



CHAPTER 2

Introducing the Cisco ISE 3300 Series Hardware

This chapter introduces the Cisco Identity Services Engine (ISE) 3300 Series appliance hardware and provides descriptions of the support appliance hardware, the major components, controls, connectors, and front-panel and rear-panel LED indicators. This chapter contains information about the following topics:

- [Cisco ISE Series Appliances, page 21](#)
- [Cisco ISE 3300 Series Appliance Hardware Summary, page 21](#)



Note

Cisco ISE 3300 Series Release 1.0 does not comply with the Federal Information Processing Standards (FIPS) for network hardware platforms. FIPS 140-2 compliance will be addressed in future releases of Cisco ISE software.

Cisco ISE Series Appliances

The Cisco ADE-OS and Cisco ISE software run on either a dedicated Cisco ISE 3300 Series appliance or on a VMware server (Cisco ISE VM). The Cisco ISE Release 1.0 software does not support the installation of any other packages or applications on this dedicated platform. See the [Release Notes for Cisco Identity Service Engine, Release 1.0](#) for additional hardware compatibility information.

Cisco ISE 3300 Series Appliance Hardware Summary

[Table 2-1](#) summarizes the hardware specifications for each of the supported Cisco ISE appliances. See the Diagrams column for hyperlinks to detailed diagrams that show network interface card (NIC) ports, power supply sockets, LEDs, and important controls or buttons on the corresponding panel.

Table 2-1 Cisco ISE Appliance Hardware Summary

Cisco ISE Appliance Product	Hardware Specifications	Diagrams
<p>Cisco ISE 3315 Platform</p> <p>Supports the following:</p> <ul style="list-style-type: none"> Up to 3,000 concurrent endpoints¹ Up to three standalone or high-availability pairs 	<ul style="list-style-type: none"> Single processor: Quad-core Intel Xeon (Core 2 quad) 4 gigabyte (GB) RAM 250 GB SATA² hard disk drive (HDD) Four 10/100/1000 LAN ports [two integrated NICs; 2 gigabit (Gb) NICs (PCI-E)] CD/DVD-ROM drive Four USB ports (two on the front panel, two on the rear panel) Two Gb Ethernet ports on rear panel One serial port on the rear panel One Video Graphics Array (VGA) port on the front panel Weight—From 24.25 lb (11.0 kg) to 28.0 lb (12.7 kg), depending on what options are installed. Dimensions—1.75 in. H 17.3 in. W x 22.0 in. D (44.5 mm x 440.0 mm x 559.0 mm); these dimensions do not include the rack handles. Cooling fans—Five (plus two on the power supply). Rack mounting—Uses slide rails (see Installing the Slide Rails in a Rack, page B4); mounts in a standard 19-inch (48.3 cm), four-post equipment rack (by using the provided rack-mount brackets). Maximum operating altitude—7000 feet (2133 meters). Operating temperature range—50 to 90° F (10 to 35° C) up to 3,000 feet (914.4 meters); 50 to 90° F (10 to 32° C) 3000 to 7000 feet (914.4 to 2133 meters). Power—Configured for AC-input power; has a single autoranging AC-input power supply (350 Watts). <p>Note The Cisco ISE 3315 appliance is normally shipped with a rack-mount hardware kit that includes brackets or rails for mounting it in a four-post equipment rack. For more information, see Mounting a Cisco ISE 3300 Series Appliance in a Four-Post Rack, page B2.</p>	<ul style="list-style-type: none"> Figure 2-2 on page 2-5, “Cisco ISE 3315 Front-Panel Features” Figure 2-3 on page 2-6, “Cisco ISE 3315 Front-Panel LEDs and Buttons” Figure 2-4 on page 2-7, “Cisco ISE 3315 Rear-Panel Features” Figure 2-5 on page 2-7, “Cisco ISE 3315 Rear-Panel LEDs”

Table 2-1 Cisco ISE Appliance Hardware Summary (continued)

Cisco ISE Appliance Product	Hardware Specifications	Diagrams
<p>Cisco ISE 3355 Platform</p> <p>Supports the following:</p> <ul style="list-style-type: none"> Up to 6,000 concurrent endpoints Up to 20 standalone or high-availability pairs 	<ul style="list-style-type: none"> Single processor: Quad-core Intel Xeon (Nehalem) 4 GB RAM 2 x 300 GB SAS³ RAID⁴ HDD Four 10/100/1000 LAN ports [two integrated NICs; 2 Gb NICs (PCI-E)] CD/DVD-ROM drive Four USB ports (one on the front panel, one internal, two on the rear panel) Two Gb Ethernet ports on the rear panel One serial port on the rear panel Two VGA ports (one on front panel and one on rear panel) Cavium CN-1620-400-NHB-G accelerator card Weight—From 28 lb (12.7 kg) to 34.5 lb (15.6 kg) depending on what options are installed. Dimensions—1.7 in. H x 17.3 in. W x 28.0 in. D (43 mm x 440.0 mm x 711.4 mm); these dimensions do not include the rack handles. Cooling fans—Six for single-processor (Cisco ISE 3355) or dual-processor (Cisco ISE 3395). Rack mounting—Uses slide rails (see Installing the Slide Rails in a Rack, page B4); mounts in a standard 19-inch (48.3 cm), four-post equipment rack (by using the provided rack-mount brackets). Maximum operating altitude—7000 feet (2133 meters). Operating temperature range—50 to 90° F (10 to 35° C) up to 3000 feet (914.4 meters); 50 to 90° F (10 to 32° C) 3000 to 7000 feet (914.4 to 2133 meters). Power—Configured for AC-input power; has dual redundant auto-switching power supplies (675 Watts). <p>Note The Cisco ISE 3355 and Cisco ISE 3395 appliances are normally shipped with a rack-mount hardware kit that includes brackets or rails for mounting it in a four-post equipment rack. For more information, see Mounting a Cisco ISE 3300 Series Appliance in a Four-Post Rack, page B2. The rack-mount hardware kits for Cisco ISE 3300 Series appliances do not include a two-post equipment rack.</p>	<ul style="list-style-type: none"> Figure 2-7 on page 2-8, “Cisco ISE 3355 Front-Panel Features” Figure 2-8 on page 2-9, “Cisco ISE 3355 Front-Panel LEDs and Buttons” Figure 2-9 on page 2-10, “Cisco ISE 3355 Rear-Panel Features” Figure 2-10 on page 2-11, “Cisco ISE 3355 Rear-Panel LEDs”

Table 2-1 Cisco ISE Appliance Hardware Summary (continued)

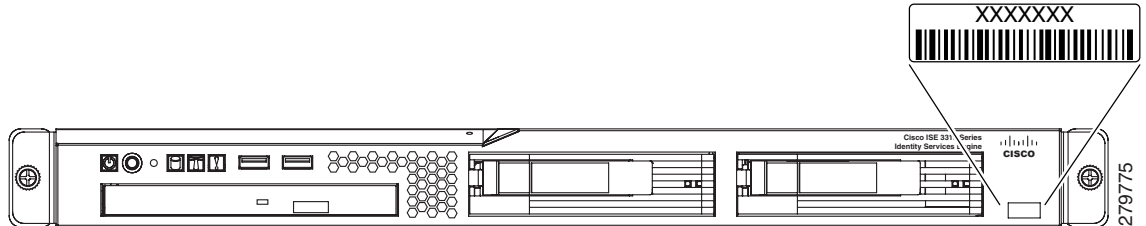
Cisco ISE Appliance Product	Hardware Specifications	Diagrams
<p>Cisco ISE 3395 Platform</p> <p>Supports the following:</p> <ul style="list-style-type: none"> • Up to 10,000 concurrent endpoints • Up to 40 standalone or High-Availability pairs 	<ul style="list-style-type: none"> • Dual processor: 2 x Quad-core Intel Xeon (Nehalem) • 4 GB RAM • 4 x 300 GB SAS RAID HDD • 4 10/100/1000 LAN ports [two integrated NICs; 2 Gb NICs (PCI-E)] • CD/DVD-ROM drive • Four USB ports (one on the front panel, one internal, two on the rear panel) • Two Gb Ethernet ports on the rear panel • One serial port on the rear panel • Two VGA ports (one on front panel and one on rear panel) • Cavium CN-1620-400-NHB-G accelerator card • Weight—From 28 lb (12.7 kg) to 34.5 lb (15.6 kg) depending on what options are installed. • Dimensions—1.7 in. H x 17.3 in. W x 28.0 in. D (43 mm x 440.0 mm x 711.4 mm); these dimensions do not include the rack handles. • Cooling fans—Six for single-processor (Cisco ISE 3355) or dual-processor (Cisco ISE 3395). • Rack mounting—Uses slide rails (see Installing the Slide Rails in a Rack, page B4); mounts in a standard 19-inch (48.3 cm), four-post equipment rack (by using the provided rack-mount brackets). • Maximum operating altitude—7000 feet (2133 meters). • Operating temperature range—50 to 90° F (10 to 35° C) up to 3000 feet (914.4 meters); 50 to 90° F (10 to 32° C) 3000 to 7000 feet (914.4 to 2133 meters). • Power—Configured for AC-input power; has dual redundant auto-switching power supplies (675 Watts). 	<ul style="list-style-type: none"> • Figure 2-12 on page 2-12, “Cisco ISE 3395 Front-Panel Features” • Figure 2-13 on page 2-13, “Cisco ISE 3395 Front-Panel LEDs and Buttons” • Figure 2-14 on page 2-14, “Cisco ISE 3395 Rear-Panel Features” • Figure 2-15 on page 2-15, “Cisco ISE 3395 Rear-Panel LEDs”

1. Concurrent endpoints represent the total number of supported users and devices. This can be any combination of users, personal computers, laptops, IP phones, smart phones, gaming consoles, printers, fax machines, or other types of network devices.
2. SATA = serial advanced technology attachment.
3. SAS = single-attachment station.
4. RAID = redundant array of independent disks.

Cisco ISE 3315 Serial Number Location

The serial number label is located at the lower left of the front panel of the Cisco ISE 3315 (see [Figure 2-1](#)).

Figure 2-1 Cisco ISE 3315 Appliance Serial Number Location



Note

The serial number for the Cisco ISE 3315 is defined by and observes the Cisco unique device identifier (UDI) specifications.

Cisco ISE 3315 Front and Rear Panels

The Cisco ISE 3315 platform is recommended for deployments that serve up to 3,000 concurrent endpoints and that manage up to three additional appliances or three high-availability pairs. The Cisco ISE 3315 comes equipped with four network interfaces that provide flexibility in NIC interface selection and also enables it for use in high-availability configurations. For additional details, see [Cisco ISE Series Appliances, page 21](#).



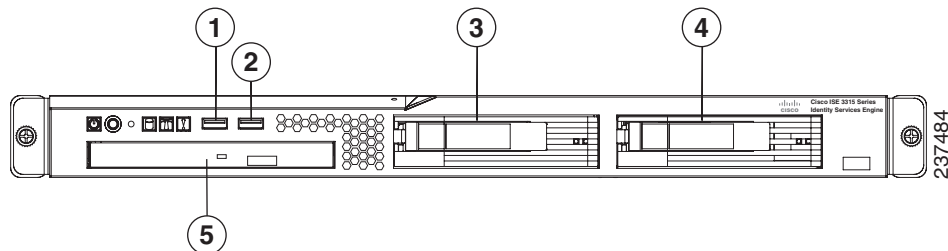
Note

Concurrent endpoints represent the total number of supported users and devices. This can be any combination of users, personal computers, laptops, IP phones, smart phones, gaming consoles, printers, fax machines, or other types of network devices.

Cisco ISE 3315 Front-Panel Features

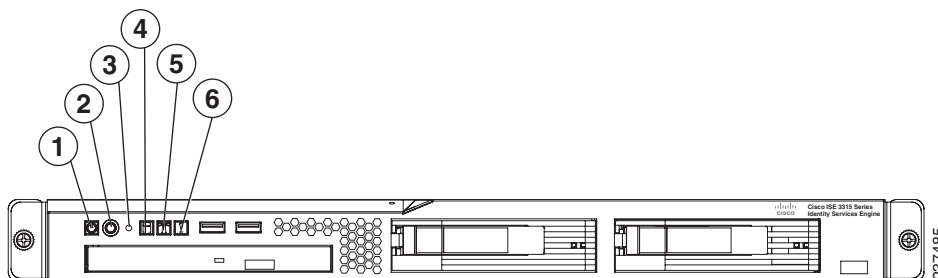
[Figure 2-2](#), [Figure 2-3](#), and the accompanying tables illustrate and describe the Cisco ISE 3315 front-panel features, LEDs, and buttons.

Figure 2-2 Cisco ISE 3315 Front-Panel Features



1	Front USB port 1	4	HDD bay 1
2	Front USB port 2	5	CD-ROM/DVD drive
3	Hard disk drive (HDD) bay 0		

Figure 2-3 Cisco ISE 3315 Front-Panel LEDs and Buttons

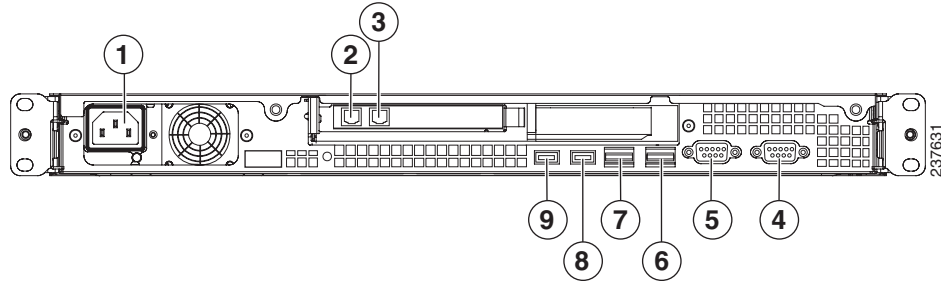


1	Power status LED	Green = Appliance has AC power and is powered on. Off = Appliance is powered off (AC power disconnected).
2	Power button	(Recessed.)
3	Reset button	(Recessed.)
4	HDD activity LED	Flashing green = Ongoing drive activity. Off = No drive activity.
5	Locator button or LED	Flashing blue = Locator button has been pressed.
6	System health LED	Off = System health is normal. Amber = Prefailure system threshold has been reached, which can be caused by any of the following conditions: <ul style="list-style-type: none"> • At least one fan failure (system or processor fan). • At least one of the temperature sensors reached critical level (system or processor thermal sensors). • At least one memory module failed. • A power supply unit error has occurred.

Cisco ISE 3315 Rear-Panel Features

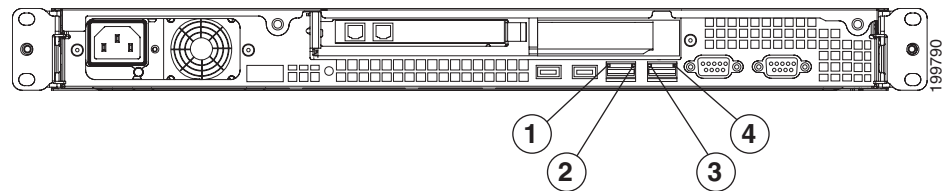
Figure 2-4, Figure 2-5, and the accompanying tables illustrate and describe the Cisco ISE 3315 rear-panel features and LEDs.

Figure 2-4 Cisco ISE 3315 Rear-Panel Features



1	AC Power supply cable socket	6	NIC 2 (eth1) Gigabit Ethernet interface
2	NIC 3 (eth2) add-on card	7	NIC 1 (eth0) Gigabit Ethernet interface
3	NIC 4 (eth3) add-on card	8	Rear USB port 4
4	Serial port	9	Rear USB port 3
5	Video port		

Figure 2-5 Cisco ISE 3315 Rear-Panel LEDs

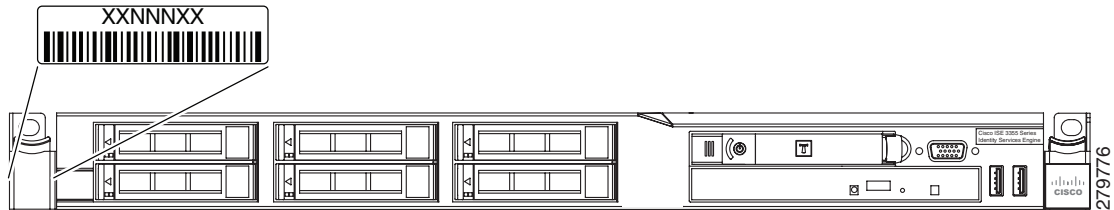


1	NIC 1 (eth0) activity LED	Green = Activity exists. Flashing green = Activity exists. Off = No activity exists.
2	NIC 1 (eth0) link LED	Green = Link exists. Off = No link exists.
3	NIC 2 (eth1) activity LED	Green = Activity exists. Flashing green = Activity exists. Off = No activity exists.
4	NIC 2 (eth1) link LED	Green = Link exists. Off = No link exists.

Cisco ISE 3355 Serial Number Location

The serial number label is located at the lower left of the front panel of the Cisco ISE 3355 (see [Figure 2-6](#)).

Figure 2-6 Cisco ISE 3355 Appliance Serial Number Location



Note

The serial number for the Cisco ISE 3355 is defined by and observes the Cisco UDI specifications.

Cisco ISE 3355 Front and Rear Panels

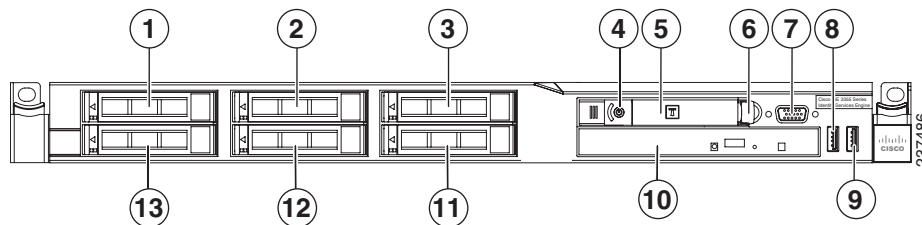
The Cisco ISE 3355 platform provides enhanced capability for enterprise-wide deployments that serve up to 6,000 concurrent endpoints and manage up to 20 other appliances or high-availability pairs. Similar to the Cisco ISE 3315, the Cisco ISE 3355 comes equipped with four network interfaces that provide flexibility in NIC interface selection and also make it capable for use in high-availability configurations.

The Cisco ISE 3355 also provides 4 GB of RAM, two SAS drives that are configured in RAID 0 and 1, dual power supplies, and a Cavium CN-1620-400-NHB-G accelerator card that supports Secure Sockets Layer (SSL) for larger network deployments and provides added reliability for centralized management of the deployment in the network core. For details, see [Cisco ISE Series Appliances, page 21](#).

Cisco ISE 3355 Front-Panel Features

[Figure 2-7](#), [Figure 2-8](#), and the accompanying tables illustrate and describe the Cisco ISE 3355 front-panel features, LEDs, and buttons.

Figure 2-7 Cisco ISE 3355 Front-Panel Features

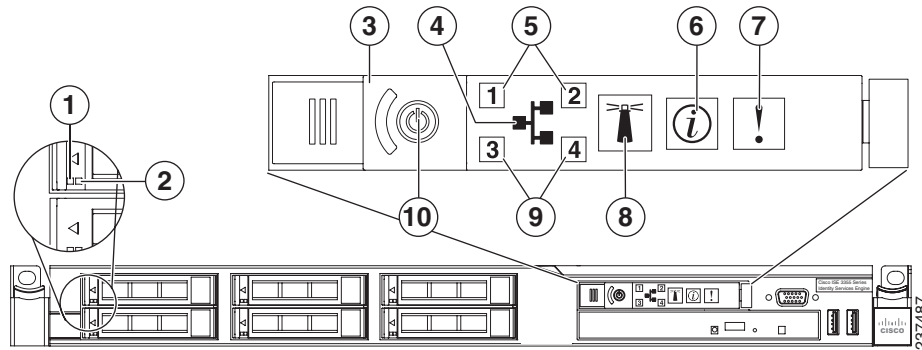


1	HDD bay 0	8	Front USB port 1
2	Empty (unused) HDD bay ¹	9	Front USB port 2
3	Empty (unused) HDD bay ¹	10	CD-ROM/DVD drive

4	Power button with LED indicator (bi-color: green or amber)	11	Empty (unused) HDD bay ¹
5	Operator information panel	12	Empty (unused) HDD bay ¹
6	Operator information panel release switch	13	HDD bay 1
7	Video port		

1. We do not support installing additional hard drives in the Cisco ISE 3355 appliance.

Figure 2-8 Cisco ISE 3355 Front-Panel LEDs and Buttons



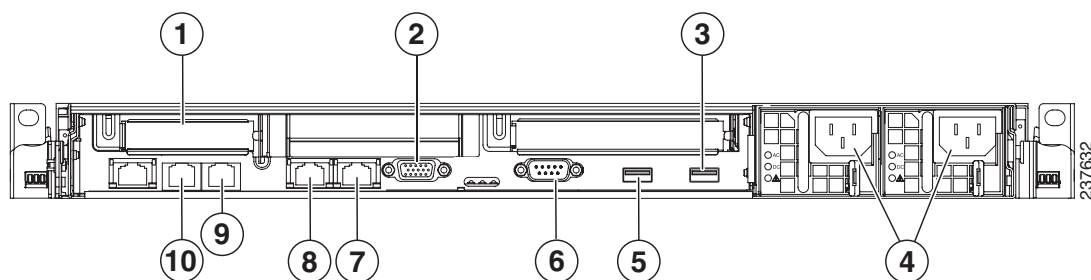
1	HDD activity LED	Green = Hard disk drive activity. Flashing Green = Hard disk drive activity. Off = Hard disk drive is idle or disabled.
2	HDD status LED	Amber = Hard disk drive is in error state. Off = Hard disk drive is functioning or disconnected from power.
3	Power switch button cover	Cover slides left or right to expose or protect the power switch.
4	Ethernet icon LED	Green = Ethernet interfaces are configured and up. Off = No Ethernet interfaces are currently configured or Ethernet interfaces are all down.
5	Ethernet interface activity LEDs (NIC 1 and NIC 2)	Green = Activity exists. Flashing green = Activity exists. Off = No activity exists.
6	Information LED	Amber = A noncritical system event has occurred. Off = System is functioning normally.
7	System health LED	Off = System health is normal. Amber = A prefailure system threshold has been reached, which can be caused by any of the following conditions: <ul style="list-style-type: none"> • At least one fan failure (system or processor fan). • At least one of the temperature sensors reached critical level (system or processor thermal sensors). • At least one memory module failed. • A power supply unit error has occurred.

8	Front locator button or LED	Flashing blue = Locator button has been pressed.
9	Ethernet interface activity LEDs (NIC 3 and NIC 4)	Green = Activity exists. Flashing green = Activity exists. Off = No activity exists.
10	Power button with LED	Green = The appliance has AC power and is powered up. Rapidly flashing green = The appliance is turned off and is not yet ready to be turned on. The appliance typically only remains in this state for 1 to 3 minutes. Slowly flashing green = The appliance is currently turned off and ready to be turned on. Slowly fading on or off green = The appliance is in power-save mode and is ready to be turned on. Off = The appliance is turned off (AC power is disconnected).

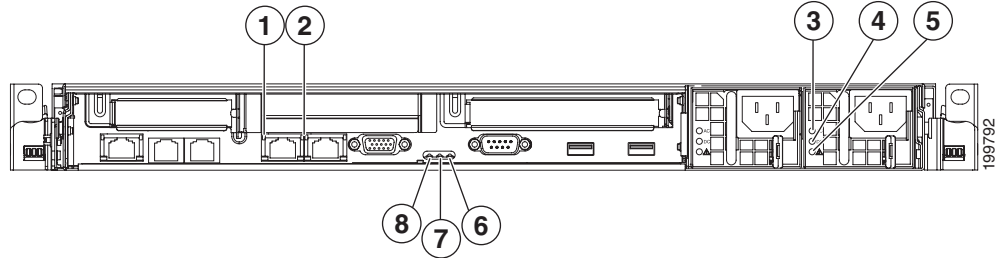
Cisco ISE 3355 Rear-Panel Features

Figure 2-9, Figure 2-10, and the accompanying tables illustrate and describe the Cisco ISE 3355 rear-panel features and LEDs.

Figure 2-9 Cisco ISE 3355 Rear-Panel Features



1	Empty (unused) PCI Express slot	6	Serial port (serial console, DB9 connection)
2	Video port	7	NIC 2 (eth1) Gigabit Ethernet interface
3	Rear USB port 4	8	NIC 1 (eth0) Gigabit Ethernet interface
4	AC Power supply cable sockets	9	NIC 4 (eth3) add-on card
5	Rear USB port 3	10	NIC 3 (eth2) add-on card

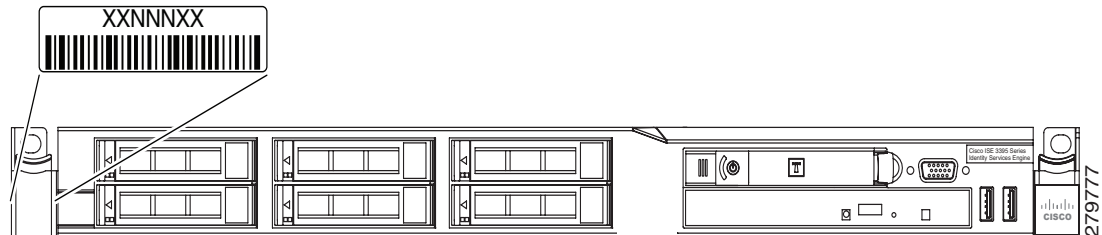
Figure 2-10 Cisco ISE 3355 Rear-Panel LEDs

1	NIC 1 (eth0) activity LED	Green = Activity exists. Flashing green = Activity exists. Off = No activity exists.
2	NIC 1 (eth0) link LED	Green = Link exists. Off = No link exists.
3	AC power LED	Green = AC power source is connected to power supply. Off = No AC power source is connected to power supply.
4	DC power LED	Green = DC power source is connected to power supply. Off = No DC power source is connected to power supply.
5	Power supply error LED	Amber = Power source to power supply is present, but power supply is in error state. Off = Power supply is functioning normally (if AC and DC power indicators are green) or power supply is disconnected.
6	System error LED	Amber = Indicates that a system error has occurred. Off = The system is functioning normally.
7	Rear locator LED	Flashing blue = Front locator button has been pressed.
8	Power LED	Green = The appliance has AC power and is turned on. Rapidly flashing green = The appliance is turned off and is not yet ready to be turned on. The appliance typically only remains in this state for 1 to 3 minutes. Slowly flashing green = The appliance is currently turned off and ready to be turned on. Slowly fading on or off green = The appliance is in power-save mode and is ready to be turned on. Off = The appliance is turned off (AC power is disconnected).

Cisco ISE 3395 Serial Number Location

The serial number label is located at the lower left of the front panel of the Cisco ISE 3395 (see [Figure 2-11](#)).

Figure 2-11 Cisco ISE 3395 Appliance Serial Number Location



Note

The serial number for the Cisco ISE 3395 is defined by and observes the Cisco UDI specifications.

Cisco ISE 3395 Front and Rear Panels

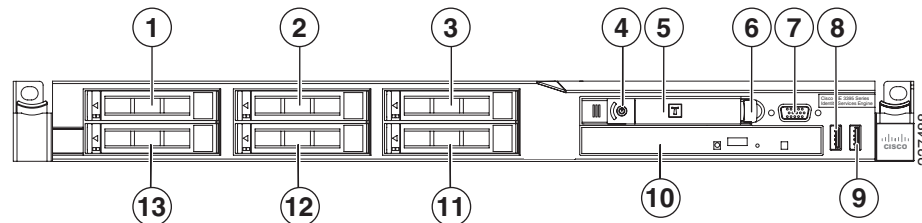
The Cisco ISE 3395 appliance provides the enhanced processing, memory, and power necessary for an enterprise-wide deployment serving up to 10,000 concurrent endpoints and managing up to 40 additional appliances or HA pairs.

The Cisco ISE 3395 features dual processors, dual power supplies, 4 GB of RAM, four HDDs, four network interfaces, and a Cavium CN-1620-400-NHB-G accelerator card that supports SSL for larger network deployments and provides added reliability for centralized management of the deployment in the network core. For details, see [Cisco ISE Series Appliances](#), page 21.

Cisco ISE 3395 Front-Panel Features

[Figure 2-12](#), [Figure 2-13](#), and the accompanying tables illustrate and describe the Cisco ISE 3395 front-panel features, LEDs, and buttons.

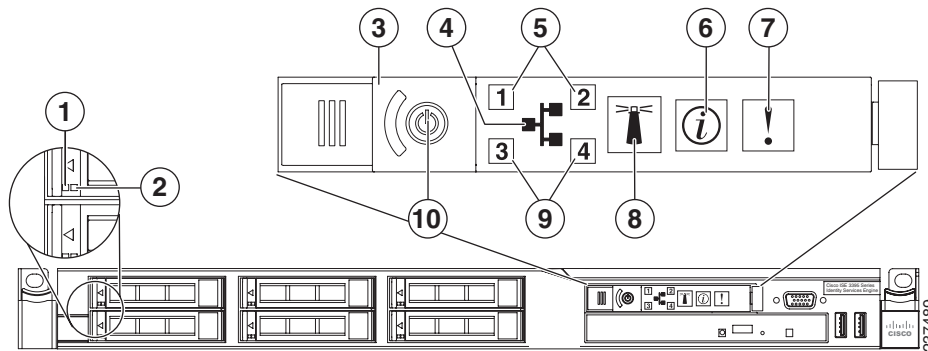
Figure 2-12 Cisco ISE 3395 Front-Panel Features



1	HDD bay 0	8	Front USB port 1
2	HDD bay 2	9	Front USB port 2
3	Empty (unused) HDD bay ¹	10	CD-ROM/DVD drive
4	Power button with LED indicator (bi-color: green or amber)	11	Empty (unused) HDD bay ¹
5	Operator information panel	12	HDD bay 3
6	Operator information panel release switch	13	HDD bay 1
7	Video port		

1. We do not support installing additional hard drives in the Cisco ISE 3395 appliance.

Figure 2-13 Cisco ISE 3395 Front-Panel LEDs and Buttons



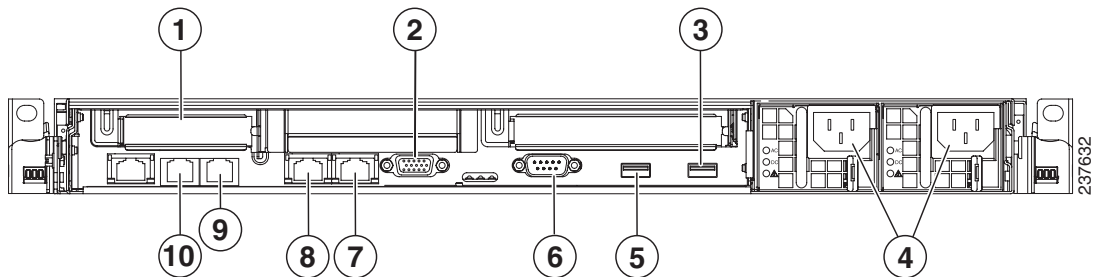
1	HDD activity LED	Green = Hard disk drive activity. Flashing Green = Hard disk drive activity. Off = Hard disk drive is idle or disabled.
2	HDD status LED	Amber = Hard disk drive is in an error state. Off = Hard disk drive is functioning or disconnected from power.
3	Power switch button cover	Cover slides left or right to expose or protect power switch.
4	Ethernet icon LED	Green = Ethernet interfaces are configured and up. Off = No Ethernet interfaces are currently configured or the Ethernet interfaces are all down.
5	Ethernet interface activity LEDs (NIC 1 and NIC 2)	Green = Activity exists. Flashing green = Activity exists. Off = No activity exists.
6	Information LED	Amber = A noncritical system event has occurred. Off = System is functioning normally.

7	System health LED	<p>Off = System health is normal.</p> <p>Amber = A prefailure system threshold has been reached, which can be caused by any of the following conditions:</p> <ul style="list-style-type: none"> • At least one fan failure (system or processor fan). • At least one of the temperature sensors reached critical level (system or processor thermal sensors). • At least one memory module failed. • A power supply unit error has occurred.
8	Locator button or LED	Flashing blue = Locator button has been pressed.
9	Ethernet interface activity LEDs (NIC 3 and NIC 4)	<p>Green = Activity exists.</p> <p>Flashing green = Activity exists.</p> <p>Off = No activity exists.</p>
10	Power button or LED	<p>Green = The appliance has AC power and is turned on.</p> <p>Rapidly flashing green = The appliance is turned off and is not yet ready to be turned on. The appliance typically only remains in this state for 1 to 3 minutes.</p> <p>Slowly flashing green = The appliance is currently turned off and ready to be turned on.</p> <p>Slowly fading on or off green = The appliance is in power-save mode and is ready to be turned on.</p> <p>Off = The appliance is turned off (AC power is disconnected).</p>

Cisco ISE 3395 Rear-Panel Features

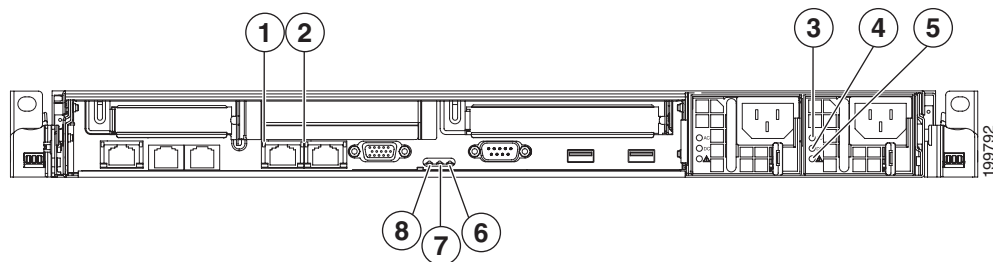
Figure 2-14, Figure 2-15, and the accompanying tables illustrate and describe the Cisco ISE 3395 rear-panel features and LEDs.

Figure 2-14 Cisco ISE 3395 Rear-Panel Features



1	Empty (unused) PCI Express slot	6	Serial port (serial console, DB9 connection)
2	Video port	7	NIC 2 (eth1) Gigabit Ethernet interface
3	Rear USB port 4	8	NIC 1 (eth0) Gigabit Ethernet interface
4	AC Power supply cable sockets	9	NIC 4 (eth3) add-on card
5	Rear USB port 3	10	NIC 3 (eth2) add-on card

Figure 2-15 Cisco ISE 3395 Rear-Panel LEDs



1	NIC 1 (eth0) activity LED	Green = Activity exists. Flashing green = Activity exists. Off = No activity exists.
2	NIC 1 (eth0) link LED	Green = Link exists. Off = No link exists.
3	AC power LED	Green = AC power source is connected to the power supply. Off = No AC power source is connected to the power supply.
4	DC power LED	Green = DC power source is connected to the power supply. Off = No DC power source is connected to the power supply.
5	Power supply error LED	Amber = Power source to power supply is present, but power supply is in error state. Off = Power supply is functioning normally (if AC and DC power indicators are green) or power supply is disconnected.
6	System error LED	Amber = Indicates that a system error has occurred. Off = The system is functioning normally.
7	Rear locator LED	Flashing blue = Front locator button has been pressed.
8	Power LED	Green = The appliance has AC power and is turned on. Rapidly flashing green = The appliance is turned off and is not yet ready to be turned on. The appliance typically only remains in this state for 1 to 3 minutes. Slowly flashing green = The appliance is currently turned off and ready to be turned on. Slowly fading on or off green = The appliance is in power-save mode and is ready to be turned on. Off = The appliance is turned off (AC power is disconnected).

