

Firmware Installation Instructions

The following sections discuss installing firmware:

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Installation notes and best practices

Warning!

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. If this occurs, contact technical support. The module may need to be returned to the factory for reprogramming.

Caution:

Before upgrading firmware, ensure that the system is stable and is not being reconfigured or changed in any way. If changes are in progress, monitor them and wait until they are completed before proceeding with the upgrade.

Important:

In dual-module enclosures, both controllers or both I/O modules must have the same firmware version installed. Running different firmware versions on installed modules may cause unexpected results.

Before installing this firmware:

- Create a full backup of system data. (Strongly recommended.)
- Schedule an appropriate time to install the firmware:
 - 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.
- Allocate sufficient time for the update:

It takes approximately 45 minutes for the firmware to load and for the automatic restart to complete on the first controller module. When dual modules are installed, the full process time is approximately 90 minutes. If cascaded drive enclosures are also being updated, total process time may be as long as 180 minutes.

- Set the **Partner Firmware Update** option so that, in dual-controller systems, both controllers are updated. When the Partner Firmware Update option is enabled, after the installation process completes and restarts the first controller, the system automatically installs the firmware and restarts the second controller. If Partner Firmware Update is disabled, after updating software on one controller, you must manually update the second controller.

During the installation process:

- Monitor the system display to determine update status and see when the update is complete.

After the installation process is complete and all systems have automatically restarted:

- Verify system status in the system's management utility and confirm that the new firmware version is listed as installed.
- Review system event logs.
- Updating array controller firmware may result in new event messages that are not described in earlier versions of documentation. For comprehensive event message documentation, see the most current version of the *AssuredSAN 3000 Series Event Descriptions Reference Guide*.

When reverting to a previous version of firmware, note the following:

- Ensure that both Ethernet connections are accessible before downgrading the firmware.
- When using a Binary firmware package, you must manually disable the Partner Firmware Update (PFU) and then downgrade the firmware on each controller separately (one after the other).
- Reverting from TS250 or later to firmware prior to TS230 is not supported.

Installing firmware using RAIDar

Important:

Using RAIDar to install TS252 firmware is supported only when upgrading from TS230 or later firmware. When upgrading from all other firmware versions, install the TS252 firmware using FTP.

1. Obtain the firmware package in .zip file format from the Customer Resource Center website at <http://crc.dothill.com>. Save it to a temporary directory, and extract the contents.
2. Locate the extracted firmware file. The firmware filename is in the following format: TSxxxRyyy-zz.bin
3. In single-domain environments, stop all I/O to vdisks in the enclosure before starting the firmware update.
4. Log in to RAIDar and, in the Configuration View panel, right-click the system and then select **Tools > Update Firmware**.

A table displays currently installed firmware versions.

5. Click **Browse** and select the firmware file to install.
6. Click **Install Controller-Module Firmware File**.
7. Wait for the installation to complete. During installation, each updated module automatically restarts.
8. In the RAIDar display, verify that the expected firmware version is installed on each module.

Installing firmware using FTP

1. Obtain the firmware package in .zip file format from the Customer Resource Center website at <http://crc.dothill.com>. Save it to a temporary directory, and extract the contents.
2. Locate the extracted firmware file. The firmware file name is in the following format: TSxxxRyyy-zz.bin
3. Using RAIDar, prepare to use FTP:
 - a. Determine the network-port IP addresses of the system controllers.
 - b. Verify that the system FTP service is enabled.
 - c. Verify that the user you will log in as has permission to use the FTP interface and has manage access rights.
4. In single-domain environments, stop I/O to vdisks in the enclosure before starting the firmware update.
5. Open a command prompt (Windows) or a terminal window (UNIX), and navigate to the directory containing the firmware file to load.
 - a. Enter a command using the following syntax:

ftp <controller-network-address>. (For example: **ftp 10.1.0.9**)

- b. Log in as an FTP user (user = **ftp**, password = **!ftp**).
- c. Enter a command using the following syntax:

put <firmware-file> flash

where **<firmware-file>** represents the binary firmware filename.

6. Wait for the installation to complete. During installation, each updated module automatically restarts.
7. If needed, repeat these steps to load the firmware on additional modules.
8. Quit the FTP session.
9. Verify that the expected firmware version is installed on each module.
 - Using RAIDar, right-click the system in the Configuration View panel, and then select **Tools > Update Firmware**.
 - In the CLI, execute the **show version** or the **show enclosures** command.