

Ethernet Routing Switch 2500 Series Software Release 4.3.2

1. Release Summary

Release Date: 22-July-2011

Purpose: Software patch release to address customer and internally found software issues.

2. Important Notes Before Upgrading to This Release

None.

3. Platforms Supported

Ethernet Routing Switch 2500 (all models).

4. Notes for Upgrade

Please see “Ethernet Routing Switch 2500 Series Overview — System Configuration” (NN47215-500, available at <http://www.avaya.com/support> - click Products, select Ethernet Routing Switch 2500 Series from the A-Z list, then select Documentation > View All Documents) for details on how to upgrade your Switch.

File Names for This Release

File Name	Module or File Type	File Size (bytes)
2500_10015_diag.bin	Diagnostic image	1,265,238
2500_432012.img	Agent code image	6,148,972
2500_432013.img	Agent code image (SSH)	6,254,388

5. Version of Previous Release

Software Version 4.3.1

6. Compatibility

This software release is managed with Enterprise Device Manager (EDM) which is integrated into the agent software.

7. Changes in This Release

7.1. New Features in This Release

7.1.1 802.1AB integration

802.1AB integration provides a set of LLDP TLVs for Avaya IP telephone support. You can select which Avaya IP phone support TLVs can be transmitted from individual switch ports by enabling or disabling TLV transmit flags for the port. The TLV transmit flags and TLV configuration operate independently of each other. Therefore, you must enable the transmit flag on a switch port for a specific TLV before the port can transmit that TLV to an Avaya IP phone. A switch port does not transmit Avaya IP phone support TLVs unless the port detects a connected Avaya IP phone.

Configuration is supported via Enterprise Device Manager (EDM) and Avaya CLI (example follows):

Prerequisites

- Log on to the Interface Configuration mode in ACLI.
- Enter the interface mode in ACLI (e.g. `interface fastethernet 1/1`).

Procedure Steps

1. Select the Avaya TLVs that the switch transmits by using the following command:
`lldp tx-tlv [port <portList>] vendor-specific avaya {[call-server] [dot1q-framing] [file-server] [poe-conservation]}`
2. Disable Avaya TLVs that the switch transmits by using the following command:
`no lldp tx-tlv [port <portList>] vendor-specific avaya {[call-server] [dot1q-framing] [file-server] [poe-conservation]}`
3. Display Avaya TLV transmit flag configuration information for specific switch ports by using the following command in the Interface Configuration mode for one or more ports:
`show lldp tx-tlv vendor-specific avaya`

802.1AB Avaya PoE Conservation Level Request TLV

With the PoE conservation level request TLV, you can configure the switch to request that an Avaya IP phone connected to a switch port operate at a specific power conservation level. The requested conservation level value for the switch can range from 0 to 255 (Avaya IP Phones support 243 levels). Selecting a higher value than the phone's range will set it to its' maximum setting. To disable power conservation mode set the level to zero (0).

If you set the PoE conservation level request TLV on a port and you enable energy-saver for the port, the TLV value is temporarily modified for maximum power savings by the switch. When you disable energy-saver for the port, the switch automatically restores the power conservation level request TLV to the previous value. If you set the PoE conservation level on a port while AES is active on the port and the maximum PoE Conservation level for the switch is 255, the switch replaces the PoE conservation level stored for AES restoration with the new value you set for the port. By default, the transmission of PoE conservation level request TLV is enabled on all PoE capable switch ports. The PoE conservation level request TLV can only be configured for switches that support PoE.

With the PoE conservation level support TLV, an Avaya IP phone transmits information about its current power save level, typical power consumption, maximum power consumption, and power conservation level of the IP phone to a switch port.

Configuration is supported via Enterprise Device Manager (EDM) and Avaya CLI (example follows):

Prerequisites

- Log on to the Interface Configuration mode in ACLI.
- Enter the interface mode in ACLI (e.g. `interface fastethernet 1/1`).

Procedure Steps

1. Configure PoE conservation level TLVs for connected Avaya IP phones by using the following command:
`lldp vendor-specific avaya poe-conservation-request-level <0-255>`
2. Set PoE conservation level TLVs for connected Avaya IP phones to the default value by using the following command:
`default lldp vendor-specific avaya poe-conservation-request-level`
3. Display the PoE conservation level TLVs for connected Avaya IP phones by using the following command:
`show lldp vendor-specific avaya poe-conservation-request-level`
4. Display the received PoE conservation level information for all switch ports by using the following command in the User EXEC mode:
`show lldp neighbor vendor-specific avaya poe-conservation`
5. Display the received PoE conservation level information for specific switch ports by using the following command in the Interface Configuration mode for one or more ports:
`show lldp [port <portlist>] neighbor vendor-specific avaya poe-conservation`

802.1AB Avaya Call server TLV

With the call server TLV, you can configure the switch to advertise the IP addresses of a maximum of 8 call servers to connected Avaya IP phones. Avaya IP phones use the IP address information to connect to a call server. Avaya IP phones use the call server TLV to report which call server it is connected to back to the switch. The call server TLV supports IPv4 addresses only. By default, the transmission of the call server TLV is enabled for all ports.

Configuration is supported via Enterprise Device Manager (EDM) and Avaya CLI (example follows):

Prerequisites

- Log on to the Global Configuration mode in ACLI.

Procedure Steps

1. Define the local call server IPv4 addresses the switch advertises to Avaya IP phones by using the following command (you can configure up to 8 Call servers):
`lldp vendor-specific avaya call-server [<1-8>] <A.B.C.D> [[<1-8>] <A.B.C.D>]`
2. Disable call server IPv4 address advertisement to Avaya IP phones by using the following command:
`default lldp vendor-specific avaya call-server <1-8>`
3. Display call server TLV configuration information for the local switch by using the following command:
`show lldp vendor-specific avaya call-server`
4. Display call server advertisement configuration information received on specific switch ports from connected Avaya IP phones by using the following command:
`show lldp [port <portlist>] neighbor vendor-specific avaya call-server`

802.1AB Avaya File server TLV

With the file server TLV, you can configure the switch to advertise the IP addresses of a maximum of 4 file servers to connected Avaya IP phones. Avaya IP phones use the IP address information to connect to a file server. Avaya IP phones use the call server TLV to report which file server it is connected to back to the switch. The file server TLV supports IPv4 addresses only. By default, the transmission of the file server TLV is enabled for all ports.

Configuration is supported via Enterprise Device Manager (EDM) and Avaya CLI (example follows):

Prerequisites

- Log on to the Global Configuration mode in ACLI.

Procedure Steps

1. Define the local file server IPv4 addresses the switch advertises to Avaya IP phones by using the following command (you can configure up to 4 File Servers):

```
lldp vendor-specific avaya file-server [<1-4>] <A.B.C.D> [[<1-4>] <A.B.C.D>]
```
2. Disable call server IPv4 address advertisement to Avaya IP phones by using the following command:

```
default lldp vendor-specific avaya file-server <1-4>
```
3. Display call server TLV configuration information for the local switch by using the following command:

```
show lldp vendor-specific avaya file-server
```
4. Display file server advertisement configuration information received on specific switch ports from connected Avaya IP phones by using the following command:

```
show lldp [port <portlist>] neighbor vendor-specific avaya file-server
```

802.1AB Avaya 802.1Q Framing TLV

With the 802.1Q framing TLV, you can configure the switch to exchange Layer 2 priority tagging information with Avaya IP phones. Because the 802.1Q framing TLV operates as an extension of the LLDP Network Policy TLV, you must enable the LLDP MED Capabilities and LLDP MED Network Policy TLVs for the 802.1Q framing TLV to function. By default, the transmission of the 802.1Q framing TLV is enabled for all ports on switches that support PoE.

Configuration is supported via Enterprise Device Manager (EDM) and Avaya CLI (example follows):

Prerequisites

- Log on to the Interface Configuration mode in ACLI.
- Enter the interface mode in ACLI (e.g. `interface fastethernet 1/1`).

Procedure Steps

1. Configure the Layer 2 frame tagging mode by using the following command (note it is recommended to use either tagged or non-tagged mode):

```
lldp vendor-specific avaya dot1q-framing [tagged | non-tagged | auto]
```
2. Set the Layer 2 frame tagging mode to default by using the following command:

```
default lldp vendor-specific avaya dot1q-framing
```
3. Display the configured Layer 2 frame tagging mode for all switch ports by using the following command in the User EXEC mode:

```
show lldp vendor-specific avaya dot1q-framing
```

4. Display the configured Layer 2 frame tagging mode for specific switch ports by using the following command in the Interface Configuration mode for one or more ports:

```
show lldp vendor-specific avaya dot1q-framing
```

802.1AB Avaya Phone IP TLV

Avaya IP phones use the phone IP TLV to advertise IP phone IP address configuration information to the switch. The phone IP TLV supports IPv4 addresses only.

Configuration is supported via Enterprise Device Manager (EDM) and Avaya CLI (example follows):

Prerequisites

- Log on to the Interface Configuration mode in ACLI.

Procedure Steps

1. Display the received IP address configuration information for all switch ports by using the following command in the User EXEC mode:

```
show lldp neighbor vendor-specific avaya phone-ip
```
2. Display the received IP address configuration information for specific switch ports by using the following command in the Interface Configuration mode for one or more ports:

```
show lldp [port <portlist>] neighbor vendor-specific avaya phone-ip
```

7.1.2 EDM Improvements

Improvements have been made to the performance of EDM especially when starting EDM for the first time.

7.2 Old Features Removed From This Release

None.

7.3 Problems Resolved in This Release

Unicast acknowledge (option 85) change to multicast acknowledge by DHCP-relay agent (**wi00835604**)

The inconsistency between CLI MAC_Security Addr & MAC_Addr_Table is now resolved (**wi00847984**)

It was not possible to clear MAC- security MAC-Address table when disabling port or disabling Mac-Security (**wi00848022**)

Mac Security autoLearn was not functioning consistently (**wi00831512**)

Ethernet link problems with Intel 82566MM chipset is addressed in this release (**wi00861163**)

8. Outstanding Issues

None.

9. Known Limitations

ADAC Up-link ports are removed from Voice VLAN after boot base unit (**wi00905726**)

This issue is addressed in the 4.4 release.

10. Documentation Corrections

Due to code changes included in 4.3.2 to address wi00732866 "ERS 5xxx- SMLT/SLT ports using SFPs with fix speed and duplex not working after a reboot", the default behavior of the "speed 1000" command was modified to allow connecting to remote devices that are not capable of auto-negotiation.

The old requirement was to have auto-negotiation always enabled when having 1Gb links for both copper and fiber.

The current recommendation for getting a successful link-up on 1Gb ports is:

- on copper ports, the auto-negotiation should always be enabled;
- on fiber ports, auto-negotiation should be enabled or disabled on both partners; --> This is how wi00482642 was fixed.
- in case one of the link partners is not capable of auto-negotiation, the auto-negotiation must be disabled at the other end

To enable auto-negotiation on a 1Gb port, use the "speed port <portNum> auto" command.

To disable it, you use the "speed port <portNum> 1000" command.

If you would like to achieve the same behavior as the "speed port <portNum> 1000" command, you could use the "auto-negotiation-advertisements port <portNum> 1000-full pause-frame" command.

For other known issues, please refer to the product release notes and technical documentation available from the Avaya Technical Support web site at: <http://www.avaya.com/support> .

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