



Navy Cash Training System Troubleshooting Procedures Unit 3

Objectives

At the end of this training unit you will be able to:

- State the various problems that might occur with the Navy Cash system.
- Describe the steps used to remove and replace Navy Cash hardware.
- Apply troubleshooting steps and processes to correct problem scenarios in the classroom using Navy Cash training equipment.



Troubleshooting and Problem Diagnostics

Troubleshooting Tips

- When problems occur with the Navy Cash system, ensure you follow these basic troubleshooting tips:
 - Review system application and security logs on a *weekly* basis. Navy Cash applications utilize a high level of logging and there will be many messages in various log files.
 - Be aware of changes to Navy Cash software and hardware as some components require certain settings.
 - Check all cables and wires. Re-crimped cables will affect Navy Cash operations if not done properly.

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Loss of Ship's Power

- If the ship loses power :
 - The Uninterruptible Power Supply (UPS) should maintain power to the server long enough to power it off properly.
 - When power returns, follow the “Power On” steps to power on the Navy Cash server.
 - » Allow the 1st node to fully boot up before turning on the second node. This allows full control of the resources.
 - » **No** other devices should be plugged into a Navy Cash UPS.

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Incorrect Network Settings

- Network adapters and switch ports may have mismatching duplex levels or transfer speed settings.
 - Ensure all Navy Cash Switch ports have speed and duplex statically assigned and *not* set to auto.
 - Both network switches/server network adapters must be set to 10 or 100 Mbps and full duplex. The system will not function correctly if they are mismatched.

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Incorrect Network Settings (cont)

- Network adapters or switches with transmission rates of 10/100 megabits per second (Mbps) do not switch over correctly. Some 'auto sense' settings may not properly detect the speed of some network adapters.
- Be aware of upgrades or the installation of software or equipment which impacts Navy Cash devices or communication.

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Navy Cash Devices Offline

- Check cables, UPS, switches
- Verify services are *online* by following these steps:
 - **Step 1:** Open *Failover Cluster Management*
 - **Step 2:** Verify that *NCSERVICE* resource is *online*.
 - **Step 3:** If *offline*, right-click on the resource and select *Bring Online*. Once the resource is *online*, check devices for connectivity.
 - **Step 4:** If equipment is *online*, troubleshooting ends. If not then attempt to ping the devices' switch.

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Navy Cash Devices Offline (cont)

- **Step 5:** If the switch can't be pinged, verify it is powered on and all cables are seated firmly.
- **Step 6:** Verify the ship's switch port configuration (speed/duplex, VLAN, etc).
- **Step 7:** Confirm IP configuration against navy.cfg file (F:\ncservice\navy.cfg)
- **Step 8:** If the navy.cfg file needs to be changed, contact the Navy Cash Call Center for further assistance.

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Client/Server Comms Failure

- **Step 1:** Verify IP addresses are correct by executing “*ipconfig -all*” from the command prompt.
 - Always verify the IP addresses to the ones that are listed on the laminated *Navy Cash Quick Info* sheet hanging on the server rack.
- **Step 2:** Check connections on both ends of network cable. Perform a ping test to verify connectivity
 - If connection is achieved, troubleshooting ends. If problem persists, continue with next step.

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Client/Server Comms Failure (cont)

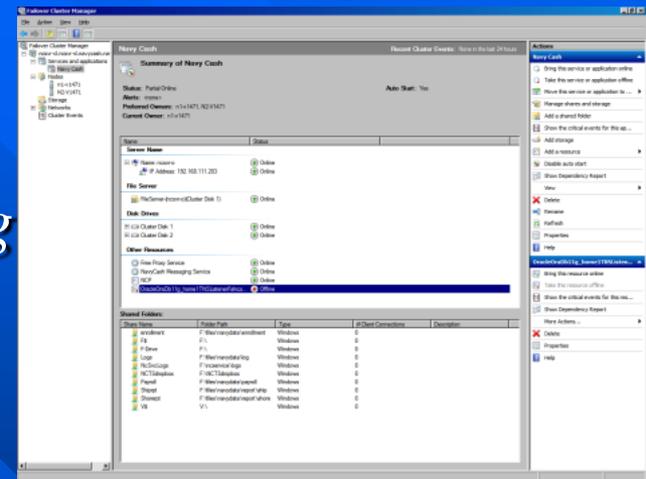
- **Step 3:** Verify ship's switch speed/duplex settings and verify the Navy Cash settings.
- **Step 4:** Verify that NIC of workstation, laptop, or server is functioning correctly.
 - If it is not working, contact the Navy Cash Call Center for replacement.

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Group in Failover Cluster Management Has Warning Icon

- **Step 1:** Verify ownership of the cluster resources, then switch to appropriate node using the KVM switch.
- **Step 2:** Bring the service *online* by right-clicking on resource name and select *Bring Online*.
- **Step 3:** If none of these steps work, reboot the Navy Cash system.
- If this does not correct the problem, contact the Navy Cash Call Center.



Client/Server Comms Failure

- If ship is expecting any network changes such as a GIG-E Upgrade, COMPOSE Upgrade, or new IP scheme, notify the Navy Cash Call Center of expected upgrade and dates upgrade will take place.

Hardware Failure

- If any of the following fail, the Navy Cash Technical Team may determine that a replacement is required: server, Overland Storage device, workstation, or laptop. Follow these steps:
 - **Step 1:** Detach all physical connections from the back of the failed server.
 - » VGA, 3 network connections, 2 power cables, UPS Serial Cable.
 - **Step 2:** Remove the two internal drives from the failed server.

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Hardware Failure (cont)

- **Step 3:** Slide the replacement server out of the box.
- **Step 4:** Replace with the received spare.
- **Step 5:** Place the old drives into the new server.
- **Step 6:** Plug in cables
- **Step 7:** Power up the server using proper startup procedures.
- **Step 8:** Using *Failover Cluster Management*, ensure that the system has reattached to Cluster resources.
- **Step 9:** Using *Failover Cluster Management*, ensure that the system “fails over” between nodes correctly.

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Field Replacements

Adding/Removing Drives

- If a disk failure occurs in the *Overland Storage* device, a red flashing light will appear.
- When the red light on the Overland Storage Device indicator panel has gone out, fail-over is complete.
- Drives are hot-swappable so can be taken out and replaced with the system powered on.

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Adding/Removing Drives (cont)

- **Step 1:** Remove bad drive from server / *Overland Storage* device
- **Step 2:** Insert replacement drive (system will automatically re-write drive information on the new drive)
 - Upon completion, the system will erase and release the spare for future fail-over events.

Adding/Removing Drives (cont)

- Do NOT swap or replace drives without notifying the Navy Cash Call Center first. They will generate a case number and provide you with that number for reference.
- Do NOT, under *any* circumstances, swap a drive from one node to the other, or one node to the *Overland Storage*, or from the *Overland Storage* to a node!

Database/System Failure

- Any of the following procedures **MUST** be done with JPMC or Engility Technical support:
 - Installing software
 - Database restores
 - Changing permissions
 - Setting policies
- Do **NOT** attempt to perform operations on the Oracle database without JPMC or Engility Technical support.

CAUTION

DO NOT RESTORE THE DATABASE OR ANY OF THE DATA ON THE SHARED DRIVES.

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Support

- For information on system hardware, refer to the manufacturer's documentation
- For support of the Navy Cash system:
 - Tel: 1-866 6NAVYCASH
1-866 662-8922
 - Fax: 1-866 242-7301
 - Web: www.navycashcenter.com
 - E-mail: navycashcenter@ezpaymt.com
- Navy Cash system troubleshooting guidance and supporting documentation will be available on ship's server/Intranet as part of NIAPS release 2.4.2.0.

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Customer Service Center (CSU)

- When onsite troubleshooting cannot remedy the issue, fill out a Navy Cash Trouble Call worksheet and contact the Navy Cash Call Center for further support:
 - The Navy Cash Call Center issues a trouble ticket for the call.
 - The Navy Cash Call Center determines priority of the issue and the response necessary to assist. This support will be provided as phone support, a tech visit or trainer visit where applicable.

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Support Calls

- When placing a support call, ensure that you have filled out the Navy Cash Trouble Call Worksheet that is found in the Navy Cash SOP. This form will require the following types of information that will assist in the better diagnosis of the problem:
 - Precise description of the issue
 - List of troubleshooting procedures that have been attempted (i.e. power up/down server, checking cables, etc.)
 - The Navy Cash Call Center is available 24X7.



Support Calls (cont)

- Be prepared to answer:
 - Do the Navy Cash devices (including switches) have power to them?
 - On what node is the server running?
 - Can the nodes fail over between each other?
 - Are any errors listed in the Event and System logs?
 - Have there been any changes to shipboard routers/LAN?

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Questions



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