

Catalyst Express 500 Series Switches Software Image Upgrade Configuration Example

Document ID: 70761

Introduction

Prerequisites

Requirements

Components Used

Conventions

Background Information

Prepare to Upgrade

Download the Software Image

Software Upgrade using Device Manager

Software Upgrade using Cisco Network Assistant

Verify

Troubleshoot

Software Upgrade Failed

Related Information

Introduction

This document explains the procedure to upgrade a software image on Cisco Catalyst Express 500 Series Switches using both the Device Manager and Cisco Network Assistant.

You need a software image upgrade for several reasons:

- In order to implement new features in your network that are available in the new software release.
- A known bug affects your switch, and that bug is resolved in the next software release.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is based on a Cisco Catalyst Express 500–24LC (WS–CE500–24LC) that runs Cisco IOS® Software Release 12.2(25)FY.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

Refer to the Cisco Technical Tips Conventions for more information on document conventions.

Background Information

The Cisco Catalyst Express 500 Series Switches can only be managed either through the embedded Device Manager GUI (embedded in the Catalyst Express switches) or with Cisco Network Assistant (downloadable from the Software Download (registered customers only) page). You can use either the Device Manager or the Cisco Network Assistant in order to upgrade your Catalyst Express 500 Series Switches. You must use Cisco Network Assistant in order to upgrade multiple switches.

The Device Manager is a graphical device management tool you use to configure, monitor, and troubleshoot the switch. The simplest way to configure, manage, and monitor the switch is with the Device Manager. You can display the Device Manager from anywhere in your network through a web browser such as Microsoft Internet Explorer or Netscape Navigator.

Enhanced Catalyst Express 500 features and procedures are only available from the Cisco Network Assistant network management application. Cisco Network Assistant is a free software program that you can download from Cisco.com and run on your PC as long as you are a registered Cisco.com user. Refer to Cisco Network Assistant for more information.

Complete the steps in the Getting Started Guide for the Catalyst Express 500 Switches in order to set up the switch for the first time.

Prepare to Upgrade

The software upgrade procedure for Catalyst Express 500 is divided into these procedures:

- Download the Software Image
- Software Upgrade using Device Manager
- Software Upgrade using Cisco Network Assistant

Note: The images that this document uses are for example purposes only. Replace the images with the images that you use in your switch environment. Be sure to refer to the Cisco Catalyst Express 500 Series Switches Release Notes for the hardware and software requirements.

Download the Software Image

Complete these steps in order to download the software image.

1. Go to the Software Downloads (registered customers only) page and log in using your Cisco.com username and password.
2. Select Switches Software (registered customers only) from the Downloads page and enter your Cisco.com username and password.
3. Click **LAN Switches** from the Select Device page.

1 Select Device

2 Select Software Type

3 Select Software

4 Download

[Switches](#)

Select a Device

Find Device [Expand all](#) | [Close all](#)

- ATM Switches
- Blade Switches
- Hubs
- LAN Network Management
- LAN Switches
- LRE Series Switches
- Long Reach Ethernet
- Metro Ethernet Switches
- WAN Switches
- xDSL

[Requires a service contract](#)

- Click **Cisco Catalyst Express 500 Series Switches** and choose the switch model.

- Cisco Catalyst Express 500 Series Switches
 - Cisco Catalyst Express 500-24LC Switch [Requires Login and/or service contract](#)
 - Cisco Catalyst Express 500-24PC Switch [Requires Login and/or service contract](#)
 - Cisco Catalyst Express 500-24TT Switch [Requires Login and/or service contract](#)
 - Cisco Catalyst Express 500G-12TC Switch [Requires Login and/or service contract](#)
 - Cisco Catalyst G-L3 Series Switches [Requires Login and/or service contract](#)
 - Cisco Kalpana Series Etherswitches [Requires Login and/or service contract](#)
- LRE Series Switches
- Long Reach Ethernet
- Metro Ethernet Switches
- WAN Switches
- xDSL

[Requires Login and/or service contract](#)

- Select **IOS** from the Select a Software Type page.

1 Select Device

2 Select Software Type

3 Select Software

4 Download

[Switches](#) > [Cisco Catalyst Express 500-24LC Switch](#)

Select a Software Type

[Cisco Network Assistant](#) IOS

- Click **12.2.25-SEG** which is the software release used here for upgrade.

Downloads

1 Select Device

2 Select Software Type

3 Select Software

4 Download

[Switches](#) > [Cisco Catalyst Express 500-24LC Switch](#) > [IOS](#)

Select a Release

Find Release [Expand all](#) | [Close all](#)

Available Releases

12.2

12.2.25-SEG

12.2.25-FY

7. Select the appropriate image version (cryptographic or noncryptographic) from the list.

Downloads

1 Select Device

2 Select Software Type

3 Select Software

4 Download

[Switches](#) > [Cisco Catalyst Express 500-24LC Switch](#) > [IOS](#) > [12.2.25-SEG](#)Release 12.2.25-SEG Software ([ED - Early Deployment](#))Find Release: [Expand all](#) | [Close all](#)

Available Releases

12.2

12.2.25-SEG

12.2.25-FY

[LAN BASE W/O CRYPTO WITH WEB BASED DEV MGR](#)
ce500-lanbase-tar.122-25.SEG.tar
Published 08/Jun/2006
LAN BASE W/O CRYPTO WITH WEB BASED DEV MGR
Size: 7940 KB
Minimum Memory: DRAM:32MB Flash:16MB

[LAN BASE WITH WEB BASED DEV MGR](#)
ce500-lanbasek9-tar.122-25.SEG.tar
Published 08/Jun/2006
LAN BASE WITH WEB BASED DEV MGR
Size: 8470 KB
Minimum Memory: DRAM:32MB Flash:16MB

8. Click **Submit** after you agree to the Encryption Software Export Distribution Authorization.

9. Click **Download** from the Download Image page.

1 Select Device

2 Select Software Type

3 Select Software

4 Download

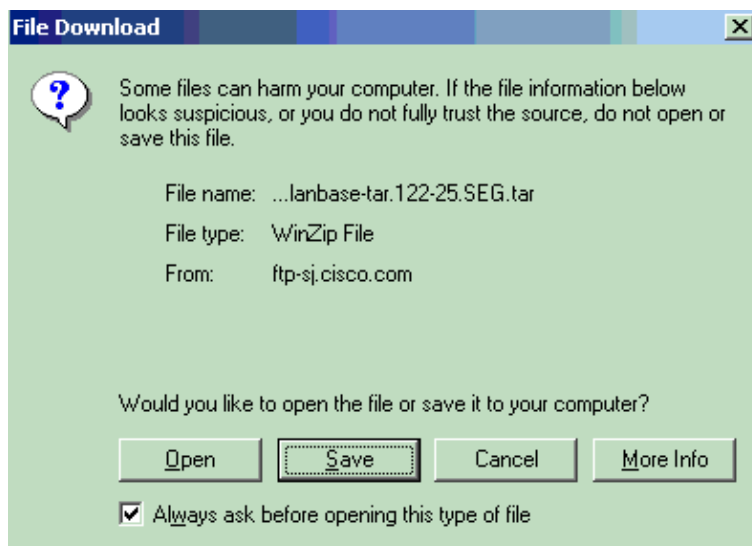
[Switches](#) > [Cisco Catalyst Express 500-24LC Switch](#) > [IOS](#) > [12.2.25-SEG](#) > [LAN BASE W/O CRYPTO WITH WEB BASED DEV MGR](#)

Download Image

[DOWNLOAD](#)

| Details | |
|----------------------------|--|
| Release | 12.2.25-SEG |
| Filename | ce500-lanbase-tar.122-25.SEG.tar |
| Product Code | -- |
| Date Published | 08/Jun/2006 |
| Description | LAN BASE W/O CRYPTO WITH WEB BASED DEV MGR |
| Release Information | Release Notes |
| Security Advisories | Security Advisories |
| Minimum Memory | DRAM:32MB Flash:16MB |
| Size | 7940 KB |
| BSD Checksum | 36572 |
| Core Checksum | 1d417f00 |
| Router Checksum | 0xf129 |
| CRC Checksum | -- |
| MD5 | 30f3d26456c07a40e8e07c9715701f85 |

10. **Agree** to the Software Download Rules and enter your Cisco.com username and password.
11. Click **Save** in order to save the .tar file to your PC.



Note: The file is stored as a .tar file. You can use any archive utility such as WinZip and PKZip in order to extract the .tar file. The files are automatically extracted during the upgrade process.

Software Upgrade using Device Manager

Note: Make sure that you have downloaded the switch software image from Cisco.com to your PC before you complete this software upgrade procedure. See the Download the Software Image section of this document for more information.

For this example, the software on a Catalyst 500 switch is upgraded from a cryptographic version of Cisco IOS Software Release 12.2(25)FY to a noncryptographic version of Cisco IOS Software Release 12.2(25)SEG. The procedure is the same no matter which version of software you use.

Note: You can upgrade the switch from a cryptographic version of the switch software to a noncryptographic version. However, if the switch previously ran the cryptographic version and the Device Manager was accessed through a secured session, the Device Manager cannot automatically redisplay the window after the software upgrade completes. Close the existing browser session and open a new browser session in order to solve this issue.

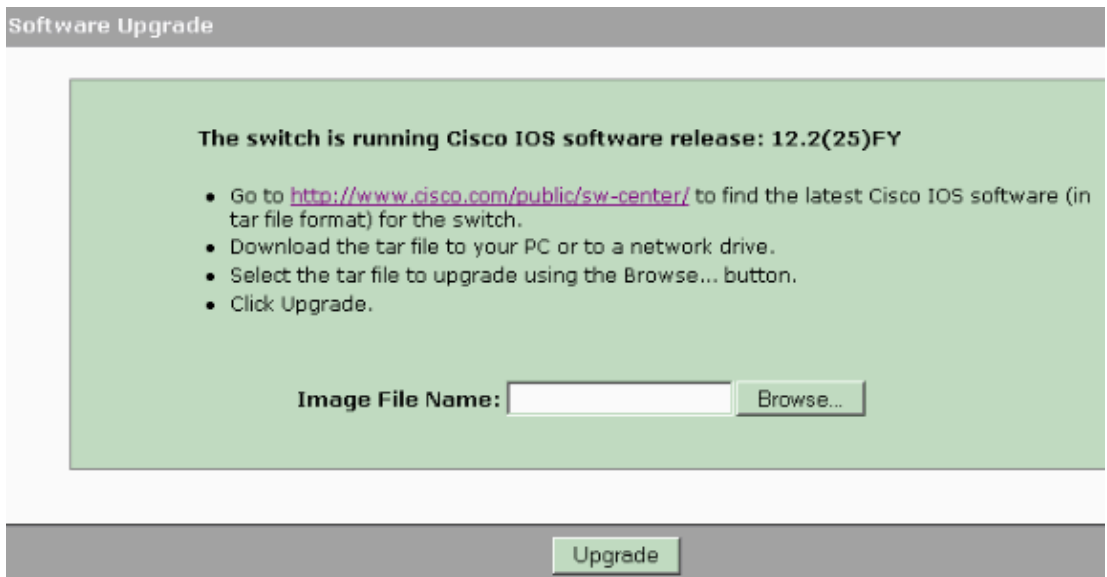
1. Open a web browser and enter the management IP address of the switch. This opens the Device Manager window for Catalyst Express 500.
2. Click **Dashboard** in order to verify the current software version that runs on the switch.

| Dashboard | |
|--------------------|-------------------|
| Switch Information | |
| Host Name: | Switch |
| Product ID: | WS-CE500-24LC |
| IP Address: | 172.16.100.100 |
| MAC Address: | 00:16:46:EB:ED:80 |
| Version ID: | V01 |
| Serial Number: | FOC0948X0JG |
| Software: | 12.2(25)FY |
| Contact: | |
| Location: | |

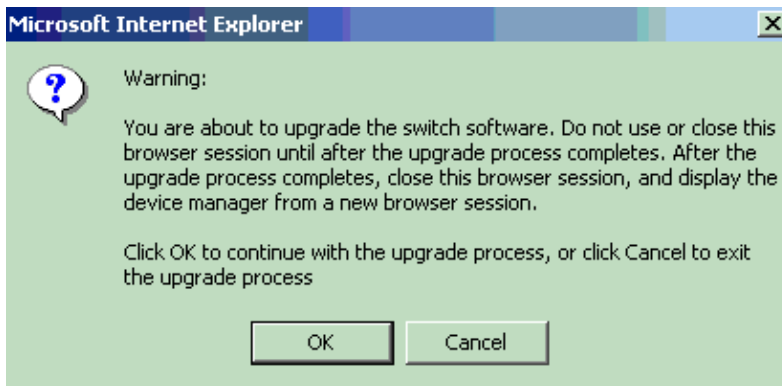
3. Always perform a backup of the switch configuration to the connected PC before you upgrade the software. If you lose the switch configuration for any reason, you can always restore the configuration from this PC.

Note: Use Cisco Network Assistant in order to backup the switch configuration in Cisco Catalyst Express 500 Series Switches. Device Manager has no option to backup the switch configuration. See the Software Upgrade using Cisco Network Assistant section of this document for more information.

4. Click **Software Upgrade** from the Device Manager menu in order to start the upgrade.
5. Click **Browse** and locate the .tar file saved on the PC from the Software Upgrade window.

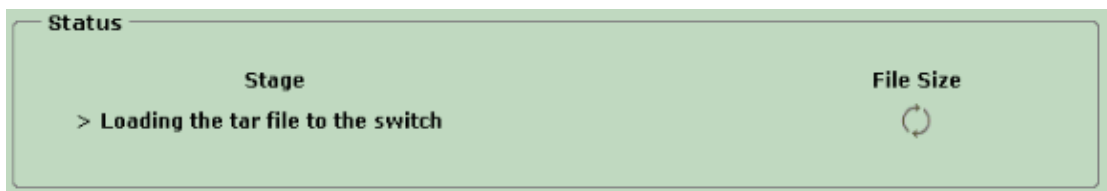


6. Click **Upgrade**. A warning message appears.

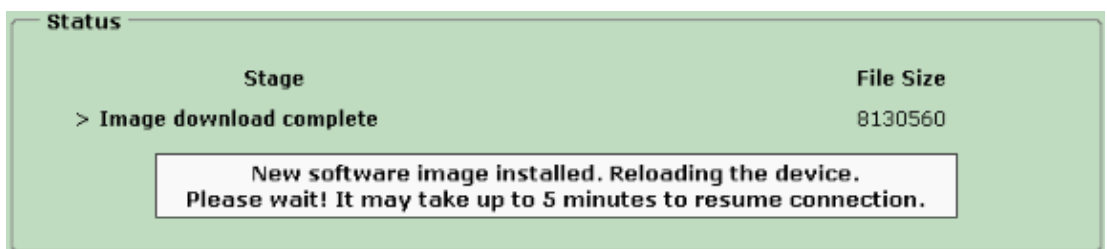


7. Click **OK** in order to continue with the upgrade process.

This starts the upgrade process by loading the .tar file to the switch.



The switch reloads by itself when the upgrade completes.



8. Close this browser session and open a new one. Allow the switch to bootup completely before you try this new session.

9. Verify the switch status after the upgrade.

Dashboard

| Switch Information | |
|--------------------|-------------------|
| Host Name: | Switch |
| Product ID: | WS-CE500-24LC |
| IP Address: | 172.16.100.100 |
| MAC Address: | 00:16:46:EB:ED:80 |
| Version ID: | V01 |
| Serial Number: | FOC0948X0JG |
| Software: | 12.2(25)SEG |
| Contact: | |
| Location: | |

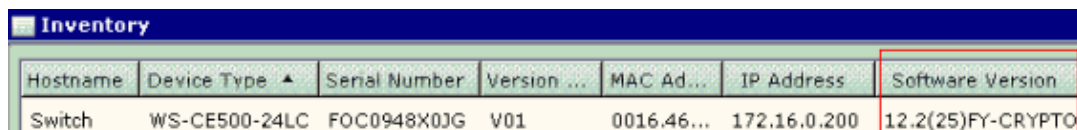
This completes the upgrade procedure for a Cisco Catalyst Express 500 Series Switch using the Device Manager.

Software Upgrade using Cisco Network Assistant

Note: Make sure that you have downloaded the switch software image from Cisco.com to your PC before you complete this software upgrade procedure. See the Download the Software Image section of this document for more information.

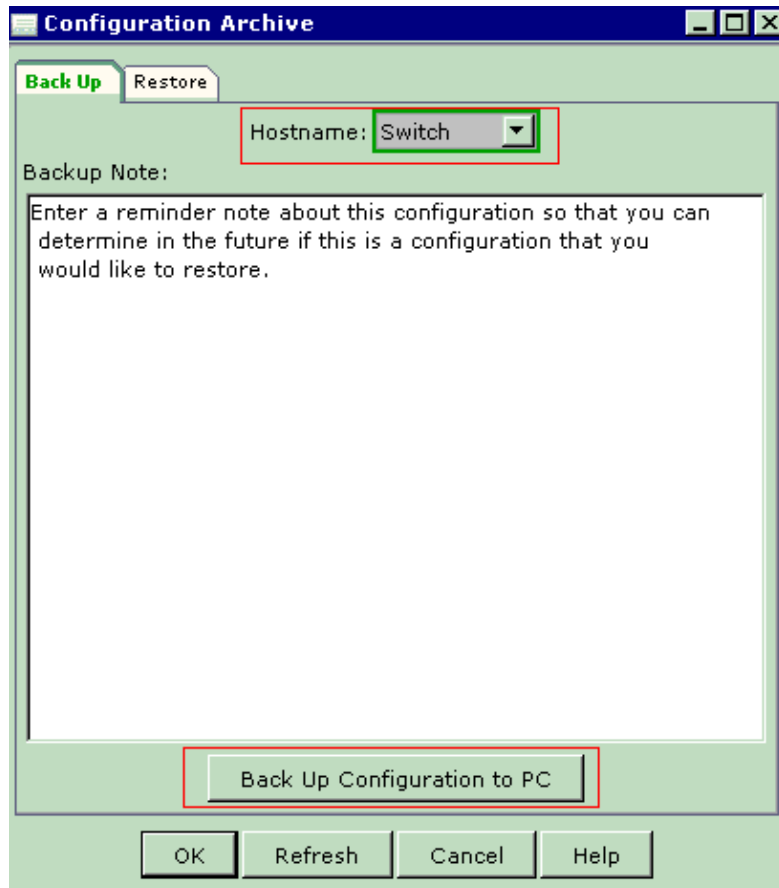
For this example, the software on a Catalyst 500 switch is upgraded from a cryptographic version of Cisco IOS Software Release 12.2(25)FY to a noncryptographic version of Cisco IOS Software Release 12.2(25)SEG. The procedure is the same no matter which version of software you use.

1. Start Cisco Network Assistant on the PC and connect to the switch using the management IP address.
2. Click **Inventory** from the Network Assistant menu in order to verify the current software version that runs on the switch.

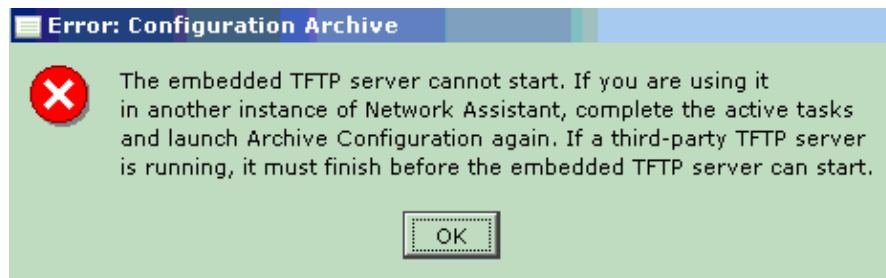


| Hostname | Device Type | Serial Number | Version ... | MAC Ad... | IP Address | Software Version |
|----------|---------------|---------------|-------------|------------|--------------|-------------------|
| Switch | WS-CE500-24LC | FOC0948X0JG | V01 | 0016.46... | 172.16.0.200 | 12.2(25)FY-CRYPTO |

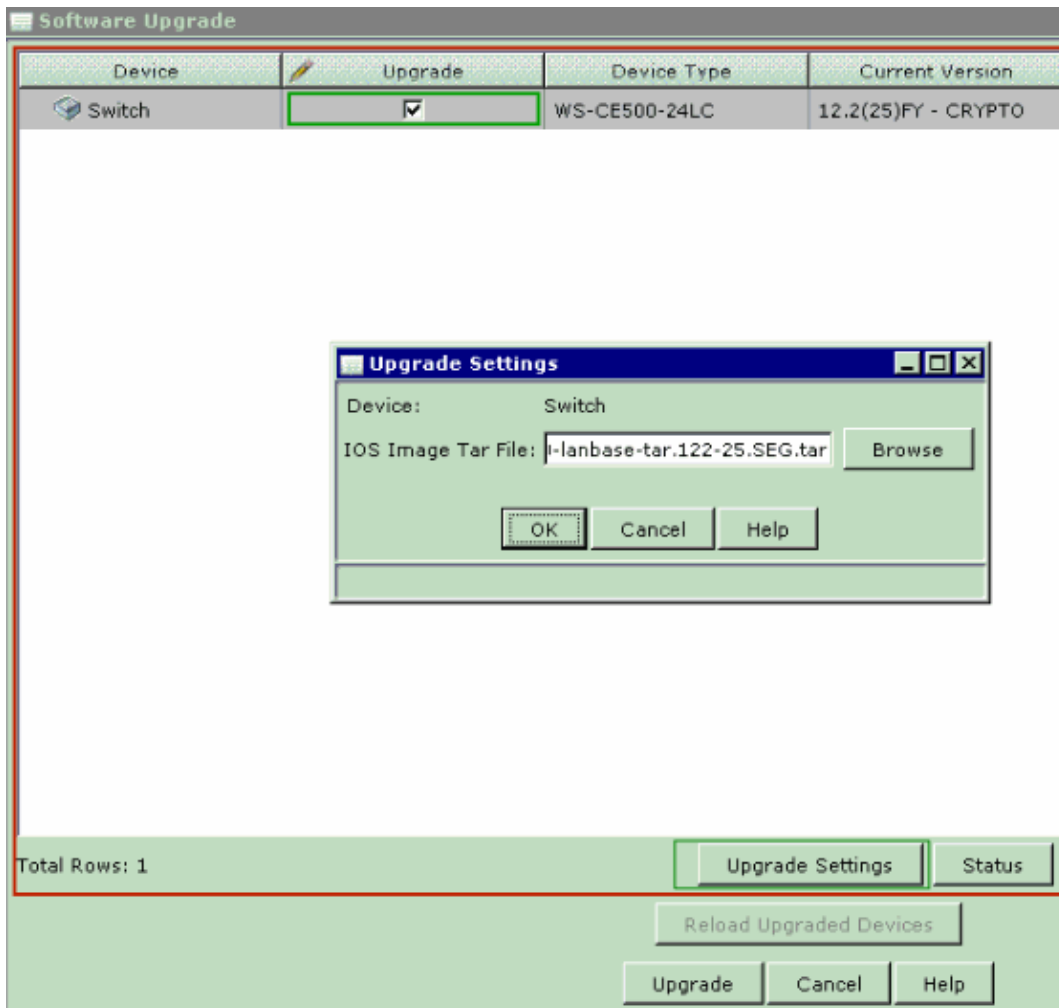
3. Perform a backup of the switch configuration to the connected PC before you upgrade the software. If you lose the switch configuration for any reason, you can always restore the configuration from this PC. Complete these steps:
 - a. Choose **Features > Maintenance > Configuration Archive**.
 - b. Select the Catalyst 500 switch from the Hostname drop-down and click **Back Up Configuration to PC**.



Note: Cisco Network Assistant uses an embedded TFTP server for backup. The backup can possibly fail if you use it in another instance of Network Assistant or if a third party TFTP server is running.

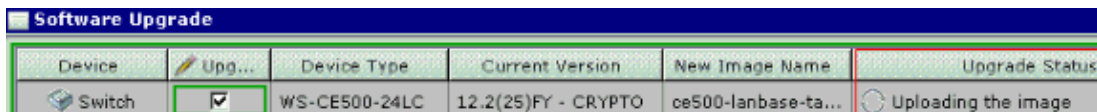


4. Click **Software Upgrade** from the Network Assistant menu in order to start the software upgrade.
5. Check **Upgrade** and click **Upgrade Settings**.



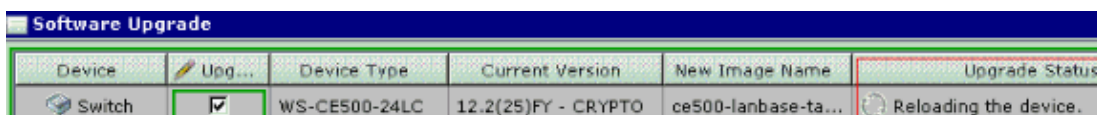
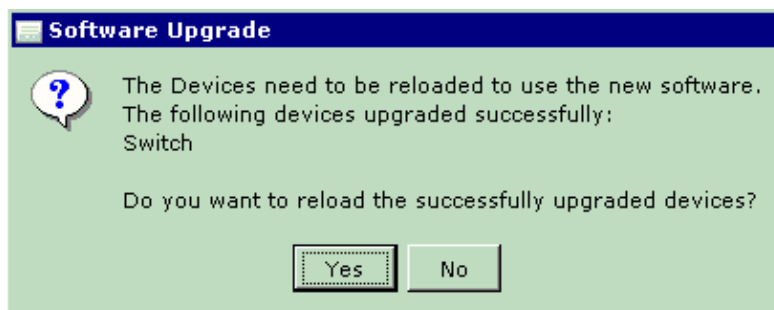
6. Click **OK** after you locate the .tar file and then click **Upgrade**.

The upgrade process starts by uploading the image into the switch.



7. Click **Yes** in order to reload the switch.

The Upgrade Status changes to **Software upgrade is complete**. This denotes the completion of the upgrade process.



| Software Upgrade | | | | | |
|------------------|---------------|---------------------|--------------------|------------------------------|--|
| Device | Device Type | Current Version | New Image Name | Upgrade Status | |
| Switch | WS-CE500-24LC | 12.2(25)FY - CRY... | ce500-lanbase-t... | Software upgrade is complete | |

- Click **Status** on the Software Upgrade window in order to verify the switch status after the successful completion of the software upgrade.

Software Upgrade Status

Device: Switch

Verified image compatibility.
 Uploading the image

Image download complete.

Software image was copied to the device successfully.

"Switch" will be reloaded in 1 minute.
 Reloading of "Switch" has started.
 Waiting for reloading of "Switch" to finish.
 Checking if "Switch" is up.
 "Switch" is up
 Switch was reloaded successfully
 Software upgrade is complete

- Click **Inventory** in order to verify the new software version.

| Inventory | | | | | | |
|-----------|---------------|--------|------|------------|--------------|-----------------------------|
| Hostname | Device Type | Ser... | V... | MAC Ad... | IP Address | Software Version |
| Switch | WS-CE500-24LC | FOC... | V01 | 0016.46... | 172.16.0.200 | 12.2(25)SEG-CE500-LANBASE-M |

This completes the upgrade procedure for a Cisco Catalyst Express 500 Series Switch using the Cisco Network Assistant.

Verify

Complete this step in order to verify the switch software that runs on a Cisco Catalyst Express 500 Series Switch.

- For Device Manager, click on **Dashboard**.

Dashboard

Switch Information

Host Name: Switch

Product ID: WS-CE500-24LC

IP Address: 172.16.100.100

MAC Address: 00:16:46:EB:ED:80

Version ID: V01

Serial Number: FOC0948X0JG

Software: 12.2(25)SEG

Contact:

Location:

- For Cisco Network Assistant, click on **Inventory**.

| Inventory | | | | | | |
|-----------|---------------|--------|------|------------|--------------|-----------------------------|
| Hostname | Device Type | Ser... | V... | MAC Ad... | IP Address | Software Version |
| Switch | WS-CE500-24LC | FOC... | V01 | 0016.46... | 172.16.0.200 | 12.2(25)SEG-CE500-LANBASE-M |

Troubleshoot

This section provides information you can use to troubleshoot your configuration.

Software Upgrade Failed

Complete these steps in order to troubleshoot a software upgrade failure in a Cisco Catalyst Express 500 Series Switch:

1. If the software upgrade process does not complete or if the switch fails to restart after the upgrade process completes, follow these steps:
 - a. Make sure that you have downloaded the correct .tar file from Cisco.com. See the Download the Software Image section of this document for more information.
 - b. If you have downloaded the correct .tar file, refresh your device manager browser session to make sure that there is connectivity between the switch and your PC.
 - c. Try to upgrade the switch again by following any of the procedures in the Prepare to Upgrade section of this document.
2. If the upgrade process still fails (for example, an Upgrade Failed message appears or the system LED does not turn solid green after a few seconds), you need to recover the switch software.

Note: You might need to recover the switch software if the image is corrupted during an upgrade or if you installed the wrong image on the switch. In all these cases, the switch does not pass the power-on self-test (POST), and there is no connectivity. A symptom of corrupted software is when the switch continuously tries to restart. You must have physical access to the switch in order to do a software recovery. Complete these steps in order to recover the switch software:

- a. Power off and then power on the switch by disconnecting and then reconnecting the AC power cord to the connector on the switch rear panel.
- b. When the system LED blinks green, immediately press the **Setup** button.
- c. Stop pressing the **Setup** button when all the system LEDs (System, Alert, Setup, and PoE) are solid amber. The switch begins the POST, which is a series of automatic tests that confirm proper operation. The system and setup LEDs blink green during this process. POST lasts approximately one minute.
- d. When POST completes, the system LED turns solid amber, and the setup LED blinks green. The LED of an available port blinks green, all other port LEDs remain off (dark).

- Note:** If the setup LED is amber, it means that there is no available switch port to which to connect your management station. Disconnect one of the switch ports, and then press the **Setup** button again until the setup LED and the port LED blink green.
- e. Connect the PC, which is configured to get the IP address via DHCP, directly to the switch port with a blinking green port LED. The port LED turns solid green after the connection.
 - f. Open a web browser in order to open the Device Manager window. If the browser does not pull up the Device Manager window automatically, then go to **http://10.0.0.1**.

Software Recovery

- Erase system configuration.
- Boot with the factory default IOS image.
- Erase system configuration and Boot with the factory default IOS image.

The Software Recovery window appears with these options:

| Options | Description |
|---|---|
| Erase system configuration | <p>Use this option in order to delete all the configuration settings on the switch, including the IP address, usernames, and passwords, but retain the software image.</p> <p>If you select this option, you must set up the switch again, as described in Getting Started Guide for the Catalyst Express 500 Switches.</p> |
| Boot with the factory default IOS image (recommended) | <p>Use this option in order to use the factory–default software image. Settings for features supported on the default software image are retained, including the IP address, usernames, and passwords.</p> <p>Use this option if a software upgrade fails. Display the Device Manager, and try to upgrade the switch software again by following any of the procedures in the Prepare to Upgrade section.</p> |
| Erase system configuration and | Use this option in order to delete all of the configuration settings |

| | |
|---|---|
| boot with the factory default IOS image | <p>on the switch and to change to the factory–default software image. All files on the switch Flash image are deleted and the switch returns to using the factory default image.</p> <p>If you select this option, you must set up the switch again, as described in Getting Started Guide for the Catalyst Express 500 Switches and then upgrade the switch software by following any of the procedures in the Prepare to Upgrade section.</p> |
|---|---|

- g. From the Software Recovery window choose **Boot with the factory default IOS image** and click **Submit**. The switch reloads and boots with the factory default IOS image.
- h. Open a new browser session to the switch using the management IP address and try to upgrade the switch software again by following any of the procedures in the Prepare to Upgrade section.

Related Information

- [User Guide for the Catalyst Express 500 Switches](#)
- [Getting Started Guide for the Catalyst Express 500 Switches](#)
- [Catalyst Express 500 Series Switches Configuration Example](#)
- [LAN Product Support Pages](#)
- [LAN Switching Support Page](#)
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