



# Troubleshooting the Cisco ISE 3300 Series Appliance

The Cisco Identity Services Engine (ISE) 3300 Series appliance undergoes extensive testing before it leaves the factory. If you encounter problems, use the information in this appendix to help isolate problems or to determine whether the appliance is the source of the problem.

Although conditions due to excessive temperatures or excessive power consumption are unlikely at initial startup, see the general environmental conditions that are required to support the Cisco ISE 3300 Series appliances as described in [Maintaining Your Site Environment and Appliance, page D-1](#).

**Note**

The procedures in this appendix assume that you are troubleshooting the initial Cisco ISE 3300 Series appliance 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 appendix might not apply.

This appendix does not cover every possible issue that might occur on an appliance, but instead it focuses on those events that are frequently seen by the customer. This appendix provides information on the following topics:

- [Troubleshooting Overview, page C-1](#)
- [Problem Solving, page C-2](#)
- [Reading the LEDs, page C-5](#)
- [Locating Appliance Serial Numbers, page C-5](#)

## 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 A-9](#), [Powering Up the Cisco ISE 3300 Series Appliance, page B-14](#), and [Troubleshooting the Power and Cooling Systems, page C-3](#).
- The appliance fan and blower are operating. See [Airflow Guidelines, page A-8](#) and [Troubleshooting the Power and Cooling Systems, page C-3](#).
- The appliance software boots successfully.
- The adapter cards (if installed) are properly installed in their slots, and each card initializes (and 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 the basic configuration. To understand the features that this release of Cisco ISE offers, see the *Cisco Identity Services Engine User Guide, Release 1.0*. To properly configure the Cisco ISE features, see [Chapter 3, “Configuring the Cisco ISE 3300 Series Appliance”](#).

If you cannot locate the source of a problem, contact a Cisco customer service representative for information on how to best proceed with resolving any issue. For more information on the Cisco Technical Assistance Center (TAC), see the *Cisco Information Packet* publication that is shipped with your appliance or visit the following website:

<http://www.cisco.com/tac/>

Before you contact Cisco TAC, make sure that you have the following information ready:

- The appliance chassis type and serial number.
- The maintenance agreement or warranty information (see the *Cisco Information Packet*).
- The name, type of software, and version or release number (if applicable).
- The date you received the new appliance.
- A brief description of the problem or condition you experienced, the steps you have taken to isolate or re-create the problem, and a description of any steps you took to resolve the problem.



**Note**

Be sure to provide the customer service representative with any upgrade or maintenance information that was performed on the Cisco ISE 3300 Series appliance after your initial installation. For site log information, see [Creating a Site Log, page A-14](#).

## Problem Solving

The key to problem solving is to isolate the problem to a specific location or task. Compare what the Cisco ISE 3300 Series appliance is doing with what it should normally be doing. So, when you are troubleshooting, you must define specific symptoms, and then identify potential problems that could be causing the symptoms. Next, you systematically run through each potential problem and try to eliminate it (from the most likely to the least likely) until the symptoms or conditions disappear.

**Observe these guidelines when performing troubleshooting, by completing the following steps:**

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- Step 1** Analyze the problem, and define a clear problem statement. Define symptoms and potential causes.
  - Step 2** Gather the necessary facts as needed to help isolate possible or potential causes.
  - Step 3** Consider possible or potential causes that are based on the facts that you have gathered.
  - Step 4** Create an action plan that is based on those causes. Begin with the most likely problem and devise a plan that tests only one variable.
  - Step 5** Implement the action plan. Perform each step carefully while testing to see if the symptom disappears.
  - Step 6** Analyze the results to determine if 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 that is based on the next most probable cause on your list.

Return to [Step 4](#) and repeat the process until the problem is solved. Be sure to undo any changes you made while implementing your action plan.

**Tip**

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Remember to change only one variable at a time.

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**Note**

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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 C-5](#).

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When troubleshooting, check the following appliance subsystems first:

- Power and cooling systems—Check external power sources, power cables, and appliance fans. In addition, check for inadequate ventilation, blocked air circulation, excessive dust or dirt, fan failures, or any environmental conditions that might affect the power or cooling systems.
- Adapter card—Check the LEDs on the adapter card that can aid you to identify a failure.
- Cables—Verify that the external cables connecting the appliance to the network are all secure and in good order.

## Troubleshooting the Power and Cooling Systems

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

- When the Cisco ISE 3300 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 caused by a power supply failure.
- Does the appliance shut down after being on for only a short time?
  - Check if this is an environmentally induced shutdown. For more information, see [Environmental Reporting Features, page C-4](#) section.
  - Check the cooling fans. If the cooling fans are not working, the appliance will overheat and shut itself down.

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

Checking the power supply connection requires you to shut down the appliance, remove any external cables, and open up the appliance.
  - Ensure that the appliance intake and exhaust vents are all clear.
  - Check that the environmental site requirements have been met (see the [Temperature and Humidity Guidelines, page A-9](#)).
- 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 Cisco customer service representative.

## Environmental Reporting Features

The Cisco ISE 3300 Series appliance has protection circuits that monitor and detect excessive current, voltage, and temperature conditions inside the appliance.

If the power supply shuts down or latches off, an AC power cycle switches off for 15 seconds and switches on for 1 second to reset the power supply. The following conditions can cause abnormally high appliance temperatures:

- Cooling fan failure
- An air conditioner failure in the room where the appliance is installed
- Airflow blocked to cooling vents (intake or exhaust)

Take steps to correct any problems that you discover. For information about environmental operating conditions, see [Temperature and Humidity Guidelines, page A-9](#).

## Troubleshooting Adapter Cards, Cables, and Connections

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 Cisco ISE 3300 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 Cisco ISE 3300 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 Cisco customer service representative.
- If you are using the console port with a terminal, and the Cisco ISE 3300 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 Cisco ISE 3300 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 Cisco ISE 3300 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 Cisco customer service representative.

## Reading the LEDs

The LEDs on the Cisco ISE 3300 Series appliance serve the following purposes:

- Indicate that basic power is available to the appliance.
- Indicate the status of the hard disk drive, CD/DVD drive, and network activity.

## Front-Panel LEDs

The front-panel LEDs for the supported Cisco ISE 3300 Series appliances are described in tables with supporting figures in the following locations:

- [Cisco ISE 3315 Front-Panel Features, page 2-5](#) (see [Figure 2-3 on page 2-6](#))
- [Cisco ISE 3355 Front-Panel Features, page 2-8](#) (see [Figure 2-8 on page 2-9](#))
- [Cisco ISE 3395 Front-Panel Features, page 2-12](#) (see [Figure 2-10 on page 2-11](#))

## Rear-Panel LEDs

The rear-panel LEDs for the supported Cisco ISE 3300 Series appliances are described in tables with supporting figures in the following locations:

- [Cisco ISE 3315 Rear-Panel Features, page 2-7](#) (see [Figure 2-5 on page 2-7](#))
- [Cisco ISE 3355 Rear-Panel Features, page 2-10](#) (see [Figure 2-10 on page 2-11](#))
- [Cisco ISE 3395 Rear-Panel Features, page 2-14](#) (see [Figure 2-15 on page 2-15](#))

## Locating Appliance Serial Numbers

In Cisco ISE 3300 Series appliances, the serial number label is located on the front panel of each appliance, and these are shown in the following locations:

- [Cisco ISE 3315 Serial Number Location, page 2-5](#) (see [Figure 2-1 on page 2-5](#))
- [Cisco ISE 3355 Serial Number Location, page 2-8](#) (see [Figure 2-6 on page 2-8](#))
- [Cisco ISE 3395 Serial Number Location, page 2-12](#) (see [Figure 2-11 on page 2-12](#))

■ Locating Appliance Serial Numbers