



# ExtremeCloud™ IQ - Site Engine Installation Guide

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# Table of Contents

ExtremeCloud™ IQ - Site Engine Installation Guide .....	1
Table of Contents .....	2
ExtremeCloud IQ - Site Engine Suite Installation .....	4
General Information .....	4
Operating System Requirements .....	4
ExtremeCloud IQ - Site Engine Server Requirements .....	4
ExtremeCloud IQ - Site Engine Client Requirements .....	4
ExtremeCloud IQ - Site Engine Server and Client Hardware Requirements .....	5
ExtremeCloud IQ - Site Engine Server .....	5
ExtremeCloud IQ - Site Engine Client .....	5
ExtremeControl Engine Version Requirements .....	6
Screen Resolution .....	6
ExtremeCloud IQ - Site Engine Services .....	6
Important Upgrade Considerations .....	8
Upgrading ExtremeControl Engine to Version 22.09.12 .....	8
General Upgrade Information .....	8
Agent Version for NAC Agent-Based Assessment .....	9
Upgrading to Policy Manager 22.09.12 .....	9
Pre-Installation Checklist .....	9
ExtremeCloud IQ - Site Engine Installation .....	10
Installing ExtremeCloud IQ - Site Engine .....	10
Preparing for CD Installation .....	11
Install and Launch ExtremeCloud IQ - Site Engine .....	12
Performing a Silent Install .....	14
Select the deployment mode and licensing for ExtremeCloud IQ - Site Engine .....	15
Post Installation Procedure for Ubuntu 18.04 LTS (Bionic Beaver) .....	15
Restoring a Database from a Windows Server to a Linux Server .....	15
Console .....	16

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Syslog .....	16
Traps .....	16
Inventory Manager .....	16
Systems with Multiple NICs .....	16
Binding to One Interface .....	17
Uninstalling ExtremeCloud IQ - Site Engine .....	17
Extreme Networks Support .....	17
<b>ExtremeCloud IQ - Site Engine Licensing .....</b>	<b>19</b>
Licensing for Devices in Connected Mode .....	20
Licensing for Devices in Air Gap Mode .....	21
Revoke Air Gap License .....	22
License Limits and Violations .....	23
Devices Marked as Unmanaged .....	24
Licensing for ExtremeControl (Network Access Control) .....	24
After Upgrading from Extreme Management Center .....	25
Upon Initial Installation .....	25
<b>Logging into ExtremeCloud IQ - Site Engine .....</b>	<b>26</b>
Post upgrade from Extreme Management Center Version 8.5.5 or 8.5.6 .....	26
Initial installation of ExtremeCloud IQ - Site Engine or upgrading from Extreme Management Center .....	26
Onboarding Devices (Connected mode only) .....	30
XIQ Onboarded Status for Devices (Connected mode only) .....	30
<b>Convert from Connected to Air Gap deployment .....</b>	<b>33</b>
<b>Convert from Air Gap to Connected deployment .....</b>	<b>35</b>

# ExtremeCloud IQ - Site Engine Suite Installation

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This document provides instructions for installing and launching ExtremeCloud IQ - Site Engine, and for launching ExtremeCloud IQ - Site Engine applications on remote ExtremeCloud IQ - Site Engine clients. It also includes information for those upgrading from an earlier version of Extreme Management Center.

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**IMPORTANT:** Backup the Extreme Management Center database prior to performing the upgrade and save it to a safe location. Use the **Administration > Backup/Restore** tab.

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## General Information

Before you install ExtremeCloud IQ - Site Engine, read the *ExtremeCloud IQ - Site Engine Release Notes*. The most recent version of these release notes can be found at the [ExtremeCloud IQ - Site Engine Documentation site](#). Select **Release Notes** at the top of the page.

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**NOTE:** The terms engine, gateway, and appliance are used interchangeably throughout ExtremeCloud IQ - Site Engine documentation.

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## Operating System Requirements

### ExtremeCloud IQ - Site Engine Server Requirements

These are the operating system requirements for the ExtremeCloud IQ - Site Engine server.

Manufacturer	Operating System
Linux	Red Hat Enterprise Linux WS and ES v6 and v7 Ubuntu 18.04
VMware® (ExtremeCloud IQ - Site Engine Virtual Engine)	VMware ESXi™ 6.0 server VMware ESXi™ 6.5 server VMware ESXi™ 6.7 server VMware ESXi™ 7.0 server vSphere (client only)™
Microsoft® Hyper-V (ExtremeCloud IQ - Site Engine Virtual Engine)	Windows® Server 2012 R2 Windows® Server 2016

### ExtremeCloud IQ - Site Engine Client Requirements

These are the operating system requirements for remote ExtremeCloud IQ - Site Engine client machines.

Manufacturer	Operating System
Windows (qualified on the English version of the operating systems)	Windows® 10
Linux	Red Hat Enterprise Linux WS and ES v6 and v7 Ubuntu 18.04
Mac OS X®	El Capitan Sierra

## ExtremeCloud IQ - Site Engine Server and Client Hardware Requirements

These are the hardware requirements for the ExtremeCloud IQ - Site Engine server and ExtremeCloud IQ - Site Engine client machines:

### ExtremeCloud IQ - Site Engine Server

	Small	Medium	Enterprise	Large Enterprise
Total CPUs	1	2	2	2
Total CPU Cores	8	16	24	24
Memory	16 GB	32 GB	64 GB	64 GB
Disk Size	240 GB	480 GB	960 GB	1.92 TB
IOPS	200	200	10,000	10,000

#### Recommended scale based on server configuration:

Maximum APs	250	2,500	25,000	25,000
Maximum Wireless MUs	2,500	25,000	100,000	100,000
Maximum Managed Devices	100	1,000	10,000 air gap 8,000 connected	10,000 air gap 8,000 connected
ExtremeControl End-Systems	N/A	50,000	200,000	200,000
Statistics Retention (Days)	90	180	180	360
ExtremeAnalytics	No	Yes	Yes	Yes
MU Events	No	Yes	Yes	Yes

### ExtremeCloud IQ - Site Engine Client

	Requirements
CPU Speed	3.0 GHz Dual Core Processor
Memory	8 GB (4 GB for 32-bit OS)
Disk Size	300 MB (User's home directory requires 50 MB for file storage)
Java Runtime Environment (JRE) (Oracle Java only)	Version 8
Browser <sup>1</sup> (Enable JavaScript and Cookies)	Microsoft Edge (version 41.16.199.10000.0 in compatibility mode) Mozilla Firefox (version 34 or later <sup>2</sup> ) Google Chrome (version 33.0 or later)

<sup>1</sup>Browsers set to a zoom ratio of less than 100% might not display ExtremeCloud IQ - Site Engine properly (for example, missing borders around windows). Setting your browser to a zoom ratio of 100% corrects this issue.

<sup>2</sup>When accessing ExtremeCloud IQ - Site Engine using Firefox version 59.0.1 on a non-touchscreen system on which a Windows operating system is installed, the vertical scroll arrows do not display.

## ExtremeControl Engine Version Requirements

For complete information on ExtremeControl engine version requirements, see [Important Upgrade Information](#).

## Screen Resolution

For optimum display of ExtremeCloud IQ - Site Engine windows and tables, the recommended minimum screen resolution setting for ExtremeCloud IQ - Site Engine clients is 1024 by 768 pixels. For optimum display of graphs and tables, the recommended minimum screen resolution setting is 1280 by 1024 pixels.

## ExtremeCloud IQ - Site Engine Services

During the ExtremeCloud IQ - Site Engine installation, you can enable the ExtremeCloud IQ - Site Engine Services, allowing it to run in the background on the ExtremeCloud IQ - Site Engine server. The service starts automatically by default, and if you shut down and restart the machine, the service is restarted automatically.

You can also restart the services manually or disable a service so it does not start automatically when you restart the server.

- **SNMPTrap Service** - Enables SNMP trap messages to be received and logged when problems or irregularities are detected on network devices. Only one trap service may be running at a time on a server. If you are also running a network management system on the server, you may wish to use the network management trap service.
- **TFTP** - Enables you to upload and download configuration files, and download firmware to devices. Only one TFTP service may be running at a time on a machine.

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**NOTE:** The ExtremeCloud IQ - Site Engine TFTP Service does not support IPv6.

Typically, the TFTP service that exists in Linux is disabled; however, if it is enabled, you may wish to disable it and enable the ExtremeCloud IQ - Site Engine version of TFTP which provides additional features for ExtremeCloud IQ - Site Engine. If you elect to enable the ExtremeCloud IQ - Site Engine version on the Linux platform, you must first disable the Linux TFTP service and perform some configuration as follows:

1. Using a text editor, edit the file `/etc/xinetd.d/tftp`
2. Set `disable = yes`  
Sample file:

```

service tftp
{ flags = REUSE
socket_type = stream
wait = no
user = root
server = /usr/sbin/in.tftp
disable = yes
}

```

3. Then run: `/etc/rc3.d/S56xinetd restart`

ExtremeCloud IQ - Site Engine version 22.09.12 supports upgrades from Extreme Management Center 8.5.7 or ExtremeCloud IQ - Site Engine. The following table details which upgrades are needed for each NetSight, Extreme Management Center or ExtremeCloud IQ - Site Engine version prior to upgrading to ExtremeCloud IQ - Site Engine version 22.09.12.

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**NOTE:** You can change deployment modes from air gap to connected or from connected to air gap after the upgrade.

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Current Version			Upgrade to ExtremeCloud IQ - Site Engine version 22.9
	8.3.3	8.5.7	
ExtremeCloud IQ - Site Engine (all versions)			X
Extreme Management Center version 8.5.5, 8.5.6 , or 8.5.7			X
Extreme Management Center version 8.5.0-8.5.4		X	X
Extreme Management Center version 8.4.4		X	X
*Extreme Management Center version 8.4.0-8.4.3		X	X

Current Version			Upgrade to ExtremeCloud IQ - Site Engine version 22.9
	8.3.3	8.5.7	
*Extreme Management Center version 8.2.x or 8.3.x		X	X
Extreme Management Center version 8.0.x or 8.1.x	X	X	X
NetSight version 7.1 or older	X	X	X

**IMPORTANT:**

A backup ([Administration > Backup/Restore](#)) of the database must be performed prior to the upgrade and saved to a safe location.

During the installation (if upgrading using the user interface installer), you have the option to backup additional user files by selecting a checkbox on the Previous Installation Detected screen. This option lets you backup user files such as Inventory Manager archive files not automatically backed up during the install because the backup could take several minutes.

## Important Upgrade Considerations

- If your network is using ExtremeAnalytics or ExtremeControl engines, Fabric Manager, or another add-on feature, you must first perform the ExtremeCloud IQ - Site Engine upgrade to version 22.09.12 and then add the feature.
- The 4.xx version of the NAC Request Tool is not compatible with the 22.09.12 ExtremeCloud IQ - Site Engine server. If you are using the NAC Request Tool you need to upgrade the version of NAC Request Tool to version 22.09.12.
- To upgrade Traffic Sensor from version 21.x, a fresh installation is recommended. If the fresh installation cannot be used, then please check [Knowledge Base](#) for a special procedure.

## Upgrading ExtremeControl Engine to Version 22.09.12

### General Upgrade Information

You are not required to upgrade your ExtremeControl engine version to 22.09.12 when upgrading to ExtremeCloud IQ - Site Engine version 22.09.12. However, both ExtremeCloud IQ - Site Engine and ExtremeControl engine must be at version 22.09.12 in order to take advantage



of the new ExtremeControl version 22.09.12 features. ExtremeCloud IQ - Site Engine version 22.09.12 supports managing ExtremeControl engine versions 8.4, 8.5, 21.4, 21.9, 21.11, and 22.09.12.

In addition, if your ExtremeControl solution utilizes a Nessus assessment server, you should also upgrade your assessment agent adapter to version 22.09.12 if you upgrade to ExtremeControl version 22.09.12.

You can download the latest ExtremeControl engine version at the [Extreme Portal](#).

## Agent Version for NAC Agent-Based Assessment

If you are using onboard agent-based assessment, be aware that the agent version is upgraded during the ExtremeControl engine software upgrade. If you would like end-systems to update their agent to the new version, you must configure your assessment test set to test for the new agent version. Refer to the [Important Upgrade Information](#) section in the [ExtremeCloud IQ - Site Engine Release Notes](#) or the agent version included in the ExtremeControl engine software.

## Upgrading to Policy Manager 22.09.12

- Policy Manager 22.09.12 only supports ExtremeWireless Controller version 8.01.03 and higher. If you upgrade to ExtremeCloud IQ - Site Engine 22.09.12 prior to upgrading your controllers, then Policy Manager does not allow you to open a domain where the controllers already exist or add them to a domain. A dialog is displayed indicating your controllers do not meet minimum version requirements and that they must be upgraded before they can be in a domain.
- Following an upgrade to Wireless Controller version 8.31 and higher, a Policy Manager enforce fails if it includes changes to the default access control or any rules that are set to contain. To allow Policy Manager to modify the default access control or set rules to contain, you must disable the **"Allow" action in policy rules contains to the VLAN assigned by the role** checkbox accessed from the Wireless Controller's web interface on the Roles > **Policy Rules** tab. This will allow the enforce operation to succeed.

## Pre-Installation Checklist

Please review the following checklist prior to performing an ExtremeCloud IQ - Site Engine software installation or upgrade.

**Backup database.** If performing an upgrade, be sure to backup the Extreme Management Center database prior to performing the upgrade. Use the **Backup/Restore** tab to perform the backup (**Administration** > **Backup/Restore** tab).

If you are an existing Extreme Management Center customer, contact your representative to have your Extreme Management Center license migrated to an ExtremeCloud IQ - Site Engine license. The ExtremeCloud IQ - Site Engine license also includes licensing for ExtremeAnalytics.

**IMPORTANT:**

- For upgrade and installation requirements, as well as configuration considerations, see [ExtremeCloud IQ - Site Engine Configuration and Requirements](#).
- ExtremeCloud IQ - Site Engine version 22.09.12 receives the licenses from ExtremeCloud IQ. ExtremeCloud IQ - Site Engine is a subscription-based -only licensing model. Existing NMS licenses do not provide access to ExtremeCloud IQ - Site Engine. You can view the status of your license by accessing [Administration > Licenses](#).

## ExtremeCloud IQ - Site Engine Installation

If you are an existing Extreme Management Center customer, contact your representative to have your Extreme Management Center license migrated to an ExtremeCloud IQ - Site Engine license. The ExtremeCloud IQ - Site Engine license also includes licensing for ExtremeAnalytics.

### Installing ExtremeCloud IQ - Site Engine

Use the following instructions to install ExtremeCloud IQ - Site Engine. Please read through the following items before beginning the installation.

- The user performing the installation must be the root user. During the installation process you can specify another user to launch and run the server, if desired.
- If you are installing ExtremeCloud IQ - Site Engine on a Linux system that doesn't support a GUI, see [Performing a Silent Install](#) for information on installing ExtremeCloud IQ - Site Engine without using its GUI Installation wizard.
- If you are installing ExtremeCloud IQ - Site Engine on a Linux system that requires an operating system upgrade, you [are prompted](#) to upgrade using either an internet connection or locally if no additional Ubuntu packages need to be installed.
- Prior to beginning installation, verify that your `/etc/hosts` file has the local host name specified. It should have an entry that looks like:  

```
127.0.0.1 localhost
```
- You may encounter a Java exception during the install when becoming the root user with the `su -` command. Be sure that your system's root environment has a proper `DISPLAY` variable setting. The Installation program reports a Java exception (`InvocationTargetException`) if the `DISPLAY` variable is undefined. If this occurs:

Before using the `su -` command, set the system display variable to accept a remote display with the command:

```
/usr/openwin/bin/xhost +test 111 111
```

After using the `su -` command, set the display variable in the environment where the `su -` was done.

For C shell: `setenv DISPLAY :0.0`

For Korn shell: `export DISPLAY=:0.0`

## Preparing for CD Installation

Perform the following steps if you will be installing the ExtremeCloud IQ - Site Engine software from a CD. The following procedures assume that the CD drive from which you are installing is physically attached to the system where ExtremeCloud IQ - Site Engine is being installed.

1. Insert the ExtremeCloud IQ - Site Engine CD into the CD drive.
2. Use an xterm where you are logged in as root. (Be sure that your system's root environment has a proper DISPLAY variable setting. For more information see the above [note](#).)
3. Using the cd command, cd to the `/mnt/cdrom` directory.
4. Using the ls command, check to see if the CD drive is mounted. If no files are listed, issue the following commands:  

```
mount /mnt/cdrom
```

## Install and Launch ExtremeCloud IQ - Site Engine

1. Download *XIQ-SE Install and Upgrade* from the ExtremeCloud IQ section of the [Extreme Portal](#).
2. Use an xterm where you are logged in as root. (Be sure that your system's root environment has a proper DISPLAY variable setting. For more information see the above [note](#).)
3. Change the permissions on the upgrade file by entering the following command:  
`chmod u+x File_Name_<version>_install.bin`
4. If installing ExtremeCloud IQ - Site Engine on a system on which Ubuntu 18.04 LTS (Bionic Beaver) is installed, continue to step 5; otherwise, proceed to step 9.
5. Edit the `rsyslog.conf` file.
6. Uncomment (remove the # from the beginning of the line) for the lines that include `imudp/514` and `imtcp/514`:

```
#ENABLE_RSYSLOG_SERVICE
cp /etc/rsyslog.conf /etc/rsyslog.conf.original
sed -i 's/#module(load=\\"imudp\\")/module(load=\\"imudp\\")/g' /etc/rsyslog.conf
sed -i 's/#input(type=\\"imudp\\" port=\\"514\\")/input(type=\\"imudp\\" port=\\"514\\")/g' /etc/rsyslog.conf
sed -i 's/#module(load=\\"imtcp\\")/module(load=\\"imtcp\\")/g' /etc/rsyslog.conf
sed -i 's/#input(type=\\"imtcp\\" port=\\"514\\")/input(type=\\"imtcp\\" port=\\"514\\")/g' /etc/rsyslog.conf
systemctl restart rsyslog
```

7. Edit the `/etc/hosts` file.
8. Ensure the `ip fqdn hostname` line is configured (the last line in the following codeblock):

```
#IF_DNS_NOT_CONFIGURED
hostnamectl set-hostname <set_your_hostname_here>
domainname <set_your_domain_here>
export HOST_IP=`hostname -i|awk '{print $1}'`
export HOST_FQDN=`hostname -f`
export HOST_NAME=`hostname`
cp /etc/hosts /etc/hosts.original
echo $HOST_IP $HOST_FQDN $HOST_NAME >> /etc/hosts
#
# If DNS is configured on the system ensure the /etc/hosts contains an
# entry of the format:
# <ip> <fqdn> <hostname>
# 192.168.1.150 xmc1804.extremenetworks.com xmc1804
```

9. Start the Installer.
  - **If you have downloaded the software**, cd to the directory where you downloaded the installer and start the Installer with the following command:  
`./ExtremeCloudIQSiteEngine_<version>_64bit_install.bin`

- **If you are installing from a CD**, start the installer with the command:  
`/mnt/cdrom/ExtremeCloudIQSiteEngine_<version>_64bit_install.bin`
10. The ExtremeCloud IQ - Site Engine Installer leads you through a series of windows that ask for all the information required in order to install ExtremeCloud IQ - Site Engine. You need the following information for the Installer Program:
- **Service Configuration** – There are two Service Configuration screens.
    - In the first screen, you can specify a user other than root to own the ExtremeCloud IQ - Site Engine server and its supporting files, if desired. This user becomes the admin user for the server. Select **Use existing user** if you already have a user defined on the machine and enter the user name. Select **Create local netsight user** if you want to create a new "netsight" user (netsight is the user name) and enter the password for this new user. Leave the **Use existing user** option set to **root** if you do not want to specify another user.
    - In the second screen, enable and start the ExtremeCloud IQ - Site Engine Services. (For more information on the services offered on the Linux platform, see [ExtremeCloud IQ - Site Engine Services](#).)
  - **Destination Directory** – This is the path to your ExtremeCloud IQ - Site Engine Installation Directory. In the Destination Directory window, select **Choose** to navigate to the directory, or type the path in manually.
  - **Operating System Upgrade Method** – If your Linux system requires an operating system upgrade, you are prompted to upgrade using either an internet connection or locally (without an internet connection) if no additional Ubuntu packages need to be installed:

!!! ATTENTION !!!

We can attempt to upgrade the OS without using the Internet if there were no extra Ubuntu packages installed. If there were extraneous packages installed, the upgrade will fail with this method.

Do you want to attempt a local in-place upgrade of the OS and reboot when complete? (Y/n)

When you have finished with this series of windows, ExtremeCloud IQ - Site Engine is installed according to your specifications.

11. When the installation is complete, the database and server are started automatically. You must wait until the ExtremeCloud IQ - Site Engine server has started all its various server components before you can connect to the server and launch the ExtremeCloud IQ - Site Engine applications. On the installation screen, you see an hourglass icon while the server starts its components. When the server is ready for connections, the installation screen displays a green check.
12. On the installation screen, select the **Show Launch Page** link to open the ExtremeCloud IQ - Site Engine Launch Page.
13. The ExtremeCloud IQ - Site Engine Launch Page opens. At the top of the web page you will see tabs for the following functions:

- **Home** – Launch your ExtremeCloud IQ - Site Engine applications by selecting the names or icons of any of the listed applications.
  - **Getting Started** – In order to launch your ExtremeCloud IQ - Site Engine applications, you must have Java Runtime Environment (JRE) 6 (also referred to as 1.6) or higher installed on your system. This page tells you if you have met this requirement and provides instructions for installing the Java Runtime Environment (JRE), if required.
  - **Administration** – Provides access to specific server administration functions such as client and server diagnostics, and server utilities.
14. Verify that you have met the JRE requirement by accessing the **Getting Started** tab, and install the JRE according to the instructions on the **Install Java** tab, if required.
  15. Select the **Home** tab and launch the desired ExtremeCloud IQ - Site Engine application by selecting the name or icon.
  16. A login window appears. ExtremeCloud IQ - Site Engine requires a user login as a way to restrict access to the ExtremeCloud IQ - Site Engine server, perform audit trails, and assign user capabilities according to the Authorization Group the user belongs to.
    - a. Select the ExtremeCloud IQ - Site Engine server to which you wish to connect.
    - b. Enter your username.
    - c. Enter your password and select **OK**.

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**NOTES:** The initial user to log in must be the user that performed the ExtremeCloud IQ - Site Engine installation, which is either root or the user defined in the [Service Configuration screen](#) during the installation. This is because the ExtremeCloud IQ - Site Engine server has a single pre-defined user. After the initial user has logged in, additional users can be defined.

The password for the root user does not expire. To configure the password to age so it expires after 60 days, see [Configure Your Password to Expire](#).

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17. The application main window opens.

## Performing a Silent Install

If you are installing ExtremeCloud IQ - Site Engine on a Linux system that doesn't support a GUI, you must add the cli flag (--cli) to the install command, in order to allow the ExtremeCloud IQ - Site Engine installer to prompt for any required input.

Start the installation with the following command:

```
./ExtremeCloudIQSiteEngine_<version>_64bit_install.bin --cli
```

If you are installing as a user other than root, you must use the --user command to specify the different user. The user must already be configured on the machine before you install. For example:

```
./ExtremeCloudIQSiteEngine_<version>_64bit_install.bin --cli --user  
<username>
```

To perform the install and create a new local "netsight" user (where netsight is the user name), use the --password command to set the password for the new "netsight" user. For example:

```
./ExtremeCloudIQSiteEngine_<version>_64bit_install.bin --cli --password  
<password>
```

## Select the deployment mode and licensing for ExtremeCloud IQ - Site Engine

After installing or upgrading to ExtremeCloud IQ - Site Engine, you need to select your deployment mode and licensing for ExtremeCloud IQ - Site Engine. Refer to [First log in to ExtremeCloud IQ - Site Engine](#) for the procedure.

## Post Installation Procedure for Ubuntu 18.04 LTS (Bionic Beaver)

If installing ExtremeCloud IQ - Site Engine on a system on which Ubuntu 18.04 LTS (Bionic Beaver) is installed, follow this procedure when ExtremeCloud IQ - Site Engine is installed:

1. Open a command prompt on the ExtremeCloud IQ - Site Engine server.
2. Enter `cp /var/Extreme_Networks/.netsight /var/Extreme_Networks/.netsight.original`.
3. Enter `export HOST_IP=`hostname -i|awk '{print $1}'``.
4. Enter `sed -i "\$aJBoss_HOSTNAME=$HOST_IP" /var/Extreme_Networks/.netsight`.
5. Install OpenSSH for SCP-based archives support and allow root login:
  - a. Open the `/etc/ssh/sshd_config` file and change **PermitRootLogin** to **yes**.
  - b. Enter `apt-get install openssh-server`.
6. Allow root access to the ExtremeCloud IQ - Site Engine server via SSH.
  - a. Enter `cp /etc/ssh/sshd_config /etc/ssh/sshd_config.original`.
  - b. Enter `sed -i 's/#PermitRootLogin prohibit-password/PermitRootLogin yes/g' /etc/ssh/sshd_config`.

## Restoring a Database from a Windows Server to a Linux Server

This section describes several ExtremeCloud IQ - Site Engine configuration changes required if you are moving your ExtremeCloud IQ - Site Engine installation from a Windows platform system to a Linux platform system. The steps are performed after restoring your database to the new server.

In addition, there are two changes that must be made in the legacy Console java application and one change in the legacy Inventory Manager application.

## Console

Use the following instructions to change the location of syslog and trap information to the new location on the Linux system.

### Syslog

Change the Syslog Log Manager to point to the new location on the Linux system. This allows the display of syslog information in the **Syslog Event View** tab.

1. From the Console menu bar, select **Tools > Alarm/Event > Event View Manager**.
2. Select the Syslog entry under Available Log Managers, and select the **Edit** button. The Log Manager Parameters window opens.
3. Change the path in the Log Directory field to `/var/log/syslog`.
4. Change the Pattern to Red Hat LINUX Syslog Pattern.
5. Select **OK**.

### Traps

Change the Traps Log Manager to point to the new location on the Linux system. This allows the display of trap information in the **Traps Event View** tab.

1. From the Console menu bar, select **Tools > Alarm/Event > Event View Manager**.
2. Select the Traps entry under Available Log Managers, and select the **Edit** button. The Log Manager Parameters window opens.
3. Change the path in the Log Directory field to `%logdir%/traps`.
4. Select **OK**.

## Inventory Manager

If you are using Inventory Manager, you need to change the Data Storage Directory path to point to the new location on the Linux system. The Data Storage directory is where all Inventory Manager data is stored, including capacity planning reports, configuration templates, archived configurations, and property files.

1. From the Inventory Manager menu bar, select **Tools > Options**. Expand the Inventory Manager options folder and select **Data Storage Directory Path**.
2. Change the path to the correct new location. On a default Linux install, the path would be:  
`<user's home directory>/appdata/InventoryMgr`
3. Select **OK**.

## Systems with Multiple NICs

This section provides instructions for configuring ExtremeCloud IQ - Site Engine servers with multiple NICs (Network Interface Cards). During the startup process, the ExtremeCloud IQ - Site



Engine server automatically binds to the first available NIC, which may not be the correct interface for the server to use. In addition, changes on the network can cause the server to bind to an incorrect interface, should the server restart during a change.

If the system has multiple NICs installed, it is a good practice to either:

- configure the server to bind to a preferred IP address, if using only one interface for connections or
- configure multiple network interfaces, if using more than one interface for connections.

This ensures that local and remote clients, as well as ExtremeControl engines, are able to connect to the ExtremeCloud IQ - Site Engine server.

## Binding to One Interface

If the ExtremeCloud IQ - Site Engine server has multiple NICs installed but only one interface is used to access ExtremeCloud IQ - Site Engine, use the following instructions to configure the preferred interface for the ExtremeCloud IQ - Site Engine server.

Configure the ExtremeCloud IQ - Site Engine server to bind to the correct IP address.

1. Open the `/var/Extreme_Networks/.netsight` file. Edit the line `JBOSS_HOSTNAME=<server IP>` to add the correct NIC IP address.
2. Restart the ExtremeCloud IQ - Site Engine server.

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**NOTE:** User preferences and application data (such as FlexViews and MIBs) for remote clients are stored in the following local directory on the client machine: `C:\Documents and Settings\<username>\Application Data\NetSight`.

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## Uninstalling ExtremeCloud IQ - Site Engine

Use the procedures below to uninstall your ExtremeCloud IQ - Site Engine Suite of products. The uninstall removes all ExtremeCloud IQ - Site Engine data from the database. Be sure to backup your database prior to uninstalling.

Navigate to the `<install directory>/uninstaller` directory and start the Uninstaller by issuing the command:

```
./uninstall.sh
```

## Extreme Networks Support

If you require assistance, contact Extreme Networks Global Technical Assistance Center using one of the following methods.

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Web [www.extremenetworks.com/support/](http://www.extremenetworks.com/support/)

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Phone 1-800-872-8440 (toll-free in U.S. and Canada) or 1-603-952-5000  
For the Extreme Networks Support phone number in your country:  
[www.extremenetworks.com/support/contact/](http://www.extremenetworks.com/support/contact/)

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Email [support@extremenetworks.com](mailto:support@extremenetworks.com)

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## ExtremeCloud IQ - Site Engine Licensing

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ExtremeCloud IQ - Site Engine includes all the features and functionality of Extreme Management Center. If you are an existing Extreme Management Center customer, contact your representative to have your Extreme Management Center license migrated to an ExtremeCloud IQ - Site Engine license. The ExtremeCloud IQ - Site Engine license also includes licensing for ExtremeAnalytics.

---

- NOTES:**
- ExtremeCloud IQ - Site Engine is a subscription-based -only licensing model.
  - is not compatible with ExtremeCloud IQ - Site EngineExtremeCloud IQ Connect level account. The Pilot level is mandatory.
- 

You can view ExtremeCloud IQ and ExtremeCloud IQ - Site Engine license information by accessing [Administration > Licenses](#).

This Help topic includes information on the following:

- [Licensing for Devices in Connected Mode](#)
- [Licensing for Devices in Air Gap Mode](#)
- [Revoke Air Gap License](#)
- [License Limits and Violations](#)
- [Licensing for ExtremeControl](#)

There are three tiers of licenses for ExtremeCloud IQ - Site Engine and devices:

- Pilot - Natively supported Extreme devices
- Navigator - 3rd party devices, Extreme Campus Controller wireless devices, WING wireless devices, and devices not natively supported by ExtremeCloud IQ - Site Engine
- No License - Status-Only devices

ExtremeCloud IQ - Site Engine can be deployed in two ways, using connected mode or air gap mode:

- Connected mode:
  - ExtremeCloud IQ - Site Engine uses ExtremeCloud IQ to determine if you meet or exceed the [license limits](#) for each license type.
  - All ExtremeCloud IQ - Site Engines connected to the same customer account share a pool of licenses, one serial number consumes one license entitlement, regardless of the number of monitoring entities.
  - ExtremeCloud IQ - Site Engine shares information with ExtremeCloud IQ.
  - ExtremeCloud IQ can cooperate with ExtremeCloud IQ - Site Engine.

- Air gap mode:
  - ExtremeCloud IQ - Site Engine does not require internet access.
  - ExtremeCloud IQ - Site Engine uses a license file to determine if you meet or exceed the [license limits](#) for each license type.
  - ExtremeCloud IQ - Site Engines can not share licenses.

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Devices that do not have serial numbers or MAC addresses in Extreme Management Center must be Rediscovered after you upgrade to ExtremeCloud IQ - Site Engine in connected mode before they can be onboarded to ExtremeCloud IQ.

**NOTE:**

If your number of devices exceeds your licenses available, ExtremeCloud IQ - Site Engine transitions to a license violation state and your access to ExtremeCloud IQ - Site Engine features and functionality is degraded. To resolve the license shortage you need to access the Extreme Networks License Portal or ExtremeCloud IQ to evaluate the quantities of available Pilot, Navigator, and NAC licenses versus the number of licenses required by ExtremeCloud IQ - Site Engine.

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## Licensing for Devices in Connected Mode

When ExtremeCloud IQ - Site Engine has been [onboarded](#), it starts sending requests to add the devices from its database to ExtremeCloud IQ.

As devices are added and discovered in ExtremeCloud IQ - Site Engine, they are onboarded to ExtremeCloud IQ, with a request for a license of the appropriate tier (Navigator, Pilot or No License) that each device will require.

Devices may be marked as [Unmanaged](#) in ExtremeCloud IQ, which means they are not using a license and available features are very limited.

The following grid details the type of license required by each device and engine type:

Device Type	License Tier Type	Number of Licenses Per Device
Extreme-supported Device (Includes VOSS/Fabric Engine, SLX, Extreme Access Series, VDX Series, Fabric Manager, Universal Platform Fabric Engine, Universal Platform VOSS, Universal Platform Switch Engine, Universal Platform EXOS, Summit Series, ERS Series, 200 Series, 7100 Series, A Series, B Series, C Series, K Series, S Series, ICX Series, Security Appliances, MLXe Series)	Pilot	1

Device Type	License Tier Type	Number of Licenses Per Device
Extreme-supported Chassis (Includes S series, K series, N series, E series, Black Diamond, Black Diamond X, X series, VSP series, MLXe series, VDX series, SLX series)	Pilot	1 for each chassis
ExtremeControl engine	Pilot	1
ExtremeAnalytics engine	Pilot	1
ExtremeCloud IQ - Site Engine*	Pilot	1
vSensor	Pilot	1
All Other Devices (Includes Non-Extreme Device)	<a href="#">Navigator</a>	1
Devices with Ping-Only profile	No License	0

\*There is one license required for the ExtremeCloud IQ - Site Engine itself. If there are more ExtremeCloud IQ - Site Engine, then only one license is consumed.

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**NOTE:** For HiveOS APs (IQE) and Dell N-Series, a Pilot license is required, but currently not enforced in ExtremeCloud IQ - Site Engine. These are not onboarded to ExtremeCloud IQ through ExtremeCloud IQ - Site Engine.

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## Licensing for Devices in Air Gap Mode

ExtremeCloud IQ - Site Engine [uses licenses](#) stored locally in a license file. This ensures ExtremeCloud IQ - Site Engine does not require an internet connection to verify licenses are available as you add devices.

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**NOTE:** Licenses in one installation of ExtremeCloud IQ - Site Engine in air gap mode cannot be shared with other installations of ExtremeCloud IQ - Site Engine.

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As devices are added and discovered in ExtremeCloud IQ - Site Engine, they consume a license of the appropriate tier (Navigator, Pilot or No License) that each device requires against the total listed in the license file.

Devices may be marked as [Unmanaged](#), which means they are not using a license and available features are very limited.

The following grid details the type of license required by each device and engine type:

Device Type	License Tier Type	Number of Licenses Per Device
Extreme-supported Device (Includes VOSS/Fabric Engine, SLX, Extreme Access Series, VDX Series, Fabric Manager, 200 Series, ICX Series, Security Appliances, MLXe Series, Extreme Access Series, VDX Series, HiveOS (IQE), Dell N-Series)	Pilot	1
Extreme-supported Device (Universal Platform Fabric Engine, Universal Platform VOSS, Universal Platform Switch Engine, Universal Platform EXOS, Summit Series, ERS Series, A Series, B Series, C Series, 7100 Series)	Pilot	1 for each unit
Extreme-supported Chassis (Includes S series, K series, N series, E series, Black Diamond, Black Diamond X, X series, VSP series, MLXe series, VDX series, SLX series)	Pilot	1 for each chassis
ExtremeControl engine	Pilot	1
ExtremeAnalytics engine	Pilot	1
ExtremeCloud IQ - Site Engine*	Pilot	1
vSensor	Pilot	1
All Other Devices (Includes Non-Extreme Device)	<a href="#">Navigator</a>	1
Devices with Ping-Only profile	No License	0

\*There is one license required for the ExtremeCloud IQ - Site Engine itself. If there are more ExtremeCloud IQ - Site Engine, then only one license is consumed.

## Revoke Air Gap License

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**NOTE:** A maximum of 10 Air Gap licenses can be revoked in one revocation file.

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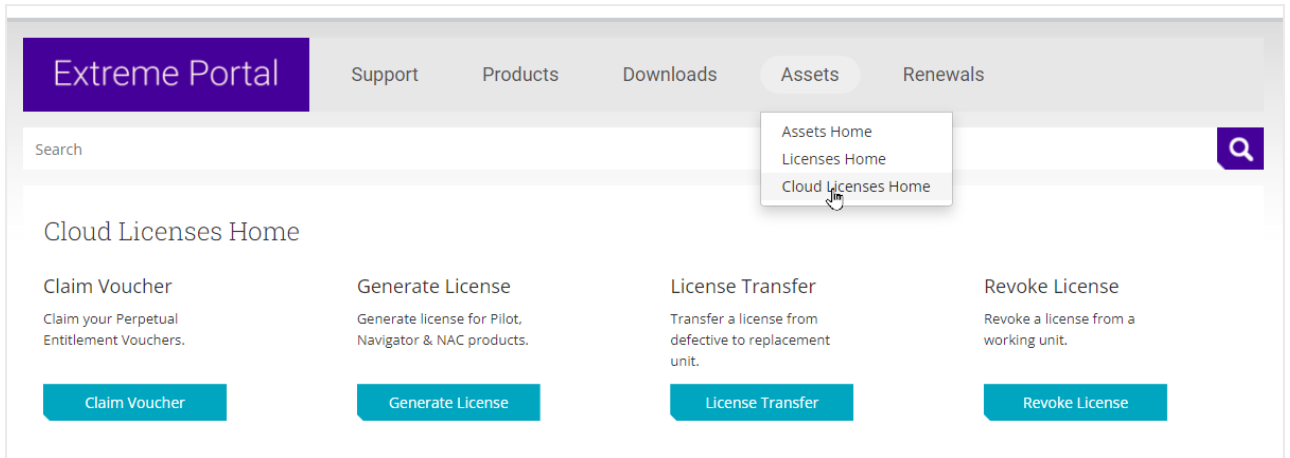
Follow this procedure to revoke your Air Gap license.

1. Open **Administration > Licenses** or enter this URL.  
<https://<Server>:/8443/xiqLicenseSetup.jsp?setupMode=Airgap>

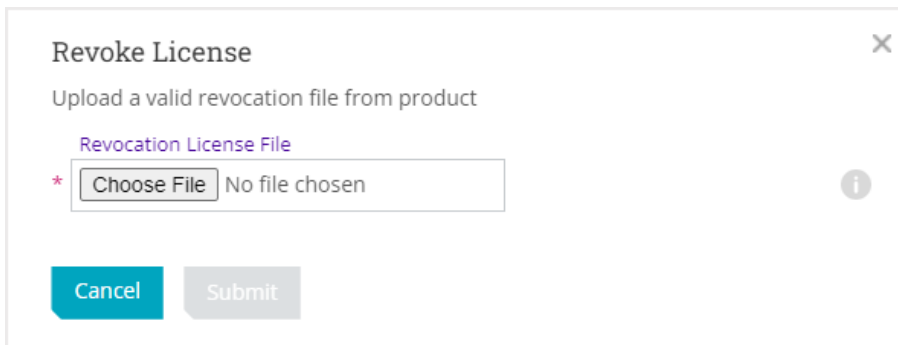
2. Select either the Pilot, Navigator, or NAC license to revoke.

ExtremeCloud IQ - Site Engine generates a revocation file.

3. Download the file to your computer.
4. Log into the Extreme Portal (<https://extremeportal.force.com/ExtrCloudLicenseLanding>).
5. Select **Assets > Cloud Licenses Home > Revoke License**.



6. Upload the revocation file and select **Submit**.



The revoked licenses are returned to the license pool. Contact [support](#) if you encounter an error. You will need to provide the revocation file (.rvk) and the error message.

## License Limits and Violations

For each request to add a device to ExtremeCloud IQ - Site Engine:

- **In connected mode:** ExtremeCloud IQ determines if there are enough licenses of that type available.
- **In air gap mode:** ExtremeCloud IQ - Site Engine uses the license file to determine if there are enough licenses of that type available.

As a result for both modes, one of the following actions happens:

- If there are enough licenses, device onboarding is successful.
- If there are not enough Navigator licenses, a Pilot license is used instead.
- If there are not enough Pilot licenses, the request is considered a license violation.

**NOTE:** When an evaluation license is used for ExtremeCloud IQ - Site Engine, all devices are managed with Pilot licenses.

To correct a license limit violation:

- **In connected mode:** You must acquire more licenses (and, when the updated licenses are available in ExtremeCloud IQ, they are used by ExtremeCloud IQ - Site Engine).
- **In air gap mode:** You must acquire more licenses by generating a new licensing file from the licensing portal, then install the licensing file in ExtremeCloud IQ - Site Engine.

## Devices Marked as Unmanaged

When devices are marked as Unmanaged in ExtremeCloud IQ, they are also Unmanaged in ExtremeCloud IQ - Site Engine.

Onboarded Unmanaged devices are indicated in the [XIQ Onboarded column](#) of the **Network > Site > Device** table by a red X.

Poll Details	Device Type	Family	Firmware	Reference	Connector	XIQ Onboarded	Upda...	Archived	Config Changed
Up: 328 Down: 0	H450-02-240-04	Summit Ser...	31.1.1.3			X			
Up: 196 Down: 0	vm386E/IOS	Summit Ser...	30.4.0.483		3.6.1.8				
Configuration staged for device	vm386E/IOS	Summit Ser...	31.1.1.3		3.6.1.8				
Up: 2 Down: 162	H435-247-45	Summit Ser...	31.1.1.3	✓	3.6.1.8			✓	
Up: 2 Down: 162	H435-247-45	Summit Ser...	31.1.1.3	✓	3.6.1.8			✓	
Up: 0 Down: 196	Virtual Application A...	Extreme An...	8.5.3.46						
Up: 0 Down: 196	Virtual Access Contr...	Extreme Co...	8.5.5.12						
Up: 2 Down: 162	FABRIC/ISR	Fabric Man...	8.5.3.26		3.6.1.8				

For more details on the **Network > Site > Device** table, visit [Onboarding Unmanaged Devices](#).

## Licensing for ExtremeControl (Network Access Control)

If the ExtremeCloud IQ - Site Engine was [onboarded](#) to ExtremeCloud IQ, ExtremeCloud IQ provides the Network Access Control (NAC) entitlements to ExtremeCloud IQ - Site Engine.



There is an option to allocate a portion of the available license pool in ExtremeCloud IQ. The full 100% NAC entitlements should be allocated automatically to the first ExtremeCloud IQ - Site Engine. If there are more Site Engines, for example, a lab instance and a production instance, then the NAC entitlements allocation can be changed in the ExtremeCloud IQ GUI. It is recommended to check the NAC entitlements allocation in ExtremeCloud IQ.

If the ExtremeCloud IQ - Site Engine is operated in air gap deployment mode, the licensed quantity for ExtremeControl is provided through a license file. The license file is generated in Extreme Portal. The licensed quantity for ExtremeControl varies depending on whether ExtremeCloud IQ - Site Engine is initially installed or it was upgraded from the Extreme Management Center.

## After Upgrading from Extreme Management Center

If you are upgrading from Extreme Management Center to ExtremeCloud IQ - Site Engine, the licensing and capabilities of ExtremeControl do not change. The following are included in the licenses:

- NMS-ADV License includes 500 Access Control End-Systems and 50 Guest and IoT Manager (GIM) licenses.
- NMS-xx License includes 250 Access Control End-Systems and 25 GIM licenses.

---

**NOTE:** If your version of ExtremeControl contains NMS or NMS-ADV licenses described above and licenses are used through ExtremeCloud IQ (in Connected mode) or in a locally stored license file (in Air Gap mode), ExtremeControl will sum those licensed quantities.

---

## Upon Initial Installation

If you are completing an initial install of ExtremeCloud IQ - Site Engine, there is no end-system license included. The evaluation license can be generated on the Extreme Portal which includes unlimited end-systems and Guest and IoT Manager (GIM) licenses.

## Logging into ExtremeCloud IQ - Site Engine

In connected mode, ExtremeCloud IQ - Site Engine gets licenses through ExtremeCloud IQ. ExtremeCloud IQ acts as a license proxy between ExtremeCloud IQ - Site Engine and Extreme Portal. Therefore, your ExtremeCloud IQ needs to be linked to your license entitlements in the Extreme Portal before your ExtremeCloud IQ - Site Engine can be onboarded to ExtremeCloud IQ and consumes licenses via ExtremeCloud IQ. In Air Gap deployment mode, ExtremeCloud IQ - Site Engine utilizes these licenses based on a license file.

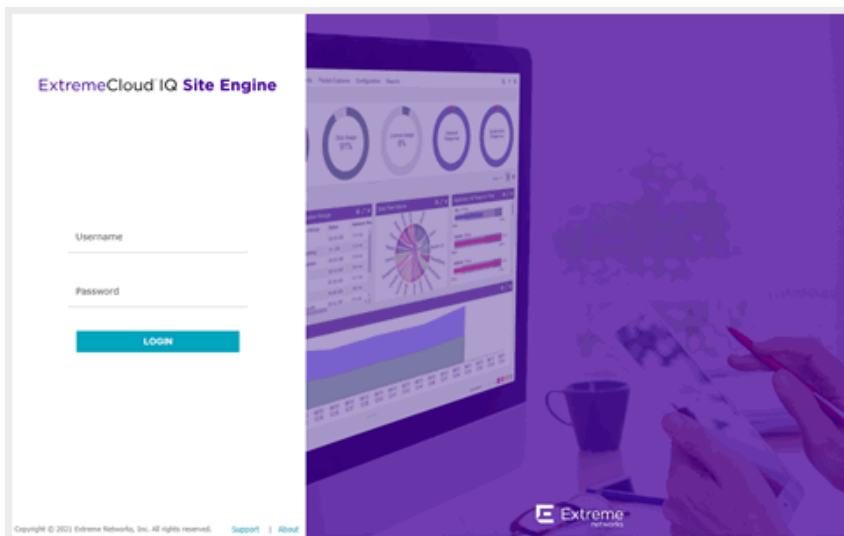
## Post upgrade from Extreme Management Center Version 8.5.5 or 8.5.6

When the Extreme Management Center is onboarded to ExtremeCloud IQ using the soft launch feature, you need to remove Extreme Management Center from ExtremeCloud IQ before onboarding ExtremeCloud IQ - Site Engine.

## Initial installation of ExtremeCloud IQ - Site Engine or upgrading from Extreme Management Center

Follow these steps to launch ExtremeCloud IQ - Site Engine:

1. Enter this `https://<IP Address>:8443` in your browser.



2. Enter your ExtremeCloud IQ - Site Engine login credentials and select **Login**. These are the credentials you configured during the installation

3. Accept the License Agreement and select **Next**.

## Welcome to ExtremeCloud IQ - Site Engine

### License Agreement

PLEASE READ ALL OF THE FOLLOWING TERMS AND CONDITIONS OF THIS END USER LICENSE AGREEMENT.

This End User License Agreement ("Agreement") is a legal agreement between You and/or the entity You represent and Extreme Networks, Inc., on behalf of itself and its affiliates, including, but not limited to, Extreme Network Ireland Ops Limited (collectively, "Extreme") for the Software (defined below) licensed by Extreme or its licensors.

By downloading, installing, copying, accessing, or using the Software, or activating a Software license key, or by clicking an "I Agree" or similar button, or by opening the Software media, You agree to the terms and conditions of this Agreement as a condition of Your use of, and right to use, the Software.

If You do not agree to all the terms and conditions in this Agreement, do not download, install or use the Software. If the Software was delivered to You embedded in an Extreme Hardware Product, do not install or use that Extreme Hardware Product.

Extreme may make changes to this Agreement at any time and will provide written notice of such changes to You and give You an opportunity to accept those changes. Your continued use of the Software after such changes have been posted will signify your assent to acceptance of the revised terms.

If You and Extreme have signed a separate written agreement covering Your rights and duties with respect to the Software, then that written agreement take precedence over any conflicting terms in this Agreement.

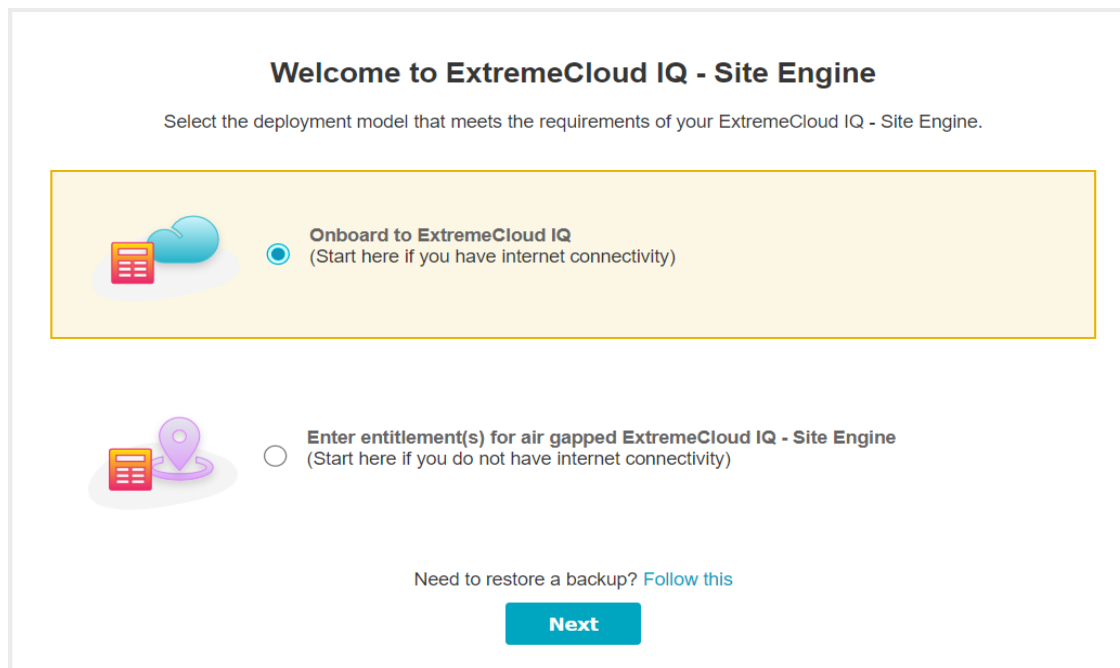
Your privacy is important to Extreme. Extreme's Privacy Policy is located at <https://www.extremenetworks.com/company/legal/privacy/>. Please read our Privacy Policy for information related to Extreme's collection, use and disclosure of Your personal information. By agreeing to the terms of this Agreement, You are also accepting the terms of Extreme's Privacy Policy.

1. DEFINITIONS. Capitalized terms used in this Agreement are defined in Section 18 below.

I accept the License Agreement

[Next](#)

4. Select your deployment mode. Refer to the [XIQ-SE Activation](#) document for licensing information.
  - Connected mode - **Onboard to ExtremeCloud IQ - Site Engine** - In connected deployment mode, ExtremeCloud IQ - Site Engine utilizes these licenses through connection to ExtremeCloud IQ. It is required to link your Extreme Portal to ExtremeCloud IQ. Once those are linked together, you can use the licenses you purchased in both ExtremeCloud IQ and ExtremeCloud IQ - Site Engine.
  - Air Gap mode - **Enter entitlement(s) for air gapped ExtremeCloud IQ - Site Engine** - In air gap deployment mode, ExtremeCloud IQ - Site Engine utilizes these licenses based on a license file. During the generation of the license file, the licenses are assigned to the locking ID of ExtremeCloud IQ - Site Engine.



**NOTE:** The Welcome screen provides a link to the procedure for [restoring](#) ExtremeCloud IQ - Site Engine from backup.

5. Click **Next**.
6. Depending on the deployment mode you selected, you will do one of the following:
  - For Connected mode onboarding of ExtremeCloud IQ - Site Engine to ExtremeCloud IQ, enter the ExtremeCloud IQ email address and password and select **Onboard**. If your environment requires HTTP Proxy or other advanced settings, select the **Advanced** link. If you do not have an ExtremeCloud IQ account, select the **Register Here** link.

## Welcome to ExtremeCloud IQ - Site Engine

[Back](#) **Onboard to ExtremeCloud IQ**

Please enter your ExtremeCloud IQ credentials to onboard the ExtremeCloud IQ - Site Engine.

Email

Password

Don't have an account? [Register here](#)

[Advanced](#)

Onboard

- For Air Gap deployment, drag and drop your entitlements to this screen.

## Welcome to ExtremeCloud IQ - Site Engine

[Back](#) **Air Gap License Entitlements**

Enter the entitlement(s) for your air gapped ExtremeCloud IQ - Site Engine.  
 After adding entitlements to the table below, click the Continue button to log in to ExtremeCloud IQ - Site Engine.  
 ExtremeCloud IQ - Site Engine serial number (Locking ID, UUID): **XIQSE-4464725328CD4130B8D425187D41000**

Don't have a license file? [Generate here](#)

Entitlements 🗂

Drag and drop a license entitlement file into this zone or click here to paste license entitlements.

Feature	License Name	Type	Quantity	Start Date	End Date	Description	
PRD-XIQ-NAV-S-C	XIQ-NAV-S-C	Subscription	20	11/14/2021 07:00:00 PM	11/15/2022 06:59:00 PM	ExtremeCloud IQ - Site Engine - Navigator	🗑
PRD-XIQ-PIL-S-C	XIQ-PIL-S-C	Subscription	Unlimited	11/14/2021 07:00:00 PM	11/15/2022 06:59:00 PM	ExtremeCloud IQ - Site Engine - Pilot	🗑
PRD-XIQ-NAC-S	XIQ-NAC-S	Subscription	100,000	11/14/2021 07:00:00 PM	11/15/2022 06:59:00 PM	ExtremeCloud IQ - Site Engine - Access Control	🗑

Displaying 3 rows

Continue

7. Click **Onboard** (Connected mode) or **Continue** (Air Gap mode). ExtremeCloud IQ - Site Engine is ready to use.

You can now access ExtremeCloud IQ - Site Engine.

---

**NOTE:**

If you need to convert your deployment between Connected or Air Gap mode, see [Convert from Connected to Air Gap deployment](#) or [Convert from Air Gap to Connected deployment](#).

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## Onboarding Devices (Connected mode only)

When ExtremeCloud IQ - Site Engine is onboarded, it starts sending requests to add the devices from its database to ExtremeCloud IQ. Cloud Configuration Groups are created in ExtremeCloud IQ that match User Device Groups in ExtremeCloud IQ - Site Engine.

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**NOTE:**

Devices with IPv6 addresses in ExtremeCloud IQ - Site Engine will not be onboarded as locally-managed devices in ExtremeCloud IQ. Only devices with IPv4 addresses qualify.

---

As devices are added and discovered in ExtremeCloud IQ - Site Engine, they are onboarded to ExtremeCloud IQ, with a request for a [license](#) of the appropriate tier (Navigator, Pilot or No License) that each device will require.

If devices that are onboarded are included in User Device Groups in ExtremeCloud IQ - Site Engine, they are also included in Cloud Configuration Groups in ExtremeCloud IQ that match the devices' assigned User Device Groups in ExtremeCloud IQ - Site Engine.

Cloud Configuration Groups are updated when devices are added to User Device Groups (either by user action or by API call). Cloud Configuration Groups are also updated when devices are removed from a User Device Group or deleted from ExtremeCloud IQ - Site Engine.

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**NOTE:**

Cloud Configuration Group names include User Device Group parent names (other than "My Network") and are prefixed with "XIQSE-".  
The Cloud Configuration Group names will be shortened to fit the limit of 128 characters.

---

View the [ExtremeCloud IQ - Site Engine and ExtremeCloud IQ Onboarding Flowchart](#) for a detailed chart on how devices are onboarded to ExtremeCloud IQ and managed by ExtremeCloud IQ - Site Engine.

## XIQ Onboarded Status for Devices (Connected mode only)

After an attempt is made to onboard a device, the [XIQ Onboarded](#) column in the table **Network > Site > Device**) indicates the status of the onboarding attempt.

Port Details	Device Type	Family	Firmware	Reference	Connector	XIQ Onboarded	Upda...	Archived	Config Changed
Up: 328 Down: 0	H450-52-240-04	Summit Ser...	31.1.1.3			X			
Up: 196 Down: 0	vm386EiOS	Summit Ser...	30.4.0.483						
Configuration staged for device	vm386EiOS	Summit Ser...	31.1.1.3		3.6.1.8				
Up: 2 Down: 162	H435-247-45	Summit Ser...	31.1.1.3	✓	3.6.1.8			✓	
Up: 0 Down: 162	H435-247-45	Summit Ser...	31.1.1.3	✓	3.6.1.8			✓	
Up: 0 Down: 196	Virtual Application A...	Extreme An...	8.5.3.46						
Up: 0 Down: 196	Virtual Access Contr...	Extreme Co...	8.5.5.12						
Up: 2 Down: 162	R4BRClxBR	Retro Man...	8.5.3.26		3.6.1.6				

- Black check mark - Indicates that the device is onboarded to ExtremeCloud IQ.
- Red X - Indicates the device is onboarded but Unmanaged, which means it is not using a license, it has read-only device-level support, and available features in ExtremeCloud IQ - Site Engine are limited. Other functionality, including Status Polling, Historical Device + Port Statistics Collection, Existing Scheduled Tasks, and Archives, are supported for devices with Unmanaged status, but these devices cannot be configured for new tasks or new archives.

**NOTE:**

In ExtremeCloud IQ - Site Engine version 22.09.12, only use ExtremeCloud IQ to set an ExtremeCloud IQ - Site Engine onboarded device to Unmanaged as a temporary measure while you obtain more licenses.

If you mark a device as Unmanaged so it does not trigger a [license limit violation](#), you can then access ExtremeCloud IQ - Site Engine and delete the device before the license violation occurs.

You can perform an enforce for an ExtremeControl engine with an Unmanaged status; however, if the device has an Unmanaged status, then the enforce does not reconfigure the device and changes are not written to the device.

When devices are marked as Unmanaged in ExtremeCloud IQ, they are also Unmanaged in ExtremeCloud IQ - Site Engine.

In addition, existing ExtremeAnalytics functionality for devices with an Unmanaged status is still supported, but only with existing configuration.

- Blank - Indicates the device is not successfully onboarded to ExtremeCloud IQ from the ExtremeCloud IQ - Site Engine because either it is already onboarded to ExtremeCloud IQ (either from another

ExtremeCloud IQ - Site Engine or by using the IQ Agent to connect directly), or because ExtremeCloud IQ - Site Engine lost its connection to ExtremeCloud IQ.

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**NOTE:** If a device's status is Blank, it has limited features available in ExtremeCloud IQ - Site Engine because management of the device is owned by ExtremeCloud IQ.

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- N/A - Indicates the device is not eligible to be onboarded to ExtremeCloud IQ because it does not have a valid serial number or MAC address, or Extreme does not yet offer onboarding support for the device.

---

**NOTE:** If ExtremeCloud IQ - Site Engine does not recognize a device's serial number or MAC address, right-click on the device and select Rediscover to attempt to discover the device's serial number or MAC address. When the device's serial number or MAC address is discovered, it can be onboarded to ExtremeCloud IQ during the next onboarding cycle.

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**IMPORTANT:** After you complete these procedures, you must return to the next step [Post Installation Procedure for Ubuntu 18.04 LTS \(Bionic Beaver\)](#) ExtremeCloud IQ - Site Engine Suite Installation.

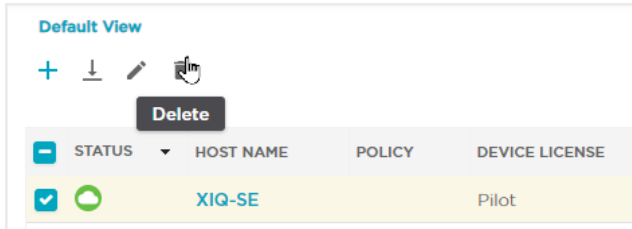
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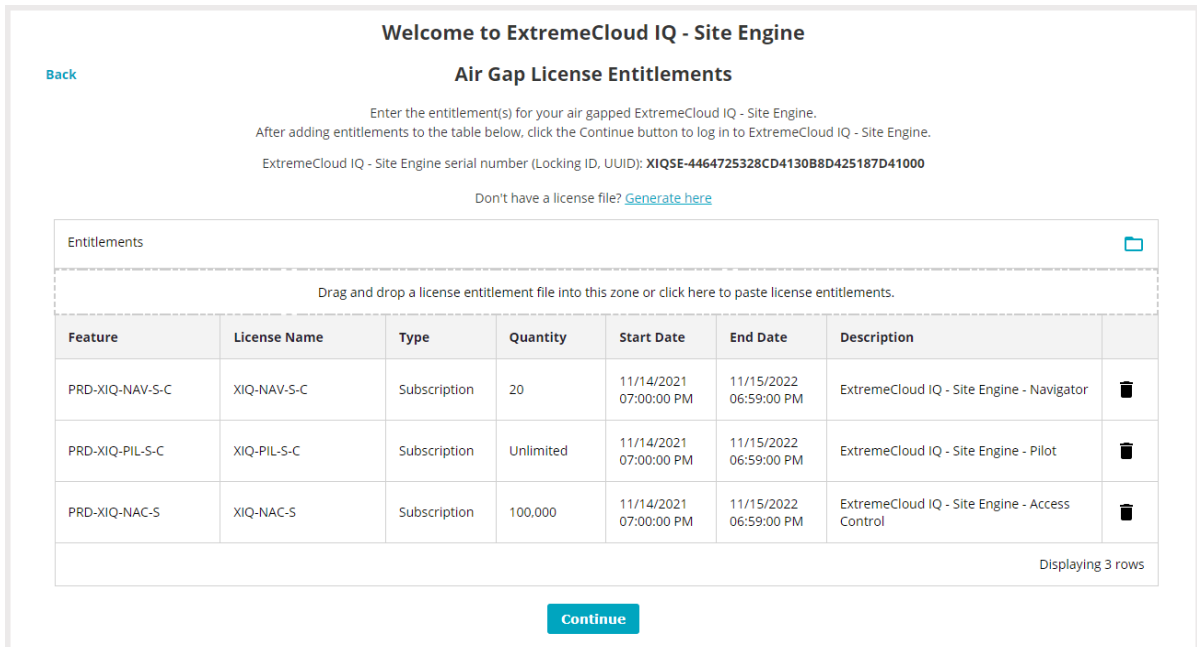
## Convert from Connected to Air Gap deployment

Follow this procedure if you need to convert from Connected mode to Air Gap mode.

1. Delete ExtremeCloud IQ - Site Engine from ExtremeCloud IQ



2. In the next 48 hours, all subscriptions will be deactivated automatically. During this time period:
  - The ExtremeCloud IQ - Site Engine will report `Connection Lost with ExtremeCloud IQ`
  - New devices cannot be added to ExtremeCloud IQ - Site Engine
3. Log in to ExtremeCloud IQ - Site Engine
4. Go to **Air Gap License Entitlements** using `HTTPS://<SiteEngineIP>:8443/xiqLicenseSetup.jsp?setupMode=Airgap`



5. Copy the ExtremeCloud IQ - Site Engine serial number (Locking ID, UUID) from the entitlements screen

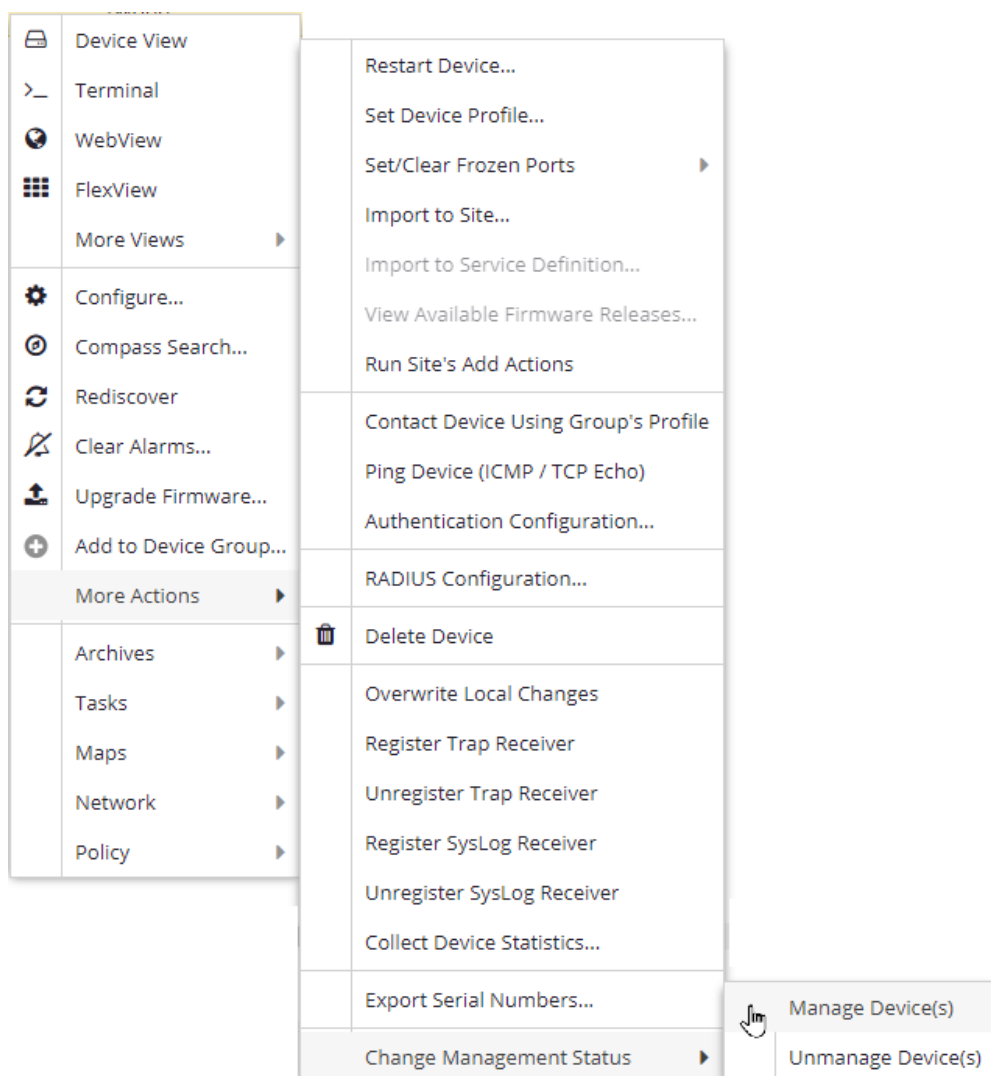
6. Generate a license file. Follow the license generation procedure in section *Air gap deployment mode: Generate and Install the License File* found in the [Activation Instructions](#) guide
7. Drag and drop the license file in the **Entitlements** section of the **Air Gap License Entitlements** screen (see [step 4](#)).
8. Click **Continue**
9. Restart your ExtremeCloud IQ - Site Engine server.

After the restart, your Site Engine is ready to use.

## Convert from Air Gap to Connected deployment

Follow this procedure if you need to convert from Air Gap mode to Connected mode.

1. Check the connectivity from ExtremeCloud IQ - Site Engine to ExtremeCloud IQ. If there is a connectivity issue, fix it before continuing.
2. Make all of the devices managed or delete all unmanaged devices from ExtremeCloud IQ - Site Engine.



3. Revoke all Air Gap licenses. For information on how to revoke the licenses, see [Revoke Air Gap License](#).
4. Go to `HTTPS://<SiteEngineIP>:8443/xiqLicenseSetup.jsp?setupMode=Auto`
5. If you do not have an ExtremeCloud IQ account, then you need to create one.

6. If your ExtremeCloud IQ account is not linked to your Extreme Portal account, follow the procedure in the [Activation Instructions](#).
7. Onboard ExtremeCloud IQ - Site Engine to ExtremeCloud IQ. For more information on how to onboard Site Engine, see [Logging into ExtremeCloud IQ - Site Engine](#).
8. Restart your ExtremeCloud IQ - Site Engine server.

After the restart, your Site Engine is ready to use.