

# ARISTA

## CLOUD NETWORKING PORTFOLIO

Arista Networks is the leader in building software driven open networks for today's datacenter and cloud computing environments. Arista delivers the most efficient, reliable and high performance Universal Cloud Network architectures based on 10G, 25G, 40G, 50G and 100G platforms delivered with an extensible operating system – Arista EOS®. Arista EOS is built on an open, programmable, and resilient state-sharing architecture that delivers maximum system uptime, reduces CAPEX and OPEX by simplifying IT operations and enables business agility. Arista EOS software offers programmability at all layers, including eAPI, EOS SDK, Linux, DevOps integration (Ansible/Chef/Docker/Puppet), and broad scripting support. Furthermore, Arista CloudVision® software NetDB extends the EOS state-based architecture to a network-wide scope as a platform for workflow automation, workload orchestration, and advanced visibility. CloudVision's open framework leverages modern APIs and state streaming to capture granular network state and to integrate with a variety of network overlay, network orchestration, telemetry and security ecosystem partners.

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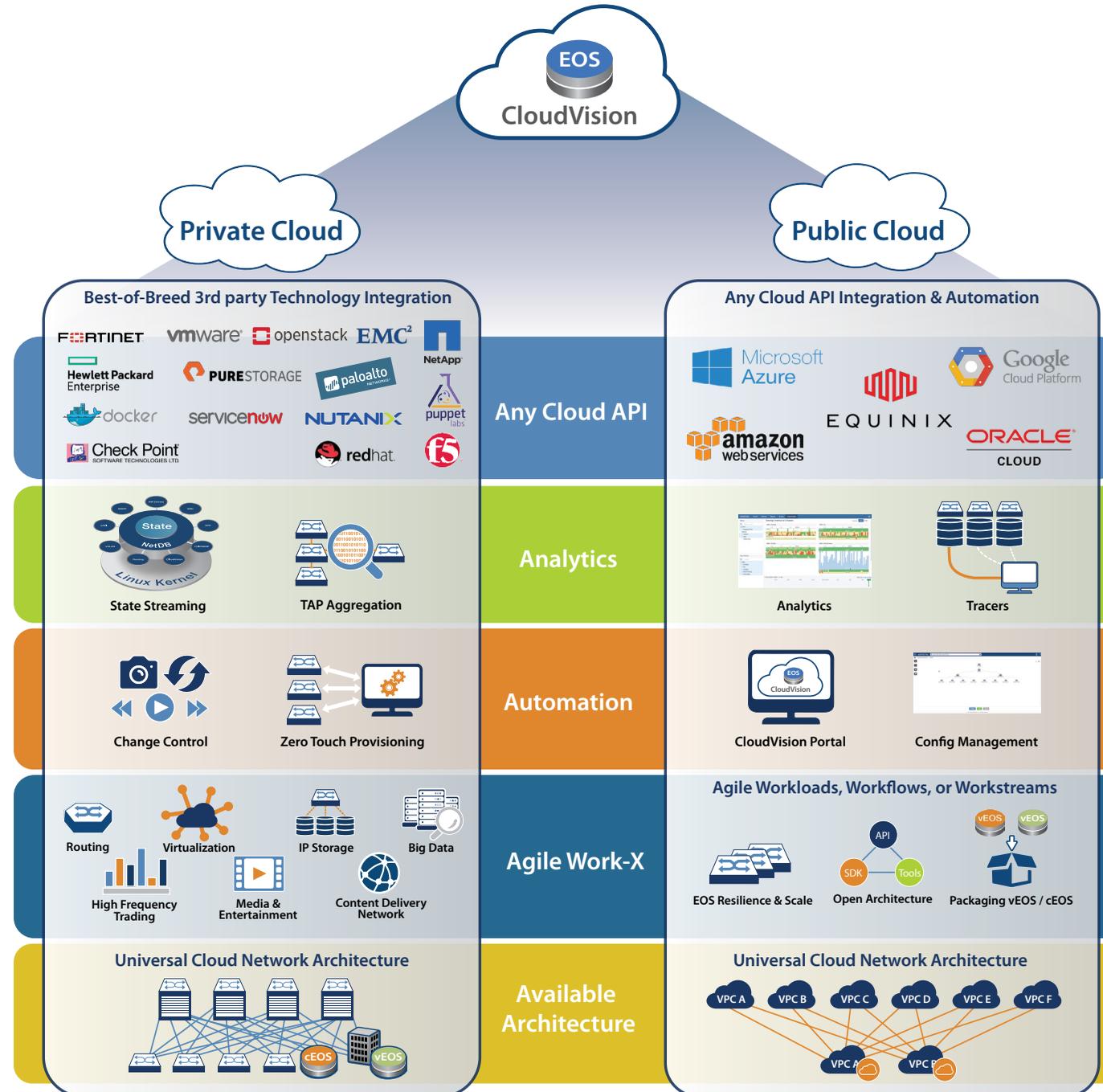
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## UNIVERSAL CLOUD NETWORK AND ECOSYSTEM



### TCO

3x

Savings with faster migration and integration between public and private cloud

10x

OPEX savings using single pane of glass for network automation and analytics into public and private cloud

5x

Cost savings using same operational model for public and private cloud

# ARISTA - THE PLATFORM FOR SOFTWARE DRIVEN CLOUD NETWORKING

- Fully programmable platforms allow rapid, automated deployment and provisioning
- Open SDK/APIs for easy integration with third-party and customer extensions
- Single-OS consistency across use cases for every place in the cloud
- Proven solutions and reference designs with a broad best-in-class ecosystem of partners

## SDN Controllers and Security



VMware NSX, OVSDB Controllers, Checkpoint, F5, Fortinet, Palo Alto Networks

## DevOps / Network Services



Puppet, Chef, Ansible, Docker

## ANY CLOUD API

### Orchestration/ IT Operations Tools



OpenStack, HPE VMware vCenter, ServiceNow

### Big Data Analytics



Splunk Enterprise, VMware Log Insight

### Hybrid Cloud



AWS, Microsoft Azure, Oracle Cloud Infrastructure, Google Cloud Platform

## ARCHITECTURE

### High Availability

- Open, predictable and efficient network designs with only modern, open and standards-based protocols using ECMP & VXLAN
- Advanced hitless upgrade/update and auto recovery features with 100% active-active utilization of all bandwidth, resources and links

### Scalability

- A state sharing, highly resilient, multi-process architecture that enhances reliability, visibility and scalability
- Supports networks from a few nodes to millions of VMs, containers and end-points at Internet scale and with linear expansion

### Efficiency

- Designed to utilize advancing developments in merchant silicon hardware, ensuring a path for customers to new advances in speed, scale and efficiencies with proven investment protection

## AUTOMATION

### Cloud Automation for Everyone

- CloudVision provides a turnkey automation hub for config and image management, change control simplification, operations compliance, and much more

### Zero Touch Provisioning

- Reduce operating costs and time to production with ZTP by eliminating human errors during rack expansion or replacement
- Automate infrastructure scale-out using standards-based mechanisms that are customizable and scripted at any scale

### DevOps Integration

- Integrate development and operations workflows with DevOps and CI/CD tools including Docker, Ansible, Chef, Puppet and others
- Automate network and server management with access to any virtualized, containerized or Linux tool running natively on EOS

## ANALYTICS

### Telemetry

- Access and record network-wide state and congestion information for every workload, workflow and workstream
- Identify and troubleshoot issues in underlay and overlay network topologies for real-time or forensic analysis

### Tracers

- Enable real-time visibility and automation for highly dynamic, virtualized, containerized, big data and bare metal workloads
- Correlate network health and reachability information with workload placements in the public, private and hybrid cloud

### TAP Aggregation and Advanced Mirroring

- Get precision access to raw and filtered packet data anywhere and anytime at industry-leading scale with both in-band and out-of-band capture, replication and analysis capabilities
- Generate and analyze high rate sFlow metadata for macro-level visibility into performance trends and security threats

## FOUNDATION FOR UNIVERSAL CLOUD NETWORKING

### EOS – Open and Extensible Networking Software

- State sharing, highly resilient, multi-process architecture that enhances reliability, visibility, serviceability at any scale
- Built on state-of-the-art NetDB process isolation architecture and continuous development model to enable ease of customer extension, high stability and rapid delivery of advanced features
- At its core, a native unmodified Linux kernel and runtime supporting open APIs, Python, Go, JSON eAPI/SDK, OpenFlow/DirectFlow, AEM event notification, Docker runtime, Linux tools, etc.
- Packaged as bundled EOS on Arista switches, containerized EOS, or virtualized EOS – for any production or simulation use case



### CloudVision – A Platform for Cloud Automation and Visibility

- Extends EOS shared-state to a network-wide model for global automation, orchestration, visibility, and analytics
- Unified control point for third party (SDN/SDDC) network controllers, orchestration systems, and security platforms
- Turnkey automation for provisioning and ongoing change management with network-wide snapshot and rollback
- Visibility and correlation of network state across physical, virtual and cloud network infrastructures



Product Line Overview	GbE		Ultra-Low Latency			Programmable Leaf			10/25/40/100 GbE				10/25/40/100 GbE Spline™				10/40/100GbE Dynamic Deep Buffers				10/40GbE Spline™		10/25/40/50/100GbE Universal Spine													
Chassis	7010T	7020TR	7150S			7160			7050X / 7250X				7060CX / 7260X				7280R				7300		7500R													
Model Number	48	48	24	52	64	48T	48Y	32C	7050TX	7050SX	7050QX	7050CX3	32S	QX-64	CX-64	CX3-64	SR	TR	QR	CR	4-Slot	8-Slot	4-Slot	8-Slot	12-Slot	16-Slot										
Height	1RU	1RU	1RU			1RU			1RU / 2RU				1RU				1RU	1RU	1RU/2RU	2RU	1RU	1RU	1RU/2RU	2RU	8RU	13RU	7U	13U	18U	29U						
Line Card Slots	-	-	-			-			-				-				-				4	8	4	8	12	16										
Backplane Capacity	-	-	-			-			-				-				-				25Tbps	50Tbps	38.4Tbps	76.8Tbps	115Tbps	150Tbps										
Switching Capacity	176Gbps	216Gbps	480Gbps	1.04Tbps	1.28Tbps	2.16Tbps	3.6Tbps	6.4Tbps	1.44-2.56Tbps		2.56-5.12Tbps		6.4Tbps		6.4Tbps	5.12Tbps	12.8Tbps		2.16Tbps	2.16Tbps	4.32-6.4Tbps	6-12Tbps	25Tbps	50Tbps	38Tbps	75Tbps	115Tbps	150Tbps								
Per Slot Capacity	-	-	-			-			-				-				-				3.2Tbps In / 3.2Tbps Out				9.6Tbps											
Forwarding Capacity	132Mpps	162Mpps	480Mpps	720Mpps	960Mpps	1.28pps			720-1.44Bpps	960-1.44Bpps	1.44-3.84Bpps	28pps	3.38pps	3.38pps	9.52Bpps	4.28pps	720Mpps	720Mpps	1.44-2.88Bpps	2.5-5.7Bpps	198pps	388pps	698pps													
Ports																																				
100/1000 BASE-T	48	48	-			-			-				-				-				-				-		-									
100Mb/1Gb/10Gb BASE-T	-	-	-			48			32-96				-				-				-				192	384	192	384	576	768						
1/10GbE (SFP+)	4	6	24	52	48	-	48	-	-	48-96	4	2	-	2	2	2	48	-	-	-	48	48	192	384	192	384	576	768								
10/40GbE	-	-	-	-	16/4	72/6	72/6	128/32	4-8		32-64		-	128/32	-/64	256/64	128/64	24/6	24/6	144-160/36-72	120-140/30-60	512/128	1,024/256	576/144	1152/288	1728/432	2304/576									
25/100GbE	-	-	-			24/6	72/6	128/32	-				128/32	128/32	-	256/64	128/64	24/6	24/6	6-16	120-140/30-60	512/128	1024/256	576/144	1152/288	1728/432	2304/576									
Port-Port Latency	3usec	3usec	350ns	380ns	380ns	From 3usec	From 2usec	3usec		550ns	550-1800ns	800ns	450ns	550ns	550-1800ns	450ns	From 3.8usec				550-1,800ns				under 4usec											
Forwarding Technology	Store and Forward	Store and Forward	Cut-Through			Store and Forward			Cut-Through				Cut-Through		Store and Forward	Cut-Through	Store and Forward				Store and Forward				Store and Forward											
Buffer Size	4MB	3GB	9.5MB - Dynamic Allocation			24MB			12MB	12MB	12MB - 48MB	32MB	16MB	16MB	64MB	42MB	4GB	4GB	8-16GB	12-24GB	96MB	192MB	96GB	192GB	288GB	384GB										
Environmental																																				
AC + AC Power Redundancy	Yes	Yes	Yes			Yes			Yes				Yes				Yes				Yes				Yes											
DC Power	Yes	Yes	Yes			Yes			Yes				Yes				Yes				Yes				Yes											
N+1 Hot Swappable Fans	Yes	Yes	Yes			Yes			Yes				Yes				Yes				Yes				Yes											
Average/Max Power Draw (W)	52/65	105/115	191/334	191/450	224/455	408/482	168/382	310/465	305-507/367-704	140-235/220-415	150-622/302-1229	206/265	220/410	315/800	1672/2090	340/660	263/381	290/405	9/15 per port	34-42 per port	1560/2262	2986/4360	3650/4978	6439/8586	9618/12824	12824/17098										
Front-to-Rear/Rear-to-Front Air	Yes / Yes	Yes / Yes	Yes / Yes			Yes / Yes			Yes/Yes				Yes/Yes				Yes / Yes				Yes / No				Yes / Yes											
Features																																				
EOS Single Binary Image	Yes	Yes	Yes			Yes			Yes				Yes				Yes				Yes				Yes											
Latency Analyzer (LANZ)	No	No	Yes			Yes			Yes				Yes				Yes				Yes				Yes											
VM Tracer	Yes	Yes	Yes			Yes			Yes				Yes				Yes				Yes				Yes											
Zero Touch Provisioning (ZTP)	Yes	Yes	Yes			Yes			Yes				Yes				Yes				Yes				Yes											
Max VLANs	4,096	4,096	4,096			4,096			4,096				4,096				4,096				4,096				4,096											
Max MAC Entries	84K	256K	64K			128K			288K				136K				264K				768K				288K				768K							
Multi Chassis LAG	Yes - 32 Link	Yes - 32 Link	Yes - 32 Link			Yes - 64 Link			Yes - 64 Link				Yes - 64 Link				Yes - 128 Link				Yes - 64 Link				Yes - 128 Link											
Jumbo Frames	9,216 Bytes	9,216 Bytes	9,216 Bytes			9,216 Bytes			9,216 Bytes				9,216 Bytes				9,216 Bytes				9,216 Bytes				9,216 Bytes											
Max ARP Entries	84K	80K	64K			80K			32K (208K UFT *)				64K				32K (208K UFT *)				64K				92K - 736K				32K (208K UFT *)				768K			
Max Routes (IPv4 / IPv6)	16K/8K	200K/100K	84K/21K			128K/64K			16K/8K (144K/77K UFT *)				384K/192K (UFT*)				16K/8K (144K/77K UFT *)				384K/192K (UFT *)				over 1M+ entries in hardware				16K/8K (144K/77K UFT *)				Over 1M+ entries in hardware			
BGP/OSPF	Wirespeed	Wirespeed	Wirespeed			Wirespeed			Wirespeed				Wirespeed				Wirespeed				Wirespeed				Wirespeed											
Multicast Routing	PIM-SM	PIM-SM	PIM-SM			PIM-SM			PIM-SM				PIM-SM				PIM-SM				PIM-SM				PIM-SM											
Multicast Groups	8K	24K	23K			128K			8K				16K				8K				16K				128K											

