

Integrating OmniVista 3600 Air Manager 8.2 with Centralized NMS Event Correlation

Overview

This document describes the OV3600 alert/trap workflow when integrating with a centralized NMS Event Correlation System. This document includes the following topics:

- "Adding NMS Event Correlation Servers to OV3600" on page 1
- "Configuring Alerts/Traps in OV3600" on page 2
- "Viewing Alerts in Various Destinations" on page 3
- "Acknowledging Alerts" on page 4
- "Compiling the OV3600 MIB on NMS" on page 4
- "Matching Severity in the NMS Event Correlation Servers" on page 4
- "Enhanced Integration" on page 4
- "MIB for SNMPv2c" on page 5

Adding NMS Event Correlation Servers to OV3600

Perform the following steps to add an event correlation server to OV3600.

1. Navigate to **OV3600 Setup > NMS** and click **Add**.
2. Configure server settings. The configuration options can vary depending on the SNMP version that you select.



If you select SNMPv3, then you must also configure the application that will receive the traps/informs) for SNMPv3. You will need to set up the engineID, authentication, and privacy parameters and then restart your application before you can receive the SNMPv3 informs.

Figure 1: OV3600 Setup > NMS > Add NMS Server Page Illustration

NMS Integration

AMP can send SNMPv1, SNMPv2 traps or SNMPv3 in forms to NMS servers. First, add one or more NMS servers below, then select NMS as a notification option for **triggers**.

The Sync action will send one traps/informs for each device managed by AMP to notify an NMS of each one's up/down and configuration status.

[Download](#) the AMP MIB files.

NMS Server

Hostname:

Port (1-65535):

SNMP Version:

Community String:

Confirm Community String:

Enabled: Yes No

Send Configuration Traps: Yes No

SNMP Retries (1-40):

SNMP Timeout (3-60):

Configuring Alerts/Traps in OV3600

1. Navigate to **System > Triggers** (see Figure 2).
2. Select Alerts/Traps.
3. Click **Add**.
4. Configure properties for the Alert/Trap.
 - Thresholds for the alert (quantity and time)
 - Severity of alert
 - Distribution options
 - Notification Method
 - Sender
 - Recipient
 - NMS – sends SNMP traps
 - Alert Suppression

Figure 2: Configuring a Client Count Trigger

The screenshot shows the configuration page for a 'Client Count' trigger. The 'Trigger' section includes fields for Type (Client Count), Client Count (At Least/At Most), Severity (Normal), Duration, and Limit by (Device). The 'Conditions' section shows matching conditions set to 'All' and a table with one condition: Device Type is Access Point. The 'Trigger Restrictions' section includes Folder (Top), Include Subfolders (Yes), and Group (- All Groups -). The 'Alert Notifications' section has a Notes field, checkboxes for Email and NMS (checked), NMS Trap Destinations (NMS_Server_1), Logged Alert Visibility (By Role), and Suppress Until Acknowledged (Yes).

OPTION	CONDITION	VALUE
Device Type	is	Access Point

Viewing Alerts in Various Destinations

Figure 3 below shows the **System > Alerts** page of the OV3600 console.

Figure 3: System > Alerts Page Illustration

	TRIGGER TYPE	TRIGGER SUMMARY	TRIGGERING AGENT	TIME	SEVERITY	DETAILS	NOTES
<input type="checkbox"/>	Device Down	Device Type is Access Point	ssahoo-155	1/20/2016 11:18 AM PST	Normal	-	-
<input type="checkbox"/>	Device Down	Device Type is Access Point	ssahoo-155	1/20/2016 11:18 AM PST	Normal	-	-
<input type="checkbox"/>	Device Down	Device Type is Access Point, Device Type is Access Point, (more...)	ssahoo-155	1/20/2016 11:18 AM PST	Normal	-	-
<input type="checkbox"/>	Device Down	Device Type is Access Point	SH-GF-2	1/19/2016 4:03 PM PST	Normal	-	-

Figure 4 below shows an email from the recipient's perspective.

Figure 4: Email Recipient of an Alert

```

Cc:
Subject:    OV3600 Alert: Device Down

Device Down: Minutes Down Threshold >= 5 minutes
Severity: Normal
Time: Fri Feb 1 15:17:03 2013

Device: HQ - https://tipi.corp.ov3600.com/ap_monitoring?id=1
Additional Info: Minutes Down Threshold >= 5 minutes
Group: Access Points
Folder: Top
Location: Board Room Wall
    
```

Below shows the actual alerts output as seen by the NMS server.

Client Count

```

10:32:52.964243 IP (tos 0x0, ttl 64, id 0, offset 0, flags [DF], proto 17, length: 284)
tipi.corp.ov3600.com.38979 > ov3600-openvie.snmptrap: [bad udp cksum ebf4!] { SNMPv2c C=foo {
V2Trap(242) R=47680 system.sysUpTime.0=10 S:1.1.4.1.0=E:12028.4.15.0.3 E:12028.4.15.1.101=2
E:12028.4.15.1.102=4 E:12028.4.15.1.103="Device: HQ-Engineering -
https://demo.ov3600.com/ap_monitoringid=11277: AP User Count >= 2 users for 15 minutes"
E:12028.4.104=10.2.26.164 } }
    
```

Device Down

```

10:32:23.055999 IP (tos 0x0, ttl 64, id 0, offset 0, flags [DF], proto 17, length: 261)
tipi.corp.ov3600.com.38934 > ov3600-openvie.snmptrap: [bad udp cksum e740!] { SNMPv2c C=foo {
V2Trap(219) R=47676 system.sysUpTime.0=10 S:1.1.4.1.0=E:12028.4.15.0.13 E:12028.4.15.1.101=2
E:12028.4.15.1.102=4 E:12028.4.15.1.103="Device: Aruba-AP65-ap.2.2.3 -
https://demo.ov3600.com/ap_monitoringid=1: Device Down " E:12028.4.104=10.51.3.46 } }
    
```

OID Breakdown

12028.4.15.1.102 contains Severity Code

- 1 = Normal
- 2 = Warning

- 3 = Minor
- 4 = Major
- 5 = Critical

12028.4.15.1.103 contains several fields separated by colons

- Object Type {Client, OV3600, Device/AP, Group}
- Object Name and URL (the URL is optional, if it exist then it will be separated by a dash (-))
- Trap Description and Evaluation Elements

12028.4.15.1.104 contains device IP Address

- Group Traps will contain the OV3600 IP address.

Acknowledging Alerts

OV3600 alerts must be manually acknowledged from the **System > Alert** page. OV3600 does not currently provide an external interface to acknowledge alerts from an NMS server.

Compiling the OV3600 MIB on NMS

1. Navigate to **OV3600 Setup > NMS**.
2. Click **Download**.
3. Transfer to NMS server.
4. Compile on NMS server.

Matching Severity in the NMS Event Correlation Servers

Most NMS Event Correlation systems have the ability to color code and escalate based on information received in the trap, as shown in [Figure 5](#). The OID **12028.4.15.1.102** contains the OV3600 severity code.

Figure 5: Color Code Example

Node	Alert Group	Alert Key	Summary
device.airwave.com, IP: 10.51.3.46	Access Point Signal Strength	Device: HQ-Engineering	Signal Strength - launch @URL for details: [Device: HQ-Engineering]
device.airwave.com, IP: 10.51.3.46	Access Point Signal Quality	Device: HQ-Engineering	Signal Quality - launch @URL for details: [Device: HQ-Engineering]
device.airwave.com, IP: 10.51.3.46	Access Point Status	Device: AnubaAP65-ap2.2.3	Device Up - launch @URL for details: [Device: AnubaAP65-ap2.2.3]
device.airwave.com, IP: 10.51.3.46	Access Point Status	Device: AnubaAP65-ap2.2.3	Device Down - launch @URL for details: [Device: AnubaAP65-ap2.2.3]
device.airwave.com, IP: 10.51.3.128	Access Point Status	Device: AnubaCst-203	Device Down - launch @URL for details: [Device: AnubaCst-203]
device.airwave.com, IP: 10.51.3.128	Access Point Status	Device: AnubaCst-203	Device Up - launch @URL for details: [Device: AnubaCst-203]
device.airwave.com, IP: 10.51.5.42	Access Point Status	Device: ap	Device Down Device uptime indicates that device has rebooted - launch @URL for details: [Device: ap]
device.airwave.com, IP: 10.51.5.42	Access Point Status	Device: ap	Device Up - launch @URL for details: [Device: ap]
device.airwave.com, IP: 10.51.3.46	Bandwidth Usage per Access Point	Device: HQ-Engineering	AP Bandwidth - launch @URL for details: [Device: HQ-Engineering]
device.airwave.com, IP: 10.51.3.46	Bandwidth Usage per Client	Client: 10.17.10.143	Client Bandwidth - launch @URL for details: [Client: 10.17.10.143]

4 0 50 12 0 13

Items selected: 7/17/2007 01:45:33 PM root INCOMS [F11]

Enhanced Integration

OV3600 has enhanced integration modules with several NMS Event Correlation Systems. These integrations provide enhanced functionality like quicklink problem diagnostics, configuration, and WLAN topology views.

- **IBM Netcool** – navigate to <https://www-304.ibm.com/software/brandcatalog/ismlibrary/details?catalog.label=1TW10NC16> to download the certified NetCool NIM

- **ProCurve Manager** – Navigate to **OV3600 Setup > NMS** and click on the **HP ProCurve Manager** section to obtain additional information.
- **HPE OpenView NNM** – Contact Alcatel-Lucent Support for additional information.

MIB for SNMPv2c

You can download the MIB from the **Home > Documentation** page in OmniVista 3600 Air Manager 8.2.