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Release Notes for Catalyst 2900 Series XL Modules

April 1999

These release notes describe the caveats for the Catalyst 2900 series XL modules.

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Introduction

The Catalyst 2900 series switches now offer a 1000BaseX module in addition to the switched 10BaseT/100BaseTX and 100BaseFX modules. The 1000BaseX module allows you to install either a short-wavelength (SX) or long-wavelength (LX/LH) Gigabit Interface Converter (GBIC). These modules can add port density and fiber-optic connectivity or high-speed uplink to a Catalyst 2900 series XL network. The 10BaseT/100BaseTX module autonegotiates the duplex and speed settings of each port to match that of the attached device. The 1000BaseX module autonegotiates the duplex mode only.

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Features

The following features are supported on the 1000BaseX module:

- VLAN integration

The module supports VTP and Media Access Control (MAC) address-based dynamic VLANs.

The module supports IEEE 802.1Q and Inter-Switch Link (ISL) tagging. See the *Catalyst 2900 Series XL Command Reference* publication and *Catalyst 2900 Series XL Enterprise Edition Software Configuration Guide* for VLAN configuration information.

- Per-VLAN spanning tree plus (PVST+)

An independent spanning tree instance runs on each VLAN. See the *Catalyst 2900 Series XL Command Reference* publication and *Catalyst 2900 Series XL Enterprise Edition Software Configuration Guide* for spanning-tree configuration information.

- Trunking (IEEE 802.1Q and ISL)

The module supports setting a trunk to IEEE 802.1Q or ISL mode. Enter the **set trunk** command to configure trunk ports and to add VLANs to the allowed VLAN list for existing trunks. See the **set trunk** command description in the *Catalyst 2900 Series XL Command Reference* publication.

- Port Security

See the *Catalyst 2900 Series XL Enterprise Edition Software Configuration Guide* for information about configuring port security on a port or range of ports.

- Autonegotiation



Caution Autonegotiation with Gigabit Ethernet behaves differently than autonegotiation with Ethernet or FastEthernet. To avoid link configuration problems, refer to the *Catalyst 2900 Series XL Enterprise Edition Software Configuration Guide* for information about autonegotiation.

- Gigabit EtherChannel

Configure Gigabit EtherChannel by entering the **set port channel** command.

- Support for Catalyst 2900 series IOS Release 11.2(8)SA5 or later

Installation Notes

You must tighten the screws while inserting the module in the switch.



Warning Tighten screws to activate.

Waarschuwing Schroeven aandraaien om te activeren.

Varoitus Aktivoi kiristämällä ruuvit.

Attention Pour activer : serrez les vis.

Warnung Schrauben anziehen für Aktivierung.

Avvertenza Per attivare: stringere la vite.

Advarsel Stram skruene for å aktivere.

Aviso Aperte os parafusos para ativar.

¡Advertencia! Para activar, apriete los tornillos.

Warning! Aktiviera genom att dra åt skruvarna.

使用するにはネジを締めてください。

Important Notes

Switch Software Requirement

To use the Gigabit Ethernet module (WS-X2931-XL) with a Catalyst 2900 series XL switch, ensure that the switch is running IOS version SA5 or later. For information on upgrading the switch software, see “Upgrading Your Catalyst 2900 Series XL Switch Software.”

Hot Swapping

Hot swapping is *not* supported in this release. When inserting a module in or removing a module from a switch, power off the switch. If you insert or remove a module while the switch is powered on, restart the switch using the **reload** command.

Caveat

This section contains a list of known problems and suggested workarounds.

Gigabit Interface Converter Data Integrity

Some Gigabit Interface Converters (GBICs) contain faulty data. Therefore, the GBIC information is *not* reliable. The software cannot detect that this is erroneous information, so it passes along the faulty data. If you select a cable based on this erroneous information, the module link will not come up. To work around this problem, select a cable based on the GBIC type printed on the label.

Upgrading Your Catalyst 2900 Series XL Switch Software

This section describes the procedure for upgrading your Catalyst 2900 series XL switch software by using the IOS command-line interface (CLI). If you are running Cisco IOS Release 11.2(8)SA3 or later, we recommend that you upgrade the switch by using the web-based Cisco Visual Switch Manager Software (CVSM). To perform the steps in this section, you must have a TFTP server and a management station (such as a PC) with a CD-ROM drive. You must also access the switch management console by either of these two methods:

- Using a terminal emulation program (such as ProComm or HyperTerminal) and the supplied RJ-45-to-RJ rollover cable and adapters
- Using Telnet if an IP address is assigned to the switch

Coping Files from the CD-ROM

Follow these steps to download a new version of Catalyst 2900 software:

- Step 1** Insert the CD-ROM into the CD-ROM drive.
- Step 2** Copy the following files from the CD-ROM to a location on your TFTP-enabled PC (or transfer the files to the switch directly from the CD-ROM):
- Enterprise Edition: `c2900XL-hs-mz-112.8-SAn.tar`
 - Standard Edition: `c2900XL-h-mz-112.8-SAn.tar`

Upgrading Switch Software by Using the Command-line Interface

You can use the CLI to perform a TFTP transfer of the files to the switch.

The procedure that follows includes the commands to address the following issues:

- To avoid a conflict with users accessing the manager software pages during the software upgrade, delete the existing HTML files and disable access to the HTML pages before you upgrade the software.
- Because the switch Flash memory can hold only one software image file, you need to change the name of the *current* image file to the name of the *new* file you are copying. You then replace the old file with the new file when you copy it into Flash memory.

Follow these steps to upgrade the switch software by using a TFTP transfer:

- Step 1** If your PC or workstation cannot act as a TFTP server, copy the files to a TFTP server to which you have access.

- Step 2** You can access the CLI by starting a Telnet session or by connecting to the console port via the RS-232 connector.

To start a Telnet session on your PC or workstation, enter the following command:

```
server% telnet switch_ip_address
```

- Step 3** Enter privileged EXEC mode:

```
switch> enable
switch#
```

- Step 4** Display the name of the current (default) image file. The following example shows the current name in *italic*:

```
switch# show boot
BOOT path-list:    flash:current_image
Config file:      flash:config.text
Enable Break:     1
Manual Boot:      no
```

- Step 5** If there is no file defined in the BOOT path-list, enter **dir flash:** to display the contents of Flash memory. The file named `c2900XL-h-mz_current_version` is your current image file.

- Step 6** Rename the current image file to the name of the new image. This does not affect the operation of the switch.

```
switch# rename flash:current_image flash:new_image
Source filename [current_image]?
Destination filename [new_image]?
```

- Step 7** Display the contents of Flash memory to verify the renaming of the file:

```
switch# dir flash:
Directory of flash:
-rwx      910426 Mar 06 1993 23:47:28  new_image
-rwx       80971 Sep 14 1998 03:10:38  c2900XL-diag-mz-112.0.0.11-SA2
-rwx       4800 Mar 01 1993 00:04:14  html
-rwx        159 Jan 01 1970 00:00:34  env_vars
-rwx       1121 Mar 01 1993 18:46:01  config.text
```

- Step 8** If you are upgrading a WS-C2916M-XL, you need to delete the diagnostics file to make room for the new software.

Note If you are not upgrading one of the listed models, you do not need to delete this file.

The diagnostics file has a name in the following format:
c2900XL-diag-mz-version_name. The string *version_name* depends on the switch and software you are running.

Display the diagnostics file:

```
switch# dir flash:c2900XL-diag-mz*
Directory of flash:
-rwx       80971 Sep 14 1998 03:10:38  c2900XL-diag-mz-112.0.0.11-SA2
```

Delete the diagnostics file:

```
Switch# del flash:c2900XL-diag-mz-112.0.0.11-SA2
Delete filename [c2900XL-diag-mz-112.0.0.11-SA2]?
Delete flash:c2900XL-diag-mz-112.0.0.11-SA2? [confirm]
Switch#
```

- Step 9** Enter terminal configuration mode:

```
switch# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
```

- Step 10** Disable access to the switch HTML pages:

```
switch(config)# no IP http server
```

- Step 11** Change the name of the default image file:

```
switch(config)# boot system flash:new_image
```

- Step 12** Return to privileged EXEC mode:

```
switch(config)# ^Z
```

- Step 13** Verify that the name of the default image file is correct:

```
switch# show boot
BOOT path-list:    flash:new_image
Config file:      flash:config.text
Enable Break:     1
```

```
Manual Boot:          no
HELPER path-list:
NVRAM/Config file
buffer size: 32768
```

- Step 14** Remove the manager software HTML files:

```
switch# del flash:html/*
```

Press the Enter key to confirm the deletion of each file. Do not press any other keys during this process.

- Step 15** If you are running IOS Release 11.2(8)SA3 or later, remove the files in the Snmp directory:

```
switch# del flash:html/Snmp/*
```

Press the **Enter** key to confirm the deletion of each file. Do not press any other keys during this process.

- Step 16** If you are running IOS Release 11.2(8)SA2 or earlier, create a directory on the switch Flash memory to be used for the HTML files:

```
switch# mkdir flash:html/Snmp
```

Make sure the "S" in "Snmp" is uppercase.

- Step 17** Enter the following command to copy the new software file from the TFTP server to the switch Flash memory:

```
switch# tar /x tftp://server_ip_address//path/filename.tar flash:
Loading /path/filename.tar from server_ip_address (via!)
extracting advanced.gif (2648 bytes)
extracting amber.gif (530 bytes)!
extracting bar.gif (4156 bytes)!
extracting cool.gif (530 bytes)
extracting daytona.gif (1470 bytes)
extracting duplgnd.gif (639 bytes)!
. . .
```

Depending on the TFTP server being used, you might need to enter only one slash (/) after the *server_ip_address* in the **tar** command.

- Step 18** Enter terminal configuration mode:

```
switch# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
```

- Step 19** Reenable access to the switch HTTP pages:

```
switch(config)# IP http server
```

- Step 20** Reload the new software with the following command:

```
switch# reload
System configuration has been modified. Save? [yes/no]:y
Proceed with reload? [confirm]
```

- Step 21** Press **Return** to confirm the reload.

Your Telnet session ends when the switch resets.

Upgrading the Switch Software by Using IOS 11.2(8)SA5 Cisco Visual Switch Manager

This section describes the procedure for upgrading switch software after you have upgraded to IOS Release 11.2(8)SA5. To upgrade to IOS Release 11.2(8)SA5, see the “Upgrading Your Catalyst 2900 Series XL Switch Software” section. To upgrade the WS-C2916M-XL model from IOS Release 11.2(8)SA4 to IOS Release 11.2(8)SA5, you need to use the command-line interface procedure described in the “Upgrading the Switch Software by Using IOS 11.2(8)SA5 Cisco Visual Switch Manager” section.

With IOS Release 11.2(8)SA5, you can upgrade the switch software by using a single file. You can download this file by using the procedure described in "Downloading Files from CCO" section.

Follow these steps to upgrade the switch software by using the combined (tar) file that contains the image and the HTML pages:

Step 1 Open the CVSM System Configuration page.

Note To avoid errors during the upgrade process, close any other switch CVSM pages open.

Step 2 In the Combined Cisco IOS and Visual Switch Manager Upgrade section, enter the IP address of your TFTP server in the Server IP Address or Name of TFTP Server field.

Step 3 In the Cisco IOS and Visual Switch Manager Upgrade Filename field, enter the filename of the combined IOS image and HTML tar file that you downloaded from CCO (such as c2900XL-h-mz-112.8-SA5.tar or c2900XL-hs-mz-112.8-SA5.tar)

Note Do not enter the path name. Enter only the filename in this field. You set the path in the TFTP root directory of the TFTP server application.

Step 4 Click **Upgrade Cisco IOS and Visual Switch Manager**.

In the CVSM software message window that appears, click **OK** to change the old image filename into the new image filename. Changing the filenames enables the old image to be overwritten by the new version. Only enough Flash memory is available for one version.

Step 5 In the CVSM software confirmation window that appears, click **OK** to continue the upgrade process. This can take several minutes.

Step 6 In the TFTP server window, wait for the successful message to appear.

Step 7 Reboot the switch.

Reload the CVSM page to access the new HTML files.

Catalyst 2900 Software Caveats

For a list of Catalyst 2900 software caveats, refer to the *Release Notes for the Catalyst 2900 Series XL Cisco IOS Release 11.2(8)SA5*.

Related Documentation

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

- *Catalyst 2900 Series XL Modules Installation Guide*
- *Catalyst 2900 Series XL Installation and Configuration Guide*
- *Catalyst 2900 Series XL Enterprise Edition Software Configuration Guide*
- *Catalyst 2900 Series XL Command Reference*
- *Quick Start: Catalyst 2900 Series XL Cabling and Setup*
- *Release Notes for the Catalyst 2900 Series XL Cisco IOS Release 11.2(8)SA5*

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.

Available 24 hours a day, 7 days a week, CCO provides a wealth of standard and value-added services to Cisco's customers and business partners. CCO services include product information, product documentation, software updates, release notes, technical tips, the Bug Navigator, configuration notes, brochures, descriptions of service offerings, and download access to public and authorized files.

CCO serves a wide variety of users through two interfaces that are updated and enhanced simultaneously: a character-based version and a multimedia version that resides on the World Wide Web (WWW). The character-based CCO supports Zmodem, Kermit, Xmodem, FTP, and Internet e-mail, and it is excellent for quick access to information over lower bandwidths. The WWW version of CCO provides richly formatted documents with photographs, figures, graphics, and video, as well as hyperlinks to related information.

You can access CCO in the following ways:

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

Note If you are a network administrator and need personal technical assistance with a Cisco product that is under warranty or covered by a maintenance contract, contact Cisco's Technical Assistance Center (TAC) at 800 553-2447, 408 526-7209, or tac@cisco.com. To obtain general information about Cisco Systems, Cisco products, or upgrades, contact 800 553-6387, 408 526-7208, or cs-rep@cisco.com.

Documentation CD-ROM

Cisco documentation and additional literature are available in a CD-ROM package, which ships with your product. The Documentation CD-ROM, a member of the Cisco Connection Family, is updated monthly. Therefore, it might be more current than printed documentation. To order additional copies of the Documentation CD-ROM, contact your local sales representative or call customer service. The CD-ROM package is available as a single package or as an annual subscription. You can also access Cisco documentation on the World Wide Web at <http://www.cisco.com>, <http://www-china.cisco.com>, or <http://www-europe.cisco.com>.

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

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