

The following are the key Host Software products contained in HP StorageWorks P2000 Modular Smart Array Software Support/Documentation CD:

Host Software Bundles

Separate Host Software bundles are provided for each of the supported OS platforms.

Windows bundles

Windows bundles are based on Windows ProLiant Support Packs. Separate bundles are available for Windows 2003 and 2008, and for each of the supported hardware architectures (x86, x64, and IA64). Bundles include installable Smart Components and the HP SUM engine. The HP SUM engine will have “pull from web updates,” so users can get the latest from web automatically.

Linux bundles

Linux Bundles are based on Linux ProLiant Support Packs. Separate bundles are available for RHEL4, RHEL5, SLES 10, SLES 11. Bundles include installable RPM packages and install script (install.sh)

Individual Host Software Smart Components

Individual Smart Components are available for each of the drivers contained in the bundles so customers can choose to install or update a specific driver without going through the bundle installation. Here again, the individual drivers are available for each of the supported OS platforms and hardware architectures. In addition to the drivers locally hosted on the CD, links are provided to hp.com where newer versions of the drivers may be available.

Microsoft Hot Fixes

Also available are the Microsoft Hot Fixes for various Microsoft dependent products like the Storport storage driver, VDS, and VSS. The Setup page provides detailed instructions on the sequence of steps required to install these hot fixes.

Best Practices for Firmware Updates

The sections below detail common firmware updates best practices for all generations of the MSA2000/P2000. This includes the MSA2000 G1, MSA2000 G2, and the P2000 G3 MSA.

General P2000/MSA2000 Device Firmware Update Best Practices

1. As with any other firmware upgrade, it is a recommended best practice to ensure that you have a full backup prior to the upgrade.
2. Before upgrading the firmware, ensure that the storage system configuration is stable and is not being reconfigured or changed in any way. If any configurations changes are in progress, monitor them using the SMU or CLI and wait until they are completed before proceeding with the upgrade.
3. Do not cycle power or restart devices during a firmware update. If the update is interrupted or there is a power failure, the module could become inoperative. Should this happen, contact HP customer support.
4. After the device firmware update process is completed, confirm the new firmware version is displayed correctly via one of the MSA management interfaces—SMU GUI, MSA CLI, etc.

P2000/MSA2000 Array Controller or I/O Module Firmware Update Best Practices

1. The array controller (or I/O module) firmware can be updated in an online mode only in redundant controller systems.
2. When planning for a firmware upgrade, schedule an appropriate time to perform an online upgrade.
 - For single domain systems, I/O must be halted.
 - For dual domain systems, because the online firmware upgrade is performed while host I/Os are being processed, I/O load can impact the upgrade process. Select a period of low I/O activity to ensure the upgrade completes as quickly as possible and avoid disruptions to hosts and applications due to timeouts.
3. When planning for a firmware upgrade, allow sufficient time for the update.
 - In single-controller systems, it takes approximately 10 minutes for the firmware to load and for the automatic controller restart to complete.
 - In dual-controller systems, the second controller usually takes an additional 20 minutes, but may take as long as one hour.
4. When reverting to a previous version of the firmware, ensure the Management Controller (MC) Ethernet connection of each storage controller is available and accessible before starting the downgrade.
 - When using a Smart Component firmware package, the Smart Component process will automatically first disable Partner Firmware Update (PFU) and then perform downgrade on each of the controllers separately (one after the other) through the Ethernet ports.
 - When using a Binary firmware package, first disable the Partner Firmware Update (PFU) option and then downgrade the firmware on each of the controller separately (one after the other).
5. When performing FW updates to MSA70 drive enclosures, each enclosure will need to have a power cycle performed.

P2000/MSA2000 Disk Drive Firmware Update Best Practices

1. Disk drive upgrades on the HP StorageWorks P2000/MSA2000 storage systems is an offline process. All host and array I/O must be stopped prior to the upgrade.
2. If the drive is in a virtual disk, verify that it is not being initialized, expanded, reconstructed, verified, or scrubbed. If any of these tasks is in progress, before performing the update wait for the task to complete or terminate it. Also verify that background scrub is disabled so that it doesn't start. You can determine this using SMU or CLI interfaces. If using a firmware smart component, it would fail and report if any of the above pre-requisites are not being met.
3. Disk Drives of the same model in the storage system must have the same firmware revision. If using a firmware smart component, the installer would ensure all the drives are updated.