ISILON AND FORCE10 NETWORKS

One Low Latency & Non-Blocking Fabric

Reliability, Security & Quality of Service

Ethernet Delivers the Lowest TCO Unified Fabric

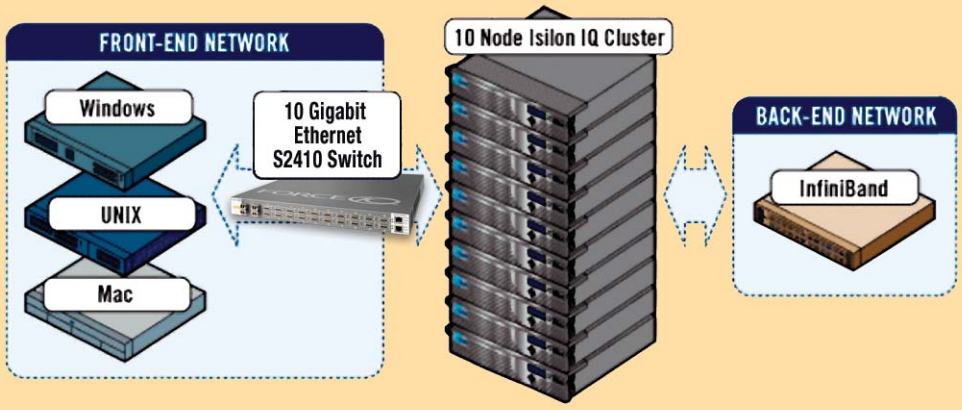
Interoperable Standards-based Storage Solution

FORCE10

ISILON AND FORCE10 DELIVER PEAK STORAGE PERFORMANCE WITH 10 GIGABIT ETHERNET

- **Ethernet/IP file-based storage with 10 GbE performance**
- **High performance NFS, CIFS, HTTP, and FTP**
- **Storage applications for HPCC, media and entertainment, Web 2.0, and life sciences**

ISILON 10 GIGABIT CLUSTERED STORAGE SOLUTION



High Performance, Low Latency Ethernet Solutions for Storage Networks

The transition to 10 GbE is under way in the data center, and the ubiquity and reliability of Ethernet make it a desirable solution for delivering a high performance data center network, storage and compute fabric. Ethernet technology has reached a maturity and is a compelling proposition. The mass-market availability of 10 GbE adapters and switches enables Ethernet-based storage systems to deliver high bandwidth, high throughput and low latency Ethernet solutions for the rigorous demands of data center applications.

The combined best-of-breed 10 GbE technology of Force10 Networks high performance switches and Isilon storage solutions enable IT staff to leverage existing skills and tools. The result is a reduced total cost of ownership and complexity of data center operations with common spares, common software, and common training for networking, storage, and clustering. Data center managers can now fully realize high data throughput with extremely low overhead while remaining completely compatible with existing Ethernet infrastructures.

Key Applications

Ultra low latency switch for high performance Ethernet storage networks

- Low cost 10 GbE interface to network attached storage systems
- Connects directly to 10 GbE servers
- Low latency data center interconnect switch

Key Features

Resilient and scalable high density, low latency 10 GbE switch for high performance Ethernet environments

- 24 line-rate 10 GbE ports in a 1-RU form factor
  - S2410CP: 20 CX4 ports plus four 10 GbE pluggable XFP interfaces
  - S2410P: 24 XFP interfaces
- 300 nanosecond switching latency under full load (using CX4 connectors)
- 64 byte to 10,240 byte frames
- Switching fabric capacity of 480 Gbps and forwarding capacity of 360 Mpps

Force10 S2410 Specifications

S2410CP

S2410P

Physical

S2410CP: 20 line-rate 10GBase-CX4 ports plus four 10 GbE pluggable XFP ports
S2410P: 24 line-rate 10 GbE XFP ports

1 RJ45 console/management port with RS232 signaling
1 RJ45 Ethernet management port

Size: 1 RU, 1.73 h x 17 w x 16.73" d
(4.4 h x 43.2 w x 42.5 cm d)
Weight: 14.3 lbs (6.5 kg)
Power Supply: 100–240 VAC 50/60 Hz
Maximum power consumption:
S2410CP: 125 W
S2410P: 225 W
Maximum thermal output:
S2410CP: 426 BTU/h
S2410P: 768 BTU/h
Maximum current draw:
S2410CP: 1.15 A at 100/120 VAC, 0.575 A at 200/240 VAC
S2410P: 2.05 A at 100/120 VAC, 1.025 A at 200/240 VAC
Maximum Operating Specifications:
Temperature: 32° to 104°F (0° to 40°C)
Operating humidity: 10 to 90 percent (RH), non-condensing
Maximum Non-operating Specifications:
Storage Temperature: –4° to 158°F (–20 to 70°C)
Storage humidity: 10 to 95 percent (RH), non-condensing
Reliability:
S2410CP: MTBF 273,332 hours
S2410P: MTBF 240,105 hours

Redundancy

Link aggregation
Built-in power redundancy

Performance

Layer 2 MAC addresses:
16K
Switching fabric capacity:
480 Gbps (360 Mpps)
Link aggregation:
12 links per group, 12 groups per switch
Queues per port:
4 queues
VLANs:
1024 VLANs with 4096 tag value support
Line-rate Layer 2 switching:
all protocols, including IPv4 and IPv6
Switching latency:
300 ns (CX4 ports), 700 ns (XFP ports)

IEEE Compliance

802.1D	Bridging, STP
802.1p	L2 Prioritization
802.1Q	VLAN Tagging, Double VLAN Tagging
802.1s	Multiple Spanning Tree Protocol
802.1w	Rapid Spanning Tree Protocol
802.3ac	Frame Extensions for VLAN Tagging
802.3ad	Link Aggregation with LACP
802.3ae	10 Gigabit Ethernet
802.3ak	10 Gigabit Ethernet (10GBASE-CX4)
802.3x	Flow Control
MTU	10,240 bytes

Isilon Solutions

FORCE10 TECHNOLOGY ALLIANCE PARTNER

Isilon IQ X-Series Clustered Storage Systems

The enterprise data storage environment is in the midst of a major transformation, fueled by large and rapidly growing stores of unstructured data and the wide-spread deployment of virtualized computing and high-speed networking. Isilon IQ X-Series clustered storage helps enterprises propel critical information back into the bloodstream of their business to gain new insights, create meaningful IT operating leverage and transform information into business breakthroughs.

By combining Isilon's OneFS® operating system software with the latest advances in industry-standard hardware, Isilon delivers modular, pay-as-you-grow, enterprise-class clustered storage systems that deliver unprecedented storage scalability and performance, and dramatically reduce the cost and complexity of managing storage growth – empowering enterprises to achieve unprecedented levels of innovation and business agility.

Isilon IQ clustered storage systems deliver the industry's first and only storage system to scale up to 1.6 petabytes of capacity and provide performance of 10 GB/second in a single file system and single volume – achieving 100X the scalability and 20X the performance of traditional SAN and NAS storage systems. Powered by OneFS, the Isilon IQ family of products creates a single pool of expandable storage that is easy to install and grow – once racked, a 10, 50 or 100+ terabyte cluster takes less than 10 minutes to configure and set up, and capacity can be added on the fly in less than 60 seconds with no downtime.

And as constrained budgets put added pressure on IT departments to justify expenditures, storage solutions that protect investments in both the short- and long-term are increasingly compelling. Isilon IQ's unique architecture coupled with its intelligent software provides investment protection today, and for the future. Isilon IQ's design harnesses advancements in industry-standard CPU, memory and disk drives to deliver the best price/performance solution for businesses. Built-in TrueScale™ technology means that storage capacity, system performance and throughput can be scaled linearly or independently to meet the most demanding capacity and performance requirements. As a result, Isilon IQ can easily meet ever-changing storage and business needs while preserving the initial system investment.

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