



# Replace fan

## StorageGRID Appliances

NetApp  
June 13, 2024

# Table of Contents

- Replace fan ..... 1
- Replace fan in an SGF6112 or SG6100-CN (SG6160) ..... 1
- Replace fan canister in storage controller shelf or expansion shelf (SG6160) ..... 6

# Replace fan

## Replace fan in an SGF6112 or SG6100-CN (SG6160)

The SGF6112 appliance and SG6100-CN controller have eight cooling fans. If one of the fans fails, you must replace it as soon as possible to ensure that the appliance has proper cooling.

### Before you begin

- You have the correct replacement fan.
- You have [determined the location of the fan to replace](#).
- You have [physically located the SGF6112 appliance or SG6100-CN controller](#) where you are replacing the fan in the data center.



A [controlled shutdown of the appliance](#) is required before removing the appliance from the rack.

- You have disconnected all cables and [removed the appliance cover](#).
- You have confirmed that the other fans are installed and running.

### About this task

To prevent service interruptions, confirm that all other Storage Nodes are connected to the grid before starting the fan replacement or replace the fan during a scheduled maintenance window when periods of service disruption are acceptable. See the information about [monitoring node connection states](#).



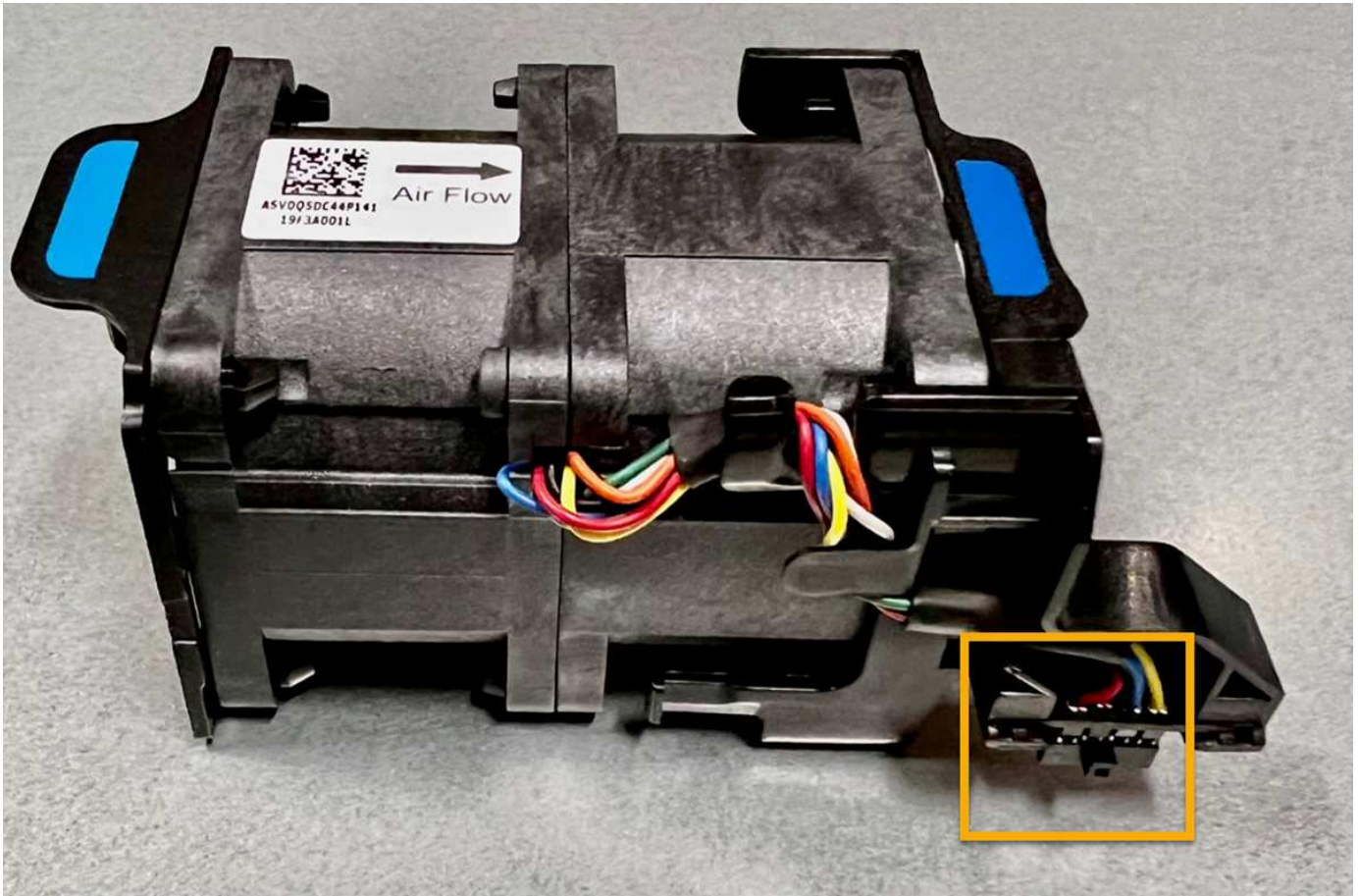
If you have ever used an ILM rule that creates only one copy of an object, you must replace the fan during a scheduled maintenance window because you might temporarily lose access to those objects during this procedure. See information about [why you should not use single-copy replication](#).

The appliance node will not be accessible while you replace the fan.

The photograph shows a fan for the appliance. The electrical connector is highlighted. The cooling fans are accessible after you take the top cover off of the appliance.



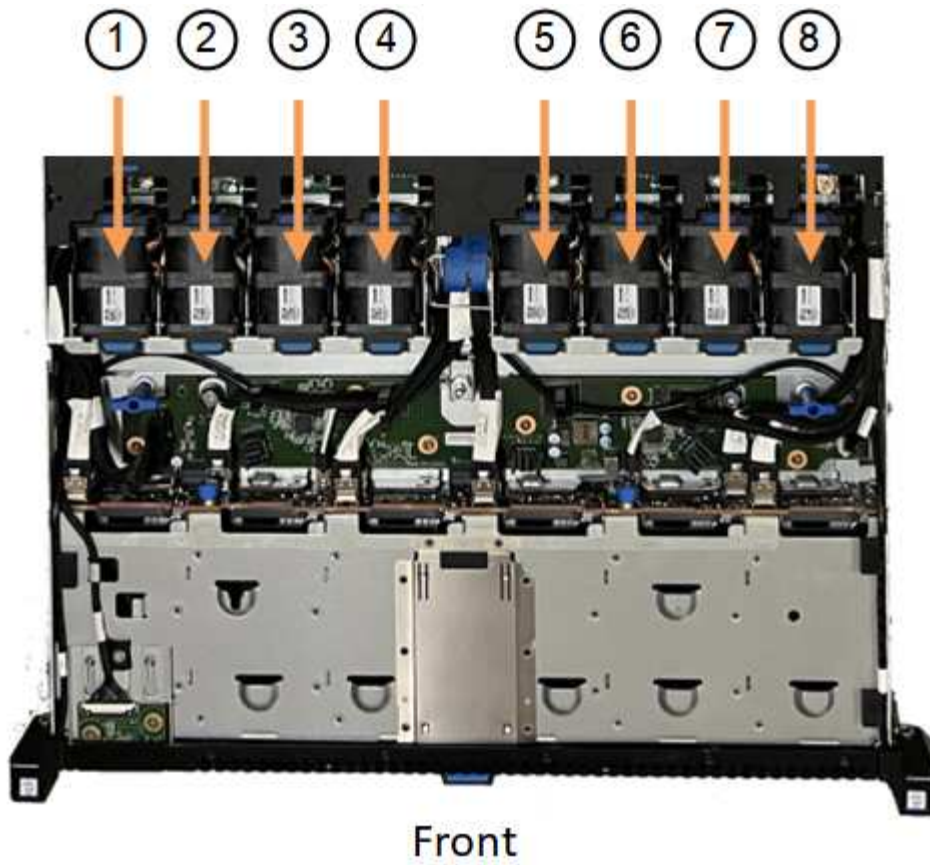
Each of the two power supply units also contain a fan. The power supply fans aren't included in this procedure.



### Steps

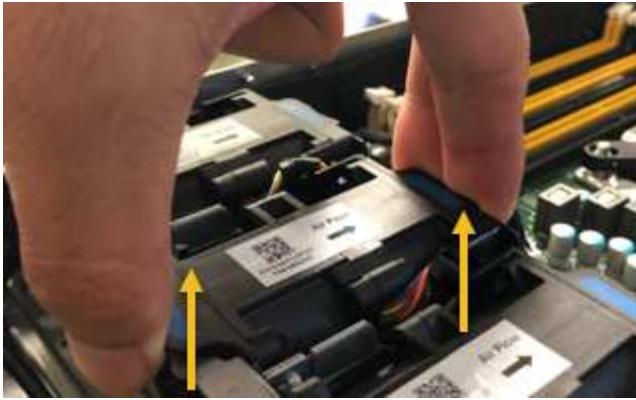
1. Wrap the strap end of the ESD wristband around your wrist, and secure the clip end to a metal ground to prevent static discharge.
2. Locate the fan that you need to replace.

The eight fans are in the following positions in the chassis (front half of StorageGRID appliance with top cover removed shown):



|   |          |
|---|----------|
|   | Fan unit |
| 1 | Fan_SYS0 |
| 2 | Fan_SYS1 |
| 3 | Fan_SYS2 |
| 4 | Fan_SYS3 |
| 5 | Fan_SYS4 |
| 6 | Fan_SYS5 |
| 7 | Fan_SYS6 |
| 8 | Fan_SYS7 |

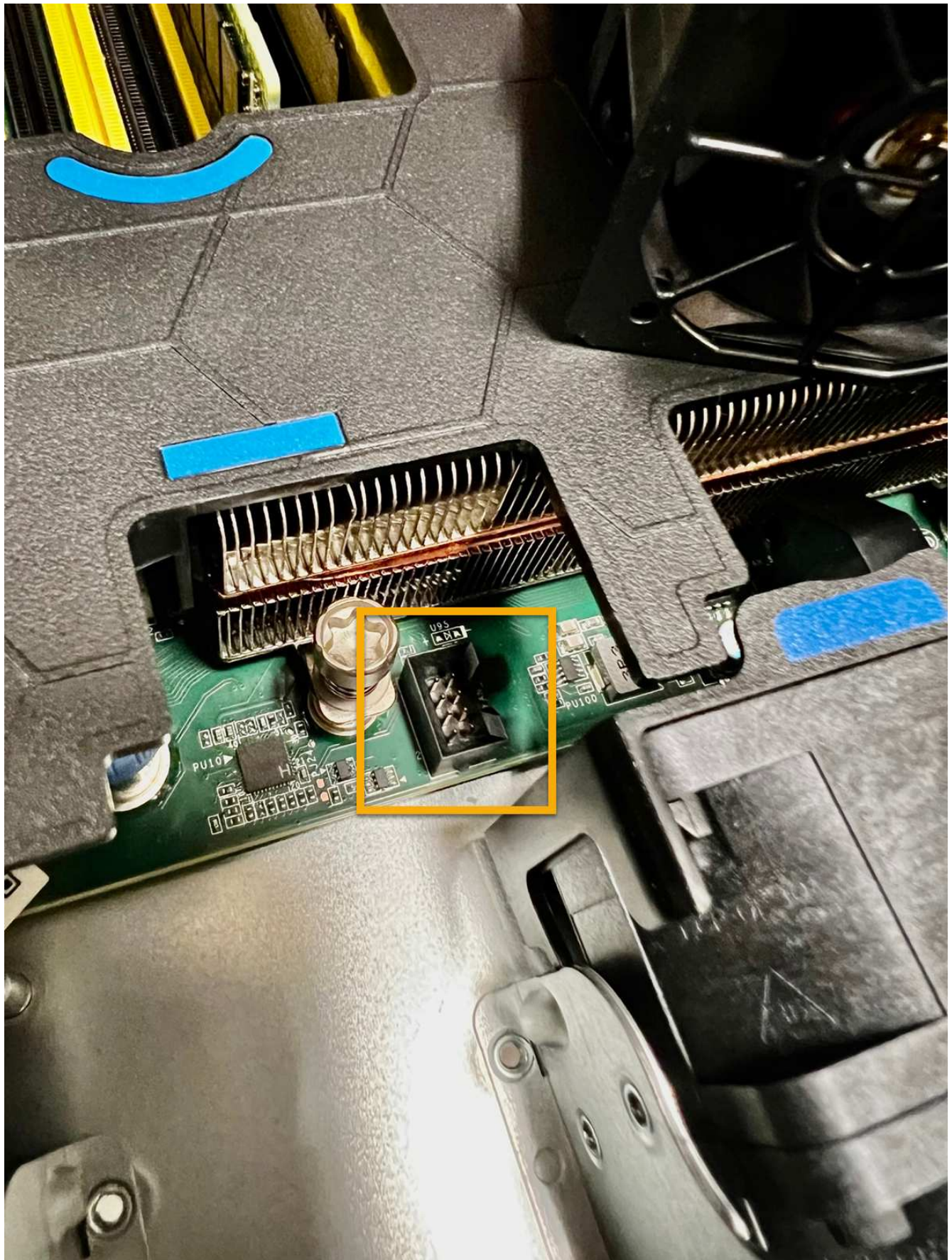
3. Using the blue tabs on the fan, lift the failed fan out of the chassis.



4. Slide the replacement fan into the open slot in the chassis.

Be sure to align the connector on the fan with the socket in the circuit board.

5. Press the fan's connector firmly into the circuit board (socket highlighted).



After you finish

1. [Put the top cover back on the appliance](#), and press the latch down to secure the cover in place.
2. [Power on the appliance](#) and monitor the appliance LEDs and boot-up codes.

Use the BMC interface to monitor boot-up status.

3. Confirm that the appliance node appears in the Grid Manager and that no alerts appear.

After replacing the part, return the failed part to NetApp, as described in the RMA instructions shipped with the kit. See the [Part Return & Replacements](#) page for further information.

## Replace fan canister in storage controller shelf or expansion shelf (SG6160)

You can replace a fan canister in an SG6160.

### About this task

Each 60-drive controller shelf or drive shelf includes two fan canisters. If a fan canister fails, you must replace it as soon as possible to ensure that the shelf has adequate cooling.



**Possible equipment damage** — If you perform this procedure with the power turned on, you must complete it within 30 minutes to prevent the possibility of overheating the equipment.

### Before you begin

- Navigate to the SANtricity System Manager tab of the Nodes page for the node(s) listed in the alert that notified you of the fan failure. Using the SANtricity UI presented on this tab, review the details in the Recovery Guru to confirm that there is an issue with the fan canister and select **Recheck** from the Recovery Guru to ensure no other items must be addressed first.
- Check that the amber Attention LED on the fan canister is on, indicating that the fan has a fault. Contact technical support for assistance if both fan canisters in the appliance have their amber Attention LEDs on.
- Make sure you have the following:
  - A replacement fan canister (fan) that is supported for your appliance model.
  - An ESD wristband, or you have taken other antistatic precautions.

## Step 1: Prepare to replace fan canister

Prepare to replace a fan canister by collecting support data about your appliance and locating the failed component.


### Steps

1. Collect support data for your storage array using SANtricity System Manager.
  - a. Select **Support Center > Diagnostics**.
  - b. Select **Collect Support Data**.
  - c. Click **Collect**.

The file is saved in the Downloads folder for your browser with the name, **support-data.7z**.

2. From SANtricity System Manager, determine which fan canister has failed.



- a. Select **Hardware**.
- b. Look at the fan  icon to the right of the **Shelf** drop-down lists to determine which appliance has the failed fan canister.

If a component has failed, this icon is red.

- c. When you find the appliance with a red icon, select **Show back of shelf**.
- d. Select either fan canister or the red fan icon.
- e. On the **Fans** tab, look at the statuses of the fan canisters to determine which fan canister must be replaced.

A component with a **Failed** status must be replaced.



If the second fan canister in the appliance does not have **Optimal** status, do not attempt to hot-swap the failed fan canister. Instead, contact technical support for assistance.

You can also find information about the failed fan canister in the Details area of the Recovery Guru, or you can review the Event Log under Support and filter by Component Type.

3. From the back of the storage array, look at the Attention LEDs to locate the fan canister you need to remove.

You must replace the fan canister that has its Attention LED on.

## Step 2: Remove failed fan canister and install new one

Remove a failed fan canister so you can replace it with a new one.



If you do not turn off the power to your storage array, ensure that you remove and replace the fan canister within 30 minutes to prevent the system from overheating.

### Steps

1. Unpack the new fan canister, and place it on a level surface near the appliance.

Save all packing material for use when returning the failed fan.

2. Press the orange tab to release the fan canister handle.
3. Use the fan canister handle to pull the fan canister out of the appliance.
4. Slide the replacement fan canister all the way into the appliance, and then move the fan canister handle until it latches with the orange tab.

## Step 3: Complete fan canister replacement

Confirm that the new fan canister is working correctly, gather support data, and resume normal operations.

### Steps

1. Check the amber Attention LED on the new fan canister.



After you replace the fan canister, the Attention LED stays on (solid amber) while the firmware checks that the fan canister was installed correctly. The LED goes off after this process is complete.

2. From the Recovery Guru in SANtricity System Manager, select **Recheck** to ensure the problem has been resolved.
3. If a failed fan canister is still being reported, repeat the steps in [Step 2: Remove failed fan canister and install new one](#). If the problem persists, contact technical support.
4. Remove the antistatic protection.
5. Collect support data for your storage array using SANtricity System Manager.
  - a. Select **Support Center > Diagnostics**.
  - b. Select **Collect Support Data**.
  - c. Click **Collect**.

The file is saved in the Downloads folder for your browser with the name, **support-data.7z**.

6. Return the failed part to NetApp, as described in the RMA instructions shipped with the kit.

#### **What's next?**

Your fan canister replacement is complete. You can resume normal operations.

## Copyright information

Copyright © 2024 NetApp, Inc. All Rights Reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

## Trademark information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.