



Sun StorEdge™ Network FC Switch-8 and Switch- 16 Best Practices

Sun StorEdge SAN 3.0 Release

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Part No. 816-2688-10
September 2001, Revision A

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Best Practices in the Sun SAN

To facilitate optimum performance in current configurations and to set up your Sun StorEdge Network FC Switch-8 and Switch-16 Version 3.0 software to allow additional features and increased functionality in supported subsequent releases, follow the configuration rules in the Configuration chapter of the *Sun StorEdge Network FC Switch-8 and Switch-16 (Version 3.0) Configuration and Installation Guide*.

A brief summary follows.

Configuration Rules Summary

Switch Fabric Rules

- Sun StorEdge Switch-8 or Switch-16
- Switch Port Types
 - SL_Port (private loop port)
 - TL_Port (translated loop port)
 - F_Port (point to point Fabric port)
 - T_Port (trunk port for switch cascading)

Zoning Rules

- SL zones
- Nameserver zones

SL zones and nameserver zones meet requirements for security and heterogeneous device connectivity on the same switch. They allow for private loop and Fabric devices to co-exist on the same switch without affecting each other.

- Multiple zones

- Hard zones

Hard zones increase security and allow for dedicated resources, better performance, better fault isolation, and reliability in cascaded switch configurations.

- Use switch port-based zoning.

You must create zones by grouping switch ports logically (port-based zoning). This kind of zoning scheme is easy to use. It allows you to create zones during switch Fabric installation and setup. You can add more storage and more hosts later.

- Create non-overlapping zones.

This provides resource sharing among all the devices in one zone. It ensures that events in one zone do not affect the reliability and performance of other zones. InterSwitch Links (ISLs) can be shared across soft zones.

- Maximum zones per 16-port to 16-port cascading = 30

- SL zones and nameserver zones must be in different hard zones. You can create hard zones to meet security and resource allocation requirements.

Cascading Rules

- No hub to switch cascading

- Long distance access, a maximum of two switches

In addition to meeting current maximum connectivity requirements for the storage platforms, this serves as the building block for more complex topologies in future SAN offerings.

- 16-port and 8-port switches can be cascaded together,

- Maximum distance = 10 kilometers

- Do not configure both local and remote storage in the same zone.

Configure local and remote storage in separate zones for disaster tolerant mirroring applications. Such configurations can also guarantee no single point of failure.

- The number of ISLs equals the number of initiators using the ISLs.

This guarantees that ISLs are not a bottleneck for I/O traffic.

- Configure at least two ISLs per cascaded configuration.

This provides a reliable configuration tolerant of at least one ISL failure.

OS Related Rules

- All hosts in a zone must be running Solaris 8, Release 4.01 or a subsequent supported version.
- You can mix Sun StorEdge PCI Single Fibre Channel Network Adapters, Sun StorEdge PCI Single Fibre Channel Network Adapter+'s, and Sun StorEdge CPCI Dual Fibre Channel Network Adapter on the host and in the switch zones.
- Host platforms:
 - Sun Enterprise™ E220R, E250, E420R, and E450 server hosts
 - Sun Enterprise E10000 server host
 - Sun Enterprise E3000-E6000 server hosts
 - Sun Enterprise E3500-E6500 server hosts
 - Sun Enterprise F3800 server host (only with the Sun StorEdge CPCI Dual Fibre Channel Adapter)
 - Sun Enterprise F4800 and F4810 server hosts
 - Sun Enterprise F6800 server host

Different classes of host platforms can co-exist in the same zone.

Device Related Rules

- Block storage, sequential storage, and file access devices are supported.
 - Sun StorEdge T3 and T3+ arrays
 - Sun StorEdge A5200 array
 - Sun StorEdge A3500FC array
 - Sun StorEdge L180 Tape Library with STK 9840 tape drives
 - Sun StorEdge L700 FC Tape Library with STK 9840 tape drives
- Configure each zone with only type of storage device.

You can configure hosts to access heterogeneous storage device by configuring zones. Different kinds of devices can co-exist in the same SAN, but they must be grouped in separate zones.

See the configuration chapter of the *Sun StorEdge Network FC Switch-8 and Switch-16 Installation and Configuration Guide* for the maximum configuration limits per zone for each device.

