C H A P T E R **10**

Events and Notifications

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Audience

We prepared this material with specific expectations of you.

✔ You monitor events for components of Cisco DMS..

Concepts

Overview

DMS-Admin supports email (SMTP) natively.

In addition, you can purchase and install a license key to activate our *SNMP Notifications Module*. After you activate this module, you can start to use:

- A network management MIB file called *CISCO-DIGITAL-MEDIA-SYSTEMS-MIB.my*.
- The *agent capabilities* file that describes which MIB objects we support in this release.

In this framework, you can define alarms that associate system events with methods to deliver notification messages.

Timesaver   The Alerts gauge at Administration > Dashboard shows the total count of notification messages delivered in the past 1 hour. Click **View Alerts** to jump directly to the Alerts page.

Restrictions

- **SNMP features in this release are read-only.**
  - Your NMS can use SNMP to submit queries to DMS-Admin but cannot use SNMP to edit the configuration of any Cisco DMS component.
  - You cannot edit the (default) community string of your DMM appliance.
- **SNMPv1 and SNMPv2c are not secure protocols.** You cannot use a firewall to secure SNMP traffic.
- In this release, the SNMP Notification Module does not support:
  - The SNMPv3 protocol.
  - Any monitoring of Cisco Digital Media Encoders (DMEs).

Understand SNMP Concepts

Your fully licensed and equipped DMS-Admin software can use *SNMPv1* or *SNMPv2c* to:

- Respond to Cisco DMS MIB schema-compliant queries from your NMS.
- Send notification messages automatically to your NMS whenever predefined system event types occur.

Understand MIB and NMS Concepts

Any dedicated NMS that supports SNMP can load *CISCO-DIGITAL-MEDIA-SYSTEMS-MIB.my* into its MIB browser. CiscoWorks is one example. Your NMS can then send SNMP queries to DMS-Admin and represent its responses correctly to monitor objects from our MIB schema.

- Cisco DMS server appliances.
- Cisco DMPs—*in the sense that, when your DMPs report their events to your DMM appliance, it forwards the appropriate SNMP alerts*.
- Cisco Digital Media Manager software.
- Cisco Show and Share software.

Our MIB schema models three object groups.

Object Group	Description
DMS Systems Group	Models all distributed component parts of this Cisco DMS installation as a single, abstract system.
DMS Features Group	Categorizes licensed and unlicensed features.
DMS Inventory Group	Lists the devices that constitute your Cisco DMS installation and describes their operational status.

Understand IP Address Conflict Events

An address conflict occurs when a DHCP server assigns to one registered DMP the exact dynamic IP address that some other registered DMP used previously.

When the DMP that previously used the address is no longer in active use, you should delete the record of it in *Digital Signs*.

When the DMP that previously used the address is one that should remain active, confirm that it is still running and still connected to the network, then restart it and confirm that its DHCP server does not assign IP addresses with expiration dates.

Understand Supported Event Types

Global Event Categories

Categories	Notification Messages
All Internal Events	List all signals exchanged between and among the internal components of Cisco DMS. **Note** Most users attribute little or no significance to these events.
All Notifiable Events	List all.
Deployment Failures	Messages list recently failed deployments of content for all components of Cisco DMS.
Deployment Successes	Messages list recently failed deployments of content for all components of Cisco DMS.

DMP Event Categories

Categories	Notification Messages
Outages	List all registered but unreachable DMPs.
Restarts	List all registered DMPs that restarted recently.
IP Conflicts	List all registered DMPs with IP address conflicts.
IP Registrations	List all newly registered DMPs.

Show and Share Event Categories

Categories	Notification Messages
Show and Share Outages	List registered but unreachable *Show and Share* appliances.
Show and Share Restarts	List registered *Show and Share* appliances that restarted recently.
Show and Share Content Publishing Failures	List recently failed deployments of content for use on *Show and Share*.
Show and Share Content Publishing Successes	List recently successful deployments of content for use on *Show and Share*.

Failover Cluster Event Categories

Categories	Notification Messages
Cluster Node Outages	List instances when either node in any failover pair is not responsive.
Cluster Node Activations	List instances when either node in any failover pair becomes responsive.

WAAS Event Categories

Categories	Notification Messages
WAAS Connections	Lists instances when DMM established a connection to a WAAS share.
WAAS Disconnections	Lists instances when DMM lost its connection to a WAAS share.
WAAS Low Disk Space	Lists instances when the WAAS share was low on disk space.

Understand Notification Methods

Email

Activates automatic delivery of email notification messages for all corresponding event types.

SNMP

Activates automatic delivery of SNMPv2c notification messages to your NMS for all corresponding event types.

Syslog

Activates automatic delivery of notification messages to your Syslog collector.

All

All of the above.

Workflow

Procedures

- Enable or Disable Email, page 10-5
- Configure Alert Reports and Notification Settings, page 10-6

Enable or Disable Email

You can enable or disable the email service (SMTP) on your DMM appliance. When this service is enabled, DMS-Admin can send email notifications automatically to you or other interested parties whenever system events of predefined types occur.

Before You Begin

- To see and use the Settings tab, you must be logged in as an administrator.

Procedure

| Step 1 | Choose **Settings > External Servers > SMTP**. |

| Step 2 | Enter the required values to start or stop email service on your DMM appliance. |

You must enter these values or you cannot send notification messages:

Value	Description
Server Status	Click the radio button to enable or disable the email service.
Host	The routable IP address or DNS-resolvable hostname.
Port	The number to identify which TCP port is reserved for SMTP traffic.

| Step 3 | Click **Save**. |

| Step 4 | Stop. You have completed this procedure. |

Configure SNMP Server Settings for Your DMM Appliance

Cisco DMS can convey its notifications to an external SNMP server.

Procedure

| Step 1 | Choose **Settings > SNMP**. |

| Step 2 | Click the Server Status radio button to enable or disable SNMP monitoring. |

| Step 3 | Enter in the Host field the routable IP address or DNS-resolvable hostname of your NMS. |

| Step 4 | Enter in the Port field the numeric UDP port assignment reserved for SNMP traffic. |

| Step 5 | Apply the community string. |

Step 6   Enter in the Community String field the password to identify that community.

> **Tip**   **The default Community String value is *public*.**

Step 7   Click **Save**.

Step 8   Stop. You have completed this procedure.

Populate the MIB Browser in Your NMS

Procedure

Step 1   Log in to your Cisco.com account on **ftp.cisco.com**.

Step 2   Navigate to ftp://ftp-sj.cisco.com/pub/mibs/v2/ .

> **Timesaver**   **Alternatively, go to http://cisco.com/go/dms/mib.**

Step 3   Download these files:

```
09/23/2008 12:00AM            2,392 CISCO-DIGITAL-MEDIA-SYSTEMS-CAPABILITY.my
06/02/2008 12:00AM           43,053 CISCO-DIGITAL-MEDIA-SYSTEMS-MIB.my
```

Step 4   Load both files into your network management system (NMS).

> **Tip**   **Manufacturer documentation for your NMS should tell you how to do this.**

Step 5   When your NMS prompts you to enter the SNMP port number for your DMM appliance, use the port number **161**.

Step 6   Stop. You have completed this procedure.

Configure Alert Reports and Notification Settings

Define Alert Report Parameters

Procedure

Step 1   Click the **Alerts** tab.

Step 2   Click **Alert Reports**, .

Step 3   Click the radio button to choose a monitoring mode.

- In *Live Monitor Mode*, we refresh displayed values in something close to real time.

- In *Snapshot Mode*, we do not refresh displayed values.

Step 4   Choose the range of dates.

Step 5   Choose an event type from the Type list, and then click **Apply**.

Step 6   Click **Save**.

Step 7   Stop. You have completed this procedure.

Define Notification Rules

Before You Begin

- Before you can deliver notification messages to any email recipent, you must configure SMTP and enable notification operations for it.

- Before you can deliver notification messages to any NMS, you must purchase and install a license key that activates the SNMP Notification Module. Then, you must configure SNMP and enable both notification operations **and** query operations for it.

- Before you can deliver notification messages to any Syslog collector, you must configure Syslog and enable notification operations for it.

Procedure

Step 1   Choose **Alerts > Notification Rules**.

Step 2   Check the check boxes to turn On one or more notification methods for each listed event type.

OR

Uncheck every check box for an event type to stop its delivery of notication messages through any medium or channel.

Step 3   (**Optional**) *Did you check Email?*

If so, you activated the Recipient field, which is now editable. Enter the email address that should receive notification messages.

> **Note**   **Enter only one email address in this field.** It rejects any entry that contains multiple email addresses (**CSCts96411**).

> **Tip**   **You can enter a unique recipient address for each notification rule.**

Step 4   Click **Save**.

Step 5   Stop. You have completed this procedure.

Reference

FAQs and Troubleshooting

FAQs

SMTP FAQs

Q. **What might interfere with the delivery of configured email notifications for events that the Alert Browser shows?**

Explanation This might happen when DMM cannot connect to your SMTP server — due to either a misconfiguration or a service outage (SMTP error 421). To determine the cause, get copies of your DMM system logs from AAI and inspect /var/log/dms/EmsService.log file.

Recommended Action Make sure the SMTP server configuration is correct in DMS-Admin. If the configuration is correct, test with a different mail server.

SNMP and MIB FAQs

Q. **Which SNMP versions does the MIB support?**

A. *SNMPv1* and *SNMPv2*.

> **Note**   **This release does not support *SNMPv3*.**

Q. **If multiple DMPs become unreachable at the same time, will I receive separate SNMP notifications for each?**

A. Maybe. This can occur when you configure DMS-Admin to send SNMP notifications for unreachable DMPs.

> **Note**   **This release does not support notification throttling.**

Q. **Where can I download the MIB and its agent capabilities file?**

A. Log in to your Cisco.com account and go to ftp://ftp.cisco.com/pub/mibs/v2/. Alternatively, go to http://cisco.com/go/dms/mib.

Q. **Which object groups does the MIB support?**

A. This release supports:

- *cdmsSystem*
- *cdmsFeatures*
- *cdmsInventory*

To understand these object groups, see the agent capabilities file.

Q. **Can I configure the community for my...**

• ... SNMP agent to accept 'get' requests?	**A.** Yes, from the public community.
• ... SNMP agent to accept 'set' requests?	**A.** No, not in this release.
• ... external SNMP server, which receives traps?	**A.** No, not in this release.