

Dell™ SC200/SC220 Storage Enclosures

Getting Started With Your System



Notes, Cautions, and Warnings



NOTE: A NOTE indicates important information that helps you make better use of your Storage Center.



CAUTION: A CAUTION indicates potential damage to hardware or loss of data if instructions are not followed.



WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

Contacting Dell Technical Support Services

For technical support, go to support.dell.com/compellent/.

Information in this document is subject to change without notice.

© 2012 Dell Inc. All rights reserved.

Reproduction of these materials in any manner whatsoever without the written permission of Dell Inc. is strictly forbidden.

Trademarks used in this text: *Dell* and the *DELL* logo.

Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Dell Inc. disclaims any proprietary interest in trademarks and trade names other than its own.

Regulatory Model Series E03J
Regulatory Model Series E04J

September 2012 P/N 1C9X5 Rev. A00

Installation and Configuration



WARNING: Before performing the following procedure, review the safety instructions that came with all Storage Center components.

Unpacking the System



NOTE: Unpacking, installing, and deploying your Storage Center may be done only by a certified service technician.

Before you begin, make sure the site where you intend to set up and use the Storage Center has the following:

- Standard power from an independent source or a rack power distribution unit with a UPS.
- Storage Center with the latest firmware, BIOS, and drivers. Contact your supplier for the correct software versions.

Installation Overview

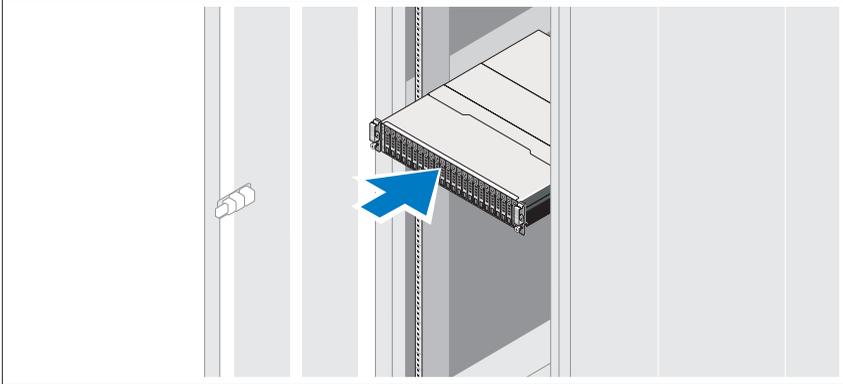
The installation process follows the general steps below. For detailed information, refer to vendor documentation supplied with the equipment.



CAUTION: If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient temperature. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T_{ma}) specified by the manufacturer. For more information, see "Technical Specifications" on page 8.

- 1 Assemble the rails following the safety instructions and the rack installation instructions provided with your system.
- 2 Install network switches, as applicable.
- 3 Unpack the Storage Center controllers.
- 4 Unpack and install the IO cards into the Storage Center controllers.
- 5 Install the Storage Center controllers into the rack.
- 6 Unpack the enclosures.
- 7 Install the enclosures into the rack.

- Always load the rack from the bottom up for weight stability.
- You can allow room for expansion if you have fewer than the maximum number of enclosures.



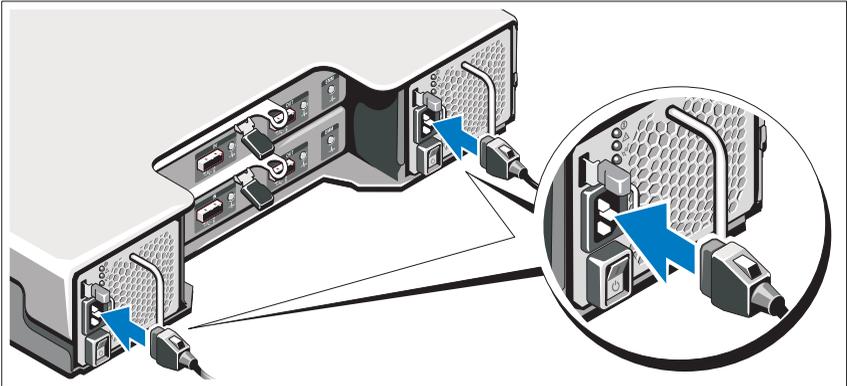
8 Unwrap and insert each drive into the enclosure one at a time.

- Protect the drive from static discharge.
- Handle drives by the edges of the frame.



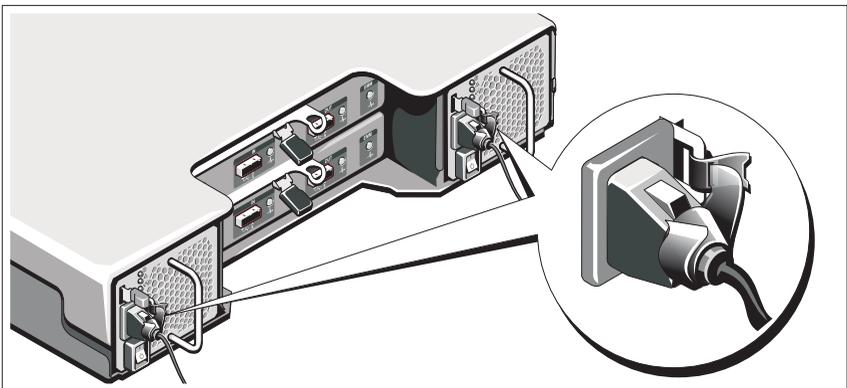
CAUTION: If the enclosure system operates for more than a few minutes with missing drives, the enclosure can overheat, causing power failure and data loss. Such use may invalidate the warranty.

Connecting the Power Cables



- 1 Ensure that the power switch is in the OFF position before connecting the power cables.
- 2 Connect the enclosure power cables to the rack power.

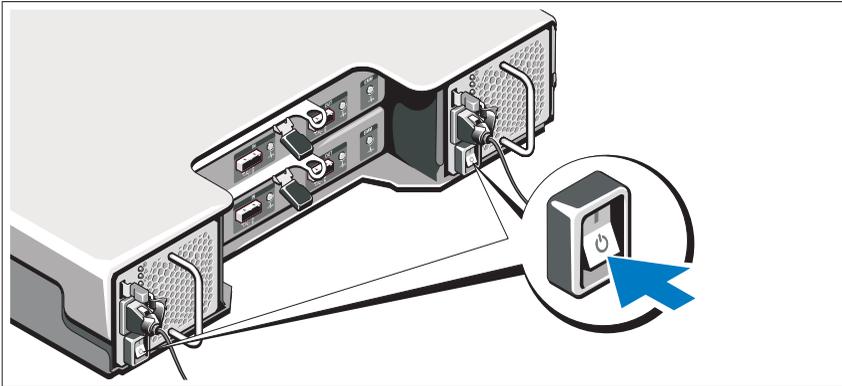
Securing the Power Cables



- 1 Bend the power cables as shown in the illustration and secure the cables firmly to the bracket using the strap provided.

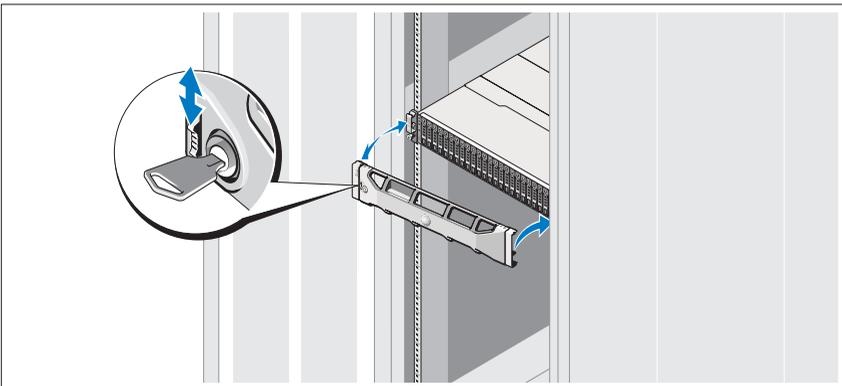
- 2 Plug the other end of the power cables into a grounded electrical outlet or a separate power source such as an uninterruptible power supply (UPS) or a power distribution unit (PDU).

Location of Power Button



 **NOTE:** Do not power up the enclosure until all Storage Center components are racked and cabled.

Installing the Optional Bezel



- Install the bezel (optional).

Other Information You May Need



WARNING: See the safety and regulatory information that shipped with your Storage Center components. Warranty information may be included within this document or as a separate document.

- The rack documentation included with your rack solution describes how to install your system into a rack.
- The *Storage Center Connectivity Guide* provides information about cabling all Storage Center hardware components.
- The *Storage Center System Setup Guide* provides instructions for configuring a new Storage Center using the System Manager Setup Wizard.
- The *Storage Center System Manager Administrator's Guide* describes how to manage a Storage Center.

NOM Information (Mexico Only)

The following information is provided on the device described in this document in compliance with the requirements of the official Mexican standards (NOM):

Importer:	Dell Inc. de México, S.A. de C.V Paseo de la Reforma 2620-11 ° Piso Col. Lomas Atlas 11950 México, D.F.
Model number:	E04J
Supply voltage:	100–240 V CA
Frequency:	50/60 Hz
Current consumption:	8.6 A

Technical Specifications

Drives	
SAS hard drives	SC200: Up to 12 3.5-inch SAS hot-swappable hard drives (6.0 Gbps) SC220: Up to 24 2.5-inch SAS hot-swappable hard drives (6.0 Gbps)
Enclosure Management Modules (EMMs)	
EMMs	Two hot-swappable modules with temperature sensors and an audio alarm
Connectivity	
Configurations	Storage Center supports up to 168 drives in each redundant-path enclosure chain Each SC8000 controller supports up to 6 enclosure chains
Redundant Array of Independent Disks (RAID)	
Controller	Dell Compellent SC8000

Redundant Array of Independent Disks (RAID) *(continued)*

Management	RAID management using Storage Center System Manager version 6.2 or later
------------	--

Back-Plane Board

Connectors	<ul style="list-style-type: none">• SC200: 12 SAS hard-drive connectors• SC220: 24 SAS hard-drive connectors• Two power supply/cooling fan module connectors• Two sets of EMM connectors• One control panel connector for front LEDs
------------	--

Sensors	Two temperature sensors
---------	-------------------------

Back-Panel Connectors (per EMM)

SAS connectors	SAS A and B connectors for connection to the controller and for expansion to an additional enclosure NOTE: SAS connectors are SFF-8086/SFF-8088 compliant
----------------	---

Serial connector	One 6-pin UART mini-DIN connector NOTE: For engineering use only
------------------	--

LED Indicators

Front panel	<ul style="list-style-type: none">• One two-color LED indicator for system status• One single-color LED indicators for power status
-------------	--

Hard-drive carrier	<ul style="list-style-type: none">• One single-color activity LED• One two-color LED status indicator per drive
--------------------	--

EMM	Three two-color LED status indicators, one each for the two EMM SAS ports and one for the EMM status
-----	--

LED Indicators *(continued)*

Power supply/cooling fan	Three LED status indicators for power supply status, power supply/cooling fan fault status, and AC status
--------------------------	---

Power Supplies

AC power supply (per power supply)

Wattage	700 W
Voltage	100–240 VAC (8.6 A–4.3 A)
Heat dissipation	SC200: 191-147 W SC220: 133-114 W
Maximum inrush current	Under typical line conditions and over the entire system ambient operating range, the inrush current may reach 55 A per power supply for 10 ms or less

Available Hard Drive Power (Per Slot)

Supported hard drive power consumption (continuous)	SC200: Up to 1.16 A at +5 V, Up to 1.6 A at +12 V SC220: Up to 1.2 A at +5 V, Up to 0.5 A at +12 V
---	---

EMM Power (Per Slot)

Maximum power consumed by EMM	SC200: 11 W at +12 V SC220: 14 W at +12 V
Maximum available power	100 W at +12 V
Maximum available power	1 W at +5 V (standby)

Physical

Height	8.68 cm (3.41 inches)
Width	44.63 cm (17.57 inches)
Depth	SC200: 59.4 cm (23.4 inches) SC220: 54.1 cm (21.3 inches)

Physical *(continued)*

Weight (maximum configuration)	SC200: 29.2 kg (64 lb)
	SC220: 24 kg (53 lb)
Weight (empty)	SC200: 8.84 kg (19.5 lb)
	SC220: 8.61 kg (19 lb)

Environmental

NOTE: For additional information about environmental measurements for specific system configurations, see dell.com/environmental_datasheets.

Temperature

Operating 5° to 40°C (41° to 104°F) with a maximum temperature gradation of 10°C per hour

NOTE: For altitudes above 2950 feet, the maximum operating temperature is derated 1°F/550 ft.

Storage -40° to 65°C (-40° to 149°F) with a maximum temperature gradation of 20°C per hour

Relative humidity

Operating 20% to 80% (noncondensing) with a maximum humidity gradation of 10% per hour

Storage 5% to 95% (noncondensing)

Maximum vibration

Operating 0.26 G at 5–350 Hz for 15 min

Storage 1.88 G at 10–500 Hz for 15 min

Maximum shock

Operating Half-sine shock 31G +/- 5% with a pulse duration of 2.6ms +/-
10% in operational orientations only

Environmental *(continued)*

Storage	<ul style="list-style-type: none">• Half-sine shock 71G +/- 5% with a pulse duration of 2ms +/- 10% (all sides)• Square wave shock 27G with a velocity change of 235 in/sec (all sides)
Altitude	
Operating	-16 to 3048 m (-50 to 10,000 ft) NOTE: For altitudes above 2950 feet, the maximum operating temperature is derated 1°F/550 ft.
Storage	-16 to 10,600 m (-50 to 35,000 ft)
Airborne Contaminant Level	
Class	G2 or lower as defined by ISA-S71.04-1985

www.dell.com | support.dell.com



01C9X5A00