

*ExtremeXOS—a highly available, open and extensible foundation for converged networks.*

### High Availability Architecture

- Reduce network downtime using hitless failover/upgrade and module level software upgrade
- Prevent system corruption using a memory-protected process model
- Avoid system reboots using self-healing process recovery

### Extensible Functionality

- Integrate best-of-breed appliances to your network with an open, yet secure XML-based Application Programming Interface (API)
- Integrate Extreme Networks® and third party-developed software applications using an open standards-based POSIX interface
- Extend network functionality and automate management tasks using CLI scripting

### Integrated Security

- Guard access to the network through authentication, Network Login/802.1x, and host integrity checking
- Harden the network infrastructure with Denial of Service (DoS) protection and IP Security against man-in-the-middle and DoS attacks
- Secure management using authentication and encryption

Extreme Networks® has revolutionized the industry by creating ExtremeXOS—a highly available and extensible foundation for converged networks. ExtremeXOS raises the bar for availability, critical for offering carrier-grade voice and video services over IP for supporting mission-critical business applications such as CRM. A more available network also lowers operational costs by drastically reducing emergency maintenance.

ExtremeXOS allows you to extend the capabilities of your network. It allows you to integrate specialized application appliances such as security devices into your network. ExtremeXOS has been designed from the ground up to support the next-generation Internet Protocol, IPv6. Even when not planning to use IPv6, ExtremeXOS will secure the network using IPv6 Access Control Lists and provide investment protection for your network.

Security capabilities provide network access control integrated with endpoint integrity checking, and network control and management plane protection. Its innovative Universal Port infrastructure provides dynamic security policies for users as well as autoconfiguration of ports and VoIP phones.

ExtremeXOS has been deployed in production networks for over two years, making it the only next generation operating system in the industry that can be safely deployed without “early adopter” risks.

## High Availability Architecture

ExtremeXOS creates a highly available network for voice services and other mission-critical business applications.

True preemptive multitasking and protected memory allow each of the many processes—such as resiliency or device management protocols—to run as separate Operating System (OS) processes that are protected from each other.

With process monitoring and restart, ExtremeXOS dramatically increases network availability. Each independent OS process is monitored in real time. If a process becomes unresponsive, it can be automatically restarted.

Hitless failover to the redundant management module is available on BlackDiamond® 8800 series, BlackDiamond 10808 and BlackDiamond 12804. In addition, BlackDiamond 10808 and BlackDiamond 12804 are capable of hitless upgrade of the OS.

ExtremeXOS also provides the capability of upgrading individual parts of the OS (modules). As an example, upgrading the Telnet application will not impact data forwarding.

## Extensible Functionality

ExtremeXOS allows for flexible expansion of network capabilities by providing a means for third-party applications in the network to interact directly with the OS. If you need to extend your network to handle other applications or integrate monitoring software or security devices, ExtremeXOS integrates best-of-breed solutions with an open yet secure XML-based API. For example, this extensibility allows integration with third-party applications such as security appliances and VoIP monitoring solutions to provide a closed loop for new monitoring and response capabilities. It also serves as a framework for integration with management software such as service provisioning solutions.

With its innovative dynamic software loading capability, additional applications can be loaded, started and stopped without impacting traffic forwarding or management of the network. This allows partners of Extreme Networks such as Avaya to provide specific extensions such as VoIP call quality monitoring.

ExtremeXOS offers CLI scripting to allow you to automate regular management tasks and applying them to multiple ports or easily replicate on multiple switches.

## Integrated Security

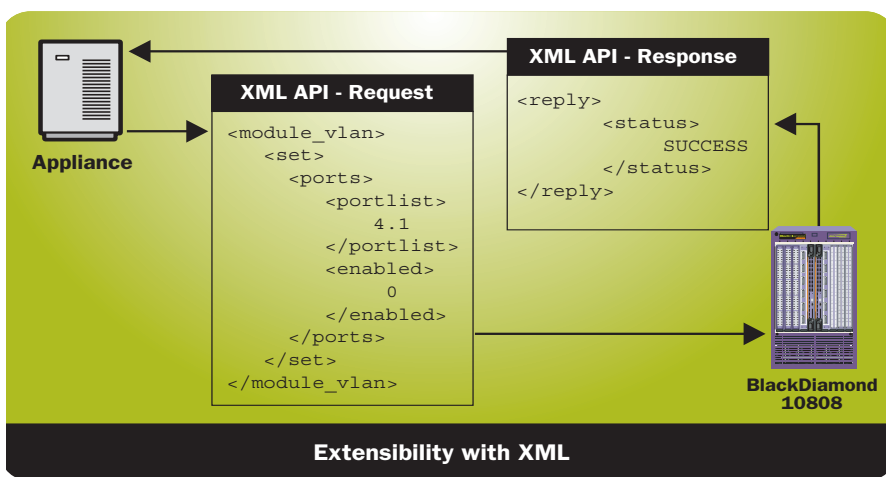
ExtremeXOS guards access to the network through authentication, host integrity checking and dynamic user/time/location based security policies. It hardens the network infrastructure with DoS protection and IP Security to protect the infrastructure, network services, applications and client devices/computers from man-in-the-middle attacks and eavesdropping. It also provides a full suite of secure management protocols using authentication and encryption, ensuring continued control over your infrastructure.

ExtremeXOS Network Login dramatically eases the rollout of user authentication solutions and allows to activate it on every

port, including ports used for printers or VoIP phones, as it offers a choice of 802.1x, web-based and MAC-based authentication. Host computers without 802.1x support can use web-based authentication to log into the network or a limited network access to install 802.1x.

ExtremeXOS' IP Security framework protects the network, network services such as DHCP and DNS and even host computers from spoofing and man-in-the-middle attacks. It also allows protecting the network from statically configured and/or spoofed IP addresses as well as building an external trusted database of MAC/IP/port bindings so that you always know where traffic from a specific address comes from for immediate defense.

ExtremeXOS has been designed from the ground up to support the next-generation Internet Protocol, IPv6. Even when not planning to use IPv6, ExtremeXOS will secure the network using IPv6 Access Control Lists and provide investment protection for your network.



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