



Navy Cash Training System Troubleshooting

Objectives

At the end of this 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, hardware and shipboard routers
 - Check all cables and wires. Re-crimped cables will affect Navy Cash operations if not done properly

Loss of Ship's Power

- If the ship loses power :
 - The UPS should maintain power to the server long enough for it to be powered off properly, if done promptly
 - When power returns, follow the “Power On” sequence 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 (e.g. printer) should be plugged into a Navy Cash UPS

Incorrect Network Settings

- Network adapters and switch ports may have mismatching duplex levels or transfer speed settings
 - Ensure all Navy Cash Router ports have speed and duplex statically assigned and not set to *auto*
 - Both network switches/server network adapters must be set to 100 Mbps and full duplex
 - » For the system to function correctly, settings must match

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

Navy Cash Devices Offline

- Check cables, UPS, routers
- Verify services are *online* by following these steps:
 - **Step 1:** Open *Cluster Administrator*
 - **Step 2:** Verify that *NCSERVICE* resource is *online* in the Navy Cash group resource
 - **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' router

Navy Cash Devices Offline (cont)

- **Step 5:** If the router can't be pinged, verify that the ship's switch port configuration is correct
- **Step 6:** Confirm port configuration against navy.cfg file (F:\ncservice\navy.cfg)
- **Step 7:** If the navy.cfg file needs to be changed, contact the Navy Cash Call Center for further assistance

Client/Server Comms Failure

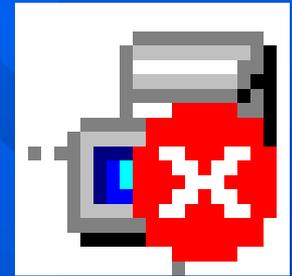
- **Step 1:** Verify IP addresses are correct by executing “*ipconfig -all*” from the *Command* prompt
 - Verify the IP addresses to the ones listed on the laminated Navy Cash Quick Info Sheet hanging on the server rack
- **Step 2:** Check connections on both ends of network cable. Perform a *Ping* test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

Client/Server Comms Failure (cont)

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

Group in Cluster Administrator Has Warning Icon

- **Step 1:** Verify ownership of the cluster resources, then switch to appropriate node
- **Step 2:** Open the *Group* to find out which resource is offline
- **Step 3:** Bring the service *online* by right-clicking on resource name and select *Bring Online*
- **Step 4:** If none of these steps work, re-boot the Navy Cash system
- If this does not correct the problem, contact the Navy Cash Call Center*



* Fill out a NC Trouble call worksheet first.

Client/Server Comms Failure

- If your 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 a node fails, the Navy Cash Call Center may determine that a new node is required. After it is received, follow these steps:
 - **Step 1:** Detach all physical connections from the back of the failed server
 - » VGA, SCSI, 3 network connections, 3 power cables, UPS
 - **Step 2:** Remove the two internal drives from the failed server
 - **Step 3:** Slide the node out of the DL380 box
 - **Step 4:** Replace with the received spare

Hardware Failure (cont)

- **Step 5:** Place the old drives into the new node
- **Step 6:** Plug in cables
- **Step 7:** Power up the server
- **Step 8:** Using *Cluster Administrator*, ensure that the system has reattached to Cluster resources
- **Step 9:** Using *Cluster Administrator*, ensure that the system “fails over” between nodes correctly

Field Replacements

Adding/Removing Drives

- If a disk failure occurs in the *Cluster Storage Array*, a red flashing light will appear
- A cluster will automatically fail over to the spare and make it a duplicate of the failed drive
- When the red light on the Cluster Unit indicator panel has gone out, fail-over is complete
- Drives are ‘hot-swappable’, meaning they can be taken out and replaced with the system powered on

Adding/Removing Drives (cont)

- **Step 1:** Remove bad drive from Cluster Unit
- **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
 - No one is to swap or replace drives without notifying the Navy Cash Call Center first. They will then generate a case number and provide you with that number for reference.

Database/System Failure

- Any of the following procedures **MUST** be run with Navy Cash shore support:
 - Installing software
 - Database restores
 - Changing permissions
 - Setting policies
- ***Do not*** attempt to perform operations on the *Oracle* database without shore support

CAUTION

DO NOT RESTORE THE DATABASE OR ANY OF THE DATA ON THE SHARED DRIVES. THAT INFORMATION RESIDES ON THE CLUSTER.



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

Customer Service Center (CSU)

- When onsite troubleshooting cannot remedy the issue, 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

* Fill out a NC Trouble call worksheet first.

Support Calls

- When placing a support call, ensure that you have filled out a *Navy Cash Trouble Call Worksheet*, found in the Navy Cash SOP. This form captures information that will assist in best diagnosis of the problem:
 - Precise description of the issue
 - List of troubleshooting procedures that have been attempted (i.e. pwr up/down server, switching nodes, etc.)

The Navy Cash Call Center is available 24X7

Support Calls (cont)

- Be prepared to answer:
 - Do the Navy Cash devices (including routers) 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?

Resources

- Navy Cash Resources which can help in day to day tasking and troubleshooting:
 - System Admin manual is on the Navy Cash Resource CD...
 - Navy Cash SOP and copies of training slides are on the Treasury Website at

<http://fms.treas.gov/navycash/training.html>

Navy Cash supporting documentation and videos can now be found on the ships Intranet (NIAPS)