Replace or install a mezzanine card - FAS500f

ONTAP Systems

Martin Houser, Thripura Naidu Parangsam, Doug Thompson
October 21, 2021

This PDF was generated from https://docs.netapp.com/us-en/ontap-systems/fas500f/mezzanine-replace.html on October 26, 2021. Always check docs.netapp.com for the latest.

Table of Contents

Replace or install a mezzanine card - FAS500f

To replace a failed mezzanine card, you must remove the cables and any SFP or QSFP modules, replace the card, reinstall the SFP or QSFP modules and recable the cards. To install a new mezzanine card, you must have the appropriate cables and SFP or QSFP modules.

- You can use this procedure with all versions of ONTAP supported by your system
- All other components in the system must be functioning properly; if not, you must contact technical support.

Step 1: Shut down the impaired controller

To shut down the impaired node, you must determine the status of the node and, if necessary, take over the node so that the healthy node continues to serve data from the impaired node storage.

About this task

If you have a cluster with more than two nodes, it must be in quorum. If the cluster is not in quorum or a healthy node shows false for eligibility and health, you must correct the issue before shutting down the impaired node.

ONTAP 9 System Administration Reference

Steps

1. If AutoSupport is enabled, suppress automatic case creation by invoking an AutoSupport message: `system node autosupport invoke -node * -type all -message MAINT=number_of_hours_downh`

   The following AutoSupport message suppresses automatic case creation for two hours: `cluster1:*> system node autosupport invoke -node * -type all -message MAINT=2h`

2. Disable automatic giveback from the console of the healthy node: `storage failover modify -node local -auto-giveback false`
3. Take the impaired node to the LOADER prompt:

If the impaired node is displaying…	Then…
The LOADER prompt	Go to the next step.
Waiting for giveback…	Press Ctrl-C, and then respond `y` when prompted.

If the impaired node is displaying…	Then…
System prompt or password prompt (enter system password)	Take over or halt the impaired node: • For an HA pair, take over the impaired node from the healthy node: `storage failover takeover -ofnode impaired_node_name` When the impaired node shows Waiting for giveback…, press Ctrl-C, and then respond `y`.

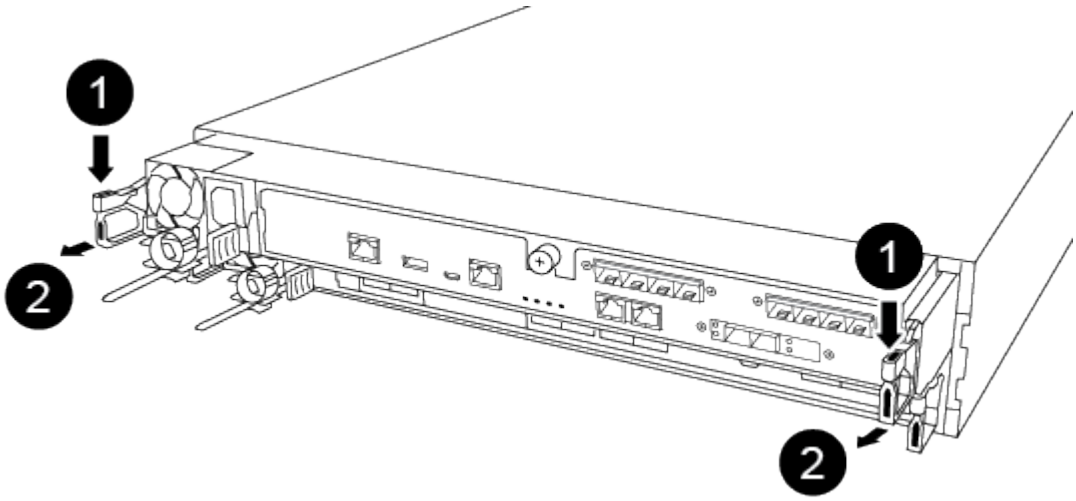
Step 2: Remove the controller module

You must remove the controller module from the chassis when you replace a component inside the controller module.

Make sure that you label the cables so that you know where they came from.

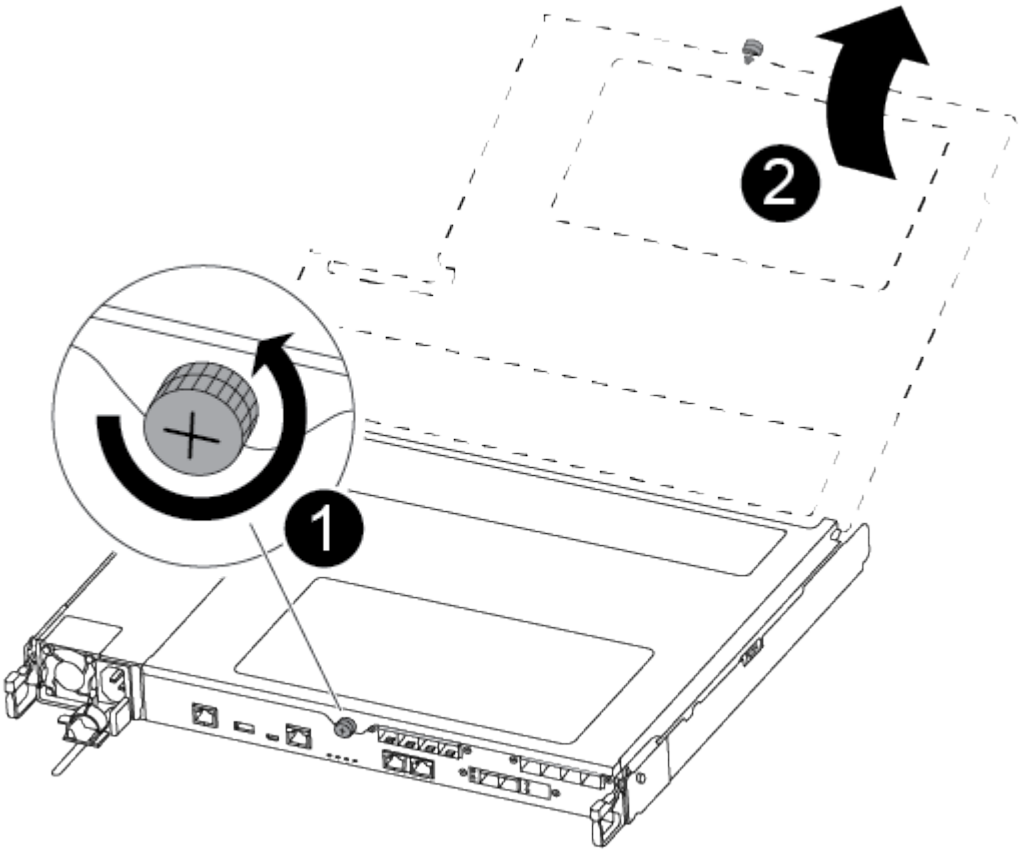
1. If you are not already grounded, properly ground yourself.
2. Unplug the controller module power supplies from the source.
3. Release the power cable retainers, and then unplug the cables from the power supplies.
4. Insert your forefinger into the latching mechanism on either side of the controller module, press the lever with your thumb, and gently pull the controller a few inches out of the chassis.

If you have difficulty removing the controller module, place your index fingers through the finger holes from the inside (by crossing your arms)



1	Lever
2	Latching mechanism

5. Using both hands, grasp the controller module sides and gently pull it out of the chassis and set it on a flat, stable surface.
6. Turn the thumbscrew on the front of the controller module anti-clockwise and open the controller module cover.



1	Thumbscrew
2	Controller module cover.

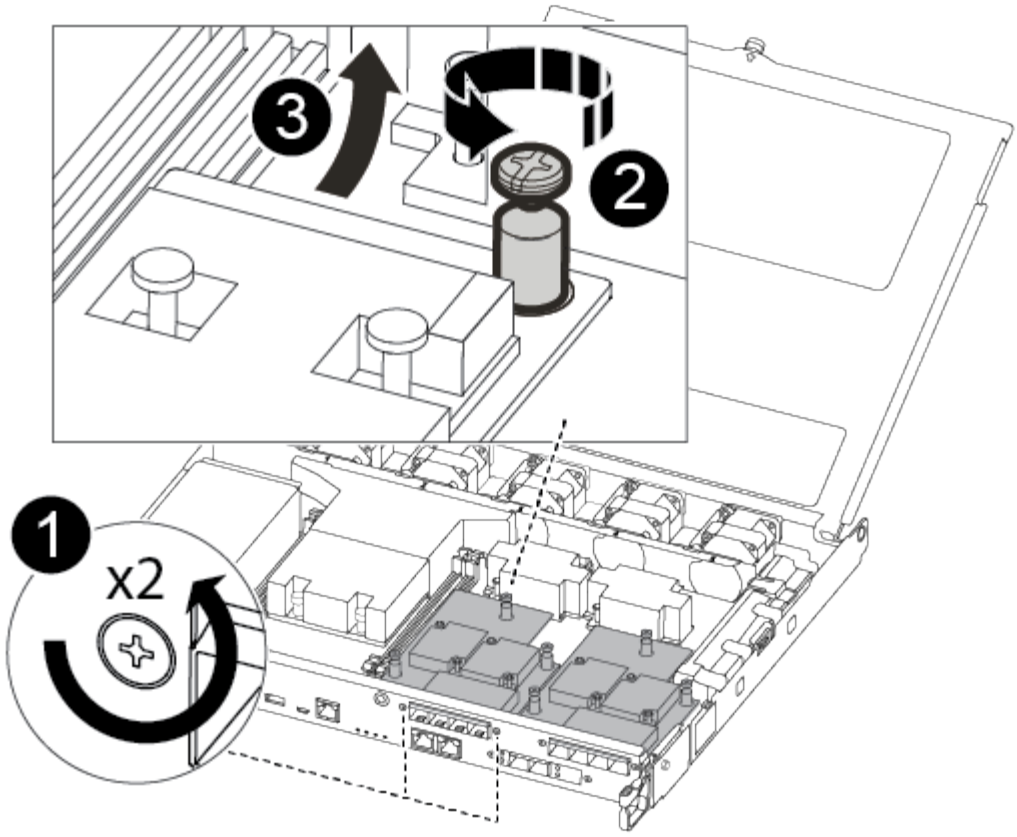
Step 3: Replace or install a mezzanine card

To replace a mezzanine card, you must remove the impaired card and install the replacement card; to install a mezzanine card, you must remove the face plate and install the new card.

You can use the following video or the tabulated steps to replace a mezzanine card:

Replacing a mezzanine card

1. To replace a mezzanine card:
2. Locate and replace the impaired mezzanine card on your controller module.



1	Remove screws on the face of the controller module.
2	Loosen the screw in the controller module.
3	Remove the mezzanine card.

a. Unplug any cabling associated with the impaired mezzanine card.

   Make sure that you label the cables so that you know where they came from.

b. Remove any SFP or QSFP modules that might be in the impaired mezzanine card and set it aside.

c. Using the #1 magnetic screw driver remove the screws from the face of the controller module and set them aside safely on the magnet.

d. Using the #1 magnetic screw driver loosen the screw on the impaired mezzanine card.

e. Gently lift the impaired mezzanine card directly out of the socket and set it aside

f. Remove the replacement mezzanine card from the antistatic shipping bag and align it to the inside face of the controller module.

g. Gently align the replacement mezzanine card into place.

h. Using the #1 magnetic screw driver insert and tighten the screws on the face of the controller module and on the mezzanine card.

Do not apply force when tightening the screw on the mezzanine card; you might crack it.

i. Insert any SFP or QSFP modules that were removed from the impaired mezzanine card to the replacement mezzanine card.

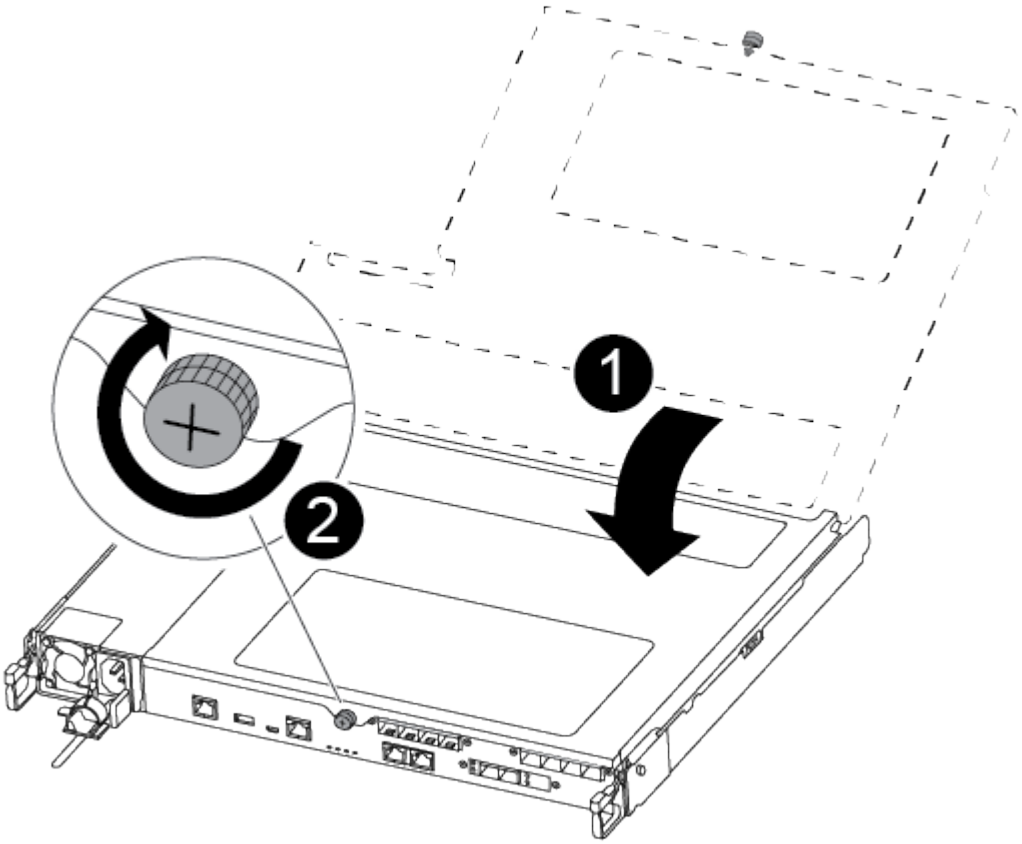
3. To install a mezzanine card:
4. You install a new mezzanine card if your system does not have one.
   a. Using the #1 magnetic screw driver remove the screws from the face of the controller module and the faceplate covering the mezzanine card slot, and set them aside safely on the magnet.
   b. Remove the mezzanine card from the antistatic shipping bag and align it to the inside face of the controller module.
   c. Gently align the mezzanine card into place.
   d. Using the #1 magnetic screw driver insert and tighten the screws on the face of the controller module and on the mezzanine card.

Do not apply force when tightening the screw on the mezzanine card; you might crack it.

Step 4: Reinstall the controller module

After you replace a component within the controller module, you must reinstall the controller module in the system chassis and boot it.

1. Close the controller module cover and tighten the thumbscrew.



1	Controller module cover
2	Thumbscrew

2. Insert the controller module into the chassis:

   a. Ensure the latching mechanism arms are locked in the fully extended position.

   b. Using both hands, align and gently slide the controller module into the latching mechanism arms until it stops.

   c. Place your index fingers through the finger holes from the inside of the latching mechanism.

   d. Press your thumbs down on the orange tabs on top of the latching mechanism and gently push the controller module over the stop.

   e. Release your thumbs from the top of the latching mechanisms and continue pushing until the latching mechanisms snap into place.

      The controller module begins to boot as soon as it is fully seated in the chassis. Be prepared to interrupt the boot process.

   The controller module should be fully inserted and flush with the edges of the chassis.

3. Recable the system, as needed.
4. Return the node to normal operation by giving back its storage: `storage failover giveback -ofnode` *`impaired_node_name`*
5. If automatic giveback was disabled, reenable it: `storage failover modify -node local -auto -giveback true`

Step 5: Return the failed part to NetApp

After you replace the part, you can return the failed part to NetApp, as described in the RMA instructions shipped with the kit. Contact technical support at NetApp Support, 888-463-8277 (North America), 00-800-44-638277 (Europe), or +800-800-80-800 (Asia/Pacific) if you need the RMA number or additional help with the replacement procedure.

Copyright Information

Copyright © 2021 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.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

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.