Hewlett Packard Enterprise

Channel Webinar: DCN Competitive Overview and How to Win with HPE Aruba Networking

Competitive TME
Thuy D. Pham

July 15th, 2024

Before we begin…
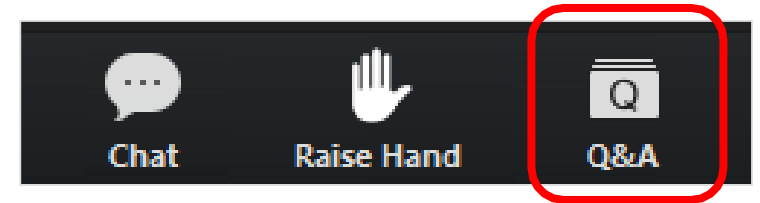
- Listen by computer audio or dial-in

- All lines are muted during the webinar

- Ask *questions by selecting "Q&A"* and to report any webinar difficulties

- Webinar is being recorded & will be emailed to all attendees

Partner Technical Webinar Series
HPE Aruba Networking Competitive Overview

Session 1: Data Center Switching Competitive Overview
Monday, July 15, 2024 at 9 AM PT / 12 PM ET

Session 2: Network Management Competitive Overview
Monday, August 26, 2024 at 9 AM PT / 12 PM ET

Session 3: Security SSE Competitive Overview
Monday, September 23, 2024 at 9 AM PT / 12 PM ET

([Click here](#)) to register and view session recordings for the webinar series series

Disclaimer

★ All competitor information is from public sources, analyst reports, HPE Aruba

sellers, and the Internet.

★ Technical & Commercial Competitive data presented in this deck are current as of

this date.

★ All slides are strictly HPE internal only, and not meant to be shared outside.

Today's Agenda

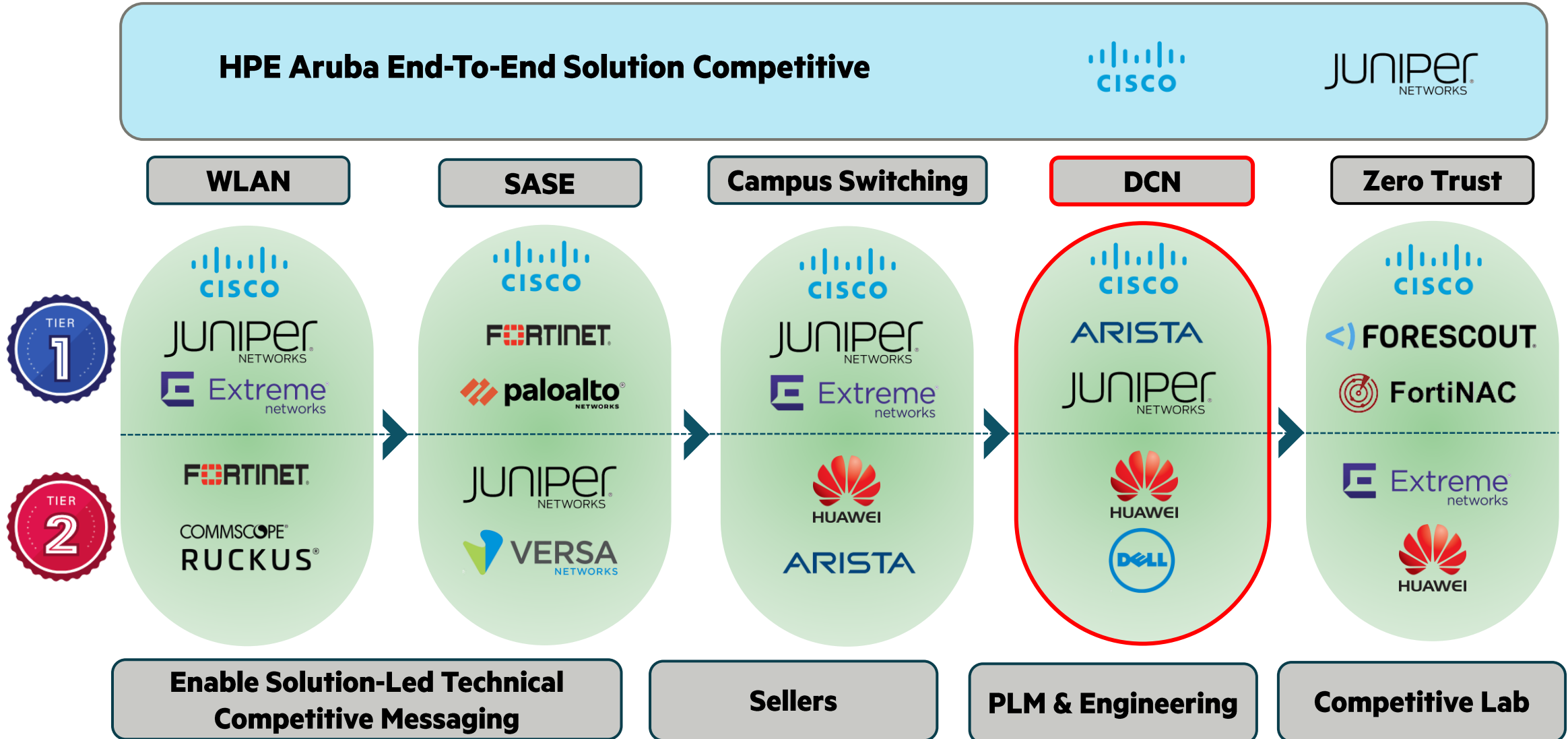| 1	DCN Landscape Overview
2	Cisco DCN Portfolio Overview
3	Arista DCN Portfolio Overview
4	Juniper DCN Portfolio
5	How to Win with HPE Aruba Networking
6	Q&A

Know your competition – Data Center Networking

Cisco

- This set of slides covers high level overview of Cisco

Cisco: At a Glance

History

- Founded in 1984, headquartered in San Jose, California

Unique selling point

- Comprehensive hardware and application portfolios that addressees a large customer base

Sales strategy

- Global internal sales and partner channel enables it to meet presales and procurement requirements worldwide
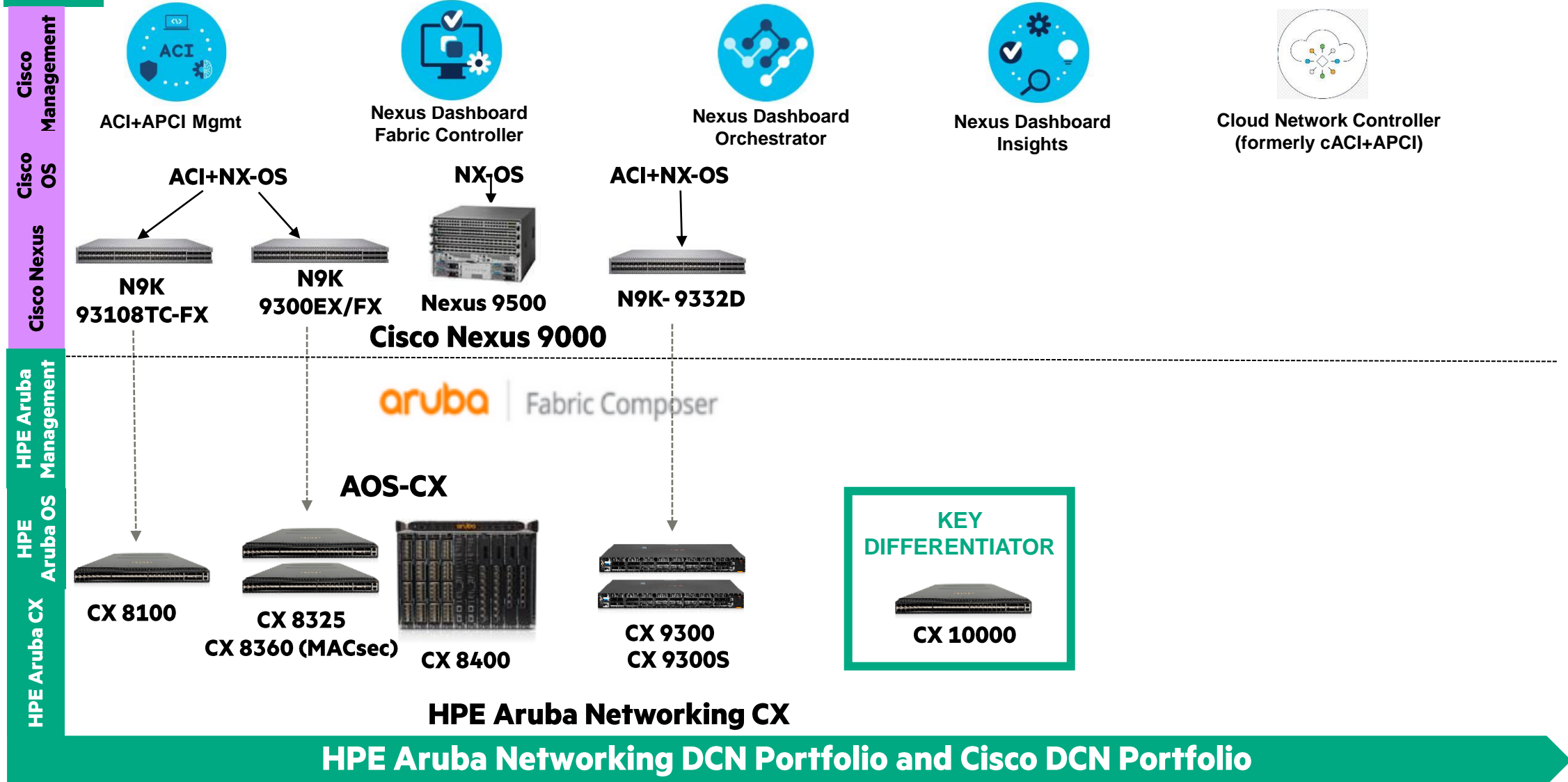
Latest update

- Cisco Vision - Common user interface across Cisco networking platforms
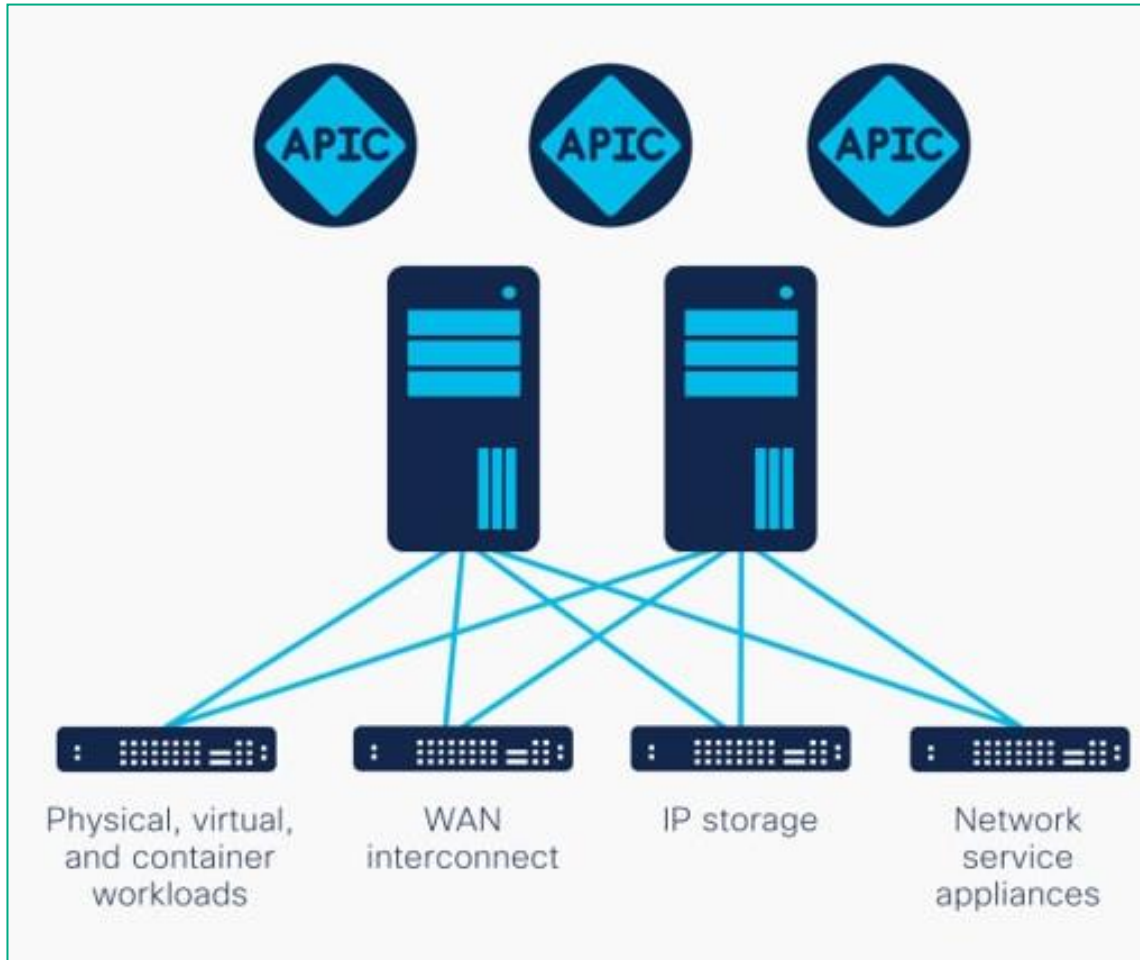
Future trajectory

- License models - Perpetual & Subscriptions – Sneaks into Advanced tier for DCN

Product Comparison - HPE Aruba Networking and Cisco for DCN

ACI+APCI Mgmt

Nexus Dashboard
Fabric Controller

Nexus Dashboard
Orchestrator

Nexus Dashboard
Insights

Cloud Network Controller
(formerly cACI+APCI)

Cisco OS

ACI+NX-OS

NX-OS

ACI+NX-OS

Cisco Nexus

N9K
93108TC-FX

N9K
9300EX/FX

Nexus 9500

N9K- 9332D

Cisco Nexus 9000

HPE Aruba Management

aruba | Fabric Composer

HPE Aruba OS

AOS-CX

HPE Aruba CX

CX 8100

CX 8325
CX 8360 (MACsec)

CX 8400

CX 9300
CX 9300S

**KEY
DIFFERENTIATOR**

CX 10000

HPE Aruba Networking CX

HPE Aruba Networking DCN Portfolio and Cisco DCN Portfolio

Cisco ACI (Application Centric Infrastructure): Overview

Physical, virtual, and container workloads · WAN interconnect · IP storage · Network service appliances

- Cisco SDN solution for data center fabric
- Nexus 9000 family used for h/w infrastructure (leaf & spine switches)
- Application Policy Infrastructure Controller (APIC) cluster for policy management and automation
- Underlay connectivity: ISIS
- Overlay control+data plane
  - Control: COOP (Council of Oracle Protocol)
  - Data: VXLAN
- Endpoints, LST/GST tables, L2Out, L3Out, Endpoint Group, Policy/Contract

Cisco ACI vs HPE Aruba Networking CX 10000 with AFC

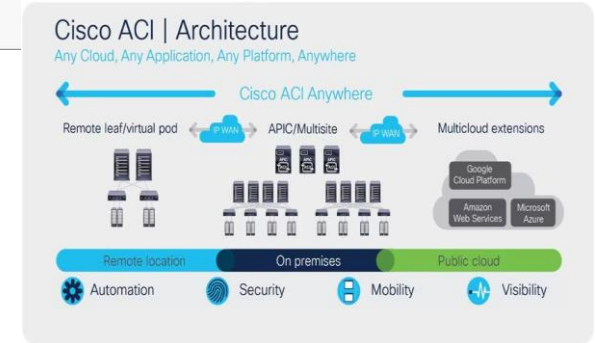| CISCO ACI	HPE ARUBA NETWORKING CX10000 with AFC
Proprietary Control + Data Plane, Vendor lock-in	Open Architecture
Interop Challenges, Migration difficult	Interoperable with other vendors
APIC: Complex workflow, Cumbersome Interface	AFC: Simple, Intuitive interface
Extra tools for monitoring (Tetration, NIR, NAE, NIA) -> more licensing	AFC: one portal for fabric, policy provisioning, monitoring
Troubleshooting is difficult	Troubleshoot with ease
Limited uSeg (ACI seg using microseg EPGs) Scale	Security/Services at high scale

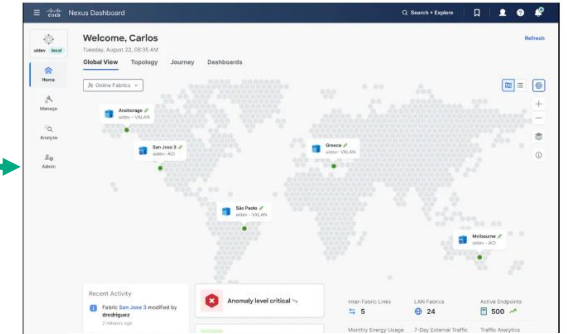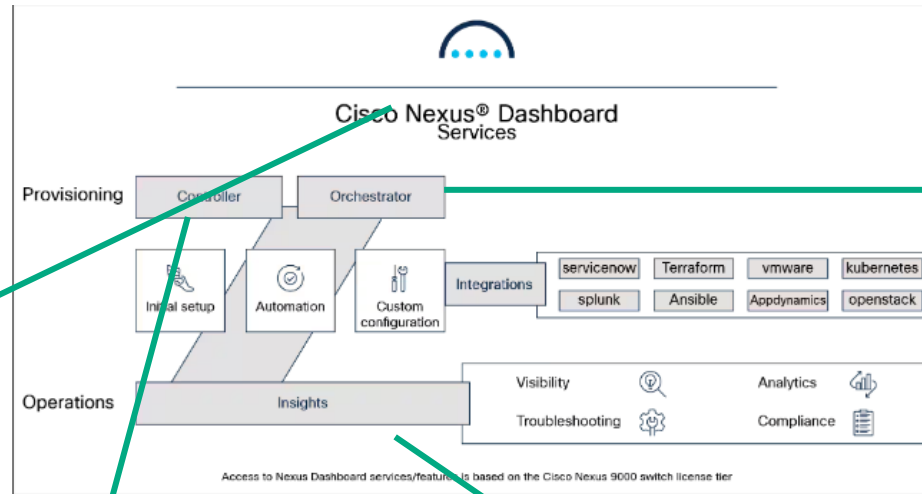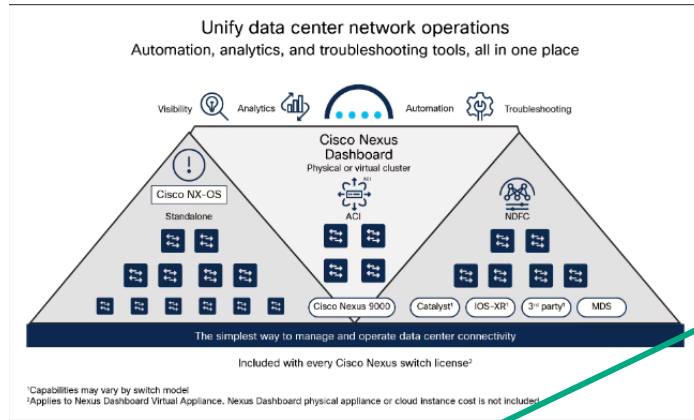# Cisco – Strengths and Challenges

Strengths

- Breadth of hardware portfolio
- Management Story – Nexus Dashboard (eg DCCN), Tetration Analytics Platform, APM – (AppD), ACI
- SDN Story in both WAN and LAN

Challenges

- Multiple "panes" of management (WAN/LAN/SDWAN), ACI, ND Services, ND Console, NDFC, NDO, ND Insights
- Deployment Complexity and Learning Curve – Require multiple OS (ACI or NX-OS mode – Nexus deployment), significant amount of HW resources which lead to longer implementation times and increased operational costs.
- Licensing Costs – HW, multiple SW licensing tiers, and on-going maintenance costs can be substantial.
- Vendor Lock-In – Cisco's proprietary and protocols can create vendor lock-in, making it challenging to switch.
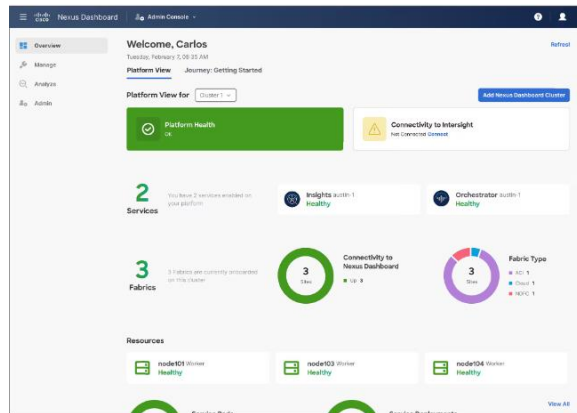- Distributed network/security services – require separate appliances.

Cisco Nexus Dashboard Overview

Nexus Dashboard Admin Console

Displays health of the various clusters, fabrics, and infrastructure services

Nexus Dashboard Fabric Controller (NDFC)

Consolidates management for multiple NX-OS–based switches, bringing automation and monitoring for LAN, EVPN VXLAN, and SAN fabrics

Nexus Dashboard Insights

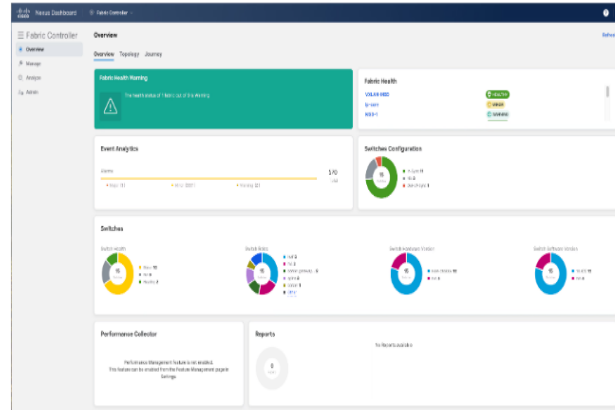Monitors network health across Cisco ACI and Cisco NX-OS–based networks

Nexus Dashboard Orchestrator (NDO) and ACI

Interconnect fabrics over any routed network and rendering configurations defined in the Cisco ACI DC controller
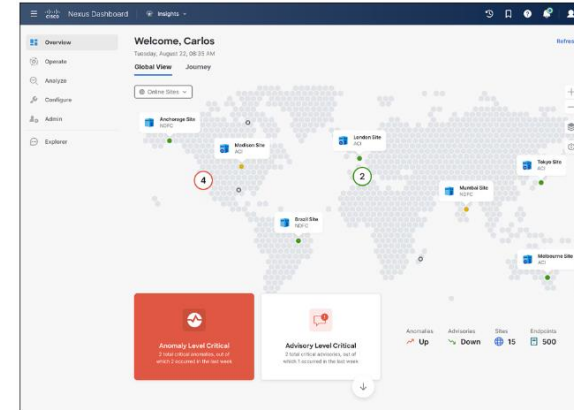
Cisco – How To Compete?

What They Claim.

➢ Cisco Networking Cloud is one platform for the entire on-premises and cloud-based DCN environment.
➢ Simple licensing model

What They Hide!

➢ Multiple platforms and OS to run DCN environment – ACI or NX-OS or Nexus Dashboard (for cloud)
➢ Multi-tier DCN licensing models required when purchase Nexus – Essentials, Advantage, and Premier

Questions to Ask?

➢ Can you provide a breakdown of the total cost of ownership (TCO) for your DCN solutions?
➢ Can you provide details on Cisco's approach to distributed network/security services such as stateful E-W Firewall, ACL, IPSec Encryption, NAT, DDoS, & Micro-segmentation?

Arista

- This set of slides covers high level overview of Arista

Arista: At a Glance

History

- Founded in 2004 at Santa Clara, CA

Unique selling point

- Known for Data Center Networking

Sales strategy

- Use Data Center success to expand into Enterprise and Cloud Market
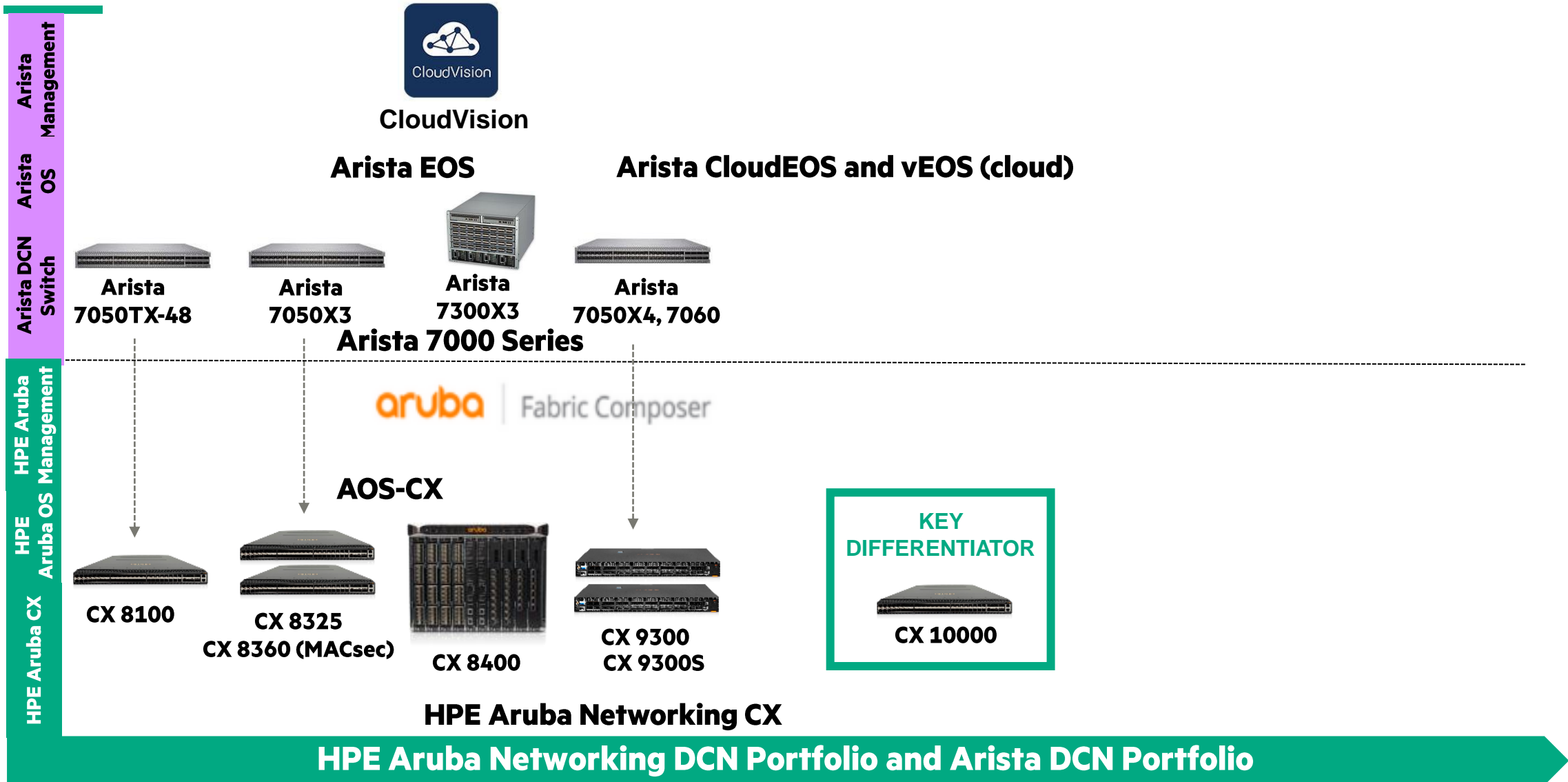
Latest update

- CloudVision: Turnkey solution for automation, control, telemetry and diagnostics

Future trajectory

- Innovate in software-driven cloud networking principles and portfolio

Product Comparison - HPE Aruba Networking and Arista for DCN

Arista Management

CloudVision

Arista OS

Arista EOS

Arista CloudEOS and vEOS (cloud)

Arista DCN Switch

Arista 7050TX-48

Arista 7050X3

Arista 7300X3

Arista 7050X4, 7060

Arista 7000 Series

HPE Aruba OS Management

aruba | Fabric Composer

HPE Aruba CX

AOS-CX

CX 8100

CX 8325
CX 8360 (MACsec)

CX 8400

CX 9300
CX 9300S

KEY DIFFERENTIATOR

CX 10000

HPE Aruba Networking CX

HPE Aruba Networking DCN Portfolio and Arista DCN Portfolio

CloudVision Portal (CVP): One Tool for Everything

- Deployment formats: On-premises virtual appliance (CVP), on-premises physical appliance (CVA), Saas/Cloud offering (CVaaS) but referred to as CVP, in general
- Started as on-premises option, but has a cloud offering now
- Initially Mojo Wireless Manager was a separate, but has been integrated into both on-prem and SaaS CVP
- One tool in on-premises and SaaS formats, with wireless and wired support for campus and DC networks.

Virtual appliance
Hypervisor: KVM, ESXi, Single-node (lab use) or 2N+1 Cluster (production)
Single-node: 8 core CPU, 22 GB RAM, 135 GB Disk, 20 MB/s disk thput
3-node: 28 core CPU, 52 GB RAM, 1 TB Disk, 40 MB/s (per node) disk thput

Physical appliance
X86 h/w with OVA installed (CV-100, 200-CV and 250-CV)

Arista – Strengths and Challenges

Strengths
- EOS stability
- Expanding portfolio
- Cloud Vision

Challenges
- Slow to invest in new markets
- Lack of innovation, follow the cloud
- High lead times
- Complexity for Smaller Deployments – its DCN solutions are designed for large-scale DC with complex networking requirements. This can lead over engineering and increased costs for smaller organizations.
- Costs – HW, SW, and on-going maintenance costs can be substantial
- Licensing costs – multiple licensing tiers – EOS license - Base, E, FLX Lite, FLX, V2, Z – CloudVision subscription tiers – Lite or Premier
- Limited Diversification and Campus Networking Focus – Lacks diversification into other networking domains. This limits its ability to provide end to end networking solutions.

Arista – How To Compete?

What They Claim.

- CloudVision - One tool for everything
- Simple licensing model

What They Hide!

- Multiple deployment formats – on-prem virtual(CVP), on-prem physical (CVA), SaaS/Cloud (CVaaS)
- Multiple licensing tiers – EOS license - Base, E, FLX Lite, FLX, V2, Z – CV subs tiers – Lite or Premier

Questions to Ask?

- Can you provide a breakdown of the total cost of ownership (TCO) for your DCN solutions?
- Can you provide details on Arista's approach to distributed network/security services such as E-W Firewall, Macro & Micro-segmentation?

Juniper

- This set of slides covers high level overview of Juniper as a company, Juniper Data Center Networking switching series.

Juniper: At A Glance

History
- Founded in 1996, became Juniper Networks "Powered by Mist AI" in 2019

Unique selling point
- Intent-based networking

Sales strategy
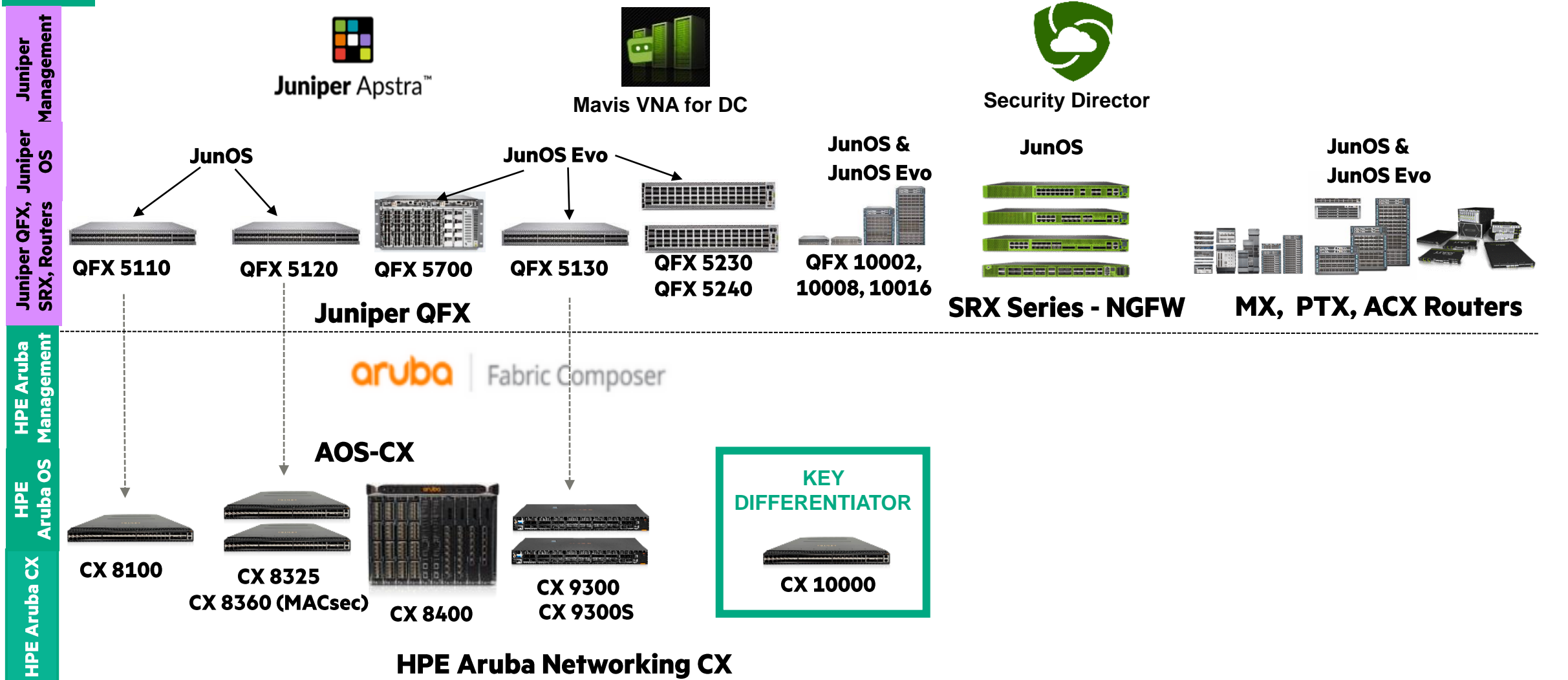- Gartner Leadership and Industry Influencer Recognition

Latest update
- Integrates Marvis VNA into Apstra and brings AIOps to the data center

Future trajectory
- Delivering intelligent operations in the automated data center and boost 800GB for ML/AI

Product Comparison - HPE Aruba Networking and Juniper for DCN

Juniper Apstra™

Mavis VNA for DC

Security Director

Juniper QFX, Juniper OS, Juniper SRX, Routers

JunOS

QFX 5110   QFX 5120   QFX 5700

JunOS Evo

QFX 5130

QFX 5230
QFX 5240

JunOS & JunOS Evo

QFX 10002, 10008, 10016

JunOS

SRX Series - NGFW

JunOS & JunOS Evo

MX, PTX, ACX Routers

Juniper QFX

HPE Aruba Management

aruba | Fabric Composer

HPE Aruba OS

AOS-CX

HPE Aruba CX

CX 8100

CX 8325
CX 8360 (MACsec)

CX 8400

CX 9300
CX 9300S

KEY DIFFERENTIATOR

CX 10000

HPE Aruba Networking CX

HPE Aruba Networking DCN Portfolio and Juniper DCN Portfolio

Juniper APSTRA

- APSTRA – Intent-based networking and automation software (design, deploy, operate)
- Four Challenges APSTRA is claimed to solve:
  - Infrastructure Composition
  - Change Reliability
  - Extensibility
  - Scalability
- Provides intent-based analytics
- Provides root-cause identification

HPE Aruba Networking AFC vs Juniper Apstra

Factor	HPE Aruba Networking AFC	Juniper Apstra	Comments
Under Lay Protocol	OSPF and eBGP (not recommended/validated)	eBGP - Recommended	Equivalent
Overlay Protocol	iBGP	iBGP/eBGP	Equivalent
Configuring overlay and underlay	First configure OSPF underlay, then configure BGP overlay	Configure both underlay and overlay together	Equivalent
Workflow to configure VSX/MC-LAG	VSX can be configured at the service aggregation	Juniper uses ESI LAG.	Equivalent
Configure Fabric if switches are not online	Not Supported	Supported	Advantage Juniper

Juniper – Strengths and Challenges

Strengths

- Strong router portfolio
- JunOS – stable EVPN fabric
- Improving lead times

Challenges

- Quality perceptions on QFX line
- APSTRA configuration limitations – "workaround with configlets"
- Support (TAC) perception
- Complexity and Learning Curve – its DCN offerings are more advanced, complex, and have a steeper learning curve for DCN admin. This can lead to longer implementation times, increased operational costs, and training requirements.
- Costs – Its DCN solutions come with a premium price tag for HW, SW, and on-going maintenance.
- Integration Challenges – Integrating its DCN's solutions with existing or non-Juniper is challenging due to proprietary protocols.
- Licensing costs – multiple licensing tiers – Standards, Advanced, and Premium.

Juniper – How To Compete?

What They Claim.

➤ Solving infrastructure composition, change reliability, extensibility, and scalability with Apstra for DCN
➤ Simple licensing model

What They Hide!

➤ Apstra for Day 2 automation and configurations are limited – use configlets workaround for solving configurations
➤ Multiple licensing tiers – Standard, Advanced, and Premium

Questions to Ask?

➤ Can customers easily configure Apstra without using scripts or manual configuration?
➤ Can you provide a breakdown of the total cost of ownership (TCO) for your DCN solutions?

How to Win with HPE Aruba Networking

HPE Aruba Networking Strengths/ Advantages

Simplified Operations

- Common OS, features, management

- Security-first, AI-powered networking solutions

- Modern UI, workload centric, easy-to-use

Pre-engineered Solutions

- Easily integrates with HPE compute and storage

- Integrates with third-party vendor environments using pre-validated reference architectures

- Reduces time, risk and cost of standing up complex IT solutions

Distributed Network and Security Services

- Stateful firewall services East-West traffic, stateful ACLs, encryption, DDoS, NAT
- Zero-trust segmentation
- Pervasive telemetry/IPFIX

Cost Savings

- Reduces hardware and infrastructure cost

- Reduces deployment and maintenance complexities

- Streamlining operational overhead

How to Win with HPE Aruba Networking – Data Center Networking

- HPE Aruba Networking is #1 or #2 in every IT/DC category – compute, storage, cloud, services and networking.

- HPE Aruba Networking's architecture is based on open standards, open AP, and a large data center technology ecosystem.

- HPE Aruba Networking solutions are full interoperable with 3rd party/multi-vendors environments.

- We offer best-of-breed Security-first, AI-powered networking solutions that are essential to Zero Trust and integrate with your current security systems.

DCN - How to Overcome Customer's Objections

Customer Objections	HPE Aruba Networking Response
HPE Aruba Networking's data center experience "HPE Aruba Networking isn't a data center player."	HPE Aruba Networking is #1 or #2 in every IT/DC category – compute, storage, cloud, services and increasingly networking.
Interoperability, learning curve "We don't have time to deal with new technologies."	HPE Aruba Networking provides many validated reference architectures (pre-tested integrations with commonly used technology solutions our customers may have).
Cisco/Arista/Juniper shop "We're a Cisco/Arista/Juniper shop – we're going to stay with Cisco/Arista/Juniper solutions."	HPE Aruba Networking solutions are full interoperable with 3rd party/multi-vendors environments and have open API integration with network/IT automation tools
HPE Aruba Networking's new CX Technology will be disruptive "Aruba's new CX 10 switching technology is too new."	The HPE Aruba Networking CX10K switch can be seamlessly deployed as a ToR switch without disrupting your network design. It's easy to start small with one rack or POD.
Data center security "Security is driving our vendor decision(s)"	We offer best-of-breed security/network solutions that are essential to Zero Trust -and integrate with your current security systems. HPE Aruba Networking's CX 10K switching is the industry's first and only switch with embedded firewall services capabilities on all ports

Why HPE Aruba Networking for DCN?

One Operating System. One ASIC Architecture. One Operating Model.

Data Center

Spine

ToR

Aruba CX 8400

Aruba CX 8300
CX 10000

Aruba CX 9300
9300-32D

Aruba CX 9300
9300-32C8D (1RU)

AOS-CX

100% RESTful APIs

State Database

Microservices Architecture

Access via System, NMS, Cloud

Time-Series Database
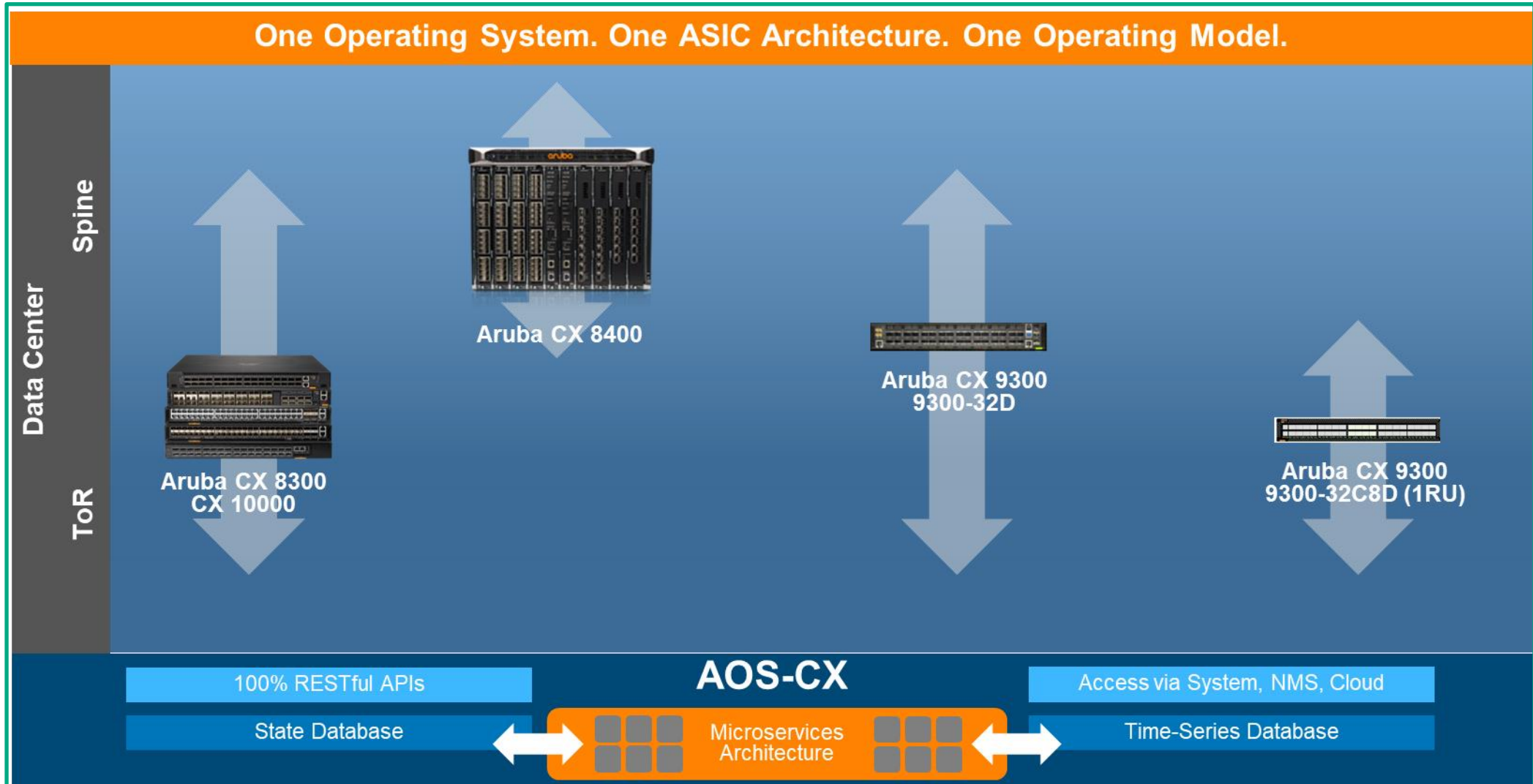
Quick Answer: **What are my options for VMware NSX, given the changes arising from the Broadcom acquisition?**

What are my options for (agentless) NSX / Microsegmentation

1 - Upgrade to VCF   **2 – network** *or Server DPUs*   3 – Do nothing/VLANs

"The network switch will be the enforcement point for microsegmentation.
The local network switch must also be the default gateway for all connected workloads and employ anycast to enforce microsegmentation at the switch connecting the host. Vendors: Cisco (ACI) and

Hewlett Packard Enterprise (HPE) Aruba (CX10000)"

Gartner, Quick Answer: What Are My Options for VMware NSX, Given the Broadcom Acquisition?, Nauman Raja, Andrew Lerner, Jorge Aragon, May 2024

HPE Aruba CX 10000 vs. Agent-based Firewall, Security (e.g., VMware NSX)

HPE Aruba CX 10000 Distributed Services Switch	Design and TCO Considerations	Virtualized software security agent
Security/network services embedded into network fabric	Architecture	Software-agents deployed across 100-1,000's servers
✓ Distributed E-W Firewall, Microseg, NAT, IPsec	Security functionally	✓ Distributed E-W Firewall, Microseg, IDS
None - DPU based acceleration	Impact on servers	High - 20-30% CPU Tax
✓ 800G Stateful Firewall	Performance	○ Limited to server CPU/NIC
Low - up to 65% less when compared to software-agents	Overall TCO	High – based on costly, annual server licensing subscriptions
Simple integration into any virtual, bare metal or brownfield DC	Deployment flexibility	Hypervisor dependent, admin complexity for brownfield DC

HPE Aruba Networking Integration

HPE GL PCE, storage, compute, solutions and customer wins

HPE GreenLake for Private Cloud Enterprise

- CX 8360 and CX 8325 used for OOBM and leaf/spine network

HPE Storage Networking Ethernet Storage Fabric, Mellanox replacement

- CX 9300, CX 8325 with new half-width 8325 switches coming Q3

HPE HPC / AI testing Security-first, AI ready Data Center Network

- Rail-optimized, 2-node fabric with 9300-32D (400G) support 64 GPUs

HPE GreenLake for Networking DCN Service Packs

- CX 8000/9000/10000 available for NaaS consumption

HPE Reference Architectures - link

- HPE Aruba Networking integration into dozens of HPE RAs
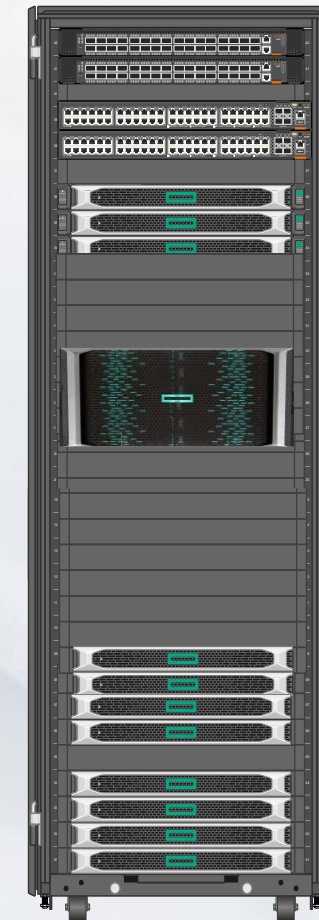
HPE GL Wins with HPE Aruba

HPE Aruba Networking DCN *CX Switch Trade-Up Program*

Apply HERE: www.hpe.com/partners/dcncxtradeup   **Learn More!** (DCN WinBook on SalesEdge)

Promotion Ends: October 31, 2024
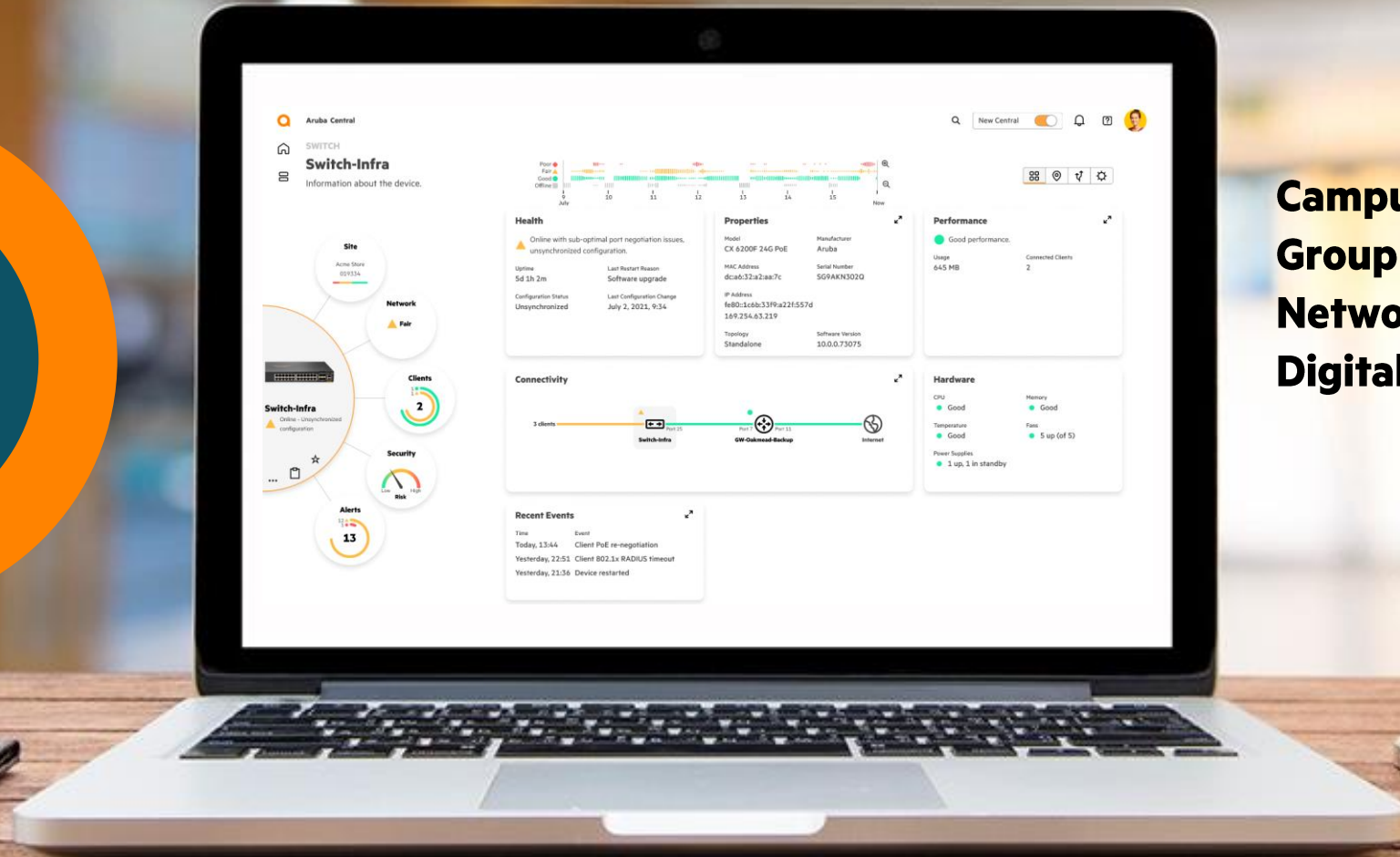
HPE Aruba Networking - Data Center Industry Recognition

QR - Get the Reprint

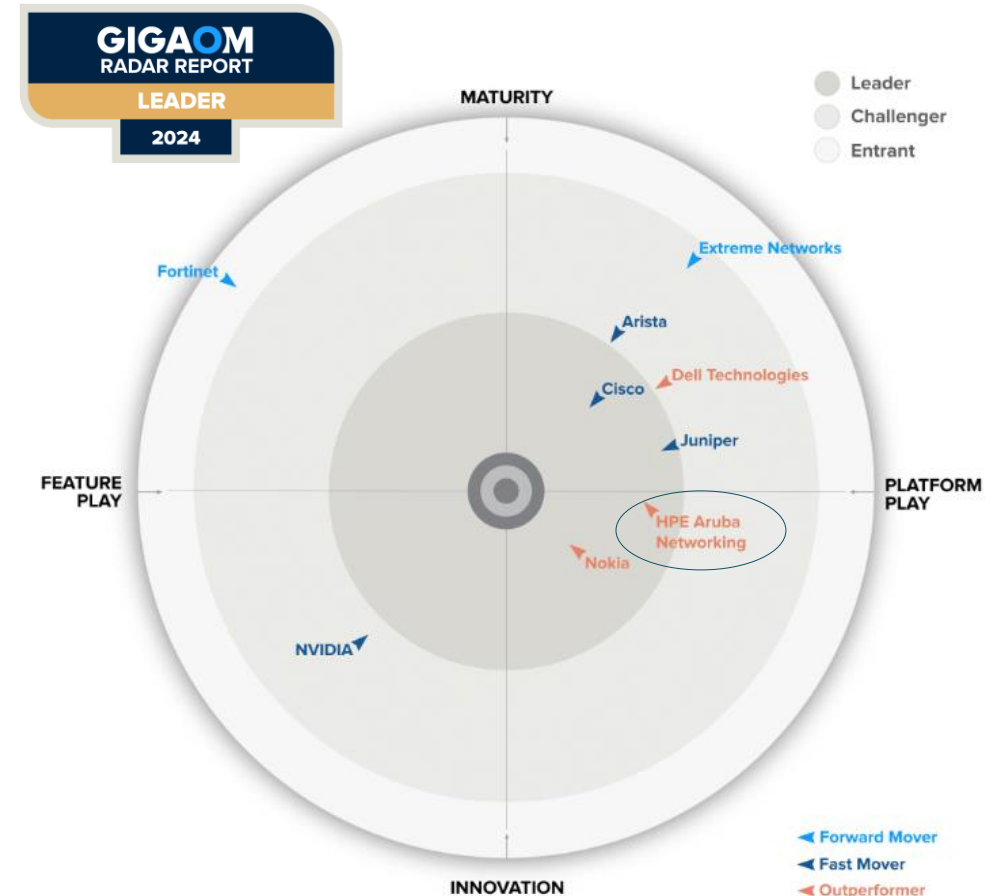*"One of HPE Aruba's differentiating features is its Distributed Services Switch, which provides stateful firewall services at every top-of-rack configuration ..."*

Data Center 50:
The Coolest Data Center Companies of 2023

HPE Aruba Networking CX 10000

Questions

Useful Links

Aruba Technical Enablement home page

https://afp.arubapedia.arubanetworks.com/arubapedia/index.php/Technical_Enablement

Aruba Data Center Information: Tons of great links!

https://afp.arubapedia.arubanetworks.com/arubapedia/index.php/Category:Data_Center_Switches

Aruba Fabric Composer Test Drive! Hands on!

https://www.arubanetworks.com/afc-demos/

Data Center Evolution with Pensando

https://arubaversity.arubanetworks.com/student/path/1315140-data-center-evolution?sid_i=0

Partner Resources
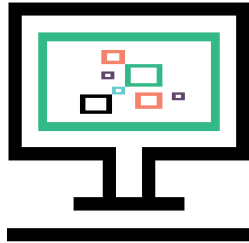
Airheads Community

(Click Here)

Arubapedia for Partners

(Click Here)

Partner Ready for Networking portal
(Click Here)

Ask Questions
Get Answers

Channel SEs (CSEs)

Regional channel support

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Thank you

Competitive TME - aruba-competitive-tme@hpe.com

Backup Slides

Building the next-gen IT service delivery platform

DXC Technology (NYSE: DXC) helps global companies run their mission-critical systems and operations while modernizing IT, optimizing data architectures, and ensuring security and scalability across public, private and hybrid clouds.

Pre-deployment

- More than 100 global, multi-tenant data centers
- End-to-end Cisco ACI deployment
- **Scale-up** services appliances

Challenges

- Complexity and cost (infrastructure sprawl, overlapping IPs, inefficient traffic patterns)
- Poor security posture
  - Limited intra-data center security
  - Unencrypted flows

Solution: distributed services

- Aruba Fabric Composer
- HPE Aruba Networking CX 10000
  - Distributed E-W firewall, NAT, IPSec

. **>70% increase in workload security posture within DC**

. **Up to 83% reduction in DC security infrastructure footprint**

University of Illinois Urbana-Champaign – DCN Win

Customer Profile

Campus sits on nearly 10 square miles, has 13K+ faculty and 56K+ students. Looking to transform their academic experiences and support pioneering research that enables students, faculty, and staff to make a significant societal impact. The strategy for the future infrastructure is to modernize edge and data center networks to deliver ultra-high performance, secure connectivity.

Opportunities

Advanced data security capabilities eliminate the need to purchase separate hardware appliances, software, and licenses to provide the cybersecurity capabilities required. When researches include 100GbE connectivity in proposals, it improves their chances of winning grant funds nationally and worldwide.

Business outcome

- Delivers 100GbE that enables attracting research grants
- Achieves $200K savings by reducing data center complexity
- Streamlines management and troubleshooting significantly

Challenges

Campus needs change quickly. There is a high need for usage visibility and analytics insight to pivot quickly to changing needs.

Competitive situation

Already partnered with HPE Aruba Networking for wired and wireless edge networking, Illinois determined that adopting HPE Aruba Networking Data Center solution was the best choice.

Solution

HPE Aruba Networking Hardware
- WiFi 6E Access Points
- CX Access Switches
- CX Core and Data Center Switches
- HPE Cray Supercomputing

HPE Aruba Networking Software
- Central on Premises
- ClearPass Policy Manager
- SD-Branch
- User Experience Insights (UXI)

Case Study: https://www.arubanetworks.com/resources/case-studies/university-of-illinois/

Doane University – DCN Win

Customer Profile

Campus sits on 300 acres and encompasses 21 buildings, including 6 residence halls. Two satellite locations exist for non-traditional students. Stated vision is to have a fully digital education journey with every aspect of daily life enabled by a mobile device.

Opportunities

Doane's hyper-connected vision included a data security review and refresh as its legacy firewall was unable to deliver the necessary performance for achieving the new hyper-connected vision. Requirements included adopting future-ready AI-enabled, networking infrastructure, Securing personal data using zero-trust, SASE approach, and gaining a flexible, expandable cloud-managed solution.

Business outcome

- Enables cutting-edge academic innovation like AI, analytics, and IoT
- Provides 10x throughput and reduces Wi-Fi incidents 60%
- Saves nearly 30% on costs versus leading competitor
- Safeguards personal data institution-wide with rapid 9-week deployment

Challenges

Doane first considered deploying a traditional firewall that was double the size of existing equipment, although this would somewhat improve traffic flow, Doane determined that bottlenecks would return.

Competitive situation

Cisco

Solution

- 630 Indoor Access Point Series
- 570 Outdoor Access Point Series
- 550 Indoor Access Point Series
- 505H Remote Access Point Series

- Central
- ClearPass
- CX 6300 Switch Series
- CX 10000 Switch Series

Case Study: https://www.arubanetworks.com/resources/case-studies/doane-university/

Kyndryl – DCN Win

kyndryl™

Customer Profile

Kyndryl is the world's largest provider of IT infrastructure services serving thousands of enterprise customers in more than 60 countries. With their strategic technology partners and thousands of customers worldwide, they co-create solutions to help enterprises reach their peak digital performance.

Opportunities

Modernization of Kyndryl's colocation facilities needs to be transformational in terms of reduction in Capex & Opex, compliance and security expenditure. TCO benefits need to be multi-faceted across security, sustainability, and performance through infrastructure consolidation.

Challenges

Securing scaling of managed cloud services across global colocation sites. Each colocation facility must handle multiple terabits of encrypted data traffic with ever growing bandwidth requirements.

Business outcome

Kyndryl's Global Network Peering Platform evolution with the CX 10000 is being rolled out across their worldwide hosted hybrid IT datacenters, providing security services for Cloud, C4i and resiliency services clients, delivering radical TCO savings in legacy infrastructure retirement and consolidation, without forcing a compromise between choosing between delivering the necessary performance to meet customer SLA's and security.

Moved from 40RU+ in rackspace down to 2RU with a pair of CX10000s.

Solution
- CX 10000 Smart Switch
- HPE Aruba Networking Premium Service for CX 10000
- HPE ANW 8100
- HPE ANW Central SW (5-year)

Cisco Hypershield

- This set of slides covers high level overview and our response to Cisco Hypershield recent announcement.

Cisco Hypershield Announcement

- On April 18th, 2024, Cisco announced Cisco Hypershield: Security reimagined — hyper-distributed security for the AI-scale data center.

- Cisco claims that the It's the first truly distributed,
  - AI-native system that puts security wherever it needs to be:
  - In every software component of every application running on your network; on every server;
  - And in your public or private cloud deployments.

What Cisco Hypershield Really Is

- A Cisco security architecture NOT currently supported in a Cisco switching platform.

- Cisco Hypershield is a two-tier software only, subscription service. The first release is only supported on server deployment.

- Cisco Hypershield can be installed as an agent in public/private cloud, VM, and container workloads.

- Cisco Hypershield is built on open source eBPF that provides visibility of the server at the OS/kernel. Required kernel level modifications which can be very risky.

- Cisco Hypershield Architecture still requires their NGFW (ASA) and is a centralized firewall service. Selective East-West traffic still needs to be hairpin back to and from fabric.

- Cisco Hypershield software version is expected to be available sometime in August 2024.

HPE Aruba Networking Key Differentiators

- Powers a simplified and less complex Data Center Distributed Services Architecture (DSA) without software agents and a CPU tax.

- Avoids appliances sprawl and traffic hair pinning when East-West traffic inspections and segmentation are required.

- Security-first and AI-powered approach for Data Center Networking.

- CX 10000 is a Distributed Services Switch (DSS) that provides service chaining solution with East-West Firewall (FW), IPsec Encryption, Network Address Translation (NAT), Telemetry and other advanced services simultaneously with extensive scale.

How to Win and Key Takeaway

HOW TO WIN:

- Simplify network and security deployment and operation.
- Distribute services closer to applications for secure, streamlined management.
- Improve security while limiting appliance scrawl for a lower overall cost.
- Optimize network bandwidth, performance, and user experience.
- Seamlessly integrates into existing compute, storage, and virtualized IT infrastructure.

KEY TAKEAWAYS: BENEFITS OF HPE ARUBA CX10000 SERIES SWITCH

- Lower total cost of ownership
- Single point of management = easier automation
- Zero Trust Secure Networking
- Automated Insights & Diagnostics

Connect: Unified edge-to-cloud switching

Data center—leaf-spine, 25/100/400G,
On premises, private cloud, colocation

Core

HPE Aruba Networking CX 10000

HPE Aruba Networking CX 9300

HPE Aruba Networking CX 9300S-32C8D

Aggregation

HPE Aruba Networking
CX 8400

HPE Aruba Networking CX 8360/8100

HPE Aruba Networking CX 8325

HPE Aruba Networking CX 6300M

HPE Aruba Networking
CX 6400

Access

HPE Aruba Networking
CX 6X00

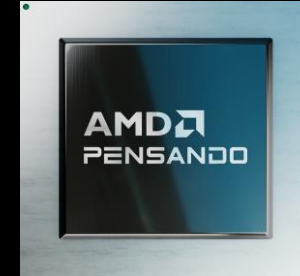| ⚙ AUTOMATION	Options to Match Your Operating Model			
Turnkey Automation **aruba** Fabric Composer	Event-Driven Automation (Aruba NAE)	Network Overlays (e.g. NSX)	Automation Frameworks (e.g. Ansible)	Custom Automation (e.g. Python Scripts)
100% RESTful APIs		AOS-CX		Access via System, NMS, Cloud
State Database	← →	Micro-Services Architecture	← →	Time-Series Database

BUILT ON A CLOUD-NATIVE OPERATING SYSTEM

AOS CX

Common operating model - campus edge to DC, cloud managed

End-to-end portfolio for the enterprise

AI/ML AND VISUALIZATION INTEGRATIONS

Empower the tools the customer already uses!

Rest API POST

Metrics/Tags

IPFIX/Flow Telemetry

FW Syslog

kafka

New Innovations

E.g., Identity Group Mapping ...

Security/XDR

Chronicle XDR

App Dependency Mapping

Guardicore

Network AIOps

ElastiFlow   Augtera

DDOS

SIEM

splunk>

elastic

Chronicle

SOAR

Security Compliance/ Provisioning