

Veritas Appliance

Hardware Service Procedure

Replacing a RAID canister in a Primary Storage Shelf or an Expansion canister in an Expansion Storage Shelf

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Purpose

This document describes the process for replacing a RAID canister in a Primary Storage Shelf or an Expansion canister in an Expansion Storage Shelf.

A Primary Storage Shelf contains two RAID canisters.

An Expansion Storage Shelf contains two Expansion canisters.

Affected Models

- NetBackup 5330 Appliance
- Velocity 7330 Appliance

Electrical Safety

The static discharged by human bodies can damage static-sensitive components on the boards. When installing and maintaining the equipment, observe appropriate electrostatic safety precautions to prevent personnel injuries or device damage.

When operating a device in an electrostatic sensitive area, you must take electrostatic-discharge (ESD)-preventive measures. These include wearing ESD-preventive gloves, an ESD-preventive wrist strap, and ESD-preventive clothes to avoid personnel injury or device damage.

To prevent damage to the device, pay attention to the following during operations:

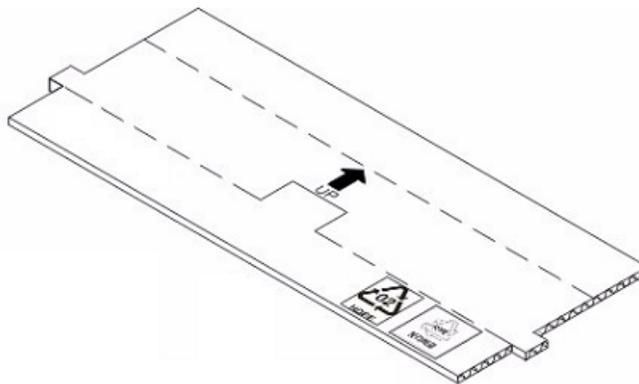
- Do not touch devices with bare hands because ESD from the human body may damage the electrostatically sensitive elements on a board.
- When dealing with the server or any of the internal components, wear an ESD-preventive wrist strap, ESD-preventive gloves, and ESD-preventive suit.

Hardware Part Replacement Procedure

Removing and replacing a RAID canister in a Primary Storage Shelf or an Expansion canister in an Expansion Storage Shelf

Before you start to replace a RAID canister in a Primary Storage Shelf or an Expansion canister in an Expansion Storage Shelf, gather the following:

- ESD wrist strap
- A replacement canister
- A RAID canister air blocker (the air blocker shipped with the original Primary Storage Shelf)



Warning: If you perform this procedure with the power turned on, you must complete it within 15 minutes to prevent the possibility of overheating the equipment.

Do not remove both canisters from the storage shelf at the same time. One canister must be functioning at all times.

Caution: To prevent electrostatic discharge damage, use proper antistatic protection when handling components.

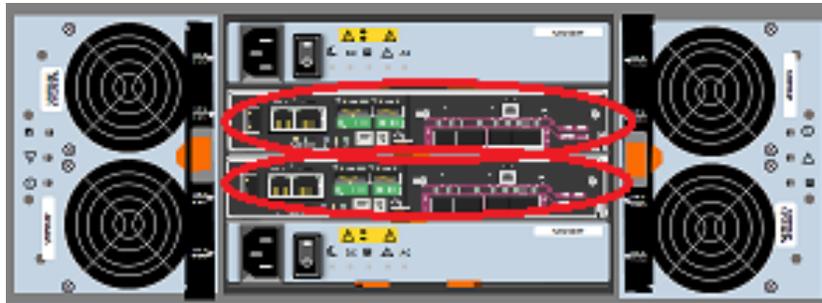
Canister locations

The RAID and Expansion canisters for both storage shelves are located in the center of the rear panel of the shelf. These canisters are located between the two power canisters.

In the Primary Storage Shelf, each RAID canister has two levers that disengage the canister from the chassis of the storage shelf. The lever attached to the left of the canister has an orange tab on its end. The right-hand lever does not have an orange tab. The right lever folds under the left lever. Both levers open to approximately 75 degrees. The levers of the replacement canister secure the new canister in place.

Figure 1

Primary Storage Shelf RAID canisters



In the Expansion Storage Shelf, each Expansion canister has two levers with orange tabs that disengage the canister from the chassis of the storage shelf. The levers of the replacement canister secure the new canister in place.

Figure 2

Expansion Storage Shelf Expansion canisters

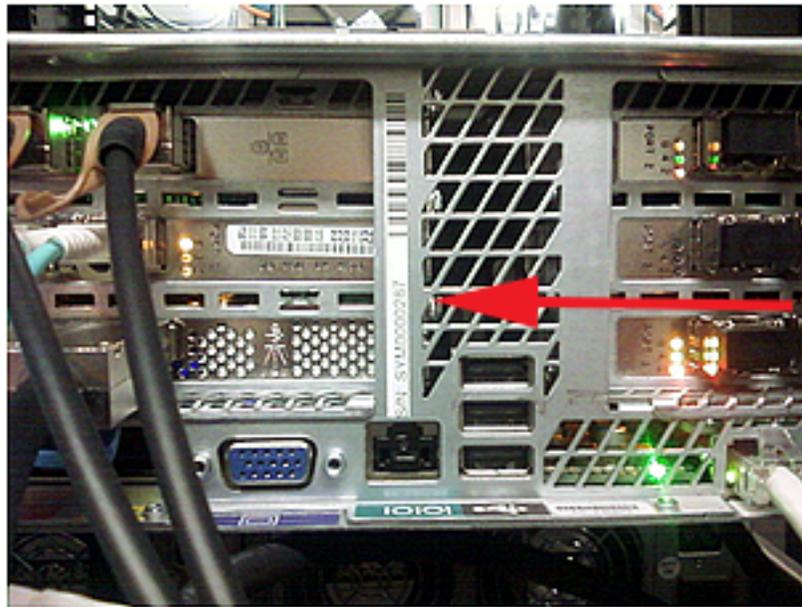


To remove a RAID or an Expansion canister

Warning: If you perform this procedure with the power turned on, you must complete it within 15 minutes to prevent the possibility of overheating the equipment.

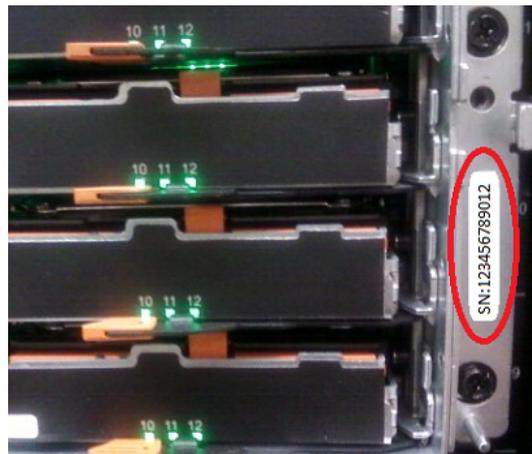
Do not remove both canisters from the storage shelf at the same time. One canister must be functioning at all times.

- 1 Locate and identify the storage shelf that has the faulty canister as follows:
 - Have the customer take you to the unit with the failed component.
 - Verify the appliance serial number. The serial number begins with either SYM or VTAS. The serial number is on a label located on a vertical post in the middle of the rear panel of the appliance.

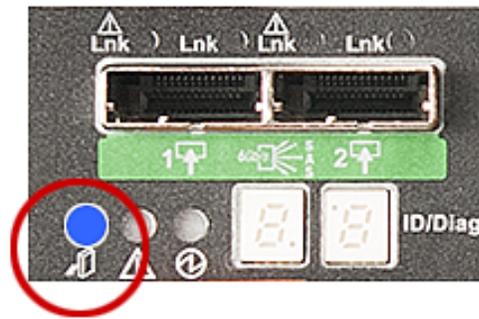


- Verify the storage shelf serial number on the storage shelf with the faulty canister. On a Primary Storage Shelf or an Expansion Storage Shelf, the serial number is located on a label on the front, lower right corner of the shelf.

Note: If the bezel is attached to the storage shelf, you must unlock it and remove it from the shelf to view the serial number.



- 2 Before you begin service on the affected canister, verify that the component is in the **Service Action Allowed** mode. The Service Action Allowed LED is located on the rear of the canister and it should be glowing the color blue.

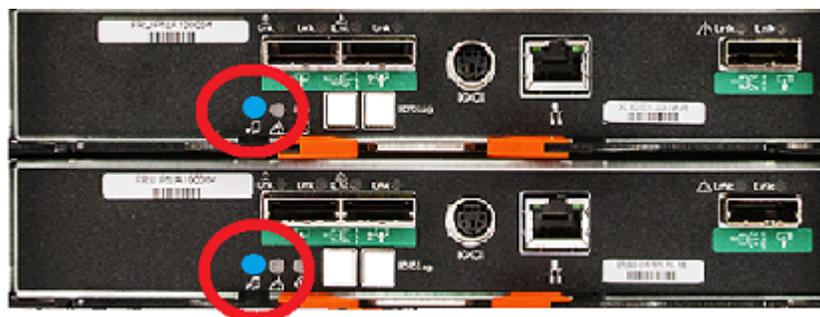


Each canister contains one of these LEDs. Be sure to work on the canister that has the blue LED.

Primary Storage Shelf RAID canister Service Action Allowed LEDs



Expansion Storage Shelf Expansion Service Action Allowed canister LEDs



- 3 If the Service Allowed LED is not blue, access the appliance shell menu. You can use the `Support > ServiceAllowed` command to turn on the blue light. If you cannot turn on the light, contact Veritas Technical Support.
- 4 Label the cables from the canister that you plan to remove.
 - On a RAID canister, label the FC cables that connect to the appliance. Label the SAS cables (if present) that connect to the Expansion shelf.
 - On an Expansion canister, label the SAS cables that connect to the Primary shelf.
- 5 Remove the cables from the canister that you need to replace.

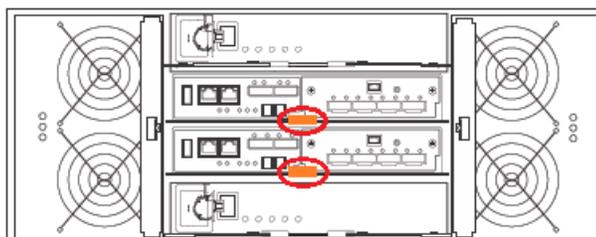
- From a RAID canister, remove the FC cables that connect to the appliance. Remove the SAS cables (if present) that connect to the Expansion shelf. Remove any Ethernet or other FC cables.
 - From an Expansion canister, remove the SAS cables that connect to the Primary shelf.
- 6** Do not remove the power cords.
- 7** Remove the FC SFPs from the RAID canister. The Expansion canister does not have any SFPs.
- Flip up the metal handle on the SFP.



- Use the handle to pull the SFP straight out from the port.

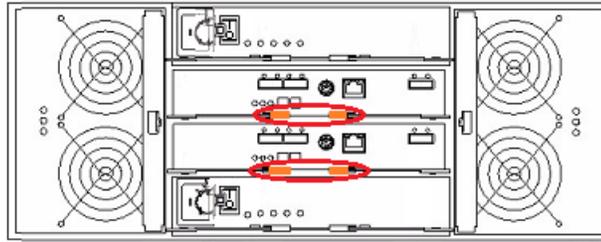


- Keep all SFPs in a safe location. You will re-install them in the new RAID canister.
- 8** Locate the lever(s) on the canister you need to remove.
- The Primary Storage Shelf has one lever with an orange tab and one lever without a tab, per canister. The lever with the orange tab overlaps the top of the other lever.
- Primary Storage Shelf RAID Canister Levers (the lever with the orange tab is shown)



The Expansion Storage Shelf has two levers with orange tabs per canister.

Expansion Storage Shelf Expansion Canister Levers (two per canister)



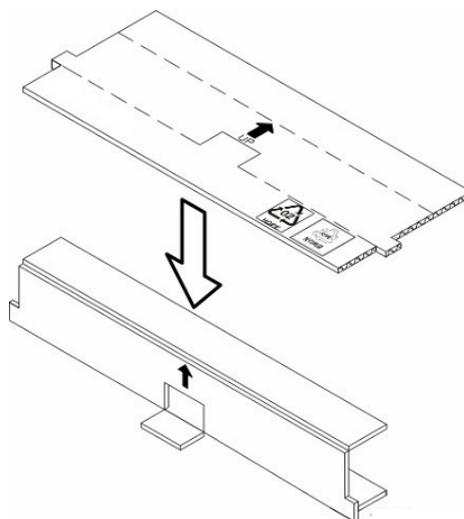
Warning: If you perform this procedure with the power turned on, you must complete it within 15 minutes to prevent the possibility of overheating the equipment.

Do not remove both canisters from the storage shelf at the same time. One canister must be functioning at all times.

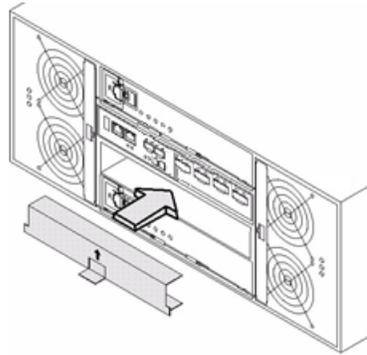
- 9 Unlock and pull the levers forward to release the canister.
- 10 Pull the canister out of the chassis.
While removing the canister, you might notice an increase in fan speed. The fan speed returns to normal after you have replaced the canister.
- 11 Refer to the next section to remove the battery from the RAID canister.
- 12 Refer to the last section to replace the Expansion canister.
- 13 Move quickly to install the new canister within 15 minutes.

To remove the battery from the RAID canister

- 1 Locate the air blocker.
- 2 Fold the air blocker inward at right angles so it is ready to insert into the open canister slot.



- 3 Insert the air blocker into the open slot to make sure that correct airflow is maintained throughout the storage shelf.



- 4 Locate the removed RAID canister.
Primary Storage Shelf RAID Canister Levers open



Warning: If you perform this procedure with the power turned on, you must complete it within 15 minutes to prevent the possibility of overheating the equipment.

Do not remove both canisters from the storage shelf at the same time. One canister must be functioning at all times.

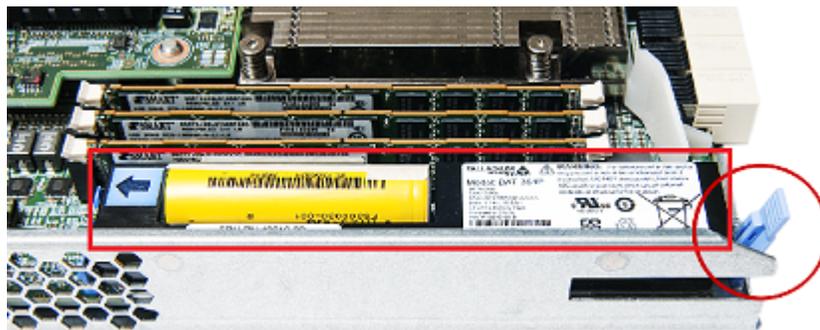
- 5 Set the canister on a flat, static-free surface, with the levers up. The canister is now upside-down.
- 6 Press down on both of blue latch buttons (circled).



- 7 Slide the cover to the rear of the canister and lift it away from the canister.
- 8 Move the small blue locking handle down to pull the battery out of the canister.

In the diagram:

- The blue locking handle is circled in red.
- The battery is indicated by a red box.
- The arrow at the left end of the battery shows the direction in which to insert the battery into the replacement canister.



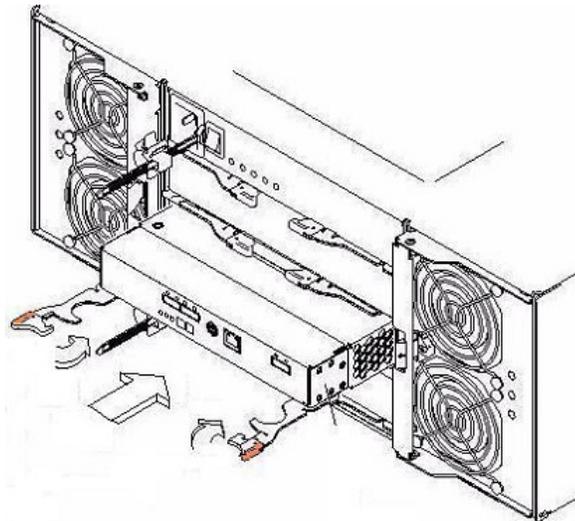
- 9 Remove the battery by sliding it towards the rear of the canister.
- 10 Locate the replacement canister.
- 11 Insert the battery into the battery compartment in the replacement canister.
- 12 Slide the battery towards the front of the replacement canister under the tabs along the sides of the compartment.
- 13 Move the blue locking handle up to secure the battery circuit board to the replacement canister. To make sure that the battery is seated correctly, you might need to slide it out and insert it again.
- 14 Reinstall the cover on the replacement canister by sliding the cover forward until the latch buttons click.

15 Remove the air blocker in the empty slot in the Primary Storage Shelf.

To install a replacement RAID or Expansion canister

1 Slide the new canister all the way into the rear panel of the chassis.

The following image shows the insertion of an Expansion canister. The mechanism for installing a RAID canister works the same way.



2 Rotate the levers towards the center of the canister to lock it into place.

3 Reinstall the Fibre Channel SFPs into the RAID canister. This step does not apply to the Expansion canister.

- Use the SFPs that you removed before you removed the original RAID canister.
- Insert an SFP into an Fibre Channel port. You should not need to use the handle.

4 On the RAID or Expansion canisters, reconnect all of the cables that were removed from the original canister.

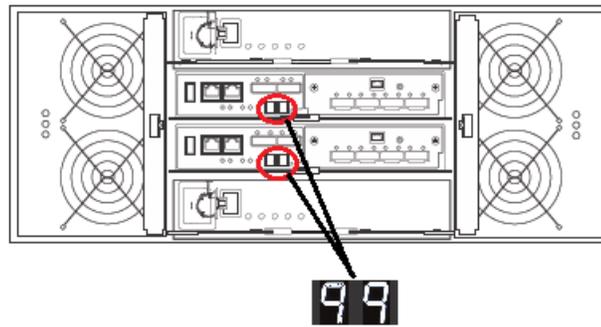
5 Bring the replacement RAID canister online. If the canister does not come online, contact Veritas Technical Support.

6 Look at the Service Action Required LEDs and Service Action Allowed LEDs.

- If all of the *Service Action Required* LEDs are off, the procedure is completed.
- If any of the storage shelf *Service Action Required* LEDs are on, or if the RAID canister *Service Action Required LED* is on, check that the canister has been installed correctly and that all of the cables are installed correctly. Reinstall the canister, if necessary.

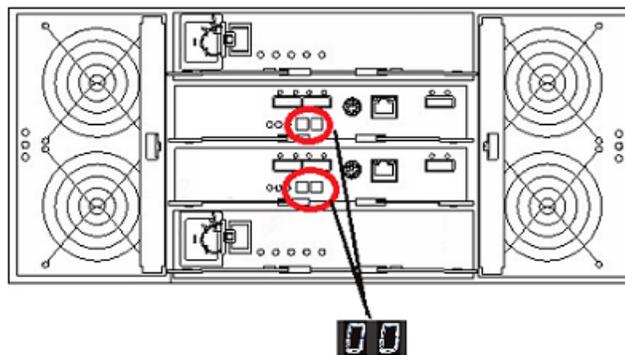
7 Look at the seven segment displays on the new canister.

- The display on the RAID canister should read “99.”



Note: It can take up to 10 minutes for the canister to become operational. If after 10 minutes, the display is a number other than 99, you should escalate the issue.

- The display on the Expansion canister should read “00.”



Note: It can take up to two minutes for the Expansion canister to become operational. If after two minutes, the display is a number other than 00, you should escalate the issue.

- 8 Replace the bezel, if required.