# ARUBA CX 9300-32D SWITCH SERIES

MARKET CONTEXT

As global data traffic continues to accelerate with no sign of slowing down, continued innovation across network, compute and storage domains is critical to meet this data growth. Not only will the growing number of connected devices increase the demand for data, but there are also multiple mega trends impacting the data center infrastructure which will further drive the expansion of network bandwidth and storage capacity.

The next wave of data center buildout necessitates the need for 100/200/400GbE data center fabrics in order to support emerging workloads such as Artificial Intelligence (AI), Intelligent Edge Computing, Software-Defined WAN (SD-WAN), 5G Wireless, Virtual/ Augmented Reality (VR/AR) and NVMe Storage Disaggregation.

TRANSFORMING THE ETHERNET SWITCH MARKET

The Ethernet switch market is undergoing a transformation. Previously, Ethernet switching infrastructure growth was led by 10/40GbE, but volume demanded that the tide start to turn in favor of 25 and 100GbE.
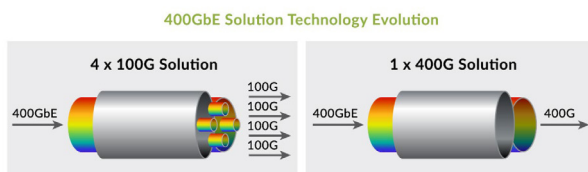
This trend is being driven by mounting demands for host-side bandwidth as data center densities increase, and pressure grows for switching capacities to keep pace. More than just bandwidth, 100 and 400Gbps technology is helping to drive better cost efficiencies in capital and operating expenses, as compared to legacy connectivity infrastructure at 10/40Gbps. These increased bandwidths also enable greater reliability and lower power requirements for optimal data center efficiency and scalability.

ARUBA CX 9300-32D SOLUTION OVERVIEW

The Aruba CX 9300-32D is a next-generation 12.8Tbps, 1U fixed configuration switch supporting 32-ports of 25/100/400GbE. The switch is an ideal solution for flexible, cost-effective, high-density 10-400GbE connectivity server, storage, and intra-fabric connectivity. This solution helps protect enterprises investment as they as they transition server farms from 10GbE to 25GbE and 100GbE/400GbE EVPN-VXLAN spine configurations at reduced power and a smaller footprint.

FEATURES AND CAPABILITIES

- Aruba CX 9300-32D supports large Data Center PODS of up to 6,000 x 25G servers or up to 2,000 x 100G servers. This is an 8X jump in scaling/density over current Aruba CX 8325-32C which scales to 700 x 25G servers.
- Aruba CX 9300-32D can be used as a 25/100G Leaf or 100/400G Spine switch (128 x 100G ports)
- When deployed as a Spine, the 9300-32D flexibility connects to a range of leaf switches including CX 8325-48Y8C, CX 8360-48Y6C or CX 10000-48Y6C (Distributed Services Switch).
- HPE Aruba storage optimized. With Aruba's most recent AOS-CX release, our 9300-32D and CX 8325 switches provides an ideal solution for data center, cloud and storage use cases that support top-of-rack server/ storage connectivity and scale-out leaf-spine fabric topologies. These innovative AOS-CX enhancements provide storage-optimization to insure low-latency AND "lossless" network QOS and connectivity characteristics that storage requires.
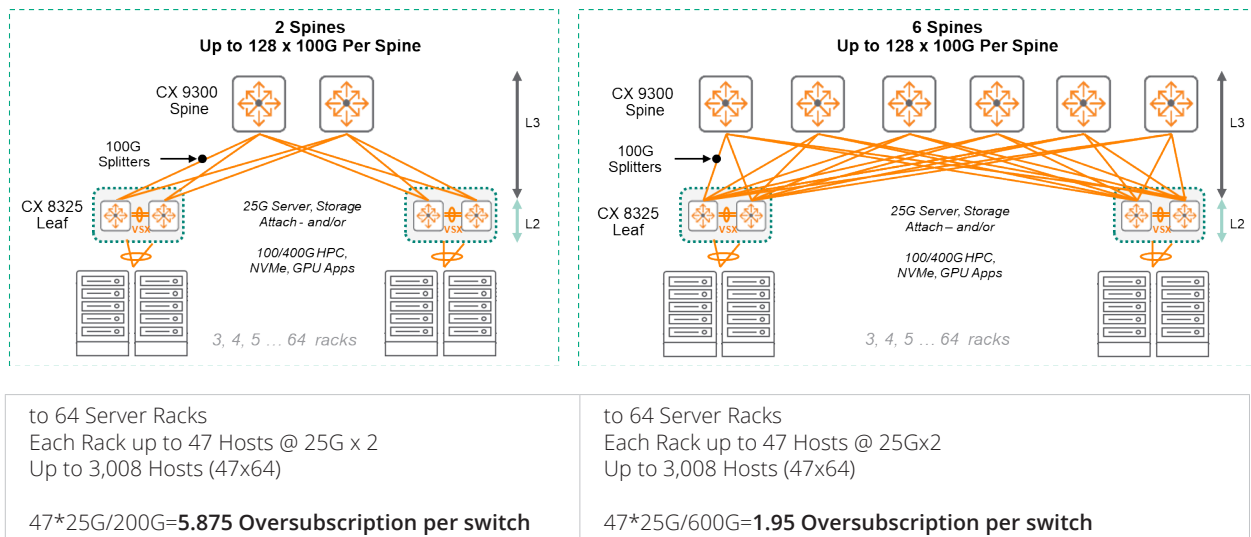
- Breakout cabling scalability enables a single 200GbE split into two 100GbE links. Likewise, any 100GbE port on a switch can breakout to four 25GbE ports linking one switch port, and accommodating up to four adapter cards in servers, storage or other subsystems. Similarly, a 400 Gbps port can be configured as 4x100GbE, 2x200GbE, or 1x400GbE.

- At these larger scales, Aruba Fabric Composer support greatly simplify the automation, orchestration, and end-end visibility of fabric underlay and virtualized overlay.

ARUBA CX 9300 DEPLOYMENT ARCHITECTURES

Layer 3 Spine and Leaf

to 64 Server Racks Each Rack up to 47 Hosts @ 25G x 2 Up to 3,008 Hosts (47x64) 47*25G/200G=**5.875 Oversubscription per switch**	to 64 Server Racks Each Rack up to 47 Hosts @ 25Gx2 Up to 3,008 Hosts (47x64) 47*25G/600G=**1.95 Oversubscription per switch**

ARUBA CX 9300-32D TECHNICAL SPECIFICATIONS

High speed connectivity

32-port 10/25/100/400G with 2-port of 1/10G for Telemetry

12.8Tbps switching capacity to fully support 32x 400G

Ports speeds:

400G PAM4, 2x200G PAM4, 4x100G PAM4, 2x100G NRZ, and 41x25G NRZ

Routing

Advanced Layer 3 including OSPF, BGP, VXLAN, VSX

High hardware scale up to 1.24M IPv4, including full Internet routing

Software and Hardware (Fans, Power Supplies) Resiliency

Database-driven Aruba OS-CX architecture for HA and fault tolerance

N+1 for hot swappable, redundant power supplies and F-to-B (and B-to-F) bundles

Management

REST for distributed or centralized orchestration

Seamless Software upgrade using VSX oer OOBM

OOBM console management ports, Status LEDs for fans, power, supplies

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