



Navy Cash Training System Administration Unit 1

Objectives

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

- Name the various Navy Cash hardware components
- Describe the functionality of Navy Cash devices
- State the purpose of Navy Cash software programs
- State where to get Navy Cash system support



SysAdmin Responsibilities

- Responsibilities of the Navy Cash system administrator include:
 - Set up of user accounts
 - Support Disbursing in network issues as required
 - Support troubleshooting routines

Note: Support from Shipboard IT personnel will be required at various times.



User Accounts

- “AAS-Admin” user account is the only account that should be used to log into the server.
- Passwords for this account are provided during the integration and should not be changed unless directed to do so by the NCTS.



User Accounts (cont)

User Name	User Description	Additional Privl's
AAS-Admin	Administrator. Member of Administrators group.	All usual System Administrator privileges.
NCDisbo	Disbursing Officer. Member of the Administrators group.	Backup Privl's. Full access to the <i>q:\files</i> directory.
NCStore	Ship's Store. Member of the Authenticated group.	R— <i>q:\files\navydata\reports</i>
NCPost	Ship's Post. Member of the Authenticated group.	R— <i>q:\files\navydata\reports</i>



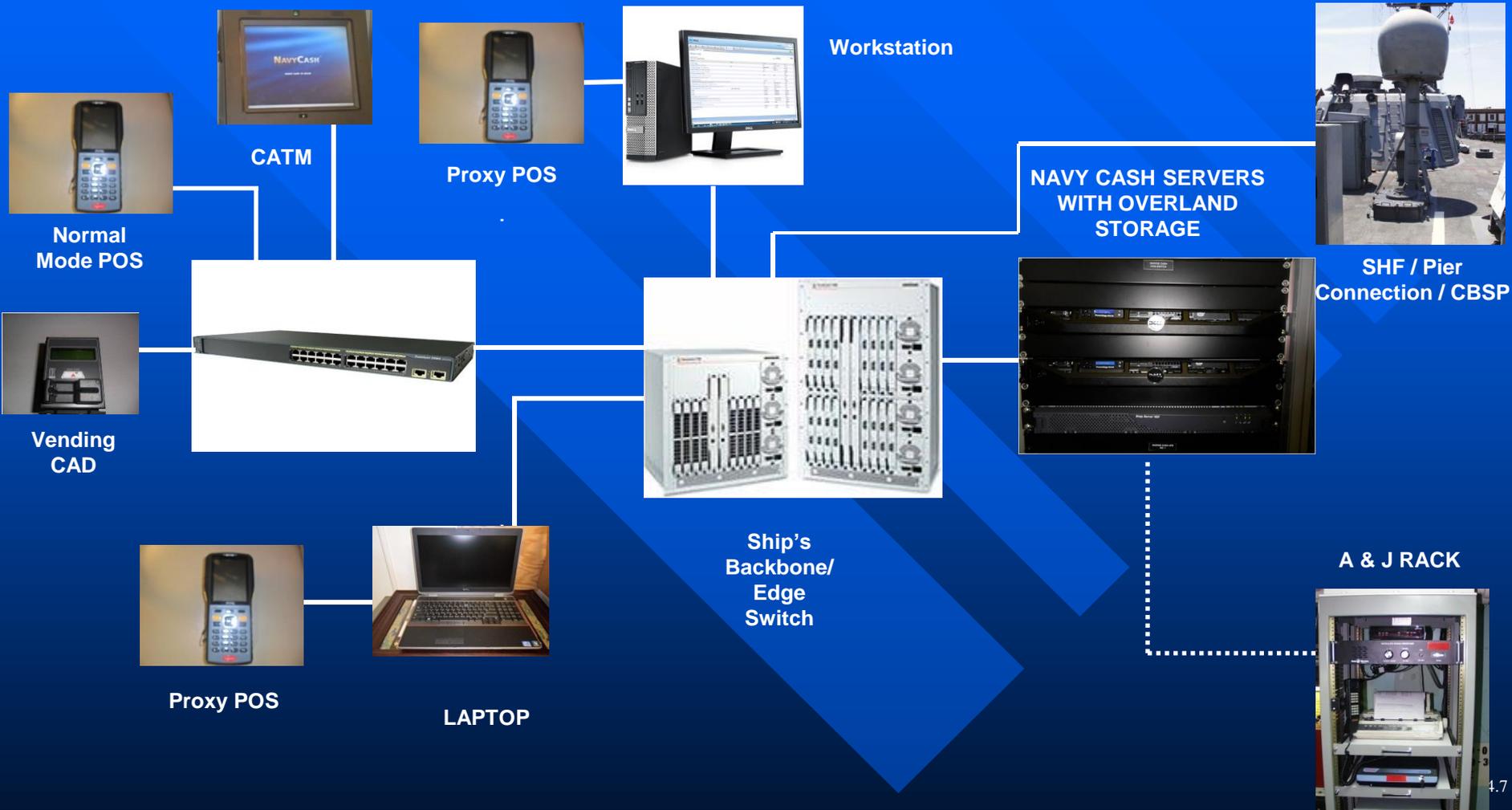
Navy Cash System Hardware

Navy Cash System Hardware

- (2) Dell PowerEdge R310 Server
- (1) Overland Storage SnapServer 410
- Dell E6520 Laptop
- Cisco 2960 Switch
- ITC CAD
- Ingenico Point of Sales Device
- NCR Cashless Kiosk



Navy Cash Basic System Diagram



Clustered Server

- A clustered server is a combination of two servers and a modular smart array. Its purpose is to provide a highly reliable and redundant system.
- The cluster drives appear to clients as a single resource.
- Navy Cash uses an active/passive clustering solution.



Clustered Server (cont)

- Navy Cash uses two servers, designated as Node 1 and Node 2. Node 1 is the default server and Node 2 is the backup.
- Any problems with Node 1 will cause the system to automatically fail-over to Node 2.



Example of a Clustered Server Layout



Node 1

Node 2

RAID unit

Dell PowerEdge R310 Server



- Each Dell PowerEdge Server consists of:
 - Intel Pentium G6950 2.8 GHz or higher processor
 - 10/100MB NIC (w/ 2 ports)
 - 10/100/1000MB NIC (w/ 2 ports)
 - 2x 250 GB Hard Drives
 - DVD-ROM Drive

*Servers are delivered
pre-configured*

PowerEdge Server Controls and Indicators



- Item 1: Power

- Item 2/3: HDD Health

- * green = normal, amber = degraded/system shutdown, red = critical



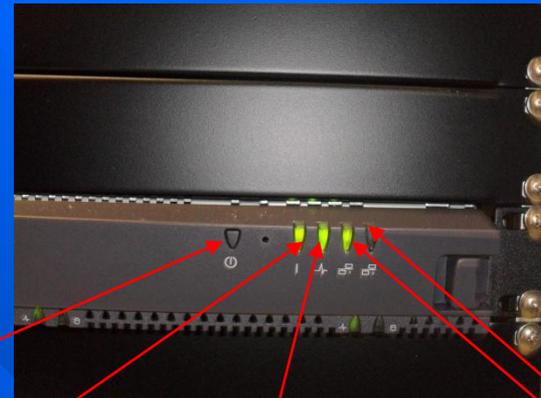
Overland Storage Unit



- *Overland Storage* device consists of 4x 2TB SATA drives (minimum size)
- RAID (Redundant Array of Independent Disk) Configured
- The hard drives are hot swappable, meaning they can be removed and replaced while the system is operating.

Overland Storage Indicators

- *Overland Storage*
 - Power switch at top left supplies power



Power Switch

Power Indicator

Status

Network 1/2

- Item 1: Power

(steady green = operating normally, off = not operating)

- Item 2: Status

(1 blinking green = up and running, 2 blinking green = booting up, 3 blinking green = shutting down, amber = problem)

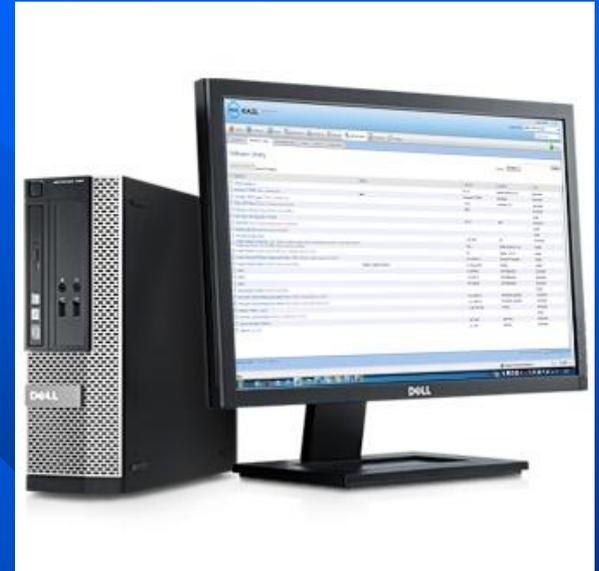
- Item 3: Network 1 (steady green = connected)

- Item 4: Network 2 (steady green = connected)

Dell Workstation

Dell Workstation consists of:

- Intel Dual Core or higher Processor
- Minimum 160 GB Hard Drive
- Minimum 2 GB RAM
- DVD ROM
- (8) USB Ports (disabled)
- (1) 10/100/1000 LAN Interface Card



Dell E6520 Laptop

Dell E6520 Laptop

- Intel i3 Processor or higher
- Minimum 2 GB RAM
- DVD/CD
- (4) USB Ports (disabled)
- (1) SD Card Slot
- (1) 10/100/1000 LAN Interface Card



Cisco Catalyst 2960-24TT Switch

- The Cisco Switch enables users to connect to network devices.
- The Cisco Switch contains:
 - 1 console port
 - 24 Ethernet 10/100 ports
 - 2 10/100/1000 uplinks



Ship's Switch Configuration

- Network adapters and switch ports must have matching duplex levels and transfer speed settings.
- Do not set switch ports to “auto”; use 10/full or 100/full depending on speed of network.



Navy Cash Devices

IP/TCP Data

- All of the Navy Cash devices use statically assigned IP addresses.
- They also utilize a configuration file located on the servers. The Navy Config file is used to determine the location of the devices in the system.

Note: Make no changes to the Navy Cash config file.



Card Access Device (CAD)

- Located in various vending machines
- Slot for card insertion
- 3 Hidden keypads show:
 - Version status
 - Terminal ID number
 - IP/Gateway/DNS
 - Transaction/Error status
- Function in *online* or *offline* mode
- Contains SD Card for redundancy



Ingenico (POS) Device

- Perform sales and refund transactions on this unit at or in merchant locations, Disbursing, and with foreign vendors.
- May be used in *online* or *offline* mode
- Functions in proxy mode (attached to computer) or normal mode (stand-alone).
- Contains SD Card for redundancy.



Ingenico
IPA 280

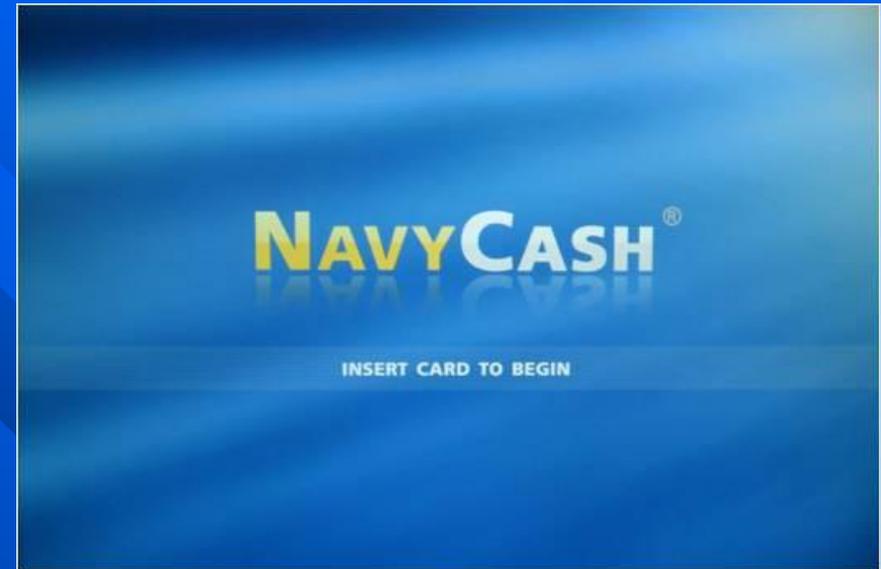
Ingenico (POS) Device (cont)

- 2 Alphanumeric keyboards and 2 LED screens
- Two slots for cards (only the *side* slot is used. See picture ->)
- Card must be inserted with back of device (silver side) facing you.
- Keyboard on silver side of device is used by customer to enter PIN when making a transaction.



NCR Cashless ATM

- Transfers money to and from chip, strip and home bank
- Must be *online*, connected to server in order to function
- Transactions are immediately logged with server



Navy Cash System Software

Software Programs

Upon completion of *Go Live*, the servers, workstation(s), and laptop(s) are configured and fully operational.

Do NOT install any other software on the server, workstation(s), or laptop(s) unless directed to do so by the Navy Cash Call Center.



Software Programs (cont)

- The following programs are loaded on each node:

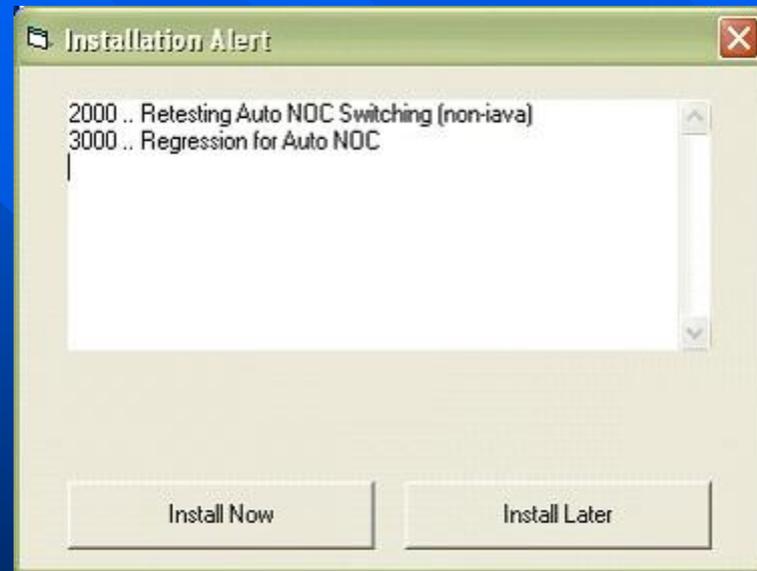
Windows Server 2008 Enterprise R2 Service Pack 1

- Microsoft Cluster Server (MSCS)
- Oracle 11.2.0.2
 - » Configured with *Oracle Failsafe* to prevent downtime. *Oracle Failsafe Manager* is used to startup & shutdown the data base.
- Navy Cash Listener/Parser (NC Service)
 - » Provides communication between Navy Cash server and devices.



Installation Alerts

- Installing IAVA and other Software Patches



Installation Alerts (Cont)

- Installation alerts provide an automated mechanism for applying software updates to the Navy Cash system on the ship.
- These software updates include *Information Assurance Vulnerability Assessment (IAVA)* and *Bulletins (IAVB)*, DMLs (data fixes) applied to the ship-side Navy Cash database, and application patches applied to the Navy Cash system



Installation Alerts (Cont)

- When IAVA and Navy Cash application patches have been pulled to the ship as part of the round trip process, the “*Installation Alert*” pop-up window will appear the next time an authorized individual logs into the Disbursing Application.
- The *Installation Alert* window notifies the Disbursing Officer to initiate the installation process by clicking on the “Install Now” or to delay the installation by clicking on the “Install Later” button.
- DML patches will be transmitted to the ship and applied automatically without any action required by the Disbursing Officer.



Installation Alerts (Cont)

- The Disbursing Officer (or authorized IT) must install IAVA and Navy Cash application patches as soon as practicable. Ideally, install patches after retail outlets have closed for the business day.
- The status of each patch will be transmitted back to shore automatically as a part of the next ship-initiated round trip via a log file. These log files will show a summary of the activity that occurred during the installation of a patch.
- IAVA patches in particular require Navy-Wide compliance monitoring to ensure mitigation of security vulnerabilities. For each IAVA/B, the Navy Cash team ashore must report compliance to meet established deadlines using the Online Compliance Reporting System (O CRS) to document and track compliance status for all Navy assets.



Navy Cash System Requirements

IT21 Practices

- IT21 practices, with regards to auditing event logs and physical security, should be followed in addition to Navy Cash documentation.
- Do not apply IAVA patches Independently on the Navy Cash servers. Navy Cash Technical Support will provide all necessary and approved updates.
- When in doubt, contact the Navy Cash Call Center.



Static IP Assignment

- Each node is assigned it's own static IP address that resides on the ISNS backbone. Additionally, there are additional static IPs assigned to the RAID that are not broadcast.
 - ISNS provides backbone and off-ship connectivity required for Navy Cash.
 - If there is no LAN connectivity, the server cannot communicate with the Navy Cash devices.



Ship Router Access

- An ACL addition must be made on the ship's router to allow the Navy Cash servers (both nodes' External IP addresses) off-ship communication.
 - Required for both Node 1 and Node 2 IP addresses, contact SPAWAR for current ACL entries.
 - If the Navy Cash IP addresses are not given access off the ship via the ship's router, the server cannot send or receive updates.



Power On/Off

Powering Equipment On/Off

- The servers will need to be powered off when you know power is going to be cut off to the area where the server is located.

Note: You should never try and run the Navy Cash servers powered only by the UPS. UPS is there to allow time to properly shut-down the system if power is lost.



Power On Sequence



- **Step 1:** Power on the *Overland Storage Device* first (wait until Power light is blinking once, pause, blinking once, pause, etc...)
- **Step 2:** Apply power to the monitor
- **Step 3:** Remove Faceplate. Power on Node 1 and login as `aas-admin`.
- **Step 4:** Remove Faceplate. Power on Node 2 and login as `aas-admin`.
- Replace Faceplate on both nodes.

Power Off Sequence



- **Step 1:** Perform Windows shut down sequence on the servers. Wait for the servers to completely shut down before continuing to the next step.
- **Step 2:** Power off the *Overland Storage Device* by pressing the power button once only! It will begin blinking 3 times, pause, blink 3 times, pause, etc...
- **DO NOT HOLD POWER BUTTON:** just press it once to power off.



Navy Cash Support

Final Tips

- If the *Navy Cash Service* in *Cluster Administrator* is down, the NCR Cashless ATM, laptops, and Ingenico POSs can NOT connect with the server.
- Ship's force must not reallocate the blades, switches, or ISNS switch ports devoted to Navy Cash.



System Support

- For information on system hardware, refer to the accompanying technical manuals and documentation
- Disbursing will handle the majority of technical calls for the *Disbursing Application*
- For support:
 - Tel: 1-866 6NAVYCASH
1-866 662-8922
 - Fax: 1-866 242-7301
 - Web: www.navycashcenter.com
 - Email: navycashcenter@ezpaymt.com
 - Navy Cash Call Center is Available 24X7

