Setting Up Your Dell EMC SCv3000 and SCv3020 Storage System (Fibre Channel Front End)

1. Before You Begin

- **Warning!** Before you set up and operate your Dell EMC storage system, review the safety instructions that came with your storage system.

Unpack Storage Center Equipment
A Dell EMC SCv3000 series storage system includes:
- Documentation
- Storage system
- Front bezel
- Rack rails
- Power cables (2)
- USB cables (2)

2. Mount the Chassis and Optional Enclosures

- **Warning!** The chassis is heavy. Do not attempt to lift the chassis without assistance.

Mount the storage system chassis and expansion enclosures in a manner that allows for expansion in the rack and prevents the rack from becoming top-heavy. Secure the storage system chassis to the rack using the mounting screws that are located behind the latches on each chassis ear. Dell EMC recommends mounting the storage system chassis in the bottom of the rack.

3. Install the Bezel

1. Hold the bezel with the logo upright.
2. Hook the right end of the bezel into the right side of the chassis.
3. Swing the left end of the bezel toward the left side of the chassis.
4. Press the bezel into place until the release latch closes.
5. Use the key to lock the front bezel.

4. Cable the Host Servers to the Storage System

Fault domains provide fault tolerance at the storage controller level. If you are using Fibre Channel, incorporate your switch zoning strategy with the fault domains. Dell EMC recommends using redundant cabling to avoid a single point of failure.

1. Identify the protocol being used to connect the host servers to the disk array.
2. Refer to the diagram below that corresponds to the proper protocol. These cabling guidelines ensure the configuration has redundancy and failover capability.
3. Clean the Fibre Channel cables using the recommended process.

Fibre Channel IO Card Cabling
Connect the host servers and storage system to the corresponding Ethernet switches.

**Fibre Channel 4 Port Configuration**

1. Install the Fibre Channel HBAs in the host servers.
2. Connect each host server to both switches.
   - Connections shown in orange belong to fault domain 1.
   - Connections shown in blue belong to fault domain 2.
3. Connect Fibre Channel HBA to switch 1.
   - Top storage controller: port 1 to switch 1
   - Top storage controller: port 2 to switch 1
   - Bottom storage controller: port 1 to switch 1
   - Bottom storage controller: port 2 to switch 1
4. Connect Fibre Channel HBA to switch 2.
   - Top storage controller: port 2 to switch 2
   - Bottom storage controller: port 2 to switch 2

**Fibre Channel 2 Port Configuration**

1. Install the Fibre Channel HBAs in the host servers.
2. Connect each host server to both switches.
   - Connections shown in orange belong to fault domain 1.
   - Connections shown in blue belong to fault domain 1.
3. Connect Fibre Channel HBA to switch 1.
   - Top storage controller: port 1 to switch 1
   - Bottom storage controller: port 1 to switch 1
4. Connect Fibre Channel HBA to switch 2.
   - Top storage controller: port 2 to switch 2
   - Bottom storage controller: port 2 to switch 2

5. Connect to Management Network

The Ethernet management interface of each storage controller must be connected to a management network. The Ethernet management port provides access to the Storage Center and is used to send emails, alerts, SNMP traps, and support data.

1. Connect the Ethernet management port on the top storage controller to the Ethernet switch.
2. Connect the Ethernet management port on bottom storage controller to the Ethernet switch.

ISCSI Mezzanine Card Cabling
If the storage system includes an ISCSI mezzanine card, connect the host servers and storage system to Ethernet switches.

**ISCSI 4 Port Mezzanine Card Configuration**

1. Connect each host server to both Ethernet switches.
   - Connections shown in orange belong to fault domain 1.
   - Connections shown in blue belong to fault domain 2.
2. Connect ISCSI fault domain 1 (in orange) to switch 1.
   - Top storage controller: port 1 to switch 1
   - Bottom storage controller: port 3 to switch 1
3. Connect ISCSI fault domain 2 (in blue) to switch 2.
   - Top storage controller: port 2 to switch 2
   - Bottom storage controller: port 2 to switch 2
4. Connect ISCSI fault domain 2 (in blue) to switch 2.
   - Top storage controller: port 2 to switch 2
   - Bottom storage controller: port 4 to switch 2
To connect the Storage Center to the Fibre Channel SAN, follow these steps:

1. **Establish the Connection**: Ensure that the necessary software is installed on the hosts and the Storage Center. Install the host drivers and configure the SAN. Then, connect the hosts to the SAN through the Storage Center.

2. **Assign IP Addresses**: Assign IP addresses to the hosts and the Storage Center. This step is crucial for communication between the hosts and the Storage Center.

3. **Configure Host Access**: Configure the host access to the Storage Center. This is typically done through the Storage Center's interface. Ensure that the correct IP addresses are assigned to the hosts.

4. **Verify the Connection**: Verify the connection by checking the Storage Center logs and the host logs. Ensure that the connection is stable and that the data transfer is occurring.

5. **Optimize Performance**: Optimize the performance of the connection by adjusting the settings on the Storage Center. This may include adjusting the RAID settings or the cache size.

6. **Security Measures**: Implement security measures such as encryption and firewalls to protect the data being transferred.

7. **Monitor Performance**: Monitor the performance of the connection over time. This will help you identify any issues and improve the connection as needed.

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**Notes, Cautions, and Warnings**

- **CAUTION**: Make sure that the power switches are in the OFF position before plugging in the power cables.

- **WARNING**: Ensure that all cables are securely attached to avoid damage or loss of data.

- **NOTE**: If using jumbo frames, enable and configure jumbo frames on all devices in the data path.