HP StorageWorks 70 Modular Storage Array

setup poster

hp ®
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⚠ Important Safety Information

Before installation, read *Important Safety Information* on the Documentation CD.
قبل التثبيت، اقرأ معلومات هامة حول السلامة على القرص المضغوط Documentation CD.
Před instalací si přečtěte příručku *Důležité bezpečnostní informace* na disku CD.
安装之前，请阅读文档 CD 上的*重要安全信息*。
安裝前，請閱讀說明文件光碟上的「*重要的安全性資訊*」。
Læs dokumentet Vigtige sikkerhedsoplysninger på dokumentations-cd'en, før produktet installeres.
Lesen Sie vor der Installation die *Sicherheitshinweise* auf der Documentation CD.
Enne installimist vt dokumentatsiooni CD-lt peatükki „*Tähtis ohutusteave*".
Antes de la instalación, lea la sección *Información de seguridad importante* del CD Documentación.
Avant l'installation, lisez les *informations importantes relatives à la sécurité* CD Documentation.
Πριν την εγκατάσταση, διαβάστε *Σημαντικές πληροφορίες ασφαλείας* στο CD Documentation.
לפני ההתקנה, קרא את המידע הבטיחותי החשוב שב-Documentation CD (תקליטור התיעוד)
Prije ugradnje, pročitajte *Važne sigurnosne informacije* na dokumentacijskom CD-u.
Prima dell'installazione, leggere sul CD le *Informazioni importanti sulla sicurezza*.
インストール前に、Documentation CDの『安全に使用していただくために』をお読みください。
설치하기 전에 Documentation CD의 주요 안전 수칙을 읽으십시오.
Pirms instalācijas, izlasiet drošības informāciju dokumentācijas CD.
Prieš diegdami perskaitykite *Svarbią saugos informaciją* dokumentacijos CD.
Telepítés előtt olvassa el a dokumentációs CD *Fontos biztonsági tudnivalók* dokumentumát.
Lees de *Belangrijke veiligheidsinformatie* op de documentatie-cd voordat u de installatie uitvoert.
Les "Viktig sikkerhetsinformasjon" på dokumentasjons-CDen før du installerer dette produktet.
Przed instalacją przeczytaj *Ważne informacje dotyczące bezpieczeństwa* na dysku CD Documentation.
Antes da instalação, leia as *Informações Importantes sobre Segurança* no CD da Documentação.
Перед установкой ознакомьтесь с разделом *Указания по технике безопасности* на компакт-диске «Документация».
Pred inštaláciou si prečítajte časť *Dôležité bezpečnostné informácie* na disku Documentation CD.
Pred namestitvijo preberite *Pomembne varnostne informacije* na CD-ju Documentation.
Tärkeisiin turvatietoihin" Documentation CD -levyllä ennen tuotteen asentamista.
Läs dokumentet Viktig säkerhetsinformation på dokumentations-cd:n innan du installerar denna produkt.
Yüklemeden önce, Documentation CD'sindeki *Önemli Güvenlik Bilgileri*'ni okuyun.
Перед установкою прочитайте *Важливі відомості з безпеки* на CD документації.

Audience assumptions

This document is for the person who installs, administers, and troubleshoots servers and storage systems. HP assumes you are qualified in the servicing of computer equipment and trained in recognizing hazards in products with hazardous energy levels.

Regulatory compliance notices

Regulatory compliance identification numbers

For the purpose of regulatory compliance certifications and identification, this product has been assigned a unique series number. The series number can be found on the product nameplate label, along with all required approval markings and information. When requesting compliance information for this product, always refer to this series number. The series number should not be confused with the marketing name or model number of the product.

Regulatory notice rating label

The rating label on the device shows which class (A or B) the equipment falls into. Class B devices have an FCC logo or FCC ID on the label. Class A devices do not have an FCC ID or logo on the label. Once the class of the device is determined, see the corresponding statement in the user guide on the Documentation CD.

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Site requirements

Select an installation site that meets the following requirements:

- Space
- Power
- Grounding
- Temperature
- Rack
- Airflow

Detailed installation site requirements for this product are described in the *HP StorageWorks 70 Modular Smart Array Enclosure user guide* located on the Documentation CD.

Rack planning resources

The rack resource kit ships with all HP branded or Compaq branded 9000, 10000, and H9 series racks. For more information on the content of each resource, see the rack resource kit documentation.

If you intend to deploy and configure multiple servers in a single rack, see the white paper on high-density deployment at the HP website: http://www.hp.com/products/servers/platforms.

Rack warnings

⚠️ **WARNING!** **To reduce the risk of personal injury or damage to the equipment, be sure that:**
- **The leveling jacks are extended to the floor.**
- **The full weight of the rack rests on the leveling jacks.**
- **The stabilizing feet are attached to the rack if it is a single-rack installation.**
- **The racks are coupled together in multiple-rack installations.**
- **Only one component is extended at a time. A rack may become unstable if more than one component is extended for any reason.**

⚠️ **WARNING!** **To reduce the risk of personal injury or equipment damage when unloading a rack:**
- **At least two people are needed to safely unload the rack from the pallet. An empty 42U rack can weigh as much as 115 kg (253 lb), can stand more than 2.1 m (7 ft) tall, and may become unstable when being moved on its casters.**
- **Never stand in front of the rack when it is rolling down the ramp from the pallet. Always handle the rack from both sides.**

Contents

- MSA70 Enclosure
- Rack mounting hardware kit
- Power cords (2)
- SAS cable
- Documentation kit

Installing options

Install any hard drives and hardware options before powering up the enclosure. For complete information on installing hard drives and options, see the user guide.
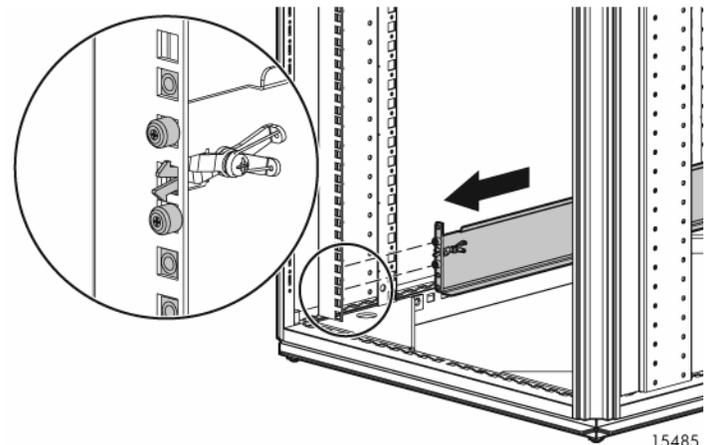
Installing enclosure into a rack

📝 **NOTE:** When installing servers, HP recommends installing all enclosures at the bottom of the rack. To optimize cabling access, avoid interleaving the enclosure and server products.

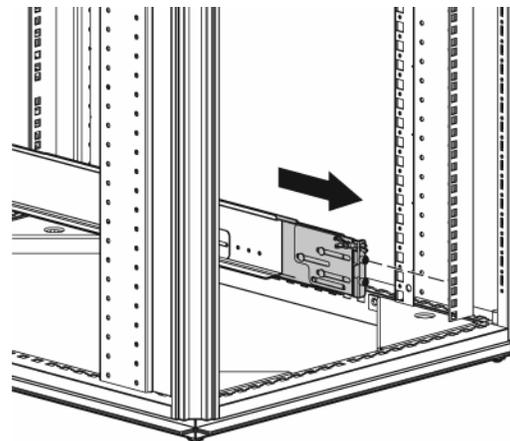1. Secure the front end of the rails to the rack.

📝 **IMPORTANT:** Do not remove the pins from the ends of the rack rails unless you are converting the rails for use in round-hole racks. These load-bearing pins are designed to fit through the holes without being removed.

📝 **IMPORTANT:** Be sure that the scissor-type locking latches engage the rack fully when the pins extend through the holes marked with the template.

📝 **NOTE:** Identify the left (L) and right (R) rack rails by markings stamped into the sheet metal.

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2. Secure the back end of the rails to the rack.

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3. Slide the chassis into the rack.
4. Use the thumbscrews on the front of the chassis to secure it to the rack.

5. Use the shipping bracket to secure the storage enclosure for shipping:

📝 **IMPORTANT:** Use of the shipping bracket is required only when the rack is shipped with the MSA70 Enclosure installed.

   a. Loosen the thumbscrew on the shipping bracket.

   b. Slide the shipping bracket forward until it engages the chassis.

   c. Tighten the thumbscrew.

If you are installing the storage enclosure into a telco rack, order the appropriate option kit at the RackSolutions website: http://www.racksolutions.com/hp. Follow the enclosure-specific instructions on the website to install the rack brackets.
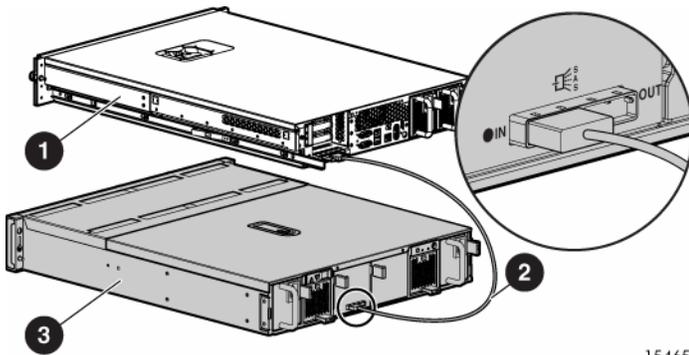
Cabling

Supported cables

For a complete list of supported cables, see the QuickSpecs on the HP website: http://www.hp.com.

Cabling guidelines

- Always use the shortest cables possible. The the maximum supported cable length between SAS ports is 6 M (19.59 ft)
- Only use supported SAS cables with 3-Gb connectors.
- Always be sure that the servers attached to the MSA enclosure are powered down and power cords are disconnected before connecting SAS cables.
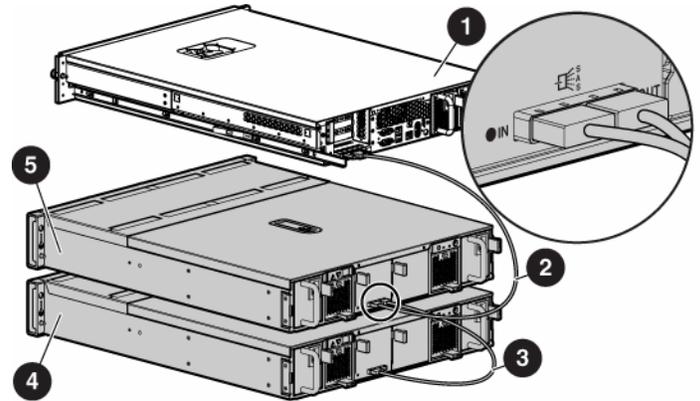
Choosing a configuration

Single-enclosure configuration

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Item	Description
1	Server
2	SAS cable
3	MSA Enclosure

Cascading (1+1) configuration

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Item	Description
1	Server
2	SAS cable
3	SAS cable
4	MSA Enclosure 1
5	MSA Enclosure 2

* Only an MSA70 enclosure can be cascaded with another MSA70. Do not mix with other types of storage enclosures.

Power cords

The power cord should be approved for use in your country.

⚠ **WARNING! To reduce the risk of electric shock or damage to the equipment:**
- **Do not disable the power cord grounding plug. The grounding plug is an important safety feature.**
- **Plug the power cord into a grounded (earthed) electrical outlet that is easily accessible at all times.**
- **Do not route the power cord where it can be walked on or pinched by items placed against it. Pay particular attention to the plug, electrical outlet, and the point where the cord extends from the storage system.**

To connect AC power cords:

1. Connect the power cords to the power supplies.

2. Connect the power cords to the AC power source.
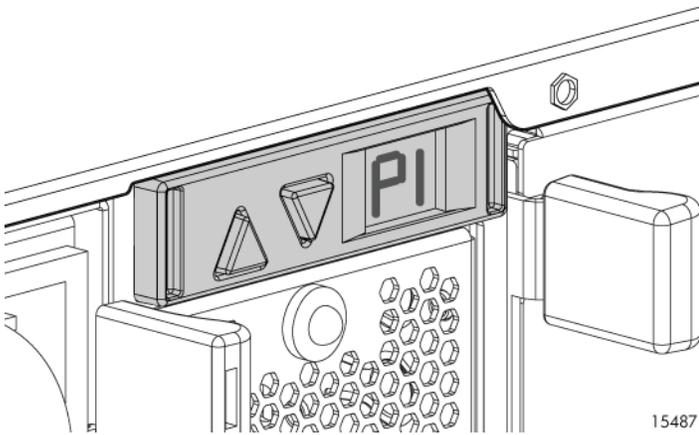
Powering up

📝 **IMPORTANT:** Always power up the enclosure first, and then the server. This ensures that the servers, during their discovery, see the enclosure as an operational device. If you do not power up the enclosure before powering up the servers, you will need to power down the servers, ensure that the enclosure is powered up, and then power back up the servers.

To power up the storage enclosure:

1. Complete server hardware installation and cabling. See the server documentation.
2. Connect the SAS cables and power cords to the enclosure. See "Choosing a configuration" on this poster.
3. Press and hold the Power On/Standby button. Wait and observe the system power LED and fan modules. When the enclosure powers up, the system power LED illuminates solid green and the fans spin to a high speed, and then spin down to a low speed.
4. Power up the servers. See the server documentation.

7-segment display board

When the MSA70 is connected to the host controller, the controller automatically assigns the port and box ID numbers to the enclosure. The 7–segment display board allows you to identify the port and box ID number assigned to the MSA70. See the user guide for more information.

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- Press the up arrow key to view the port that the MSA70 is connected to.
- Press the up down arrow key to view the box ID number.

NOTE: You can also view the port and box ID numbers within ACU, HP SIM, and ADU.

Updating firmware

After installing hardware and powering up the enclosure for the first time, be sure to verify that the host controller, the enclosure, and hard drives have the latest firmware. You can identify which firmware versions you have for the host controller, the MSA70, and the installed hard drives through HP SIM and ACU. ADU allows you to view the firmware versions for the host controller and hard drives, but not the MSA70.

NOTE: The firmware for both SAS and SATA hard drives is upgradeable.

For firmware and software updates, see the HP website: http://h18004.www1.hp.com/support/files/storage/us/index.html. You can also update the firmware on the server, controller, enclosure, and hard drives using Smart Components. See "Smart Components for ROM Flash" in the user guide.

Additional information

For more information about this product, see the *HP StorageWorks Modular Smart Array 70 Storage Enclosure user guide* on the Documentation CD.

To receive proactive support alerts (such as Customer Advisories), as well as updates on drivers, software, firmware, and customer replaceable components, proactively via e-mail through HP Subscriber's Choice. Sign up for Subscriber's Choice at:

http://www.hp.com/go/myadvisory.