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Release Notes for the Catalyst 2900 Series XL Cisco IOS Release 11.2(8)SA1

February 25, 1998

These release notes describe the features and caveats for Cisco IOS Release 11.2(8)SA1.

Catalyst 2900 series XL switches are supported by a special release of Cisco IOS software that is not released on the same eight-week maintenance cycle that is used for other platforms. As maintenance releases and future Cisco IOS releases become available, they will be posted to CCO in the Cisco IOS software area.

The product documentation for the Catalyst 2900 series XL modules and the Catalyst 2900 series XL switches is as follows:

Catalyst 2900 Series XL Installation and Configuration Guide

Catalyst 2900 Series XL Modules Installation Guide

Catalyst 2900 Series XL Command Reference (online only)

Quick Start: Catalyst 2900 Series XL Cabling and Setup

Release Notes for the Catalyst 2900 Series XL Cisco IOS 11.2(8)SA

New Software Features

The following changes have been made to the web-based Port Management page:

- The page now displays the current duplex and speed status for ports that have been set to autonegotiate these settings.
- A **Stats** button has been added to display port statistics.

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Current Caveats

This section describes possibly unexpected behavior by Cisco IOS Release 11.2(8)SA1.

- Cannot use the CDP name to connect to the CDP neighbor from the CDP HTML page. The workaround is to register the CDP name to a domain name server before trying to connect to it from the CDP HTML page. [CSCdj31392]

- The MIB-II IpRoute table is always empty even though a default gateway has been defined.

The MIB-II IpRoute table only contains entries if Cisco IOS software is running on a router. Because this is a switch, not a router, the IpRoute table will always be empty. [CSCdj36918]

- Broadcast storm control miscounts the input broadcast frame rate. The workaround is to not rely on the “Current” field of the output of **show port storm-control**. [CSCdj37018]

- There are some commands that are not disabled, but that do nothing. For example, the configuration command **ip routing** can be entered from the command line without error. This command, however, does nothing. Do not enter router-based Cisco IOS commands such as **ip routing**. [CSCdj43070]

- CGMP cannot be disabled. There is no workaround. [CSCdj44323]

- If the user uses ? when entering a command-line interface (CLI) command to find out the available module numbers, the help prompt displays the incorrect module number (interface number). Depending on whether the system has no modules, one module, or two modules, the available module numbers are 0, 0–1, or 0–2. [CSCdj47044]

- Inconsistent port numbering for dot1dStpPort and dot1dTpFdbPort.

For dot1dStpPort, the range of system board port numbers is from 1–32, the range of module 1 port numbers is from 33–64, and the range of module 2 port numbers is 33–64.

For dot1dTpFdbPort, the range of system board port numbers is from 1–64, the range of module 1 port numbers is from 65–128, and the range of module 2 port numbers is from 129–193.

Use the above port-numbering scheme to match dot1dStpPort port number and dot1dFdbPort port number to module and port numbers on the system. [CSCdj47348]

- c2900PortNumberOfLearnedAddresses and c2900PortNumberOfDroppedAddresses MIB objects are not currently supported. No workaround is available. [CSCdj48438]

- The value of MIB object c2900PortRxSuppressBcastFrames is always zero.

The MIB object c2900PortRxSuppressBcastFrame is not supported. It is used to count the broadcast frames received that were discarded because of the threshold-based broadcast suppression. [CSCdj48447]

- Turning on Port Fast on ports in a Fast EtherChannel port group might cause a loss of connectivity between switches. The workaround is to not turn on Port Fast on ports in a Fast EtherChannel port group. [CSCdj48602]

- Error messages are returned when the user tries to set the following CISCO-C2900-MIB objects:

c2900PortBroadcastRisingThreshold, c2900PortFloodUnknownUnicasts, c2900PortFloodUnknownMulticasts, c2900PortFrameAge, c2900PortMayForwardFrames, c2900PortBufferCongestionControl, c2900PortGroupIndex, c2900PortUsageApplication, c2900PortBufferCongestionThresholdPercent, c2900InfoVisualIndicatorMode, and c2900PortClearAddresses

These C2900 MIB objects are not supported in this release. Use the corresponding CLI commands to set these variables. [CSCdj49182]

- In the C2900PortEntry table, four objects are not maintained:
c2900PortNumberOfDroppedAddresses, c2900PortFloodUnknownMulticasts,
c2900PortAddrSecureAddrViolations, and c2900PortNumberOfLearnedAddresses
When retrieving these MIB objects, the values returned are always zero.
These objects are not currently supported. The values returned by these four objects should be ignored. [CSCdj49186]
- The c2900PortVisualIndicator object in the CISCO-C2900-MIB always returns the state of the LED in port status mode.
This MIB object will only indicate the LED color in the portStatus mode. Therefore, make sure that the c2900InfoVisualIndicatorMode is portStatus before relying on the validity of the c2900PortVisualIndicator object. The LED colors can also be determined by looking at the front of the Catalyst 2900 series XL switch. [CSCdj49195]
- The c2900ConfigAddressViolationAction and c2900PortFrameAge objects in the CISCO-C2900-MIB always return their default values.
If the default values for these MIB objects are altered, do not rely on their current values to be returned by the MIB. [CSCdj49197]
- The ifInUcastPkts of ifTable, when read from SNMP, does not give the correct number of unicast packets. This number might not always be the latest. There are some other statistics in the ifTable that behave the same way. This problem happens only on FastEthernet interfaces.
Do not depend on the statistics of FastEthernet interface ifTable to be the latest values. To get the right values, enter the **show interface** command from the CLI. [CSCdj49278]
- On the Port Security HTML page, security action cannot be configured by choosing the security action and clicking **Apply**. The workaround is to disable port security, click **Apply**, and then reenables port security and set the security action before clicking **Apply**. [CSCdj49285]
- The historyControlIndex in the RMON MIB can be greater than 65535. No workaround is necessary; the switch functions properly regardless of the historyControlIndex value. To comply with the RMON MIB, do not specify a historyControlIndex value greater than 65535. [CSCdj49296]
- The count of input broadcast frames does not include the count of multicast frames nor the count of broadcast frames and multicast frames dropped due to forwarding decisions.
Enter **show controllers ethernet-controller interface** at the CLI to display a complete table of statistics for an interface. This can then be used to determine the complete number of broadcast frames, including multicast and unforwarded frames. [CSCdj49315]
- The RMON monitoring of ifIndex.1 does not work properly.
The ifIndex.1 interface refers to the internal, or CPU, interface to the network. Because this is an internal interface, RMON monitoring of this interface is not supported. This interface should not be specified in the historyControlDataSource. [CSCdj49324]
- The ACT and COL LEDs shown on the HTML home page are not working.
The ACT and COL LEDs displayed on the front panel of the HTML home page should be marked 1 and 2. They are LEDs that display module status on the real system. These LEDs on the HTML page are not supported. [CSCdj50013]
- When the user enters the **reload** command to reboot the system, there is no prompt for saving configuration changes into NVRAM.

Either use a **write mem** command before using **reload** to reboot the system, or avoid using the **clear** command to modify the system configuration. [CSCdj50400]

- Creating an RMON event table entry from the CLI with a duplicate eventIndex writes over the previous entry.

When creating entries in the RMON event table from the CLI, be sure to choose unique event numbers for each entry. [CSCdj50799]

- The user cannot add a static address through the web interface if no output port is specified.

Add the static address by using the CLI command **mac-address-table static hwaddr input-port**. [CSCdj50857]

- Creating RMON event table entries with large eventIndex fields will cause CPUHOG messages on the console.

When creating entries in the RMON event table, choose small numbers for the eventIndex value. Sequential numbers starting with 1 will work best. [CSCdj51546]

- The value of the STP RootPort number shown from SNMP (Bridge MIB object dot1dStpRootPort) is incorrect.

Use the CLI **show spantree** command to find the STP RootPort number. [CSCdj51560]

- STP Designated Port number and STP Designated Cost shown from SNMP (dot1dStpPortDesignatedCost and dot1dStpPortDesignatedPort) are always 0.

To obtain the correct value of STP Designated Port Number and STP Designated Cost, use the **show spantree** command. [CSCdj51594]

- STP Topology Change Number does not increase.

Do not rely on Topology Change Number to count the times STP topology has changed. [CSCdj51607]

- The violation action for the Port Security page should read Shutdown, not Disable. This will provide consistency between online help and the web page. [CSCdj52608]

- Broadcast frames that are filtered due to broadcast storm control are not counted in the **show-interface** statistics.

If an accurate number of broadcast frames received on an interface is required, do not enable broadcast storm control on the interface. [CSCdj53486]

- SNMP ifInUcastPkts, ifOutUcastPkts, ifInNUcastPkts, and ifOutNUcastPkts counters are incorrect.

The ifInUcastPkts or ifOutUcastPkts counters include unicast and multicast packets received or sent by the switch. The ifInNUcastPkts or ifOutNUcastPkts counters only include broadcast packets received or sent by the switch. [CSCdj54209]

- On the HTML page that displays the switch, a port in STP blocking state is displayed in green.

To find out if a port is in STP blocking state, go to the Spanning-Tree Management page, or check the LED right above the port on the front panel. [CSCdj54388]

- STP and CDP packets on port 1 are not forwarded to the monitor port.

Switch the connections between port 1 and the monitor port. Disable port monitoring on the monitor port, and enable port monitoring on port 1. [CSCdj54447]

- No connectivity to a Novell server after client power-up or reboot. The Ethernet link to the switch is active, but the client failed to find a Novell server and cannot log into it.

Configure the switch port to operate at a fixed speed and specify the duplex mode; for example, choose 100 Mbps and half duplex. This will disable autonegotiation on the switch port and allow the link between the client and the switch to set up faster. This allows the initial broadcast frames from the client searching for the Novell server to be forwarded through the switch more quickly. [CSCdj57531]

- Some configuration changes do not take effect when the configuration is changed through the web-based Switch Manager.

When using the web-based management, do not make more than 15 configuration changes before clicking **Apply**. [CSCdj58539]

- The SNMP MIB object C2900BandwidthUsagePeakEntry Peak values are too large.

There is no workaround for this problem. Do not rely on the value of this field to provide accurate information. [CSCdj64613]

- The timestamp values stored in the SNMP MIB object C2900BandwidthUsagePeakEntry can indicate too much time between intervals.

There is no workaround for this problem. The time elapsed during one interval might be too long if the CPU was under heavy load during the interval. This could cause the intervals to not land on exact interval boundaries (for example, 24-hour periods from midnight to midnight). [CSCdj65046]

- The CISCO-C2900-MIB returns incorrect values for c2900PortFloodUnknownMulticasts and c2900PortFloodUnknownUnicasts objects. The workaround is that the value returned by c2900PortFloodUnknownUnicasts is the value that should be returned by c2900PortFloodUnknownMulticasts. [CSCdj65178]
- The CISCO-C2900-MIB objects c2900PortFrameAge, c2900PortBufferCongestionControl, and c2900PortBufferCongestionThresholdPercent should be treated as read-only objects. An error is returned if you attempt to set this object. [CSCdj65469]
- The set function of c2900PortUsageApplication MIB object is not supported.

Use the WEB interface or CLI to set the corresponding port application parameters. [CSCdj66180]

- The CISCO-C2900-MIB does not allow the c2900BandwidthUsagePeakInterval to be set. The default interval of 1 hour is the only interval available in this release. [CSCdj67159]
- If the c2900BandwidthUsagePeakRestart is set to TRUE, the c2900BandwidthUsagePeakTable is cleared, and the peak bandwidth recording is restarted. If the c2900BandwidthUsagePeakRestart is set to FALSE, no action should be taken. But even if the c2900BandwidthUsagePeakRestart is set to FALSE, the peak table is getting cleared and the peak bandwidth recording is restarted.

Do not set the c2900BandwidthUsagePeakRestart to FALSE. [CSCdj67194]

- System does not automatically find the Cisco IOS image in Flash memory during system startup.

To work around this, change the name of the file used to boot the system and enter the **boot system flash:boot_filename** command to identify the name of the new Cisco IOS image. [CSCdj68326]

- No warning is given if a user changes to a new Web page without applying the changes on the current page.

The workaround is to click **Apply** before changing to a new Web page when there are changes to be saved. [CSCdj68976]

- The CISCO-C2900-MIB object c2900PortUsageApplication cannot be set. In order to control the port application, use the Cisco IOS CLI. [CSCdj69900]
- The RPS indicator on the physical view of the switch is not shown.
This error does not have a workaround. [CSCdj70757]
- Layer 2 output queues can become blocked when an interface is reset with a low probability.
When a Layer 2 interface has become blocked, this condition can be detected by entering **show interface interface** and observing the status of the output queue.

```
pheller-malibu#show int f0/14 FastEthernet0/14 is up, line protocol is up Hardware is Fast Ethernet, address is 00e0.1ee2.de0e (bia 00e0.1ee2.de0e) MTU 1500 bytes, BW 100000 Kbit, DLY 100 usec, rely 255/255, load 1/255 Encapsulation ARPA, loopback not set, keepalive not set Half-duplex, 100Mb/s, 100BaseTX/FX ARP type: ARPA, ARP Timeout 04:00:00 Last input 19:08:48, output 00:00:01, output hang never ^^^^^^^ (1) Last clearing of "show interface" counters never Queueing strategy: fifo Output queue 0/40, 0 drops; input queue 0/75, 0 drops ^ (2)
```

(1) When an interface running STP is blocked, the time of last output should not be more than 2 seconds.

(2) The number of output frames queued should be either 0, or in rare cases, 1.

If this condition is detected, resetting the interface should clear the output queue and restart transmission. You can either enter **shutdown** and then **no shutdown** to reset the interface or disconnect and reconnect the Ethernet cable at both ends of the connection. [CSCdj70808]
- Sometimes the LED on a shut-down secure port does not turn amber.
For a port enabled for port security, use the **show interface** command to determine whether the port has been shut down because of security violations. [CSCdj70986]
- On the CDP web page, the help explanation for the Browse button should read as follows:
“Start a new browser session and display the HTML interface of the selected neighboring device.” [CSCdj71921]
- Alternating amber/green port status LED due to collision fragments.
If collision fragments are being generated at a fast enough rate on a switch port, the port status LED displays an alternating green/amber port fault condition.
Collision fragments are not an error condition in a half-duplex Ethernet network. If the port fault indication is activated on a port, use **show controllers ethernet-controller interface** to display a table of port statistics. Several other statistics are also used to activate the port fault display, such as, Transmit Late Collisions, Transmit Excessive Collisions, Transmit Too Late Discards, Receive Alignment Errors, Receive FCS Errors, Receive Oversize Frames, and Receive Undersize Frames.
If none of these statistics are incrementing or are not incrementing very quickly, the port fault indicator was activated due to collision fragments and should not be considered a fault condition. [CSCdj72160]
- Web interface does not provide an option to disable SNMP. There is no workaround for this DDT. [CSCdj72792]
- Security reject counter is not cleared after security is turned off on the port. No workaround is available. [CSCdj73101]
- Every time a port MAC address is changed, the address table size available to the user is reduced by one because the old MAC address is not removed from the address table until the system is reset.

The workaround is to reset the system after a port MAC address is changed and the change has been saved. [CSCdj73177]

- Port statistics cannot be cleared from any of the HTML pages.

The HTML pages do not contain any buttons that cause the port statistics to be cleared.

From the Cisco Access Page, choose **Monitor the Switch** instead of **Web Console**. This is the HTML command interface. Select **clear**, then **controllers**, and **ethernet-controller**. Select **<CR>** to clear all ports, or continue and enter the interface to be cleared. The statistics displayed through the HTML will reflect this clearing action. [CSCdj35562]

- The C2900 XL implements broadcast storm control differently from the way a Catalyst 2800 implements it. The C2900 XL seeks to limit the amount of broadcast traffic that is forwarded through the switch. Therefore, if there is a constant 600-pps broadcast packet on a port with a rising threshold of 500 and a falling threshold of 400, broadcast storm control is activated. If the “filter” action is chosen, packets are not forwarded until the rate of packets being forwarded is less than 400 pps. When the forwarding rate drops below 400 pps, broadcasts are once again forwarded. But because there is a constant stream of broadcast packets of 600 pps, the switch will quickly pass the rising threshold and block broadcasts. This implementation has the effect of limiting the broadcast forwarding rate on a port to a rate between the rising and falling threshold. [CSCdj53443]

- The broadcast storm rate is above the falling threshold and below the rising threshold.

This is the correct behavior. Action is taken when broadcast storm rate crosses from below to above the rising threshold and when the rate falls from above to below the falling threshold. [CSCdj53499]

- When entering the **reload** command, the operator is not prompted to save configuration changes.

Save the configuration from the CLI before entering the **reload** command. [CSCdj54346]

- The output of the **show port storm-control** command is incomplete for ports that do not have either filter or trap enabled on them.

Display the port storm-control status by using the console or the Telnet interface. [CSCdj54589]

- The switch performs as if it has run out of I/O memory, but the **show mem** command value indicates it has not run out of memory.

Do not rely on the **show mem** lowest field for I/O memory to reliably report the lowest level of I/O memory. [CSCdj57625]

- The switch unreliably responds to continuous pings from another workstation.

This could be due to a network transmitting broadcast traffic at 500 frames per second and thus containing a misconfigured or faulty device. In this case, fix or remove the faulty device. It could also be a duplex mismatch. See the *Catalyst 2900 Series XL Installation and Configuration Guide* for instructions on how to troubleshoot duplex mismatches. [CSCdj60660]

- A port remains in an Spanning-Tree Protocol (STP) listening state.

Do not use SNMP STP to disable spanning tree on a port if you intend to reenabling spanning tree. [CSCdj73797]

Cisco IOS 11.2(8)SA Caveats/Release 11.2(8)SA1 Modifications

This section describes Cisco IOS Release 11.2(8)SA caveats that were resolved with Cisco IOS Release 11.2(8)SA1.

- The following message is printed on the console after the user enters the **enable** command:

```
% No authentication server running
```

This happens if the user has previously entered the **enable use-tacacs** configuration mode command. [CSCdj75618]

- When the Mode button is set to utilization, the LEDs display a VU-meter-style indicator that rapidly changes the LEDs from green to amber. [CSCdj29328]
- When configuring a port for port security and using SNMP to generate traps, address security violation traps are not sent when address security violations occur. [CSCdj35909]
- A message appears on the console shortly after booting:

```
% Illegal subtree oid: c2900MibNotificationsPrefix.1 XCRS% Illegal subtree oid: c2900MibNotificationsPrefix.2.
```

[CSCdj44968]

- If the speed of a switch port is set to autonegotiate, and the user tries to force full duplex on the port, the port will lose its link. [CSCdj47637]
- Bandwidth Group objects in CISCO-C2900-MIB are not updated. [CSCdj48441]
- When the Mode button is pressed to switch to the bandwidth-utilization display, all or most of the LEDs are amber. [CSCdj49279]
- The MAC address aging time can be set to less than 10 seconds. [CSCdj50275]
- Telnet does not work from the system. Telnet from the system to other stations is not supported. [CSCdj51155]
- Power-on self-test (POST) failure message for the Ethernet port is suppressed. POST does not display an error message if a problem is detected with one of the Ethernet controllers. [CSCdj51535]
- After a **write erase** command, the **show running** command returns an error. [CSCdj51956]
- Help description for the **tar** command is incorrect. [CSCdj52165]
- No link is detected after a Compaq computer with a NETELLIGENT 10/100 PCI adapter connected to one of the ports on the switch is power-cycled. [CSCdj53272]
- No link is detected on a port connected to a device with cable of a certain length. [CSCdj53500]
- The following console message could display at boot up:

```
%SYS-3-CPUHOG: Task ran for 2232 msec (275/259), Process = Init, PC = 1116B0  
-Traceback= A9798 128B94 129298
```
- Address security violations are not reported when the switch address table is full. [CSCdj57731]
- The switch might reset if the user tries to set one of the switch port's own MAC addresses. [CSCdj58119]
- STP cannot be enabled under certain circumstances. [CSCdj59203]
- LED can stay green for a while after the link on the port is down. [CSCdj60674]
- Sometimes a module port MAC address cannot be added to the address table. [CSCdj61019]

- The settings for individual objects in the switch SNMP MIB are treated as set-all for all objects in that group. For example, if the c2900PortLinkbeatStatus of c2900PortTable needs to be set, all the other objects in the c2900PortTable also get set. [CSCdj61728]
- An interface sometimes drops incoming packets destined for the system itself. [CSCdj61832]
- Console output can hang. [CSCdj63078]
- When using Microsoft Internet Explorer and clicking **Apply**, sometimes the screen is not updated correctly. [CSCdj63729]
- When using Microsoft Internet Explorer and clicking **Apply**, sometimes the screen is not updated correctly. [CSCdj63852]
- Microsoft Internet Explorer displays the error message “400 Bad Request.” [CSCdj63863]
- The CISCO-C2900-MIB object c2900BandwidthUsagePeakEntry should be treated as a read-only object. An error will be returned if you attempt to set this object. [CSCdj63917]
- Use the Communicator/Navigator 4.x to view the Port Management page. [CSCdj65532]
- A 3Com 3c509 network-interface card (NIC) connected to a switch port establishes a link at 100Mbps/full duplex after a PC is rebooted, even though the NIC is set to 100/half duplex. If a PC with a 3Com 3c509 NIC set to 100Mbps/half duplex is rebooted, the switch will establish a link at 100Mbps/full duplex. [CSCdj65919]
- A new file is extracted from a tar file, overwriting a previous file with the same name, and the new file size is larger than it should be. [CSCdj71812]
- The command **snmp host hostname** returns the following error:

```
% Illegal subtree oid: c2900MibNotificationsPrbullefix.1 % Illegal subtree oid:
c2900MibNotificationsPrefix.2
```

[CSCdj73497]

Cisco Connection Online

Cisco Connection Online (CCO) is Cisco Systems’ primary, real-time support channel. Maintenance customers and partners can self-register on CCO to obtain additional information and services.

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You can access CCO in the following ways:

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- WWW: <http://www-europe.cisco.com>
- WWW: <http://www-china.cisco.com>

- Telnet: cco.cisco.com
- Modem: From North America, 408 526-8070; from Europe, 33 1 64 46 40 82. Use the following terminal settings: VT100 emulation; databits: 8; parity: none; stop bits: 1; and connection rates up to 28.8 kbps.

For a copy of CCO's Frequently Asked Questions (FAQ), contact cco-help@cisco.com. For additional information, contact cco-team@cisco.com.

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This document is to be used in conjunction with the *Catalyst 2900 Series XL Installation and Configuration Guide*.

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