

High-Performance Visibility into SSL/TLS Traffic

Radware's Alteon SSL Inspect provides a simple one-box solution for high-performance visibility into enterprise SSL/TLS traffic. It removes the blind spot introduced by the rising use of SSL/TLS and allows security tools to inspect all traffic for possible breaches and leaks.

Alteon SSL Inspect acts as a central switching point for all perimeter network security solutions, steering the decrypted traffic between the different tools before re-encrypting it on the way to its destination server. Alteon also provides scalability and high availability for each inspection tool.

Features and Benefits

Full Visibility into SSL/TLS Traffic

By providing visibility into SSL/TLS traffic and offloading the SSL processing from the perimeter security devices, Alteon SSL Inspect greatly enhances any organization's security and maximizes its security infrastructure.

As a smart centralized traffic steering solution, Alteon SSL Inspect, with its high capacity SSL hardware engine, decrypts all relevant SSL traffic before forwarding it to the various security solutions and re-encrypts the traffic before forwarding it to the final destination. By performing the traffic decryption and re-encryption once for inspection of multiple security tools, Alteon SSL Inspect provides lower latency for all transactions, increases performance (by reducing the performance penalty up to 80% versus activating SSL traffic inspection in each of the security solutions) and reduces the cost of the overall solution.

High-Volume SSL Traffic Inspection

Radware's Alteon platforms contain hardware-based SSL engines, which cost-effectively handle high-capacity SSL/TLS transactions and the processing of multigigabit per second of SSL traffic.

The need to process higher volumes of traffic with stronger encryption ciphers has placed a heavy toll on computational and memory resources (especially critical for IoT and mobile devices). This has led the industry to introduce a stronger yet much more efficient encryption algorithm based on elliptic curve cryptography (ECC).

To provide cost-effective support for the latest SSL/TLS standards, the Alteon D-line solution incorporates the latest SSL software and hardware engines, enabling high-capacity ECC-based SSL/TLS transaction processing with leading price-performance ratio across all its platforms and form factor range.

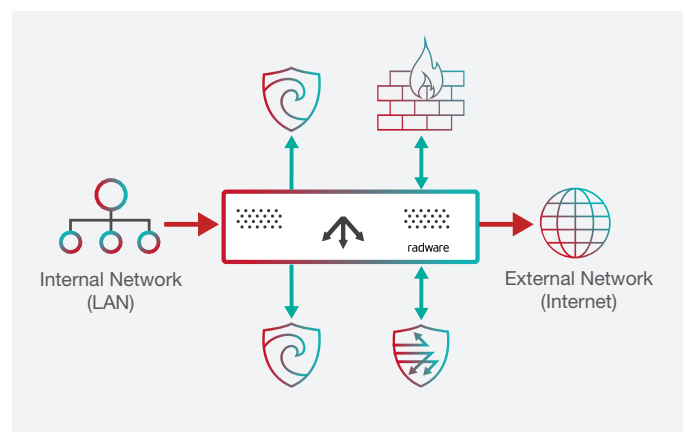


Figure 1 — Single instance SSL Inspect

Security Scalability and Availability

The unique deployment architecture of SSL Inspect and its inherent load balancing capabilities enable it to monitor and load balance each of the security server farms separately and thus provide seamless scalability and ensure that traffic will always flow through the most available server. Even in cases where servers are down, SSL Inspect provides a simple way to define whether to bypass an unresponsive security service, ensuring continuous internet connectivity, or to block the traffic and avoid cyberthreats.

Granular Traffic Inspection Policies

Alteon SSL Inspect provides total control over the chaining of available security devices, enabling inspection of different traffic flows by different security device chains, based on granular filters classifying the traffic to different categories. As a result, organizations can avoid inspection of traffic that they consider safe and save significant resources on their security devices, thus optimizing their utilization and their total cost of ownership. Decisions can be made on a multitude of parameters, from ports and IP addresses to hosts or web category (based on a third-party URL categorization feed).

Ensuring Employees Privacy

Organizations are required to maintain user privacy and need to avoid traffic inspection when their employees are browsing web services of a private nature such as their bank or healthcare provider.

Alteon SSL Inspect can categorize the traffic on the fly and based on this information decide which traffic should be inspected and which should completely bypass decryption and inspection.

Bypass decisions can be made either to ensure end-user privacy (for traffic such as personal finances and health) or to reduce the load on the security tools for traffic that does not need to be inspected — such as Office 365.

Flexible Deployment Options

Alteon SSL Inspect supports a wide range of deployment options that allow seamless integration in any organization's network.

Comprehensive Traffic Inspection

- ▶ Inspection of SSL traffic from external clients to enterprise services (Inbound) and/or of SSL traffic from internal clients to the internet (Outbound)
- ▶ Alteon can provide SSL visibility for HTTPS, mail protocols (IMAP, SMTP, POP3), FTPS and generic TLS traffic
- ▶ Alteon SSL Inspect can discover outbound SSL traffic on any TCP port, allowing to intercept all SSL traffic

Network Integration

- ▶ Alteon can be installed as either an inline Layer 2 device or as an inline routed Layer 3 device.
- ▶ Alteon SSL Inspect can perform outbound SSL inspection as either a transparent HTTPS proxy or as an explicit HTTPS proxy

Single or Dual Instance

Alteon SSL Inspect can be implemented as a single instance solution, overseeing all of the organization's traffic to and from the internet (Figure 1 — Single instance SSL Inspect) or as a two-instance solution with virtual/physical separation between the DMZ and the enterprise's internal network (Figure 2 — Dual-instance SSL Inspect).

Inspection Tools

SSL Inspect allows combining steering traffic to active inline devices, including a 1- or 2-leg solution, L2 and L3 solutions, internet content application protocol (ICAP) solution as well as forwarding a copy of the traffic to out-of-path passive devices. It has the ability to connect to any type of value-add security service (VAS) such as firewalls, anti-malware, threat protection data leakage protection (DLP), intrusion prevention systems (IPs), network forensics, etc.

Solution briefs are available for the following inspection tools:

- Cisco Firepower NGFW and ISP/NGISP, ASA Firewall
- CheckPoint Next-Generation Firewall
- FireEye Network Security
- Symantec Vontu DLP
- BlueCoat ProxySG

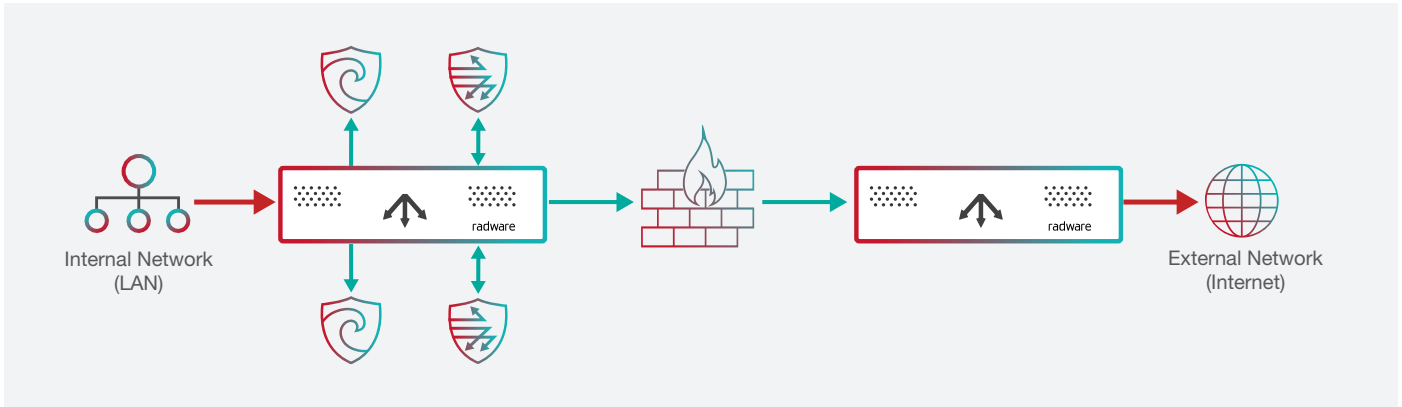


Figure 2 — Dual-instance SSL Inspect

Single SSL/TLS Encryption/Decryption Point

Based on its advanced application classification capabilities, SSL Inspect seamlessly intercepts and steers traffic to the various third-party security solutions for in-depth inspection before allowing it to continue to its destination. By centralizing the encryption/decryption process, you maximize performance, minimize latency and simplify security infrastructure management.

Simplified Configuration and Monitoring

- The SSL Inspect dashboard provides a powerful monitoring tool and together with the configuration wizard facilitates smooth deployment and operation of SSL inspection solutions.

The real-time and historical data provided allows you to:

- Show the increased inspection coverage and utilization of your security infrastructure
- Visualize the SSL traffic patterns
- Quickly identify and get to the root cause of any issue



Figure 3 — SSL Inspection Dashboard

	Alteon 4208SSLI	Alteon 5208SSLI	Alteon 6024SSLI
PERFORMANCE			
Maximum processed throughput	12Gbps	26Gbps	80Gbps
Inspected SSL throughput	1.25Gbps	3.5Gbps	8.5Gbps
Full SSL handshakes per second (RSA 2K)	1,700	5,200	11,000
Full SSL handshakes per second (ECC p-256)	1,400	4,200	9,000
HW SPECIFICATIONS			
Processor	Intel quad-core CPU	1 x Intel quad-core CPU	1 x Intel 6-core CPU
Memory	8GB	32GB	64GB up to 256GB
Traffic Ports	2 x 10GbE SFP+		
8 x 1GbE RJ45	2 x 10GbE SFP+		
8 x 1GbE RJ45	24 x 10GbE SFP+		
USB Port	Yes	Yes	Yes
RS-232C Console	RJ-45 Serial Connection	RJ-45 Serial Connection	RJ-45 Serial Connection
ENVIRONMENTAL SPECIFICATIONS			
Power Supply	Auto-range power supply 80-plus certified (Dual PS version) AC: 100–240 V, 50–60 Hz Power consumption: 93 W Dual power supply is optional AC: 100–240 V, 47–63 Hz Power consumption: 140W	Auto-range power supply 80-plus certified AC: 100–240 V, 47–63 Hz Power consumption: 140 W Dual power supply is optional DC power supply is optional	Auto-range power supply 80-plus certified AC: 100–240 V, 47–63 Hz Power consumption: 250 W Dual power supply is optional DC power supply is optional
Heat Dissipation	318 BTU/h	480 BTU/h	850 BTU/h
Dimensions	436 mm (17.2") W x 336 mm (13.2") D x 44 mm (1.7"/1U) H EIA Rack or Stand-alone: 482 mm (19")	44 mm (1.7") H x 436 mm (17.1") W x 406 mm (16") D 1 U standard 482 mm (19") rack-mount chassis	88 mm (3.4") H x 436 mm (17.1") W x 480 mm (18.9") D 2 U standard 482 mm (19") rack-mount chassis
Weight	Single power supply: 4.23 kg (7.1 lbs) Dual power supply: 5.4 kg (11.9 lbs)	6 kg (13.2 lbs)	10.5 kg (23.1 lbs) Single power supply: 11 kg (24.2 lbs) Dual power supply: 11.7 kg (25.8 lbs)
Operating Environment	Temperature: 0°–40°C (32°–104°F) Humidity: 5% to 95% non-condensing	Temperature: 0°–40°C (32°–104°F) Humidity: 5% to 95% non-condensing	Temperature: 0°–40°C (32°–104°F) Humidity: 5% to 95% non-condensing
Airflow Direction	Front-to-Back	Front-Right/Front-Left –to-Back	Front-to-Back
Min CFM	21.9	50	200

COMPLIANCE & CERTIFICATIONS			
Compliance			
ROHS2	Compliant (EU directive 2011/65/EU)	Compliant (EU directive 2011/65/EU)	Compliant (EU directive 2011/65/EU)
Safety/EMC/ECI	FCC Part 15, Subpart B, Class A; IC ICES-003:2016 Issue 6, Class A; ANSI C63.4:2014; UL 60950-1:2007 R10.14; CAN/CSA-C22.2 No. 60950-1-07+A1:2011+A2:2014; UL 62368-1:2007 R10.14; CAN/CSA-C22.2 No. 62368-1-14; EN 55024:2010; EN 55032:2015 +AC:2016/CISPR 32:2015 +COR1:2016/AS/NZS CISPR 32:2015, Class A; EN 300 386 V2.1.1 (2016-07); EN 61000-3-2:2014; EN 61000-3-3:2013; EN 61000-4-2:2009; EN 61000-4-3:2006 +A1:2008 +A2:2010; EN 61000-4-4:2012; EN 61000-4-5:2014; EN 61000-4-6:2014; EN 61000-4-8:2010; EN 61000-4-11:2004;	FCC Part 15, Class A; IC ICES-003; UL 60950-1:2007 R12.11; CAN/CSA-C22.2 No. 60950-1-07+A1:2011; EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013; IEC 60950-1:2005 (Second Edition)+Am 1:2009+Am 2:2013; EN 60950-1:2006+A11:2009; AS/NZS 60950.1:2015	FCC Part 15, Class A; IC ICES-003; UL 60950-1:2007 R10.14; CAN/CSA-C22.2 No. 60950-1-07+A1:2011+A2:2014; EN 55022:2010/AC:2011 Class A; EN 61000-3-2:2014; EN 61000-3-3:2013; EN 55024:2010; IEC 61000-4-2:2008; IEC 61000-4-3:2006+A1:2007; IEC 61000-4-4:2012; IEC 61000-4-5:2014; IEC 61000-4-6:2013; IEC 61000-4-8:2009; IEC 61000-4-11:2004; IEC 61000-4-12:2006; IEC 60950-1:2005 (Second Edition)+Am 1:2009+Am 2:2013; EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013; NEBS
Certifications	CCC (China), TUV (U.S., Canada), CE (Europe), FCC (U.S.), KCC (Korea), BSMI (Taiwan), EAC (Russia), VCCI (Japan), Anatel (Brazil)	CCC (China), TUV (U.S., Canada), CE (Europe), FCC (U.S.), KCC (Korea), BSMI (Taiwan), EAC (Russia), VCCI (Japan), Anatel (Brazil), SDPPI (Indonesia)	CCC (China), TUV (U.S., Canada), CE (Europe), FCC (U.S.), KCC (Korea), BSMI (Taiwan), EAC (Russia), VCCI (Japan), Anatel (Brazil), SDPPI (Indonesia)

	Alteon 6024SSLI FIPS	Alteon 7612SSLI	Alteon 9800SSLI
PERFORMANCE			
Maximum processed throughput	80Gbps	200Gbps	320Gbps
Inspected SSL throughput	5.8Gbps	15.5Gbps	30Gbps
Full SSL handshakes per second (RSA 2K)	5,250	28,000	44,700
Full SSL handshakes per second (ECC p-256)	750	21,500	42,800
HW SPECIFICATIONS			
Processor	1 x Intel 6-core CPU	Intel 12-core CPU	2 x Intel 18-core CPU
Memory	64GB up to 256GB	96GB/up to 192GB	192GB
Traffic Ports	24 x 10GbE SFP+	6 x 40GbE QSFP+ 12 x 10GbE SFP+	8 x 100GbE/40GbE/10GbE
USB Port	Yes	Yes	Yes
RS-232C Console	RJ-45 Serial Connection	Serial Connection	Serial Connection

ENVIRONMENTAL SPECIFICATIONS			
Power Supply	Auto-range power supply 80-plus certified AC: 100–240 V, 47–63 Hz Power consumption: 250 W Dual power supply is optional DC power supply is optional	Auto-range power supply 80-plus certified (AC PSU) AC: 100–240 V, 47–63 Hz Power consumption: 400 W Dual power supply is optional DC power supply is optional	Auto-range power supply 80-plus platinum certified (AC PSU) AC: 100–240 V, 47–63 Hz Power consumption: 800 W DC power supply is optional
Heat Dissipation	850 BTU/h	1364 BTU/h	1800 BTU/h
Dimensions	88 mm (3.4") H x 436 mm (17.1") W x 480 mm (18.9") D 2 U standard 482 mm (19") rack-mount chassis	438 mm (17.24") W x 438 mm (17.24") D x 88 mm (3.4"/2U) H EIA Rack or Stand-alone: 530 mm (20.86")	445 mm (17.54") W x 730 mm (28.75") D x 87 mm (3.44"/2U) H
Weight	Single power supply: 11 kg (24.2 lbs) Dual power supply: 11.7 kg (25.8 lbs)	Single power supply: 11 kg (24.2 lbs) Dual power supply: 12 kg (26.4 lbs)	15.2 kg (33.5 lbs)
Operating Environment	Temperature: 0°–40°C (32°–104°F) Humidity: 10% to 95% non- condensing	Temperature: 0°–40°C (32°–104°F) Humidity: 5% to 95% non- condensing	Temperature: 10°–40°C (50°–104°F) Humidity: 8% to 90% non-condensing
Airflow Direction	Front-to-Back	Front-to-Back	Front-to-Back
Min CFM	200	200	
COMPLIANCE & CERTIFICATIONS			
Compliance			
ROHS2	Compliant (EU directive 2011/65/EU)	Compliant (EU directive 2011/65/EU)	Compliant (EU directive 2011/65/EU)
Safety/EMC/EMI	FCC Part 15, Class A; IC ICES-003; UL 60950-1:2007 R10.14; CAN/CSA-C22.2 No. 60950-1-07+A1:2011+A2:2014; EN 55022:2010/AC:2011 Class A; EN 61000-3-2:2014; EN 61000-3-3:2013; EN 55024:2010; IEC 61000-4-2:2008; IEC 61000-4-3:2006+A1:2007; IEC 61000-4-4:2012; IEC 61000-4-5:2014; IEC 61000-4-6:2013; IEC 61000-4- 8:2009; IEC 61000-4-11:2004; IEC 61000-4-12:2006; IEC 60950-1:2005 (Second Edition)+Am 1:2009+Am 2:2013; EN 60950-1:2006+A11:2009+ A1:2010+A12:2011+A2:2013; EBS	FCC Part 15, Subpart B; ANSI C63.4:2014; ICES-003 Issue 6:2016 (updated Apr. 2017); CISPR 22:2008; CAN/CSA-CISPR 22-10; IEC 60950- 1:2005/AMD1:2009; IEC 60950- 1:2005/AMD2:2013; IEC 60950- 1:2005; EN 60950-1:2006/A11:2009 /A1:2010/A12:2011/A2:2013; IEC 62368-1:2014; EN 62368-1:2014/ A11:2017; EN 55032:2015 +AC:2016 Class A; AS/NZS CISPR 32:2015, Class A; CISPR 32:2015+C1:2016, Class A; EN 55024:2010+A1:2015; EN 55035:2017; EN 61000-3-2:2014, Class A; EN 61000-3-3:2013; EN 61000-4-2:2009, EN 61000-4-3:2006 +A1:2008 +A2:2010; EN 61000- 4-4:2012; EN 61000-4-5:2014; EN 61000-4-6:2014+AC:2015; EN 61000-4-11:2004+A1:2017; EN 300 386 V2.1.1 (2016-07)	FCC Part 15B (Class A); ICES- 003:2016 Issue 6, Class A; ANSI C63.4:2014; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 +A2:2013; EN 62479:2010; EN 50581:2012; EN 55024:2010; EN 55032:2012 Class A; EN 61000-3- 2:2014; EN 61000-3-3:2013; AS/NZS CISPR 32:2013; AS/NZS 60950.1: 2011
Certifications	CCC (China), TUV (U.S., Canada), CE (Europe), FCC (U.S.), KCC (Korea), BSMI (Taiwan), EAC (Russia), VCCI (Japan), Anatel (Brazil), SDPPI (Indonesia)	CCC (China), UL (U.S., Canada), CE (Europe), FCC (U.S.), KCC (Korea), BSMI (Taiwan), EAC (Russia), VCCI (Japan), Anatel (Brazil)	CCC (China), UL (U.S., Canada), CE (Europe), FCC (U.S.), KCC (Korea), BSMI (Taiwan), EAC (Russia), VCCI (Japan), NRCS (South Africa), TCVN (Vietnam), BIS (India)

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