# Integrating OV3600 with Centralized NMS Event Correlation System

## Overview

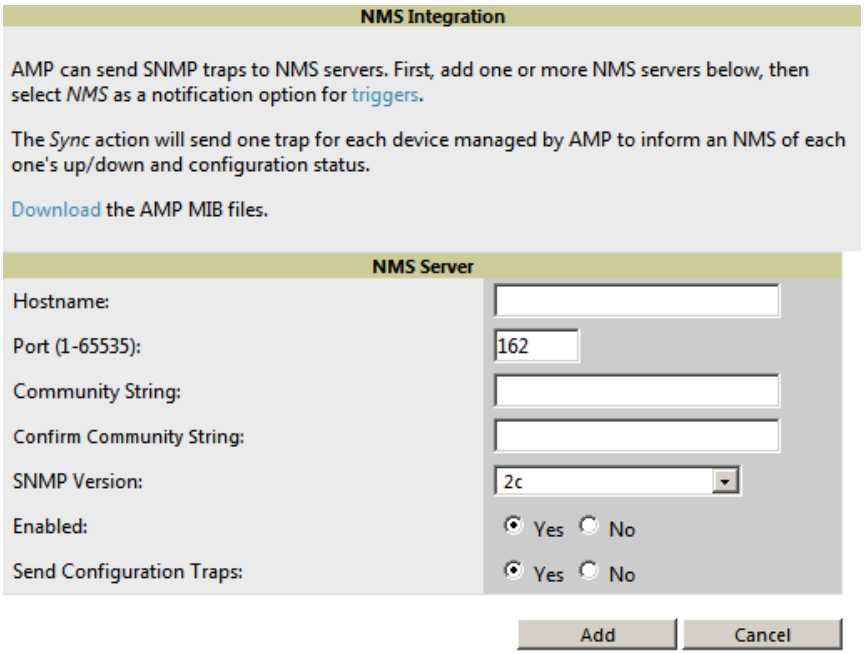
This document describes OV3600's alert/trap workflow when integrating with a centralized NMS Event Correlation System, using the following topics:



## Adding NMS Event Correlation Servers to OV3600

1. Navigate to **OV3600 Setup > NMS** and click **Add**.
2. Configure server settings.

**Figure 1** ***OV3600 Setup > NMS*** *Page Illustration*

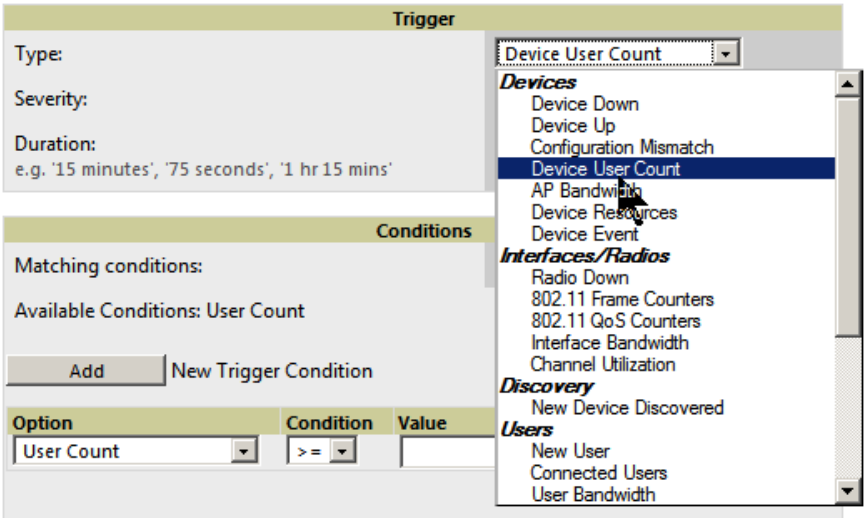



## Configuring Alerts/Traps in OV3600

1. Navigate to **Systems > Triggers**, as shown in Figure 2.
2. Select one of the built-in Alerts/Traps.

3. Click **Add**.

**Figure 2** *Configuring a **Device Count** Trigger*



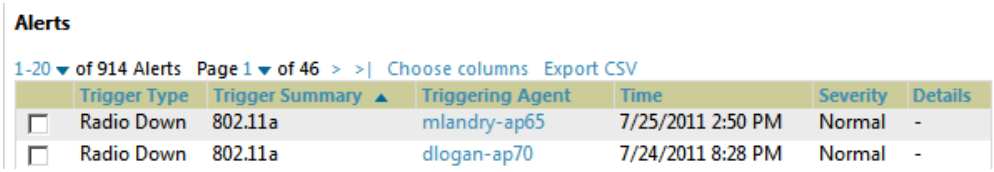

Configure properties for the Alert/Trap

- Thresholds for the alert (quantity and time)
- Severity of alert
- Distribution options
- Notification Method
  - Sender
  - Recipient
  - NMS – sends SNMP traps
- Alert Suppression

# Viewing Alerts in Various Destinations

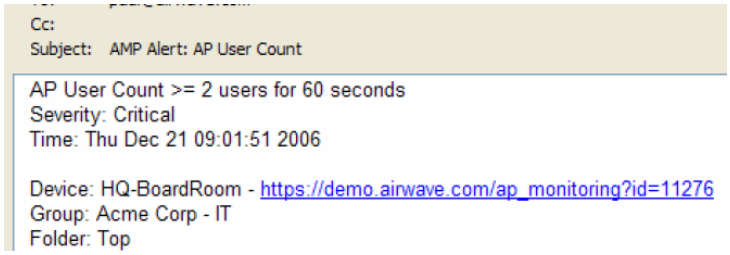
## As seen on OV3600's console System > Alerts page

**Figure 3** ***System > Alerts*** *Page Illustration*




## As seen in email from the recipient's perspective

**Figure 4** *Email recipient of an alert*



### As seen by the NMS server via a tcpdump of the actual alert

#### Device User Count

```
10:32:52.964243 IP (tos 0x0, ttl  64, id 0, offset 0, flags [DF], proto 17, length: 284)
demo.ov3600.com.38979 > airwave-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 60 seconds"
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)
demo.ov3600.com.38934 > airwave-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=11797: Device Down "
E:12028.4.104=10.51.3.46 } }
```

#### OID Breakdown

12028.4.15.1.102 contains Severity Code

- 2 = Normal
- 3 = Warning
- 4 = Minor
- 5 = Major
- 6 = 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 OV3600's IP address.

## Acknowledging Alerts

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

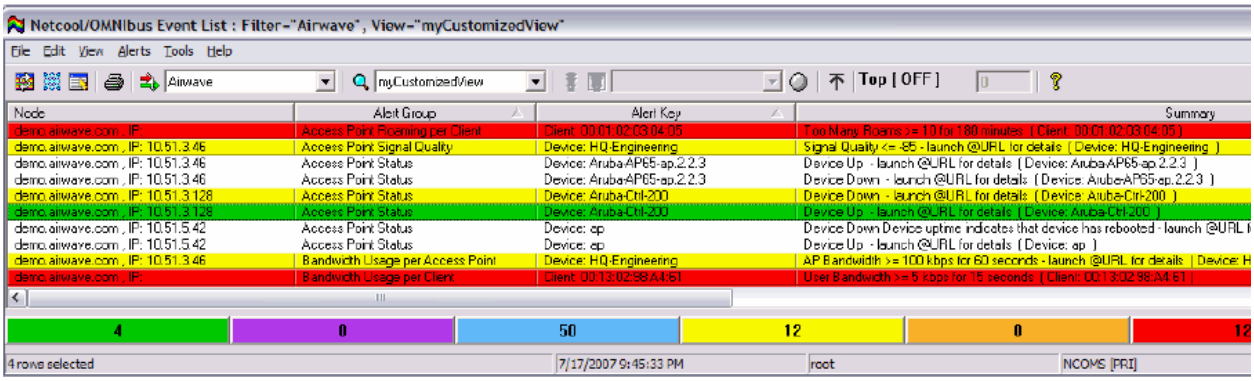
## Compiling OV3600's MIB on NMS

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

## Matching OV3600's Severity in the NMS Event Correlation Servers

Most NMS Event Correlation systems have the ability to color code and esclate based on information received in the trap, as shown in Figure 5. The OID **12028.4.15.1.102** contians OV3600's severity code.

**Figure 5** *Color Codes*




## Enhanced Integration

OV3600 has enhanced integration modules with several NMS Event Correlation Systems. These integrations provide enhanced functionality like quicklink porblem 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
- (NetCool Integration Module).
- **ProCurve Manager** – Navigate to OV3600 Setup > NMS and click on the HP ProCurve Manager section to obtain additional information.
- **HP OpenView NNM** – contact Support for additional information.

## Actual MIB


Traps in grey text are unused.

```
- ************************************************************************
-- *  awampEvent parameter definitions
-- ************************************************************************
awampEventID OBJECT-TYPE
                SYNTAX INTEGER
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "Random number OV3600 assigns to the event."
        ::= { awampEventObject 101 }
awampEventSeverityCode OBJECT-TYPE
                SYNTAX INTEGER
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "Level 1-6"
        ::= { awampEventObject 102 }
awampEventDescription OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "Concatenated String produced from OV3600."
        ::= { awampEventObject 103 }
awampEventAPIPOld OBJECT-TYPE
                SYNTAX IpAddress
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "Old IP of the AP when OV3600 changes and
                         sends trap to HPOV."
        ::= { awampEventObject 104 }
awampEventAPMngURL OBJECT-TYPE
```

```
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "URL to manage AP on OV3600 from HPOV."
        ::= { awampEventObject 105 }
awampEventAPMonURL OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "URL to monitor AP on OV3600 from HPOV."
        ::= { awampEventObject 106 }
awampEventGroupMngURL OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "URL to manage Group on OV3600 from HPOV."
        ::= { awampEventObject 107 }
awampEventGroupMonURL OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "URL to monitor Group on OV3600 from HPOV."
        ::= { awampEventObject 108 }
awampEventAPICON OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "Name of ICON to display on HPOV screen"
        ::= { awampEventObject 109 }
-- ********************************************************************
-- *  Fault Traps generated by the OV3600
-- *  (1.3.6.1.4.12028.4.15.0.)
-- ********************************************************************

tooManyDevAssocOV3600 NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when too many devices are
 simultaneously associated with OV3600 for a period of time."
    ::= { awampEventPrefix 1 }
tooManyDevAssocGroup NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when too many devices are
 simultaneously associated with OV3600 for a period of time."
    ::= { awampEventPrefix 2 }

tooManyDevAssocAp NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
      awampAPIP }
    STATUS current
    DESCRIPTION
 "This trap is sent when too many devices are associated
 simultaneously associated with AP for a period of time. "
    ::= { awampEventPrefix 3 }

toomuchBWOV3600 NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when there is too much BW being
 used on the WLAN for a period of time."
    ::= { awampEventPrefix 4 }
toomuchBWGroup NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when there is too much BW being
```

```
 used by a Group for a period of time."
    ::= { awampEventPrefix 5 }

toomuchBWAP NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
      awampAPIP }
    STATUS current
    DESCRIPTION
 "This trap is sent when there is too much BW being
 used on an AP for a period of time."
    ::= { awampEventPrefix 6 }
toomuchBWClient NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when there is too much BW being
 used by a Client for a period of time."
    ::= { awampEventPrefix 7 }

toomanyRoamsClient NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when Client roams too often from
 AP to AP for a period of time."
    ::= { awampEventPrefix 8 }
poorSignalAP NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
                awampAPIP }
    STATUS current
    DESCRIPTION
 "This trap is sent when an AP has poor Signal
 quality for a period of time."
    ::= { awampEventPrefix 9 }

nonOV3600APChange NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
      awampAPIP }
    STATUS current
    DESCRIPTION
 "This trap is sent when an AP Changes configuration
 without the OV3600's knowledge"
    ::= { awampEventPrefix 10 }

unauthenticatedClient NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when Client is associated with
 WLAN for a period of time without authenticating."
    ::= { awampEventPrefix 11 }

rogueAPDetected NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when the OV3600 discovers a Rogue
      AP."
    ::= { awampEventPrefix 12 }

downAP NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
                awampAPIP }
    STATUS current
    DESCRIPTION
 "This trap is sent when the AP is down as in
  missed SNMP Ping or SNMP Get"
    ::= { awampEventPrefix 13 }
discoveredAP NOTIFICATION-TYPE
```

```
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
                awampAPIP }
    STATUS current
    DESCRIPTION
 "This trap is sent when AP is discovered by OV3600.
  The AP is not authorized, but only discoverd.
  A Config trap is when AP is authorized"
    ::= { awampEventPrefix 14 }

upAP NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
                awampAPIP }
    STATUS current
    DESCRIPTION
 "This trap is sent when AP is detected as UP after being
         marked DOWN by the OV3600."
    ::= { awampEventPrefix 15 }

genericTrap NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
                awampAPIP }
    STATUS current
    DESCRIPTION
 "This trap will catch things not defined."
    ::= { awampEventPrefix 50 }
```