

Highlights

Full Stack Management

- Native cloud management for Wi-Fi, Switching, and SD-WAN unified networks 360

Dashboards and Insights

- Machine Learning derived insights drive a comprehensive visual dashboard of location, devices, and users

Network Health

- Real-time and historical view of client and device health with built-in remediation tools

Application Visibility and Control

- Visibility and control of application usage for professional and recreational applications and network services

Comparative Analytics

- Anonymously compare operational and performance-based metrics to those of other organizations of a similar size and vertical

Integrated Essentials Applications

- ExtremeGuest™
- ExtremeAirDefense™
- ExtremeloT™
- ExtremeLocation™

Auto-Provisioning

- With zero-touch deployment, automatically apply configuration policies



ExtremeCloud™ IQ

Machine Learning and AI-driven Wired and Wireless Network Management Offering Intuitive Configuration Workflows, Real-Time and Historical Monitoring, Comprehensive Troubleshooting and Integrated Network Applications

ExtremeCloud IQ is an industry-leading and visionary approach to cloud-driven networking, built from the ground up to take full advantage of Extreme's end-to-end networking solutions. ExtremeCloud IQ delivers unified, full-stack management of wireless access points, switches, and routers and enables onboarding, configuration, monitoring, troubleshooting, reporting, and more. Using innovative machine learning and artificial intelligence technologies, ExtremeCloud IQ analyzes and interprets millions of network and user data points, from the network edge to the data center, to power actionable business and IT insights, and deliver new levels of network automation and intelligence.



Built to Suit Your Business Needs

Extreme Elements are the building blocks that allow you to tailor your network to your specific business environment, goals, and objectives. They enable the creation of an Autonomous Network that delivers the positive experiences and business outcomes most important to your organization.

Combining architecture, automation, and artificial intelligence, Extreme Elements enable you to ensure that your users get what they need — when and where they need it. Providing these superior user experiences is as simple as mixing and matching the right elements.

Learn more at <https://www.extremenetworks.com/extreme-elements/>.



ExtremeCloud IQ™ operates on Extreme’s fourth generation Cloud Services architecture, capable of supporting millions of infrastructure devices and hundreds of millions of clients per Regional Data Center. All Extreme Cloud Services components are hosted in secure SOC Type 1 data centers with 24/7 monitoring, scheduled backups, and built-in disaster recovery capabilities. The ExtremeCloud IQ offers rapid feature velocity, increased availability, and advanced flexibility desired for modern access network management.

Extreme Cloud Services also provides a full suite of cloud-optimized open APIs for developers to create 3rd party applications and user experiences including user onboarding mechanisms, proximity-based services, presence and location analytics, and more.

Deployment options include Public Cloud, Private Cloud, and a Local Cloud solution.

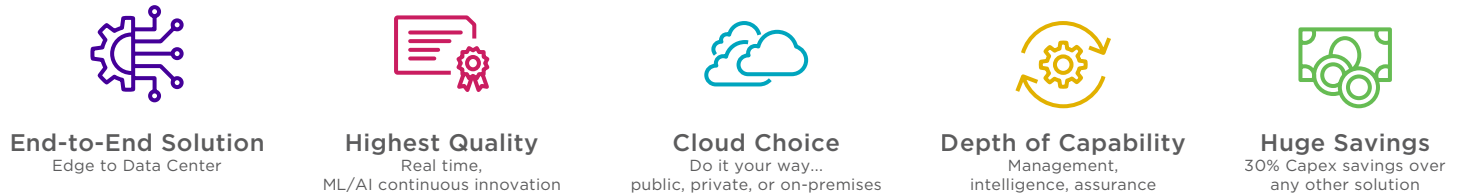


Figure 1: The ExtremeCloud Difference

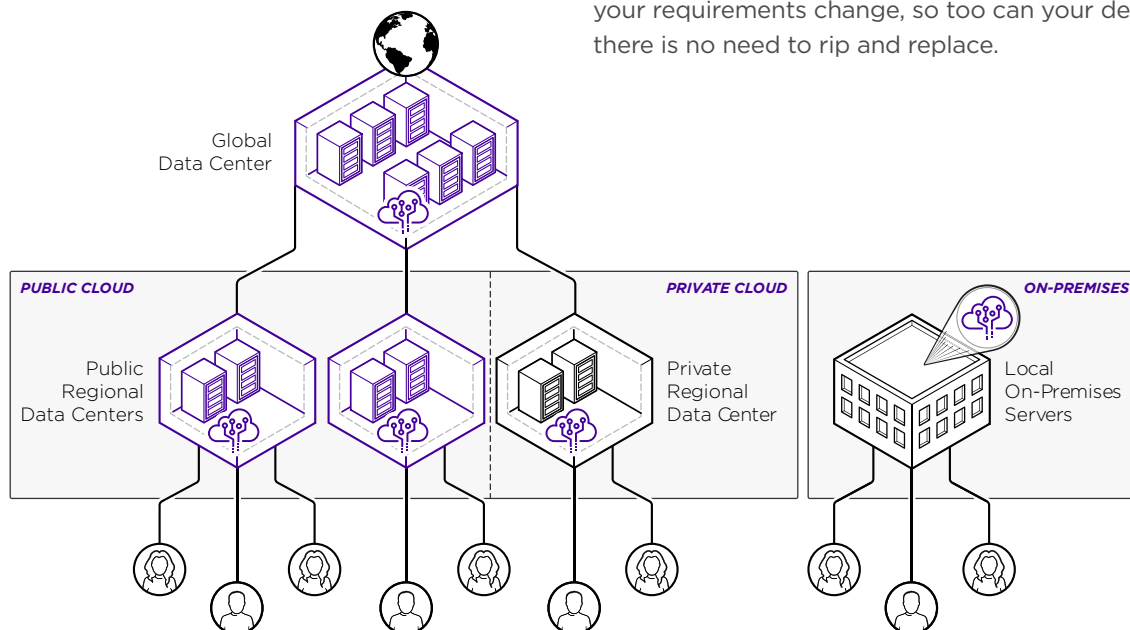
Deployment Choices

Extreme offers three cloud deployment options - Public, Private or On-Premises - that support one goal: to provide you with maximum flexibility, continuous innovation, and a consistent user experience. More so, our 100% software-centric architecture is Cloud-Hosting agnostic, supporting AWS, Google, MSFT and more.

- **Public Cloud:** Extreme provides access to a hosted service which removes infrastructure management and costs, provides data privacy and protection, unmatched reliability, and continuous delivery of innovations.










- **Private Cloud:** Private Cloud: For businesses who want or need to isolate management services in their own controlled environment, Extreme packages ExtremeCloud IQ into a private cloud offering which enables the same services as the public cloud (e.g. ML, AI, data stores etc.) all hosted within customers’ or partners’ private cloud instance.
- **On-Premises:** The on-premises option provides Extreme’s cloud service in a format which can be hosted on-premises at your site.

Regardless of which option you choose, ExtremeCloud IQ offers the same capabilities and feature sets. More so, as your requirements change, so too can your deployment - there is no need to rip and replace.



Your Network. Your Way. Complete Solution Flexibility with ExtremeCloud IQ™

Through value-based licensing/SaaS tiering, Extreme Networks is making it even easier for you to grow as you go, both in a technical and commercial sense. We offer the most flexible, feature-rich, application tiers tailored to every business, budget, and IT needs, that delivers the management, intelligence and assurance your business requires.

	ExtremeCloud™ IQ Connect	ExtremeCloud™ IQ Navigator	ExtremeCloud™ IQ Pilot	COMING SOON ExtremeCloud™ IQ Co-Pilot	Future ExtremeCloud™ IQ Auto-Pilot
Availability	 PUBLIC	 PUBLIC	   PUBLIC PRIVATE LOCAL	  PUBLIC PRIVATE	  PUBLIC PRIVATE
Feature Set	Free device management for access points, switches, and routers	EVERYTHING IN CONNECT, PLUS: Additional management functions for Extreme WiNG products	EVERYTHING IN CONNECT, PLUS: Advanced infrastructure management, reporting, and remediation tools	EVERYTHING IN PILOT, PLUS: Machine Learning-derived insights and intelligence	EVERYTHING IN CO-PILOT, PLUS: Advanced Actionable AI
Unique Features	<ul style="list-style-type: none"> • Device onboarding • Guided Configuration • Centralized Management • Wi-Fi Planner • Basic Monitoring Tools • Essential Security 	<ul style="list-style-type: none"> • Application Visibility • SSH Proxy • Web Proxy to WiNG Controller • Web Proxy to Extreme Campus Controller 	<ul style="list-style-type: none"> • Advanced Topology View • Troubleshooting Heuristics • Contextualized Optimization • Role Based Profiling • Advanced 360° Reporting • Comparative Analytics 	<ul style="list-style-type: none"> • Supervised ML Insights & Tuning • Automated Bug Fixes • ML Issue Resolution • Automated RMA • Advanced NAC Integration • Multi-Cloud Support 	<ul style="list-style-type: none"> • AI Configuration • AI DFS Optimization • AI-Driven Quarantine • AI Segmentation • AI Anomaly Detection • AI WIPS

- **ExtremeCloud IQ Pilot** is the primary deployment mode for ExtremeCloud IQ, and is targeted at organizations that require enhanced policy enforcement, visibility, reporting, and advanced configurations. It is a simple and seamless upgrade from Connect to Pilot. Pilot delivers configuration and management of infrastructure devices at scale including advanced policy, advanced segmentation, advanced troubleshooting, advanced guest, advanced SSH, etc.
- **ExtremeCloud IQ Navigator** is targeted at organizations that have deployed the WiNG Wi-Fi controller based solution. It provides enhanced policy enforcement, visibility, reporting, and advanced configurations. It is a simple and seamless upgrade from Connect to Navigator. Navigator delivers configuration and management of WinG infrastructure systems at scale including advanced policy, advanced segmentation, advanced SSH, etc.
- **ExtremeCloud IQ Connect** is our base level tier. It provides subscription-free cloud management for supported devices, enabling organizations to deploy enterprise-grade connectivity with basic network management.
- **ExtremeCloud IQ Co-Pilot** unlocks additional machine learning tools, multi-cloud support, self-remediation, and automated configurations and software management. For example, the “Instant Context” capability reduces the volume of context-gathering activities required for support calls to near zero by implementing a machine learning-driven, intelligent support chat window that collects real-time and historical information about a device or client through input or drag-and-drop functionality.
- **ExtremeCloud IQ Auto-Pilot** utilizes the latest in AI techniques to further optimize network performance and protect your organization from growing threats such as IoT. It delivers cloud-driven artificial intelligence actions that proactively replace problematic infrastructure devices (i.e. Auto-RMA-Action), change infrastructure device configurations (i.e. Auto-DFS-Action), fix known bugs (i.e. Auto-BugFix-Action), advanced ML/AI-insights and trends over time, etc.

ExtremeCloud IQ Essentials

ExtremeCloud IQ Essentials provides four key applications. WIPS, Location services, IoT, and Guest management, enable organizations to take advantage of an all-in-one platform for wired and wireless management, business insights, location tracking, wireless security, seamless IoT onboarding and guest access, and guest access through a single user interface simplifying network management while infusing network and business insights.

ExtremeGuest™

ExtremeGuest is a robust and comprehensive guest engagement solution that enables managers and network operators to use analytical insights for a deeper dive into how their guest networks are utilized. For example, knowing how many customers use the guest network, how often they visit, and how much time they spend on the network are all metrics that can be measured through ExtremeGuest. Analytics of social networking behavior of customers can be used to increase patronage and expand brand exposure.

ExtremeAirDefense™

ExtremeAirDefense simplifies the protection, monitoring and compliance of your Wireless LAN networks. ExtremeAirDefense continuously safeguards the network from external threats 24x7x365 and notifies IT staff when attacks occur, enabling an immediate response. Using existing infrastructure with AirDefense, you can protect your air waves from unwanted behavior. It is deployed as a set of access points serving as sensors to monitor the airwaves together with this application. Sensors can be access points configured in radio share or dedicated sensing modes and can also be used as overlay security network in any environment. Sensors can be deployed as either dedicated sensors or in radio-share mode.

ExtremeloT™

ExtremeloT is a simple IoT security solution that is designed to protect high risk, wired IoT devices. Through the application of security profiles, it controls IoT device attachment and access to the network. It locks down IoT communications to only what's authorized, blocking everything else. ExtremeloT provides an easy to use interface for onboarding IoT devices securely. It reduces the effort of IT departments by using security profiles and a separate onboarding portal that non-it personnel can use to bring IoT devices onto the network securely, protecting the network from vulnerable smart devices.

ExtremeLocation™

Location services are crucial in helping enterprises personalize customer engagement and enhance operational efficiencies. ExtremeLocation is a resilient and scalable cloud-driven solution, that provides enterprises powerful multi-tier location services across all sites. Supporting Wi-Fi and/or BLE technologies, enterprises can monitor workflows and assets, in real-time or historically, to improve their overall operations and efficiency. ExtremeLocation provides granular location accuracy resolution to support diverse industry-specific use cases. For example, retailers can track new and repeat visitors, engagement times and associates or asset locations, to provide a contextual-based personalized experience to their customers. Healthcare providers may view real-time dashboards and monitor trends of users and assets, to deliver enhanced patient care.

Product Specifications

Simplified Deployment

- Customer self-service sign-up
- Guided workflow for network policy deployment
- On-screen step-by-step guided configuration
- RF planner with map import and export
- Design with simulated APs on RF Planner map, then seamlessly swap these for real APs when deployed
- Devices automatically connect to ExtremeCloud IQ for provisioning
- Devices auto-provision with network policy and firmware updates

Centralized Configuration

- Guest Access functionality
- Device templates for switches, routers and APs
- Act as RADIUS server or RADIUS proxy, and as DHCP server
- Centralized view of all configuration objects
- Ability to bulk edit device properties
- Ability to schedule firmware upgrade
- Command Line Interface (CLI) access to Extreme devices
- Active directory/LDAP
- IPv6 support
- Syslog and SNMP server configuration
- Auto-provisioning
- Configuration audit, backup, restore, import and export
- Support for Extreme VPN gateway (VG-VA)
- Multi-tenant capability: supports multiple virtual organizations

Centralized Policy Management

- Device classification by location and timezone
- Customer application definition
- Client classification by location, OS type, MAC address
- Multiple user profiles for each SSID
- Time-based firewall and QoS policy
- Application, network and MAC layer firewall policy rules
- WIPS policy for rogue AP detection and mitigation

Security and Privacy

- ISO/IEC 27001 certified for Information Security Management Systems (ISMS)
Note: ISO-27017 and 27701 to be added in future release
- Role-based access control
- Customer and network data is private and secure
- No customer data traverses ExtremeCloud network
- SSO for ExtremeCloud™ IQ administrators via SAML
Note: Only supported in Public Cloud, not supported on IQVA
- Optional multi-factor authentication with Google Authenticator for administrators
- EU General Data Protection Regulation (GDPR) features including:
 - Search for, download and delete personal data for specific users
 - Creation of reports to document the above actions

Dashboard

- Graphical widgets and status cards with drill-down capabilities
- Time-range slider on dashboard for historical view
- 360° views of Extreme network policies, AP, client devices, users and apps
- Global search function by network policy, MAC address, serial number, user, hostname or application name
- Unlimited retention of historical data for monitoring and reporting usage
- Interactive Network Summary Report with easy sharing
- Savable contextual filters by location, SSID, policy, user, profile and client OS type
- Comparative Analytics to anonymously compare operational and performance metrics against other cloud customers of a similar size and industry

Guest Access

- Onboarding and management of visitor and employee personal devices (BYOD)
- Provides multiple onboarding workflows via Captive Web Portal, Kiosk app and Guest Check-In applications
- Private PSK (PPSK), 802.1X (RADIUS) and PSK authentication
- Supports 3rd party and customized CWP's including HTML upload for added deployment flexibility

Troubleshooting

- Client 360° behavioral analysis; real-time and historical network performance monitoring and optimization
- Help-desk optimized interface with problem summary and suggested remedy
- Dedicated Helpdesk user role
- Real-time troubleshooting with probe messages and stage filters
- Historical troubleshooting with automatic issue detection
- Mark issue resolved or escalate issue with email notification
- Built-in Command Line Interface (CLI) and remote SSH
- RADIUS test
- AP technical data download
- VLAN probe tool for simplified troubleshooting of the wired network
- Optional packet capture analysis with partner solution (CloudShark)

Monitor

- WIPS history report
- Drill-down capability from client list to client 360° view
- Device list with rich utilities for advanced configuration and investigation
- Real-time client list with SNR, RSSI, data usage and connection status
- Savable and reusable filters shared across dashboard and monitor
- Alarm and event lists with historical and real-time data
- PCI DSS 3.2 compliant reporting
- Rogue AP and rogue client monitoring
- Real-time data for connection clients and users
- Google Maps integration and navigation with floorplan upload capability

Supported Languages

- English, German, Spanish, French, Italian, Japanese, Korean, Portuguese, Chinese

Reliability

- Data centers with SOC Type 1 compliance (formally SAS 70 and/or SSAE 16), Type 2 and 3 compliance
- High availability with disaster recovery and redundancy
- 99.99999% Uptime SLA (excluding maintenance windows)
- Scheduled backups
- 24x7 monitoring Warranty

Security and Operation

- Accounts are password protected and accessed via secure SSL
- Management traffic is encrypted and restricted using industry-proven CAPWAP protocol over HTTPS
- Out-of-band operation ensures no customer data traverses Extreme's Cloud Services
- Single-Sign-On (SSO) to ExtremeCloud IQ for administrator accounts
- Multi-Factor authentication with Google Authenticator for administrator accounts
- Multi-tenant architecture with secure account separation
- Centralized monitoring and management
- Integrated RBAC to delegate select ExtremeCloud IQ roles and permissions to different administrators
- VAR and partner management capabilities including account provisioning and maintenance
- ExtremeCloud IQ connectivity does not impact network operations servicing end-users

Ordering Information

ExtremeCloud™ IQ Subscriptions

Category	Model Number	Model Description
ExtremeCloud IQ Pilot Subscription	XIQ-PIL-S-C-EW	ExtremeCloud IQ Pilot SaaS Subscription and EW SaaS Support for one (1) device (1 year).
ExtremeCloud IQ Pilot Subscription	XIQ-PIL-S-C-PWP	ExtremeCloud IQ Pilot SaaS Subscription and PWP SaaS Support for one (1) device (1 year).
ExtremeCloud IQ Pilot Subscription	XIQ-PIL-S-OP-EW	ExtremeCloud IQ Pilot On-Prem Subscription (RTU License), EW SW Support for one (1) device (1 year).
ExtremeCloud IQ Pilot Subscription	XIQ-PIL-S-OP-PWP	ExtremeCloud IQ Pilot On-Prem Subscription (RTU License), PWP SW Support for one (1) device (1 year).
ExtremeCloud IQ Pilot On-Prem Software	XIQ-PIL-VA-DL	ExtremeCloud IQ Pilot SW, delivered via download. Can be used with XIQ On-Premises Subscription SKU or XIQ Perpetual SKUs. One time buy.
ExtremeCloud IQ Pilot On-Prem Perpetual License	XIQ-PIL-P-OP	ExtremeCloud IQ Pilot On-Prem Perpetual License On-Premises for one (1) device. Cannot be used with SaaS.
ExtremeCloud IQ Navigator Subscription	XIQ-NAV-S-C-EW	ExtremeCloud IQ Navigator SaaS Subscription EW SaaS Support for one (1) device (1 year).
ExtremeCloud IQ Navigator Subscription	XIQ-NAV-S-C-PWP	ExtremeCloud IQ Navigator SaaS Subscription PWP SaaS Support for one (1) device (1 year).

Warranty

As a customer-centric company, Extreme Networks is committed to providing quality products and solutions. In the event that one of our products fails due to a defect, we have developed a comprehensive warranty that protects you and provides a simple way to get your product repaired or media replaced as soon as possible.

Software warranties are ninety (90) days and cover defects in media only. For full warranty terms and conditions please go to extremenetworks.com/support/policies.

Service and Support

Extreme Networks provides comprehensive service offerings that range from Professional Services to design, deploy and optimize customer networks, customized technical training, to service and support tailored to individual customer needs. Please contact your Extreme Networks account executive for more information about Extreme Networks Service and Support.

Additional Information

For additional technical information on ExtremeCloud IQ, please go to extremenetworks.com/extremecloud-iq.



<http://www.extremenetworks.com/contact>

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