A10 Thunder on Dell Technologies OEM Solution Bundle

Single Service Platform (SSP) Specifications

The SSP range consists of A10's cloud-ready software and purpose-built Dell Technologies hardware, with an inclusive license[4] that has the capabilities of delivering Application Delivery Controller (ADC), SSL Insight (SSLi), and Carrier Grade Networking (CGN) solutions along with an expanded feature set of A10 capabilities.

	Dell Technologies VEP4600	Dell Technologies R640		Dell Technologies R740	
		10GE NIC Model	100GE NIC Model	10GE NIC Model	100GE NIC Model
Thunder ADC Performance					
Application Throughput (L4 / L7)	10 Gbps / 7.5 Gbps	40 Gbps / 40 Gbps	60 Gbps / 60 Gbps	75 Gbps / 75 Gbps	100 Gbps / 100 Gbps
Connections Per Second (L4 / L7)[1]	350K / 175K	2 Million / 1 Million	2 Million / 1 Million	2 Million / 1 Million	3 Million / 1 Million
SSL Bulk Throughput	2 Gbps	32 Gbps	38 Gbps	45 Gbps	66 Gbps
SSL CPS (RSA / ECDSA)[2]	3.5K / 7K	100K / 45K	107K / 72K	120K / 60K	131K / 85K
Thunder CGN Performance					
Throughput	12 Gbps	30 Gbps	60 Gbps	60 Gbps	100 Gbps
Full TCP Connections Per Second	500K	1.5 Million	1.5 Million	2 Million	2 Million
Concurrent Sessions	50 Million	100 Million	100 Million	100 Million	100 Million
Thunder SSLi Performance[3]					
SSL Insight Throughput	Not Supported	8.5 Gbps	12.5 Gbps	16.5 Gbps	30 Gbps
SSL Insight CPS (RSA / ECDHE)	Not Supported	28.5K / 13.5K	28.5K / 14.5K	30K / 18.5K	30K / 18.5K
SSL Insight Concurrent Sessions	Not Supported	3 Million	3 Million	3 Million	3 Million
Network Interface					
1 GE (BASE-T)	6	2	2	2	2
1/10 GE Fiber (SFP+)	4	6	2	10	10
100 GE Fiber (QSFP28)	0	0	2	0	4
Hardware Specifications					
Processor	1 x Intel Xeon 8-core	2 x Intel Xeon 20-core		2 x Intel Xeon 20-core	
Memory	16 GB	192 GB		192 GB	
Storage	SSD	2 x SSD		2 x SSD	
TLS/SSL Security Processor	Built-in	2 x Security card (PCIe)		2 x Dual-chip security card (PCIe)	
Power Supply (DC option available)	Single 230W Power Supply	Dual 750W Power Supply		Dual 2000W Power Supply	

*1 Layer 7 connections per second - measures number of new HTTP connections (1 HTTP request per TCP connection, without TCP connection reuse) within 1 second
*2 RSA (2K keys) cipher: "TLS_RSA_WITH_AES_128_CBC_SHA256", ECDSA (EC P-256) cipher: "TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA256"
*3 SSLi performance is tested in L3, dual-partition mode deployment, with RSA (2K keys) cipher "TLS_RSA_WITH_AES_128_CBC_SHA256" and ECDSA (EC P-256) cipher "TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256"
*4 A10 Thunder on Dell Technologies OEM bundle solutions are licensed under the Convergent Firewall (CFW) license. Check with your A10 Networks sales representative for the latest information on full feature testing and validation.

Multi-tenant Virtual Platform (MVP) Specifications

A10 Thunder Multi-tenant Virtual Platform (MVP) on Dell Technologies is an advanced platform enabling multiple virtual instances or services on a single platform, with inclusive license[4] that has the capabilities of delivering Application Delivery Controller (ADC), SSL Insight (SSLi), and Carrier Grade Networking (CGN) solutions along with an expanded feature set of A10 capabilities.

	Dell Technologies R640		Dell Technologies R740		Dell Technologies R760[6]
	10GE NIC Model	100GE NIC Model	10GE NIC Model	100GE NIC Model	
Performance with ADC					
Application Throughput (L4 / L7)	40 Gbps / 40 Gbps	43 Gbps / 40 Gbps	75 Gbps / 75 Gbps	100 Gbps / 90 Gbps	– [5]
Connections Per Second (L4 / L7)[1]	950K / 700K	1 Million / 850K	1.2 Million / 1 Million	1.7 Million / 1.7 Million	– [5]
SSL Bulk Throughput	32 Gbps	37 Gbps	40 Gbps	63 Gbps	– [5]
SSL CPS (RSA / ECDSA)[2]	60K / 45K	98.6K / 75K	120K / 90K	164K / 116K	– [5]
Performance with CGNAT					
Throughput	32 Gbps	60 Gbps	56 Gbps	120 Gbps	200 Gbps
Full TCP Connections Per Second	750K	850K	1.5 Million	1.5 Million	3 Million
Concurrent Sessions	100 Million	220 Million	140 Million	220 Million	256 Million
Performance with SSL Insight[3]					
SSL Insight Throughput	6.8 Gbps	15.5 Gbps	13.8 Gbps	32.5 Gbps	– [5]
SSL Insight CPS (RSA / ECDHE)	12.5K / 7K	55K / 32K	27K / 14K	68.5K / 52.5K	– [5]
SSL Insight Concurrent Sessions	58K	680K	118K	680K	– [5]
Network Interface					
1 GE (BASE-T)	2	2	2	2	0
1/10 GE Fiber (SFP+)	6	2	10	10	0
25 GE Fiber (SFP28)	0	0	0	0	4
100 GE Fiber (QSFP28)	0	2	0	4	4
Hardware Specifications					
Processor	2 x Intel Xeon 20-core		2 x Intel Xeon 20-core		2 x Intel Xeon 24-core
Memory	192 GB		192 GB		256 GB
Storage	2 x SSD		2 x SSD		2 x SSD
TLS/SSL Security Processor	2 x Security card (PCIe)		2 x Dual-chip security card (PCIe)		2 x Hardware accelerator (PCIe)
Power Supply (DC option available)	Dual 750W Power Supply		Dual 2000W Power Supply		Dual 1400W Power Supply

*1 Layer 7 connections per second - measures number of new HTTP connections (1 HTTP request per TCP connection, without TCP connection reuse) within 1 second
*2 RSA (2K keys) cipher: "TLS_RSA_WITH_AES_128_CBC_SHA256", ECDSA (EC P-256) cipher: "TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA256"
*3 SSLi performance is tested in L3, dual-partition mode deployment, with RSA (2K keys) cipher "TLS_RSA_WITH_AES_128_CBC_SHA256" and ECDSA (EC P-256) cipher "TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256"
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*5 Available in late 2023 | *6 Available bandwidth license: 50, 100, 150, 200 Gbps. Maximum throughput performance depends on the license.
All Thunder MVP performance specifications are aggregate numbers that use the following VM profiles:
For ADC and CGNAT:
- R640 10GE NIC model is tested with 4-VM profile (8 vCPUs, 16 GB memory, 30 GB storage, 16 SSL virtual functions (VFs) assigned on each vThunder)
- R640 100GE NIC model is tested with 4-VM profile (16 vCPUs, 32 GB memory, 30 GB storage, 8 SSL VFs assigned on each vThunder)
- R740 10GE and 100GE NIC models are tested with 8-VM profile (8 vCPUs, 16 GB memory, 30 GB storage, 16 SSL VFs assigned on each vThunder)
- R760 is tested with 2-VM profile (32 vCPUs, 64 GB memory, 100GB storage assigned on each vThunder)
For SSL Insight:
- R640 10GE NIC model is tested with 1 VM and R740 10GE NIC model is with 2 VMs. Each vThunder is assigned with 8 CPUs, 16 GB memory, 30 GB storage, 8 SSL VFs.
- Both R640 and R740 100GE NIC models are tested with 4-VM profile (16 vCPUs, 32 GB memory, 30 GB storage, 16 SSL VFs assigned on each vThunder)

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