



# Troubleshooting

The CSACS-1121, Cisco SNS-3415, and Cisco SNS-3495 series appliances undergoes extensive testing before it leaves the factory. If you encounter problems, use the information in this appendix to help isolate problems or to eliminate the appliance as the source of the problem.

Although an overtemperature or overvoltage condition is unlikely at initial startup, a discussion of environmental temperature and voltage monitoring functions is provided in [Regulatory Compliance, page 7](#) section.

**Note:** The procedures in this chapter assume that you are troubleshooting the initial CSACS-1121 series, Cisco SNS-3415, or Cisco SNS-3495 series appliances startup, and that the appliance is in the original factory configuration. If you have removed or replaced components, or changed any default settings, the recommendations in this chapter might not apply.

This appendix does not cover every possible issue that might occur on an appliance but instead focuses on those events that are frequently seen by the customer.

This appendix contains:

- [Troubleshooting Overview, page 1](#)
- [Problem Solving, page 2](#)
- [Reading the LEDs, page 4](#)
- [Product Serial Number Location, page 7](#)

## Troubleshooting Overview

At the initial system boot, you should verify the following:

- The external power cable is connected, and the proper power source is being applied. For more information, see [Power Considerations, page 8](#), [Power Specifications, page 5](#), [Powering Up the CSACS-1121 Series Appliance, page 17](#), [Connecting and Powering On the Cisco SNS-3415/3495 Appliance, page 9](#), and [Troubleshooting the Power and Cooling Systems in the CSACS-1121 Series Appliance, page 3](#).
- The appliance fan and blower are operating. See [Airflow Guidelines, page 7](#), [Environmental Specifications, page 5](#), and [Troubleshooting the Power and Cooling Systems in the CSACS-1121 Series Appliance, page 3](#).
- The appliance software boots successfully.
- The adapter cards (if installed) are properly installed in their slots, and each initializes (is enabled by the appliance software) without problems.

When each of these conditions is met, the hardware installation is complete, and you should proceed to perform a basic configuration. For proper configuration features, see [Chapter 5, "Installing and Configuring the Cisco Secure Access Control System with CSACS-1121,"](#) or [Chapter 9, "Installing and Configuring the Secure Access Control System with the Cisco SNS-3415 and Cisco SNS-3495,"](#) or the *User Guide for Cisco Secure Access Control System 5.8*.

If you cannot locate the source of the problem, contact a customer service representative for information on how to proceed. For technical support information, see the *Cisco Information Packet* publication that is shipped with your appliance. Before you call, ensure that you have the following information ready:

- Appliance chassis type and serial number. For more information, see [Cisco Product Identification Tool, page 3](#).
- Maintenance agreement or warranty information (see the *Cisco Information Packet*).
- Type of software and version number (if applicable).
- Date you received the new appliance.
- Brief description of the problem you are facing and the steps you have taken to isolate and resolve the problem.

**Note:** Be sure to provide the customer service representative with any upgrade or maintenance information that was performed on the CSACS-1121, Cisco SNS-3415, and Cisco SNS-3495 series appliances after your initial installation. For site log information, see [Creating a Site Log, page 12](#) and [Site Log, page 1](#)

## Problem Solving

The key to problem solving is to isolate the problem to a specific location by comparing what the CSACS-1121, Cisco SNS-3415, or Cisco SNS-3495 series appliance is doing with what it should be doing.

In other words, when troubleshooting, define the specific symptoms, identify all potential problems that could be causing the symptoms, and then systematically eliminate each potential problem (from most likely to least likely) until the symptoms disappear.

The following steps provide guidelines you can use during the troubleshooting process.

1. Analyze the problem and create a clear problem statement. Define symptoms and potential causes.
2. Gather the facts that you need to help isolate possible causes.
3. Consider possible causes based on the facts that you gathered.
4. Create an action plan based on those causes. Begin with the most likely problem and devise a plan in which you manipulate only one variable.
5. Implement the action plan. Perform each step carefully while testing to see whether the symptom disappears.
6. Analyze the results to determine whether the problem has been resolved. If the problem is resolved, consider the process complete.

If the problem has not been resolved, create an action plan based on the next most probable cause on your list. Return to [4. Create an action plan based on those causes. Begin with the most likely problem and devise a plan in which you manipulate only one variable., page 2](#) and repeat the process until the problem is solved.

Be sure to undo anything that you changed while implementing your action plan. Remember to change only one variable at a time.

**Note:** The LEDs on the front and back panel of the appliance enable you to determine the performance and operation of the appliance. For a description of these LEDs, see [Reading the LEDs, page 4](#).

When troubleshooting, check the following appliance subsystems first:

- Power and cooling systems (external power source, power cable, and appliance fans). Also, check for inadequate ventilation, air circulation, or environmental conditions.
- Adapter card—Checking the LEDs on the adapter card can help you to identify a failure.
- Cables—Verify that the external cables connecting the appliance to the network are all secure.

## Troubleshooting the Power and Cooling Systems in the CSACS-1121 Series Appliance

Both the power LED and the fans can help you troubleshoot a power problem. Check the following items to help isolate the problem:

- When the CSACS-1121 Series appliance is connected to the power source, is the appliance power LED on the front panel on? If not, check the AC power cord connection; if the power LED is still off, the problem might be due to a power supply failure.
- Does the appliance shut down after being on for only a short time?
  - Check for an environmentally induced shutdown. For more information, see [Environmental Reporting Features, page 3](#) section.
  - Check the fans. If the fans are not working, the appliance will overheat and shut itself down.

If the fans are not working, you might need to check the power supply connection to the fans.

Checking this connection will require you to shut down the appliance, remove any external cables, and open up the appliance.

- Ensure that the appliance intake and exhaust vents are clear.
- Check the environmental site requirements in [Temperature and Humidity Guidelines, page 8](#).
- Does the appliance partially boot, but the LEDs do not light? Check for a power supply failure by inspecting the power LED on the front panel of the appliance:
  - If the LED is on, the power supply is functional.
  - If the LED is off, see the *Cisco Information Packet* for warranty information, or contact your customer service representative.

### Environmental Reporting Features

The CSACS-1121 Series appliance has protection circuits that monitor and detect overcurrent, overvoltage, and overtemperature conditions inside the appliance.

If the power supply shuts down or latches off, an AC cycle switches off for 15 seconds and switches on for 1 second to reset the power supply. For more information, see [Regulatory Compliance, page 7](#).

The following conditions can cause an abnormally high appliance temperature:

- Fan failure
- Air conditioner failure in the room
- Airflow blocked to cooling vents

Take steps to correct the problem. For information about environmental operating conditions, see [Temperature and Humidity Guidelines, page 8](#).

## Troubleshooting Adapter Cards, Cables, and Connections in the CSACS-1121 Series Appliance

Network problems can be caused by an adapter card, cables or cable connections, or external devices such as a hub, wall jack, WAN interface, or terminal. Check for the following symptoms to help isolate a problem:

- Adapter card is not recognized by the CSACS-1121 Series appliance:
  - Ensure that the adapter card is firmly seated in its slot.
  - Check the LEDs on the adapter card. Each adapter card has its own set of LEDs.
  - Verify that your software release supports the adapter card. See the documentation that was included with your adapter card.
- Adapter card is recognized, but interface ports do not initialize:
  - Ensure that the adapter card is firmly seated in its slot.
  - Check external cable connections.
  - Verify that your software release supports the adapter card. See the documentation that was included with your adapter card.
- The CSACS-1121 Series appliance does not boot properly, or it constantly or intermittently reboots:
  - Ensure that the adapter card is firmly seated in its slot.
  - Check the appliance chassis or the application software. For warranty information, see the *Cisco Information Packet* publication that is shipped with your appliance or contact your customer service representative.
- If you are using the console port with a terminal, and the CSACS-1121 Series appliance boots but the console screen is frozen:
  - Check the external console connection.
  - Verify that the parameters for your terminal are set as follows:
    - a. The terminal should have the same data rate that the appliance has (9600 bps is the default).
    - b. 8 data bits.
    - c. No parity generated or checked.
    - d. 1 stop bit.
- The CSACS-1121 Series appliance powers on and boots only when an adapter card is removed. Check the adapter card. For warranty information, see the *Cisco Information Packet* publication that is shipped with your appliance or contact your customer service representative.
- The CSACS-1121 Series appliance powers on and boots only when a particular cable is disconnected. There might be a problem with the cable. For warranty information, see the *Cisco Information Packet* publication that is shipped with your appliance or contact your customer service representative.

## Maintaining the Cisco SNS-3415/3495 Appliance

The Cisco SNS-3415 or Cisco SNS-3495 appliance is based on the Cisco UCS C220 Server. Please refer to the Cisco UCS C220 Server Installation and Service Guide for information on how to maintain your Cisco SNS-3415 or Cisco SNS-3495 appliance, and to install and replace the server components, if necessary.

## Reading the LEDs

There are several LEDs on the CSACS-1121, Cisco SNS-3415, and Cisco SNS-3495 appliances. LEDs serve the following purposes:

- Indicate that basic power is available to the appliance.

## Reading the LEDs

- Indicate the hard disk, CD drive, and network activity statuses.

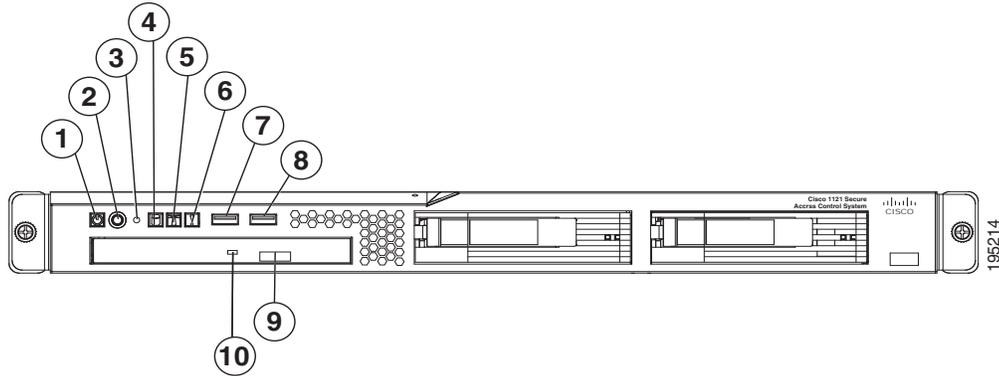
This section contains:

- [LEDs of CSACS-1121 Series Appliance, page 6](#)
- [LEDs of the Cisco SNS-3415/3495 Appliance, page 7](#)

## LEDs of CSACS-1121 Series Appliance

### Front-Panel LEDs

**Figure 1 Front-Panel LEDs**



1	Appliance power LED	6	System-error LED
2	Power-control button	7	USB 1 connector
3	Reset button	8	USB 2 connector
4	Hard disk drive activity LED	9	CD-eject button
5	Locator LED	10	CD drive activity LED

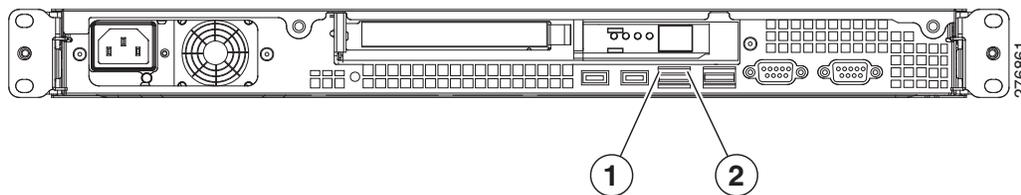
**Table 1 Front-Panel LED Descriptions**

LED	Color	State	Description
Appliance power	Green	On	Power on.
	Green	Blinking	Sleep (standby).
	Off	Off	Power off.
Hard disk drive activity	Green	Random blinking	Hard disk drive activity.
	Off	Off	No hard disk drive activity.
Reset button	–	–	Press the button to do a soft reset.
Locator LED	Blue	Blinking	System is booting up.
	Off	Off	System bootup is completed.
System-error	Amber	On	A system error has occurred.
CD drive activity	Green	On	The CD drive is in use.

### Back-Panel LEDs

**Figure 2 CSACS-1121 Back-Panel LEDs**

Product Serial Number Location



1	Ethernet activity LED	2	Ethernet link LED
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**Table 2 Rear-Panel LEDs**

LED	Color	State	Description
Ethernet activity LED	Green	On	Activity exists between the server and the network.
	Green	Blinking	Activity exists between the server and the network.
	Off	Off	No activity exists.
Ethernet link LED	Green	Random blinking	Ethernet controller is connected to the network.
	Off	Off	Ethernet controller is not connected to the network.

### LEDs of the Cisco SNS-3415/3495 Appliance

See [Cisco SNS-3415/3495 Appliance Front-Panel View, page 5](#), to view the available front-panel LEDs in the Cisco SNS-3415 or Cisco SNS-3495 appliance.

See [Cisco SNS-3415/3495 Appliance Back-Panel View, page 6](#), to view the available back-panel LEDs in the Cisco SNS-3415 or Cisco SNS-3495 appliance.

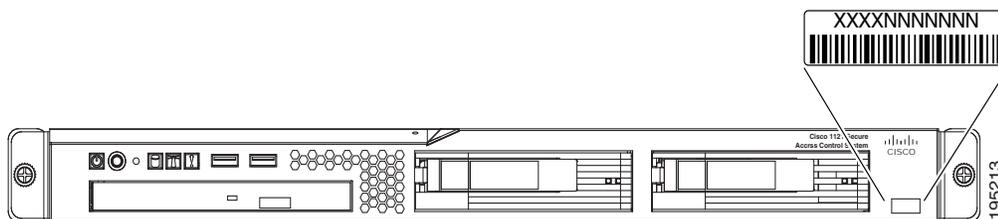
See [Internal Diagnostic LEDs, page 7](#), to view the available internal diagnostic LEDs in the Cisco SNS-3415 or Cisco SNS-3495 appliance.

### Product Serial Number Location

On the CSACS-1121 Series appliance, the serial number label is located on the front panel of the appliance, at the lower-left. [Figure 3 on page 7](#) shows the location of the serial number label.

This section contains details on [Cisco Product Identification Tool, page 8](#).

**Figure 3 Serial Number Location for the CSACS-1121 Series Appliance**



**Note:** The serial number for the CSACS-1121 Series appliance is 11 characters long.

On the SNS-3415 or SNS-3495 appliance, the serial number for the server is printed on a label on the top of the server, near the front.

## Cisco Product Identification Tool

The Cisco Product Identification (CPI) tool helps you retrieve the serial number of your Cisco products.

Before you submit a request for service online or by phone, use the CPI tool to locate your product serial number. You can access this tool from the Cisco Support website.

To access the CPI tool:

1. Click the **Tools & Resources** link.
2. Click the **Show All Tools** tab.
3. Choose **Cisco Product Identification Tool** from the alphabetical list.

This tool offers three search options:

- Search by product ID or model name.
- Browse for Cisco model.
- Copy and paste the output of the **show** command to identify the product.

Search results show an illustration of your product with the location of the serial number label highlighted. Locate the serial number label on your product and record the information before you place a service call.

You can access the CPI tool from Cisco.com at:

<http://tools.cisco.com/Support/CPI/index.do>

Access to the CPI tool on the Cisco Support website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at:

<http://tools.cisco.com/RPF/register/register.do>