

ALCATEL-LUCENT AND QLOGIC DELIVER CONVERGED NETWORK SOLUTIONS FOR DATA CENTERS

SOLUTION BRIEF

Data center administrators are confronted by new business challenges that are made worse by a shrinking IT budget. Administrators must focus on improving asset use to enhance performance and flexibility while reducing costs. One way to address these issues is to evolve and transform the technologies deployed in the data center. Alcatel-Lucent and QLogic together deliver solutions that transform the current infrastructure to a virtualized and converged network environment.

QLogic Converged Network Adapters (CNA) and Alcatel-Lucent Application Fluent Network (AFN) Mesh, simplifies the data center and future proofs the investment. The combined solution supports multiple protocols with the highest degree of offload for TCP/IP, Fiber channel over Ethernet (FCoE), and iSCSI. The solution virtualizes the infrastructure while supporting both IP and discrete storage protocols.

One drawback of Ethernet is that it is a best-effort network that does not guarantee delivery of packets. To address this problem, the Data Center Bridging standard was created to enable storage protocols to be delivered over Ethernet through a set of enhancements that makes the Ethernet network lossless.

The Alcatel-Lucent OmniSwitch product family, a part of the AFN solution, supports data center lossless Ethernet technologies such as: IEEE 802.1Qbb, 802.1Qau and 802.1Qaz. The QLogic 8200/8300 Series CNA enables data center administrators to maximize I/O consolidation. Servers can connect to any network element using a QLogic 8200/8300 Series CNA, delivering both storage (NAS, iSCSI and FCoE) and data traffic (TCP/IP) over a single interface simultaneously. The joint solution drives I/O simplification and storage convergence in the data center.

The Alcatel-Lucent/QLogic data center solution is ready to scale and support the performance requirements of modern day applications. The network can be provisioned to uniquely carry flows (various storage, data, voice, etc.) with distinct prioritization and quality of service profiles. The Alcatel-Lucent AFN Mesh supports eight priority queues, ensuring the ability to scale and deliver network wide end-to-end application performance.

The Alcatel-Lucent AFN Mesh and QLogic CNA, together deliver end-to-end lossless Ethernet technology for the virtualized data centers over 10GigE. The simplified network enables IT administrators to consolidate resources and deliver services quickly in a standardized manner.

The QLogic 8200/8300 series NIC has been integrated with OmniSwitch products (OmniSwitch 10K, OmniSwitch 6900 and OmniSwitch 6850E) and certified on a variety of hosts:

- Windows Server 2008 (R2 32bit)
- RedHat Linux (RHEL 5.8 64bit)
- VMware ESXi 5.0.0

During the certification and interoperability testing, salient features validated included:

- NPAP – method of dividing a physical NIC into partitions or virtual ports
- NIC Teaming/Bonding – Switch independent (Failsafe) and dependent modes of load balancing (802.3ad) of server traffic
- CPU Performance – Reduced CPU demand with key protocol offloads
- SR-IOV (8300 Series CNA) – Standards driven protocol enhancing I/O performance in virtualized environment

CONVERGED SOLUTION BENEFITS

LEGACY DISCRETE LAN

- Large discrete NIC footprint – IT sprawl
- Multiple adapters for various protocol required
- Complex management
- High power and cooling requirements

ALCATEL-LUCENT AFN MESH WITH QLOGIC CNA

- Reduced cost and reduced NIC footprint
- Single adapter supports multiple protocols
- Simplified management
- Reduced power and cooling required
- Speedy service delivery
- Consistent network

To find out more about the Alcatel-Lucent /QLogic Data Center Solution visit:

<http://enterprise.alcatel-lucent.com/>

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