



Navy Cash Training System Maintenance Procedures Unit 3



Objectives

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

Product Version

Update	System Component	Technology	Product Version
1.4.7.3/4	Mobile POS	BlueBird	v1.1.1.7
1.4.7.3/4	Fixed POS	VeriFone	v1.0.4.6
1.4.7.4	CAD	ITC-CAD	v1.0.0.1
1.4.7.4	Kiosk	VeriFone	v1.0.1.6
1.4.7+	API - App	Cogent	API - App v. 1.0.4156.27632
1.4.7+	API – Core	Cogent	API - Core v. 1.0.4156.27634
1.4.7+	API - ITC	Cogent	API - ITC v. 1.0.4156.27636
1.4.7+	API - NCR	Cogent	API - NCR v. 1.0.4156.27636

Loss of Ship's Power

- If the ship loses power :
 - The UPS software should maintain power to the server long enough for it to be powered off properly.
 - 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 should be plugged into a Navy Cash UPS.

Loss of Ship's Power (cont)

- If the ship loses power :
 - Do not rely on the UPS to power the system!
 - If power is going to be out for an extended amount of time (more than 30 minutes), do a proper shutdown of the Overland Snap Server.
 - If the Overland Snap Server shuts down due to lack of power, it may result in hardware/software failure that may include loss of data!

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 100 Mbps and full duplex. They cannot be mismatched if the system is to function correctly.

Incorrect Network Settings (cont)

- Network adapters or switches with transmission rates of 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, switches
- Verify services are online by following these steps:
 - **Step 1:** Open Failover Cluster Manager
 - **Step 2:** Verify that the Navy Cash Messaging Service 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 access the devices' switch using Cisco Network Assistant from one of the servers.

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:** If ship is CANES, verify both nodes, both workstation, all switches, and all devices are in appropriate CANES ACLs (refer to HACSIM tabs EUA-1 and EUA-2). Additionally, both nodes MSs and DCs, workstations, and switches' MACs must be in ISE.

Navy Cash Devices Offline (cont)

- **Step 8:** Confirm ip configuration against navy.cfg file (F:\ncservice\navy.cfg).
- **Step 9:** If the navy.cfg file needs to be changed, contact the Navy Cash Central Support Unit (CSU) for further assistance.

Client/Server Comms Failure

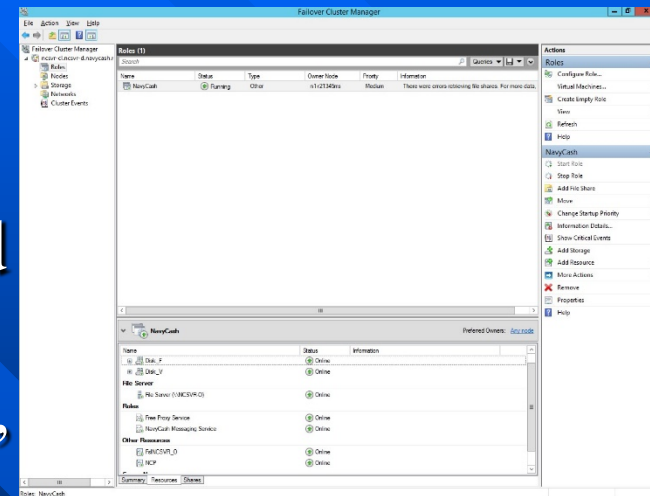
- **Step 1:** Verify IP addresses are correct by executing “*ipconfig /all*” from an elevated command prompt.
 - Always verify the IP addresses to the ones that are listed on the laminated Navy Cash Quick Info Sheet hanging on the server rack.
- **Step 2:** Check connections on both ends of network cable.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

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 Central Support Unit (CSU) for replacement.

Group in Failover Cluster Manager 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, re-boot the Navy Cash system.
- If this does not correct the problem, contact the Navy Cash Central Support Unit (CSU).



Client/Server Comms Failure

- If ship is expecting any network changes such as a GIG-E Upgrade, ORT upgrade, CANES upgrade, or new IP scheme, notify the Navy Cash Central Support Unit (CSU) of expected upgrade and dates upgrade will take place. Do not modify IPs on Navy Cash without direction from the Navy Cash Technical Team.

Hardware Failure

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

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 Manager, ensure that the system has reattached to Cluster resources.
- **Step 9:** Using Failover Cluster Manager, ensure that the system “fails over” between nodes correctly.

Hardware Failure (cont)

- **Step 10:** Overland Storage Replacement will be handled on a case by case basis. Steps 1 – 9 only apply to the servers (Nodes 1 and 2).

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.

Adding/Removing Drives (cont)

- **Step 1:** Leave Overland Snap Server on.
- **Step 2:** Remove bad drive from Server / Overland Snap Server.
- **Step 3:** Insert replacement drive.
- **Step 4:** Follow procedures sent with replacement drive to add replacement drive to RAID.

Adding/Removing Drives (cont)

- 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.
- 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 run with FRBB or Engility Technical support:
 - Installing software.
 - Database restores.
 - Changing permissions.
 - Setting policies.
- Do not attempt to perform operations on the Oracle database without FRBB or Engility Technical support.

CAUTION

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

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: 1-813 533-5711
 - Web: www.navycash.com
 - E-mail: navycashcenter@frb.org

Customer Service Center (CSU)

- When onsite troubleshooting cannot remedy the issue, contact the Navy Cash Central Support Unit (CSU) for further support:
 - The Navy Cash CSU issues a trouble ticket for the call.
 - The Navy Cash CSU 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.

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 CSU 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?

Questions

