Integrating Dell Networking W-AirWave 7.7 with Centralized NMS Event Correlation

Overview

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

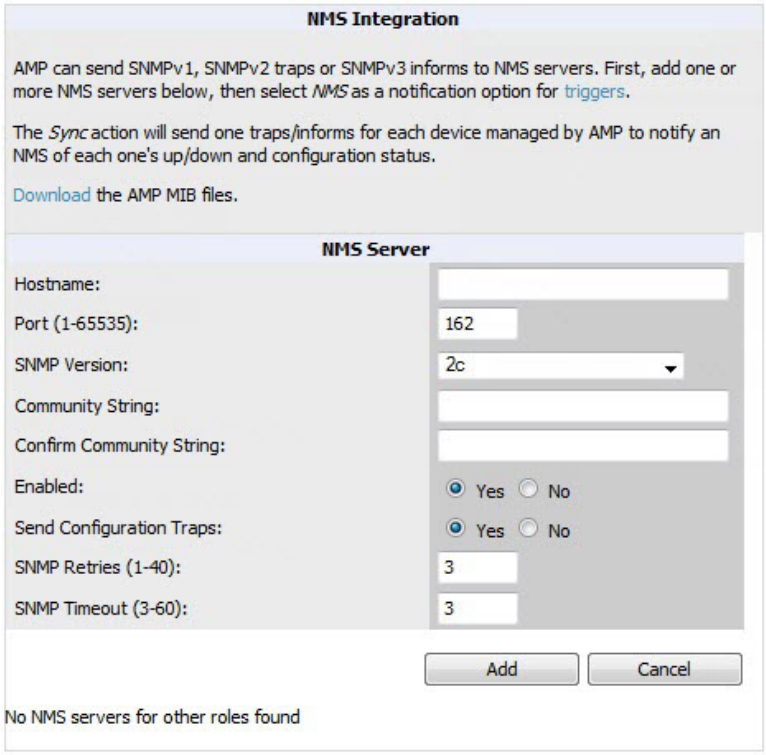
Adding NMS Event Correlation Servers to AirWave

Perform the following steps to add an event correlation server to AirWave

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

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

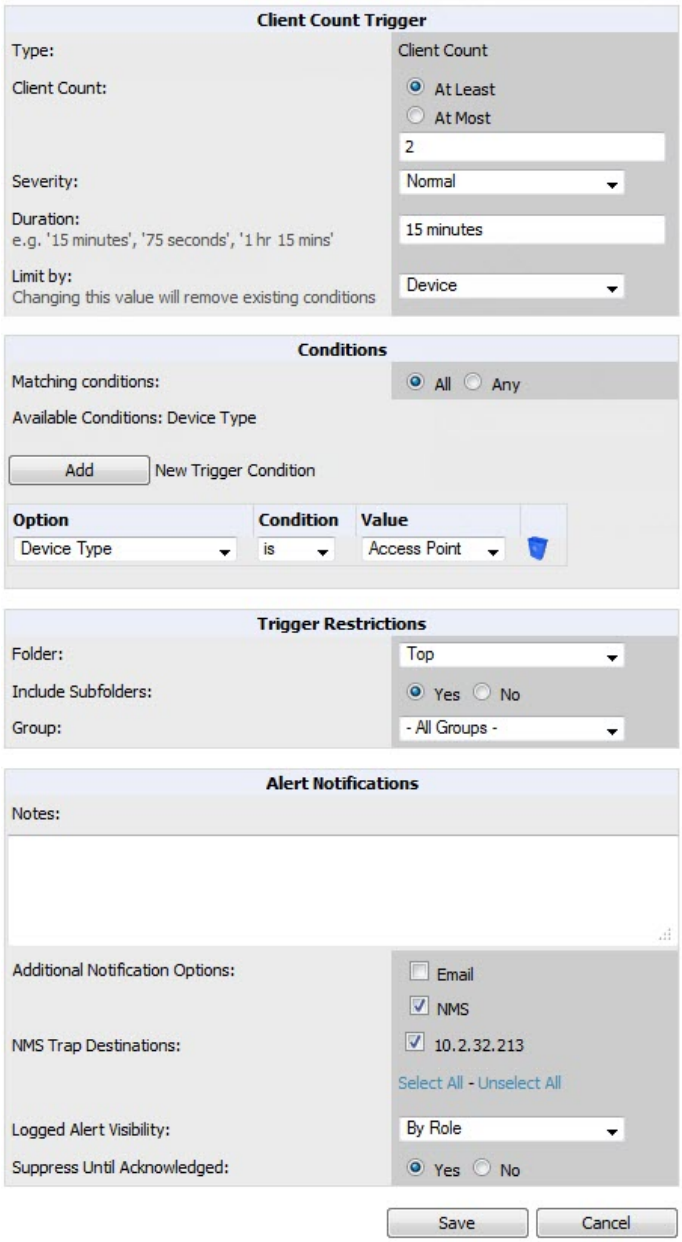
Figure 1 *AMP Setup> NMS > Add NMS Server Page Illustration*



Configuring Alerts/Traps in AirWave

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 Client 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 the **System > Alerts** page of the AirWave console:

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 alerts:

Client Count

```
10:32:52.964243 IP (tos 0x0, ttl  64, id 0, offset 0, flags [DF], proto 17, length: 284) tipi.c
orp.airwave.com.38979 > airwave-openvie.snmptrap: [bad udp cksum ebf4!]  { SNMPv2c C=foo { V2Tr
ap(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.airwave.com/ap_monitoringid=11277: AP User Count >= 2 users for 15 minutes" E:1202
8.4.104=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.c
orp.airwave.com.38934 > airwave-openvie.snmptrap: [bad udp cksum e740!]  { SNMPv2c C=foo { V2Tr
ap(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:1202
8.4.15.1.102=4 E:12028.4.15.1.103="Device: Aruba-AP65-ap.2.2.3 - https://demo.airwave.com/ap_mo
nitoringid=1: 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, AirWave, 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 AirWave's IP address.

Acknowledging Alerts

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

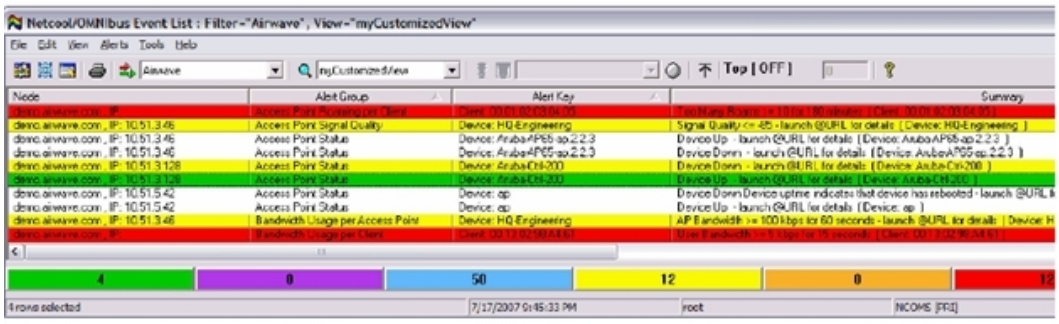
Compiling the AirWave MIB on NMS

1. Navigate to **AMP Setup > NMS**.
2. Click on the **Download** link.
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 AirWave severity code.

Figure 5 *Color Codes*



Actual MIB for SNMPv2c

NOTE

Traps in grey text are unused.

```
_ ***********************************************************************
-- *  Definitions
-- ***********************************************************************
```

```
awampApName OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "The AP Name"
        ::= { awamp 101 }
awampGroupName OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "The Group Name"
        ::= { awamp 102 }
awampAPEthMAC OBJECT-TYPE
                 SYNTAX MacAddress
                 MAX-ACCESS read-only
                 STATUS current
                 DESCRIPTION
                         "IEEE Unique Identifier"
        ::= { awamp 103 }
awampAPIP OBJECT-TYPE
                 SYNTAX IpAddress
                 MAX-ACCESS read-only
                 STATUS current
                 DESCRIPTION
                         "IP Address of the AP (Eth0)"
        ::= { awamp 104 }
awampAPMFG OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "AP MFG"
        ::= { awamp 105 }
awampAPModel OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "AP Model"
        ::= { awamp 106 }
awampAPFirmware OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "AP Firmware"
        ::= { awamp 107 }
awampROCommString OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
"Read Only Community String (not currently used)"
        ::= { awamp 108 }
awampHPOVHostName OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "Hostname of the AP"
```

```
        ::= { awamp 109 }
awampHPOVSYSID  OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                       "Hp OpenView Object Id"
        ::= { awamp 110 }
awampHPOVMAC1  OBJECT-TYPE
                SYNTAX MacAddress
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "First Radio MAC on AP"
        ::= { awamp 111 }
awampHPOVIP1 OBJECT-TYPE
                SYNTAX IpAddress
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "First Radio IP AP"
        ::= { awamp 112 }
awampHPOVMAC2  OBJECT-TYPE
                SYNTAX MacAddress
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "Second Radio MAC on AP"
        ::= { awamp 113 }
awampHPOVIP2 OBJECT-TYPE
                SYNTAX IpAddress
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "Second Radio IP AP"
        ::= { awamp 114 }
awampHPOVsysName OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "Hostname of the AP"
        ::= { awamp 115 }
awampHPOVsysDescr OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "Hostname of the AP"
        ::= { awamp 116 }
- ****************************************************************
-- *  awampEvent parameter definitions
-- ****************************************************************
awampEventID OBJECT-TYPE
                SYNTAX INTEGER32
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "Random number AMP assigns to the event."
        ::= { awampEventObject 101 }
awampEventSeverityCode OBJECT-TYPE
                SYNTAX INTEGER32
```

```
                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 AMP."
        ::= { awampEventObject 103 }
awampEventAPIPOld OBJECT-TYPE
                SYNTAX IpAddress
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "Old IP of the AP when AMP 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 AMP from HPOV."
        ::= { awampEventObject 105 }
awampEventAPMonURL OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "URL to monitor AP on AMP from HPOV."
        ::= { awampEventObject 106 }
awampEventGroupMngURL OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "URL to manage Group on AMP from HPOV."
        ::= { awampEventObject 107 }
awampEventGroupMonURL OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "URL to monitor Group on AMP 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 }
awampEventRogueSSID OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "SSID of detected Rogue AP."
        ::= { awampEventObject 110 }
```

```
awampEventRogueLANManufacturer OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "Manufacturer of LAN of detected Rogue AP."
        ::= { awampEventObject 111 }
awampEventRogueRadioManufacturer OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                       "Manufacturer of radio detected Rogue AP."
        ::= { awampEventObject 112 }
awampEventRogueIsWired OBJECT-TYPE
                SYNTAX TruthValue
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "Detected Rogue AP was discovered on
the wired network."
        ::= { awampEventObject 113 }
awampEventRogueIsWireless OBJECT-TYPE
                SYNTAX TruthValue
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "Detected Rogue AP was discovered on
the wireless network."
        ::= { awampEventObject 114 }
awampEventRogueClassifyingRule OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "Rule used to classify detected rogue AP."
        ::= { awampEventObject 115 }
awampEventRogueDiscoveringAgent OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
"The discovering agent that last detected the rogue AP."
        ::= { awampEventObject 116 }
awampEventRogueDiscoveringAgentFolder OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "The folder name of the discovering agent
that last detected the rogue AP."
        ::= { awampEventObject 117 }
awampEventRogueClientMac OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
                STATUS current
                DESCRIPTION
                        "MAC Address of client connected to rogue ap."
        ::= { awampEventObject 118 }
awampEventRogueName OBJECT-TYPE
                SYNTAX DisplayString
                MAX-ACCESS read-only
```

```
                STATUS current
                DESCRIPTION
                    "SSID to which the client is connected on rogue ap."
        ::= { awampEventObject 119 }
-- ********************************************************************
-- *  Fault Traps generated by the AMP
-- *  (1.3.6.1.4.12028.4.15.0.)
-- ********************************************************************

tooManyDevAssocAMP NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when too many devices are
 simultaneously associated with AMP 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 AMP 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 }

toomuchBWAMP 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 }

nonAMPAPChange NOTIFICATION-TYPE
 OBJECTS { awampEventID,
               awampEventSeverityCode,
               awampEventDescription,
      awampAPIP }
    STATUS current
    DESCRIPTION
 "This trap is sent when an AP Changes configuration
 without the AMP'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 AMP 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 AMP.
  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 AMP."
    ::= { awampEventPrefix 15 }

downRadio NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
                awampAPIP }
    STATUS current
    DESCRIPTION
 "This trap is sent when the radio of an AP is not operating."
    ::= { awampEventPrefix 16 }

clientAssociate NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
                awampAPIP }
    STATUS current
    DESCRIPTION
 "This trap is sent when a watched client mac address
   associates to an AP."
    ::= { awampEventPrefix 17 }
authIssueClient NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription }
```

```
    STATUS current
    DESCRIPTION
 "This trap is sent when a client experiences too man
  authentication failures."
    ::= { awampEventPrefix 18 }

authIssueAP NOTIFICATION-TYPE
 OBJECTS { awampEventID,
               awampEventSeverityCode,
               awampEventDescription,
               awampAPIP }
    STATUS current
    DESCRIPTION
 "This trap is sent when an AP experiences too many
  authentication failures."
    ::= { awampEventPrefix 19 }

authIssueAMP NOTIFICATION-TYPE
 OBJECTS { awampEventID,
               awampEventSeverityCode,
               awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when AMP detects too many
  authentication failures."
    ::= { awampEventPrefix 20 }

idsEventAP NOTIFICATION-TYPE
 OBJECTS { awampEventID,
               awampEventSeverityCode,
               awampEventDescription,
               awampAPIP }
    STATUS current
    DESCRIPTION
 "This trap is sent when AMP receives too many IDS
  events from an AP."
    ::= { awampEventPrefix 21 }

rfidTagNotHeard NOTIFICATION-TYPE
 OBJECTS { awampEventID,
               awampEventSeverityCode,
               awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when an RFID tag is not heard for
  a certain period of time."
    ::= { awampEventPrefix 22 }

dot11Counters NOTIFICATION-TYPE
 OBJECTS { awampEventID,
               awampEventSeverityCode,
                    awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when a Dot11 counter trigger fires."
    ::= { awampEventPrefix 23 }

qosCounters NOTIFICATION-TYPE
 OBJECTS { awampEventID,
               awampEventSeverityCode,
               awampEventDescription }
    STATUS current
```

```
    DESCRIPTION
 "This trap is sent when a QOS counter trigger fires."
    ::= { awampEventPrefix 24 }

deviceResources NOTIFICATION-TYPE
 OBJECTS { awampEventID,
               awampEventSeverityCode,
               awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when a Device Resources trigger fires."
    ::= { awampEventPrefix 25 }

diskUsage NOTIFICATION-TYPE
 OBJECTS { awampEventID,
               awampEventSeverityCode,
               awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when a Disk Usage trigger fires."
    ::= { awampEventPrefix 26 }

managedAmpDown NOTIFICATION-TYPE
 OBJECTS { awampEventID,
               awampEventSeverityCode,
               awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when a Managed AMP Down trigger fires."
    ::= { awampEventPrefix 27 }

watchedAmpDown NOTIFICATION-TYPE
 OBJECTS { awampEventID,
               awampEventSeverityCode,
               awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when a Watched AMP Down trigger fires."
    ::= { awampEventPrefix 28 }

interfaceBandwidth NOTIFICATION-TYPE
 OBJECTS { awampEventID,
               awampEventSeverityCode,
               awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when an Interface Bandwidth trigger fires."
    ::= { awampEventPrefix 29 }

radioUtilization NOTIFICATION-TYPE
 OBJECTS { awampEventID,
               awampEventSeverityCode,
               awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when a Radio Utilization trigger fires."
    ::= { awampEventPrefix 30 }

deviceEvent NOTIFICATION-TYPE
 OBJECTS { awampEventID,
               awampEventSeverityCode,
               awampEventDescription }
```

```
    STATUS current
    DESCRIPTION
 "This trap is sent when a Device Event trigger fires."
    ::= { awampEventPrefix 31 }

rogueAPDetectedDetail NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
                awampEventRogueSSID,
                awampEventRogueRadioManufacturer,
                awampEventRogueIsWired,
                awampEventRogueIsWireless,
                awampEventRogueClassifyingRule,
                awampEventRogueDiscoveringAgent,
                awampEventRogueDiscoveringAgentFolder }
    STATUS current
    DESCRIPTION
 "This trap is sent when the AMP classifies a
  Rogue AP. It includes more details: SSID, Manufacturer,
  Wired (boolean), Wireless (boolean), Classifying Rule Name,
  Last Discovering Agent, and AP Folder Name."
    ::= { awampEventPrefix 32 }

ipv4LinkLocalAddresses NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when a IPv4 Link-Local Addresses trigger fires."
    ::= { awampEventPrefix 33 }

vpnUserConnect NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
                awampAPIP }
    STATUS current
    DESCRIPTION
 "This trap is sent when a new VPN user
  connects to a controller."
    ::= { awampEventPrefix 34 }

clientOnRogueAP NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
                awampAPIP,
                awampEventRogueClientMac,
                awampEventRogueSSID,
                awampEventRogueName }
    STATUS current
    DESCRIPTION
 "This trap is sent when a new client is discovered
  on Rogue AP. It includes more details: Client MAC,
  Rogue SSID and Rogue Device Name."
    ::= { awampEventPrefix 35 }

vpnUserAssociate NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
```

```
                awampEventDescription,
                awampAPIP }
    STATUS current
    DESCRIPTION
 "This trap is sent when a watched VPN username
  associates to a controller."
    ::= { awampEventPrefix 36 }

toomuchBWVPNUser NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
                awampAPIP }
    STATUS current
    DESCRIPTION
 "This trap is sent when a new VPN user
  connects to a controller."
    ::= { awampEventPrefix 37 }

toomuchGoodputClient NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when there is too much Goodput being
  used by a Client for a period of time."
    ::= { awampEventPrefix 38 }

speedClient NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when speed of a Client is
  below (or above) a threshold for a period of time."
    ::= { awampEventPrefix 39 }

noisefloorRadio NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription }
    STATUS current
    DESCRIPTION
 "This trap is sent when noise floor of AP is
  below (or above) a threshold for a period of time."
    ::= { awampEventPrefix 40 }

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

internalAMLUnknown NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
```

```
                awampEventDescription,
                awampAPIP }
    STATUS current
    DESCRIPTION
 "This is an internal trap designed for AML
  running on the NNM.  It allows the AML to
  dynamically accept severity codes from the AMP.
  Because HP OpenView statically defines these in
  trapd.conf per trap, we are creating an internal
  for each severity level to work around issue.
  Represents Blue and level 1"
    ::= { awampEventPrefix 51 }

internalAMLNormal NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
                awampAPIP }
    STATUS current
    DESCRIPTION
 "This is an internal trap designed for AML
  running on the NNM.  It allows the AML to
  dynamically accept severity codes from the AMP.
  Because HP OpenView statically defines these in
  trapd.conf per trap, we are creating an internal
  for each severity level to work around issue.
  Represents Green and level 2"
    ::= { awampEventPrefix 52 }

internalAMLMinor NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
                awampAPIP }
    STATUS current
    DESCRIPTION
 "This is an internal trap designed for AML
  running on the NNM.  It allows the AML to
  dynamically accept severity codes from the AMP.
  Because HP OpenView statically defines these in
  trapd.conf per trap, we are creating an internal
  for each severity level to work around issue.
  Represents yellow and level 3"
    ::= { awampEventPrefix 53 }

internalAMLCritcal NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
                awampAPIP }
    STATUS current
    DESCRIPTION
 "This is an internal trap designed for AML
  running on the NNM.  It allows the AML to
  dynamically accept severity codes from the AMP.
  Because HP OpenView statically defines these in
  trapd.conf per trap, we are creating an internal
  for each severity level to work around issue.
  Represents Red and level 4"
    ::= { awampEventPrefix 54 }

internalAMLWarning NOTIFICATION-TYPE
```

```
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
                awampAPIP }
    STATUS current
    DESCRIPTION
 "This is an internal trap designed for AML
  running on the NNM.  It allows the AML to
  dynamically accept severity codes from the AMP.
  Because HP OpenView statically defines these in
  trapd.conf per trap, we are creating an internal
  for each severity level to work around issue.
  Represents Cyan and level 6"
    ::= { awampEventPrefix 56 }

internalAMLMajor NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
                awampAPIP }
    STATUS current
    DESCRIPTION
 "This is an internal trap designed for AML
  running on the NNM.  It allows the AML to
  dynamically accept severity codes from the AMP.
  Because HP OpenView statically defines these in
  trapd.conf per trap, we are creating an internal
  for each severity level to work around issue.
  Represents Orange and level 7"
    ::= { awampEventPrefix 57 }

uplinkDevice NOTIFICATION-TYPE
 OBJECTS { awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
                awampAPIP }
    STATUS current
    DESCRIPTION
 "This trap is sent when the device uplink status is changed."
    ::= { awampEventPrefix 58 }

-- ********************************************************************
-- *  Config Traps generated by the AMP
-- *  (1.3.6.1.4.12028.4.15.)
-- ********************************************************************
configAlert NOTIFICATION-TYPE
     OBJECTS { awampAPIP,
               awampEventAPIPOld,
               awampAPEthMAC,
               awampEventAPMngURL,
               awampEventAPMonURL,
               awampGroupName,
               awampEventGroupMngURL,
               awampEventGroupMonURL,
               awampEventAPICON,
               awampAPMFG,
               awampAPModel,
               awampAPFirmware,
               awampApName }
     STATUS current
     DESCRIPTION
       "This trap is sent every time a new device is discovered
```

```
        and authenticated on the AMP.  Also sent upon change to
        IP, Name, Firmware, Group Association."
     ::= { awampEventPrefix 200 }

--
-- conformance information
--
awampConformance OBJECT IDENTIFIER ::= { awamp 2 }
awampCompliances OBJECT IDENTIFIER ::= { awampConformance 1 }
awampGroups      OBJECT IDENTIFIER ::= { awampConformance 2 }

-- compliance statements
awampCompliance MODULE-COMPLIANCE
    STATUS  current
    DESCRIPTION
         "The compliance statement for the AirWave AMP."
    MODULE  -- this module
    MANDATORY-GROUPS { awampInfoGroup, awampEventGroup, awampNotificationGroup }
    ::= { awampCompliances 1 }

awampInfoGroup OBJECT-GROUP
    OBJECTS   { -- these are defined in this module
                awampApName,
                awampGroupName,
                awampAPEthMAC,
                awampAPIP,
                awampAPMFG,
                awampAPModel,
                awampAPFirmware,
                awampROCommString,
                awampHPOVHostName,
                awampHPOVSYSID,
                awampHPOVMAC1,
                awampHPOVIP1,
                awampHPOVMAC2,
                awampHPOVIP2,
                awampHPOVsysName,
                awampHPOVsysDescr }
     STATUS current
     DESCRIPTION
         "The group of objects providing AMP information."
     ::= { awampGroups 1 }

awampEventGroup OBJECT-GROUP
     OBJECTS  { -- these are defined in this module
                awampEventID,
                awampEventSeverityCode,
                awampEventDescription,
                awampEventAPIPOld,
                awampEventAPMngURL,
                awampEventAPMonURL,
                awampEventGroupMngURL,
                awampEventGroupMonURL,
                awampEventAPICON,
                awampEventRogueSSID,
                awampEventRogueLANManufacturer,
                awampEventRogueRadioManufacturer,
                awampEventRogueIsWired,
                awampEventRogueIsWireless,
                awampEventRogueClassifyingRule,
                awampEventRogueDiscoveringAgent,
                awampEventRogueDiscoveringAgentFolder,
```

```
                awampEventRogueClientMac,
                awampEventRogueName }
    STATUS current
    DESCRIPTION
         "The group of objects providing AMP events."
    ::= { awampGroups 2 }

awampNotificationGroup NOTIFICATION-GROUP
    NOTIFICATIONS  { -- these are defined in this module
                tooManyDevAssocAMP,
                tooManyDevAssocGroup,
                tooManyDevAssocAp,
                toomuchBWAMP,
                toomuchBWGroup,
                toomuchBWAP,
                toomuchBWClient,
                toomanyRoamsClient,
                poorSignalAP,
                nonAMPAPChange,
                unauthenticatedClient,
                rogueAPDetected,
                downAP,
                discoveredAP,
                upAP,
                downRadio,
                clientAssociate,
                authIssueClient,
                authIssueAP,
                authIssueAMP,
                idsEventAP,
                rfidTagNotHeard,
                dot11Counters,
                qosCounters,
                deviceResources,
                diskUsage,
                managedAmpDown,
                watchedAmpDown,
                interfaceBandwidth,
                radioUtilization,
                deviceEvent,
                rogueAPDetectedDetail,
                ipv4LinkLocalAddresses,
                vpnUserConnect,
                clientOnRogueAP,
                vpnUserAssociate,
                toomuchBWVPNUser,
                toomuchGoodputClient,
                speedClient,
                noisefloorRadio,
                genericTrap,
                internalAMLUnknown,
                internalAMLNormal,
                internalAMLMinor,
                internalAMLCritcal,
                internalAMLWarning,
                internalAMLMajor,
                uplinkDevice,
                configAlert }
    STATUS current
    DESCRIPTION
        "The group of objects providing AMP notifications."
    ::= { awampGroups 3 }
```

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