



ExtremeCloud™ IQ - Site Engine Configuration and Requirements

07/2023
23.07.10
PN: 9037894-00
Subject to Change Without Notice



Copyright © 2023 Extreme Networks, Inc. All Rights Reserved.

Legal Notices

Extreme Networks, Inc., on behalf of or through its wholly-owned subsidiary, Enterasys Networks, Inc., reserves the right to make changes in specifications and other information contained in this document and its website without prior notice. The reader should in all cases consult representatives of Extreme Networks to determine whether any such changes have been made.

The hardware, firmware, software or any specifications described or referred to in this document are subject to change without notice.

Trademarks

Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries.

All other names (including any product names) mentioned in this document are the property of their respective owners and may be trademarks or registered trademarks of their respective companies/owners.

For additional information on Extreme Networks trademarks, please see:
www.extremenetworks.com/company/legal/trademarks/

Contact

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

- [Global Technical Assistance Center \(GTAC\) for Immediate Support](#)
 - **Phone:** 1-800-998-2408 (toll-free in U.S. and Canada) or 1-603-952-5000. For the Extreme Networks support phone number in your country, visit:
www.extremenetworks.com/support/contact
 - **Email:** support@extremenetworks.com. To expedite your message, enter the product name or model number in the subject line.
- [GTAC Knowledge](#) — Get on-demand and tested resolutions from the GTAC Knowledgebase, or create a help case if you need more guidance.
- [The Hub](#) — A forum for Extreme customers to connect with one another, get questions answered, share ideas and feedback, and get problems solved. This community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC.
- [Support Portal](#) — Manage cases, downloads, service contracts, product licensing, and training and certifications.



Extreme Networks® Software License Agreement

This Extreme Networks Software License Agreement is an agreement ("Agreement") between You, the end user, and Extreme Networks, Inc. ("Extreme"), on behalf of itself and its Affiliates (as hereinafter defined and including its wholly owned subsidiary, Enterasys Networks, Inc. as well as its other subsidiaries). This Agreement sets forth Your rights and obligations with respect to the Licensed Software and Licensed Materials. BY INSTALLING THE LICENSE KEY FOR THE SOFTWARE ("License Key"), COPYING, OR OTHERWISE USING THE LICENSED SOFTWARE, YOU ARE AGREEING TO BE BOUND BY THE TERMS OF THIS AGREEMENT, WHICH INCLUDES THE LICENSE AND THE LIMITATION OF WARRANTY AND DISCLAIMER OF LIABILITY. IF YOU DO NOT AGREE TO THE TERMS OF THIS AGREEMENT, RETURN THE LICENSE KEY TO EXTREME OR YOUR DEALER, IF ANY, OR DO NOT USE THE LICENSED SOFTWARE AND CONTACT EXTREME OR YOUR DEALER WITHIN TEN (10) DAYS FOLLOWING THE DATE OF RECEIPT FOR A REFUND. IF YOU HAVE ANY QUESTIONS ABOUT THIS AGREEMENT, CONTACT EXTREME, Attn: LegalTeam@extremenetworks.com.

1. **DEFINITIONS.** "Affiliates" means any person, partnership, corporation, limited liability company, or other form of enterprise that directly or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with the party specified. "Server Application" shall refer to the License Key for software installed on one or more of Your servers. "Client Application" shall refer to the application to access the Server Application. "Licensed Materials" shall collectively refer to the licensed software (including the Server Application and Client Application), Firmware, media embodying the software, and the documentation. "Concurrent User" shall refer to any of Your individual employees who You provide access to the Server Application at any one time. "Firmware" refers to any software program or code imbedded in chips or other media. "Licensed Software" refers to the Software and Firmware collectively.
2. **TERM.** This Agreement is effective from the date on which You install the License Key, use the Licensed Software, or a Concurrent User accesses the Server Application. You may terminate the Agreement at any time by destroying the Licensed Materials, together with all copies, modifications and merged portions in any form. The Agreement and Your license to use the Licensed Materials will also terminate if You fail to comply with any term of condition herein.
3. **GRANT OF SOFTWARE LICENSE.** Extreme will grant You a non-transferable, non-exclusive license to use the machine-readable form of the Licensed Software and the accompanying documentation if You agree to the terms and conditions of this Agreement. You may install and use the Licensed Software as permitted by the license type purchased as described below in License Types. The license type purchased is specified on the invoice issued to You by Extreme or Your dealer, if any. YOU MAY NOT USE, COPY, OR MODIFY THE LICENSED MATERIALS, IN WHOLE OR IN PART, EXCEPT AS EXPRESSLY PROVIDED IN THIS AGREEMENT.

4. LICENSE TYPES.

- *Single User, Single Computer.* Under the terms of the Single User, Single Computer license, the license granted to You by Extreme when You install the License Key authorizes You to use the Licensed Software on any one, single computer only, or any replacement for that computer, for internal use only. A separate license, under a separate Software License Agreement, is required for any other computer on which You or another individual or employee intend to use the Licensed Software. A separate license under a separate Software License Agreement is also required if You wish to use a Client license (as described below).
- *Client.* Under the terms of the Client license, the license granted to You by Extreme will authorize You to install the License Key for the Licensed Software on your server and allow the specific number of Concurrent Users shown on the relevant invoice issued to You for each Concurrent User that You order from Extreme or Your dealer, if any, to access the Server Application. A separate license is required for each additional Concurrent User.

5. AUDIT RIGHTS. You agree that Extreme may audit Your use of the Licensed Materials for compliance with these terms and Your License Type at any time, upon reasonable notice. In the event that such audit reveals any use of the Licensed Materials by You other than in full compliance with the license granted and the terms of this Agreement, You shall reimburse Extreme for all reasonable expenses related to such audit in addition to any other liabilities You may incur as a result of such non-compliance, including but not limited to additional fees for Concurrent Users over and above those specifically granted to You. From time to time, the Licensed Software will upload information about the Licensed Software and the associated devices to Extreme. This is to verify the Licensed Software is being used with a valid license. By using the Licensed Software, you consent to the transmission of this information. Under no circumstances, however, would Extreme employ any such measure to interfere with your normal and permitted operation of the Products, even in the event of a contractual dispute.

6. RESTRICTION AGAINST COPYING OR MODIFYING LICENSED MATERIALS. Except as expressly permitted in this Agreement, You may not copy or otherwise reproduce the Licensed Materials. In no event does the limited copying or reproduction permitted under this Agreement include the right to decompile, disassemble, electronically transfer, or reverse engineer the Licensed Software, or to translate the Licensed Software into another computer language.

The media embodying the Licensed Software may be copied by You, in whole or in part, into printed or machine readable form, in sufficient numbers only for backup or archival purposes, or to replace a worn or defective copy. However, You agree not to have more than two (2) copies of the Licensed Software in whole or in part, including the original media, in your possession for said purposes without Extreme's prior written consent, and in no event shall You operate more copies of the Licensed Software than the specific licenses granted to You. You may not copy or reproduce the documentation. You agree to maintain appropriate records of the location of the original media and all copies of the Licensed Software, in whole or in part, made by You. You may modify the machine-readable form of the Licensed Software for (1) your own internal use or (2) to merge the Licensed Software into other program material to form a modular work for your own use, provided that such work remains modular, but on termination of this Agreement, You are required to completely remove the Licensed Software from any such modular work. Any portion of the Licensed Software included in any such modular work shall be used only on a single computer for internal purposes and shall remain subject to all the terms and conditions of this Agreement. You agree to include any copyright or other proprietary notice set forth on the label of the media embodying the Licensed Software on any copy of the Licensed Software in any form, in whole or in part,

or on any modification of the Licensed Software or any such modular work containing the Licensed Software or any part thereof.

7. TITLE AND PROPRIETARY RIGHTS

- a. The Licensed Materials are copyrighted works and are the sole and exclusive property of Extreme, any company or a division thereof which Extreme controls or is controlled by, or which may result from the merger or consolidation with Extreme (its "Affiliates"), and/or their suppliers. This Agreement conveys a limited right to operate the Licensed Materials and shall not be construed to convey title to the Licensed Materials to You. There are no implied rights. You shall not sell, lease, transfer, sublicense, dispose of, or otherwise make available the Licensed Materials or any portion thereof, to any other party.
- b. You further acknowledge that in the event of a breach of this Agreement, Extreme shall suffer severe and irreparable damages for which monetary compensation alone will be inadequate. You therefore agree that in the event of a breach of this Agreement, Extreme shall be entitled to monetary damages and its reasonable attorney's fees and costs in enforcing this Agreement, as well as injunctive relief to restrain such breach, in addition to any other remedies available to Extreme.

8. PROTECTION AND SECURITY. In the performance of this Agreement or in contemplation thereof, You and your employees and agents may have access to private or confidential information owned or controlled by Extreme relating to the Licensed Materials supplied hereunder including, but not limited to, product specifications and schematics, and such information may contain proprietary details and disclosures. All information and data so acquired by You or your employees or agents under this Agreement or in contemplation hereof shall be and shall remain Extreme's exclusive property, and You shall use your best efforts (which in any event shall not be less than the efforts You take to ensure the confidentiality of your own proprietary and other confidential information) to keep, and have your employees and agents keep, any and all such information and data confidential, and shall not copy, publish, or disclose it to others, without Extreme's prior written approval, and shall return such information and data to Extreme at its request. Nothing herein shall limit your use or dissemination of information not actually derived from Extreme or of information which has been or subsequently is made public by Extreme, or a third party having authority to do so.

You agree not to deliver or otherwise make available the Licensed Materials or any part thereof, including without limitation the object or source code (if provided) of the Licensed Software, to any party other than Extreme or its employees, except for purposes specifically related to your use of the Licensed Software on a single computer as expressly provided in this Agreement, without the prior written consent of Extreme. You agree to use your best efforts and take all reasonable steps to safeguard the Licensed Materials to ensure that no unauthorized personnel shall have access thereto and that no unauthorized copy, publication, disclosure, or distribution, in whole or in part, in any form shall be made, and You agree to notify Extreme of any unauthorized use thereof. You acknowledge that the Licensed Materials contain valuable confidential information and trade secrets, and that unauthorized use, copying and/or disclosure thereof are harmful to Extreme or its Affiliates and/or its/their software suppliers.

9. MAINTENANCE AND UPDATES. Updates and certain maintenance and support services, if any, shall be provided to You pursuant to the terms of an Extreme Service and Maintenance Agreement, if Extreme and You enter into such an agreement. Except as specifically set forth in such agreement, Extreme shall not be under any obligation to provide Software Updates, modifications, or enhancements, or Software maintenance and support services to You.

-
10. DEFAULT AND TERMINATION. In the event that You shall fail to keep, observe, or perform any obligation under this Agreement, including a failure to pay any sums due to Extreme, or in the event that you become insolvent or seek protection, voluntarily or involuntarily, under any bankruptcy law, Extreme may, in addition to any other remedies it may have under law, terminate the License and any other agreements between Extreme and You.
- a. Immediately after any termination of the Agreement or if You have for any reason discontinued use of Software, You shall return to Extreme the original and any copies of the Licensed Materials and remove the Licensed Software from any modular works made pursuant to Section 3, and certify in writing that through your best efforts and to the best of your knowledge the original and all copies of the terminated or discontinued Licensed Materials have been returned to Extreme.
 - b. Sections 1, 7, 8, 10, 11, 12, 13, 14 and 15 shall survive termination of this Agreement for any reason.
11. EXPORT REQUIREMENTS. You are advised that the Software is of United States origin and subject to United States Export Administration Regulations; diversion contrary to United States law and regulation is prohibited. You agree not to directly or indirectly export, import or transmit the Software to any country, end user or for any Use that is prohibited by applicable United States regulation or statute (including but not limited to those countries embargoed from time to time by the United States government); or contrary to the laws or regulations of any other governmental entity that has jurisdiction over such export, import, transmission or Use.
12. UNITED STATES GOVERNMENT RESTRICTED RIGHTS. The Licensed Materials (i) were developed solely at private expense; (ii) contain "restricted computer software" submitted with restricted rights in accordance with section 52.227-19 (a) through (d) of the Commercial Computer Software-Restricted Rights Clause and its successors, and (iii) in all respects is proprietary data belonging to Extreme and/or its suppliers. For Department of Defense units, the Licensed Materials are considered commercial computer software in accordance with DFARS section 227.7202-3 and its successors, and use, duplication, or disclosure by the U.S. Government is subject to restrictions set forth herein.
13. LIMITED WARRANTY AND LIMITATION OF LIABILITY. The only warranty that Extreme makes to You in connection with this license of the Licensed Materials is that if the media on which the Licensed Software is recorded is defective, it will be replaced without charge, if Extreme in good faith determines that the media and proof of payment of the license fee are returned to Extreme or the dealer from whom it was obtained within ninety (90) days of the date of payment of the license fee.
- NEITHER EXTREME NOR ITS AFFILIATES MAKE ANY OTHER WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, WITH RESPECT TO THE LICENSED MATERIALS, WHICH ARE LICENSED "AS IS". THE LIMITED WARRANTY AND REMEDY PROVIDED ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE EXPRESSLY DISCLAIMED, AND STATEMENTS OR REPRESENTATIONS MADE BY ANY OTHER PERSON OR FIRM ARE VOID. ONLY TO THE EXTENT SUCH EXCLUSION OF ANY IMPLIED WARRANTY IS NOT PERMITTED BY LAW, THE DURATION OF SUCH IMPLIED WARRANTY IS LIMITED TO THE DURATION OF THE LIMITED WARRANTY SET FORTH ABOVE. YOU ASSUME ALL RISK AS TO THE QUALITY, FUNCTION AND PERFORMANCE OF THE LICENSED MATERIALS. IN NO EVENT WILL EXTREME OR ANY OTHER PARTY WHO HAS BEEN INVOLVED IN THE CREATION, PRODUCTION OR DELIVERY OF THE LICENSED MATERIALS BE LIABLE FOR SPECIAL, DIRECT, INDIRECT, RELIANCE, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING LOSS OF DATA OR PROFITS OR FOR INABILITY TO USE THE LICENSED MATERIALS, TO ANY PARTY EVEN IF EXTREME OR SUCH OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN

NO EVENT SHALL EXTREME OR SUCH OTHER PARTY'S LIABILITY FOR ANY DAMAGES OR LOSS TO YOU OR ANY OTHER PARTY EXCEED THE LICENSE FEE YOU PAID FOR THE LICENSED MATERIALS. Some states do not allow limitations on how long an implied warranty lasts and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation and exclusion may not apply to You. This limited warranty gives You specific legal rights, and You may also have other rights which vary from state to state.

14. JURISDICTION. The rights and obligations of the parties to this Agreement shall be governed and construed in accordance with the laws and in the State and Federal courts of the State of California, without regard to its rules with respect to choice of law. You waive any objections to the personal jurisdiction and venue of such courts. None of the 1980 United Nations Convention on the Limitation Period in the International Sale of Goods, and the Uniform Computer Information Transactions Act shall apply to this Agreement.
15. GENERAL.
 - a. This Agreement is the entire agreement between Extreme and You regarding the Licensed Materials, and all prior agreements, representations, statements, and undertakings, oral or written, are hereby expressly superseded and canceled.
 - b. This Agreement may not be changed or amended except in writing signed by both parties hereto.
 - c. You represent that You have full right and/or authorization to enter into this Agreement.
 - d. This Agreement shall not be assignable by You without the express written consent of Extreme. The rights of Extreme and Your obligations under this Agreement shall inure to the benefit of Extreme's assignees, licensors, and licensees.
 - e. Section headings are for convenience only and shall not be considered in the interpretation of this Agreement.
 - f. The provisions of the Agreement are severable and if any one or more of the provisions hereof are judicially determined to be illegal or otherwise unenforceable, in whole or in part, the remaining provisions of this Agreement shall nevertheless be binding on and enforceable by and between the parties hereto.
 - g. Extreme's waiver of any right shall not constitute waiver of that right in future. This Agreement constitutes the entire understanding between the parties with respect to the subject matter hereof, and all prior agreements, representations, statements and undertakings, oral or written, are hereby expressly superseded and canceled. No purchase order shall supersede this Agreement.
 - h. Should You have any questions regarding this Agreement, You may contact Extreme at the address set forth below. Any notice or other communication to be sent to Extreme must be mailed by certified mail to the following address:

Extreme Networks, Inc.
145 Rio Robles
San Jose, CA 95134 United States
ATTN: General Counsel

Table of Contents

ExtremeCloud™ IQ - Site Engine Configuration and Requirements	1
Extreme Networks® Software License Agreement	3
Table of Contents	8
Configuration and Requirements	9
Security and Vulnerability Testing	9
Installation Information	9
Important Installation Considerations	10
Custom FlexViews	10
Custom MIBs and Images	10
Important Upgrade Considerations	11
Access Control Version 8.0 and newer	11
Firewall Considerations	12
Supported MIBs	12
ExtremeCloud IQ - Site Engine Ports	12
ExtremeControl Ports	14
ExtremeAnalytics Ports	16
FabricManager Ports	17
Ephemeral Ports	18

Configuration and Requirements

Security and Vulnerability Testing

Security is something that is taken seriously by Extreme Networks. Our commitment to achieving and maintaining a strong security stance for our products enables our customers to have confidence in networking, software, and management infrastructure provided by the company.

The Software Quality Assurance team at Extreme Networks scans every ExtremeCloud IQ - Site Engine release using the current versions of multiple anti-virus solutions, updated to include the latest virus signatures.

Additionally, all Extreme Networks products undergo rigorous security testing with best-of-breed industry standard scanners. Further, all product binary images are scanned with sophisticated anti-virus solutions for evidence of viruses and malware before the images are uploaded to customer-facing portals. Whenever issues are discovered by these scanners and anti-virus solutions, a well-defined triage process is engaged for remediation or mitigation of such findings. This enables Extreme Networks to engineer solutions that heighten the security of our products, and new releases are made available as necessary in order to address any discovered security vulnerabilities. This has several additional benefits in terms of helping customers maintain networks that are compliant under various regulatory or industry standards such as HIPAA, SoX, and PCI.

Extreme Networks also monitors industry security information data sources, such as CERT, the full-disclosure mailing list, and various authoritative CVE announcements for vulnerabilities that could potentially apply to our products. When such a vulnerability is found, we follow a process by which high severity vulnerabilities (such as the ShellShock bug in the bash shell from late 2014) are prioritized over lower severity vulnerabilities. The severity itself is derived from the Common Vulnerability Scoring System (CVSS) score which provides the most widely accepted measure for vulnerability severity. For applicable vulnerabilities, we provide feedback to CERT to keep them updated on the status of our findings.

Further, for many of our products that are based on a Linux engine image - ExtremeCloud IQ - Site Engine and ExtremeControl, for example - we harden the engines by ensuring that we do not start unnecessary services and we do not install unnecessary software. In addition, we apply security updates from the upstream Linux distribution.

Taken together, the security of Extreme Networks products is maintained and verified. For all inquiries about our security processes, contact [Global Technical Assistance Center \(GTAC\)](#).

Installation Information

For complete installation instructions, refer to [ExtremeCloud IQ - Site Engine Suite Installation](#).

IMPORTANT: The **Compliance** tab is available and supported by Extreme on an ExtremeCloud IQ - Site Engine engine running the Linux operating system supplied by Extreme. Other Linux operating systems can support Compliance functionality, but python version 2.7 or higher must be installed. Additionally Compliance functionality requires the git, python2, python mysql module, python setup tools module, and python "pygtail" module packages be installed and related dependencies managed by the customer for their server's unique operating system and version.

Important Installation Considerations

Custom FlexViews

When reinstalling ExtremeCloud IQ - Site Engine Console, the installation program saves copies of any FlexViews you created or modified in the `<install directory>\.installer\backup\current\appdata\System\FlexViews` folder.

If you are [deploying FlexViews](#) via the ExtremeCloud IQ - Site Engine server, save them in the `appdata\VendorProfiles\Stage\MyVendorProfile\FlexViews\My FlexViews` folder.

Custom MIBs and Images

If you are deploying MIBs via the ExtremeCloud IQ - Site Engine server, they are saved in the `appdata\VendorProfiles\Stage\MyVendorProfile\MIBs\` folder.

If you are deploying device images (pictures) via the ExtremeCloud IQ - Site Engine server, they are saved in the `appdata\VendorProfiles\Stage\MyVendorProfile\Images\` folder.

ExtremeCloud IQ - Site Engine version 23.07.10 supports upgrades from Extreme Management Center 8.5.7 or ExtremeCloud IQ - Site Engine 23.4.12 only. The following table details the upgrade path supported for each NetSight, Extreme Management Center or ExtremeCloud IQ - Site Engine version.

NOTE: ExtremeCloud IQ - Site Engine Version 23.07.10 contains an OS upgrade. Internet connectivity is required to download custom packages.

The installer prompts "Do you want to use the Internet to perform the OS upgrade?". The offline upgrade path is supported when no custom packages are installed (answer N). The online upgrade is required when custom packages are manually installed (answer Y). An online upgrade is recommended when an online upgrade was used previously, however there is a risk of session timeout due to 15 minutes of screen inactivity.

To upgrade Access Control Engines and Application Analytics Engines you can use the directive `--keepalive` to decrease the chance of a session expiry timeout from 15 minutes of no screen activity.

From Version (currently running)	To Version (next step in upgrade path)
ExtremeCloud IQ - Site Engine 23.4.12	ExtremeCloud IQ - Site Engine 23.7

From Version (currently running)	To Version (next step in upgrade path)
ExtremeCloud IQ - Site Engine 21.x, 22.x, 23.2.x 23.4.10, 23.4.11	ExtremeCloud IQ - Site Engine 23.4.12
Extreme Management Center version 8.5.7	ExtremeCloud IQ - Site Engine 23.7
Extreme Management Center version 8.2.x to 8.5.6	Extreme Management Center 8.5.7
Extreme Management Center version 8.0.x to 8.1.x	Extreme Management Center 8.3.3.11
NetSight version 7.1.4.1	Extreme Management Center 8.3.3.11
NetSight version 7.x	NetSight 7.1.4.1
NetSight version 6.3.0.186	NetSight 7.1.4.1
NetSight version 6.x	NetSight 6.3.0.186

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 23.07.10 and then upgrade the feature.
- Fabric Manager version 22.09.13.5 is compatible with ExtremeCloud IQ - Site Engine version 23.7. If you are running a previous version of Fabric Manager, upgrade your deployment to Fabric Manager 22.09.13.5 for use with ExtremeCloud IQ - Site Engine version 23.7.
- 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.
- If the online upgrade fails due to an Internet connectivity issue, fix the connectivity issue and rerun the upgrade.

Access Control Version 8.0 and newer

Beginning in version 8.0, ExtremeControl can fail to join Active Directory when accessing as a **Standard Domain User with Descendant Computer Objects ("Reset password" permissions only)** group member.

To enable this functionality, add the following permissions:

- Reset Password
- Validated write to DNS host name

- Validated write to service principal
- Read and write account restrictions
- Read and write DNS host name attributes
- Write servicePrincipalName

Firewall Considerations

To configure your firewall, see [Ports List](#).

Supported MIBs

The following directory contains the IETF and Private Enterprise MIBs supported by ExtremeCloud IQ - Site Engine applications:

```
<install directory>\appdata\System\mibs directory
```

Navigate to the directory and open the .index file to view an index of the supported MIBs.

Additional MIB Support information is available at www.extremenetworks.com/support/policies.

ExtremeCloud IQ - Site Engine Ports

ExtremeCloud IQ - Site Engine Inbound Communication (Local Ports)

Type	Port	Description	Purpose
TCP	20	FTP Data	Device software and configuration upload/download
TCP	21	FTP Control	Device software and configuration upload/download
TCP	22	SSH	Shell access Device software and configuration upload/download
TCP	8080	HTTP	Web browser access to ExtremeCloud IQ - Site Engine user interface (redirects to port 8443) Communication with ExtremeControl and ExtremeAnalytics
TCP	8443	HTTPS	Web browser access to ExtremeCloud IQ - Site Engine user interface Northbound Interface (NBI) ExtremeControl, ExtremeAnalytics, and Fabric Manager communication
TCP	8444	HTTPS	ExtremeControl engine communication
TCP	8445	HTTPS	ExtremeControl Assessment communication
TCP	20504	ExtremeWireless Protocol	ExtremeWireless Controller communication

ExtremeCloud IQ - Site Engine Inbound Communication (Local Ports)

Type	Port	Description	Purpose
TCP	20505	ExtremeWireless Protocol	ExtremeWireless Controller communication
UDP	69	TFTP	Device software and configuration upload/download
UDP	123	NTP	
UDP	161	SNMP	SNMP agent (if enabled)
			Reception of SNMP traps from all managed devices Reception of SNMP traps from ExtremeControl and ExtremeAnalytics engines, Guest & IoT Manager, Fabric Manager, ExtremeWireless Controller, and Virtual Sensors.
UDP	162	SNMP Traps	
UDP	514	Syslog	Reception of syslog messages from monitored devices
UDP	2055	NetFlow	Default NetFlow collector

ExtremeCloud IQ - Site Engine Outbound Communication (Remote Ports)

Type	Port	Description	Purpose
TCP	22	SSH	CLI access to managed devices Shell access to ExtremeControl and ExtremeAnalytics engines, Guest & IoT Manager, Fabric Manager, and ExtremeWireless controllers
TCP	23	Telnet	If used for CLI communication in lieu of SSH
TCP	25	SMTP	Communication with SMTP server (port is configurable, most common values: 25, 465, and 587)
TCP	49	TACACS+	Required when using TACACS+ for user authentication
			Internet for ExtremeControl Assessment Agent updates (extremenetworks.com)
TCP	80	HTTP	Virtual sensor communication
TCP	389	LDAP	Required when using LDAP for user authentication
			Allows ExtremeCloud IQ - Site Engine to connect to ExtremeCloud IQ
TCP	443	HTTPS	ExtremeAnalytics Fingerprint updates (services.enterasys.com)
			Connect modules can be configured to communicate with third party solutions. The destination is defined in the Connect modules.
TCP	443	Connect	
TCP	443	OAuth	Required when automatic access tokens update is enabled in Administration > Options > SMTP Email.
TCP	636	LDAPS	Required when using LDAP for user authentication

ExtremeCloud IQ - Site Engine Outbound Communication (Remote Ports)

Type	Port	Description	Purpose
TCP	8080	HTTP	ExtremeControl and ExtremeAnalytics engine communication
TCP	8443	HTTPS	ExtremeControl, ExtremeAnalytics, Guest & IoT Manager, Fabric Manager, and Virtual Sensor communication
TCP	8444	HTTPS	ExtremeControl engine communication
TCP	20506	ExtremeWireless Protocol	ExtremeWireless Controller communication
UDP	53	DNS	Domain Name Server
UDP	123	NTP	Network Time Protocol
UDP	161	SNMP	SNMP Management of all managed devices SNMP Management of ExtremeControl and ExtremeAnalytics engines, Guest & IoT Manager, Fabric Manager, ExtremeWireless Controller, and Virtual Sensors.
UDP	162	SNMP Trap	Send SNMP traps to external trap receivers
UDP	514	Syslog	Send syslog messages to external syslog receivers
UDP	1812	RADIUS authentication	Required when using RADIUS for user authentication

ExtremeCloud IQ - Site Engine Outbound Internet Connections (not mandatory in air gap deployment)

Type	Port	Description	Purpose
TCP	443	HTTPS	ExtremeAnalytics Fingerprint updates (services.enterasys.com)
TCP	443	HTTPS	Allows ExtremeCloud IQ - Site Engine to connect to ExtremeCloud IQ (*.extremecloudiq.com - Check the specifics for your RDC. Login to ExtremeCloud IQ > About ExtremeCloud IQ > Firewall Configuration Guide)
TCP	80	HTTP	ExtremeControl Assessment Agent download (extremenetworks.com)

ExtremeControl Ports

ExtremeControl Inbound Communication (Local Ports)

Type	Port	Description	Purpose
TCP	22	SSH	Shell access Device software and configuration upload/download
TCP	80	HTTP	Captive Portal listening
TCP	443	HTTPS	Captive Portal listening

ExtremeControl Inbound Communication (Local Ports)

Type	Port	Description	Purpose
TCP	8080	HTTP	ExtremeControl web browser access (redirects to port 8443) ExtremeCloud IQ - Site Engine communication Communication between multiple ExtremeControl engines From every end-system subnet subject to ExtremeControl assessment agent in order to support agent mobility
TCP	8443	HTTPS	ExtremeControl web browser access ExtremeCloud IQ - Site Engine communication Communication between multiple ExtremeControl engines From every end-system subnet subject to ExtremeControl assessment agent in order to support agent mobility
TCP	8444	HTTPS	ExtremeControl web browser access (redirects to port 8443) ExtremeCloud IQ - Site Engine communication Communication between multiple ExtremeControl engines
TCP	8445	HTTPS	ExtremeControl Assessment communication
UDP	123	NTP	Network Time Protocol
UDP	161	SNMP	SNMP agent managed by ExtremeCloud IQ - Site Engine
UDP	1812	RADIUS authentication	ExtremeControl RADIUS server
UDP	1813	RADIUS accounting	ExtremeControl RADIUS server
		Connect	Distributed IPS module can be configured to receive information from third party solutions. Source (Protocol and Port and IP) is defined in the Distributed IPS module.

ExtremeControl Outbound Communication (Remote Ports)

Type	Port	Description	Purpose
TCP	22	SSH	Configuration of devices running VOSS/Fabric Engine (if ssh is configured in the CLI profile)
TCP	23	Telnet	Configuration of devices running VOSS/Fabric Engine (if telnet is configured in the CLI profile)
TCP	135	RPC	Remote Procedure Calls to Active Directory
TCP	389	LDAP	User-based network authentication and directory services
TCP	80/443	HTTPS	CRL verification
TCP	445	DCERPC	Distributed Computing Environment/Remote Procedure Calls
TCP	636	LDAP	User-based network authentication and directory services

ExtremeControl Outbound Communication (Remote Ports)

Type	Port	Description	Purpose
TCP	8080	HTTP	ExtremeCloud IQ - Site Engine communication Communication between multiple ExtremeControl engines
TCP	8443	HTTPS	ExtremeCloud IQ - Site Engine communication Communication between multiple ExtremeControl engines
TCP	8444	HTTPS	ExtremeCloud IQ - Site Engine communication Communication between multiple ExtremeControl engines
UDP/TCP	88	Kerberos	Kerberos Protocol
UDP	123	NTP	Network Time Protocol
UDP	161	SNMP	Communication to authenticators
UDP	162	SNMP Trap	SNMP traps sent to ExtremeCloud IQ - Site Engine
UDP	389	LDAP	Winbind discovery
UDP	1700	RADIUS CoA	ExtremeControl RADIUS server to authenticators
UDP	1812	RADIUS authentication	Proxy authorization to remote RADIUS Server
UDP	1813	RADIUS accounting	Proxy accounting to remote RADIUS Server
UDP	3799	RADIUS CoA	ExtremeControl RADIUS server to authenticators

ExtremeAnalytics Ports

ExtremeAnalytics Inbound IP Protocols

Type	Protocol	Description	Purpose
IP	47	GRE	Mirror Traffic for CoreFlow, Virtual Sensor, Wireless Controller, and App Telemetry application identification.

ExtremeAnalytics Inbound Communication (Local Ports)

Type	Port	Description	Purpose
TCP	22	SSH	Shell access
TCP	8080	HTTP	ExtremeCloud IQ - Site Engine communication
TCP	8443	HTTPS	ExtremeCloud IQ - Site Engine communication
UDP	123	NTP	Network Time Protocol
UDP	161	SNMP	SNMP agent managed by ExtremeCloud IQ - Site Engine

ExtremeAnalytics Inbound Communication (Local Ports)

Type	Port	Description	Purpose
UDP	2055	NetFlow	NetFlow Collector
UDP	2058	IPFIX	VMWare NSX IPFIX collector
UDP	2075	IPFIX	IPFIX collector
UDP	2095	NetFlow	ExtremeWireless NetFlow collector
UDP	4739	IPFIX	ExtremeXOS/Switch Engine IPFIX collector, VTAP IPFIX collector from Virtual Sensor
UDP	6343	SFlow	SFlow for ExtremeAnalytics Application Telemetry

ExtremeAnalytics Outbound Communication (Remote Ports)

Type	Port	Description	Purpose
TCP	80	HTTP	Virtual Sensor configuration
TCP	443	HTTPS	Virtual Sensor configuration
TCP	8080	HTTP	ExtremeCloud IQ - Site Engine communication
TCP	8443	HTTPS	ExtremeCloud IQ - Site Engine communication
UDP	123	NTP	
UDP	162	SNMP Trap	SNMP traps sent to ExtremeCloud IQ - Site Engine
UDP		IPFIX	Flow export. Destination and port is defined in the configuration of the Analytics Engine

FabricManager Ports

Fabric Manager Outbound Communication (Remote Ports)

Type	Port	Description	Purpose
UDP	161	SNMP	Communicating with the devices
TCP	22	SSH	Communication between ExtremeCloud IQ - Site Engine and FM for SSH
TCP	8443	HTTP	Communication between ExtremeCloud IQ - Site Engine and FM for REST & ZTP+

Fabric Manager Inbound Communication (Local Ports)

Type	Port	Description	Purpose
TCP	22	SSH	Communication between ExtremeCloud IQ - Site Engine and FM for SSH

Ephemeral Ports

The port range 32768 to 61000 is reserved for dynamically allocated port numbers used by most TCP and UDP based protocols, such as TFTP and FTP.