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

Unpack Storage Center Equipment
An SC5020 and SC5020F storage system includes:
- Documentation
- Storage system with drives
- Rack rails
- USB cables (2)
- Power cables (2)
- Front bezel

1. Before You Begin
Develop a Configuration Plan
Before installing the storage hardware, develop a configuration plan where you can record host server information, switch information, and network information.

Record System Information
- System management IPv4 address for Storage Center
- IPv4 address of the MGMT port on each storage controller
- Domain name
- DNS server address
- Additional IPv4 addresses if the storage system has iSCSI I/O ports

Consider Plans for Multipath/Failover
Redundancy is provided by fault domains, which allow alternate paths if a path fails. Fault domains are determined by the number of independent Fibre Channel fabrics or iSCSI networks. Each switch carries a separate fault domain. If a port fails, any port within the same fault domain takes over for the failed port. Dell recommends using multipathing, so that volumes are mapped to ports in more than one fault domain.

More Information
For operating system, host bus adapter (HBA), and switch requirements, refer to the Dell Storage Compatibility Matrix on the Dell Tech Center at http://en.community.dell.com/techcenter/storage.

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 recommends mounting the storage system chassis in the bottom of the rack.

3. Install the Front 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
The SC5020 storage system supports Fibre Channel, iSCSI, or SAS protocols to connect the Storage Center to host servers. The SC5020F storage system supports Fibre Channel or iSCSI protocols to connect the Storage Center to host servers. 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 recommends using redundant cabling to avoid a single point of failure.

1. Identify the protocol being used to connect the host servers to the storage system.
2. Refer to the diagram below that corresponds to the proper protocol. These cabling guidelines ensure the configuration has redundancy and failover capability. For more information, contact Dell Technical Support.

Fibre Channel and iSCSI HBA Cabling
Install the Fibre Channel or iSCSI HBAs in the host servers and connect the host servers and storage system to the corresponding Fibre Channel or Ethernet switches.

Fibre Channel 4 Port Configuration
iSCSI 4 Port Configuration
1. For Fibre Channel 4 Port configurations, install Fibre Channel HBAs into the host servers.
   - For iSCSI 4 Port configurations, install iSCSI HBAs or network interface controllers (NICs) dedicated for iSCSI traffic into the host servers.
2. Connect each host server to the two switches:
   - Connections shown in orange belong to fault domain 1.
   - Connections shown in blue belong to fault domain 2.
3. Connect fault domain 1 (in orange) to switch 1:
   - Top storage controller: port 1 to switch 1
   - Top storage controller: port 2 to switch 2
   - Bottom storage controller: port 1 to switch 1
   - Bottom storage controller: port 2 to switch 2
   - Top storage controller: port 3 to switch 1
   - Bottom storage controller: port 3 to switch 1

4. Connect fault domain 2 (in blue) to switch 2:
   - Top storage controller: port 1 to switch 2
   - Top storage controller: port 2 to switch 2
   - Top storage controller: port 3 to switch 1
   - Bottom storage controller: port 3 to switch 1
   - Bottom storage controller: port 4 to switch 2
   - Bottom storage controller: port 5 to switch 1

5. G. 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.
To connect SC400, SC420, or SC420F expansion enclosures to the storage system:

1. Connect port 1 on the top storage controller to port 1 on the top EMM of the first expansion enclosure.
2. Connect the remaining expansion enclosures in series from port 2 to port 1 using the top EMMs.
3. Connect port 2 on the top EMM of the last expansion enclosure to port 2 on the bottom storage controller.

To connect SC460 expansion enclosures to the storage system:

1. Connect port 1 on the top storage controller to port 1 on the left EMM of the first expansion enclosure.
2. Connect the remaining expansion enclosures in series from port 2 to port 1 using the left EMMs.
3. Connect port 3 on the left EMM of the last expansion enclosure to port 2 on the bottom storage controller.

**NOTE:** If the storage system is installed without expansion enclosures, do not interconnect the back-end SAS ports on the storage controllers.

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

1. Connect the power cables to both power supply/cooling fan modules in the storage system chassis.
2. Use the straps to secure the power cables to the storage system chassis.
3. Plug the other end of the power cables into a grounded electrical outlet or a separate power source such as an uninterrupted power supply (UPS) or a power distribution unit (PDU).

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**NOTE:** The Dell Storage Manager Client provides access to the initial setup wizards. The wizards help you remotely discover and configure storage systems.

Install and Start the Dell Storage Manager Client

1. Log in to the Dell Digital Locker at [http://en.community.dell.com/techcenter/storage](http://en.community.dell.com/techcenter/storage) and download the Windows or Linux version of the Dell Storage Manager Client.
2. Install the supported Fibre Channel HBA drivers on the host server and make sure that HBAs have the latest supported firmware installed.
3. Install the supported iSCSI HBA or NIC drivers on the host servers and make sure that the HBAs or NICs have the latest supported firmware installed.
4. Install the supported Fibre Channel HBA drivers on the host server and make sure that HBAs have the latest supported firmware installed.

**CAUTION:** Do not bind NICs to the software iSCSI initiator.

Discover and Configure Storage Center Wizard

1. Click the Discover and Configure Uninitialized Storage Centers link in the Discover and Configure Storage Center wizard.
2. Follow the steps in the wizard to discover and configure Storage Centers.
3. Create a Maxbraid port for each iSCSI HBA or NIC to be used for iSCSI.
4. Assign IP addresses for each iSCSI port to match the subnet for the VIF domain.
5. Assign IP addresses for each iSCSI port to match the subnet for each fault domain.
6. If you are using the software iSCSI initiator and iSCSI offload is enabled on the ESXi host, the hardware iSCSI initiator must be disabled.

**CAUTION:** Do not bind NICs to the software iSCSI initiator.

**CAUTION:** Do not bind NICs to the software iSCSI initiator.

## Connect Power Cables to the Storage System

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

1. Connect the power cables to both power supply/cooling fan modules in the storage system chassis.
2. Use the straps to secure the power cables to the storage system chassis.
3. Plug the other end of the power cables into a grounded electrical outlet or a separate power source such as an uninterrupted power supply (UPS) or a power distribution unit (PDU).

**Notes, Cautions, and Warnings**

- **NOTE** indicates important information that helps you make better use of your product.
- **CAUTION** indicates potential damage to hardware or loss of data and tells you how to avoid the problem.
- **WARNING** indicates a potential for property damage, personal injury, or death.