



ExtremeCloud IQ Controller v10.12.01 CE1000 Deployment Guide

Configuration and Management

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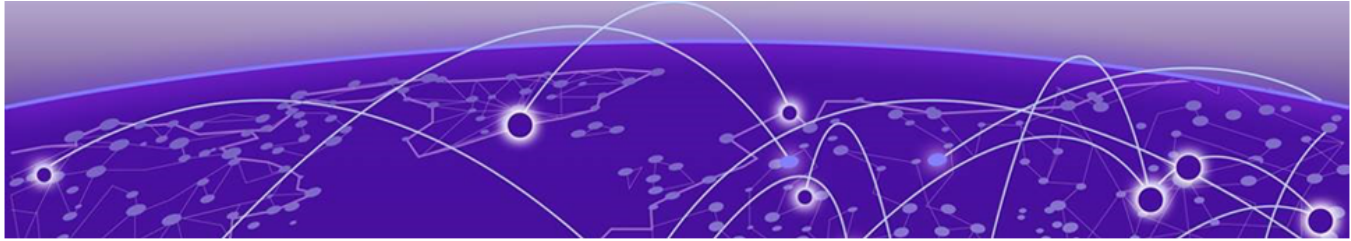
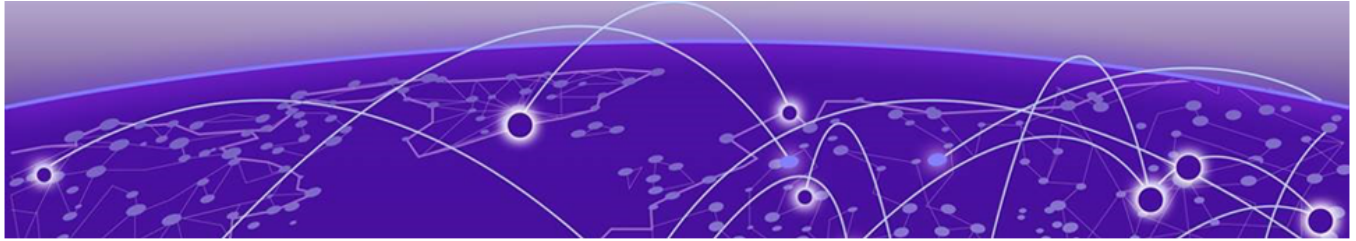


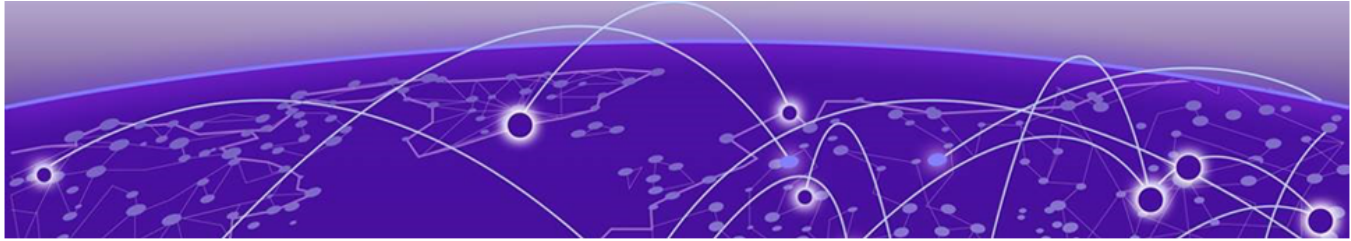
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Abstract

The CE1000 Deployment Guide for ExtremeCloud IQ Controller v10.12.01 provides comprehensive instructions for installing, configuring, and managing the CE1000 container application on the Universal Compute Platform. This guide covers the characteristics and limitations of the CE1000, supported hardware, and detailed installation prerequisites and task flow. It includes steps for uploading the CE1000 application image, running the configuration wizard, generating the activation license, and optionally onboarding to ExtremeCloud IQ for cloud visibility. The document also highlights additional deployment considerations, such as configuring LAG ports, and provides troubleshooting tips and support information.



Preface

Read the following topics to learn about:

- The meanings of text formats used in this document.
- Where you can find additional information and help.
- How to reach us with questions and comments.

Text Conventions

Unless otherwise noted, information in this document applies to all supported environments for the products in question. Exceptions, like command keywords associated with a specific software version, are identified in the text.

When a feature, function, or operation pertains to a specific hardware product, the product name is used. When features, functions, and operations are the same across an entire product family, such as Extreme Networks switches or SLX routers, the product is referred to as *the switch* or *the router*.

Table 1: Notes and warnings






Icon	Notice type	Alerts you to...
	Tip	Helpful tips and notices for using the product
	Note	Useful information or instructions
	Important	Important features or instructions
	Caution	Risk of personal injury, system damage, or loss of data
	Warning	Risk of severe personal injury

Table 2: Text

Convention	Description
screen displays	This typeface indicates command syntax, or represents information as it is displayed on the screen.
The words <i>enter</i> and <i>type</i>	When you see the word <i>enter</i> in this guide, you must type something, and then press the Return or Enter key. Do not press the Return or Enter key when an instruction simply says <i>type</i> .
Key names	Key names are written in boldface, for example Ctrl or Esc . If you must press two or more keys simultaneously, the key names are linked with a plus sign (+). Example: Press Ctrl+Alt+Del
<i>Words in italicized type</i>	Italics emphasize a point or denote new terms at the place where they are defined in the text. Italics are also used when referring to publication titles.
NEW!	New information. In a PDF, this is searchable text.

Table 3: Command syntax

Convention	Description
bold text	Bold text indicates command names, keywords, and command options.
<i>italic text</i>	Italic text indicates variable content.
[]	Syntax components displayed within square brackets are optional. Default responses to system prompts are enclosed in square brackets.
{ x y z }	A choice of required parameters is enclosed in curly brackets separated by vertical bars. You must select one of the options.
x y	A vertical bar separates mutually exclusive elements.
< >	Nonprinting characters, such as passwords, are enclosed in angle brackets.
...	Repeat the previous element, for example, <i>member [member...]</i> .
\	In command examples, the backslash indicates a “soft” line break. When a backslash separates two lines of a command input, enter the entire command at the prompt without the backslash.

Documentation and Training

Find Extreme Networks product information at the following locations:

[Current Product Documentation](#)

[Release Notes](#)

[Hardware and Software Compatibility](#) for Extreme Networks products

[Extreme Optics Compatibility](#)

[Other Resources](#) such as articles, white papers, and case studies

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Help and Support

If you require assistance, contact Extreme Networks using one of the following methods:

Extreme Portal

Search the GTAC (Global Technical Assistance Center) knowledge base; manage support cases and service contracts; download software; and obtain product licensing, training, and certifications.

The Hub

A forum for Extreme Networks customers to connect with one another, answer questions, and share ideas and feedback. This community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC.

Call GTAC

For immediate support: (800) 998 2408 (toll-free in U.S. and Canada) or 1 (408) 579 2800. For the support phone number in your country, visit www.extremenetworks.com/support/contact.

Before contacting Extreme Networks for technical support, have the following information ready:

- Your Extreme Networks service contract number, or serial numbers for all involved Extreme Networks products
- A description of the failure
- A description of any actions already taken to resolve the problem
- A description of your network environment (such as layout, cable type, other relevant environmental information)
- Network load at the time of trouble (if known)
- The device history (for example, if you have returned the device before, or if this is a recurring problem)
- Any related RMA (Return Material Authorization) numbers

Subscribe to Product Announcements

You can subscribe to email notifications for product and software release announcements, Field Notices, and Vulnerability Notices.

1. Go to [The Hub](#).
2. In the list of categories, expand the **Product Announcements** list.
3. Select a product for which you would like to receive notifications.
4. Select **Subscribe**.
5. To select additional products, return to the **Product Announcements** list and repeat steps 3 and 4.

You can modify your product selections or unsubscribe at any time.

Send Feedback

The User Enablement team at Extreme Networks has made every effort to ensure that this document is accurate, complete, and easy to use. We strive to improve our documentation to help you in your work, so we want to hear from you. We welcome all feedback, but we especially want to know about:

- Content errors, or confusing or conflicting information.
- Improvements that would help you find relevant information.
- Broken links or usability issues.

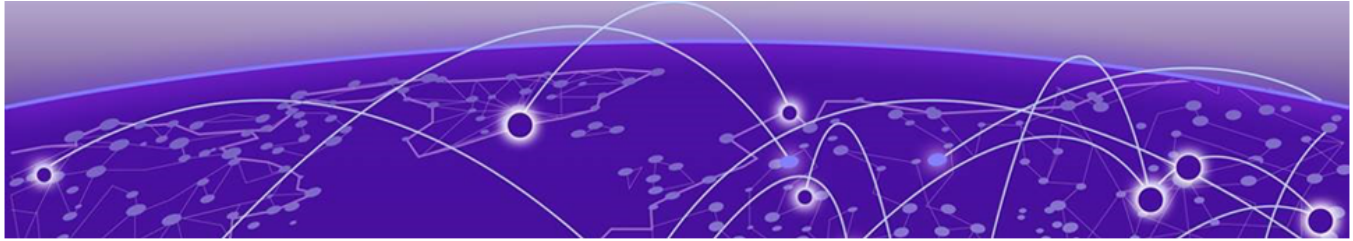
To send feedback, email us at documentation@extremenetworks.com.

Provide as much detail as possible including the publication title, topic heading, and page number (if applicable), along with your comments and suggestions for improvement.

Revision History

Table 4: Revision History

Date	Version	Revision
Feb 19 2025	AA	Initial publish
Mar 06 2025	AB	Updates to <i>LAG Configuration Summary</i> . Retitled topic and added information on static LAG vs LACP LAG interaction for clarity.



About CE1000

[CE1000 Characteristics and Limitations](#) on page 9

[Supported Hardware](#) on page 10

This guide provides the steps needed to install, activate, and deploy the CE1000 container application on Universal Compute Platform. When installed, the CE1000 lets you run ExtremeCloud IQ Controller from the appliance.

The CE1000 is a KVM-based VM platform intended to run in a container on the Universal Compute Platform 1130C platform. CE1000 replaces the E1120 appliance with similar functionality and system limits as the E1120.

- Standalone: 250 APs and 2000 users
- Availability: 500 APs and 4000 users (any client distribution between controllers)

CE1000 Characteristics and Limitations

CE1000 characteristics:

- CPU: 8 CPUs
- RAM: 16 GB
- HDD: 120 GB
- Management Port: 1Gbps (built-in e1000 driver), fixed configuration connected to Kubernetes
- Data Ports: 4 x 1Gbps (10/100/1000 Mbps) RJ45 (ixgbevf module), direct NIC H/W access over VF (SR-IOV)
- LAG Ports: 2
- USB: not supported
- Serial port: over "virtctl console" on the host or through Universal Compute Platform user interface
- Watchdog: Intel 6300ESB
- Misc:
 - Date preserved in RTC chip is UTC format
 - Jumbo Frame Support
 - Hardware Encryption Support (CRC32/IPSec)

Software image file extensions:

- dke: the main software installation image
- rdke: the rescue partition image
- qcow2: GD image (zlib compressed QCOW2)

Supported Hardware

Table 5: Supported Hardware

Container Application	Hardware Appliance
CE1000	Universal Compute Platform 1130C Appliance



Installation

[Installation Prerequisites](#) on page 11

[Installation Task Flow](#) on page 12

Installation Prerequisites

Before you install CE1000, make sure that you've done the following:

Licensing Requirements

Complete the following CE1000 licensing requirements on the [Extreme Networks Support Portal](#):

- Purchase the CE1000 activation sku: XIQ-CACT-APP.
- Download the installation image for your application from the portal at `Downloads/ExtremeCloud/Extreme Cloud IQ Controller`.

Universal Compute Platform Requirements

Deploy an ExtremeCloud Edge – Self-Orchestration deployment on the 1130C Universal Compute Platform hardware appliance. Your deployment must include the following settings:

- Deployment Type=ExtremeCloud Edge - Self Orchestration (mandatory value)
- Cluster Node Information=Standalone (mandatory)
- ICC1 IP Address—It's mandatory that you configure an ICC1 IP address. However, connectivity for the interface is not required.
- Pod Network Configuration=10.96.0.0 (this is the default setting—recommended)
- Pod Network CIDR=16
- Service Network Configuration=10.97.0.0 (this is the default setting—recommended)
- Service Network CIDR=16
- DNS—It's mandatory to configure DNS.
- LAG (optional)—If you want to deploy LAG data ports on CE1000, configure LAG on Universal Compute Platform before you configure the feature on CE1000. This can be done as part of your installation prerequisites. For more information, see LAG Port information in [LAG Configuration Summary](#) on page 16.

For detailed information on how to connect the 1130C hardware appliance, see [Extreme Networks Universal Compute Platform 1130C Appliance Installation Guide](#).

For detailed information on how to configure an ExtremeCloud Edge - Self-Orchestration deployment on the 1130C, see [ExtremeCloud Edge - Self-Orchestration Deployment Guide](#).

Installation Task Flow

Complete the following tasks to install CE1000 on the Universal Compute Platform appliance. After the CE1000 is deployed, you will be able to run ExtremeCloud IQ Controller from the appliance.

Before You Begin

Review the [Installation Prerequisites](#) on page 11. Make sure that you've completed all of the requirements, such as purchasing the SKU and downloading the application image.

Table 6: CE1000 Installation Task Flow

	Procedure	Description
1	Upload the CE1000 Application Image on page 12	Upload the CE1000 application image to Universal Compute Platform.
2	Install CE1000 Application on page 13	Install the CE1000 on Universal Compute Platform.
3	Run Configuration Wizard on page 14	Run the wizard to apply basic networking settings to your installation.
4	Generate the Activation License on page 15	Generate the activation license and apply the license to your deployment.
5	Onboard to ExtremeCloud IQ on page 16	Optional. Onboard the controller to ExtremeCloud IQ if you want to provide cloud visibility to the deployment.

Upload the CE1000 Application Image

Upload the CE1000 application image file to Universal Compute Platform

Before You Begin

Make sure that you've completed all of the requirements in [Installation Prerequisites](#) on page 11, including purchasing the SKU and downloading the application image from the support portal.

1. From the Universal Compute Platform, go to **Engines > Image Management**.

2. Choose one of the following:

- Select the **Choose Image File** pane and navigate to the image file. Or,
- Drag and drop the image file onto the **Image File** pane.

The upload may take a few minutes. After the upload completes, the CE1000 application image displays on the **Image Management** page of Universal Compute Platform.



Note

If you need to update the images on the **Image Management** page:

- To delete an uploaded image, select the check box next to the image file. Then, select **Delete**.
- To refresh the image file list, select **Refresh**.

Install CE1000 Application

Use this procedure to load and install the XIQ-C application on the Universal Compute Platform.

1. Log in to the Universal Compute Platform.
2. Go to **Engines > Installation**.
3. From the **ExtremeCloud IQ Controller** pane, select **Install**.
4. In the popup window, select **OK**.

The application installs. After installation, a CE1000 link displays in the **ExtremeCloud IQ Controller** pane.

5. Within the **ExtremeCloud IQ Controller** pane, select the link for your new installation.
6. Review the following settings and apply any required updates:
 - **Node Affinity**—Represents the FQDN (hostname + domain name) of the Universal Compute Platform host on which this ExtremeCloud IQ Controller instance is installed
 - **Port (1, 2, 3, and 4)**—The VF represents the virtual function on the internal switch that connects to the data port. We recommend that you retain the default settings. By default, the first installed instance on the host defaults to **VF01**.
7. Select **Deploy**.

After a delay of up to a few minutes to process the updates, the ExtremeCloud IQ Controller summary screen displays with a set of four tabs:

- Network Service Configuration
- Statistics
- Logs
- Consoles

8. Select **Console** and then select **Attach**.

The configuration wizard launches automatically.

Run Configuration Wizard

Run the configuration wizard to assign basic network settings to a freshly installed CE1000.



Note

For each category, the wizard displays the default setting and asks whether you accept the default setting. The following conventions apply:

- You must press the <Enter> key after each line entry.
- Round brackets () represent choices and square brackets [] represent the default selection that gets applied if you press <Enter> without making a selection. For example, (y|n) [y] where y and n are options and y is the default.
- For IP address and subnet settings, if you don't want to use the default, enter the desired IP address or netmask and then press <Enter>.

1. On Universal Compute Platform, go to **Engines > Installation**.
2. From the **ExtremeCloud IQ Controller** pane, select the CE1000 link for the new installation.

3. Select the **Console** tab and then select **Attach**.

The configuration wizard launches within the console automatically.

4. Configure the admin password:



Note

As a best practice, change the default admin password immediately after the first login. The default admin password is as follows:

- username: admin
- password: abc123

5. Follow the prompts to configure the AP password.
6. Under **Data Port Settings**, follow the prompts to apply settings to each of the following fields:
 - Port [Port 1]
 - IP address—This is the IP address that ExtremeCloud IQ Controller will use.
 - Netmask
 - VLAN ID (1-4093) [4090]
 - Tagged Frames (y|n) [n]
 - Management on interface (y|n) [n]
 - Device Registration (y|n)[y]

7. Under **Current Host Attribute Settings**, follow the prompts to apply settings to the following fields:
 - Host Name [XIQC]
 - Domain Name [extremenetworks.com]
 - Primary DNS Server—Mandatory setting
 - Secondary DNS Server—Optional setting
8. Under **Current Global Default Gateway Settings**, enter the IP address of the default gateway and enter `y`.
9. Under **Current Time Settings** follow the prompts to configure the following settings:
 - Timezone
 - Time Server 1—Enter an IP address or FQDN. This is a mandatory setting.
 - Time Server 2—Enter an IP address or FQDN. This is an optional Setting.
10. At the **Controller Post Installation Configuration** screen, Press `A` to apply settings and exit.

**Note**

If you need to update any of these settings post-install, you can relaunch the wizard from the console with the `cli-wizard` command, which opens the wizard at the Controller Post Installation Configuration screen. Enter the corresponding numerical value to access the settings that you want to configure. Follow the prompts to update the settings. When you are done, select `A` for Apply Settings and Exit

11. Select **Detach** to exit the console.
12. Login to ExtremeCloud IQ Controller using the IP address and credentials that you assigned in this procedure.

Generate the Activation License

All customers must generate and install an activation license. After you install the CE1000, use this procedure to generate and install the activation package.

1. Obtain the Locking ID of the CE1000 instance:
 - a. Log in to the CE1000 instance.
 - b. Under **Upload Activation License**, copy the **Serial Number (Locking ID)** value.

**Note**

If you plan to onboard to ExtremeCloud IQ, copy the **MAC Address** value too as you will need it during cloud onboarding.

2. Obtain the activation file:
 - a. Log in to the [Extreme Networks Support Portal](#).
 - b. Go to **Assets > Licenses Home** and select the CE1000 Voucher ID line item from the list.
 - c. On the **Voucher Details** page, select **Generate Activation Key**.

- d. Provide the serial number for the CE1000 activation.
 - e. Select the box to accept **Terms and Conditions** and select **Submit** to generate the activation file.
 - f. Download the activation file.
3. Install the activation file on CE1000:
 - a. If you signed out of CE1000, sign back in.
 - b. Upload the license file to the **Upload Activation License** pane of CE1000.

Onboard to ExtremeCloud IQ

Use this optional procedure to onboard CE1000 to ExtremeCloud IQ if you want to provide cloud visibility to your deployment.

Before You Begin

You will need both the Serial Number and MAC address that you copied from Extreme Cloud IQ Controller.



Note

Internet connectivity is mandatory for cloud visibility.

1. Sign in to ExtremeCloud IQ.
2. Go to **Manage > Devices**.
3. Select (+) icon and select **Quick Add Devices > Manage your devices directly from cloud**.
4. Paste the CE1000 Serial Number into the **Serial Number** box on ExtremeCloud IQ.
5. From the **Device Make** drop-down, select **Controllers**.
6. Paste the CE1000 MAC address into the **MAC Address** box on ExtremeCloud.
7. Select **Add Devices**.

LAG Configuration Summary

CE1000 supports the use of Link Aggregation (LAG) for the data ports. LAG interfaces increase link throughput and provide redundancy in case of a link failure.

To deploy the feature on CE1000, you must configure LACP-based LAG on Universal Compute Platform and then complete a matching static LAG configuration in ExtremeCloud IQ Controller where the LAG port members are the same in both configurations. After the feature is configured, LACP LAG on Universal Compute Platform creates and manages the aggregated link, and CE1000's static LAG runs on that link.



Note

CE1000 supports static LAG only. Universal Compute Platform supports LACP LAG only.

To configure LAG for CE1000, complete the configuration in the following table.

Table 7: Configure LAG Ports on CE1000

Step	Action	More Details
1	Configure LAG data ports on the Universal Compute Platform host.	See "Configure LAG Ports" in Universal Compute Platform User Guide .
2	Configure LAG on ExtremeCloud IQ Controller. Make sure that the configured LAG ports are the same as on the host.	See "LAG Configuration" in ExtremeCloud IQ Controller User Guide .



Note

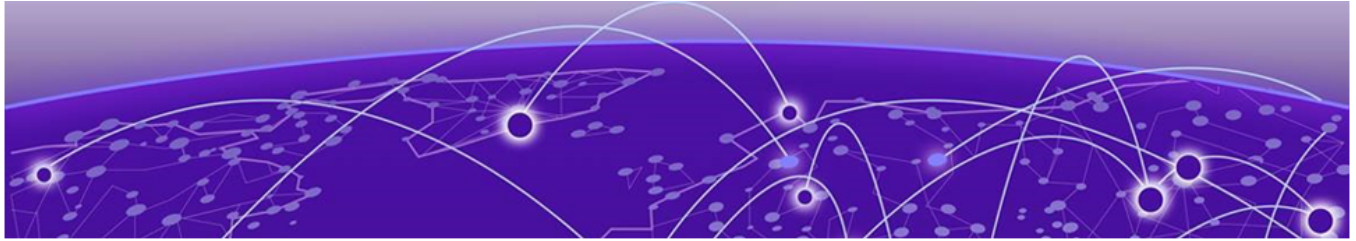
- LAG configuration on Universal Compute Platform can be completed before or after CE1000 installation.
- Make sure that the LAG configuration on Universal Compute Platform is saved before you configure LAG on ExtremeCloud IQ Controller.

Where to go Next

CE1000 is installed, licensed, and configured with basic networking capability. You can now run ExtremeCloud IQ Controller from the Universal Compute Platform appliance.

Refer to the following links for detailed information on how to configure and run ExtremeCloud IQ Controller:

- [ExtremeCloud IQ Controller User Guide](#)
- [Additional ExtremeCloud IQ Controller Documents](#)



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