

# NETSCOUT Arbor Edge Defense (AED)

## First and Last Line of Smart, Automated Perimeter Defense

### KEY FEATURES & BENEFITS

#### First & Last Line of Defense

AED's unique location on the network edge, its stateless packet processing engine and enforcement of ATLAS® or 3rd party threat intelligence feed allow it to stop inbound threats and outbound communication from compromised hosts.

#### Integration with Security Stack

REST API, support for STIX/TAXII, Syslog (CEF, LEEF) and Contextual Threat Intelligence fueled by ATLAS enable AED to integrate into existing security stack and processes.

#### Intelligently Automated, Hybrid DDoS Protection

The intelligently automated, fully managed combination of in-cloud (via Arbor Cloud) and on-premises (via AED) is continuously armed with ATLAS global threat intelligence; offers the most comprehensive form of protection from the modern-day DDoS attack.

#### Outbound Enforcement of Threat Intelligence

AED can enforcement reputation-based threat intelligence from NETSCOUT's ATLAS or 3rd parties (via STIX/TAXII)'s to block outbound communication from internal compromised hosts, helping to stop further proliferation of malware or data breach.

Let's face it. *There is no peacetime* Whether it be new forms of DDoS attacks, ransomware, phishing attempts or compromised BYOD and IoT devices organizations are under constant threat from all types of advanced cyber threats. To address these evolving threats, the modern-day security stack has become larger and more complex. And unfortunately, as evidenced by the daily reports of data breaches and downtime – is still failing.

Security teams need best of breed cybersecurity solutions that can detect and stop all types of cyber threats - both entering or leaving their networks. As importantly, these solutions must also be able to integrate into an organization's existing security stack and/or consolidate functionality to reduce cost, complexity and risk.

NETSCOUT® Arbor Edge Defense (AED) is such a solution. AED's unique position on the network edge (i.e., between the router and the firewall), its stateless packet processing engine and the continuous reputation-based threat intelligence it receives from NETSCOUT's ATLAS Threat Intelligence or 3rd parties, enable it to automatically stop both inbound threats such as DDoS attacks, and outbound communication from internal compromised threat actor command and control (C2) infrastructure – essentially acting as the first and last line of defense for organizations.

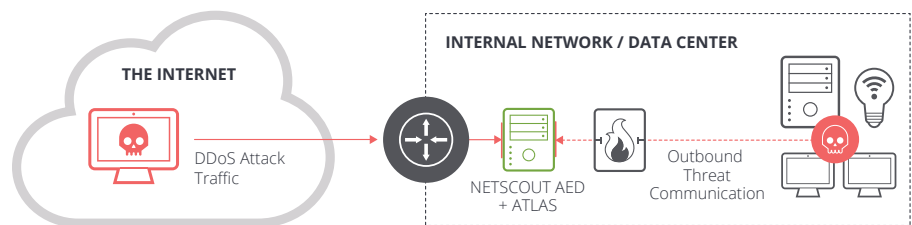


Figure 1: AED's unique location on network edge + stateless packet processing engine + ATLAS Global Threat Intelligence = First and Last Line of Defense from advanced cyber threats.

### Benefits of Arbor Edge Defense

- **First Line of Defense** – AED stops all types of inbound DDoS attacks (e.g. volumetric, TCP-state exhaustion, application-layer) to protect the availability of an organization's network, services and stateful devices (e.g. NGFWs). Fully integrated with Arbor Cloud (a global, cloud-based, DDoS protection service with over 11 Tbps of mitigation capacity), AED is the on-premise component of NETSCOUT's industry leading, hybrid DDoS protection solution.
- **Last Line of Defense** – Armed with potentially millions of reputation-based IOCs and other threat intelligence from NETSCOUT ATLAS or 3rd parties (via STIX/TAXII), AED can stop outbound communication from compromised internal devices to threat actor command and control (C2); to help stop the proliferation of malware or attacker within an organization and avoid a data breach.
- **Integration** – AED's ability to act as a first and last line of defense, use of a REST API, support for standards such as STIX/TAXII, SYSLOG (CEF, LEEF) and additional context provided by ATLAS allow AED to integrate into an organizations existing security stack and processes.

NETSCOUT AED Appliances

Features	8100	8100-CI	HD1000
Physical Dimensions	<p><b>Chassis:</b> 2U rack height;  <b>Height:</b> 3.45 inches (8.67 cm);  <b>Width:</b> 17.14 inches (43.53 cm);  <b>Depth:</b> 20 inches (50.8 cm);  <b>Weight:</b> 36.95 lbs. (17.76 kg)</p>		<p><b>Chassis:</b> 2U rack height  <b>Weight:</b> 45.2 lbs (20.5 kg) with 1 PPM, add 1.6 lb (.73 kg) per PPM (up to eight)  <b>Height:</b> 3.5 in (8.89 cm)  <b>Width:</b> 17.6 in (44.70 cm)  <b>Depth:</b> 21 in (53.34 cm)</p>
Power Options	<p><b>DC:</b> 2 x DC redundant, hot swap capable power supplies;  <b>DC Power Ratings:</b> -40 to -72 Vdc, 28/14 A max (per DC input);  <b>AC:</b> 2 x AC redundant, hot swap capable power supplies;  <b>AC Power Ratings:</b> 100 to 240 VAC, 50 to 60 Hz, 12/6 A max;                      Both AC and DC power options are 850-watt.</p>		<p><b>AC:</b> Two 1500-watt redundant power supplies; 100-240V AC, 15-10 A, 50-60 Hz (x2);  <b>DC:</b> Two 1500-watt redundant power supplies; -48 to -60 Vdc, 44 A (x2)</p>
Hard Drives	2 x 240GB SSD in RAID 1 Configuration		2 x 480GB SSD drives, RAID 1
Environmental	<p><b>Operating:</b> Temperature : 41°F to 104°F (5° to 40°C) Humidity: 5–85%;  <b>Non-Operating:</b> Temperature -40° to 158°F (-40° to 70°C); Humidity 95%</p>		<p><b>Operating temperature:</b> 39.2° to 104°F (-4° to 40°C)  <b>Relative humidity (operating):</b> 5 to 93%, non-condensing</p>
Operating System	Our proprietary ArbOS® operating system		
Management Interfaces	2 x 1G or 2 x 10G Copper, RJ-45 serial console support		4 x 1G Copper, RJ-45 serial console port
Protection Interfaces	<ul style="list-style-type: none"> <li>• 4 x 1 GigE bypass ports (LX, SX or copper)</li> <li>• 8 x 1 GigE bypass ports (LX, SX, copper or mixed)</li> <li>• 12 x 1 GigE bypass ports (LX, SX, copper or mixed)</li> <li>• 4 x 10 GigE bypass ports (LR or SR)</li> <li>• 8 x 10 GigE bypass ports (LR, SR, or mixed)</li> <li>• 4 x 10 GigE bypass ports (LR or SR) plus 4 x 1GigE bypass ports (LX, SX or copper)</li> <li>• 4 x 10 GigE bypass ports (LR or SR) plus 8 x 1GigE bypass ports (LX, SX or copper)</li> <li>• 8 x 10 GigE bypass ports (LR or SR) plus 4 x 1GigE bypass ports (LX, SX or copper)</li> <li>• 2 x 40 GigE bypass ports (LR or SR)</li> <li>• 4 x 40 GigE bypass ports (LR or SR)</li> <li>• 2 x 40 GigE bypass ports (LR or SR) plus 4 x 10 GigE bypass ports (LR or SR)</li> <li>• 2 x 40 GigE bypass ports (LR or SR) plus 8 x 10 GigE bypass ports (LR or SR)</li> </ul>		4 x 100 GigE + 8 x 10 GigE = One to four 100 GbE QSFP28 (LR) optical transceivers + One or two 4 x 10 GbE QSFP+ (SR or LR Lite) optical transceivers with one 4 x 10 GbE breakout cable on each transceiver
Traffic Bypass Options	Integrated hardware bypass; Internal “software” bypass to pass traffic without inspection		External hardware bypass via 3296 Inline Bypass Switch
Latency	Less than 80 microseconds		
Availability	Inline bypass, dual power supplies, solid-state hard drive RAID cluster		External bypass, dual power supplies

Features	8100	8100-CI	HD1000
<b>Regulatory Compliance</b>	UL/cUL/EN/IEC 62368-1; EN 55032; EN 55035; CISPR 32, 35; ETSI EN 300 386; cULus Mark; IC ICES-003 Class A; EN 61000-3-2; EN 61000-3-3; EMC Directive 2014/30/EU; Low Voltage Directive 2014/35/EU; UL 60950-1 2nd edition/CSA C22.2 No.60950-1-07 2nd Edition; FCC 47 CFR Parts 15, Class A; CB Certificate & Report including all international deviations; RoHS 2011/65/EU; Moroccan Conformity Mark; VCCI (Japan); BIS (India); CCC (China); RCM (Australia/New Zealand); KCC (South Korea); EAC-R Approval (Russia); South Africa LoA; Mexico (UL-CoC for Mexico); NEBS-ready	EN60950-1 (Europe); IEC60950-1 (International), CB Certificate & Report including all international deviations, EAC-R Approval (Russia), FCC 47CFR Parts 15, CE—Low Voltage Directive 73/23/EEE (Europe), RCM (Australia/New Zealand), KCC (South Korea), RoHS Directive 2002/95/EC (Europe), VCCI (Japan), BIS (India), CCC (China)	RoHS 6/6, IEC/EN/UL/ CSA 60950-1, FCC Part 15 Subpart BClass A, ETSI EN 300 386, CE Mark, RCM Mark, KCC Mark, EAC Mark, BIS, CCC Mark, CB Certificate and Report to IEC62368-1 and IEC60950-1, 2nd edition and all international deviations, EMC Directive 2014/30/EU, Low Voltage Directive 2014/35/EU

Features	2600	2800
<b>Physical Dimensions</b>	<b>Chassis:</b> 2U rack height; <b>Height:</b> 3.45 inches (8.67 cm); <b>Width:</b> 17.4 inches (43.53 cm); <b>Depth:</b> 20 inches (50.8 cm); <b>Weight:</b> 36.95 lbs. (17.76 kg)	
<b>Power Options</b>	<b>DC:</b> 2 x DC redundant, hot swap capable power supplies; <b>DC Power Ratings:</b> -40 to -72 Vdc, 28/14 A max (per DC input); <b>AC:</b> 2 x AC redundant, hot swap capable power supplies; <b>AC Power Ratings:</b> 100 to 240 VAC, 50 to 60 Hz, 12/6 A max; <b>Watts:</b> 315 typical, 375 max	
<b>Hard Drives</b>	2 x 240GB SSD in RAID 1 Configuration	
<b>Environmental</b>	<b>Operating:</b> Temperature : 41°F to 104°F (5° to 40°C) Humidity: 5–85%; <b>Non-Operating:</b> Temperature -40° to 158°F (-40° to 70°C); Humidity 95%	
<b>Operating System</b>	Our proprietary ArbOS® operating system	
<b>Management Interfaces</b>	2 x 10/100/1000 BaseT Copper; RJ-45 serial console port	
<b>Protection Interfaces</b>	<ul style="list-style-type: none"> <li>• 4 x 1 GigE bypass ports (LX, SX, or copper)</li> <li>• 8 x 1 GigE bypass ports (LX, SX, copper or mixed)</li> <li>• 12 x 1 GigE bypass ports (LX, SX, copper or mixed)</li> <li>• 4 x 10 GigE bypass ports (LR or SR)</li> <li>• 4 x 10 GigE bypass ports (LR or SR) plus 8 x 1 GigE bypass ports (LX, SX, copper or mixed)</li> <li>• 4 x 10 GigE bypass ports (LR or SR) plus 4 x 1 GigE bypass ports (LX, SX, or copper)</li> </ul>	<ul style="list-style-type: none"> <li>• 4 x 10 GigE bypass ports (LR or SR)</li> <li>• 8 x 10 GigE bypass ports (LR, SR or mixed)</li> <li>• 8 x 10 GigE bypass ports (LR, SR or mixed) plus 4 x 1 GigE bypass ports (LX, SX or copper)</li> <li>• 2 x 40 GbE bypass ports (LR or SR)</li> <li>• 4 x 40 GbE bypass ports (LR, SR or mixed)</li> <li>• 2 x 40 GbE bypass ports (LR or SR) plus 8 x 10 GbE bypass ports (LR, SR or mixed)</li> <li>• 2 x 40 GbE bypass ports (LR or SR) plus 4 x 10 GbE bypass ports (LR or SR)</li> </ul>
<b>Traffic Bypass Options</b>	Integrated hardware bypass; Internal “software” bypass to pass traffic without inspection	
<b>Latency</b>	Less than 80 microseconds	
<b>Availability</b>	Inline bypass, dual power supplies, solid-state hard drive RAID cluster	

Features	2600	2800
<b>Regulatory Compliance</b>	FIPS 140-2 Level 1 UL60950-1/CSA 60950-1, (USA/Canada); EN60950-1 (Europe); IEC60950-1 (International), CB Certificate & Report including all international deviations, EAC-R Approval (Russia), FCC 47CFR Parts 15, CE—Low Voltage Directive 73/23/EEE (Europe), RCM (Australia/New Zealand), KCC (South Korea), RoHS Directive 2002/95/EC (Europe), VCCI (Japan), BIS (India), CCC (China)	

**DDoS & Advanced Cyber Threat Protection**

Features	8100	8100-CI	HD1000
<b>Inspected Throughput</b>	Licenses for 100 Mbps, 250 Mbps, 500 Mbps, 1 Gbps, 2 Gbps, 5 Gbps, 10 Gbps, 20 Gbps, 30 Gbps, 40 Gbps; software upgradeable		Licenses for 25 Gbps, 50 Gbps, 75 Gbps, 100 Gbps, 125 Gbps, 150 Gbps, 175 Gbps and 200 Gbps; <b>Hardware Mitigation Capacity:</b> determined by the number of PPMs with 25G per PPM. Up to 8.7M PPS (Packet Per Second) per PPM. <b>Note:</b> Licensed Inspected Throughput should not go above the Hardware Mitigation Capacity.
<b>Maximum DDoS Flood Prevention Rate</b>	Up to 38.92 Mpps		Up to 289.17 Mpps
<b>Protected Endpoints</b>	Unlimited		
<b>Authentication</b>	On device, RADIUS; TACACS		
<b>SSL/TLS Traffic Support Capabilities</b>	TLS, HSM and CAM support can be found in the Decryption Capabilities table on page 8		Not Supported
<b>Management</b>	SNMP gets v1, v2c; SNMP traps v1, v2c, v3; CLI; Web UI; HTTPS; SSH customizable, role-based management; Up to 50 AED (appliances and/or virtual AED running KVM hypervisor) can be managed by the AED Console; managed AED must at least be running v.6.0 (vAED), v6.4 (HD1000), or v.6.6 (8100).		
<b>Protection Groups</b>	100		
<b>Reporting and Forensics</b>	Real-time and historical IPV4 and IPV6 traffic reporting, extensive drill-down by protection group and blocked host including total traffic, passed/blocked, top destination URLs/services/domains, attack types, blocked sources, top sources by IP location. Packet visibility in real-time.		
<b>DDoS Protection</b>	TCP/UDP/HTTP(S) flood attacks, botnet protection, hacktivist protection, host behavioral protection, anti-spoofing, payload expression-based filtering, permanent and dynamic blacklists/whitelists, traffic shaping, multiple protections for HTTP, DNS and SIP, TCP connection limiting, fragmentation attacks, connection attacks.		
<b>Modes</b>	Inline active; inline inactive (reporting, no blocking); SPAN port monitor		
<b>Notifications</b>	SNMP trap, Syslog (CEF,LEEF); email		
<b>Cloud Signaling</b>	Yes (collaborative DDoS attack mitigation with service provider or Arbor Cloud)		
<b>Web-Based GUI</b>	Supports multi-language translated user interfaces		
<b>Supported Browsers</b>	Google Chrome 83, Mozilla Firefox 77, Internet Explorer 11		
<b>Maximum IoCs</b>	3+ Million		
<b>IoC Types &amp; Formats</b>	IP address, fully qualified domain names, URLs. Formats: Proprietary ATLAS Intelligence Feed format, STIX, and TAXII		

Features	2600	2800
<b>Inspected Throughput</b>	Licenses for 100 Mbps, 250 Mbps, 500 Mbps, 1 Gbps, 2 Gbps, 5 Gbps, 10 Gbps, 15 Gbps, 20 Gbps	Licenses for 10 Gbps, 20 Gbps, 30 Gbps, 40 Gbps; software upgradeable
<b>Maximum DDoS Flood Prevention Rate</b>	Up to 15 Mpps	Up to 28.80 Mpps
<b>HTTP Connections per Sec</b>	368K at recommended protection level; 613K filter list only protection	1,351K at recommended protection level; 1,497K filter list only protection
<b>Protected Endpoints</b>	Unlimited	
<b>Authentication</b>	On device, RADIUS; TACACS	
<b>SSL/TLS Traffic Support Capabilities</b>	TLS, HSM and CAM support can be found in the Decryption Capabilities table on page 8	TLS, HSM and CAM support can be found in the Decryption Capabilities table on page 8
<b>Management</b>	SNMP gets v1, v2c; SNMP traps v1, v2c, v3; CLI; Web UI; HTTPS; SSH customizable, role-based management; Up to 50 AED (appliances and/or virtual AED running KVM hypervisor) can be managed by the AED Console; managed AED must at least be running v5.11; vAED Console can run on VM hypervisor.	
<b>Protection Groups</b>	100	
<b>Reporting and Forensics</b>	Real-time and historical IPv4 and IPv6 traffic reporting, extensive drill-down by protection group and blocked host including total traffic, passed/blocked, top destination URLs/services/domains, attack types, blocked sources, top sources by IP location. Packet visibility in real-time.	
<b>DDoS Protection</b>	TCP/UDP/HTTP(S) flood attacks, botnet protection, hacktivist protection, host behavioral protection, anti-spoofing, configurable flow expression filtering, payload expression-based filtering, permanent and dynamic blacklists/whitelists, traffic shaping, multiple protections for HTTP, DNS and SIP, TCP connection limiting, fragmentation attacks, connection attacks.	
<b>Modes</b>	Inline active; inline inactive (reporting, no blocking); SPAN port monitor	
<b>Notifications</b>	SNMP trap, Syslog (CEF,LEEF); email	
<b>Cloud Signaling</b>	Yes (collaborative DDoS attack mitigation with service provider or Arbor Cloud)	
<b>Web-Based GUI</b>	Supports multi-language translated user interfaces	
<b>Supported Browsers</b>	Google Chrome 83, Mozilla Firefox 77, Internet Explorer 11	
<b>Maximum IoCs</b>	3+ Million	
<b>IoC Types &amp; Formats</b>	IP address, fully qualified domain names, URLs . Formats: Proprietary ATLAS Intelligence Feed format, STIX, and TAXII	

### Arbor Enterprise Manager Console

<b>Supported Platforms</b>	Arbor Appliance; Virtual Machine
<b>Max Number AED / APS Managed</b>	50. (Note: The Arbor Enterprise Manager Console can managed both APS and AED devices)
<b>Virtual AED Console Requirements</b>	VMware vSphere Hypervisor™ version 5.5 or later; VMware vSphere Client software, version 5.5 or later; vAEM image file (ova); 4 CPUs; 100GB hard disk space; 12GB RAM; 1 management interface (a second management interface is optional)
<b>Management Options</b>	Configuration or Views into (individual and/or all AED): Hardware and Software health; System and Security alerts; Blocked Hosts; ATLAS Threat Summary; Server Types, Protection groups (IPV4/6); Blacklist/Whitelist; Executive Management Reports
<b>Supported Browsers</b>	Google Chrome 80, Mozilla Firefox 74, Internet Explorer 11

### Arbor Enterprise Manager 8000 Appliance

Features	8000	8000-CI
<b>Power Requirements</b>	Dual redundant, load-sharing, auto-sensing 850 Watt power supplies <b>AC:</b> 100-240 VAC, 50/60 Hz, 10/5 A <b>DC:</b> -40 Vdc to -72 Vdc, 25/12.5 A	
<b>Physical Dimensions</b>	<b>Chassis:</b> 2U rack height; <b>Height:</b> 3.45 inches (8.67 cm); <b>Width:</b> 17.14 inches (43.53 cm); <b>Depth:</b> 20 inches (50.8 cm); <b>Weight:</b> 36.95 lbs. (17.76 kg); Standard 19 and 23 inches rack mountable	
<b>Hard Drives</b>	Minimum: Six 480GB solid state drives configured for RAID 5	
<b>Network Interfaces</b>	2 x 10G RJ45 onboard, 4 x 10G pluggable ports via installed PCI card	
<b>Environmental</b>	<b>Operating:</b> 41° – 104°F (5° – 40°C), 5-85% humidity <b>Non-Operating:</b> -40°F – 158°F (-40°C – 70°C), 95% non-condensing humidity	
<b>Operating System</b>	Our proprietary, embedded ArbOS operating system, based on Linux	
<b>Regulatory Compliance</b>	UL 60950-1 2nd edition/CSA C22.2 No.60950-1-07 2nd Edition, EMC Directive 2014/30/EU, Low Voltage Directive 2014/35/EU, CB Certificate and Report to IEC62368-1 and IEC60950-1, 2nd edition and all international deviations, CE, FCC 47CFR Parts 15, Verified Class A limit, ICES-003 Class A Limit, VCCI Class A ITE, RoHS (recast) Directive 2011/65/EU, Moroccan Conformity Mark, KC (Korea) Approval, RCM (Australia/New Zealand) Approval, EAC (Russia)	EN60950-1 (Europe); IEC60950-1 (International), CB Certificate & Report including all international deviations, EAC-R Approval (Russia), FCC 47CFR Parts 15, CE—Low Voltage Directive 73/23/EEE (Europe), RCM (Australia/New Zealand), KCC (South Korea), RoHS Directive 2002/95/EC (Europe), VCCI (Japan), BIS (India), CCC (China)

### Arbor Enterprise Manager 7000 Appliance

<b>Processor</b>	Intel Xeon (12-Core) – ES-2648Lv3 – 1.8GHz – 20M Cache – 9.60 GT/sec – 75W
<b>Power Requirements</b>	Redundant, load sharing and auto-sensing 850W dual power supplies; <b>AC:</b> 100-240 VAC, 50/60 Hz, 12/6 A; <b>DC:</b> -40 to -72 V, 28/14 A max
<b>Physical Dimensions</b>	<b>Chassis:</b> 2U rack height; <b>Height:</b> 3.45 inches (8.67 cm); <b>Width:</b> 17.4 inches (43.53 cm); <b>Depth:</b> 20 inches (50.8 cm); <b>Weight:</b> 36.95 lbs. (17.76 kg); Standard 19 and 23 inches rack mountable
<b>Hard Drives</b>	Six 480GB solid state drives configured for RAID 5
<b>Network Interfaces</b>	2 x 1 GigE (SFP for Copper, GigE SX, or GigE LX)
<b>Environmental</b>	<b>Operating:</b> Temperature 41° to 104°F (5° to 40°C); Humidity 95%; <b>Non-Operating:</b> Temperature 73° to 104°F (23° to 40°C)
<b>Operating System</b>	Our proprietary, embedded ArbOS operating system, based on Linux
<b>Regulatory Compliance</b>	UL60950-1/CSA 60950-1; EN60950-1; IEC60950-1, CB Certificate & Report including all international deviations; SONCAP; EAC Mark; CE—Low Voltage Directive 2014/35/EU; KCC Mark; RoHS 2011/65/EU; Telcordia GR-63; ETSI EN 300 019; NEBS; ETSI EN 300 753; cULus Mark; IC ICES-003 Class A; CE Mark to EMC Directive, 2014/30/EU; EN55022, Class A; EN55024; EN61000-3-2; EN61000-3-3, CISPR22, Class A, CISPR 24 Immunity; FCC 47 CFR Parts 15, Class A

### Virtual AED

<b>Virtual Network Function (VNF) Orchestration</b>	Cloud-Init v0.7.6, Openstack Kilo and Mitaka series, OpenStack Heat, OpenStack Tacker, Ansible, Nokia Cloudband, Cisco NSO/ESC, Cisco NFVIS, Amdocs, Netcracker and other ONAP or ETSI NFV management and orchestration technologies	
<b>Minimum Virtual Machine Requirements</b>	vCPUs: 2; NICs: 1 to 10; Memory: 6GB; Storage: 100GB	
<b>Supported Hypervisors</b>	VMware vSphere 5.5+	KVM kernel 3.19 QEMU 2.0
<b>Inspection Throughput/Instance</b>	1 Gbps	1 Gbps
<b>Maximum DDoS Flood Rate/Instance</b>	910 Kpps	600 Kpps
<b>Protection Groups</b>	10; 50 with 4 vCPUs and 12GB RAM	10; 50 with 4 vCPUs and 12GB RAM

### Edge Defense Manager Virtual Appliance

<b>Max Number AED Supported</b>	12
<b>Supported HyperVisors</b>	VMware vSphere 5.5+
<b>Virtual Machine Requirements</b>	4 CPUs; 300GB hard disk space; 24GB RAM
<b>Supported Browsers</b>	Chrome v70 and Edge v42

### Decryption Capabilities

- Supports Perfect Forward Secrecy (PFS) through TLS Proxy.
- Performance data are measured with 2048-bit key.

Performance	TLS Proxy	Cryptographic Acceleration Module (CAM)
<b>Connections/Sec.</b>	<ul style="list-style-type: none"> <li>• Each AED 2800 &amp; 8100 appliance supports up to 2700 connection/sec.</li> <li>• Each AED 2600 appliance supports up to 1500 connections/sec.</li> </ul>	<ul style="list-style-type: none"> <li>• Each AED 2600, 2800 &amp; 8100 appliance supports up to 97K connection/sec.</li> </ul>
<b>Inbound Inspected Throughput</b>	<ul style="list-style-type: none"> <li>• Each AED 2600, 2800 &amp; 8100 appliance support up to 1.8 Gbps.</li> </ul>	<ul style="list-style-type: none"> <li>• AED 2800 &amp; 8100 provide up to 18 Gbps.</li> <li>• AED 2600 provides up to 18 Gbps.</li> </ul>

- ✓ Supported
- ✗ Unsupported
- ❶ Supported for TLS 1.3
- ❷ Supported for TLS 1.2
- ❸ Unsupported in FIPS mode

### Supported Cipher Suites

IANA Name	TLS Proxy	HSM	CAM
TLS_AES_256_GCM_SHA384	✓ ❶	✗	✗
TLS_AES_128_GCM_SHA256	✓ ❶	✗	✗
TLS_CHACHA20_POLY1305_SHA256	✓ ❶	✗	✗
TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256	✓	✗	✗
TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256	✓	✗	✗
TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384	✓	✗	✗
TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384	✓	✗	✗
TLS_ECDHE_ECDSA_WITH_CHACHA20_POLY1305_SHA256	✓	✗	✗
TLS_ECDHE_RSA_WITH_CHACHA20_POLY1305_SHA256	✓	✗	✗
TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA	✓	✗	✗
TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA	✓	✗	✗
TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA	✓	✗	✗
TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA	✓	✗	✗
TLS_RSA_WITH_AES_128_GCM_SHA256	✓	✗	✗
TLS_RSA_WITH_AES_256_GCM_SHA384	✓	✗	✗
TLS_RSA_WITH_AES_128_CBC_SHA	✓	✓	✓ ❷
TLS_RSA_WITH_AES_256_CBC_SHA	✓	✓	✓ ❷
TLS_RSA_WITH_3DES_EDE_CBC_SHA	✓	✓	✓ ❷
SSL_RSA_WITH_3DES_EDE_CBC_SHA	✗	✓	✓ ❷
TLS_RSA_WITH_AES_128_CBC_SHA256	✗	✓	✓
TLS_RSA_WITH_AES_256_CBC_SHA256	✗	✓	✓
TLS_ECDH_ECDSA_WITH_AES_128_CBC_SHA256	✗	✓	✓



IANA Name	TLS Proxy	HSM	CAM
TLS_ECDH_ECDSA_WITH_AES_128_GCM_SHA256	x	✓	✓
TLS_ECDH_ECDSA_WITH_AES_256_CBC_SHA384	x	✓	✓
TLS_ECDH_ECDSA_WITH_AES_256_GCM_SHA384	x	✓	✓
TLS_ECDH_RSA_WITH_AES_128_CBC_SHA256	x	✓	✓
TLS_ECDH_RSA_WITH_AES_128_GCM_SHA256	x	✓	✓
TLS_ECDH_RSA_WITH_AES_256_CBC_SHA384	x	✓	✓
TLS_ECDH_RSA_WITH_AES_256_GCM_SHA384	x	✓	✓
TLS_ECDH_ECDSA_WITH_3DES_EDE_CBC_SHA	x	✓	✓ ②
TLS_ECDH_ECDSA_WITH_AES_128_CBC_SHA	x	✓	✓ ②
TLS_ECDH_ECDSA_WITH_AES_256_CBC_SHA	x	✓	✓ ②
TLS_ECDH_RSA_WITH_3DES_EDE_CBC_SHA	x	✓	✓ ②
TLS_ECDH_RSA_WITH_AES_128_CBC_SHA	x	✓	✓ ②
TLS_ECDH_RSA_WITH_AES_256_CBC_SHA	x	✓	✓ ②
TLS_RSA_WITH_RC4_128_SHA	x	✓ ③	x
TLS_RSA_WITH_RC4_128_MD5	x	✓ ③	x
TLS_RSA_WITH_DES_CBC_SHA	x	✓ ③	x
SSL_RSA_WITH_DES_CBC_SHA	x	✓ ③	x

**Note:** Unlike the passive decryption capabilities provided by CAM, the TLS proxy plays an active role in cipher suite negotiation. This active role allows the TLS proxy to select the most modern, secure cipher suites, which eliminates the need to support a larger set of older, less secure cipher suites.

If the client and server support a cipher suite that the TLS proxy supports, then the client can connect and the TLS proxy can decrypt traffic. In this case, the cipher suite that AED uses with the TLS proxy might be different than the cipher suite that AED uses when the TLS proxy is not present.

For more information about the cipher suites and their security efficacy, refer to the SSL Labs web site at <https://www.ssllabs.com/>



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