



## EX Series Bandwidth and Link Management with Identity

### Manage Bandwidth and Network Links with Unprecedented Application and User Visibility

The EX Series is the industry's only appliance combining bandwidth management, link management, and network monitoring with application and user visibility. This helps organizations optimize and secure their networks by understanding their current network demands at the application and user level, applying traffic policies to enforce network utilization, and increasing reliability of traffic through the use of application prioritization and multiple links. The EX series is built on a high performance and secure platform for an unmatched solution to optimize the network edge.

#### Bandwidth Management

- ▶ **Comprehensive Protocol Support**  
Maximize bandwidth with support for over 100 applications to ensure the most critical network traffic receives the highest priority across WAN links. The EX provides automatic application protocol classification, comprehensive policies and traffic controls such as rate shaping, rate limiting, selective dropping, priority marking and automatic load aware shaping.
- ▶ **Application Protocol Identification**  
Application protocol classification techniques extend above simple Layer 3 and 4 (IP and port) combinations. Deep packet inspection techniques enable the EX to identify application protocols for positive application identification. These techniques enable the EX to identify application protocols that use port hopping, port tunneling, and encryption.
- ▶ **Innovative User Based QoS Policies**  
Allocate bandwidth and network application access transparently to a user based solely on their company assigned user ID. Practically any corporate data store such as Active Directory, SQL database and LDAP is available when connecting to an A10 ID Series appliance. Traditional QoS policies based on Layer 3-7 traffic classification and heuristics can also be used to control bandwidth consumption.

#### Application & User Visibility

- ▶ **Bandwidth Utilization Reports**  
Bandwidth utilization reports quickly identify top applications, and users consuming the most bandwidth. Graphical real-time and historical reports with drill down capabilities are available from the web user interface. PDF, HTML or XML formatted reports may be exported manually or emailed periodically on a configurable schedule.
- ▶ **Identity-Based Application Visibility**  
Know who is doing "what" and "when" by monitoring application activity and application user identities for a variety of Instant Messaging (IM), file transfer, and email applications. Combine with A10's ID Series appliance to enhance all reports and policies with a company assigned identity, machine host name, and MAC address for unprecedented visibility and control.
- ▶ **Application Logging**  
Log discrete application actions with user name, such as writing a file, sending an email or posting data to a web site, and archive them periodically for compliance or post event investigations. Use a free form text search engine to pinpoint events of interest.

#### Link Management

- ▶ **Link Load Balancing**  
Support multi-homed networks with fine-grained load balancing across two or more WAN links to help increase WAN capacity, ensure link level redundancy and optimize network traffic over the WAN. The EX allows mission critical applications to use highly available dedicated links and non-critical applications such as web browsing or multimedia to use links with lower service level agreements.

#### Performance, Security & Flexibility

- ▶ **High Performance**  
1 Gbps to 4 Gbps throughput allows the network capacity room to grow and scale with increasing needs.
- ▶ **Network IPS**  
Identify network anomalies before they impact your internal machines. Provide real time protection against attacks such as Distributed Denial of Service (DDoS), port scans, address sweeps, protocol misuse and malformed packets.
- ▶ **Flexible Deployment Options**  
Integrate into existing network infrastructures with support for both transparent and gateway modes, allowing fail open or closed configurations. Transparent mode also means no network configuration is changed for seamless deployment.

## EX Series Features

### » Application Bandwidth Management

- QoS policy actions
  - ◆ Automatic load aware shaping
  - ◆ Rate shape, limit, drop
  - ◆ Connection limit
  - ◆ Priority marking
  - ◆ Apply sub-policy
- QoS policy rules
  - ◆ 100+ predefined application classes
  - ◆ Custom classes based on L2-L7 attributes
  - ◆ Custom classes based on Identity\*
  - ◆ aFlex powered custom classification engine
  - ◆ Heuristics based classification
- Predefined application class categories
  - ◆ Peer-to-Peer (Ares, BitTorrent, Cspace, Dijkstra, DirectConnect, eDonkey-eMule, FreeCast, Gnutella, Limewire, KaZaA, Krawler, PPLive, PPStream, Share, SoulSeek, TVAnts, WinMX, Xunlei)
  - ◆ Multimedia (Abicast, Flash Video, iTunes, Motion, Quicktime, RTP, RTSP, Shoutcast, Windows Media)
  - ◆ Voice-over-IP (H323, Skype, Skinny)
  - ◆ Instant Messaging (AOL, Yahoo, MSN, Gtalk, IRC, QQ)
  - ◆ Access (SSH, rlogin, telnet, Remote Desktop, VNC)
  - ◆ File Transfer (FTP, RCP, NFS, CIFS, SMB, NetBIOS, Netware)
  - ◆ Email (MS Exchange, POP3, IMAP, SMTP, BIFF)
  - ◆ Database (mySQL, Oracle)
  - ◆ Directory (LDAP, ident)
  - ◆ Web (HTTP, HTTPS)
  - ◆ Miscellaneous (AURP, Ariel, BGP, Day Time, DHCP, DNS, Echo, Gopher, Kerbe-

ros, Lotus, IPP, NNTP, NTP, Printer, RPC, RPC2Portmap, Router, Shell, SNMP, Sun RPC, Syslog, Time, UUCP )

### » Link Management

- Inbound and outbound WAN link balance
- Link preference by QoS class
- Bind different classes to different link sets
- Expose internal services using Destination Network Address Translation (DNAT) or server load balancing (SLB)
- Use built in DNS or 3rd party DNS
- Packet steering or link load balance by domain name or identity\*
- Link load balancing algorithms
  - ◆ Round Robin
  - ◆ Weighted Round Robin
  - ◆ Least Connection
  - ◆ Weighted Least Connection
  - ◆ Bandwidth Usage
  - ◆ Round Trip Time
  - ◆ Bandwidth Price

### » Application and Identity Visibility

- Granular reporting
  - ◆ Top N internal talkers
  - ◆ Top N external talkers
  - ◆ Top N applications
  - ◆ Top N URLs
  - ◆ Packet size distribution
  - ◆ Interactive drill down
  - ◆ Periodic graphical reports
  - ◆ Threshold alerts
  - ◆ Enhanced with Identity, Client Host Name, and Client Host MAC address\*
  - ◆ PDF, HTML or XML format
  - ◆ By application, subnet, VLAN or interface

- Application logging
  - ◆ File Transfer – FTP, NFS, CIFS
  - ◆ Mail - SMTP, POP3
  - ◆ Instant Messaging – Yahoo, AOL, MSN, QQ
  - ◆ Web – HTTP Post
- Map application ID to company assigned ID\*
- Augmented with ID, host name, and MAC\*

### » IPS Anomaly Protection

- 28 network anomaly types
  - ◆ DDoS Attacks
  - ◆ ICMP Based Attacks
  - ◆ IP Based Attacks
  - ◆ TCP/UDP Based Attacks

### » Layer 2 and Layer 3 Support

- L3 routing protocols
  - ◆ RIP2
  - ◆ OSPF
  - ◆ Static Route
- L2 transparent mode
  - ◆ Tagged and untagged Vlans

### » Management

- Industry standard Command Line Interface (CLI)
- Intuitive Graphical User Interface (GUI)
- Localized for Chinese, Japanese and Korean
- SSH, Telnet, RS-232 Serial Console

### » High Availability

- Active/Standby
  - \* Requires ID Series IP-to-ID integration

## EX Series Hardware Summary

	EX 1100	EX 2110
<b>Processor</b>	Single Quad Core	Single Quad Core
<b>Ethernet Interface</b> Gigabit Copper Gigabit Fiber – SFP Mini GBIC	4 0	6 2
<b>Management Interface</b>	Yes (separate port)	Yes (separate port)
<b>Console Port</b>	Yes	Yes
<b>Hard Disks</b>	Single	Single
<b>Cooling Fan</b>	Single, Fixed	Single, Fixed
<b>Maximum Power Consumption</b>	131 W	158 W
<b>Power Supply</b>	Single 250 W	Single 250 W
	100 to 240 VAC, Frequency 50 – 60 Hz	
<b>Power Off Bypass</b>	Yes	Yes
<b>Dimensions</b>	1.75 in (H) 17.3 in (W) 16.7 in (D)	1.75 in (H) 17.3 in (W) 16.7 in (D)
<b>Rack Units (Mountable)</b>	1U	1U
<b>Unit Weight</b>	16 lbs	16 lbs
<b>Operating Ranges</b>	Temperature and Humidity 0° - 40° C 5% - 95%	
<b>Regulatory Certification</b>	FCC Class A, UL, CE, TUV, CB, VCCI	
<b>Standard Warranty</b>	90-day Hardware & Software	

