



INTELLIGENT COMMUNICATIONS

Ethernet Routing Switch 8300

Software Release 4.2.3.0

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1. Release Summary

Release Date: October 15, 2010

Purpose: Software maintenance release to address customer found software issues.

2. Important Notes before Upgrading to This Release

None

3. Platforms Supported

Ethernet Routing Switch 8300 modules in 8010 and 8006 chassis.

Ethernet Routing Switch 8300 modules in 8306 and 8310 chassis.

4. Notes for Upgrade

File Names for This Release

File Name	Module or File Type	File Size (bytes)
p83b4230.img	Boot monitor image	1091944
p83a4230.img	Runtime image	9403809
p83r4230.dld	Run-time image for R modules	2324652
p83c4230.img	3DES	52424
p83c4230.aes	AES (this image includes the DES image)	26960
p83a4230.mib	MIB	3684013
p83a4230.mib.zip	MIB (zip file)	578961
p83a4230.md5	md5 checksum file	477
p83f4230.img	Pre-Boot monitor image **See IMPORTANT Note below	230786

** Avaya recommends that the Pre-Boot Image ONLY be upgraded if the system is currently running a Pre-Boot Monitor Software Rel 3.6. Systems running a Pre-Boot image Rel 3.7 should not be upgraded as there have been no changes to the Pre Boot Image for this release. The following CLI command can be used to help determine the version of the Pre-Boot Monitor Software:

show sys sw

5. Version of Previous Release

Software Version 4.2.2.2

6. Compatibility

This software release is managed with Java Device Manager (JDM) release 6.1.9.0 or greater.

7. Changes in This Release

New Features in This Release

- Auto configuration of IP phones is possible with LLDP-MED feature.
The new CLI and ACLI commands: added to support the feature

CLI :

Config ethernet (slot/port) lldp tx-tlv med med-network-policy add | del app-type
<value> [vlan <value>] [dscp <value>] [priority <value>

ACLI :

Interface gigabitEthernet/fastEthernet [slot/port] lldp tx-tlv med med-network-policies

- For details on MIB object changes and new CLI/ACLI commands refer to section 11

Old Features Removed From This Release

None

Problems Resolved in This Release

CLI/ACLI

- The two CLI commands shown below have been extended to filter on port number. [Q01977336]
 - show port info fdb-entry [vlan <value>] [port <value>]
 - show vlan info fdb-entry [<vid>] [mac <value>] [port <value>].
- Nortel to Avaya rebranding done, All the show commands in CLI/ACLI along with the banner would display Avaya. [Q02146140]

The new banner is shown below:

```
*****  
* Copyright (c) 1996-2010 Avaya, Inc.      *  
* All Rights Reserved                      *  
* Ethernet Routing Switch 8006            *  
* Software Release 4.2.3.0                 *  
*****
```

- MIB description is still maintained as Nortel.

Layer 2

- RSTP port config was not saved while running in ACLI mode, this is resolved [Q02156871]
- RSTP port role/state not correct after link break on MLT is resolved. [Q01845973]
- SLPP default Ethertype is now Avaya owned 0x8102 (from Nortel owned 0x8104) – 0x8104 still processed for backward compatibility [Q01845973]
- VLACP transitions when display a large file and quit is resolved. [Q02154476]

Layer 3

- Trace route failing in full mesh RSMLT is resolved. [Q02133826]
- Ping on VRRP virtual IP failing with data packet size more then 1472 is resolved. [Q02163855]
- OSPF value md5-key was getting stored in the config file, this is resolved. [Q02133043]

Platform

- The situation of POE cards going down during failovers is resolved. [Case ID: 100902-97554]

- Data loss on GBIC [AA1419013-E5] for 5-10 seconds is resolved. To be noted if a link is connected both sides with SFP AA1419013-E5 and are in half-Duplex state, we may have one side disabled and other side forwarding. [Q02130626]
- In ACLI: Switch was getting factory defaulted in verbose mode, this is resolved. [Q02124517]
- Switch resets on continuous login and exits is resolved.[Q02150788]
- HW WARNING Wrong dev type 15111ab - error message on stand-by is resolved. [Q02151936]
- The switch was getting factory defaulted on reboot after swapping IO cards. This is resolved now, we see the configurations getting loaded without getting factory [Q02060208]

MLT / SMLT

- When the fdb-entry ages out on IST boxes, one of the boxes makes an ARP request for the Mac entry, but due to hashing algorithm the reply is coming on the peer IST box. Since the Arp is aged out on one box, it requests the other to delete it too. As a result, the entry is getting lost on both the boxes. This issue is resolved. [Q02057910]

SNMP

- Filter Crash SNMP task was resolved. [Q02158463]

8. Outstanding Issues

NA

9. Known Limitations

- JDM support for LLDP-MED is not available
- Log File Transfer with RSTP Fails.
- Configuring ACL mode – from the bootconfig sub-context still uses the nncli syntax instead of ACL
 “config bootconfig flags nncli <true | false>”

10. Documentation Corrections

None

11. LLDP-MED Feature

The purpose of this feature is to allow an IP Phones to get *voice_VLAN*, DSCP and priority, tagged/untagged traffic type's information through LLDP MED Network Policy TLV.

LLDP-MED functionality is configured on a per port basis.

When an IP Phone sends a LLDP PDU with MED capabilities the switch will notice that it has a MED endpoint device on that port and will reply with a PDU containing the Network Policies TLVS together with the other non-LLDP-MED TLVs already set for transmission.

The LLDP-MED standard specifies that if the MED capability TLV is not received from an endpoint device on a port than no other MED TLVs except med-capabilities will be sent to the user in a PDU.

The VLAN information is sent to the IP Phone through LLDP-Med Network Policy TLV. Multiple Network Policy TLVs can be sent in one LLDP PDU, each for a distinct application type.

CLI Command

```
config ethernet (slot/port) lldp tx-tlv med med-network-policy
    add | del app-type <value> [vlan <value>] [dscp <value>] [priority <value>]
```

CLI Examples

PURPOSE: LLDP-MED: app-type Voice
PROCEDURE: Execute command **config ethernet [slot/port] lldp tx-tlv med med-network-policy add app-type 1**
This command is used to enable IP voice traffic to flow.

PURPOSE: LLDP-MED: app-type Voice-Signaling
PROCEDURE: Execute command **config ethernet [slot/port] lldp tx-tlv med med-network-policy add app-type 2**
This command is used to enable Voice-Signaling for connection establishment with the IP phone.

PURPOSE: LLDP-MED: Vlan ID set
PROCEDURE: Execute command **config ethernet [slot/port] lldp tx-tlv med med-network-policy add app-type [1/2] vlan [Value]**
This command is send the vlan id in the LLDP MED network policy TLV. Default value of Zero is sent, if not configured.

PURPOSE: LLDP-MED: dscp set
PROCEDURE: Execute command **config ethernet [slot/port] lldp tx-tlv med med-network-policy add app-type [1/2] dscp [Value]**
This command is send the dscp in the LLDP MED network policy TLV. Default value of Zero is sent, if not configured.

PURPOSE: LLDP-MED: priority set
PROCEDURE: Execute command **config ethernet [slot/port] lldp tx-tlv med med-network-policy add app-type [1/2] priority [Value]**
This command is send the priority in the LLDP MED network policy TLV.
Default value of Zero is sent, if not configured.

PURPOSE: LLDP-MED: Add Voice and Voice Signaling and then delete both Voice and Voice-Signaling
PROCEDURE: Execute command **config ethernet [slot/port] lldp tx-tlv med med-network-policy add app-type 1**
config ethernet [slot/port] lldp tx-tlv med med-network-policy add app-type 2
config ethernet [slot/port] lldp tx-tlv med med-network-policy del app-type 1
config ethernet [slot/port] lldp tx-tlv med med-network-policy del app-type 2

PURPOSE: LLDP-MED: Show Info
PROCEDURE: Execute all the commands under med-network-policy and execute the command **show lldp local-sys-data type med**

ACLI Command

Interface gigabitEthernet/fastEthernet [slot/port] lldp tx-tlv med med-network-policies app-type

ACLI Examples

PURPOSE: ACLI LLDP-MED: app-type voice
PROCEDURE: Execute the command
Interface gigabitEthernet/fastEthernet [slot/port]
lldp tx-tlv med med-network-policies app-type voice

PURPOSE: ACLI LLDP-MED: app-type Voice-signaling
PROCEDURE: Execute the command
Interface gigabitEthernet/fastEthernet [slot/port]
lldp tx-tlv med med-network-policies app-type voice-signalling

PURPOSE: ACLI LLDP-MED: Vlan ID set
PROCEDURE: Execute the command
Interface gigabitEthernet/fastEthernet [slot/port]
lldp tx-tlv med med-network-policies app-type [voice/voice-signalling] vlan [Value]

PURPOSE: ACLI LLDP-MED: dscp set
PROCEDURE: Execute the command
Interface gigabitEthernet/fastEthernet [slot/port]
lldp tx-tlv med med-network-policies app-type [voice/voice-signalling] dscp [Value]

PURPOSE: ACLI LLDP-MED: priority set

PROCEDURE: Execute the command
Interface gigabitEthernet/fastEthernet [slot/port]
lldp tx-tlv med med-network-policies app-type
[voice/voice-signalling] priority [Value]

PURPOSE: ACLI LLDP-MED: Add Voice and Voice Signaling and then delete
Voice and Voice-Signaling

PROCEDURE: Execute the command
Interface gigabitEthernet/fastEthernet [slot/port]
lldp tx-tlv med med-network-policies app-type voice
lldp tx-tlv med med-network-policies app-type voice-signalling
no lldp tx-tlv med med-network-policies app-type voice
no lldp tx-tlv med med-network-policies app-type voice-signalling

PURPOSE: LLDP-MED: Show Info

PROCEDURE: Execute the command **show lldp local-sys-data med**

MIB Object Summary

The following MIB objects are added to provide the SNMP support.

rcLldpXMedLocMediaPolicyTable
rcLldpXMedLocMediaPolicyEntry
rcLldpXMedLocMediaPolicyPortNum
rcLldpXMedLocMediaPolicyAppType
rcLldpXMedLocMediaPolicyPriority
rcLldpXMedLocMediaPolicyDscp
rcLldpXMedLocMediaPolicyUnknown
rcLldpXMedLocMediaPolicyTagged
rcLldpXMedLocMediaPolicyRowStatus

MIB Object Details

File: rapid_city.mib.head

In the Import section:

```
PolicyAppType  
FROM LLDP-MED-MIB
```

Under rcport Node:

```
-----  
---  
-- LLDP-MED - Local Device Information
```



```

-----
---
---
--- rcLldpXMedLocMediaPolicyTable: Local Media Policy
---         Information Table
---
---
rcLldpXMedLocMediaPolicyTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF RcLldpXMedLocMediaPolicyEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "This table contains one row per policy type per port
        of media policy information (as a part of the MED
        organizational extension) on the local system known
        to this agent."
    ::= { rcPort 12 }

rcLldpXMedLocMediaPolicyEntry OBJECT-TYPE
    SYNTAX      RcLldpXMedLocMediaPolicyEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "Information about a particular policy on a specific
        port component."
    INDEX      { rcLldpXMedLocMediaPolicyPortNum, rcLldpXMedLocMediaPolicyAppType }
    ::= { rcLldpXMedLocMediaPolicyTable 1 }

RcLldpXMedLocMediaPolicyEntry ::=
    SEQUENCE {
        rcLldpXMedLocMediaPolicyPortNum      InterfaceIndex,
        rcLldpXMedLocMediaPolicyAppType      PolicyAppType,
        rcLldpXMedLocMediaPolicyVlanID       Integer32,
        rcLldpXMedLocMediaPolicyPriority     Integer32,
        rcLldpXMedLocMediaPolicyDscp        Integer32,
        rcLldpXMedLocMediaPolicyUnknown     TruthValue,
        rcLldpXMedLocMediaPolicyTagged      TruthValue,
        rcLldpXMedLocMediaPolicyRowStatus   RowStatus
    }

rcLldpXMedLocMediaPolicyPortNum OBJECT-TYPE
    SYNTAX      InterfaceIndex
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "."
    ::= { rcLldpXMedLocMediaPolicyEntry 1 }

rcLldpXMedLocMediaPolicyAppType OBJECT-TYPE
    SYNTAX      PolicyAppType

```

MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"The media type that defines the primary function of the application for the policy advertised by an endpoint."
REFERENCE
"ANSI/TIA-1057, Section 10.2.3.1"
::= { rcLldpXMedLocMediaPolicyEntry 2 }

rcLldpXMedLocMediaPolicyVlanID OBJECT-TYPE
SYNTAX Integer32 (0 | 1..4094 | 4095)

MAX-ACCESS read-create
STATUS current
DESCRIPTION
"An extension of the VLAN Identifier for the port, as defined in IEEE 802.1P-1998.
A value of 1 through 4094 is used to define a valid PVID.
A value of 0 shall be used if the device is using priority tagged frames, meaning that only the 802.1p priority level is significant and the default VID of the ingress port is being used instead.
A value of 4095 is reserved for implementation use."
REFERENCE
" ANSI/TIA-1057, Section 10.2.3.5"
::= { rcLldpXMedLocMediaPolicyEntry 3 }

rcLldpXMedLocMediaPolicyPriority OBJECT-TYPE
SYNTAX Integer32 (0..7)
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"This object contains the value of the 802.1p priority which is associated with the given port on the local system."
REFERENCE
" ANSI/TIA-1057, Section 10.2.3.6 "
::= { rcLldpXMedLocMediaPolicyEntry 4 }

rcLldpXMedLocMediaPolicyDscp OBJECT-TYPE
SYNTAX Integer32(0..63)
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"This object contains the value of the Differentiated Service Code Point (DSCP) as defined in IETF RFC 2474 and RFC 2475 which is associated with the given port on the local system."
REFERENCE
" ANSI/TIA-1057, Section 10.2.3.7"
::= { rcLldpXMedLocMediaPolicyEntry 5 }

rcLldpXMedLocMediaPolicyUnknown OBJECT-TYPE

SYNTAX TruthValue
MAX-ACCESS read-create
STATUS current
DESCRIPTION

"A value of 'true' indicates that the network policy for the specified application type is currently unknown. In this case, the VLAN ID, the layer 2 priority and the DSCP value fields are ignored. A value of 'false' indicates that this network policy is defined "

REFERENCE

" ANSI/TIA-1057, Section 10.2.3.2"
::= { rcLldpXMedLocMediaPolicyEntry 6 }

rcLldpXMedLocMediaPolicyTagged OBJECT-TYPE

SYNTAX TruthValue
MAX-ACCESS read-create
STATUS current
DESCRIPTION

"A value of 'true' indicates that the application is using a tagged VLAN.
A value of 'false' indicates that for the specific application the device either is using an untagged VLAN or does not support port based VLAN operation. In this case, both the VLAN ID and the Layer 2 priority fields are ignored and only the DSCP value has relevance "

REFERENCE

" ANSI/TIA-1057, Section 10.2.3.3"
::= { rcLldpXMedLocMediaPolicyEntry 7 }

rcLldpXMedLocMediaPolicyRowStatus OBJECT-TYPE

SYNTAX RowStatus
MAX-ACCESS read-create
STATUS current
DESCRIPTION

"Used to create/delete entries."

::= { rcLldpXMedLocMediaPolicyEntry 8 }

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