

HP StorageWorks 1000 Modular Smart Array racking instructions

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About this document

This document provides instructions for racking the HP StorageWorks 1000 Modular Smart Array (MSA). For configuration information, see the installation or configuration documents shipped with the MSA.

Before you begin

⚠ WARNING!

To reduce the risk of personal injury or damage to the equipment, be sure that:

- The leveling jacks on the rack are extended to the floor.
- The full weight of the rack rests on the leveling jacks.
- In single-rack installations, stabilizing feet are attached to the rack.
- In multiple-rack installations, the racks are coupled together.
- The heaviest items, such as uninterruptible power supplies and hard drive storage enclosures must be located near the bottom of the rack.
- Similar components should be installed adjacent to each other in the rack. Because storage enclosures, switches, and servers are of differing depths, to accommodate working behind the rack, mount similar devices next to one another.
- Only one device in a rack can be extended at a time. A rack may become unstable if more than one device is extended.
- At least two people are available to lift the storage system during removal or installation.
- If the system is being loaded into the rack above chest level, a third person must assist with aligning the system with the rails while the other two people support the weight of the system.

⚠ CAUTION:

- If the MSA is mounted in a closed or multi-unit rack assembly, make sure that the operating temperature inside the rack does not exceed the maximum rated ambient temperature.
- Do not restrict air flow. Allow 16 cm (6.5 in) minimum clearance at the front and rear of the switch or rack for ventilation. For ease in servicing devices in the rack, make sure you allow enough room to access the devices.
- Multiple devices connected to the same AC supply circuit may overload that circuit or overload the AC supply wiring. Consider the power source capacity and the total power usage of all devices on the circuit.
- Reliable grounding in the rack must be maintained.

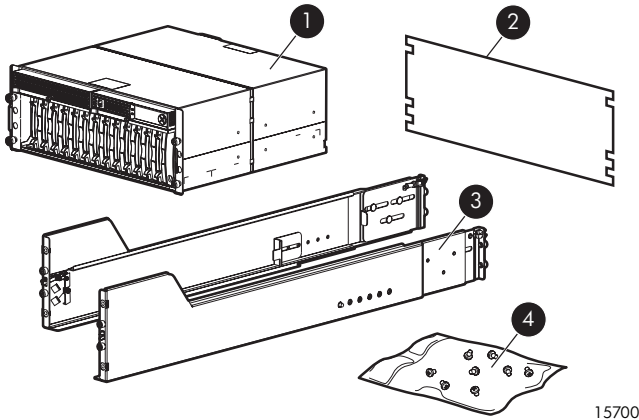
⚠ CAUTION:

Install hard drives in the enclosures only after securing the enclosures in the rack:

- An enclosure populated with hard drives is too heavy to lift safely.
- Movement of an enclosure during installation might damage the internal storage media of installed hard drives.

Collect the required items

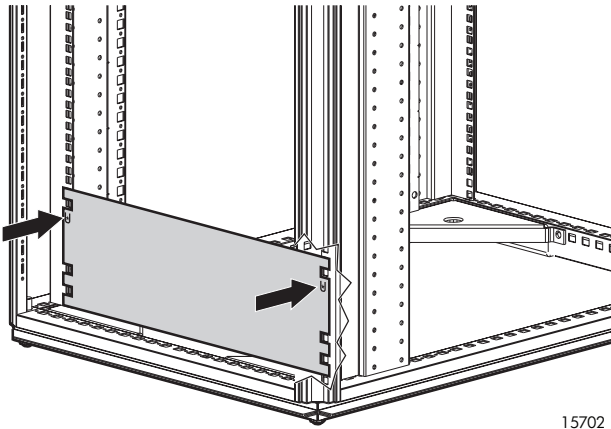
Locate the following items included in your shipping cartons and set them aside on a stable work surface:



1. MSA1000
2. MSA1000 rack template
3. 4U rails
4. Round-hole pins

Rack the MSA

1. If desired, use the instructions on the rack template to mark the holes on the front and rear of the rack that will be used by the rails.

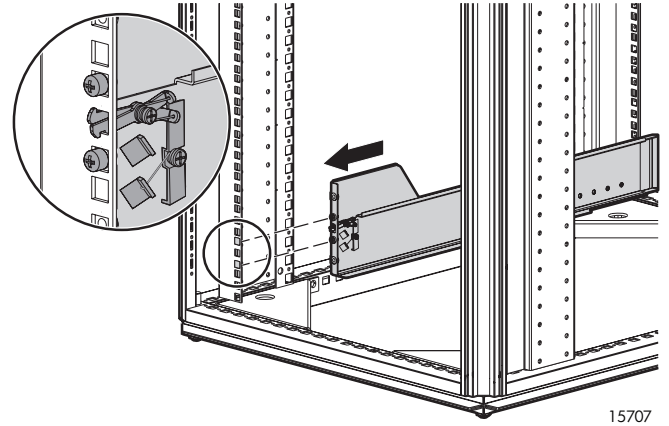


2. If the holes in the rack uprights are round instead of square, use a Phillips-head screwdriver to remove the standard larger pins from the rails and replace them with the provided smaller round-hole pins.

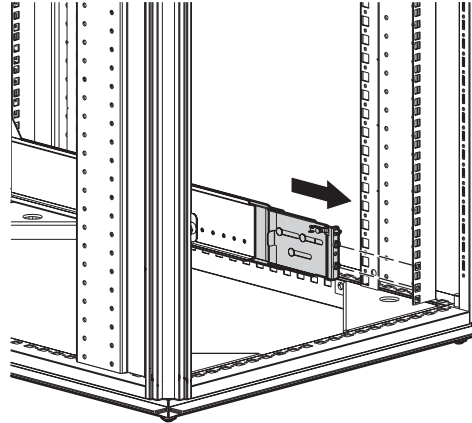
⚠ WARNING!

Pins in the rails are load bearing. Do not remove the standard pins except to replace them with the smaller pins for round-hole racks.

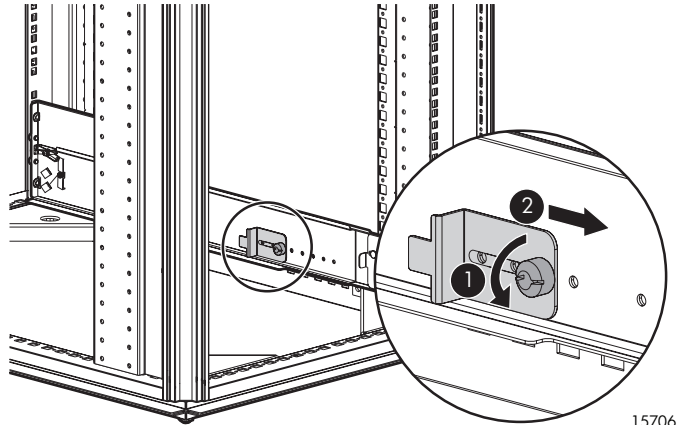
3. Identify the left (L) and right (R) rails by markings stamped into the rails.
4. From the front of the rack, align the front end of the rail with the marked holes on the rack. Disengage the scissor-pin locking latch by pulling the bottom of the latch towards the front of the rack and, at the same time, insert the end of the rail into the inside-front of the rack, making sure that the scissor-pin clicks into place. Release the locking latch and verify that it engages the scissor-pin.



5. From the rear of the rack, extend the opposite end of the rail toward the inside rear of the rack until the pins extend through the marked holes and the scissor-pin clicks into place.

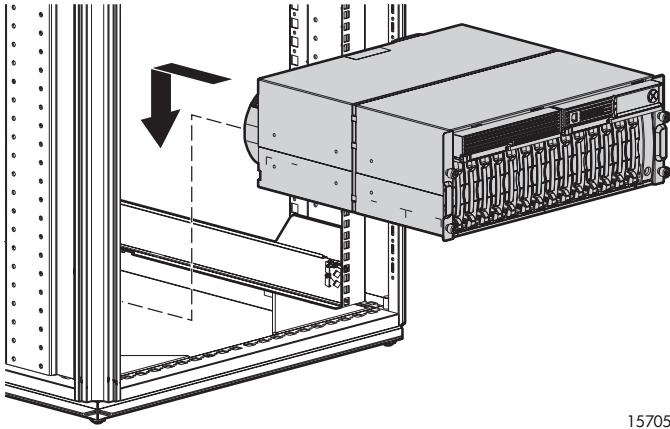


6. If necessary, loosen the locking nut on the device retaining bracket and slide the bracket out of the way, to the farthest position near the rear of the rack.



7. Repeat [step 1](#) through [step 6](#) to install the other rail.

8. From the front of the rack, place the MSA on the rails.

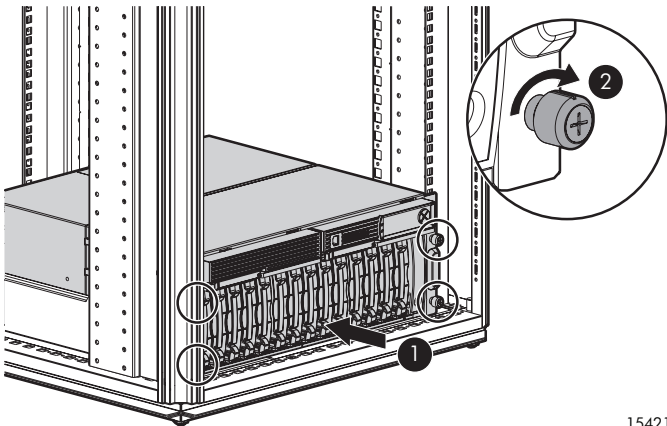


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△ **CAUTION:**

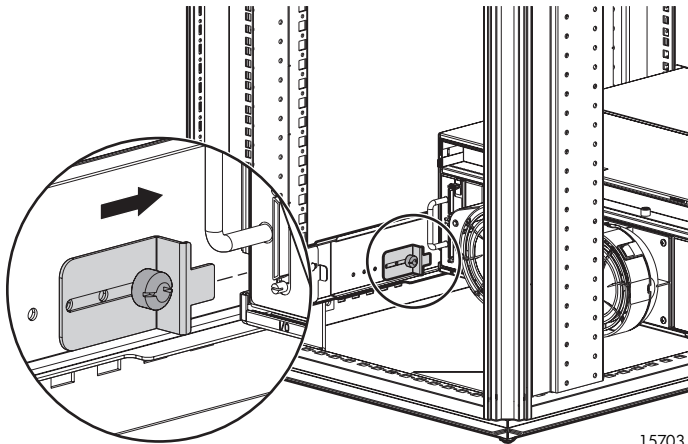
To prevent damage and ease insertion of the MSA in the rack, support the weight of the MSA and keep it level when sliding it into the rack.

9. Slide the MSA into the rack until its flanges are flush with the front of the rack. Secure the MSA to the front of the rack by tightening the four MSA thumbscrews.



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10. From the rear of the rack, secure the MSA by sliding the device retaining brackets towards the MSA until the tabs engage the slots in the MSA chassis. Be sure to tighten the thumbscrews.



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The racking procedures are complete. For additional installation and configuration information, see the documents shipped with the MSA.