



# **Boot the recovery image - AFF A700 and FAS9000**

## **ONTAP Systems**

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

# Table of Contents

- Boot the recovery image - AFF A700 and FAS9000 ..... 1
  - Option 1 Boot the recovery image in most systems..... 1
  - Option 2: Boot the recovery image in a two-node MetroCluster configuration..... 3

# Boot the recovery image - AFF A700 and FAS9000

The procedure for booting the impaired node from the recovery image depends on whether the system is in a two-node MetroCluster configuration.

## Option 1 Boot the recovery image in most systems

You must boot the ONTAP image from the USB drive, restore the file system, and verify the environmental variables.

This procedure applies to systems that are not in a two-node MetroCluster configuration.

### Steps

1. From the LOADER prompt, boot the recovery image from the USB flash drive: `boot_recovery`

The image is downloaded from the USB flash drive.

2. When prompted, either enter the name of the image or accept the default image displayed inside the brackets on your screen.
3. Restore the `var` file system:

If your system has...	Then...
A network connection	<ol style="list-style-type: none"><li>a. Press <code>y</code> when prompted to restore the backup configuration.</li><li>b. Set the healthy node to advanced privilege level: <code>set -privilege advanced</code></li><li>c. Run the restore backup command: <code>system node restore-backup -node local -target-address <i>impaired_node_IP_address</i></code></li><li>d. Return the node to admin level: <code>set -privilege admin</code></li><li>e. Press <code>y</code> when prompted to use the restored configuration.</li><li>f. Press <code>y</code> when prompted to reboot the node.</li></ol>
No network connection	<ol style="list-style-type: none"><li>a. Press <code>n</code> when prompted to restore the backup configuration.</li><li>b. Reboot the system when prompted by the system.</li><li>c. Select the <b>Update flash from backup config</b> (sync flash) option from the displayed menu.  If you are prompted to continue with the update, press <code>y</code>.</li></ol>

If your system has...	Then...
No network connection and is in a MetroCluster IP configuration	<p>a. Press <b>n</b> when prompted to restore the backup configuration.</p> <p>b. Reboot the system when prompted by the system.</p> <p>c. Wait for the iSCSI storage connections to connect.</p> <p>You can proceed after you see the following messages:</p> <pre data-bbox="672 394 1489 1255"> date-and-time [node- name:iscsi.session.stateChanged:notice]: iSCSI session state is changed to Connected for the target iSCSI-target (type: dr_auxiliary, address: ip-address). date-and-time [node- name:iscsi.session.stateChanged:notice]: iSCSI session state is changed to Connected for the target iSCSI-target (type: dr_partner, address: ip-address). date-and-time [node- name:iscsi.session.stateChanged:notice]: iSCSI session state is changed to Connected for the target iSCSI-target (type: dr_auxiliary, address: ip-address). date-and-time [node- name:iscsi.session.stateChanged:notice]: iSCSI session state is changed to Connected for the target iSCSI-target (type: dr_partner, address: ip-address).</pre> <p>d. Select the <b>Update flash from backup config</b> (sync flash) option from the displayed menu.</p> <p>If you are prompted to continue with the update, press <b>y</b>.</p>

4. Ensure that the environmental variables are set as expected:
  - a. Take the node to the LOADER prompt.
  - b. Check the environment variable settings with the `printenv` command.
  - c. If an environment variable is not set as expected, modify it with the `setenv environment-variable-name changed-value` command.
  - d. Save your changes using the `savenv` command.
5. The next depends on your system configuration:
  - If your system has onboard keymanager, NSE or NVE configured, go to [Restore OKM, NSE, and NVE as needed](#)

- If your system does not have onboard keymanager, NSE or NVE configured, complete the steps in this section.

6. From the LOADER prompt, enter the `boot_ontap` command.

*If you see...	Then...*
The login prompt	Go to the next Step.
Waiting for giveback...	a. Log into the partner node. b. Confirm the target node is ready for giveback with the <code>storage failover show</code> command.

7. Connect the console cable to the partner node.

8. Give back the node using the `storage failover giveback -fromnode local` command.

9. At the cluster prompt, check the logical interfaces with the `net int -is-home false` command.

If any interfaces are listed as "false", revert those interfaces back to their home port using the `net int revert` command.

10. Move the console cable to the repaired node and run the `version -v` command to check the ONTAP versions.

11. Restore automatic giveback if you disabled it by using the `storage failover modify -node local -auto-giveback true` command.

## Option 2: Boot the recovery image in a two-node MetroCluster configuration

You must boot the ONTAP image from the USB drive and verify the environmental variables.

This procedure applies to systems in a two-node MetroCluster configuration.

### Steps

1. From the LOADER prompt, boot the recovery image from the USB flash drive: `boot_recovery`

The image is downloaded from the USB flash drive.

2. When prompted, either enter the name of the image or accept the default image displayed inside the brackets on your screen.

3. After the image is installed, start the restoration process:

- Press `n` when prompted to restore the backup configuration.
- Press `y` when prompted to reboot to start using the newly installed software.

You should be prepared to interrupt the boot process when prompted.

4. As the system boots, press `Ctrl-C` after you see the `Press Ctrl-C for Boot Menu message.`, and when the Boot Menu is displayed select option 6.

5. Verify that the environmental variables are set as expected.
  - a. Take the node to the LOADER prompt.
  - b. Check the environment variable settings with the `printenv` command.
  - c. If an environment variable is not set as expected, modify it with the `setenv environment-variable-name changed-value` command.
  - d. Save your changes using the `savenv` command.
  - e. Reboot the node.

## 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.