ARISTA

CLOUD NETWORKING PORTFOLIO

Arista Networks is the leader in building scalable high-performance and ultra-low latency networks for today's data center and cloud computing environments. Purpose-built hardware and Arista EOS™, the world's most advanced network operating system, provide single-binary system images across all platforms, maximum system uptime, stateful fault repair, Zero Touch Provisioning, Latency Analysis, and a fully accessible Linux shell. Arista Ethernet switches are the perfect network solution for your most demanding workloads. With native support for VMware Virtualization and hundreds of Linux applications integrated into hardware platforms designed to meet the stringent power and cooling requirements of today's most demanding data centers, Arista delivers the most energy efficient and best performing 10Gb Ethernet platforms.

EOS PRODUCT DIFFERENTIATION

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Details	MLAG	ZTP	LANZ / DANZ	VXLAN/VM Tracer	Cloud Vision /eAPI	AEM / RAIL/Health Tracer
Problem Trying to Solve	• Eliminate spanning tree loops • Virtual machine mobility	Reduce mean-time-to-deployment and mean-time-to-restoration	• Track latency, microbursts & packet loss • Proactive data analysis	• VM visibility, provisioning and multi-tenancy • Extend VM mobility across IP boundaries	• Manage at scale • Simplify daily network operations • Standard programmatic interface as enabler of SDN	• Automated reaction to events in the network • Server and system health monitoring
Current Solutions	• Spanning tree • Flex connect • VPC • VSS	Manual processes	• SPAN monitoring • Expensive sniffers • Overlay Tap Aggregation and Matrix switches	Proprietary tagging and single vendor tunneling	• Non-standard API functions • Screen scraping	• Manual reaction to events • No network to server integration
Limitations of Current Solutions	• STP: redundant link is in standby mode to prevent loops, wasting bandwidth • Complex to operate and troubleshoot	• Expensive • Time consuming • Error prone	• Low granularity • Expensive • Slow and reactive • Expensive tap aggregation	• No network visibility into VMs • No network provisioning based on vMotion • Complex and expensive to implement and manage	• Proprietary fabrics lock customers into one vendor • Subset of visibility to network • No seamless application integration • High operational costs	• Reactive notification *after* event occurs • Tiered escalation in data center
Arista Solution (Product Differentiation)	• Doubles effective bandwidth • Fast convergence • Simplifies design • Enables in-service software upgrades	• Automated switch provisioning • Full customization with open tools • Automated zero touch replacement	• Identify network latency BEFORE drops occur • Proactive notification • Real-time queue depth analysis and streaming Native integration of: • Traffic Monitoring & Filtering • Precision Capture	• Detailed visibility to vSwitch, ESX host, VMs • Auto provision VLANs based on best practice • Support for multiple vCenter domains • VM mobility and VLAN extension over IP boundaries	• Open standards • Global port profiles • Single CLI for multiple functions and devices • Virtual EOS emulation • API which is agnostic to programming language • Monitor and provision any EOS feature	Automate actions based on events: • Event Handlers • Event Monitor • CLI Scheduler • Proactive monitoring & error correction with Health-tracer • Real-time server node failure alerts with RAIL
Impact to End User	▲ Network scalability ▲ Network resiliency Zero downtime for network changes	▼ Network deployment time ▼ Human error ▼ Maintenance window duration	▲ Visibility into network congestion and app 'slowness' ▲ Proactive and easier to manage	▲ Complexity for server/network configuration ▲ Improved provisioning ▲ Scale of virtual domains	▼ Network touch points ▼ Complexity of multi-device operations	▲ Predictive fault management ▲ Network availability
Financial Impact	▲ Port utilization ▲ Application performance ▼ Network cost with fewer uplinks	▼ Cost of deployment ▲ Time to market for new service	▲ Improving SLAs ▼ Operational costs	▼ Operational costs – time and manpower ▼ Capital costs – choice of VM switch	▼ Operational costs to run cloud scale infrastructure ▼ Capital costs – integrates with existing systems	▼ Operational costs to run infrastructure ▲ Improve SLAs

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Product Line Overview	Application Switch	GbE Switch	10Gb and 40Gb Data Center			10GBASE-T			Ultra Low Latency Switches			10/40/100GbE Modular Switches	
Chassis	7124FX	7048	7050S-52	7050S-64	7050Q-16	7050T-36	7050T-52	7050T-64	7150S-24	7150S-52	7150S-64	7504E	7508E
Height	1RU	1RU	1RU			1RU			1RU			7RU	11RU
Line Card Slots	–	–	–			–			–			4	8
Backplane Capacity (Gbps)	–	–	–			–			–			15,000 Gbps	30,000 Gbps
Switching Capacity (Gbps)	480 Gbps	176 Gbps	1,040 Gbps	1,280 Gbps	1,280 Gbps	720 Gbps	1,040 Gbps	1,280 Gbps	480 Gbps	1,040 Gbps	1,280 Gbps	11,520 Gbps	23,040 Gbps
Per Slot Capacity	–	–	–			–			–	–	–	1.92Tbps in / 1.92Tbps out	
Forwarding Capacity (Mpps)	360 Mpps	132 Mpps	780 Mpps	960 Mpps	960 Mpps	540 Mpps	780 Mpps	960 Mpps	360 Mpps	780 Mpps	960 Mpps	7.2 Bpps	14.4 Bpps
40GbE/100GbE Ready	–	–	–	40GbE	40GbE	–	–	40GbE	40GbE			40GbE / 100GbE	
Ports													
100/1000 BASE-T	–	48	–			–			–			–	
100Mb/1Gb/10Gb BASE-T	–	–	–			32	48	48	–			–	
1/10GbE (SFP+)	24	4	52	48	8	4	4	–	24	52	48	192	384
10/40GbE (QSFP)	–	–	–	16/4	64/16	–	–	16/4	–	–	16/4	576/144	1152/288
100GbE (MPO)	–	–	–			–			–			48	96
SFP+ Options	CR, SRL, SR, LRL, LR, ER, ZR, DWDM, 100/1000TX											CR, SRL, SR, LRL, LR, ER, ZR, DWDM, 1000TX	
Port-Port Latency	sub-500 ns	4.5 – 14.0 usec	800 ns – 1.35 usec		800 ns – 1.15 usec	3.3 usec			350 ns	380 ns	380 ns	3.5 - 13.0 usec	
Forwarding Technology	Cut-Through	Store and Forward	Cut-Through			Cut-Through			Cut-Through			Store and Forward	
Buffer Size	2MB - Dynamic Allocation	768MB - Dynamic Allocation	9MB - Dynamic Allocation			9MB - Dynamic Allocation			9.5MB - Dynamic Allocation			72GB - Dynamic Allocation	144GB - Dynamic Allocation
Environmental													
AC + AC Power Redundancy	Yes	Yes	Yes			Yes			Yes			Yes	
DC Power	Yes	No	Yes			Yes			Yes			No	
N+1 Hot Swappable Fans	Yes	Yes	Yes			Yes			Yes			Yes	
Average/Max Power Draw	150W / 210W	174W / 300W	103W / 185W	125W / 220W	192W / 303W	244W / 289W	347W / 405W	372W / 430W	191W / 334W	191W / 450W	224W / 455W	2490W / 3010W	5050W / 5790W
Front-to-Rear/Rear-to-Front Air	Yes / Yes	Yes / Yes	Yes / Yes			Yes / Yes			Yes / Yes			Yes / No	
Features													
EOS Single Binary Image	Yes	Yes	Yes			Yes			Yes			Yes	
Programmable Data Plane	Yes	No	No			No			No			No	
Latency Analyzer (LANZ)	Yes	No	No			No			Yes			Yes	
VM Tracer	Yes	Yes	Yes			Yes			Yes			Yes	
Zero Touch Provisioning	Yes	Yes	Yes			Yes			Yes			Yes	
Max VLANs	4096	4096	4096			4096			4096			4096	
Max MAC Entries	16,000	16,000	128,000			128,000			64,000			256,000	
Multi Chassis LAG	Yes - 32 Link	Yes - 32 Link	Yes - 32 Link			Yes - 32 Link			Yes - 32 Link			Yes - 64 Link	
Jumbo Frames (Bytes)	9,216 Bytes	9,216 Bytes	9,216 Bytes			9,216 Bytes			9,216 Bytes			9,216 Bytes	
Max ARP Entries	16,000	16,000	16,000			16,000			64,000			128,000	
Max Routes (IPv4 / IPv6)	16,000 / 4,000	8,000	16,000 / 8,000			16,000 / 8,000			84,000 / 21,000			64,000 / 16,000	
BGP/OSPF	Yes	Yes	Yes			Yes			Yes			Yes	
Multicast Routing	PIM-SM	PIM-SM	PIM-SM			PIM-SM			PIM-SM			PIM-SM	
Multicast Groups	4500	2048	8000			8000			23,000			64,000	
Linecard Options													
48-Port 1/10GbE SFP+	–	–	–			–			–			4	8
36-port 40GbE QSFP+	–	–	–			–			–			4	8
48-port 1/10GbE SFP+ / 2 MPO SR10	–	–	–			–			–			4	8
12-port 100GbE SR10	–	–	–			–			–			4	8