CHAPTER 2

Setting Up the Switch

The switch can operate without an IP address assigned to it. However, we recommend setting up the switch with an IP address so that you can manage it through the device manager and the Cisco Configuration Assistant. Otherwise, your switch management is limited to using only the LEDs on the switch front panel.

For best results in setting up the switch, first follow the procedures in the getting started guide that ships with the Cisco Unified Communications 500 Series. This document is also available on the CD-ROM that ships with the switch.

If you do not have a Cisco Unified Communications 500 Series, follow the guidelines and procedures in this chapter.

Before You Begin

Before you set up the switch, review the information in the Release Notes for the Catalyst Express 520 Switches on Cisco.com.

Before you power or install the switch, review the safety information the “Warnings” section on page 2-2.

The warnings in this chapter are translated into several languages in the Regulatory Compliance and Safety Information for the Catalyst Express 520 Switches document on Cisco.com.

Chapter Topics

- Warnings, page 2-2
- Set Up the Switch (Existing Network), page 2-2
- Set Up the Switch (No Network), page 2-7
Warnings

These warnings are translated into several languages in the *Regulatory Compliance and Safety Information for the Catalyst Express 520 Switches* document that shipped with the switch. Review these warnings before you power the switch.

For a complete list of warnings that apply to the switch, see the “Warnings” section on page 3-2.

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**Warning**

To prevent the switch from overheating, do not operate it in an area that exceeds the maximum recommended ambient temperature of 113°F (45°C). To prevent airflow restriction, allow at least 3 inches (7.6 cm) of clearance around the ventilation openings. Statement 17B

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**Warning**

This equipment must be grounded. Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available. Statement 1024

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Set Up the Switch (Existing Network)

**Prerequisites**

- This procedure requires connecting the switch to an upstream Dynamic Host Configuration Protocol (DHCP) server. The upstream device would assign an IP address to the switch.
- You need the hardware and software described in the “Hardware Requirements” section on page 1-15 and the “Software Requirements” section on page 1-15.
You need the Category 5 Ethernet cable that is shipped with the switch.

You should disable any pop-up blockers or proxy settings in your browser software and any wireless clients running on your PC or laptop.

Follow these steps:

**Step 1**  
Make sure that nothing is connected to the switch.

**Step 2**  
Use the supplied switch power cable to connect the switch to an AC power source.  
Before proceeding to the next step, wait until the SYSTEM LED stops blinking green and becomes solid green. A solid green SYSTEM LED means that the switch is operating properly.  
The ADMIN LED should be blinking green. A blinking green ADMIN LED means that the switch does not have an IP address yet.

**Troubleshooting:**  
If the SYSTEM LED does not blink green, does not turn solid green, or turns amber, contact your Cisco representative or reseller. The switch failed the power-on self-test (POST).
Step 3

Use the supplied Category 5 Ethernet cable to connect an upstream DHCP server (such as the Cisco Unified Communications 500 Series) to the switch dual-purpose port.

Before proceeding to the next step, wait until the port LEDs on the switch and the other device blink green. The solid green port LEDs means a successful connection between the two devices.

The ADMIN LED should still be blinking green.

Troubleshooting:

If the port LEDs do not blink green or if either LED turns amber, make sure that you are using the Category 5 Ethernet cable that shipped with the switch. If not, make sure that the cable that you are using is an undamaged Category 5 Ethernet cable.
Step 4

Verify that the ADMIN LED is off, which means that the switch has received an IP address from the upstream DHCP server and that the initial setup is complete.

Username-and-password pairs prevent unauthorized access by those who could guess the password. We recommend that the switch has at least one username-and-password pair to secure access to the device manager. The default username is cisco. The default password is cisco.

**Troubleshooting:**

If the ADMIN LED continues to blink green, it means that the switch is still not configured with an IP address. Make sure that an upstream device is operating as a DHCP server.
**Step 5**

You can now manage the switch through the Cisco Configuration Assistant and the device manager.

We strongly recommend that you download the Cisco Configuration Assistant from Cisco.com and use it to manage the switch. You can download it from the CD-ROM that ships with the switch or from this Cisco.com site:

http://www.cisco.com/go/configassist

You can display the device manager by following these steps:

1. Start a web browser on your PC or laptop.
2. Enter the switch IP address, username, and password in the web browser, and press Enter. The device manager page appears.

If you do not know the switch IP address, you can display the device manager and find out the switch IP address by following the procedure in the “Access Direct Managed Mode” section on page 7-6.

**Troubleshooting:**

If the device manager does not appear, make sure that you entered the correct switch IP address in the browser.

If you entered the correct switch IP address in the browser, make sure that the switch and your PC or laptop are in the same network or subnetwork. For example:

- If your switch IP address is 172.20.20.85 and your PC or laptop IP address is 172.20.20.84, both devices are in the same network.
- If your switch IP address is 172.20.20.85 and your PC or laptop IP address is 10.0.0.2, the devices are in different networks and cannot directly communicate without a router. You must either change the switch IP address or change the PC or laptop IP address.

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**Tip**

We recommend running a secured session with the switch. See the “Secured Sessions with the Switch” section on page 2-12 for information on how to ensure that your management session with the switch is protected from unauthorized access.
Set Up the Switch (No Network)

Prerequisites

- You need the hardware and software described in the “Hardware Requirements” section on page 1-15 and the “Software Requirements” section on page 1-15.
- You need the Category 5 Ethernet cable that is shipped with the switch.
- You should disable any pop-up blockers or proxy settings in your browser software and any wireless clients running on your PC or laptop.

Follow these steps:

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>Make sure that nothing is connected to the switch.</td>
</tr>
<tr>
<td>Step 2</td>
<td>Use the supplied switch power cable to connect the switch to an AC power source. Before proceeding to the next step, wait until the SYSTEM LED stops blinking green and becomes solid green. A solid green SYSTEM LED means that the switch is operating properly. The ADMIN LED should be blinking green. A blinking green ADMIN LED means that the switch does not have an IP address yet. <strong>Troubleshooting:</strong> If the SYSTEM LED does not blink green, does not turn solid green, or turns amber, contact your Cisco representative or reseller. The switch failed the power-on self-test (POST).</td>
</tr>
</tbody>
</table>
Step 3

Use the supplied Category 5 Ethernet cable to connect your PC or laptop to any of the downlink switch ports (such as port 1).

Before proceeding to the next step, wait until the port LEDs on the switch and your PC or laptop are green (either solid or blinking). The green port LEDs means a successful connection between the two devices.

The ADMIN LED should still be blinking green.

Troubleshooting:

If the port LEDs are not solid green or if either port LED turns amber, make sure that:

- You connected the Category 5 Ethernet cable to one of the downlink switch ports (not to an uplink port such as the dual-purpose port).
- You are using the Category 5 Ethernet cable that shipped with the switch. If not, make sure that the cable that you are using is an undamaged Category 5 Ethernet cable.
- The other device is turned on.
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Set Up the Switch (No Network)

Step 4  Start a web browser session on your PC or laptop to any URL, such as www.cisco.com. Before proceeding to the next step, wait until the Express Setup window appears. The ADMIN LED should still be blinking green.

Troubleshooting:
If the Express Setup window does not appear, make sure that any pop-up blockers or proxy settings on your browser are disabled and that any wireless client is disabled on your PC or laptop.

Step 5
1. Enter the network setting in the Express Setup window.

   The network settings enable the switch to operate with its standard default settings and to be managed through the device manager and the Cisco Configuration Assistant. You must apply these settings to access and to take advantage of the monitoring, troubleshooting, and configuration features on the switch. Otherwise, your switch management is limited to using only the LEDs on the switch front panel.

   Username-and-password pairs prevent unauthorized access by those who could guess the password. We recommend that the switch has at least one username-and-password pair to secure access to the device manager. The default username is cisco. The default password is cisco.

2. (Optional) Enter the optional administrative settings in the Express Setup window.

   The optional administrative settings identify and synchronize the switch so that it can be managed properly. The switch clock is automatically synchronized with the system clock on your PC or laptop. You can manually set the system clock settings if the switch should have different time settings.

3. Click Submit to save your changes and to complete the initial setup.

If you need more information about the Express Setup fields, see the device manager online help.
**Step 6**  
After you click **Submit**, these events occur:
- The Express Setup program ends.
- The connection between the switch and your PC or laptop ends.
- If your PC or laptop is connected to a DHCP server, your PC or laptop loses its IP address that was used during the initial setup.
- Your browser session displays an error page.

Verify that the ADMIN LED is off, which means that the switch is configured with the IP address that you entered in the Express Setup window and that the initial setup is complete.

**Troubleshooting:**
If the ADMIN LED continues to blink green, it means that the switch is still not configured with an IP address. Repeat **Step 1 to Step 5**.

If the problem persists:
1. Disconnect the Ethernet cable from the switch.
2. Repeat **Step 3 to Step 5**.
Step 7  Assign an IP address to your PC or laptop. Make sure that the IP address that you assign is in the same network as the switch IP address (assigned in Step 5).
To change the IP address of your PC or laptop, either
- Connect your PC or laptop to the network where a DHCP server allocates IP addresses within the range that is assigned to your switch.
- Enter a static IP address through your PC or laptop Control Panel.

Step 8  You can now manage the switch through the Cisco Configuration Assistant and the device manager.
We strongly recommend that you download the Cisco Configuration Assistant from Cisco.com and use it to manage the switch. You can download it from the CD-ROM that ships with the switch or from this Cisco.com site:
http://www.cisco.com/go/configassist
You can display the device manager by following these steps:
1. Start a web browser on your PC or laptop.
2. Enter the switch IP address, username, and password (assigned in Step 5) in the web browser, and press Enter. The device manager page appears.

Troubleshooting:
If the device manager does not appear, make sure that you entered the correct switch IP address in the browser.
If you entered the correct switch IP address in the browser, make sure that the switch and your PC or laptop are in the same network or subnetwork. For example:
- If your switch IP address is 172.20.20.85 and your PC or laptop IP address is 172.20.20.84, both devices are in the same network.
- If your switch IP address is 172.20.20.85 and your PC or laptop IP address is 10.0.0.2, the devices are in different networks and cannot directly communicate without a router.
You must either change the switch IP address or change the PC or laptop IP address.

Tip  We recommend running a secured session with the switch. See the “Secured Sessions with the Switch” section on page 2-12 for information on how to ensure that your management session with the switch is protected from unauthorized access.
Secured Sessions with the Switch

The switch uses the Secure Sockets Layer (SSL) protocol to secure the HTTP communications between the switch and your PC or laptop. When you attempt to display the device manager, this protocol

- Authenticates the web-based connection between the switch and your PC or laptop.
- Encrypts and decrypts the information exchanged between the switch and your PC or laptop to protect the information from unauthorized access over the Internet.

SSL is enabled by default on the switch.

To start a secured device manager session, either:

- Enter https:// before the switch IP address. (HTTP over SSL is abbreviated as HTTPS.)
- Click the Session: Secured link at the top right corner of the device manager window.

More information about secured sessions is available from the device manager online help.

When You Are Done

After you have set up the switch, follow the procedures in Chapter 3, “Installing the Switch,” to install the switch in your network environment. Make sure to review the warnings and installation guidelines.