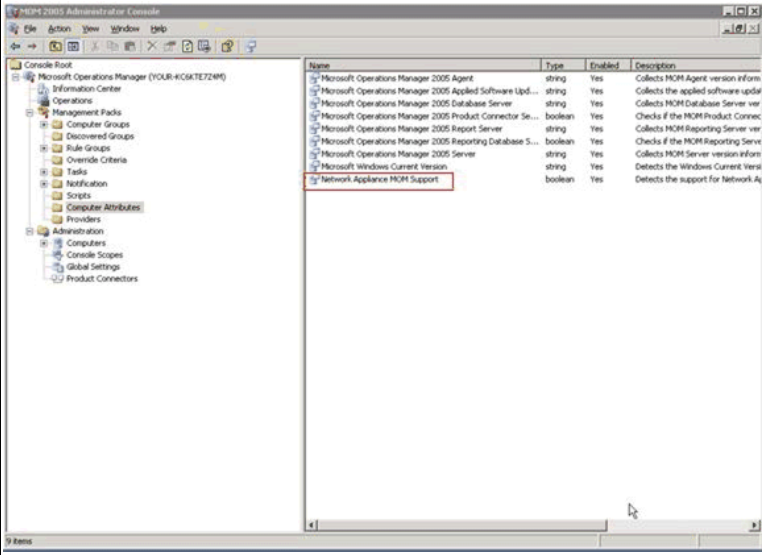
Step	Action
3	Verify that the NetApp Alert Generator script appears in the right pane. 

Verifying the Computer Attribute entries

Follow these steps to verify that the NetApp MOM Support computer attribute is installed. This attribute is a registry value that is created when you install the NetApp for MOM support files. It allows the MOM server to discover the NetApp computer group.

See "What ApplianceWatch for MOM is" on page 2 for more information.

Step	Action
1	In the MOM 2005 Administrator Console, expand the Management Packs item.
2	Select Computer Attributes. **Result:** The list of computer attributes appears in the right pane.

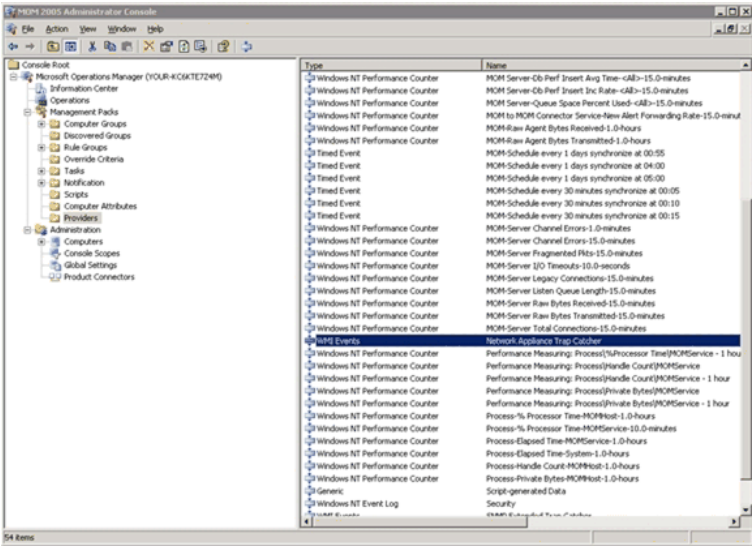
Step	Action
3	Verify that the NetApp MOM Support entry appears in the right pane. 

Verifying the Provider entries

Follow these steps to verify that the NetApp Provider entry is installed. This provider uses the WMI Event base provider and then selects from SNMP V1 notifications from the WMI SNMP namespace.

Step	Action
1	In the MOM 2005 Administrator Console, expand the Management Packs item.
2	Select Providers. **Result:** The list of providers appears in the right pane.

Step	Action
3	Verify that the NetApp Trap Catcher entry appears in the right pane.



Configuring the Storage Systems and Servers 3

About this chapter

This chapter describes how to configure your storage systems and NetApp Operations Manager to forward their SNMP traps to the MOM server.

Topics in this chapter

This chapter discusses the following topic:

- "Configuring storage systems" on page 22
- "Configuring NetApp Operations Manager" on page 26

Configuring storage systems

There are two ways to configure your storage systems:

- Use the CLI.
- Use the FilerView® administration tool.

Using the CLI to configure storage systems

After you connect to the storage system via the CLI, follow these steps to set the SNMP settings. Type `snmp options` at the command prompt for a list of options:

```
usage: snmp options
Options are:

                    (no option => display current settings)
authtrap   [ 0|1 ]       (0 => disabled, 1 => enabled)
community  [ add ro <community> ]
community  [ delete { all | ro <community> } ]
contact    [ <contact> ]
init       [ 1 ]         (0 => uninitialized, 1 => initialized)
location   [ <location> ]
traphost   [ add|delete <hostname|ipaddress> ]
traps      [ enable|disable|reset|delete ] [ <trapname> ]
traps      <trapname>.<parm> <value>
traps      walk <prefix>
traps      load <filename>
```

Note

Use single quotes (for example, 'abc def') to enclose strings that include spaces or tabs.

Step	Action
1	From the command prompt, enter the following command: `snmp init`
2	Enter the following command: `snmp authtrap 1`
3	Enter the following command: `snmp contact <contact person>`

Step	Action
4	Enter the following command: `snmp community add ro public`
5	Enter the following command: `snmp location <filer location>`
6	Enter the following command: `snmp trapshot add <MOM server IP>`

7	Enter the following command:
	`snmp`
	Example: `Dax*> snmp`
	`contact:`
	`<contact person>`
	`location:`
	`<filer location>`
	`authtrap:`
	`1`
	`community:`
	`ro public`
	`traphost:`
	`MOM server IP (MOM server IP) < MOM server IP >`
	`init:`
	`1`

8	Repeat these steps for each storage system.

Using FilerView to configure storage systems

To configure storage systems via FilerView, you can either connect through your Web browser or access FilerView through the Operations Manager application.

Step	Action
1	Open FilerView.
2	From the left pane, click SNMP.

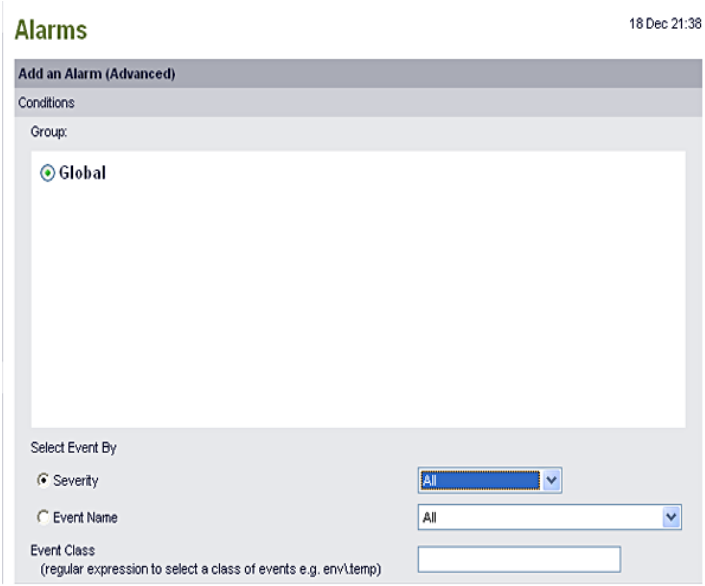
Step	Action
3	Under SNMP, click Configure. **Result:** The Configure SNMP options appear.
4	Select Yes from the SNMP Enabled drop-down list.
5	Select Yes from the Traps Enabled drop-down list.
6	Select Yes from the Auth Traps drop-down list.
7	Type a contact name in the Contact field.
8	Type the location of the storage system in the Location field.
9	In the Communities section, select an open row and select Read Only from the drop-down list; then type Public in the text box.

Step	Action
10	In the Traphosts section, type the MOM server IP address in the text box in the same row from Step 9 (see the illustration above, for example).
11	Click Apply. **Result:** The configuration settings are saved.
12	Repeat these steps for each storage system.

Configuring NetApp Operations Manager

To enable MOM to monitor NetApp Operations Manager, you must configure the NetApp Operations Manager to forward its events to MOM via SNMP traps.

Selecting the configuration settings

Step	Action
1	Connect to the NetApp Operations Manager via your Web browser.
2	Click the Alarms menu at the top of the window.
3	Click Advanced Version near the bottom of the window. **Result:** The Alarms options appear. 
4	Under Select Event By, select Severity, then select All from the drop list. **Result:** The NetApp Operations Manager will forward all events to the MOM server.

Step	Action
5	In the SNMP Trap Hosts field, enter the community string, IP address, and trap port for the MOM server. **Note** The default community string is *public* and the default trap port is *162*. **Example:** public@<MOM Server IP address>:162
6	Click Add. **Result:** The new details appear at the bottom of the window. Recipients Email Recipients - Admins (specify full login names of administrators) Email Recipients - Non-Admins (specify email addresses) Page Recipients - Admins (specify full login names of administrators) Page Recipients - Non-Admins (specify pager addresses) SNMP Trap Hosts Other Options Time From 00:00 Time To 23:59 Repeat Notify No Repeat Interval 30 Disable No Simple Version Add Show all columns Event Severity Group Recipients Edit Test Delete All All Global public@0.0.0.0:162 edit test Delete Selected

Testing the configuration settings

To verify that the NetApp Operations Manager is configured correctly, you can send a test SNMP trap to the MOM server. Follow these steps to test the configuration settings.

Step	Action
1	Click Test at the bottom of the window, as shown in the previous illustration. **Result:** The Test Alarm window appears. Test Alarm 18 Dec 22:27 Test Alarm The DataFabric Manager server is preparing to generate Alarm Test event that will match alarm 4. This will result in the following alerts: • SNMP Trap to public@0.0.0.0:162 Do you want to continue? Cancel Test
2	Click Test. **Result:** A test SNMP trap is sent to the MOM server.
3	Open the MOM Operator Console and expand the All Event Views folder.

Step	Action

4	Select Events.
	
	Result: The test SNMP event appears.
	
	NetApp Event View — later than 12/16/2007 1:00 A
	
	Type / Time / Domain / Computer / Description / Source / Category
	Success 12/19/2007 1:59:07 AM RRE INT-2650-18 __CLASS=SnmpV1ExtendedNotification WMI
	Success 12/19/2007 1:59:07 AM RRE INT-2650-18 __CLASS=SnmpV1ExtendedNotification WMI
	Success 12/19/2007 1:59:01 AM RRE INT-2650-18 __CLASS=SnmpV1ExtendedNotification WMI
	Success 12/19/2007 1:59:00 AM RRE INT-2650-18 __CLASS=SnmpV1ExtendedNotification WMI
	Success 12/19/2007 1:58:59 AM RRE INT-2650-18 __CLASS=SnmpV1ExtendedNotification WMI
	Success 12/19/2007 1:58:58 AM RRE INT-2650-18 __CLASS=SnmpV1ExtendedNotification WMI
	Success 12/19/2007 1:58:58 AM RRE INT-2650-18 __CLASS=SnmpV1ExtendedNotification WMI
	Success 12/19/2007 1:58:56 AM RRE INT-2650-18 __CLASS=SnmpV1ExtendedNotification WMI
	Success 12/19/2007 1:58:56 AM RRE INT-2650-18 __CLASS=SnmpV1ExtendedNotification WMI
	Success 12/19/2007 1:58:52 AM RRE INT-2650-18 __CLASS=SnmpV1ExtendedNotification WMI
	Success 12/19/2007 1:58:47 AM RRE INT-2650-18 __CLASS=SnmpV1ExtendedNotification WMI
	Success 12/19/2007 1:57:22 AM RRE INT-2650-18 __CLASS=SnmpV1ExtendedNotification WMI
	Success 12/19/2007 1:57:21 AM RRE INT-2650-18 __CLASS=SnmpV1ExtendedNotification WMI
	Success 12/19/2007 1:53:00 AM RRE INT-2650-18 __CLASS=SnmpV1ExtendedNotification WMI
	
	Event Details - 1 Event
	Properties | Alerts | Parameters
	
	Description:
	__CLASS=SnmpV1ExtendedNotification
	__DERIVATION=SnmpExtendedNotification, __ExtrinsicEvent, __Event, __IndicationRelated, __SystemClass
	__DYNASTY=__SystemClass
	__GENUS=2 (0x2)
	__NAMESPACE=<null>
	__PATH=<null>
	__PROPERTY_COUNT=9 (0x9)
	__RELPATH=<null>
	__SERVER=<null>
	__SUPERCLASS=SnmpExtendedNotification
	AgentAddress=10.73.64.32
	AgentTransportAddress=10.73.64.32
	AgentTransportProtocol=IP
	Community=public
	Identification=1.3.6.1.4.1.789.3.0.10351
	SECURITY_DESCRIPTOR=<null>
	TIME_CREATED=128424833411309942
	TimeStamp=459799200 (0x1B67FAA0)
	VarBindList={
	instance of SnmpVarBind {
	1.3.6.1.4.1.789.3.1.0 = 1-50-000001;
	},
	instance of SnmpVarBind {
	1.3.6.1.4.1.789.3.11.1.9.147663 = ;
	},
	instance of SnmpVarBind {
	1.3.6.1.4.1.789.3.11.1.1.147663 = 147663;
	},
	instance of SnmpVarBind {
	1.3.6.1.4.1.789.3.11.1.5.147663 = Alarm Test;
	},
	instance of SnmpVarBind {
	1.3.6.1.4.1.789.3.11.1.3.147663 = 2;
	
	Domain: RRE
	Computer: INT-2650-18
	Time: 12/19/2007 1:59:01 AM
	Type: Success
	Provider Name: NetApp Trap Catcher
	Event Number: 0
	Provider Type: WMI Events
	Source: WMI
	Category:
	Raises Alert: False
	Consolidated:
	From:
	To:
	Event Id: a42d0957-8ecc-44d8-b8d5-a82eae3921a2

5	In the MOM Operator Console, open the Alert View and expand the All Alert Views folder.

Step	Action
6	Select Alerts. **Result:** The Information alert appears in the right pane, describing the test event. NetApp Alert View — later than 9/20/2007 2:00 Time Last Modified / Severity / Computer / Source / Description / Name 12/19/2007 1:59:08 AM — Critical Error — FAS-3050-47-rre-btc-eng-in — NetApp ApplianceWatch — A disk storage shelf re... — shelfFault 12/19/2007 1:59:08 AM — Critical Error — FAS-3050-48-rre-btc-eng-in — NetApp ApplianceWatch — A disk storage shelf re... — shelfFault 12/19/2007 1:59:01 AM — Information — 10-73-64-32 — NetApp ApplianceWatch — Test event was general... — TestAlarm 12/19/2007 1:59:00 AM — Critical Error — FAS-940-54-rre-btc-eng-in — NetApp ApplianceWatch — The appliance's overa... — globalStatusCritical 12/19/2007 1:58:59 AM — Warning — FAS-940-55-rre-btc-eng-in — NetApp ApplianceWatch — The clustered host b... — CfoSettingsThisNode 12/19/2007 1:58:56 AM — Error — FAS-940-54-rre-btc-eng-in — NetApp ApplianceWatch — Unable to send autosu... — autosupportSendErr 12/19/2007 1:58:56 AM — Warning — FAS-940-54-rre-btc-eng-in — NetApp ApplianceWatch — The partner has taken... — clusterNodeTakenOv 12/19/2007 1:58:53 AM — Critical Error — FAS-3020-19-rre-btc-eng-in — NetApp ApplianceWatch — A disk storage shelf re... — shelfFault 12/19/2007 1:58:47 AM — Critical Error — 10-73-66-54 — NetApp ApplianceWatch — A node in a Cluster F... — clusterNodeFailed 12/19/2007 1:57:22 AM — Critical Error — fas-920-24-rre-btc-eng-in — NetApp ApplianceWatch — One or more disks fail... — diskFailed 12/19/2007 1:57:22 AM — Error — FAS-6030-42-rre-btc-eng-in — NetApp ApplianceWatch — Unable to send autos... — autosupportSendErr 12/19/2007 1:53:01 AM — Error — FAS-940-54-rre-btc-eng-in — NetApp ApplianceWatch — The appliance's overall... — globalStatusNonCritic 12/19/2007 1:52:23 AM — Information — FAS-940-54-rre-btc-eng-in — NetApp ApplianceWatch — Volume is online now.... — volumeOnline 12/19/2007 1:52:23 AM — Information — FAS-940-54-rre-btc-eng-in — NetApp ApplianceWatch — Volume is online now.... — volumeOnline Alert Details - 1 Alert Properties | Custom Properties | Events | Product Knowledge | Company Knowledge | History Description: Test event was generated to test operation of an alarm.Information event on IBM-X336-32 (Alarm Test) - Testing alarm 10 Name: TestAlarm Severity: Information Resolution State: New Domain: RRE Computer: 10-73-64-32 Time of First Event: 12/19/2007 1:59:01 AM Time of Last Event: 12/19/2007 1:59:01 AM Alert latency: 0 sec Problem State: Investigate Repeat Count: 0 Age: Source: NetApp ApplianceWatch Alert Id: bb11d1d0-87fe-4760-83e0-2a49e1099e1e Rule (enabled): NetApp\NetApp Storage Event Rule

SNMP Event Severity Mappings A

Understanding how NetApp SNMP events map to MOM events

The current MOM management pack allows the MOM server to process all SNMP traps generated by both the NetApp Operations Manager and storage systems. You can simultaneously monitor both the devices. Keep in mind that if you have a NetApp Operations Manager monitoring storage systems and you are also individually monitoring one of the storage systems, you will receive duplicate alerts.

The follow tables list the NetApp storage system and Operations Manager severities and their corresponding MOM severities.

Operations Manager Event Severity	MOM Severity
1 (Normal)	Success
2 (Information)	Information
3 (Warning)	Warning
4 (Error)	Error
5 (Critical)	Critical
6 (Emergency)	Critical

Storage System SNMP Severity	MOM Severity
1 (Emergency)	Critical
2 (Alert)	Critical
3 (Critical)	Critical
4 (Error)	Error
5 (Warning)	Warning
6 (Notification)	Information
7 (Information)	Information
8 (Debug)	Information