NETWORKSTATION DESIGN AND DEVELOPMENT AT WASHINGTON MUTUAL

Platform

Off-Site IBM 330 Fileserver (Domain and Branch) Preparation

NDDP002, Rev. B

This document, *Off-Site IBM 330 Fileserver (Domain and Branch) Preparation*, describes off-site preparation of IBM 330 model 8640-ESS fileservers for use on Washington Mutual UWS client-server network. The IBM 330 primary use on this network is with the American Savings Bank deployment during the first half of 1997.

Revision B replaces Revision A of NDDP002.

Author:	Robert R. Chapman, Jr.
Document Owner:	David Barrett
Process Owner:	Tim Ripley
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Approval Signatures

This document defines preparation of IBM 330 fileservers for the Washington Mutual UWS client-server network

The following people approve the distribution of this document.

Name and Title	Signature	Date
Jack Sjolseth, Networkstation Design and Development		6/19/97
David Barrett, Networkstation Design and Development		6-19-97
Mark Hinkelman, Technical Lead, NDD		6/19/97
Tim Ripley, Service Delivery Manager , NDD		

Technical Writer	Signature	Date
Robert R. Chapman, Jr. Networkstation Design and Development		19 June 1997

Revision History

Revision New 6 May 1997	No previous history
Revision A 12 May 1997	Adds checking and validation steps to sections 3.5 and 3.9. Clarifies source of packing materials in section 3.11
Revision B 19 June 1997	Corrects Figure 3-2, Figure 3-3, and text associated with each figure.

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1 Introduction

1.1 Purpose

The document defines procedures used to prepare IBM 330 server, model 8640-ESS, to a standardized production configuration before shipment to the location where it is to be installed.

1.2 Scope

Use this information to prepare an IBM server-330 to a standardized production configuration for later installation as any of the following:

1. Domain:
   - Controller.
   - Fax server.
2. Home loan center server.
3. Financial center server.

The first major use of the IBM 330 server is for American Savings Bank conversion and rollout through 7 July 1997. See the infrastructure documentation for previous server models used.

This preparation happens before shipment to the installation location. While it could be performed on a small-scale basis at the Washington Mutual Information Services Headquaters Building, Seattle, larger projects would be performed by and at another firm under contract.

1.3 Process Owner

The owner of this process is:

David Barrett
Networkstation Design and Development at Washington Mutual

1.4 Process Summary

Either brand-new or recycled equipment could be used for servers. In either case, there must be preparation to a production configuration that has been certified for use on the Washington Mutual OS/2 client-server network.

This standardized configuration includes specific settings or equipment for the following:

1. Hard disk drives.
2. Memory.
3. Jumper placement.
4. Boards.
   - Fax board (optional).
   - Token-ring™ (required).
5. System software.
6. System firmware.
7. System BIOS level.
8. RAID BIOS level.
9. EISA configuration.
10. RAID configuration.
11. CID installation of production software.

2 Process Management

2.1 Personnel Utilizing Process

Anyone performing the off-site preparation of a server uses this process. This includes IBM employees (or contract labor) and employees of companies contracting with IBM to perform this work.

In addtition, Networkstation Design and Development runs three processes on the server, no matter who performs the off-site preparation.

2.2 Roles and Responsibilities

1. Whoever performs the off-site preparation installs the following:
   - Peripheral devices.
   - Software and firmware.

2. Networkstation Design and Development—after CID installation of software (when off-site preparers informs NDD that server is ready), runs these processes:
   - Resynch.
   - Installbranch.
   - NVDMCAT.

2.3 Relationships with Other Processes and Disciplines

2.3.1 Inputs

1. The ISSC Infrastructure Group at Washington Mutual places the equipment orders, based upon requirements received from Washington Mutual.

2. Networkstation Design and Development at Washington Mutual tests and certifies the equipment configuration used. This certification deals with specific networking equipment, host environment, and client equipment.

2.3.2 Concurrent Work

If and as necessary, the following could be taking place in conjuction with server preparation:

1. Client workstation preparation. This could be performed by the same or different people preparing the server. The Infrastructure Group coordinates.

2. On-site survey and preparation for the installation of the equipment. The Infrastruture Group coordinates this work with Washington Mutual Facilities. The actual work is most likely performed by contracting firms.

2.3.3 Outputs

The output from this process is a prepared server shipped to the proper location for installation.

2.4 Process Effectiveness

The process effectiveness indication is the number of sucessful installations meeting scheduled dates. ISSC provides no formal report to Washington Mutual

2.5 Key Resources for Process

2.5.1 Hardware

1. Server.
   - Type—IBM 330 server, model 8640-ESS.
   - Processor—Intel Prentium™ Pro 200.
   - Operating System—IBM OS/2 version 3.0.
   - BIOS update—version 29A (applied during preparation).

2. Monitor.
   - IBM 6543-301 (G50).

3. Hard Disk.
   - IBM, hot-swap, part 70G9862, 2.25 GB. Use three (domain controller or fax server) or four (all other) *identical* drives.

4. Power Cables.
   - Server—Piggy-back plug.
   - Monitor—Non-piggy-back plug.

5. Mouse.
   - IBM, part 92G7457.

6. Keyboard.
   - IBM, either:
     - part 52G9700.
     - FRU part 75H9509, rev. C01.

7. Token-ring™ (Network) Interface Card(s).
   - Use either one NIC (domain controller, fax server) or three (all others).

2.5.2 Software

1. System BIOS update.

2. RAID firmware update.

3. Token-ring™ interface card (TIC) firmware update.

4. Token-ring™ configuration.

5. EISA configuration.

6. RAID configuration.

7. Hard disk preparation emergency disk.

8. CID installation disks.

2.5.3 Other Resources

1. Frame relay network.

2. CID server.

2.6 Controlling Documentation

2.6.1 Standards

Following all installation instructions included with peripheral equipment, as well as the set-up instructions included with the IBM 330 server.

2.6.2 Policies

All changes to this procedure must go through the documented change management process.

2.7 Related Documentation

Server configurations are described in schedule T and schedule N of the amended contract between ISSC and Washington Mutual Bank.

The IBM 330 server is in addition to those described.

3 Process Description

3.1 Before Applying Power to Machine

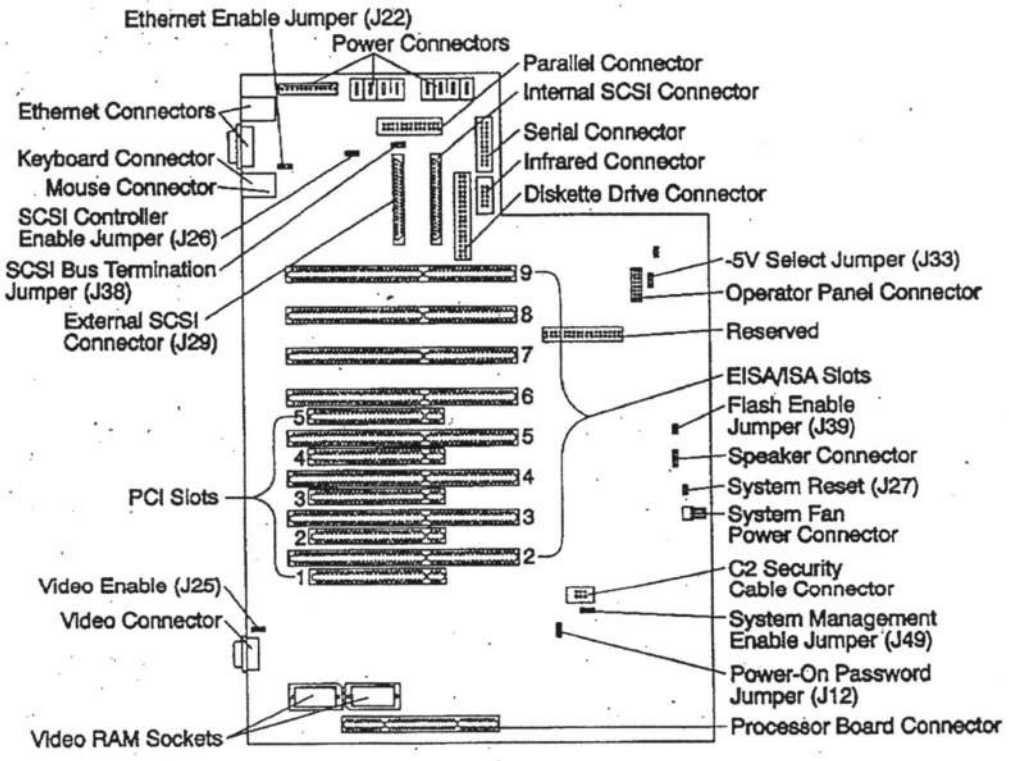
Keep machine unplugged during these steps.

1. Install hard disk drives. Use the topmost bays.
   - Domain controller, fax server—Three 2.2 GB drives.
   - All others—Four 2.2 GB drives.

2. Install memory.
   - Domain controller, fax server—Add one 64 MB DIMM.
   - All others—Add two 64 MB DIMM.

3. Install Token-ring™ (network) interface card. Start in slot 2 (counting from bottom; the RAID controller goes into the bottom-most slot).
   - Domain controller, fax server—one NIC.
   - All others—three NICs.

4. If required, install a GammaFax™ board.
   - Use EISA-ISA slot 8 (counting from bottom, as on Figure 3-1).



Picture from *PC 330 User's Handbook*, First Edition (Armonk, NY: International Business Machines Corporaiton, 1996), page 337.

Figure 3-1. System Board Component Locations

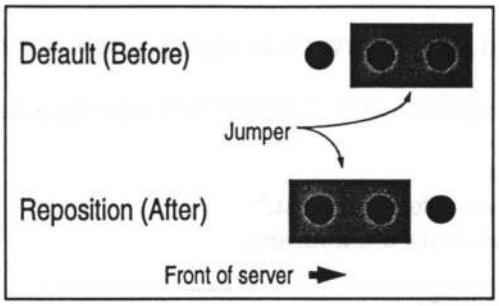


Figure 3-2. Jumper J22 Reposition

5. Change jumpers.
   - Remove brace.
   - Remove power supply shield.
   - Change jumper J22. (Figure 3-1)
     - Locate jumper on system board.
     - Move jumper block from default position (two pins covered towards front of server) to the two rear pins covered. See Figure 3-2.

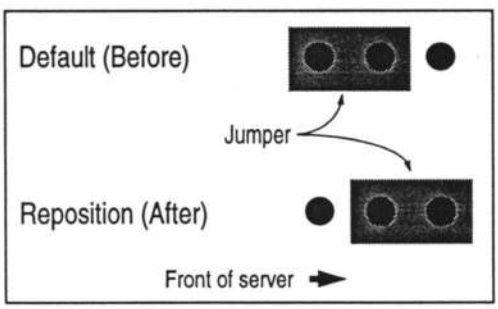


Figure 3-3. Jumper J26 and J38 Reposition

   - Change jumpers J26 and J38. (Figure 3-1)
     - Locate jumpers on system board.
     - Move jumper block from default position (two pins covered towards back of server) to the two forward pins. See Figure 3-3. This is the exact opposite of how the jumpers changed in Figure 3-2.
   - Replace power supply shield.
   - Replace brace.

3.2 Server Firmware and Software

After completing section 3.1, plug server into appropriate electrical outlet.

1. Insert system BIOS upgrade disk (version 29A) into drive A.

2. Turn-on the machine.
   √ Press <esc> for "fast post."
   After the initial boot Figure 3-4 appears:

```
Post Startup Error(s)

The following error(s) were detected when the system was
started:

          164 Memory Size Error

     Select one of the following:

          Continue                          [highlighted]
          Exit setup
```

Figure 3-4. Post Start-up Error

3. Press: ..... <enter>
   Figure 3-5 appears.

```
Configuration Error

Configuration errors were detected.

Select one of the following:

        Continue            [highlighted]
        Exit setup
```

Figure 3-5. Configuration Error

4. Press: ..... <enter>
   Figure 3-6 appears.

```
Configuration/Setup Utility

System Summary          [highlighted]

System Info

Devices

[other selections]
```

Figure 3-6. Configuration-Setup Utility

5. Press: ..... <enter>
   Figure 3-7 appears.

```
System Summary

Processor               Pent Pro
Processor speed         200 MHz
Math coprocessor        Internal
System memory           640
Extended memory         [verify]
```

Verify the extended memory is either:
(1) 95 MB (domain controller, fax server) or
(2) 159 MB (all others).

Figure 3-7. System Summary

6. Press: ..... <esc>
7. Arrow down to "save settings."
8. Press two times: ..... <enter>
9. Arrow down to "exit setup."
10. Press two times: ..... <enter>

The server automatically continues with a reboot to perform section 3.3, following.

3.3 System BIOS Update

1. This section follows upon section 3.2 immediately with a reboot from the system BIOS update disk (version 29A) started in that section.
2. If the power-up post screen (first screen after power-up or warm-boot) has "Build ID—RAET29AUS" at the lower left-hand corner:
   - Do not upgrade BIOS.
   - Arrow down to "exit" when option is given.
   - Press:..... <enter>
   - Remove the BIOS upgrade disk.
   - Power-off server.
   - Continue with section 3.4
3. Press: ..... <enter> (update POST/BIOS)
4. Press: ..... <enter> (warning screen)
5. Press: ..... <enter>
   - If message "warning, system is same" appears (screen should also list BIOS level as "29A"):
     - Do not upgrade BIOS.
     - Remove the BIOS upgrade disk.
     - Power-off server.
     - Continue with section 3.4
   - If do *not* receive the "system is same" warning (BIOS level not "29A"):
     - Wait for the upgrade to complete.
6. Press: ..... <enter> (information update done)
7. Arrow down to "exit."
8. Press: ..... <enter>

9. Remove system BIOS update disk.

10. Power-off the server.

3.4 RAID BIOS Firmware Update

Do not confuse this step with the RAID configuration step, which happens later in section 3.6, page 12.

1. Insert RAID BIOS upgrade disk.

2. Power-on the server.
   √ Press <esc> for "fast post."

3. Select "server RAID BIOS and firmware update."

4. Press: ..... <enter>
   √ Wait for upgrade to complete.
   There is an informational screen stating "Downloading firmware adapter(s) is complete. Remove diskette from the default drive. Press CTL+ALT+DEL to re-start the system."

5. Remove RAID BIOS upgrade disk.

3.5 EISA and Token-Ring™ Configuration

1. Boot the server from the 330 EISA configuration disk.

2. Enter: ..... <y> (do you want to configure...)
   √ This step takes a long time.

3. Press: ..... <enter> (EISA configuration utility)
   √ This step takes a long time.

4. Verify the following at the *configuration changes* window:
   - Addition of Token-ring™ card(s).
   - Removal of embedded 10222000.

   Press: ..... <enter>

5. At the *steps in configuring your computer* window:
   - Arrow to "step 2: add or remove boards."
   - Press: ..... <enter>
   - Verify all expected cards are in place.

- Add GammaFax:
  - ▿ Press:..... <insert>
  - ▿ Press:..... <enter> ("adv" screen)
  - ▿ Press two times: ..... <enter>
  - ▿ Arrow to "!ISA7000.CFG GammaFax Board."
  - ▿ Press:..... <enter>
  - ▿ Press:..... <enter> (add confirmation)
  - ▿ Arrow down to slot 8.
  - ▿ Press:..... <enter>
  - ▿ Press:..... <f10>
  - ▿ Arrow down to "step 5: save and exit."
  - ▿ Press:..... <enter>
  - ▿ Press:..... <enter> (save the configuration and...)
    - √ Do not do anything—like press <enter>—to reboot the computer.

6. Verify the type of new TIC(s) installed.
   - Older cards only have RJ45 ports.
     - ▿ If so, replace the older TIC(s) with new TIC(s) before continuing.
   - Newer cards have DB9 and RJ45 ports.
     - ▿ If so, immediately continue with the remainder of this section.

7. Update Token-ring™ firmware:
   - Insert the Token-ring™ firmware disk.
   - Re-boot server.
     - √ All PCI Token-ring™ adapters display.
   - Press:..... Y <enter> (update all adapters)
   - Press:..... Y <enter> (code same level warning[1])

8. Perform Token-ring™ configuration.
   - Remove the Token-Ring™ firmware disk.
   - Insert the Token-ring™ configuration disk.
   - Press:..... <enter> (reboot window)
     - √ Press <esc> for "fast post."
     - ▿ Wait 10 seconds. The program runs automatically.
       - √ Screen message: "Setting up adpater one, please wait."
       - √ Screen message: "Configuration complete."
       - √ Process repeats for a second and third adapter. If there is only one TIC installed, ignore the expected errors for adapter two and adapter three.
     - ▿ If there are several errors, the last being "could not find flash update for adapter," verify installation of the correct NICs.

---

[1] Sceen says "Warning: update code is the same level as the current code. Do you wish to continue (y/n)?" While "n" is the default, *answer "y" to the prompt*. This verifies that all servers in the field has the same code level.

9. *Caution: this step contains a 10 second window to make a menu selection.* Run diagnostic on Token-ring™ card.
   - Reboot the server using the (same) Token-Ring™ configuration disk.
     - Press:..... <alt>-<ctrl>-<del>
   - Select "IBM Token-Ring PCI Adapter Extended Diagnostics," option 3, from menu
     - √ Caution: there is only a 10 second window to make the selection.
   - When "Diagnostics" warning message displays, press the space bar.
     - √ After program initialization, a screen should show all three installed Token-ring™ cards and their addresses.
   - Verify the connection of all three cards to the network from the monitor display.
   - Perform "on-ring" test on the first card.
     - Select (single-left click): ..... First Token-Ring Card
     - Select (single-left click): ..... On-Ring Test (if not highlighted)
     - Press:..... <enter>

     The card gradually changes to "green" as it is tested. A sucessful test displays "finished testing" and "adapter OK."
     - If there is an error, go to "on error," below in step 9.
     - If there is not an error, continue by checking the second card.
   - Perform "on-ring" test on the second card.
     - Select (single-left click): ..... Second Token-Ring Card
     - Select (single-left click): ..... On-Ring Test (if not highlighted)
     - Press:..... <enter>

     The card gradually changes to "green" as it is tested. A sucessful test displays "finished testing" and "adapter OK."
     - If there is an error, go to "on error," below in step 9.
     - If there is not an error, continue by checking the third card.
   - Perform "on-ring" test on the third card.
     - Select (single-left click): ..... Third Token-Ring Card
     - Select (single-left click): ..... On-Ring Test (if not highlighted)
     - Press:..... <enter>

     The card gradually changes to "green" as it is tested. A sucessful test displays "finished testing" and "adapter OK."
     - If there is an error, go to "on error," below.
     - If there is not an error, exit the extended diagnostics program and continue with step 10:..... <f3>
   - On error, perform these steps (do not perform if there is not an error):
     - Note the address given on the monitor.
     - Note the address of the adapter on the sticker affixed to the backplane.
     - If these addresses match, the correct Token-ring™ card was located.
     - Replace the card.
     - Configure card, starting again from from step 8.

10. Remove the Token-ring™ configuration disk.

3.6 RAID Configuration

This is not the same as the RAID BIOS upgrade.

1. Insert the RAID configuration disk (the *yellow* disk).
   - √ In case of drive failure, the RAID configuration disk is critical to recover data.
   - √ *To help prevent critical data loss and lessen the chance for confusion with an emergency boot disk, it is important to save this configuration on the* yellow *RAID configuration disk, and keep that disk with the server.*

2. Re-boot the server.

3. Delete current RAID array.
   - Select the current RAID array.
   - Arrow to "step 4: create/delete/copy log drive."
   - Press:.....<enter>
   - Arrow to "2. delete disk array."
   - Press:.....<enter>
   - Press:.....<del>
   - Arrow to "2. yes."
   - Press:.....<enter>

4. Continue with the instructions for the appropriate type of server.
   - Domain controllers, fax servers: .....Section 3.6.1, page 14.
   - All other servers:.....Section 3.6.2, page 17.

3.6.1 Domain Controller, Fax Server

These instructions are only for domain controllers and fax servers. For all other types of servers, see section 3.6.2, page 17.

When finished there should be four logical drives of the sizes and type specified in Table 3-1.

Table 3-1.—Logical Drives, Domain Controllers and Fax Servers

Array ID	Array Size	Logical Drive	Size	RAID version
A	6450 MB	A0	750 MB	RAID-5
		A1	3250 MB	RAID-5
		A2	100 MB	RAID-5
		A3	200 MB	RAID-5

1. Create RAID Array.
   - Arrow to: ..... 3. Create disk array
   - Press: ..... <enter>
   - Press "enter" for each of the four drives.
     √ The drives respond "ONL-A" when finished.

2. Define Logical Drives—Define the four logical drives to array A using "RAID-5" and the size specified in Table 3-1.
   - Arrow to: ..... 4. Define logical drive
   - Press: ..... <enter>
   - Confirm "A 6450" array: ..... <enter>
   - Arrow to: 1. RAID-5
   - Press: ..... <enter>
   - Change logical partition to "750."
   - Press: ..... <enter>
   - Verify change to "750."
     - Arrow to: ..... 2. Yes
     - Press: ..... <enter>
   - Arrow to (stay on): ..... 4. Define logical drive
   - Press: ..... <enter>
   - Confirm "A 6450" array: ..... <enter>
   - Arrow to: 1. RAID-5
   - Press: ..... <enter>
   - Change logical partition to "3250."
   - Press: ..... <enter>
   - Verify change to "3250."
     - Arrow to: ..... 2. Yes
     - Press: ..... <enter>
   - Arrow to (stay on): ..... 4. Define logical drive
   - Press: ..... <enter>
   - Confirm "A 6450" array: ..... <enter>
   - Arrow to: 1. RAID-5
   - Press: ..... <enter>
   - Change logical partition to "100."
   - Press: ..... <enter>
   - Verify change to "100."
     - Arrow to: ..... 2. Yes
     - Press: ..... <enter>
   - Arrow to (stay on): ..... 4. Define logical drive
   - Press: ..... <enter>
   - Confirm "A 6450" array: ..... <enter>
   - Arrow to: 1. RAID-5
   - Press: ..... <enter>
   - Change logical partition to "200," if not already that number.
   - Press: ..... <enter>

- Verify setting of (change to) to "200."
  - ▿ Arrow to: ..... 2. Yes
  - ▿ Press: ..... <enter>
    - √ The screen displays the given information for each logical drive in Table 3-1, plus the date created (current date), the current system date, and status (OK).
- Arrow to: ..... 8. Exit (exit to main menu)
- Press: ..... <enter>

3. Initialize Logical Drives.
   - Arrow to: ..... 5. Initialize/sync logical drive
   - Press: ..... <enter>
   - Arrow to: ..... 2. Initialize logical drive
   - Press: ..... <enter>
   - Use arrow keys to highlight drive A0.
   - Press: ..... <space bar> (select A0)
   - Use arrow keys to highlight drive A1.
   - Press: ..... <space bar> (select A1)
   - Use arrow keys to highlight drive A2.
   - Press: ..... <space bar> (select A2)
   - Use arrow keys to highlight drive A3.
   - Press: ..... <space bar> (select A3)
     - √ All four logical drives should be highlighted.
   - Press: ..... <enter>
   - Confirm values: ..... YES
     - √ Wait about 20 minutes for all drives to initialize.
     - √ The screen shows the information from Table 3-1, page 14, adding the "percent intialized" as 100% for all logical drives.
   - Press: ..... <enter>

4. Synchronize Logical Drives.
   - Arrow to ..... 3. Sync logical drive
   - Press: ..... <enter>
   - Use arrow keys to highlight drive A0.
   - Press: ..... <space bar> (select A0)
   - Use arrow keys to highlight drive A1.
   - Press: ..... <space bar> (select A1)
   - Use arrow keys to highlight drive A2.
   - Press: ..... <space bar> (select A2)
   - Use arrow keys to highlight drive A3.
   - Press: ..... <space bar> (select A3)
     - √ All four logical drives should be highlighted.
   - Press: ..... <enter>
   - Select: ..... YES
   - Press: ..... <enter>
     - √ Wait for synchronization of all drives (less than 15 minutes).
     - √ The screen shows the information from Table 3-1, page 14, adding the "percent synchronized" as 100% for all logical drives.

- Arrow to: ..... 4. Exit
- Press: ..... <enter>

5. Backup RAID Configuration.
   - Arrow to: ..... 7. Advanced functions
   - Press: ..... <enter>
   - Arrow to: ..... 2. Backup IPS server RAID configuration
   - Change "config": ..... DCFAX
   - Press: ..... <enter>
   - Select: ..... YES
   - Press: ..... <enter>

6. Exit Routine.
   - Arrow to: ..... 9. Exit
   - Press: ..... <enter>
   - Arrow to: ..... 8. Exit
   - Press two times: ..... <enter>
   - Select: ..... YES
   - Press: ..... <enter>
   - Remove the yellow RAID configuration disk and store in the plastic bag.

7. Reboot server.

8. Continue with section 3.7, page 20.

3.6.2 Other Servers

These instructions are only for production servers. For all domain controllers and fax servers, see section 3.6.1, page 14.

When finished there should be four logical drives defined to the array and size specified in Table 3-2.

Table 3-2.—Logical Drives, Production Servers

Array ID	Array Size	Logical Drive	Size	RAID Version
A	6450 MB	A0	750 MB	RAID 5
		A1	3450 MB	RAID 5
		A2	100 MB	RAID 5
B	2150 MB	B0	2150 MB	RAID 0

1. Create RAID Arrays.
   - Array A—This is for the top three drives only.
     - ▿ Arrow to: ..... 3. Create disk array
     - ▿ Press: ..... <enter>
     - ▿ Press "enter" on each of the top three drives *only*.
       - √ Do not include the fourth drive at this point.
       - √ The top three drives respond "ONL-A" at this point
       - √ The bottom drive responds "ready" at this point.
   - Array B—This is for the bottom drive only.
     - ▿ Arrow to: ..... 3. Create disk array
     - ▿ Press: ..... <enter>
     - ▿ Press "enter" on the bottom drive *only*.
       - √ The three drives respond "ONL-A" when finished.
       - √ The bottom drive responds "ONL-B" when finished.

2. Define Logical Drives—Define the top three of the four logical drives to array A using "RAID-5," the remaining (bottom) drive to array B, and all drives to the size specified in Table 3-2.
   - Arrow to: ..... 4. Define logical drive
   - Press: ..... <enter>
   - Confirm "A 6450" array: ..... <enter>
   - Arrow to: 1. RAID-5
   - Press: ..... <enter>
   - Change logical partition to "750."
   - Press: ..... <enter>
   - Verify change to "750."
     - ▿ Arrow to: ..... 2. Yes
     - ▿ Press: ..... <enter>
   - Arrow to (stay on): ..... 4. Define logical drive
   - Press: ..... <enter>
   - Confirm "A 6450" array: ..... <enter>
   - Arrow to: 1. RAID-5
   - Press: ..... <enter>
   - Change logical partition to "3450."
   - Press: ..... <enter>
   - Verify change to "3450."
     - ▿ Arrow to: ..... 2. Yes
     - ▿ Press: ..... <enter>
   - Arrow to (stay on): ..... 4. Define logical drive
   - Press: ..... <enter>
   - Confirm "A 6450" array: ..... <enter>
   - Arrow to: 1. RAID-5
   - Press: ..... <enter>
   - Change logical partition to "100," if not already that number.
   - Press: ..... <enter>
   - Verify setting of (change to) "100."
     - ▿ Arrow to: ..... 2. Yes
     - ▿ Press: ..... <enter>

- Arrow to (stay on): ..... 4. Define logical drive
- Press:..... <enter>
- Arrow to (change to): ..... B 2150
- Press:..... <enter>
  - √ System automatically chooses "RAID-0."
- Press:..... <enter>
- Verify partition size of 2150.
- Press:..... <enter>
- Verify setting of "2150."
  - ▿ Arrow to: ..... 2. Yes
  - ▿ Press:..... <enter>
    - √ The screen displays the given information for each logical drive in Table 3-2, plus the date created (current date), the current system date, and status (OK).
- Arrow to: ..... 8. Exit (exit to main menu)
- Press:..... <enter>

3. Initialize Logical Drives.
   - Arrow to: ..... 5. Initialize/sync logical drive
   - Press:..... <enter>
   - Arrow to: ..... 2. Initialize logical drive
   - Press:..... <enter>
   - Use arrow keys to highlight drive A0.
   - Press:..... <space bar> (select A0)
   - Use arrow keys to highlight drive A1.
   - Press:..... <space bar> (select A1)
   - Use arrow keys to highlight drive A2.
   - Press:..... <space bar> (select A2)
   - Use arrow keys to highlight drive B0.
   - Press:..... <space bar> (select B0)
     - √ All four logical drives should be highlighted.
   - Press:..... <enter>
   - Confirm values: ..... YES
     - √ Wait about 20 minutes for all drives to initialize.
     - √ The screen shows the information from Table 3-2, page 17, adding the "percent intialized" as 100% for all logical drives.
   - Press:..... <enter>

4. Synchronize Logical Drives.
   - √ Only synchronize the three array A drives.
   - √ Do not try to synchronize the single array B drive.
   - Arrow to ..... 3. Sync logical drive
   - Press:..... <enter>
   - Use arrow keys to highlight drive A0.
   - Press:..... <space bar> (select A0)
   - Use arrow keys to highlight drive A1.
   - Press:..... <space bar> (select A1)

- Use arrow keys to highlight drive A2.
- Press:..... <space bar> (select A2)
  - √ All three logical "A" drives should be highlighted.
  - √ The "B" drive is not synchronized.
- Press:..... <enter>
- Select:..... YES
- Press:..... <enter>
  - √ Wait for synchronization of all drives (less than 15 minutes).
  - √ The screen shows the information from Table 3-2, page 17, adding the "percent sychronized" as 100% for all logical drives.
- Arrow to:..... 4. Exit
- Press:..... <enter>

5. Backup RAID Configuration.
   - Arrow to:..... 7. Advanced functions
   - Press:..... <enter>
   - Arrow to:..... 2. Backup IPS server RAID configuration
   - Change "config":..... PROD
   - Press:..... <enter>
   - Select:..... YES
   - Press:..... <enter>

6. Exit routine.
   - Arrow to:..... 9. Exit
   - Press:..... <enter>
   - Arrow to:..... 8. Exit
   - Press two times:..... <enter>
   - Select:..... YES
   - Press:..... <enter>
   - Remove the yellow RAID configuration disk and store in the plastic bag.

7. Reboot server.

3.7 Hard Disk Preparation

1. Boot the server from the "warp boot" disk.

2. Use the 330 emergency disk for "disk 1."

3. Partition the hard disk.
   - Domain Contollers, Fax Servers—
     - ▽ At [A:\]..... FD <enter>
   - Productions Servers—
     - ▽ At [A:\]..... FD330 <enter>

   The program (FD or FD330) creates partitions as listed in Table 3-3

Table 3-3.—Hard Drive Partitions

Hard Drive Partitions	Domain Controller or Fax Server (FD)	Production Servers (FD330)
1. Boot Partition	2 MB	2 MB
2. C	748 MB	748 MB
3. D	3242 MB	3445 MB
4. E	100 MB	100 MB
5. F	200 MB	312 MB
6. G	not applicable	1836 MB

3.8 CID

1. Boot server from the "warp boot" disk.

2. Use "330 CID install disk" for disk 1.

```
Type netname and press ENTER.
```

Figure 3-8. CID Software Installation: Enter Network Name

3. Enter the server's network name when prompted (Figure 3-8).
   - √ The machine begins installing after about a minute.
   - √ If there appear to be problems with the installation, contact Networkstation Design and Development at Washington Mutual by telephone immediately.

4. When prompted by several beeps and the screen message "you may remove the diskette now," remove the disk.
   - √ The CID disk can now be used in another installation.

5. Continue the CID software install.
   - √ The installation continues for about 5 hours, rebooting several times during the process.
   - Do not touch the server until receiving the shutdown confirmation (Figure 3-9).

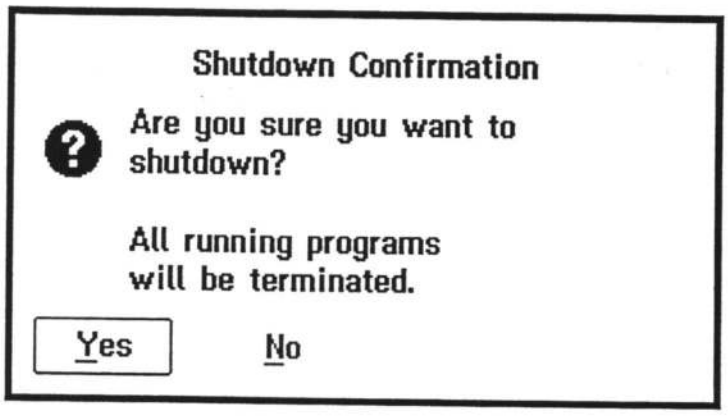


Figure 3-9. Shutdown Confirmation

6. Exit CID process—Figure 3-9 prompts for a shutdown confirmation.
   - Select (single left click): ..... Yes
     - √ The machine goes through the "shutdown" procedure.
     - √ Do not "power off" the machine.

3.9 File Changes and Updates

1. Open an OS/2 command window.

2. *Startup.ini* file changes.
   - Domain Controllers:
     - ▿ At a command prompt: ..... `cd \ <enter>`
       `copy startup.dc startup.ini <enter>`
   - Fax Servers:
     - ▿ At a command prompt: ..... `cd \ <enter>`
       `copy startup.dc startup.ini <enter>`
       `e startup.ini <enter>`
     - ▿ Find the "chase" and/or the "faxserver" line.
       - √ Use `<ctrl>-<f>` to start the search function.
     - ▿ Remove the semi-colon from the start of the line. (Fax services will not start if this is not done.)
     - ▿ Save and exit the file.
   - Production Servers:
     - ▿ Not performed until actual on-site installation.

3. Change the server IP address and setting for router IP address.
   - Note the number on the monitor.
     - √ When using the monitor number to start a command file, its reference in this document is "*crtno*."

- At a command prompt: ..... `vanstar crtno`

This command file *c:\vanstar.cmd* (1) creates a copy of *setup.cmd* on the server hard drive, (2) changes the server's IP address to 167.145.131.*crtno*, (3) changes the router IP address as 167.145.131.1, and (4) saves the changes to *setup.cmd*.

4. Validation Checks—The program *vanstar.cmd* checks the system. It displays any errors found in *red*.
   - Resolve any errors posted before continuing.
   - Upon prompt, insert the "record keeping" disk to record the sucess of the CID process.
     - √ The "record keeping" disk is the black-colored disk with the "TXT" label
   - Cross-check the documentation with the monitor information when displayed:
     - Network name.
     - Computer serial number.

5. Restart the server.
   - Choose "shutdown."
   - When screen message prompts, press `<alt>-<ctrl>-<del>`.

6. Send e-mail announcing IP address change.
   - Send to: ..... `&dsa`
   - Text: ..... `Server xxxSRV01 on IP n is ready for configuration`

   Where:
     - *xxxSRV01* is the server network name.
     - *n* is the monitor number used in step 3 to change the IP address.

7. Networkstation Design and Development does the following:
   - Run these procedures on the server from a SystemView (reference 1) window:
     - At a command prompt: .....`resync <enter>`
     - Wait until *net.acc* quits growing.
     - At a command prompt: .....`installbranch <enter>`
     - `copy c:\startup.srv c:\startup.cmd`
     - Reboot the server.
     - At a command prompt: .....`d:\ibmvndm2\nvdmcat`

       NVDMCAT tests the server.
   - Send an e-mail:
     - Send message to (route original message to NDD): ..... `&vanstar`
     - Message:..... `Server xxxSRV01 has been configured and can be boxed up.`

8. Verify completion of preparation and testing of server.

- After the message "operating system missing, system halted" appears on the monitor, check the e-mail for a message from NDD stating completion of all preparation and testing of the server.
  - √ Wait for this message before continuing with process.

3.10 Asset Tags, Network Name Tags, Emergency Disks

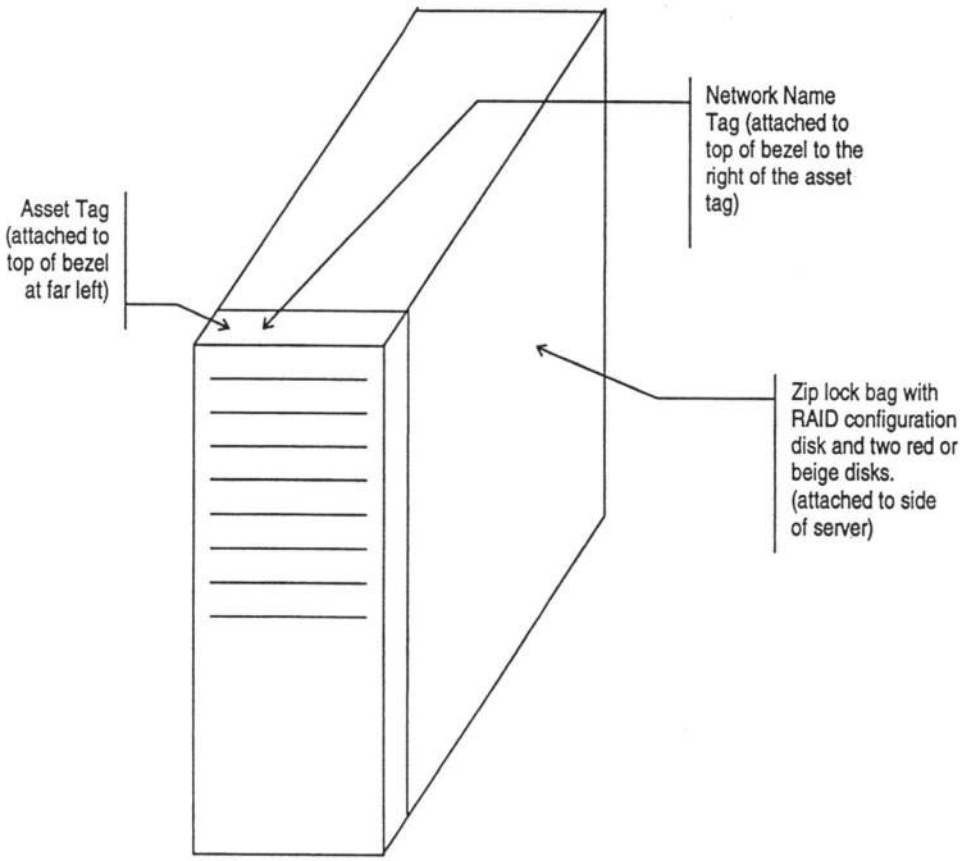


Figure 3-10. Asset Tag, Network Name Tag, and Disk Bag Placement

1. Place these tags on top of the server bezel:
   - Washington Mutual asset tag—On far left edge.
   - Network name tag—Immediately to the right of the asset tag. Record this server information on the network name tag:
     - ▿ Network name.
     - ▿ Serial number.

2. Attach emergency disks.
   - Place the following in a plastic ziplock bag:
     - RAID configuration disk (yellow).
     - Two red or beige disks.
   - Secure bag to side of server using double-sided tape.

3.11 Packing Instructions

1. Package for shipment to installation site using the Washington Mutual-supplied stock:
   - Server (with attached ziplock bag with RAID configuration disk and two red or beige disks). Use packaging in which the server came.
   - MS-Word manual, one.
   - MS-Excel manual, one.
   - 10 foot green patch cable(s), eight.

2. Label box with the network name of the server.

3. Do not pack the following:
   - All documentation and disks that came with the server.
   - 9-pin to UTP adapter.

References

1. SystemView/2 (Armonk, New York: International Business Machines). Current version in *Software*, DSAP014.