Cisco Nexus 3000 Series Switches

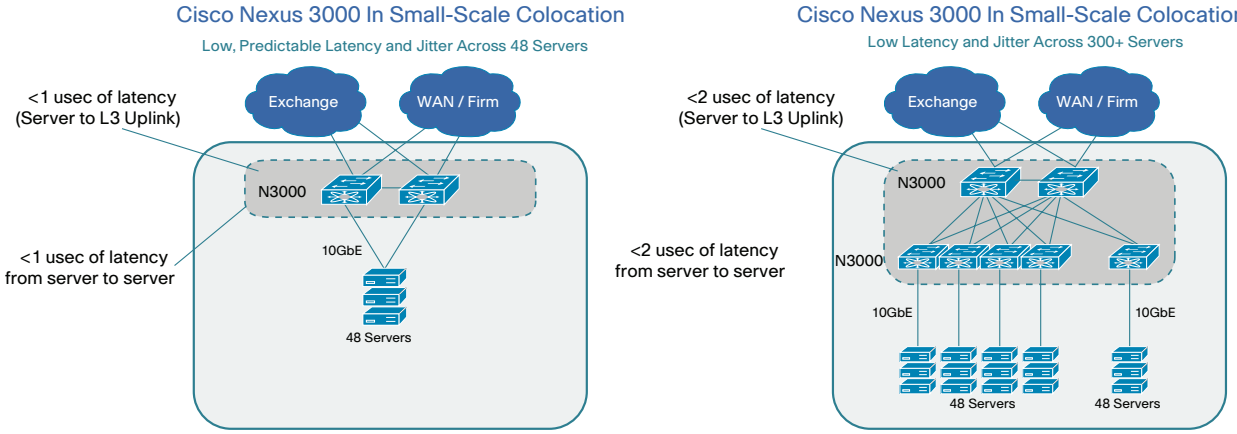
Ultra Low Latency with High Density

Cisco Nexus® 3000 Series Switches, part of the Unified Fabric component of the Cisco® Data Center Business Advantage (DCBA) architectural framework, now extends the comprehensive, proven innovations into the High Frequency Trading (HFT) market. The Cisco Nexus 3064 Switch is a high-performance, high-density, ultra-lowlatency Ethernet switch that is part of the new Cisco Nexus 3000 Series Switches.

Figure 1. Cisco Nexus 3064 Switch

The Cisco Nexus 3064 is well suited for financial co-location deployments, delivering features such as latency of less than a microsecond, line-rate Layer 2 and 3 unicast and multicast switching, and the support for 40 Gigabit Ethernet (40GbE) standards technologies on the data center–class Cisco NX-OS operating system. Figure 2 shows small- and larger-scale co-location deployment scenarios with Cisco Nexus 3000 Series Switches.

Figure 2. Cisco Nexus 3000 Series Switches in the Data Center Network



Main Benefits of Cisco Nexus 3064

- Ultra low latency
  - Ultra-low nominal latency, enabling customers to implement high-performance infrastructures for high-frequency trading workloads
- Wire-rate Layer 2 and 3 switching on all 64 10 Gigabit Ethernet ports
  - Layer 2 and 3 switching of up to 1.2 terabits per second (Tbps) and more than 950 million packets per second (mpps) in a compact 1RU form-factor switch
  - Support for 40GbE standards technologies enabling the customers data center to be 40GbE-ready.
- Purpose-built using the Cisco NX-OS operating system, with comprehensive, proven innovations
  - Modular OS built from the start for resiliency
  - Full Layer 3 unicast routing protocol suites including Border Gateway Protocol (BGP), Open Shortest Path First (OSPF), Enhanced Interior Gateway Routing Protocol (EIGRP), and Routing Information Protocol Version 2 RIPv2
  - Full Layer 3 multicast routing protocol suites including Protocol Independent Multicast–Sparse Mode (PIM-SM) and Multicast Source Discovery Protocol (MSDP)
  - Integration with Cisco Data Center Network Manager (DCNM) and XML management tools

Main Features of Cisco Nexus 3064

- One-rack-unit (1RU) form factor 1/10/40 Gigabit Ethernet switch offering throughput of up to 1.28 Tbps
- 48 fixed 1/10-Gbps Enhanced Small Form-Factor Pluggable (SFP+) ports and 4 fixed Quad SFP+ (QSFP+) ports
  - QSFP+ technology allows smooth transition from 10 Gigabit Ethernet to 40 Gigabit Ethernet.
- Line-rate Layer 2 and 3 switching
- Dual redundant power supplies
- Comprehensive unicast and multicast routing protocol support
  - Unicast protocols include BGP, OSPF, EIGRP, and RIPv2.
  - Multicast protocols include PIM-SM and MSDP.
- Full support for access control lists (ACLs; port, VLAN, and routed) and quality of service (QoS; queueing, marking, and policing)
- Full support for troubleshooting tools such as Switched Port Analyzer (SPAN) and Ethanalyzer
- Support for the IEEE 1588* standard
  - Time synchronization capability synchronizes internal clocks according to a network master clock.
- Switch management by Cisco DCNM
  - Cisco DCNM is a Cisco NX-OS management tool that automates provisioning processes, proactively monitors the LAN by detecting performance degradation, secures the network, and streamlines the diagnosis of dysfunctional network elements.

For More Information

Cisco Nexus Family Switches: http://www.cisco.com/go/nexus

Cisco Nexus 3000 Series Switches: http://www.cisco.com/go/nexus3000

Cisco NX-OS Software: http://www.cisco.com/go/nxos

* Please check the release notes for feature availability.

C45-648255-00 03/11