



# Cisco Expressway CE1000 Appliance

## Installation Guide

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X8.2 or later

December 2014

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# Introduction

## About this document

This document describes how to install a Cisco Expressway CE1000 appliance into your video network. It contains information on:

- Preparing the installation
- Installing the hardware
- Performing initial configuration
- Troubleshooting the installation

The Cisco Expressway appliance is based on the UCS C220 M3L. For more detailed information on installing this appliance see [Cisco UCS C220 Server Installation and Service Guide](#).

## About the Cisco Expressway appliance

The Cisco Expressway appliance described in this document is a CE1000, which is based on a UCS C220 M3L.

The appliance supports Cisco Expressway version X8.1.1 or later.

**Note:** you must install the 10 Gb fiber SFPs to take advantage of the unit's performance and scalability capabilities, otherwise it will not support more than 150 traversal calls. This is the case even if the option key for additional traversal calls has been installed.

The following table lists the components for the appliance:

Item	Part	Quantity
Chassis	UCSC-C220-M3L	1
Processor	UCS-CPU-E5-2643 (3.30 GHz / 4 Core - Hyper threaded)	2
RAM	UCS-MR-1X082RY-A (8 GB)	4
Hard Disk	UCS-HDD1TI2F212 (1TB NL SAS Disk LFF)	2
RAID Card	UCS-RAID9271-8I (Generation 3 RAID card) <b>Note:</b> the appliance is configured with RAID1 (mirror)	1
NIC	N2XX-AIPCI01 (Intel X520 Dual Port 1/10 Gb SFP+ Adapter)	1
	EXP-10GSFP-SR= (10 Gb SR Fiber SFP)	2
	EXP-1GSFP-T= (1 Gb Copper SFP)	2
PSU	UCSC-PSU-650 W & Power cable	2
TPM	UCSX-TPM1-001 (Trusted Platform Module)	1
Miscellaneous	UCSC-BBLKD-L (HDD filler panel)	2
	UCSC-HS-C220M3 (Heat Sink)	2
	UCSC-RAIL1 (Rail Kit)	1

The following components are field replaceable:

- Hard disks
- PSUs
- 1 Gb and 10 Gb SFP modules

To initiate a Return Material Authorization (RMA) go to [http://www.cisco.com/web/ordering/cs\\_info/or3/o32/Return\\_a\\_Product/WebReturns/product\\_Online\\_web\\_returns.html](http://www.cisco.com/web/ordering/cs_info/or3/o32/Return_a_Product/WebReturns/product_Online_web_returns.html).

## Related documents

- [Cisco Expressway Administrator Guide](#) - describes how to maintain and operate the Cisco Expressway software.
- [Cisco Expressway Cluster Creation and Maintenance Deployment Guide](#) - describes how to create and maintain a cluster of Cisco Expressways.

## Training

Training is available online and at our training locations. For more information on all the training we provide and where our training offices are located, visit [www.cisco.com/go/telepresencetraining](http://www.cisco.com/go/telepresencetraining)

## Glossary

A glossary of TelePresence terms is available at: <https://tp-tools-web01.cisco.com/start/glossary/>

# Preparing to install

## Environmental and power specifications

To view environmental and power specifications for the appliance server see [http://www.cisco.com/en/US/docs/unified\\_computing/ucs/c/hw/C220/install/spec.html](http://www.cisco.com/en/US/docs/unified_computing/ucs/c/hw/C220/install/spec.html).

## Unpacking the unit and preparing the installation

See [http://www.cisco.com/en/US/docs/unified\\_computing/ucs/c/hw/C220/install/install.html](http://www.cisco.com/en/US/docs/unified_computing/ucs/c/hw/C220/install/install.html) for information on:

- Unpacking and inspecting the server
  - Note that the CE1000 is shipped with 2 x 10 Gb fiber SFPs and 2 x 1 Gb copper SFPs.
- Installation guidelines
- Rack requirements
- Equipment requirements
- Slide rail adjustment range

## Locating serial numbers

The Cisco Expressway appliance displays two serial numbers:

- UCS serial number:
  - has the format FCHxxxxxxx
  - is displayed on the physical hardware and in the CIMC web interface
- Application/Software serial number:
  - has the format 52XNNNNN, where X is a letter and N are numbers
  - is displayed in the Cisco Expressway web interface, console and SSH session
  - must be supplied to obtain release and option keys

# Installing

## Installing the unit in a rack

See [http://www.cisco.com/en/US/docs/unified\\_computing/ucs/c/hw/C220/install/install.html#wp1341126](http://www.cisco.com/en/US/docs/unified_computing/ucs/c/hw/C220/install/install.html#wp1341126) for information on how to install the unit in a rack.

## Inserting the SFPs

The CE1000 unit is shipped with two 10 Gb fiber small form-factor pluggable (SFP) transceivers and two 1 Gb copper SFPs. When inserting the SFPs into the unit, note that you cannot mix the type of SFP. Either insert two 10 Gb fiber SFPs or two 1 Gb copper SFPs.

The SFPs do not auto-negotiate the speed, therefore ensure that the SFPs are connected to a switch at the correct speed (1 Gb if connecting to the copper SFPs or 10 Gb if connecting to the fiber SFPs)

**Note:** you must install the 10 Gb fiber SFPs to take advantage of the unit's performance and scalability capabilities, otherwise it will not support more than 150 traversal calls. This is the case even if the option key for additional traversal calls has been installed.

## Connecting and powering on the unit

Attach a power cord to each power supply in your server, and then attach the power cord to a grounded AC power outlet. See [http://www.cisco.com/en/US/docs/unified\\_computing/ucs/c/hw/C220/install/spec.html#wp1070378](http://www.cisco.com/en/US/docs/unified_computing/ucs/c/hw/C220/install/spec.html#wp1070378) for power specifications.

The power button of the unit is located in the top left-hand corner of the front panel.

If this is the first time that the power switch has been turned on after connecting the power cable, the system will perform a Self Test and the unit will automatically restart. This is expected behavior. The system will be operational after it has booted up a second time. The first boot will take approximately 2 minutes.

To verify the power status look at the Power Status LED (see [Figure 3: Front view of the Cisco Expressway unit. \[p. 12\]](#)):

- Off—There is no AC power present in the server.
- Amber—The server is in standby power mode. Power is supplied only to the CIMC and some motherboard functions.
- Green—The server is in main power mode. Power is supplied to all server components.

# Configuring

Before you can use the Cisco Expressway, you must configure its IPv4 and/or IPv6 address, subnet mask and default gateway. Consult your network administrator for information on which addresses to use. Note that the Cisco Expressway must use a static IP address.

This section describes how to connect to the Cisco Expressway and perform the initial configuration.

## Connecting to the Cisco Expressway

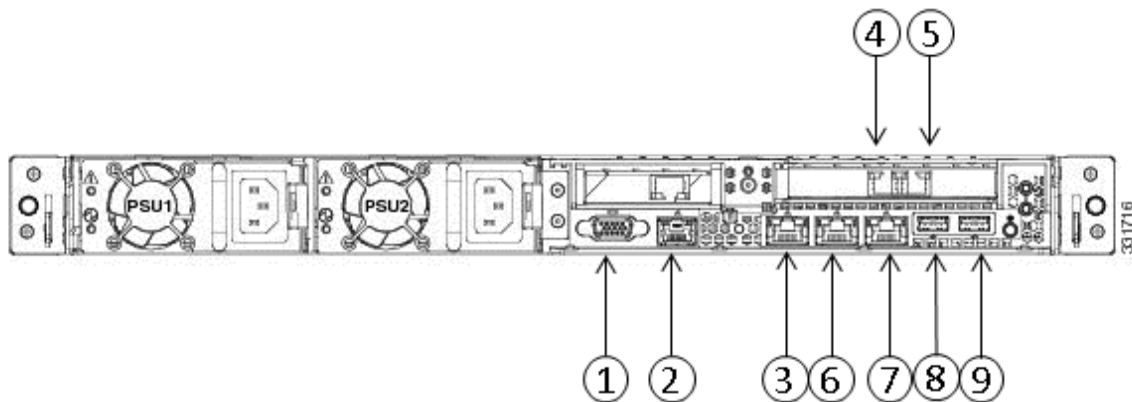
Before you can use the Cisco Expressway, you must configure its IPv4 and/or IPv6 address, subnet mask and default gateway. Consult your network administrator for information on which addresses to use. Note that the Cisco Expressway must use a static IP address.

**Note:** an additional IP address is required if the CIMC (Cisco Integrated Management Controller) tool is used. It can be a static IP address or assigned via DHCP.

This initial configuration can be done:

- by connecting from a PC to the Cisco Expressway using a serial cable (see [Connecting via the serial port \[p.8\]](#) followed by [Configuring the Cisco Expressway \[p.9\]](#)).
- by connecting a monitor and keyboard directly into the unit (see [Connecting via the KVM port \[p.9\]](#) followed by [Configuring the Cisco Expressway \[p.9\]](#)).
- if your network is set up to allow it, by connecting using a web browser to the default IP address of 192.168.0.100 (see [Using the web interface \[p.10\]](#)).

Figure 1: Rear panel showing ports.

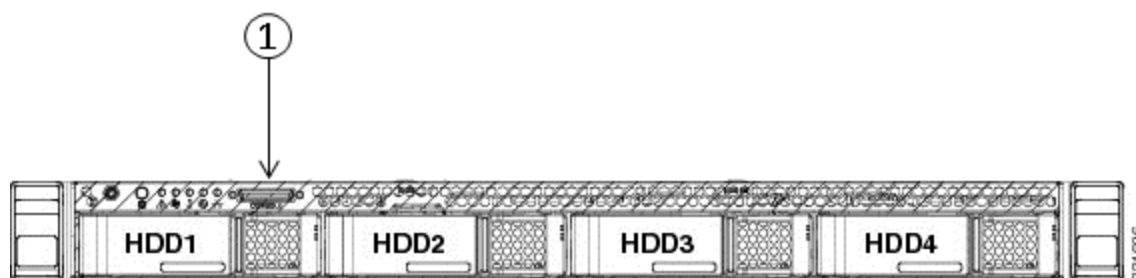


The rear panel ports are:

- |   |  |
|---|--|
| 1 | VGA port   |
| 2 | Serial port  |
| 3 | Dedicated management port (can be used for CIMC in the future) |
| 4 | LAN 1 (left-hand SFP port)                                     |
| 5 | LAN 2 (right-hand SFP port)                                    |

6	LAN 3 (not currently used)
7	LAN 4 (not currently used)
8	USB port
9	USB port

Figure 2: Front panel showing KVM connector.



The front panel port is:

1	KVM connector
---	---------------

## Connecting via the serial port

To connect to the Cisco Expressway via the serial port:

1. Connect the Ethernet LAN cable from the LAN 1 port on the rear of the unit to your network. The LAN 1 port is the left-hand port of the dual port adapter on the rear panel of the unit (shown in [Figure 1: Rear panel showing ports. \[p. 7\]](#)).
2. Connect a serial cable from the serial port on the rear of the unit to the serial port on a PC (see [Figure 1: Rear panel showing ports. \[p. 7\]](#)).

The serial cable used must be a cross-over cable. The pin assignment for the serial cable is:

Male RJ45 pin	Female DB9 pin
1	8
2	6
3 TXD	2
4 GND	5
5 GND	5
6 RXD	3
7	4
8	7

**Note:** if there is no DB9 port on your PC, a DB9 to USB serial port adapter is required.

3. Start a terminal emulator program (for example PuTTY) on the PC and configure it to use the PC's serial port as follows:



- baud rate: 115200 bits per second
- data bits: 8
- parity: none
- stop bits: 1
- flow control (hardware and software): none

**Note:** do not leave a terminal emulator session open after it is no longer in use. An open session may cause issues during a system restart.

## Connecting via the KVM port

1. Connect the Ethernet LAN cable from the LAN 1 port on the rear of the unit to your network. The LAN 1 port is the left-hand port of the dual port adapter (shown in [Figure 1: Rear panel showing ports. \[p.7\]](#)).
2. Either:
  - connect a USB keyboard and VGA monitor via a KVM adaptor to the KVM connector on the front panel (see [Figure 2: Front panel showing KVM connector. \[p.8\]](#)), or
  - connect a USB keyboard to the USB port and a VGA monitor to the VGA port on the rear panel (see [Configuring \[p.7\]](#)).

## Configuring the Cisco Expressway

When you have connected to the Cisco Expressway and powered up the system, perform the following steps for the initial configuration:

1. If the system has just booted up, the terminal emulator program on the PC will display the Cisco Expressway's startup information. After approximately four minutes you will get the login prompt. If the Cisco Expressway was already on when you connected the serial cable, press **Enter** to get the login prompt.  
The login prompt is  
`cisco login:`
2. Enter the username **admin** and press **Enter**.  
You will get the password prompt:  
`Password:`
3. Enter the default password of **TANDBERG** and press **Enter**.  
You will get the install wizard prompt:  
`Run install wizard [n]:`
4. Type **y** and press **Enter**.
5. Follow the prompts given by the install wizard to specify the following:
  - the password you want to use for your admin account  
**Note:** for security reasons you are advised to change the password from the default of **TANDBERG**.
  - whether you want to use IPv4, IPv6 or Both
  - the LAN 1 IP address of the Cisco Expressway
  - the LAN 1 IPv4 subnet mask of the Cisco Expressway (if you have selected IPv4)
  - the IP default gateway of the Cisco Expressway
  - the Ethernet speed  
**Note:** use the default value of **Auto**, but ensure that the SFP is connected to a switch at the correct speed (1 Gb if connecting to the copper SFPs or 10 Gb if connecting to the fiber SFPs).
  - whether you want to use SSH to administer the Cisco Expressway

6. After the wizard is finished the following message will appear:  
**Setting other settings...OK.**  
**The system must be restarted for new settings to take effect..**  
And you will get a restart prompt:  
**Restart Now?**  
Type **y** and press **Enter**.
7. After it has rebooted, the Cisco Expressway is ready to use. You can access the Cisco Expressway's web interface via the IP address assigned to the LAN 1 Ethernet port.  
**Note:** for security reasons you are advised to change the password for the [default admin account](#) (if you have not already done so) and the [root account](#) from the default of TANDBERG.

## Using the web interface

To use the web interface:

1. Open a browser window and in the address line type either:
  - the IP address of the Cisco Expressway
  - the FQDN of the Cisco ExpresswayThe **Login** page will appear.
2. Select **Administrator Login**.
3. Enter a valid administrator username and password and select **Login**.  
You will be presented with the **Overview** page.

See the online help or *Cisco Expressway Administrator Guide* for information on the configuration options available for each page of the Cisco Expressway web interface.

## Using the Command Line Interface (CLI)

The command line interface is available over SSH and through the serial port by default.

To use the command line interface:

1. Start an SSH session.
2. Enter the IP address or FQDN of the Cisco Expressway.
3. Login with a username of **admin** and your system password.  
You will see a welcome message.

For a full list of CLI commands available on the Cisco Expressway, see *Cisco Expressway Administrator Guide*.

## Changing the admin account password

To change the password for the admin account using the web interface:

1. Go to **Users > Administrator accounts**. You are taken to the **Administrator accounts** page.
2. Click on **View/Edit** for the admin name.
3. In the **Password** and **Confirm password** fields, enter the new password, and click **Save**.  
The **Password strength** box will indicate how secure your chosen password is.

To change the password for the admin account using the CLI:

Type `xConfiguration SystemUnit Password`

**Note:** you cannot set a blank password for the admin user or any other administrator account, or the root account.

## Changing the root account password

To change the password for the root account:

1. Using a serial connection, log in as `root` using the existing password.
2. Type the command `passwd`.  
You will be asked for the new password.
3. Enter the new password and when prompted, retype the password.
4. Type `exit` to log out of the root account.

## Changing other system settings

You are also required to configure the following:

- The system name of the Cisco Expressway. This is used by the Cisco TelePresence Management Suite (Cisco TMS) to identify the system. This can be set from the **System administration** page (**System > Administration**) on the web interface.
- Automatic discovery. If you have multiple Cisco Expressways in the same network you may want to disable automatic discovery on some of them. This can be set from the **H.323** page on the web interface (**Configuration > Protocols > H.323**).
- The DNS server address(es), if URI dialing or Fully Qualified Domain Names (FQDNs) are to be used. This can be set from the **DNS** page on the web interface (**System > DNS**).

See the online help or *Cisco Expressway Administrator Guide* for more information on these configuration options.

## Checking for updates and upgrading

To check whether your Cisco Expressway has the latest software installed go to <http://software.cisco.com/download/navigator.html> and navigate to the Cisco Expressway.

See *Cisco Expressway Administrator Guide* for information on how to upgrade.

**Note:** you must not downgrade to a software version lower than X8.1.1.

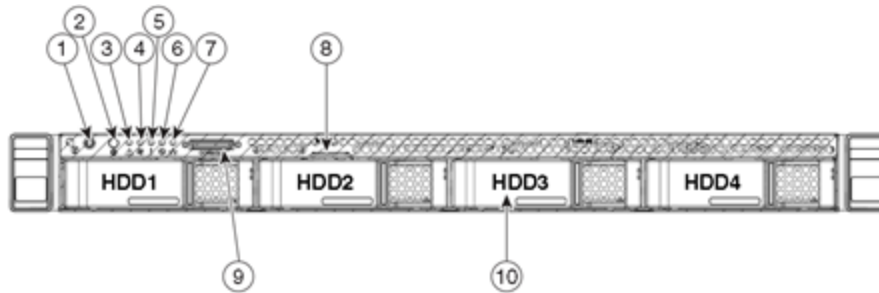
# Troubleshooting

## Locating LEDs and components

### Front view

Below is an illustration of the unit's front view and a list of the LEDs and components available.

Figure 3: Front view of the Cisco Expressway unit.

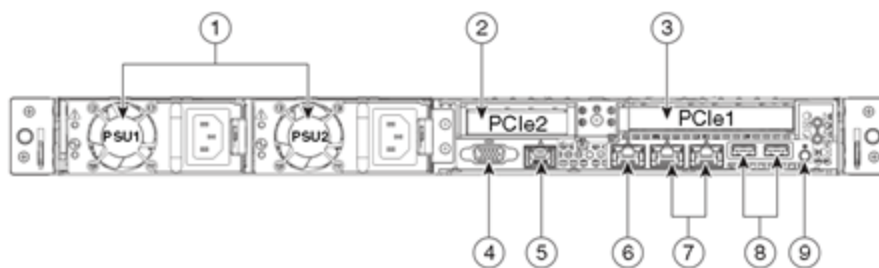


1	Power button/power status LED
2	Identification button/LED
3	System status LED
4	Fan status LED
5	Temperature status LED
6	Power supply status LED
7	Network link activity LED
8	Asset tag (serial number)
9	KVM connector (for USB/VGA connection)
10	HD drive activity/fault LED

### Rear view

Below is an illustration of the unit's rear view and a list of the LEDs and components available.

Figure 4: Rear view of the Cisco Expressway unit.



1	Power supplies (two for CE1000)
---	---------------------------------

- 
- |   |  |
|---|--|
| 2 | Slot 2: used for RAID card                                     |
| 3 | Slot 1: used for dual 1/10Gb network adapter (LAN 1 and LAN 2) |
| 4 | VGA video connector  |
| 5 | Serial port (RJ-45 connector)                                  |
| 6 | 10/100/1000 Ethernet dedicated management port (used for CIMC) |
| 7 | Dual 1-Gb Ethernet ports (not currently in use)                |
| 8 | USB ports  |
| 9 | Rear Identification button/LED                                 |
- 

### Definitions of LED states

For the definitions of LED states see [http://www.cisco.com/en/US/docs/unified\\_computing/ucs/c/hw/C220/install/replace.html#wp1167104](http://www.cisco.com/en/US/docs/unified_computing/ucs/c/hw/C220/install/replace.html#wp1167104).

## Specific issues

### Active Options only indicates '150 traversal calls' for Large deployments

To utilize the Large scale capabilities (500 traversal calls) of the Cisco Expressway, the CE1000 unit must have an active 10Gb network connection.

## Document revision history

The following table summarizes the changes that have been applied to this document:

Date	Description
December 2014	Updated for X8.5.
June 2014	Updated for X8.2.
April 2014	Initial release.

# Notices

## Technical support

If you cannot find the answer you need in the documentation, check the web site at <http://www.cisco.com/cisco/web/support/index.html> where you will be able to:

- Make sure that you are running the most up-to-date software.
- Get help from the Cisco Technical Support team.

Make sure you have the following information ready before raising a case:

- Identifying information for your product, such as model number, firmware version, and software version (where applicable).
- Your contact email address or telephone number.
- A full description of the problem.

To view a list of Cisco TelePresence products that are no longer being sold and might not be supported, visit: [http://www.cisco.com/en/US/products/prod\\_end\\_of\\_life.html](http://www.cisco.com/en/US/products/prod_end_of_life.html) and scroll down to the TelePresence section.

## Accessibility notice

Cisco is committed to designing and delivering accessible products and technologies.

The Voluntary Product Accessibility Template (VPAT) for Cisco Expressway is available here:

[http://www.cisco.com/web/about/responsibility/accessibility/legal\\_regulatory/vpats.html#telepresence](http://www.cisco.com/web/about/responsibility/accessibility/legal_regulatory/vpats.html#telepresence)

You can find more information about accessibility here:

[www.cisco.com/web/about/responsibility/accessibility/index.html](http://www.cisco.com/web/about/responsibility/accessibility/index.html)

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