

This document provides installation and setup instructions for the IBM® System Storage™ EXN1000 storage expansion unit. Additional information about the EXN1000 can be found in the *IBM System Storage EXN1000 Storage Expansion Unit Hardware and Service Guide*.

Read the safety notices:

Before continuing, make sure that you have reviewed the safety notices on the documentation CD that came with this system. Do not plug any cables into the system, adapters, or any electrical outlets until you have reviewed the safety information and followed the procedures in this document.

Need help?

If you encounter any difficulties while setting up your system, contact IBM service and support for assistance. Information can also be found at the following Web site:

www.ibm.com/storage/support/nas/

Customer-supplied items needed for setup:

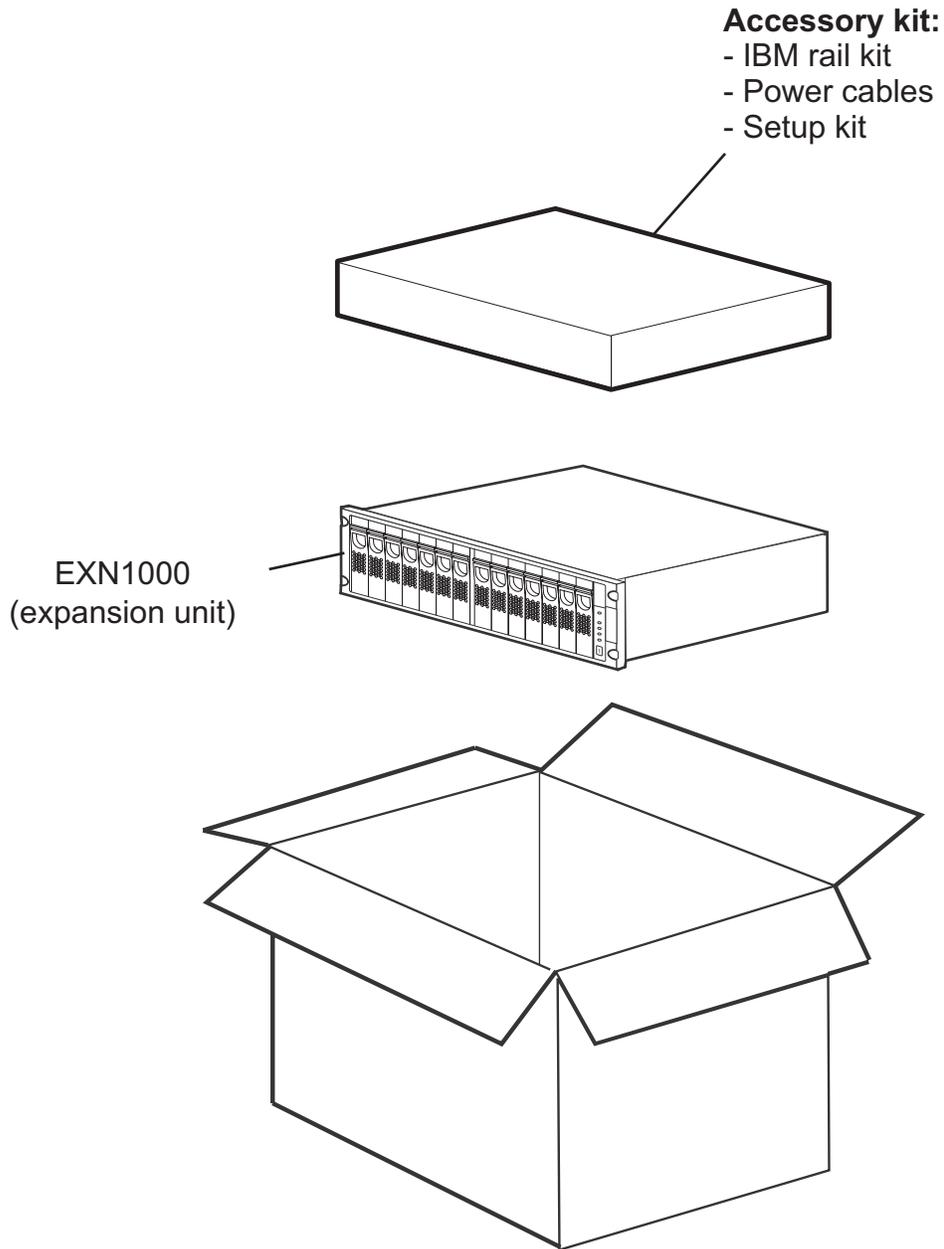
- #2 Phillips screwdriver and slotted screwdriver
- ESD wrist strap
- Pointed tool for setting ID switches
- 7-mm nut driver

1

Unpacking the EXN1000 (expansion unit)

Important:

If your system was shipped already assembled and cabled in a rack, go directly to the *Installation and Setup Instructions* of the storage system to boot the system.



Note: The contents of the box will differ based on the model you purchased. See Step 1.1 for a list of contents for specific models.

1.1 Verify that the shipping packages include the following items:

EXN1000 (2861-001)

- 1 EXN1000
- 1 IBM rail kit
- 1 Wrist Strap, ESD
- 1 Enclosure Shelf IDs Label
- 1 Publications
- 2 Power Cords

Miscellaneous Data Cables

May be present:

Small Form Factor Pluggable (SFP) module



Caution: The weight of this part or unit is between 32 and 55 kg (70.5 and 121.2 lb). It takes three persons to safely lift this part or unit. (C010)

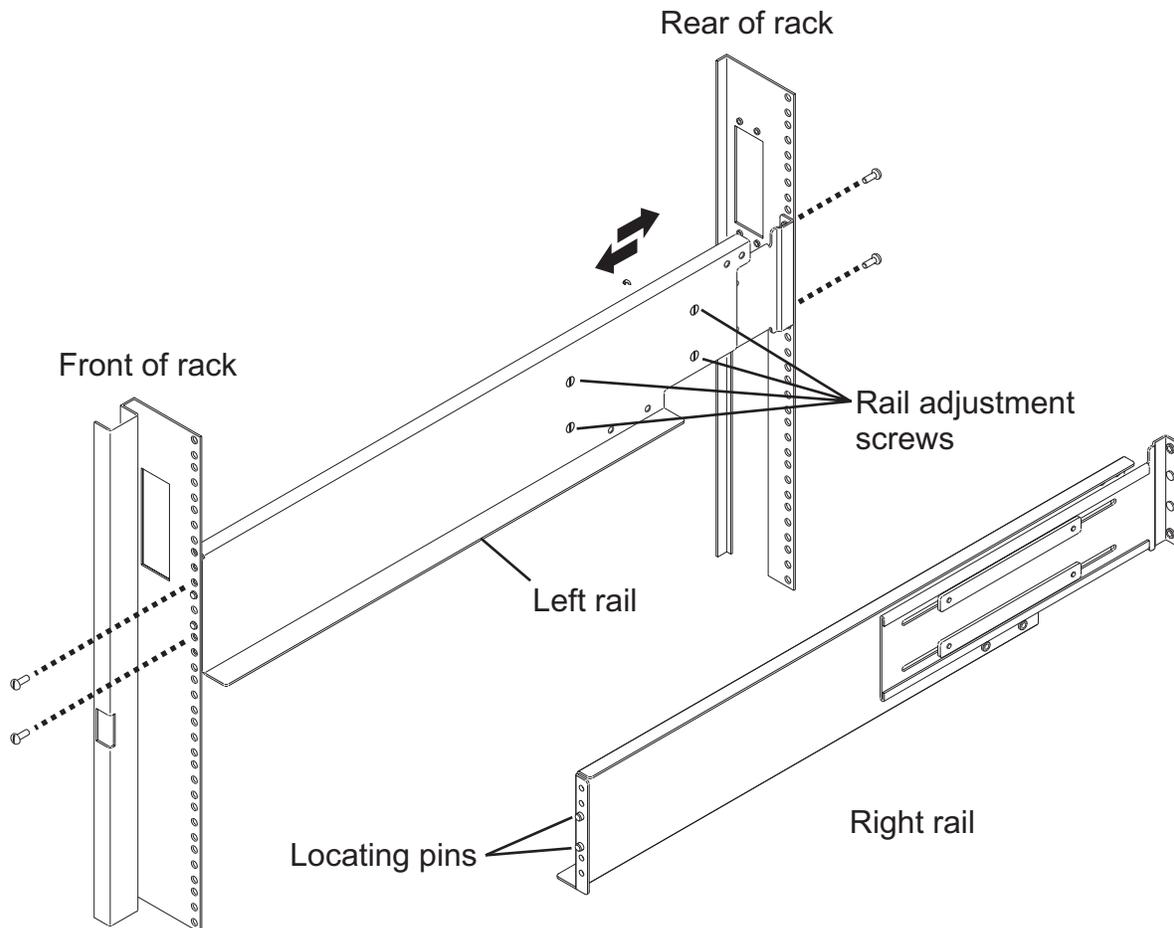
1.2 Remove the expansion unit and its tray using the handles built into the cardboard tray. Place the expansion unit and tray on a table.

1.3 Remove the top portion of the plastic surrounding the expansion unit.

2

Installing the rails in an IBM 19-inch rack

Note: Read this document in its entirety before proceeding.



2.1 Loosen (but do not remove) the four rail adjustment screws on each rail.

2.2 Use the figure on the next page for reference. At the front of the rack, position the right-hand rail into the rack at the appropriate EIA location (make sure that the two locating pins seat properly). The bottom of the rail should line up with the bottom EIA boundary.

Note: When installed, each EXN1000 unit will occupy a 3U space.

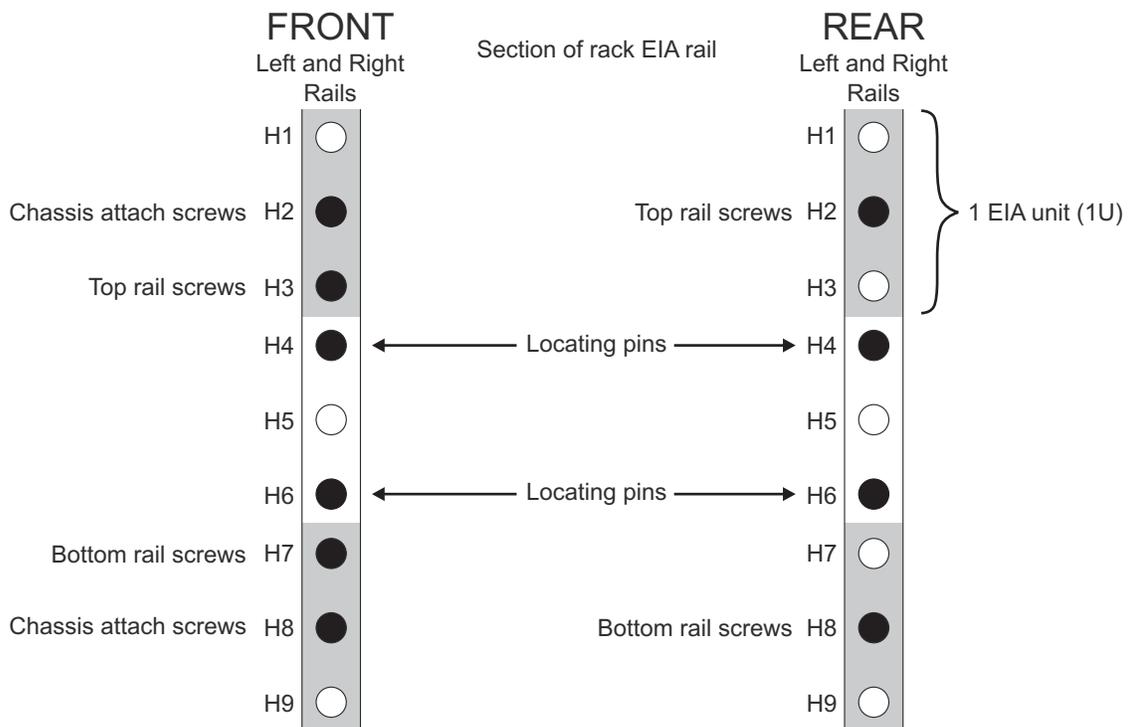
Using two silver pan head M5 screws, attach the rail to the front of the rack using holes H3 and H7. Tighten these screws with a screwdriver.

2.3 At the rear of the rack, position the rail at the same EIA location used in step 2.2 (make sure that the locating pins seat properly). Using two silver pan head M5 screws, attach the rail to the rack using holes H2 and H8. Tighten these screws with a screwdriver.

2.4 Tighten the four rail adjustment screws on the installed rail.

2.5 Repeat steps 2.2 through 2.4 for the left-hand rail.

2.6 Repeat steps 2.1 through 2.5 if installing a second EXN1000.



3

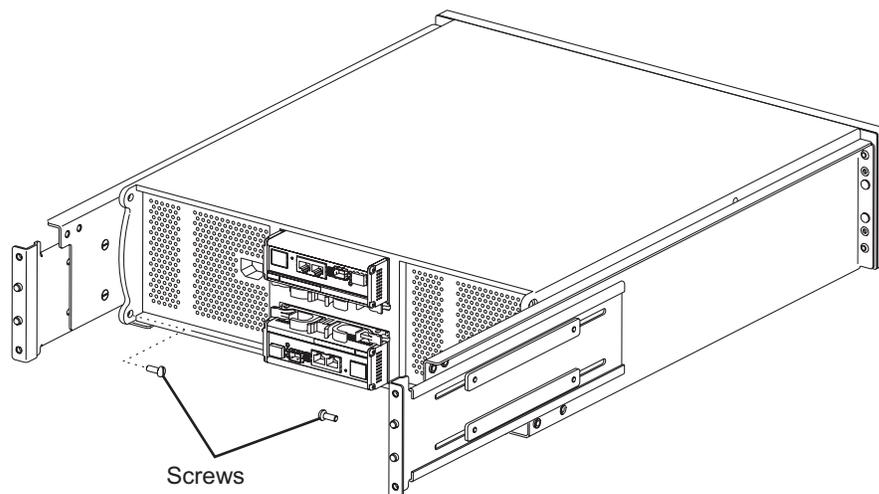
Installing the expansion unit into the rack



Caution: The weight of this part or unit is between 32 and 55 kg (70.5 and 121.2 lb). It takes three persons to safely lift this part or unit. (C010)

Note: Verify the shelf IDs before installing into the rack. All shelf IDs should be correct and sequential in the individual loop(s). If the filer and expansion unit were configured together by manufacturing, these IDs are already set. The label on the front should match the switch on the back. For more information, refer to the *Hardware and Service Guide* for the expansion unit.

- 3.1 From the front of the rack, place the expansion unit onto the rails and slide it in until the front mounting bracket of the expansion unit is flush with the frame rails of the rack.
- 3.2 At the front of the rack, using four black hex head M5 screws in the H2 and H8 holes, secure the system unit to the rack by threading the screws through the system unit bracket and the rack frame rail into the threaded rail nuts. Tighten the screws using the 7-mm nut driver.
- 3.3 From the rear of the rack, use two silver pan head M5 screws to attach the rear of the chassis to the rails as shown below.



4

Setting the speed switch

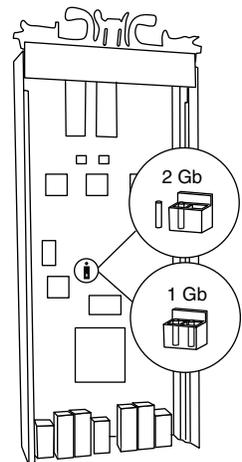
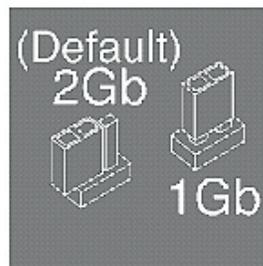
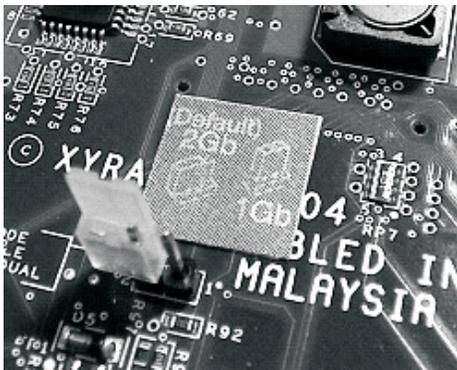
4.1

Make sure that all expansion unit speed switches are set to the correct position for your application.

If you are connecting to an N3700 storage system, the speed switch must be set to the 1Gb position. If you are connecting to any other N series storage system, the speed switch must be set to the 2Gb position.

Note: You must remove the AT-FCX controller from the back of the EXN1000 to access the speed switch.

Use the following diagrams for reference:



5

Grounding expansion units

Note: For proper grounding, you must fasten together your expansion units (and N3700 systems, if applicable). Use the provided braided copper grounding cables and screws (may be in the rail kit).

5.1

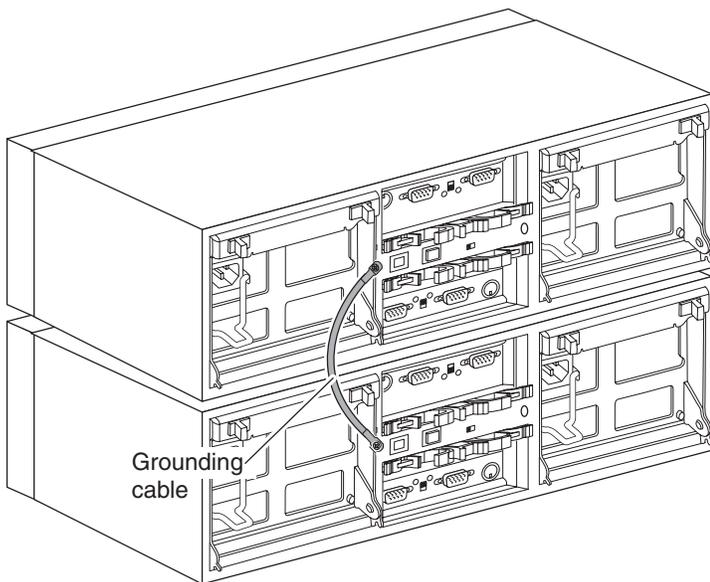
If only one expansion unit is being used, go to Step 6, "Installing the power cables" on page 9.

If two or more expansion units are being used continue with the following.

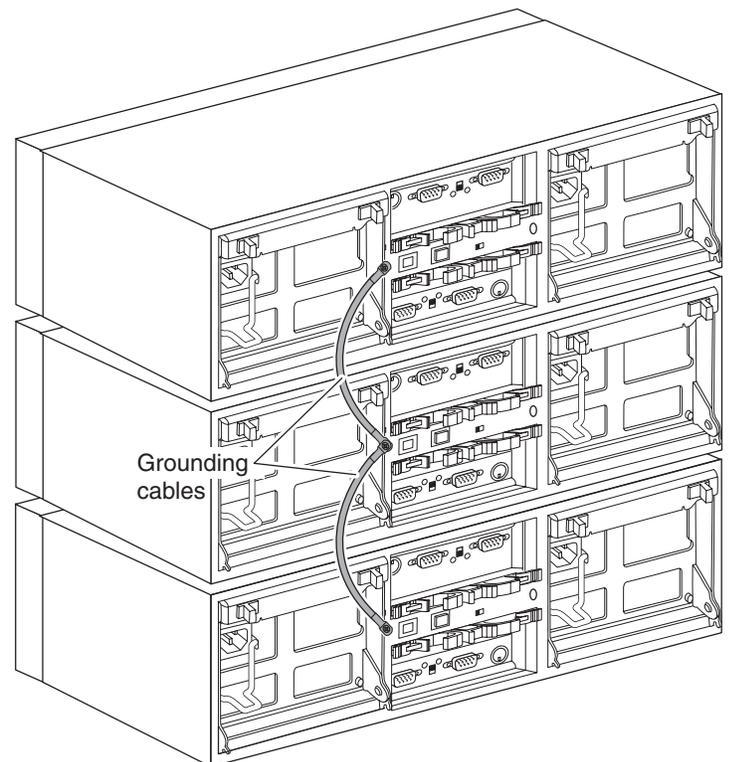
Using the grounding kit, fasten the lug at one end of the 0.25m grounding cable to one of the two threaded inserts (adjacent to the power supply receptacles as indicated by a ground symbol) at the back of the expansion unit using the M5 x 0.5-inch screw.

If additional expansion units need to be grounded, continue attaching the grounding cables from unit to unit, overlaying the hole on one end of the grounding cable from one to the next.

Dual expansion unit grounding



Multiple expansion unit grounding



6

Installing the power cables

- 6.1 Make sure all power supply switches of the expansion unit(s) are in the Off position.
- 6.2 Connect the power cords to all PSU1 and PSU2 power receptacles for all expansion units that are being installed by holding the wire clamp up, plugging in the power cord, and lowering the clamp to secure the power cord.
- 6.3 Connect the power cords to the power sources, making sure that the power supplies on the left side of the system are connected to a separate AC source than the power supplies on the right side of the system. This ensures redundant power.

Caution: Do not power on the system at this time.

7

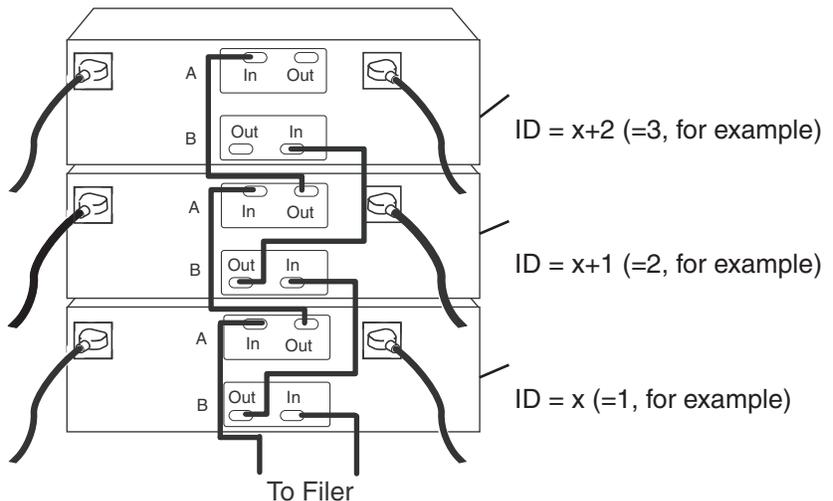
Cabling the EXN1000

7.1

Cable the first expansion unit (for example, $ID=x=1$) controller A Output port module to the second expansion unit (for example, $ID=x+1=2$) controller A module Input port. Repeat as necessary to attach a third expansion unit (for example, $ID=x+2=3$) to the second expansion unit.

For dual-node connection, cable the expansion unit controller B Output port module to the expansion unit controller B module Input port. Repeat as needed.

Make sure that the cables are secure.



Notes:

1. To cable your expansion unit to an N series storage system, refer to the *Installation and Setup Instructions* for the N series storage system to which you are connecting the EXN1000.
2. For information about dual-path Fibre Channel cabling, refer to the *Installation and Setup Instructions* for the N series storage system to which you are connecting the EXN1000.

8

Additional resources

- *IBM System Storage N3700 Hardware and Service Guide*, GA32-0515
- *IBM System Storage N3300 and N3600 Hardware and Service Guide*, GC27-2087
- *IBM System Storage N5000 Series Hardware and Service Guide*, GC26-7785
- *IBM System Storage N7000 Series Hardware and Service Guide*, GC26-7953
- *IBM System Storage EXN1000 Hardware and Service Guide*, GC26-7802
- *IBM System Storage N series Introduction and Planning Guide*, GA32-0543
- *IBM Systems Safety Notices*, G229-9054
- www.ibm.com/storage/support/nas/



© International Business Machines Corporation 2005, 2007

Printed in USA
All Rights Reserved

Mail comments to:
IBM Corporation
Attention Department GZW
9000 South Rita Road
Tucson, AZ 85744-0001

Internet URL: www.ibm.com/storage/support/nas

References in this publication to IBM products or services do not imply that IBM intends to make them available in every country or region.

IBM, the IBM logo, and System Storage are trademarks and/or registered trademarks of International Business Machines Corporation.

Data ONTAP, NetApp, and Network Appliance are trademarks and/or registered trademarks of Network Appliance, Inc in the United States and other countries.

Other company, product, and service names may be trademarks or service marks of others.

NA 210-03789_A0



45E0089



GC26-7786-04