Migrating to 8-Gbps FC SANs

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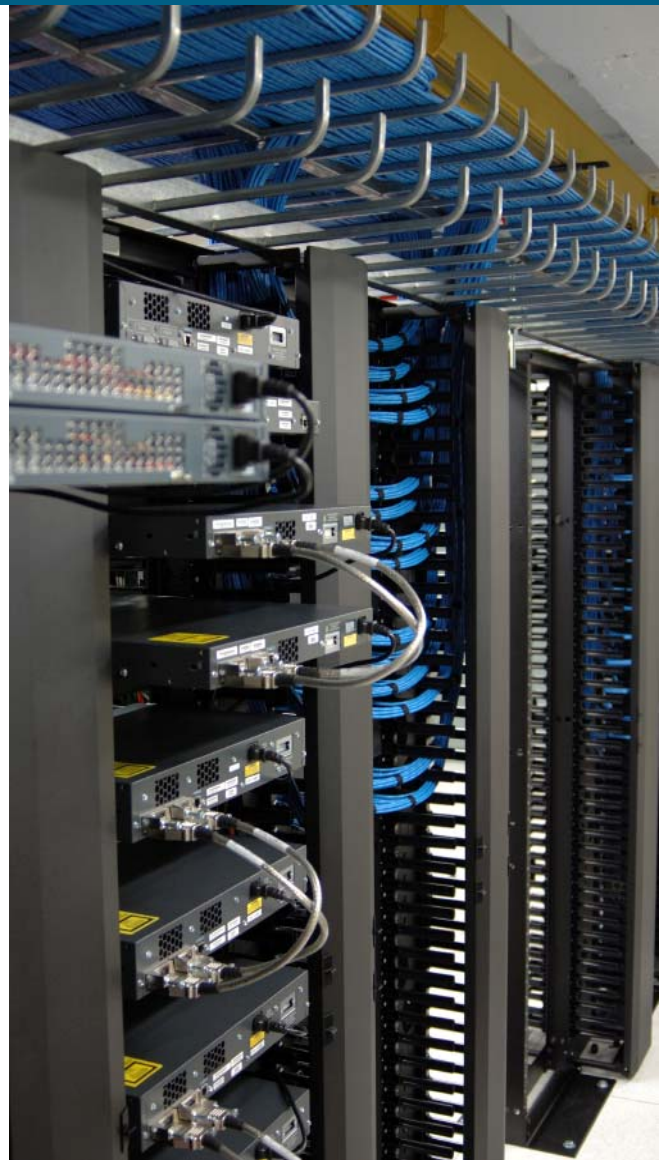
Reasons to Migrate to 8G Modules

1. Upgrade SAN for higher performance
   - Applications demanding higher performance
   - Blade Server and Virtual Machine for server consolidation
   - Higher speed Inter Switch Links (ISLs) and High-end storage
   - Higher bandwidth for greater performance
2. SAN consolidation for operational efficiency
   - Cabling, power, space, cooling savings
   - Management simplification
   - Maintenance and licensing costs reduction
   - Bandwidth preservation for existing hosts / targets

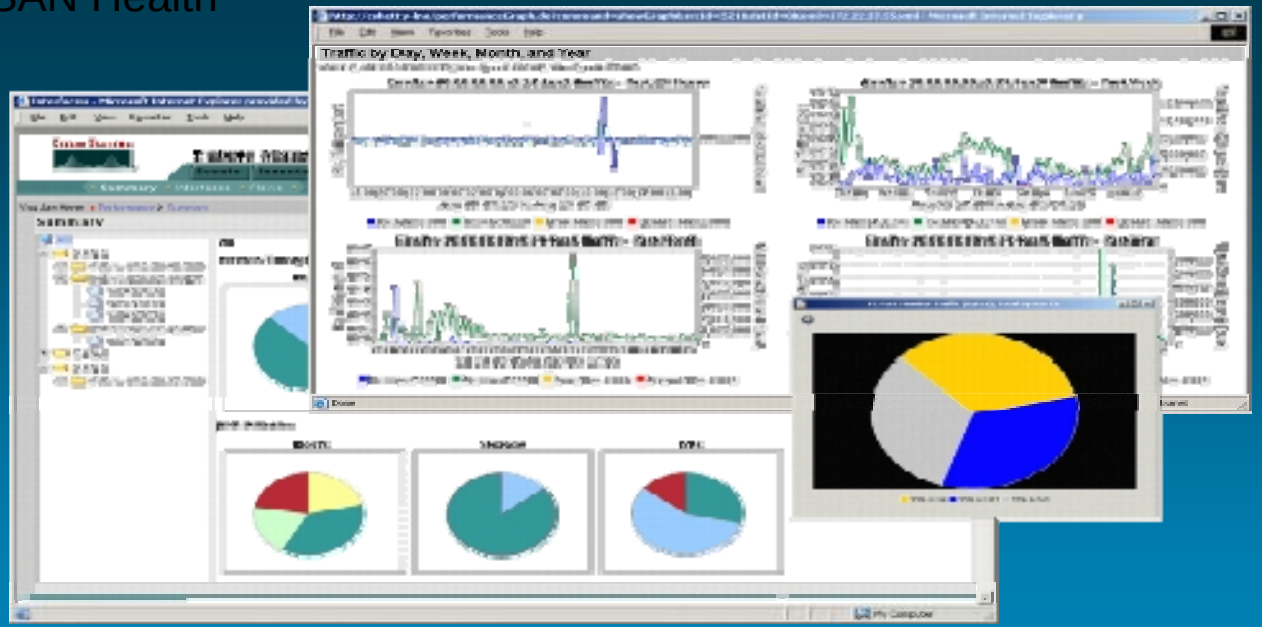


Data Center Drivers for 8G Fibre Channel

- Backup Servers
- Video Servers
- OLTP Databases
- Mainframes
- Inter-Switch Links
- Flash Drives
- Blade Servers
- Server Virtualization

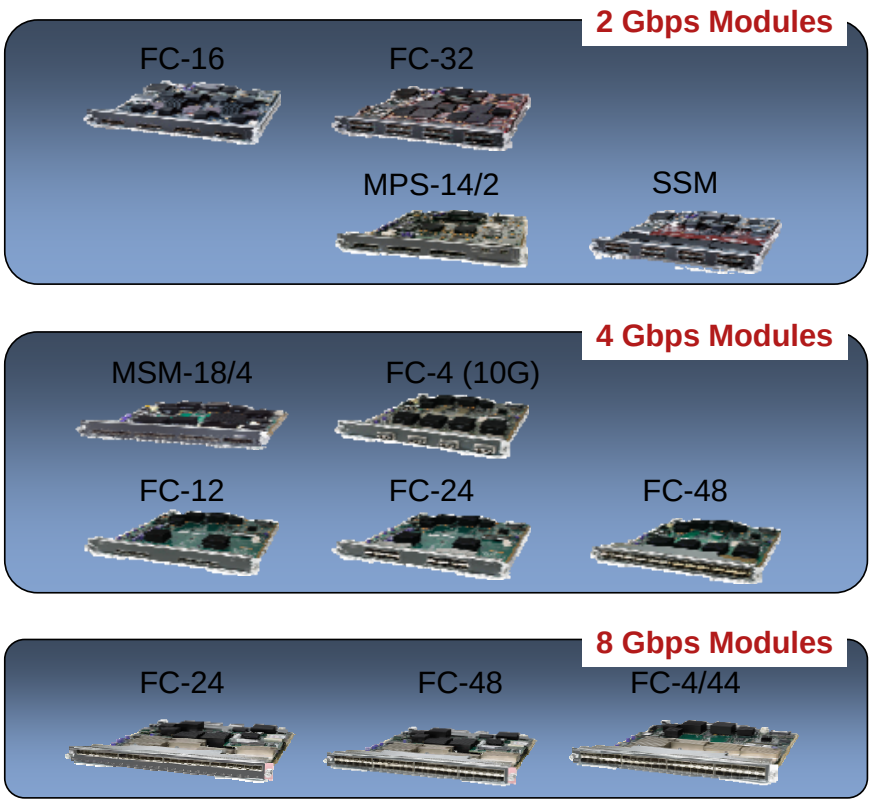
Know Your Bandwidth Requirements

- Analyze historical usage and performance data
  - Cisco MDS Fabric Manager
  - Brocade SAN Health



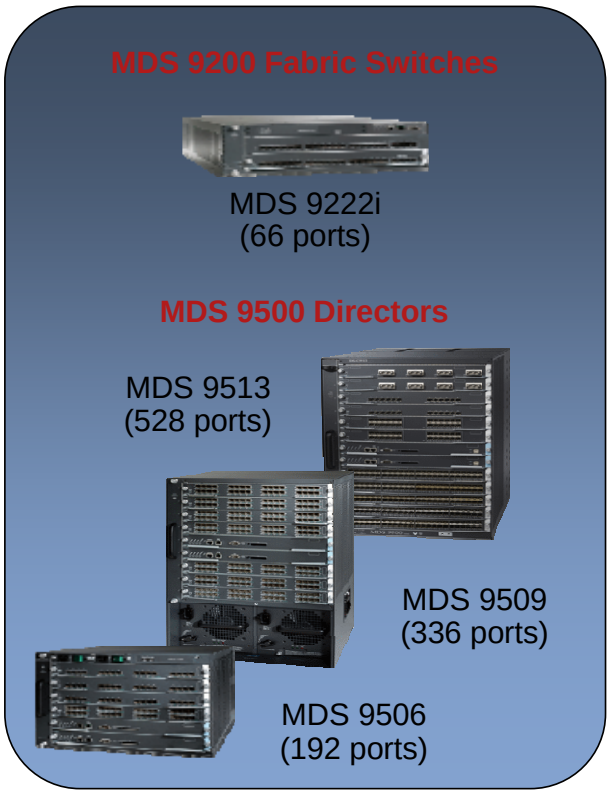
SAN Investment Protection

Only Directors / Switches with Proven Investment Protection

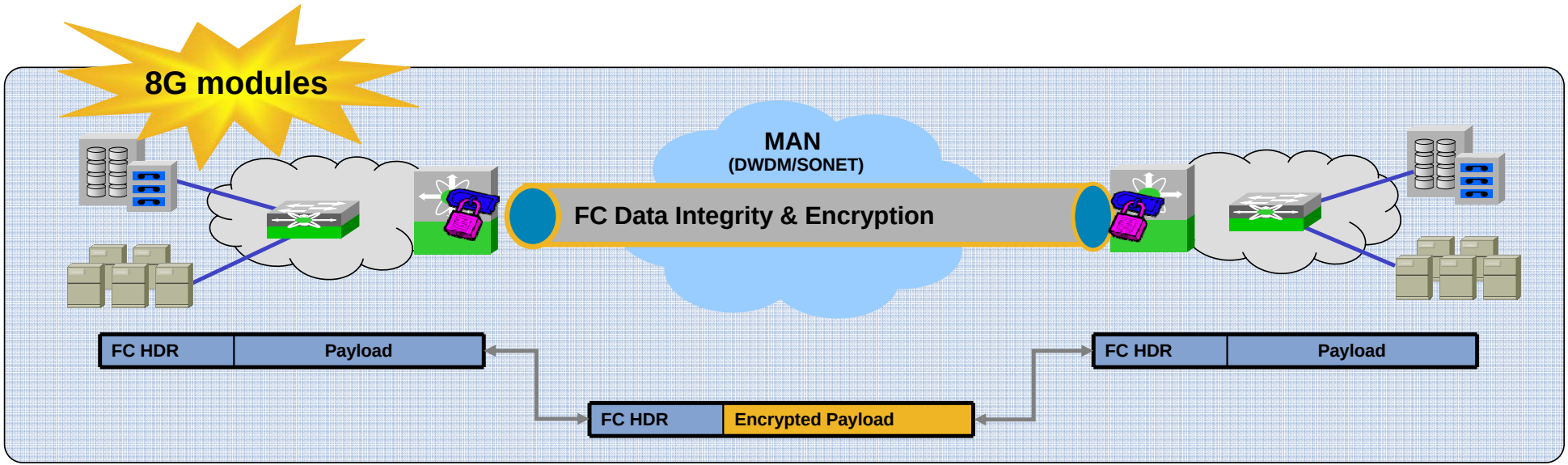


Backward and forward compatible switching modules

Common OS with consistent features



FC Link-Level Data Integrity and Encryption



- Preserve integrity and confidentiality of FC traffic over MAN
- Integrated, high performance functionality
- No change to existing SAN, enable functionality only on edge switches

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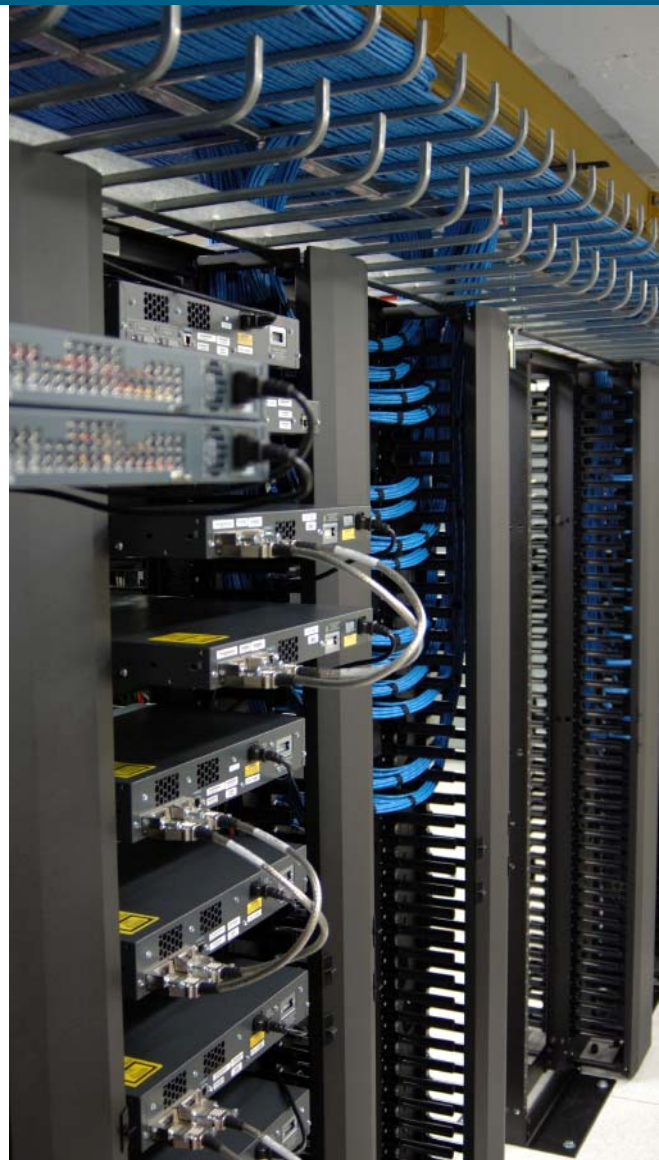


SAN Consolidation – 2G to 8G Migration

Up to 8:1 consolidation by migrating to 8G!

MDS 2G

4x MDS 9509 with 16-Port 2G Modules

MDS 9509 to MDS 9513

MDS 8G

Brocade 2G

4x Brocade 24K with 16-Port 2G Modules

Brocade 24K to MDS 9513

MDS 8G

1x MDS 9513 with 48-Port 8G Modules

McData 2G

8x McData 6040 with 2G Modules

McData 6040 to MDS 9513

MDS 8G

1x MDS 9513 with 48-Port 8G Modules

SAN Consolidation – 4G to 8G Migration

Up to 4:1 consolidation by migrating to 8G!

MDS 4G

3x MDS 9509 with 24-Port 4G Modules

MDS 9509 to MDS 9513

MDS 8G

1x MDS 9513 with 48-Port 8G Modules

Brocade 4G

2x Brocade 48K with 16-Port 4G Modules

Brocade 48K to MDS 9513

MDS 8G

1x MDS 9513 with 24-Port 8G Modules

McData 4G

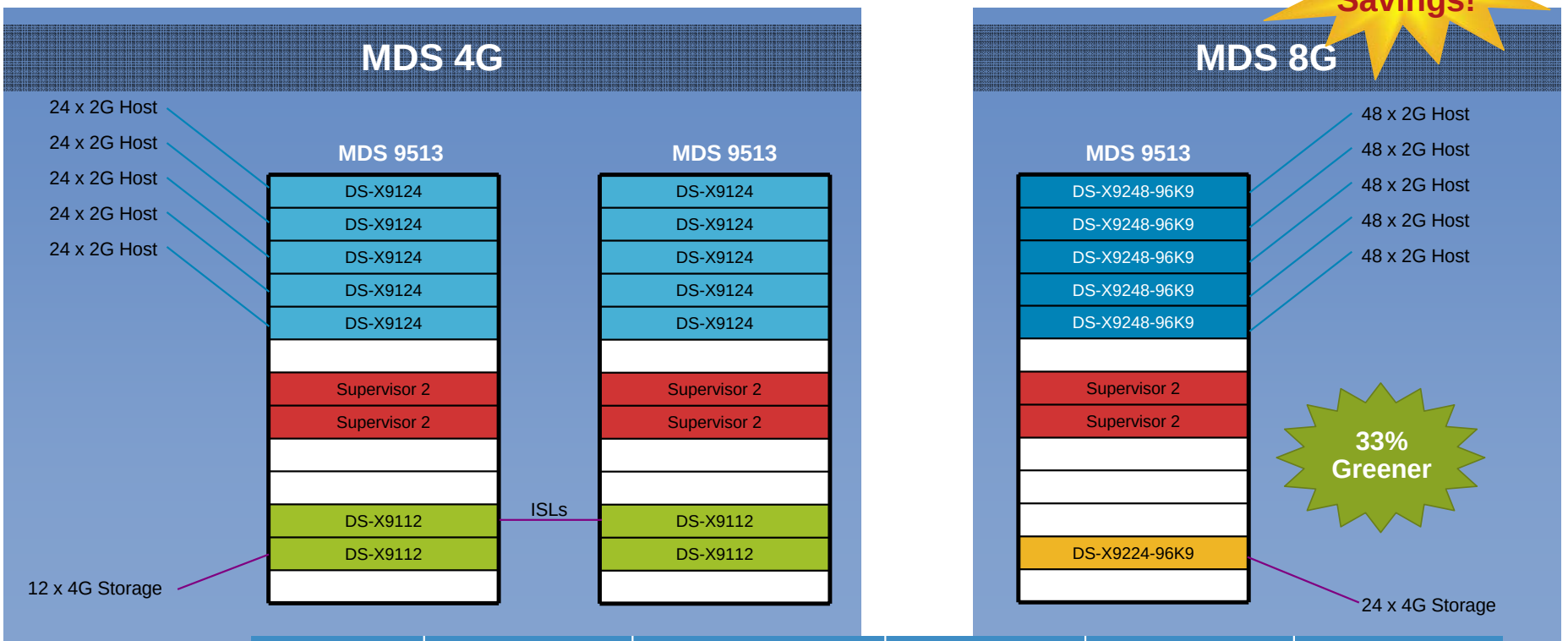
4x McData 6140 with 4G Modules

McData 6140 to MDS 9513

MDS 8G

1x MDS 9513 with 48-Port 8G Modules

Consolidate to Lower Lease Payments

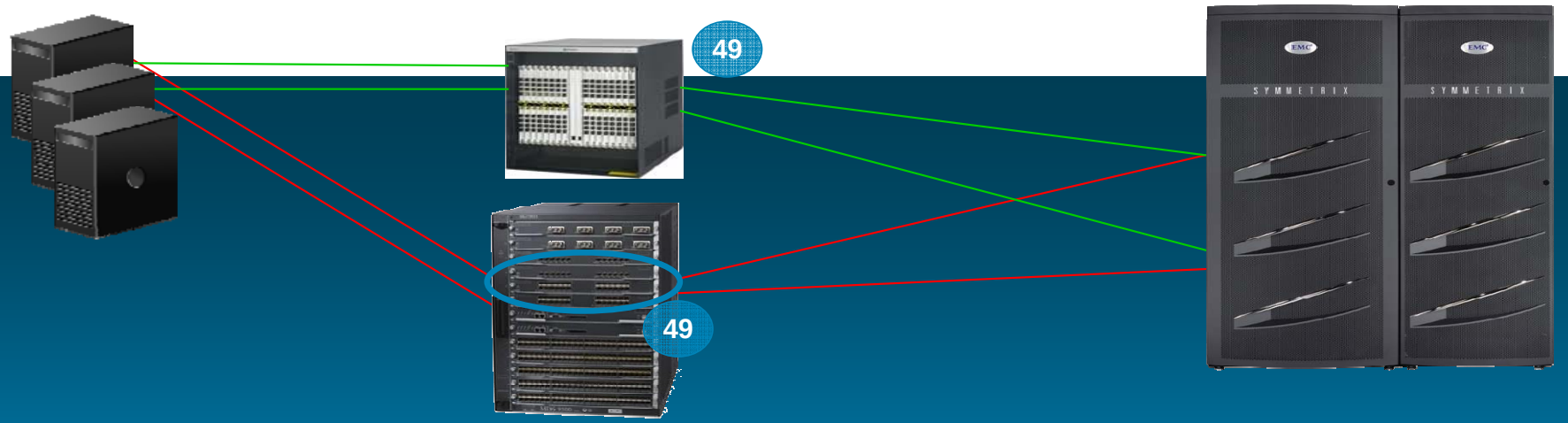


	2G Host Ports	4G Storage Ports	Oversubscription Ratio	Chassis, Licenses	Line Cards	Relative Cost
MDS 4G	240	24	5:1	2	14	$1.00
MDS 8G	240	24	5:1	1	6	$0.75

Simplified Migration: Old to New

- Persistent FC_ID: Maintain FC_ID mappings

  No need to reboot host and take application outage

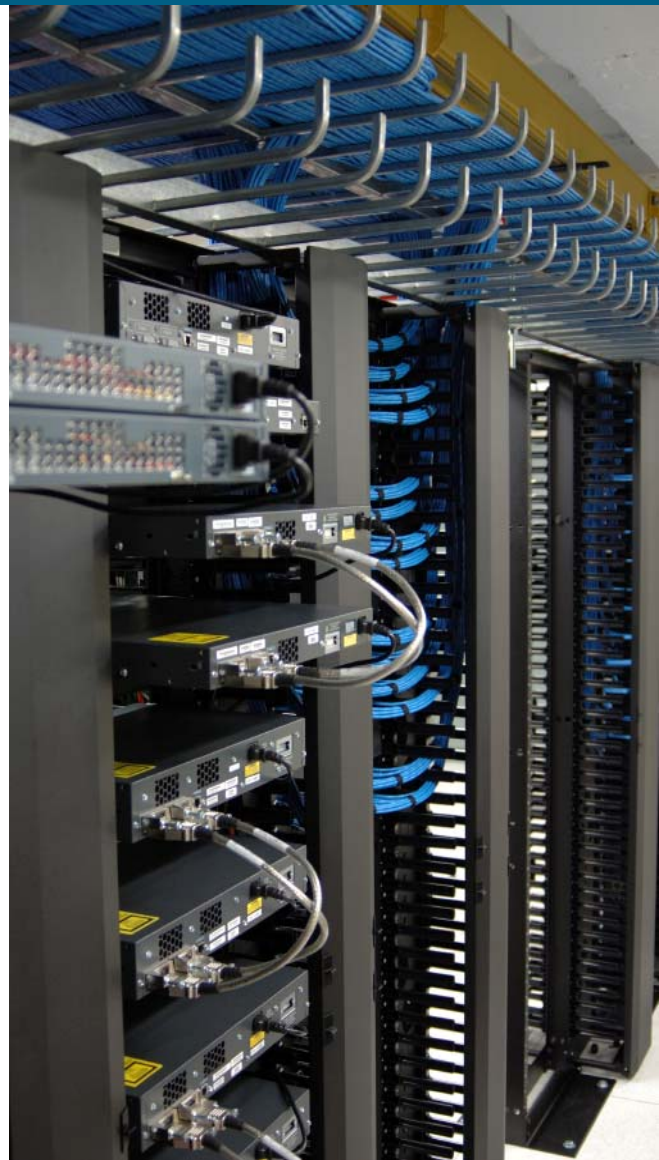


1. Install MDS 95xx in parallel to old director
2. Create VSAN w/ same switch # (domain ID) on MDS 95xx
3. Assign same FC_ID to WWNs as director to be retired
4. Quesse traffic in Fabric A – Failover to Fabric B
5. Move cables over to new director

   Restart traffic in Fabric A

Summary

1. Upgrade SAN for higher performance
   - Meet needs for demanding applications
   - Seamlessly integrate 8G modules into existing MDS 9500's
2. SAN consolidation for operational efficiency
   - Up to 8:1 consolidation over existing 2G and 4G infrastructure
   - 25% cost savings
   - 33% power savings
   - Migrate without taking application outage



Q & A

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