



# Replacing a Drive in the CSM200 Drive Module

May 2011

51573-00, Rev. A



## Revision History

Version and Date	Description of Changes
51573-00, Rev. A, May 2011	Initial release of the document.

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Document Number: 51573-00, Rev. A  
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# Replacing a Drive in the CSM200 Drive Module

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Use the following procedure to replace a failed drive in a drive module. Gather antistatic protection and a replacement drive for this procedure.

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**ATTENTION Speed requirement for a mixed configuration** – In a configuration that uses various models of controller modules, array modules, or drive modules, all modules on a fiber loop must operate at the same interface speed. For model-specific restrictions, refer to the *Product Release Notes for SANtricity® ES Storage Manager*.

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**IMPORTANT** For optimum performance, never insert a drive into a drive module without first confirming the firmware level of the drive. Contact your Sun Customer Care Center representative for information on supported firmware levels.

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**ATTENTION Possible hardware damage** – To prevent electrostatic discharge damage to the module, use proper antistatic protection when handling module components.

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- 1 If needed, use the storage management software to create, save, and print a new storage array profile.
- 2 Did the Recovery Guru direct you to replace a failed drive?
  - **Yes** – Go to step 3.
  - **No** – Run the Recovery Guru to identify the failed drive, and go to step 3.
- 3 Put on antistatic protection.
- 4 If applicable, turn off the audible alarm by pressing the Alarm Mute button on the front of the drive module.

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**ATTENTION Potential damage to drives** – Bumping a drive against another surface might damage the drive mechanism or connectors. To prevent damage when removing or installing a drive, always place your hand under the drive to support its weight.

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- 5 Unpack the new drive.
- 6 Set the new drive on a flat, static-free surface. Save all packing materials in case you need to return the drive.

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**ATTENTION Possible loss of data access** – You must use the current drive CRUs in the drive module to ensure proper performance. Using older or “legacy” drives might damage the connectors. Additionally, the latch might not hold the drive in place, which causes the drive to be disconnected and taken offline. For information on supported drives, contact your Sun Customer Care Center representative.

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**ATTENTION Risk of equipment malfunction** – To avoid exceeding the functional and environmental limits, install only drives that have been provided or approved by the original manufacturer. Not all drive modules are shipped with pre-populated drives. System integrators, resellers, system administrators, or users of the drive module can install the drives.

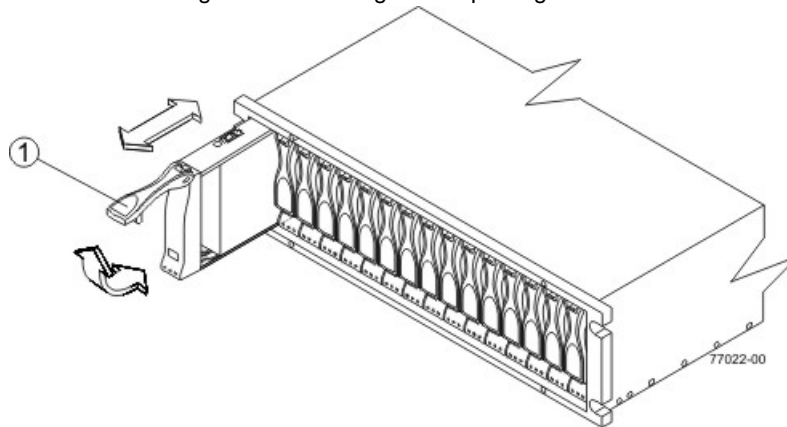
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**ATTENTION Potential loss of data access** – Removing a drive that has not failed might cause a volume to fail. To prevent loss of access to data, remove only a failed drive that has a Drive Service Action Required LED on and the Drive Service Action Allowed LED on, or has a Failed status in the storage management software.

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- 7 Check the Drive Service Action Required LEDs on the front of the drive module to identify the failed drive. If a fault is detected, the amber Drive Service Action Required LED is on.
- 8 Lift the latch, and remove the failed drive (Figure 1).

Figure 1 Removing and Replacing a Drive



1 Latch

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**IMPORTANT** If you accidentally remove an active drive, wait at least 30 seconds, and reinstall it. For more information, refer to the online help topics in SANtricity® ES Storage Manager.

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- 9 Wait 30 seconds for the storage management software to recognize that the drive has been removed.
- 10 Slide the new drive all the way into the empty slot, and close the latch.

As the drive spins up, the Drive Service Action Required LED might blink intermittently. A blinking Drive Active LED indicates that data is being restored to the new drive.

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**IMPORTANT** Depending on your configuration, the storage array might automatically reconstruct data to the new drive. If the storage array uses hot spares, it might have to complete reconstruction on the hot spare before it copies the data to the replaced drive. This situation might increase the time required to complete this procedure.

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- 11 Based on the status of the Drive Active LED and the Drive Service Action Required LED, choose one of the following actions:
  - **The Drive Active LED is on and the Drive Service Action Required LED is off** – Go to step 13.
  - **The Drive Active LED is off** – The drive might be installed incorrectly. Remove the drive, wait 30 seconds, and reinstall it. When finished, go to step 12.
  - **The Drive Service Action Required LED is on** – The new drive might be defective. Replace the defective drive with a new drive, and go to step 12.
- 12 Is the problem corrected?
  - **Yes** – Go to step 13.
  - **No** – Contact your Sun Customer Care Center representative.
- 13 Bring the new drive online by using the storage management software.
- 14 Complete any remaining Recovery Guru procedures, if needed.
- 15 Using the LEDs and the storage management software, check the status of all of the modules in the storage array.
- 16 Does any component have a Needs Attention status?
  - **Yes** – Click the **Recovery Guru** toolbar button in the Array Management Window, and complete the recovery procedure. If a problem is not resolved, contact your Sun Customer Care Center representative.
  - **No** – Go to step 17.
- 17 Remove the antistatic protection.
- 18 Create, save, and print a new storage array profile.





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