Restoring and verifying the configuration - AFF C190

ONTAP Systems

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Step 1: Verify and setting the HA state of the chassis

You must verify the HA state of the chassis, and, if necessary, update the state to match your system configuration.

1. In Maintenance mode, from either controller module, display the HA state of the local controller module and chassis:

   ha-config show

   The HA state should be the same for all components.

2. If the displayed system state for the chassis does not match your system configuration:
   a. Set the HA state for the chassis:

      ha-config modify chassis *HA-state*

      The value for *HA-state* can be one of the following:

      - ha
      - non-ha

   b. Confirm that the setting has changed:

      ha-config show

3. If you have not already done so, recable the rest of your system.
4. The next step depends on your system configuration.

If your system is in…	Then…
A stand-alone configuration	a. Exit Maintenance mode: **halt** b. Go to "Completing the replacement process.
An HA pair with a second controller module	Exit Maintenance mode: **halt** The LOADER prompt appears.

Step 2: Run system-level diagnostics

After installing a new chassis, you should run interconnect diagnostics.

Your system must be at the LOADER prompt to start System Level Diagnostics.

All commands in the diagnostic procedures are issued from the node where the component is being replaced.

1. If the node to be serviced is not at the LOADER prompt, perform the following steps:
   a. Select the Maintenance mode option from the displayed menu.
   b. After the node boots to Maintenance mode, halt the node:

      halt

      After you issue the command, you should wait until the system stops at the LOADER prompt.

      During the boot process, you can safely respond `y` to prompts:

2. Repeat the previous step on the second node if you are in an HA configuration.

   Both controllers must be in Maintenance mode to run the interconnect test.

3. At the LOADER prompt, access the special drivers specifically designed for system-level diagnostics to function properly:

   boot_diags

   During the boot process, you can safely respond `y` to the prompts until the Maintenance mode prompt (*>) appears.

4. Enable the interconnect diagnostics tests from the Maintenance mode prompt:

   sldiag device modify -dev interconnect -sel enable

   The interconnect tests are disabled by default and must be enabled to run separately.

5. Run the interconnect diagnostics test from the Maintenance mode prompt:

   sldiag device run -dev interconnect

   You only need to run the interconnect test from one controller.

6. Verify that no hardware problems resulted from the replacement of the chassis:

   sldiag device status -dev interconnect -long -state failed

   System-level diagnostics returns you to the prompt if there are no test failures, or lists the full status of failures resulting from testing the component.

7. Proceed based on the result of the preceding step.

If the system-level diagnostics tests…	Then…
Were completed without any failures	a. Clear the status logs: **sldiag device clearstatus** b. Verify that the log was cleared: **sldiag device status** The following default response is displayed: `SLDIAG: No log messages are present.` c. Exit Maintenance mode on both controllers: **halt** The system displays the LOADER prompt. You must exit Maintenance mode on both controllers before proceeding any further. d. Enter the following command on both controllers at the LOADER prompt: **bye** e. Return the node to normal operation:

If your system is running ONTAP…	Then…
With two nodes in the cluster	Issue these commands: **node::> cluster ha modify -configured true** **node::> storage failover modify -node node0 -enabled true**
With more than two nodes in the cluster	Issue this command: **node::> storage failover modify -node node0 -enabled true**
In a stand-alone configuration	You have no further steps in this particular task. You have completed system-level diagnostics.

If your system is running ONTAP…	Then…
Resulted in some test failures	Determine the cause of the problem. a. Exit Maintenance mode: `halt` b. Perform a clean shutdown, and then disconnect the power supplies. c. Verify that you have observed all of the considerations identified for running system-level diagnostics, that cables are securely connected, and that hardware components are properly installed in the storage system. d. Reconnect the power supplies, and then power on the storage system. e. Rerun the system-level diagnostics test.

Step 3: 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.