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)

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

Consider Plans for Multipath/Failover
Redundancy is provided by fault domains, which allow alternate paths if a path fails. Dell EMC 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 located in the Knowledge Base at www.dell.com/support.

1 | Before You Begin

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

Mount the Chassis and Optional Enclosures
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.

3 | Install the Bezel

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.

4 | Cable the Host Servers to the Storage System

Fault domain provide fault tolerance at the storage controller level. 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 disk array.
2. Refer to the diagram below for cabling guidelines that ensure the configuration has redundancy and failover capability.

SAS I/O Card Cabling
Directly connect the host servers to the storage system.

SAS 4 Port Configuration
1. Connect SAS fault domain 1 (in orange) to server 1.
   - Top storage controller: port 1 to port on server 1
   - Bottom storage controller: port 1 to port on server 1
2. Connect SAS fault domain 2 (in blue) to server 2.
   - Top storage controller: port 2 to port on server 2
   - Bottom storage controller: port 2 to port on server 2
3. Connect SAS fault domain 3 (in gray) to server 3.
   - Top storage controller: port 3 to port on server 3
   - Bottom storage controller: port 3 to port on server 3
   - Top storage controller: port 4 to port on server 4
   - Bottom storage controller: port 4 to port on server 4

More Information
For operating system, host bus adapter (HBA), and switch requirements, refer to the Dell Storage Compatibility Matrix located in the Knowledge Base at www.dell.com/support.

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
   - Top storage controller: port 3 to switch 1
   - Bottom 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
   - Top storage controller: port 4 to switch 2
   - Bottom storage controller: port 2 to switch 2
   - Bottom storage controller: port 4 to switch 2
Setting Up Your Dell EMC SCv3000 and SCv3020 Storage System (Front-End SAS)

To add capacity to your storage system, you can connect SCv300, SCv320, or SCv360 expansion enclosures to an SCv3000 series storage system.

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

6 | Cable the Backend

To connect SCv300 or SCv320 expansion enclosures:

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 EMM.

To connect SCv360 expansion enclosures:

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 3 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.

7 | Connect the Power Cables

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/cooler units in the storage system chassis.
2. Use the velcro 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 uninterruptible power supply (UPS) or a power distribution unit (PDU).

8 | Power on System Components

1. Power on any network switches, routers, or other network devices.
2. Power on any expansion enclosures that might be a part of the system.
3. Power on the storage system by turning on both power supply/cooler units.

9 | Discover and Configure the Storage Center

The Unisphere web interface provides access to the initial setup wizards. The wizards help you remotely discover and configure storage systems.

To access the Initialize Storage Center wizard from the Data Collector:

1. Open a web browser.
2. Type the host name or IP address of the Data Collector in the browser using the following format: http://DataCollectorHostnameOrIPAddress:8083.
3. Type the user name and password of a Data Collector user in the User Name and Password fields.
4. Click Log In.
5. From the Unisphere Central Home page, click (New), and select Initialize Storage Center.
6. The Initialize Storage Center wizard opens and the Introduction page is displayed.
7. Follow the prompts in the Initialize Storage Center wizard to proceed.

To access the Initialize Storage Center wizard by connecting directly to a Storage Center:

NOTE: The Storage Center must be installed on a DHCP-enabled network.

1. Open a web browser.
2. Type the service tag or IP address of the Storage Center in the browser using the following format: http://StorageCenterServiceTagOrIPAddress.
3. Type Admin in the User Name field.
4. Type mmm in the Password field.
5. Click Log In.
6. The web browser connects to the Data Collector and displays the Unisphere Central Home page.
7. From the Unisphere Central Home page, click and select Initialize Storage Center.
8. The Initialize Storage Center wizard opens and the Introduction page is displayed.
9. Follow the prompts in the Initialize Storage Center wizard to proceed.

CAUTION: Do not power off the storage system until it can be discovered with the Storage Center and configured using the Initialize Storage Center wizard.

10 | Attach the Host Servers (SAS)

Refer to the Dell EMC Storage Compatibility Matrix for a list of supported SAS network adapters.

Windows and Linux Hosts

1. Install the HBAs or network adapters, install the drivers, and make sure that the latest supported BIOS is installed.
2. Install SAS HBAs in the host servers.
3. Install supported HBA drivers and make sure that HBAs have the latest supported firmware.
4. Use the SAS cabling diagram to cable the host servers directly to the storage controllers.
5. Using Storage Manager, click Configure this host to access a Storage Center and log in to the Storage Center. The Setup localhost for Storage Center wizard opens.
6. Open the Storage Manager Client Welcome Screen.
7. Follow the steps in the wizard to configure the host to access the Storage Center and configure best practices for performing I/O.

Windows and Linux Hosts

1. Install the HBAs or network adapters, install the drivers, and make sure that the latest supported BIOS is installed.
2. Install the iSCSI HBAs or network adapters dedicated for iSCSI traffic in the host servers.
3. Use the iSCSI cabling diagram to cable the host servers to switches. Connecting host servers directly to the storage system without using Ethernet switches is not supported.
4. Assign IP addresses to each iSCSI port to match the subnets for each fault domain.

CAUTION: Make sure to assign the correct IPv4 addresses to the HBAs or network adapters. Assigning IPs to the wrong ports can cause connectivity issues.

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

VMware ESXi Hosts

Install the iSCSI HBAs or network adapters (NICs) and make sure that the latest supported BIOS is installed.

1. Install the iSCSI HBAs or NICs dedicated for iSCSI traffic in the ESXi hosts.
2. Use the iSCSI cabling diagram to cable the ESXi hosts to switches. Connecting ESXi hosts directly to the storage system without using Ethernet switches is not supported.
3. Create a VMkernel port for each iSCSI HBA or NIC to be used for iSCSI.
4. Assign IP addresses for each adapter port to match the subnets for each fault domain.

CAUTION: Make sure to assign the correct IPv4 addresses to the HBAs or network adapters. Assigning IPs to thewrong ports can cause connectivity issues.

NOTE: If using jumbo frames, enable and configure jumbo frames on all devices in the data path: adapter ports, switches, and storage systems.

1. Install the latest supported iSCSI HBA drivers and make sure that the latest supported firmware is installed.
2. Install supported iSCSI HBAs in the host servers.
3. Install supported HBA drivers and make sure that HBAs have the latest supported firmware.
4. Use the iSCSI cabling diagram to cable the host servers to switches. Connecting host servers directly to the storage system without using Ethernet switches is not supported.
5. Assign IP addresses to each iSCSI port to match the subnets for each fault domain.

CAUTION: Make sure to assign the correct IPv4 addresses to the HBAs or network adapters. Assigning IPs to the wrong ports can cause connectivity issues.

NOTE: If using jumbo frames, enable and configure jumbo frames on all devices in the data path: adapter ports, switches, and storage systems.

1. Install the latest supported iSCSI HBA drivers and make sure that the latest supported firmware is installed.
2. Install supported iSCSI HBAs in the host servers.
3. Install supported HBA drivers and make sure that HBAs have the latest supported firmware.

VMware ESXi Hosts

1. Install the iSCSI HBAs or network adapters in the host servers.
2. Use the iSCSI cabling diagram to cable the ESXi hosts to switches. Connecting ESXi hosts directly to the storage system without using Ethernet switches is not supported.
3. Create a VMkernel port for each iSCSI HBA or NIC to be used for iSCSI.
4. Assign IP addresses for each adapter port to match the subnets for each fault domain.

CAUTION: Make sure to assign the correct IPv4 addresses to the HBAs or network adapters. Assigning IPs to the wrong ports can cause connectivity issues.

NOTE: If using jumbo frames, enable and configure jumbo frames on all devices in the data path: adapter ports, switches, and storage systems.

1. Install the latest supported iSCSI HBA drivers and make sure that the latest supported firmware is installed.
2. Install supported iSCSI HBAs in the host servers.
3. Install supported HBA drivers and make sure that HBAs have the latest supported firmware.

VMware ESXi Hosts

1. Install the iSCSI HBAs or network adapters in the host servers.
2. Use the iSCSI cabling diagram to cable the ESXi hosts to switches. Connecting ESXi hosts directly to the storage system without using Ethernet switches is not supported.
3. Create a VMkernel port for each iSCSI HBA or NIC to be used for iSCSI.
4. Assign IP addresses for each adapter port to match the subnets for each fault domain.

CAUTION: Make sure to assign the correct IPv4 addresses to the HBAs or network adapters. Assigning IPs to the wrong ports can cause connectivity issues.

NOTE: If using jumbo frames, enable and configure jumbo frames on all devices in the data path: adapter ports, switches, and storage systems.

1. Install the latest supported iSCSI HBA drivers and make sure that the latest supported firmware is installed.
2. Install supported iSCSI HBAs in the host servers.
3. Install supported HBA drivers and make sure that HBAs have the latest supported firmware.

VMware ESXi Hosts

1. Install the iSCSI HBAs or network adapters in the host servers.
2. Use the iSCSI cabling diagram to cable the ESXi hosts to switches. Connecting ESXi hosts directly to the storage system without using Ethernet switches is not supported.
3. Create a VMkernel port for each iSCSI HBA or NIC to be used for iSCSI.
4. Assign IP addresses for each adapter port to match the subnets for each fault domain.

CAUTION: Make sure to assign the correct IPv4 addresses to the HBAs or network adapters. Assigning IPs to the wrong ports can cause connectivity issues.

NOTE: If using jumbo frames, enable and configure jumbo frames on all devices in the data path: adapter ports, switches, and storage systems.

1. Install the latest supported iSCSI HBA drivers and make sure that the latest supported firmware is installed.
2. Install supported iSCSI HBAs in the host servers.
3. Install supported HBA drivers and make sure that HBAs have the latest supported firmware.

VMware ESXi Hosts

1. Install the iSCSI HBAs or network adapters in the host servers.
2. Use the iSCSI cabling diagram to cable the ESXi hosts to switches. Connecting ESXi hosts directly to the storage system without using Ethernet switches is not supported.
3. Create a VMkernel port for each iSCSI HBA or NIC to be used for iSCSI.
4. Assign IP addresses for each adapter port to match the subnets for each fault domain.

CAUTION: Make sure to assign the correct IPv4 addresses to the HBAs or network adapters. Assigning IPs to the wrong ports can cause connectivity issues.

NOTE: If using jumbo frames, enable and configure jumbo frames on all devices in the data path: adapter ports, switches, and storage systems.