Field Bill of Material (FBM)
or
Field Feature Bill of Material (FFBM)

INSTALLATION of MICROCODE Level H10040, any suffix

On 3746-900 attached to 3745-xxA
or 3746-950
or 3745-xxA alone
With Service Processor Type: 6578 Model RAU,
or 6563 Model 65U (FC 5054), or 6275 Model 56U,
or 83U (FC 5053), or 7585-P02 (FC 5052)

Written by: C. Vallee
Modified by: J. Maher
Checked by: J. Combes
Approved by: D. Esteve
Reviewed by: A. Bowen

Before Installation (Steps 1-8)

1.0 Machines Affected

3746 Models 9x0:

- With Service Processor Type: 6578 Model RAU, 6563 Model 65U (FC 5054), 6275 Model 56U or 83U (FC 5053), or 7585-P02 (FC 5052)
- Without Microcode Level H10040 at the latest suffix

  Checkpoint: If the EC level is **not** H10040 at the latest suffix, you must upgrade the Service Processor and the 3746-9x0 according to these instructions.

Note: See Step 1.1 for verifying your level of code.

1.1 Displaying the Level of Code Installed

1. On **MOSS-E View** window, click on **Help**.
2. On **Help** window, click on **About**
3. On the **MOSS-E View About** window, click on **Licensed Internal Code**. The microcode EC number is displayed.
4. Click on **Close**, then **OK** to leave the function.

2.0 Related BMs and ECs

2.1 Prerequisites

(Must be installed prior to this installation)

MAE FC 3000 is not compatible with microcode level H10040, any suffix, or higher. If such an MAE is installed, it must be upgraded to an MAE FC 3001 via an MES order.

IMPORTANT!

If you are, at the same time using the Installation Instructions PN 02L1268, converting the MAE **FC 3000** to the MAE **FC 3001** (which consists in migrating from an MAE that connects to the token-ring, to an MAE that directly connects to the 3746-9x0 switch), then check that:

1. The customer has migrated the configuration files according to the instructions documented in the *MAE Configuration Migration Guide from FC 3000 to FC 3001*, SA33-0475.
2. The **PN** of the **MAE system card** currently plugged in your MAE **is not** one of the following: **78H6297, 11J7464, or 89H8395**. Otherwise replace the MAE system card using the installation instructions PN **02L4064** to be used for the system card P/N 31L4336.

2.2 Co-Requisite

(Must be installed together)

None

2.3 Companion

(May be installed together)

None

3.0 BMs to Be Installed

FBM	Title
43P1309	Installation of microcode level H10040 at the latest suffix on a 3746-9x0 attached to 3745-xxA, or a 3746-950 stand-alone.
OR	
FFBM	**Title**
43P1308	Installation of microcode level H10040 at the latest suffix on a 3746-9x0 attached to 3745-xxA, and/or a 3746-950 stand-alone and documentation

4.0 Preparation

- Familiarize yourself with the purpose and details of the installation instruction before negotiating machine time with the customer (see Figure 1 on page 9).
- Check all items listed on the BMs to determine that all parts have been received.

- Call your Support Center to verify whether or not there are Microcode Fix (MCF) files to be installed with the new LIC. Any MCF application will be performed in Step 10.2.1.
- Obtain the maintenance password from the Customer.
- If the customer has subscribed to RETAIN, ensure that both the 3745 and 3746-9x0 types and models are registered in RETAIN.

  For machines in the U.S., please contact the Raleigh Networking Support Center at 1-800-426-2472 and verify that the 3745 and 3746 three-digit model number and the seven-digit serial number are correctly registered in Common Customer Profile File (CCPF).

5.0 Programming

3746 Models 900 and 950 have a new requirement on NCP.

For compatibility with current reporting of 3746-900 statistics to NPM, the Licensed Internal Code (H10040, any suffix) requires NCP Version 7 Release 3, or later, with APAR IR46303 (MVS/VM) or IR46304 (VSE). NCP APAR must be applied before the installation of the new Licensed Internal Code. Otherwise, the reporting of all statistics related to 3746-900 resources controlled by NCP will be interrupted.

3746 Models 900 and 950 have a new requirement on NPM.

The newly available Licensed Internal Code (H10040, any suffix) requires:

- For the reporting of active PU counts per TIC3
  - NPM Version 2 Release 4 with APAR OW37743 (PTF UW59877) at a minimum.
- For NNP utilization reporting to NPM:
  - NPM Version 2 Release 4, Release 5, or Release 6, with APAR number OW49510
- For reporting to NPM of adapter processor utilizations via NNP
  - NPM Version 2 Release 4, Release 5, or Release 6, with APAR number OW47153

6.0 Purpose and Description

Install the new level of microcode, H10040 at the latest suffix, on the Service Processor, the 9x0 machines, and any NNP or MAE features attached.

7.0 Installation Time

The installation time depends on:

- The number of 3746-9x0, and if any NNP and MAE are installed.
- The function used to update the LIC. Two functions are available:
  - The **LIC restore** function, used to replace any engineering level of micro-code.
  - The **Restore SP (and NNP) LIC non-active version**, used when upgrading earlier versions of F64810 to later versions or to H10040, any suffix.

7.1.1 LIC Restore Function

The **LIC restore** function is traffic-disruptive. However, the code can be loaded on the service processor while the traffic is running.

- The LIC installation time for the Service Processor (3746-9x0/MOSS-E) is non-disruptive and can be completed in 35 to 60 minutes.
- Disruptive operations:
  - 5 minutes to complete each NNP feature, if any
  - 30 minutes to complete the MAE feature, if any
  - 6 minutes to complete a 9x0 general IML
  - 6 minutes to complete the 9x0 EEPROM upgrade..

  Note: Times shown are approximate and are estimated for each 3746-9x0 machine attached to the Service Processor.

B/M Installed	Machine Hours	System Hours	CE Hours	Number of CEs
43P1308 or 43P1309	2 to 3	0	3	1

7.1.2 Restore SP (and NNP) LIC Non-Active Version Function

The **Restore SP (and NNP) LIC non-active version** function is not operation- or traffic-disruptive. But, switching to the new version, after restoring the non-active version, is disruptive. In the same way, changing the MAE LIC and performing a general IML are disruptive operations.

B/M Installed	Machine Hours	System Hours	CE Hours	Number of CEs
43P1308 or 43P1309	1	0	1	1

8.0 Tools/Materials Required

None.

Installation (Steps 9-12)

9.0 Safety

Not applicable.

10.0 Details of Installation

- If the current microcode level is prior to **F64810**, the following phases take place:

  Phase 1

  The Service Processor, the NNP (if any), and the MAE (if any) are upgraded. NNP or MAE traffic is disrupted during this phase. For details, see 10.1, “Procedure 1 - 3746-9x0/MOSS-E Code Level Upgrade.”

  Phases 2 and 3

  Every 3746-9x0 machine attached to the Service Processor is updated. For details, see 10.3, “Procedure 2 - 3746-9x0 Code Level Upgrade.”

  Traffic for any 3746-9x0 machine attached to this Service Processor is disrupted during these phases. Each 9x0 machine can be upgraded separately to minimize this disruption.

- If the current microcode is any level of **F64810** or above use 10.4, “Procedure 3 - Restore SP (and NNP) LIC on Non-Active Version” on page 38. The installation will be done in two phases:

  Phase 1

  The non-active version of LIC code is restored. This phase is non-disruptive.

  Phase 2

  You switch to the non-active version of LIC code (just restored in Phase 1) and then perform a general IML. This phase is disruptive.

To sum up...

- If you are upgrading a microcode level prior to F64810, start with Procedure 1 on page 10 and continue with Procedure 2 on page 34.
- If you are upgrading any level of F64810 or above, go to Procedure 3 on page 38.

If you are migrating a MAE from FC 3000 to FC 3001, see Figure 1 on page 9 to get the sequence of the installation tasks and the documentation to be used.

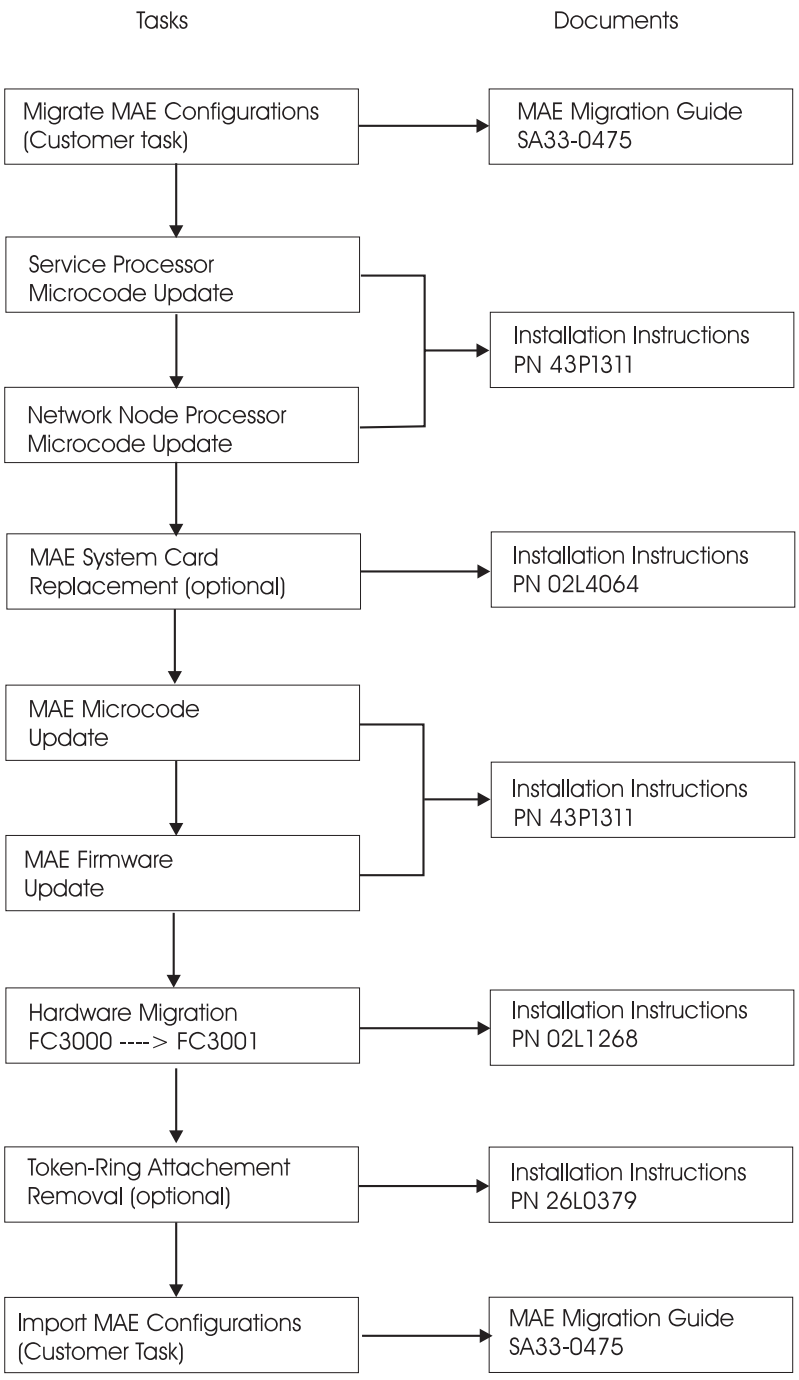


Figure 1. MAE FC 3000 to 3001 Migration Scenario

10.1 Procedure 1 - 3746-9x0/MOSS-E Code Level Upgrade

Go To

What is the EC level of the code currently installed on your SP?

- For CD-ROM microcode levels at **EC F12380 or above**, go to 10.1.5, "Saving Configuration on Diskette" on page 13.
- For ODD microcode levels **prior to F12380**, go to 10.1.1, "Saving the Configuration on the Optical Disk."

10.1.1 Saving the Configuration on the Optical Disk

__ 1. If not already logged, enter the **Service Processor maintenance password** (default is IBM3745).

__ 2. Double-click on the **Service Processor** icon.

__ 3. Click on **Operation Management**.

__ 4. Double-click on **Manage Disks and Databases**.

__ 5. Click on **Save databases on optical disk** radio button.

__ 6. Click on **OK** and follow the prompts.

__ 7. When prompted, insert the optical disk.

__ 8. When completed, click on **OK**, then click on **Cancel** to exit from the function.

10.1.2 Installing MES Data Save Function

Customer Data Migration Diskette

This diskette is no longer shipped with FBM 43P1309. Please refer to RETAIN TDR H172455, if needed.

__ 1. Insert the Customer Data Migration diskette, **PN 02L3850**, in the Service Processor diskette drive.

__ 2. Click on **Change Management**.

__ 3. Double-click on **Manage Microcode Fixes**

__ 4. Click on **OK** for use of PE function.

__ 5. On **Manage Microcode Fixes** window, click on **View** (On function bar). Then, click on **Change directory path** (On pull down menu)

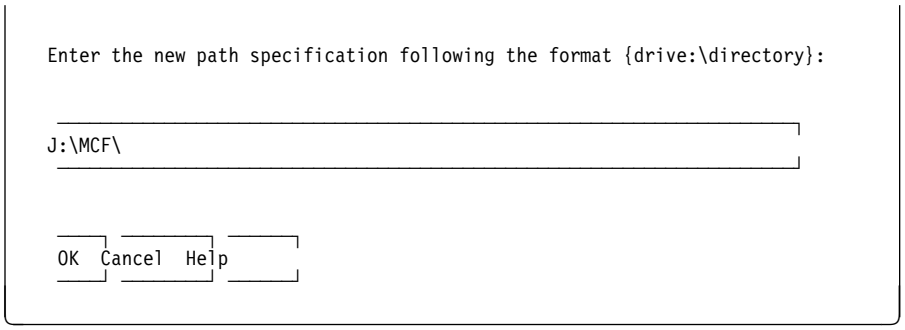
__ 6. On **Change Directory Path** window, enter **A:*.***. Then, click on **OK**.

__ 7. On **Manage Microcode Fixes** window, click on the **fixes** to be applied.

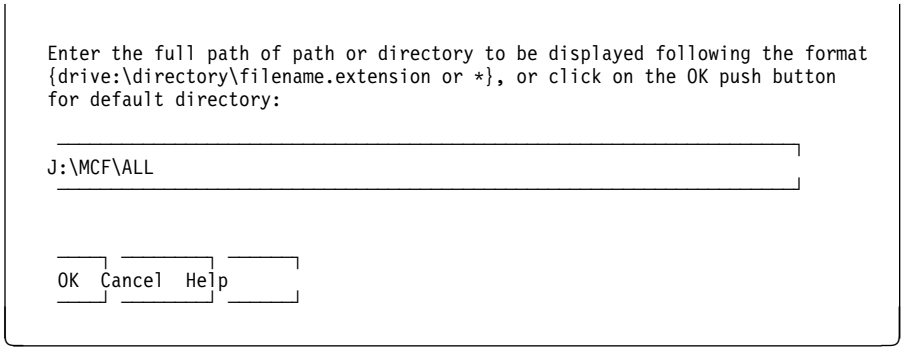
Driver	If LIC EC Level	Apply MCF
607	D2251X	MD22426.418
810	D2256X	MD22726.418
830	D4612X	MD22526.418
840	D4613X	MD22326.418

__ 8. Click on **File** (On the function bar). Then, click on **Move** (On pull down menu).

__ 9. On the **Move Microcode Fix files** window, enter **J:\MCF**. Then, click on **OK**.



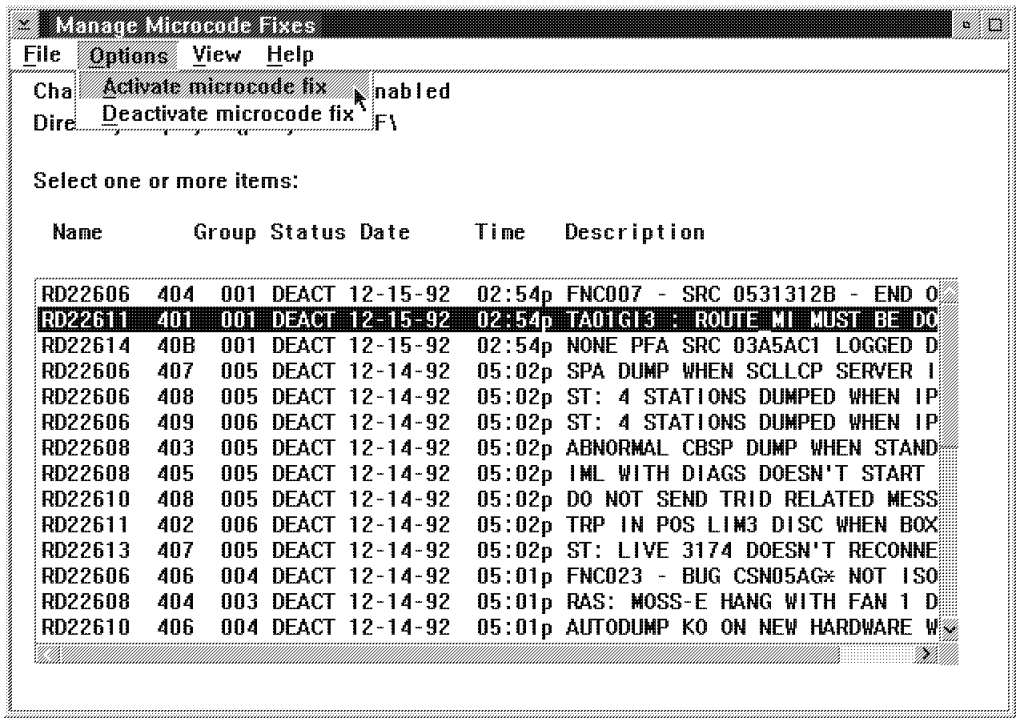
__ 10. On the **Change Directory Path** window, enter **J:\MCF\ALL**. Then, click on **OK**.



__ 11. Remove the diskette from the drive.

__ 12. On the **Manage Microcode Fixes** window, click on the **MES Data Migration** field to select this function, click on **Options** (on function bar). Then, click on **Activate microcode fix** (on pull down menu).

__ 13. Answer **Yes** to shutdown and re-boot.



Note: The current MCF is not shown on the preceding screen.

10.1.3 Verifying the MCF Status

After IML is completed

__ 1. Enter the Service Processor maintenance password

__ 2. Double-click on the **Service Processor** icon.

__ 3. Click on **Change Management**.

__ 4. Double-click on **Manage Microcode Fixes**

__ 5. The status of the MCF that has just been applied must change to **ACT**. If so, continue with the next step. Otherwise, call the Support Center.

__ 6. Exit the **Change Management** functions.

10.1.4 Saving Customer Data on Diskette

__ 1. On the **MOSS-E View** window, click on **Program**.

__ 2. Double-click on **Log OFF MOSS-E**, then double-click on **Log ON MOSS-E**.

__ 3. Insert the **backup** optical disk (diskette used in Step 10.1.1) into the ODD.

__ 4. Double-click on the **Service Processor** icon.

__ 5. Click on **Functions to Use Under PE Guidance Only**.

__ 6. Double-click on **Save Customized data on diskette**.

__ 7. When prompted, insert the Configuration Parameters diskette, **PN 02L3427**, (this can be any blank 1.44MB diskette) into the diskette drive.

Note: Only **one** diskette is provided. If more than one diskette is required, obtain additional blank 1.44MB diskettes.

__ 8. Click on **OK**, follow the prompts, and wait for the following message: `'operation is successfully completed'`.

__ 9. Click on **Close**.

__ 10. Remove the diskette and the optical disk.

__ 11. Go to 10.1.6, “Shutting Down the Service Processor.”

10.1.5 Saving Configuration on Diskette

Perform the following nine steps when upgrading the microcode from CD-ROM level F12380 or later:

__ 1. If not already logged, enter the **Service Processor maintenance password** (default is IBM3745).

__ 2. Double-click on the **Service Processor** icon.

__ 3. Click on **Operation Management**.

__ 4. Double-click on **Manage Disks and Databases**.

__ 5. Click on **Save database on diskette** radio button.

__ 6. Click on **OK** and follow the prompts.

__ 7. When prompted, insert the Configuration Parameters diskette, **PN 02L3427**, in the diskette drive.

Note: Only one **Configuration Parameters diskette** is provided. If more than one diskette is required, obtain additional blank 1.44MB diskettes.

__ 8. When completed, click on **OK** and remove the diskette.

__ 9. Go to 10.1.6, “Shutting Down the Service Processor.”

10.1.6 Shutting Down the Service Processor

__ 1. On the **MOSS-E View** window, click on **Program**.

__ 2. Double-click on **shut-down**, then enter the maintenance password (default is IBM3745), and click on **OK**.

__ 3. When a pop-up window tells you that the service processor has been shut down, power OFF the Service Processor.

__ 4. Check the service processor type:

- For service processor **type 6578, 6563, or 6275**, go to 10.1.8, “LIC Installation” on page 14.
- For service processor **type 7585-P02**, check whether there is an OD drive installed:

– **Yes**, go to 10.1.7, “Removing the Optical Disk Drive (ODD) from a 7585” on page 14.

– **No**, check whether you have received the **FBM 25L4401**?

— **Yes**, then use the FBM 25L4401 to install the MPA card and go to 10.1.8, “LIC Installation.”

— **No**, then go to 10.1.8, “LIC Installation.”

10.1.7 Removing the Optical Disk Drive (ODD) from a 7585

__ 1. **On the rear side of the ODD**, turn OFF the power switch (0).

__ 2. Disconnect the ODD Power cord from the AC Outlet Distribution Box or from the wall AC outlet, and the other end from the rear side of the ODD.

__ 3. **On the rear side of the Service Processor**, disconnect the signal cable from SCSI adapter (Position 3).

__ 4. Remove the ODD. Then, pack it into the return box (PN 32H0346) provided with this FBM.

__ 5. Have you received the **FBM 25L4401**?

- **Yes**, then use the FBM 25L4401 to install the MPA card. When complete, go to 10.1.8, “LIC Installation.”
- **No**, then go to 10.1.8, “LIC Installation.”

10.1.8 LIC Installation

__ 1. Insert the Service Processor Installation diskette:

- **PN 43P1272**, if your SP is a **7585-P02**
- **PN 43P1275**, if your SP is a **6275, 6563, or 6578**

__ 2. Then, power **ON** the Service Processor and while the system is starting, insert the **Licensed Internal Code CD ROM (PN 02L2730)** into the drive.

__ 3. When the diskette is booted, follow the prompts on the screen.

__ 4. Wait until completion. While you are waiting several messages are displayed: `Build hard disk, reboot, format ...`

Note: If the following message appears, **press enter** to continue:

```
SYS0627: Drive C: was improperly stopped.  From the OS/2
command prompt, run CHKDSK with the /F parameter on the
specified drive
```

Note: If the following message appears, ignore it:

```
SYS0318: Message file OSO001.msg cannot be found for message
1467
```

__ 5. When prompted, insert the Configuration Parameters diskette, **PN 02L3427**, in the diskette drive.

__ 6. Wait for a while, when prompted insert the Service Processor Installation diskette, **PN 43P1272** or **43P1275**, in the diskette drive.

__ 7. A message is displayed: `Number of bytes....Remaining computed time goes to 00s`. Wait several minutes until the message `LIC Restoration has successfully completed` is displayed, then press **Enter** to continue.

Note: If an error occurs, note the displayed message and press **Enter**.

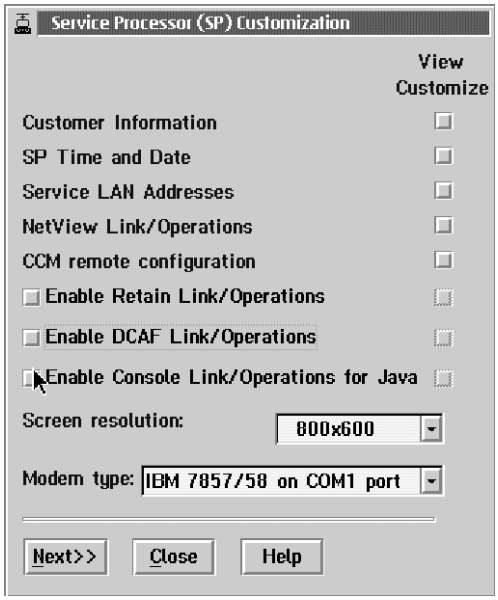
__ 8. When prompted remove the diskette from the diskette drive. Then, press **Enter** and remove the CD.

__ 9. Wait until the system has re-booted. If a LAN message appears, ignore it. When the message `Do you want to customize your SP` is displayed, click on **OK**. If not automatically prompted, select the **SP Customization** function from the **service processor configuration** menu.

About the SP customization window...

Three new options are available:

- A link definition for a **Java console**. DCAF Link/Operations and Console Link/Operations for Java options are mutually exclusive. According to the customer requirements, select either a DCAF or a JAVA link.
- **Screen resolution** option (800x600 or 640x480) to be enabled for the screens that support this option. It is mandatory to select 800x600 when an **MAE** is installed.
- **CCM remote configuration password**. Note that the **CCM remote configuration** may be greyed when feature 5810 is not installed.



__ 10. On the **Service Processor (SP) Customization** window, click on each **View Customize** check-box to open and, if necessary, modify the configuration parameters according to the customer system configuration.

In particular, during the NNP and MAE code upgrade, two configuration options must be de-activated. They are:

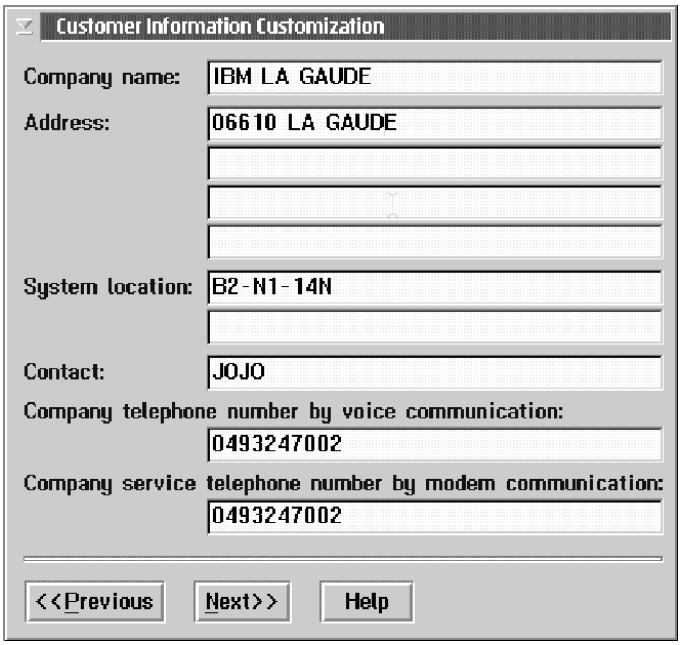
- The **Generate alerts** option in the NetView Links Reporting Customization window.
- The **Enable Remote Support Facility** option in the RETAIN customization window.

You will be prompted to check these options in a later step of this procedure. Continue with the next step.

__ 11. Check the screen resolution.

__ 12. Click on **Modem type** drop down list and select the modem and connection type of the modem being used.

__ 13. Click on **Next>>** button to display the **Customer Information Customization** window.

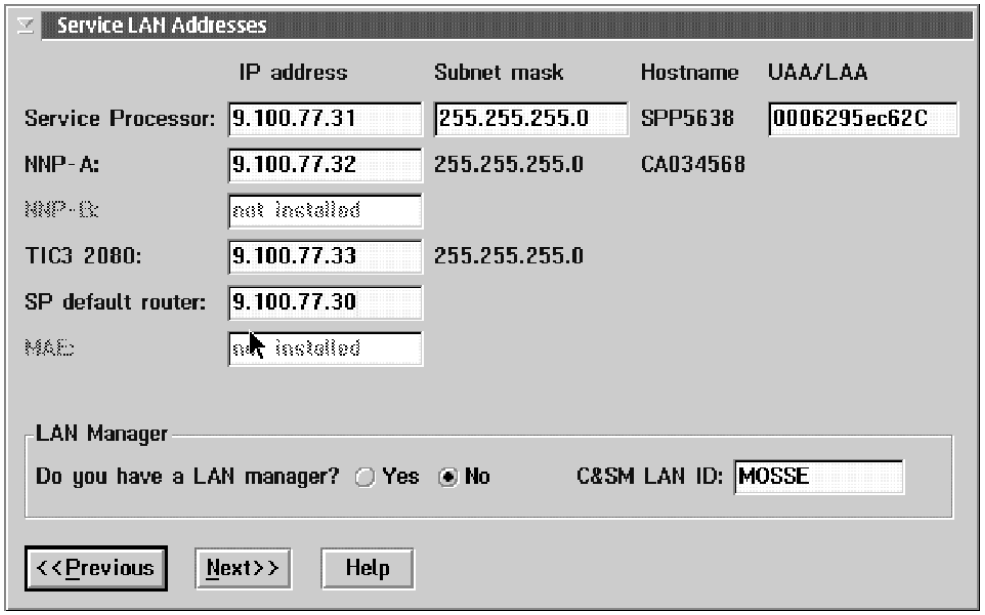


__ 14. Check the information recorded and make the necessary changes.

__ 15. Click on **Next>>** button to display the **SP Time and Date Customization** window.

__ 16. Check the information recorded and make the necessary changes. Press **Apply** to take into account the changes.

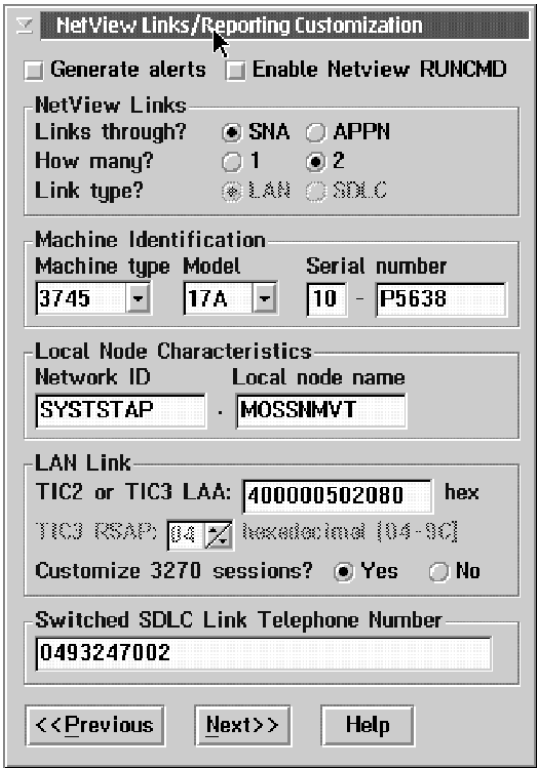
__ 17. Click on **Next>>** button to display the **Service LAN Addresses** window.



__ 18. Check the information recorded and make the necessary changes.

Note: If a controller is down, IP addresses cannot be changed.

__ 19. Click on **Next>>** button to display the **NetView Links/Reporting Customization** window.



__ 20. Check and record the configuration settings for the **Generate alerts** option.

- Use the table in Step 10.5 on page 50 to record the settings for the **Generate alerts** option, then return to this step.
- If the **Generate alerts** option is selected, disable it now and continue with the next step.

__ 21. Do not change any information. Click on **Next>>** button to display the **Token-Ring 3270 Session Customization** window.

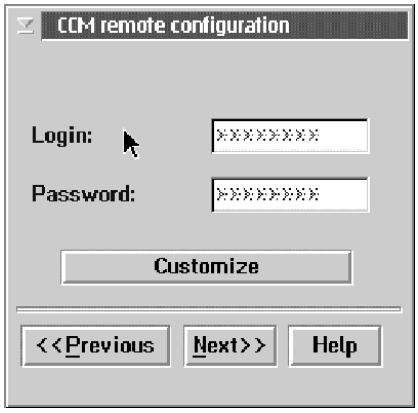
__ 22. Check the information recorded and make the necessary changes.

Customize

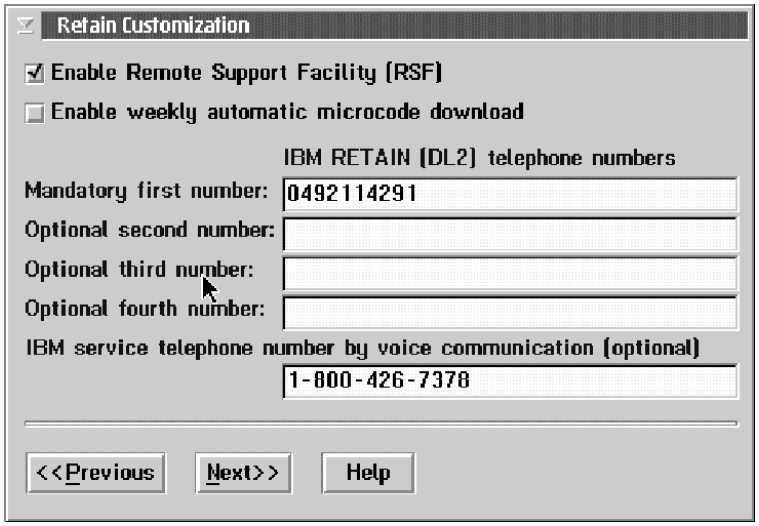
Pressing the **Customize** pushbutton allows you to display and/or modify the login and password. This function is password-protected and requires the management password.

After entering the login and password, passwords that were hidden with asterisks, are shown and can be modified.

__ 23. Click on **Next>>** button. to display the **CCM remote configuration**.



__ 24. Click on **Next>>** button to display the **Retain Customization** window.



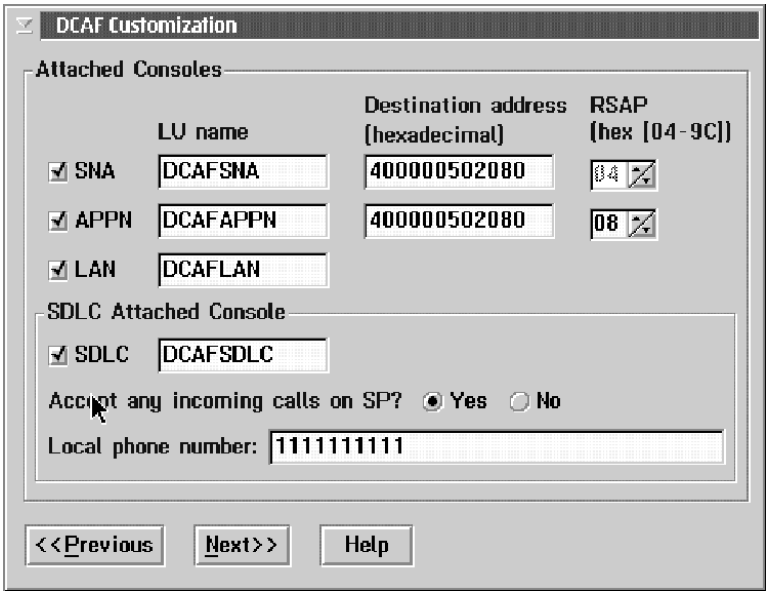
__ 25. Check and record the configuration settings for the **Enable Remote Support Facility (RSF)** option.

- Use the table in Step 10.5 on page 50 to record the settings for the **Enable Remote Support Facility (RSF)**, then return to this step.
- If the **Enable Remote Support Facility (RSF)** option is selected, disable it now and continue with the next step.

__ 26. Click on **Next>>**.

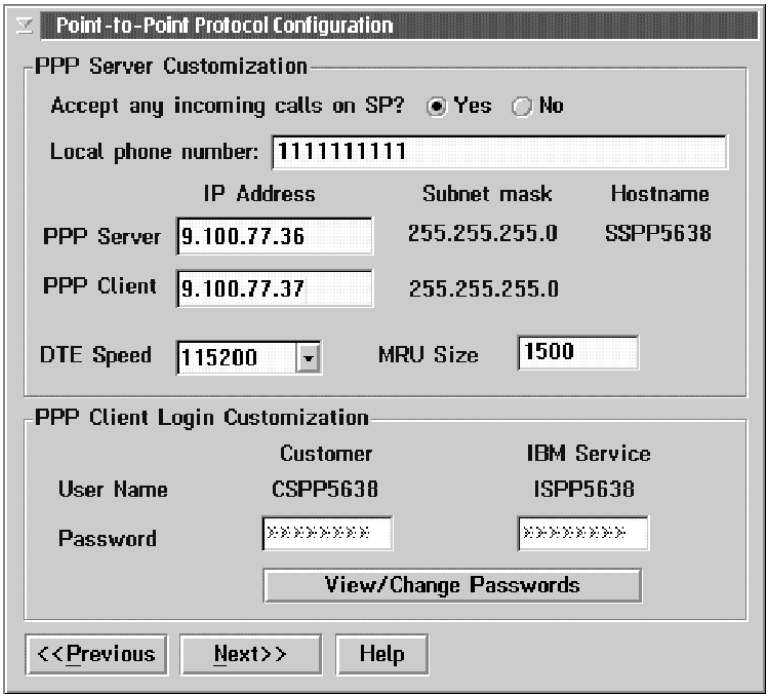
- If, in Step 10 on page 15, you have selected **DCAF** Link/Operations, then the **DCAF Customization** window is displayed. Go to the next step.
- Otherwise, if you have selected **JAVA Link/Operations**, then the **Point-to-Point Protocol Configuration** window is displayed. Go to Step 28.

__ 27. The **DCAF Customization** window is displayed:



Check the information recorded and make the necessary changes. Go to step 30 on page 21.

__ 28. The **Point-to-Point Protocol Configuration** window is displayed:



From this window, configure the PPP server parameters.

a. Click on **Yes** to accept any incoming call.

b. Type in the **Local Phone number** which is the phone number of the modem connected to the SP.

c. Specify the **IP addresses** of:

- The **PPP-server**. This is PPP address of the **service processor**.
- The **PPP-client**. This is PPP address of the **remote station**.

These IP addresses must be in the same subnet as the IP addresses of the units connected to the service LAN.

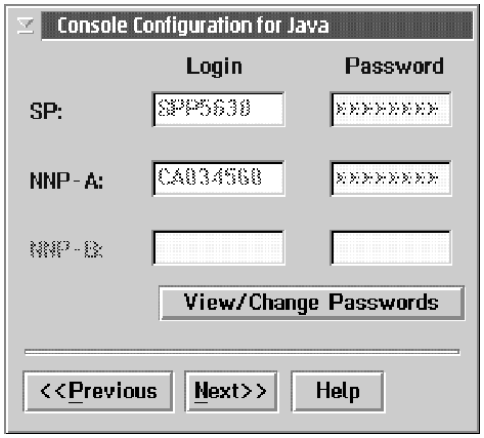
d. Select the correct **DTE speed** (modem speed) which must be set according to the type of the modem installed. Use the online help for more information.

View/Change Passwords

Pressing the **View/Change Passwords** pushbutton allows you to display and/or modify the passwords. This function is password-protected and requires the *management password*.

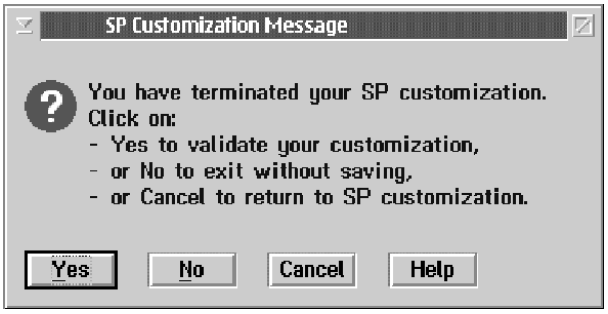
After entering the management password, passwords that were hidden with asterisks, are shown and can be modified in both the **Point-to-Point Protocol Configuration** and **Console for Java Configuration** windows, until you exit the function.

__ 29. Click on **Next>>** button to display the **JAVA Console Configuration** window.

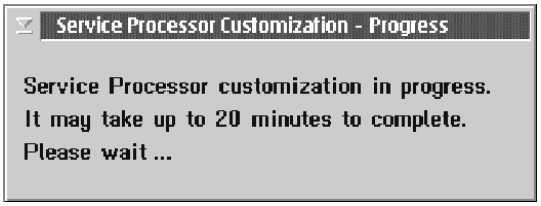


__ 30. Do not change any information. Click on **Next>>** button to return to the **Service Processor (SP) Customization** window.

__ 31. Click on **Close**. The **SP Customization Message** is then displayed:



__ 32. Click on **Yes** button to confirm the changes and start the Service Processor customization updating.



__ 33. Wait until completion. When completed, the following window is displayed:

__ 34. Click on **OK** button.

- If the service processor automatically re-boots, you will be prompted to log onto the MOSS-E. Then go to the next step.
- If the service processor does not re-boot, go to the next step.

__ 35. Is there any NNP installed?

- **Yes**, go to 10.1.9, “Upgrading the NNPs on 3746-9x0.”
- **No**, go to 10.2.1, “Applying the Mandatory MCFs Received” on page 33.

10.1.9 Upgrading the NNPs on 3746-9x0

__ 1. From the **MOSS-E View** screen, double-click on the **3746-9x0** icon.

__ 2. From the **3746-9x0 Menu** screen, click on **Network Node Processor (NNP) Management**.

__ 3. Select **Manage Control Point (CP) on NNP**.

__ 4. If the **Automatic configuration activation** option is selected, go to next step. Otherwise, go to step 6 on page 23.

__ 5. Disable the **Automatic configuration activation** option. (This is to avoid SRCs if the CCM data is not compatible with the new microcode level. See 10.3.4, “Migrating the Active Configuration Using CCM” on page 35).

__ 6. Press **Close** to exit.

__ 7. From the **Network Node Processor (NNP) Management** menu, select **Install/Remove/Change/Restore LIC/NNP**.

__ 8. Select **NNP-A** to upgrade the LIC on NNP-A or **NNP-B** to upgrade the LIC on the backup NNP. Then click on **Restore LIC on NNP**.

__ 9. When requested, insert the NNP Installation diskette, **PN 43P1273**, in the **SP diskette drive**.

__ 10. Select the NNP type and follow the prompts to remove the NNP installation diskette from the SP and install it in the **NNP diskette drive**.

__ 11. Follow the prompts and wait until the message `NNP LIC restoration operation successfully completed` is displayed. The NNP LIC restoration can last about 45 minutes. During the LIC restoration, click on **OK** to clear the alarm saying that the SP/APPN CP link has been lost.

__ 12. Click on **Close**. Then clear the reconnection alarm.

__ 13. If a backup NNP (NNP-B) is installed, return to step 7. Otherwise, continue with the next step.

__ 14. Wait until the NNP icons shown on the **MOSS-E View** becomes purple.

__ 15. If, in step 5, you have disabled the **Automatic configuration activation** option, go to the next step. Otherwise, go to step 20.

__ 16. From the **3746-9x0 Menu**, select **Network Node Processor (NNP) Management**.

__ 17. From the **Network Node Processor (NNP) Management** menu, select **Manage Control Point (CP) on NNP**.

__ 18. Enable the **Automatic configuration activation** option.

__ 19. Press **Close** to exit.

__ 20. Is there any MAE installed?

- **No**, go to 10.2.1, “Applying the Mandatory MCFs Received” on page 33.
- **Yes**, check whether you have to migrate the MAE installed from **FC 3000** to **FC 3001**?
  - **No**, go to 10.1.11, “Installing the MAE” on page 24.
  - **Yes**, go to 10.1.10, “Migrating the MAE” on page 24.

10.1.10 Migrating the MAE

__ 1. Verify the **PN** of the **MAE system card** plugged in your MAE.
If the **PN** of the card is one of the following: **78H6297, 11J7464, or 89H8395**, use the installation instructions, **PN 02L4064**, to replace the card. When complete, go to the next step.

__ 2. Use the installation instructions, **PN 02L1268**, to install the new hardware required to support FC 3001. When complete, go to the next step.

__ 3. Check whether the customer wants to remove the user token-ring kit (if any) between the MAE and the 3746-9x0?

- Yes. Continue with the next step.
- No. Go to step 5.

__ 4. Use the installation instructions, **PN 26L0379**, to remove the user token-ring link. When complete, go to next step.

__ 5. Go to 10.1.11, “Installing the MAE.”

10.1.11 Installing the MAE

__ 1. Double-click on the **3746-9x0** icon.

__ 2. Click on **Multiaccess Enclosure Management**.

__ 3. Now double-click on **Install/Remove/Change LIC on MAE**.

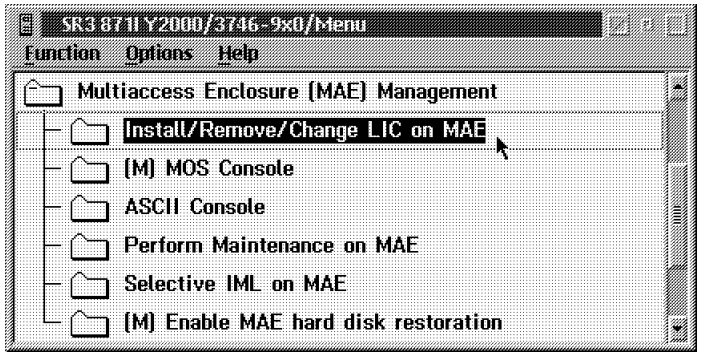


Figure 2. Install Multiaccess Enclosure

__ 4. Check the MAE installation status:

- If the MAE is installed, a popup window asks you to click on **Change LIC on MAE...**, then go to step 8 on page 26.
- Otherwise, click on **Install MAE...**, then go to step 5 on page 25.

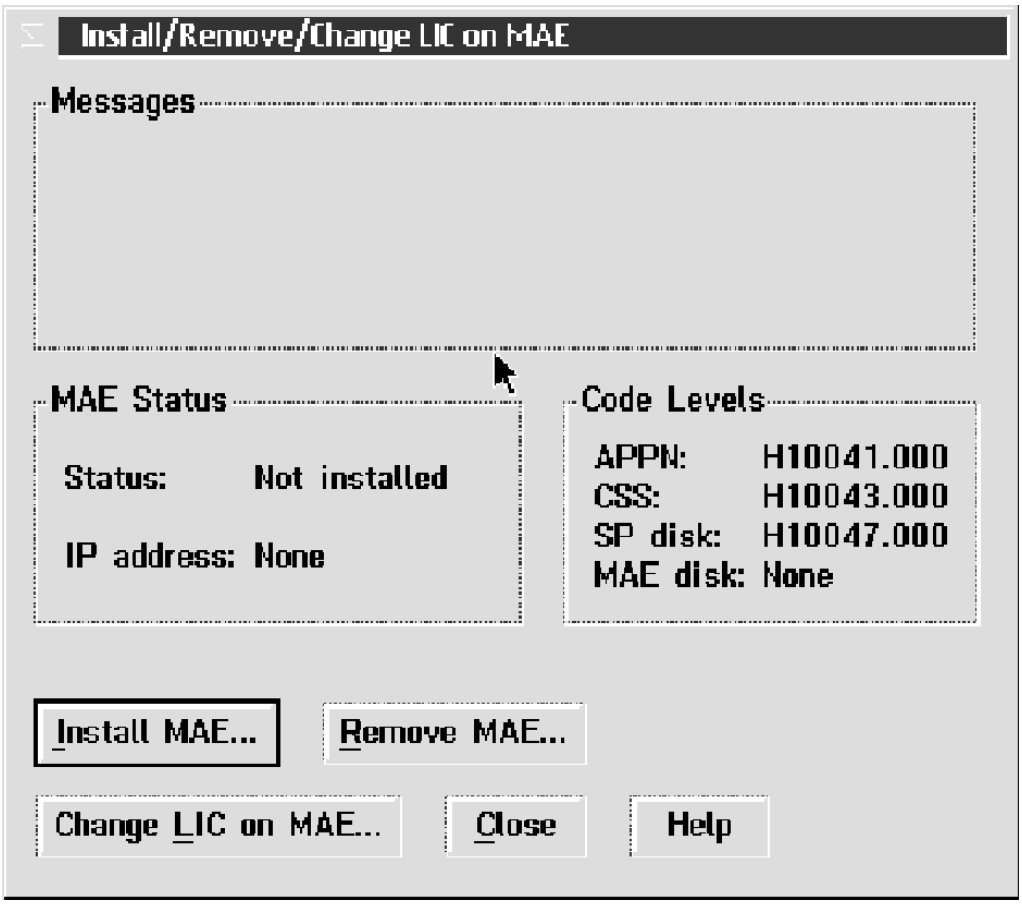
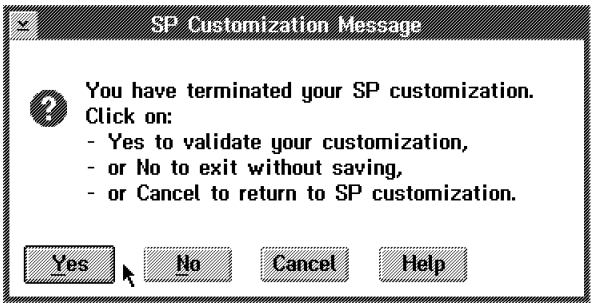


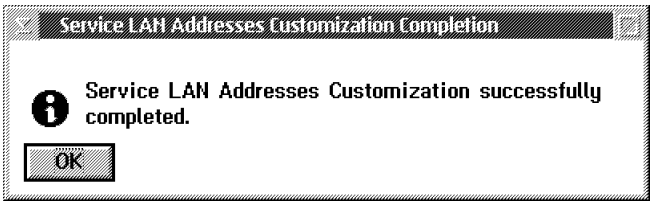
Figure 3. Install Multiaccess Enclosure

__ 5. Verify or enter the **MAE IP address**, then click on **OK**.

__ 6. Click on **Yes** to record your parameters.



__ 7. When completed, click on **OK**.

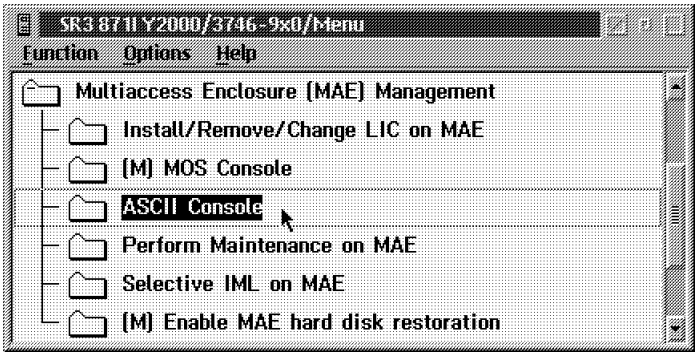


__ 8. Follow the prompts. The MAE code is now being installed: the transferred files are displayed on the window (it takes about 10 minutes). Wait until the message `Operation successfully completed` is displayed, then click on **Close**.

Note: The successful completion of the MAE/SP connection is indicated by a **green** MAE link icon. The connection may take a few minutes to complete.

10.2 Installing the Firmware

__ 1. Double-click on **ASCII Console**.



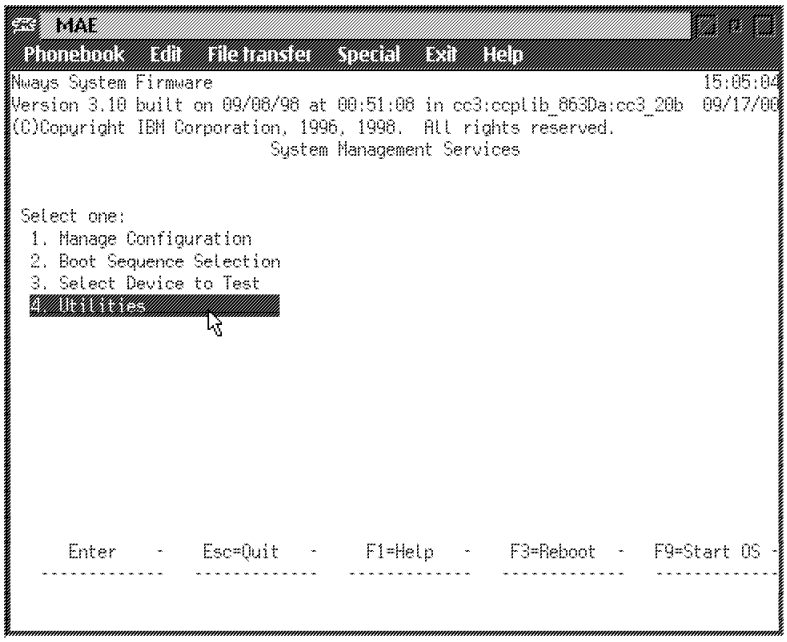
__ 2. Press the **Reset** button on the MAE (located on the front of the MAE system card).

__ 3. Several windows are displayed during tests. Wait until the **Boot Information** window is displayed.

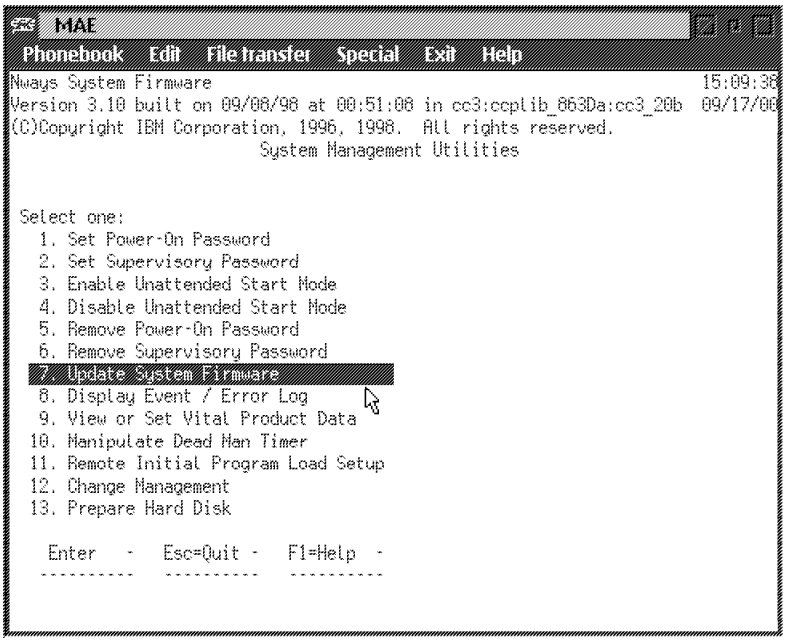
__ 4. Terminate the MAE boot by pressing **F1** when prompted.

__ 5. Enter the Multiaccess Enclosure supervisory password if required: **2216**.

__ 6. On the **System Management Services** window, select **option 4 - Utilities**, then press **Enter**.

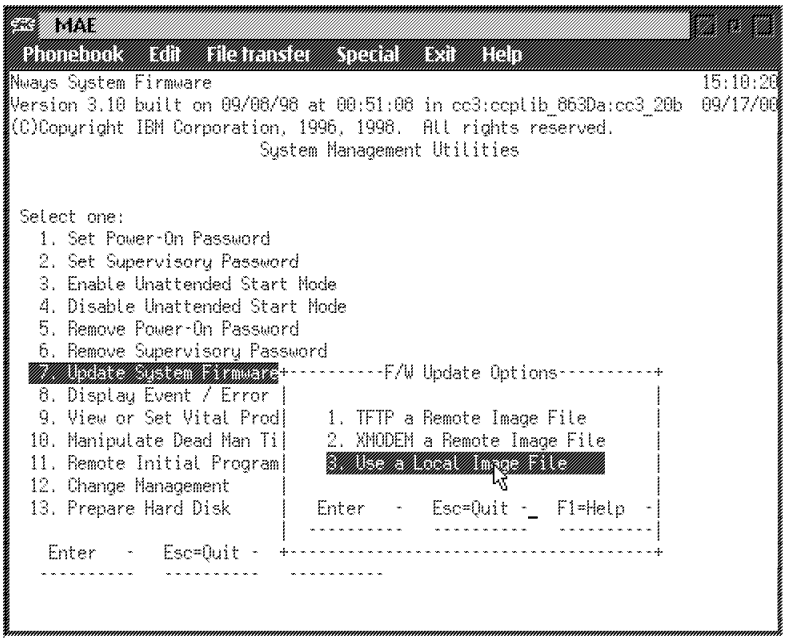


__ 7. Select **7. Update System Firmware** from the utilities panel, press **Enter**.



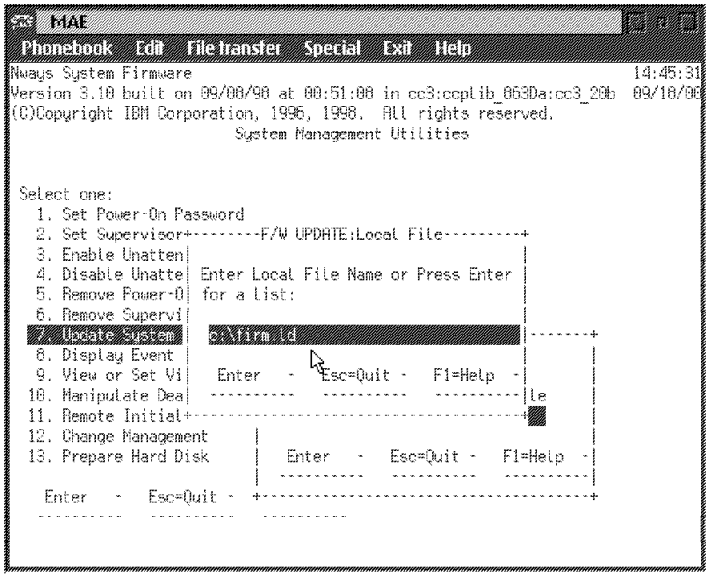
Do not power off the multiaccess enclosure during the process of updating the firmware. If the update fails, the multiaccess enclosure will boot a backup firmware image. If this happens, repeat the update procedure to reload the onboard firmware image.

___ 8. From the **F/W Update Options** menu, select **3. Use a Local Image File**, then press **Enter** and follow the prompts.

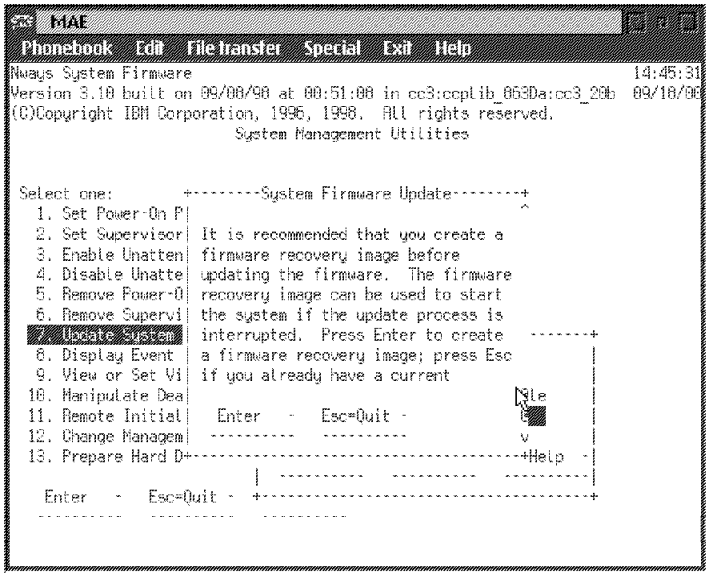


__ 9. Enter the **Local File Name**: **c:\firm.ld**, make sure that it is entered correctly, then press **Enter**.

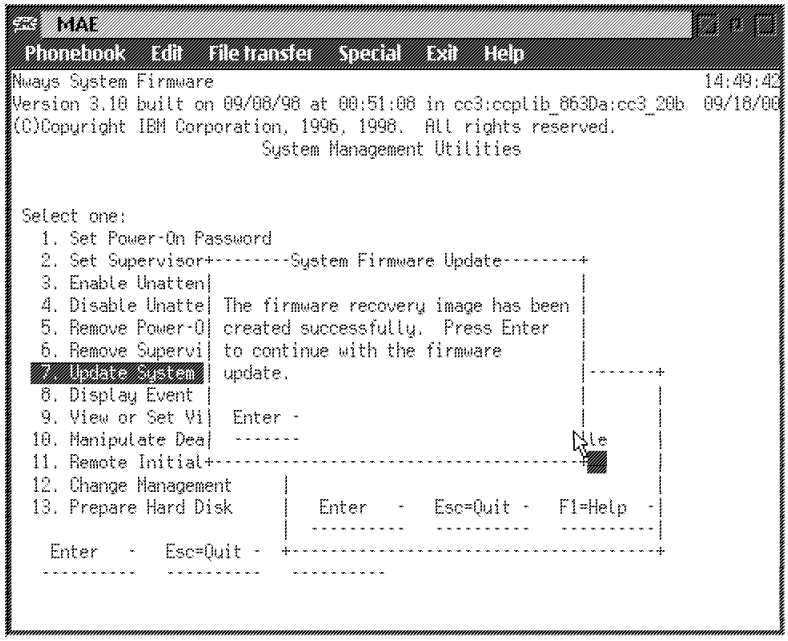
Note: If the firmware loaded on the MAE system card is at the same level as the firmware loaded on the SP hard drive, you will get the following message: `The firmware update file is at the same level as the system firmware. Firmware update cancelled. Press enter.` Then go to 10.2.1, “Applying the Mandatory MCFs Received” on page 33. Otherwise continue with the next step.



__ 10. When this window is displayed, press **Enter**.

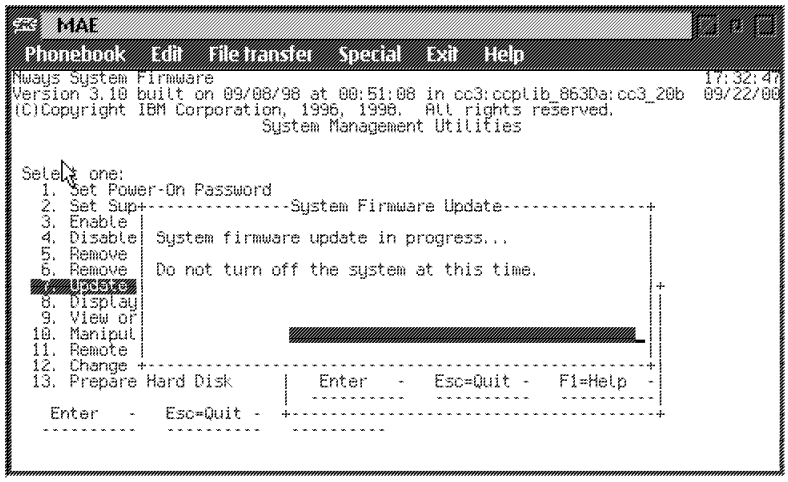


__ 11. When recovery image has been done, press **Enter**.



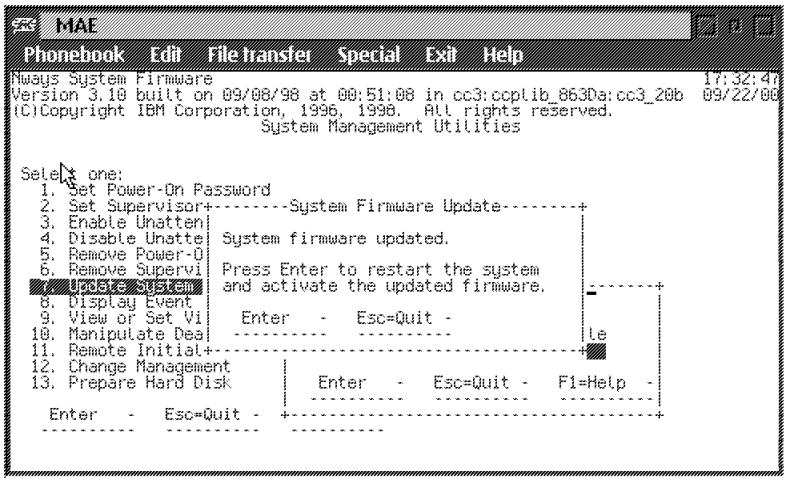
__ 12. On confirmation window, press **Y**. Then when this window is displayed, press **Enter**.

__ 13. Several windows are displayed following by:



Do not switch the system off. The process erases the old firmware and copies the new firmware into flash memory. If the machine is powered off before the process is complete, you will need to reload the firmware from the recovery image.

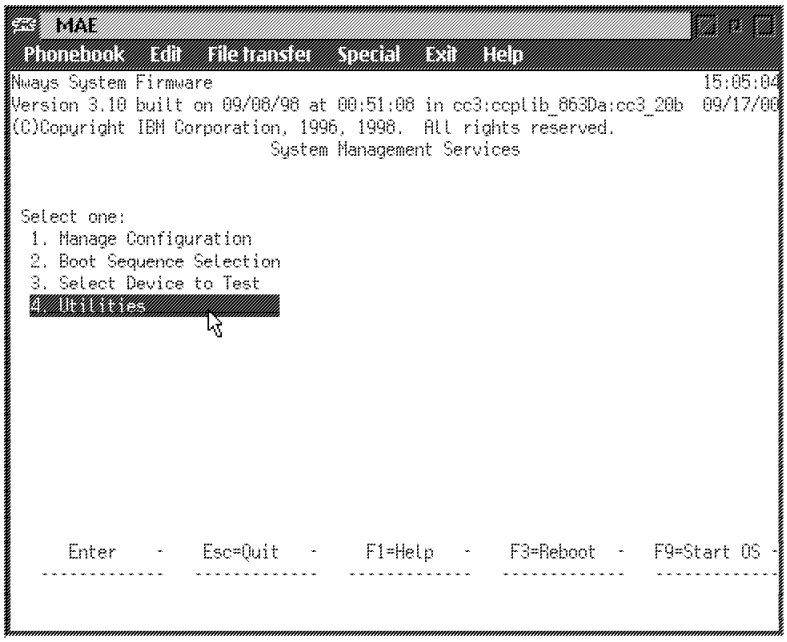
__ 14. A completed message appears when the firmware is updated.



__ 15. Press **Enter** to restart the system.

__ 16. Wait until the boot information window is displayed, then terminate the MAE boot by pressing **F1** when prompted.

__ 17. On the **System Management Services** window, select **option 4 - Utilities**, then press **Enter**.



__ 18. Check the IP addressing by selecting **(11) Remote Initial Program Load Setup** and pressing **Enter**.

__ 19. Select **(1) IP Parameters** and press **Enter**.

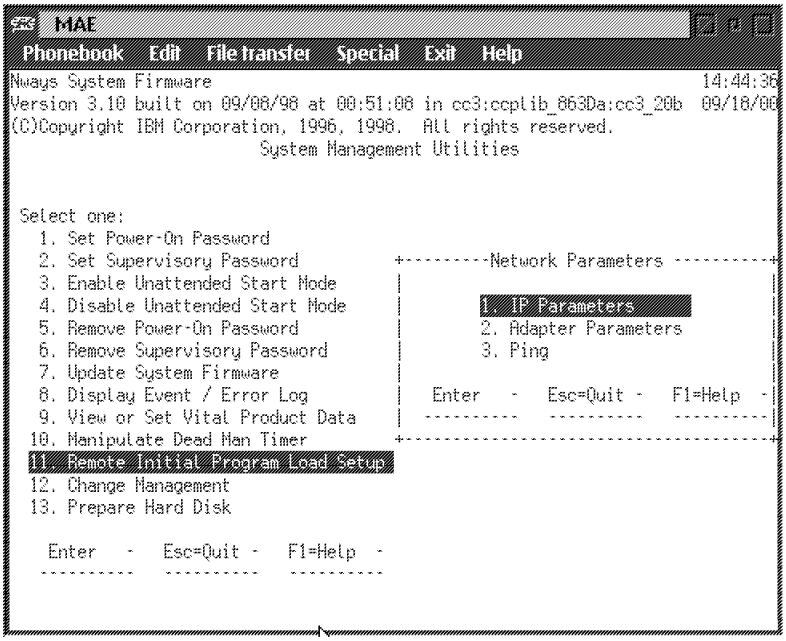
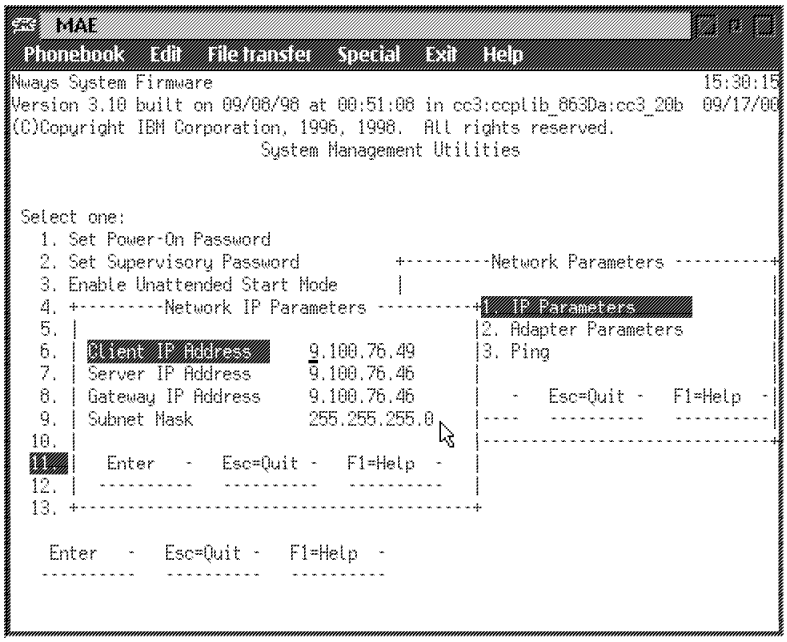


Figure 4. MAE

__ 20. Check that the following IP addresses and mask are the same as the ones defined in step 5 on page 25:

- Client IP address (MAE address of the PCMCIA card)
- Server IP address (service processor address)
- Gateway IP address (if no router on the ring, check the service processor IP address)
- Subnet Mask.



__ 21. Press **Esc** three times.

__ 22. Then close the ASCII window and go to 10.2.1, “Applying the Mandatory MCFs Received.”

10.2.1 Applying the Mandatory MCFs Received

- If you have MCF files to install onto the LIC, please refer to the *Service User's Guide* and use the procedure under the heading: “Handling Microcode Fixes on the Licensed Internal Code”.
- If there are no MCF files to install, continue with Step 10.3, “Procedure 2 - 3746-9x0 Code Level Upgrade” on page 34.

End of Procedure 1.
Go to10.3, “Procedure 2 - 3746-9x0 Code Level Upgrade” on page 34

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10.3 Procedure 2 - 3746-9x0 Code Level Upgrade

Before you start

Ask the customer for a 3746 maintenance window. Traffic must be deactivated on the 3746-9x0s.

10.3.1 3746-9x0 EEPROM Upgrade

__ 1. Click on **3746-9x0 Menu**.

__ 2. Click on **Change Management**.

__ 3. Double-click on **Upgrade/Downgrade EEPROM**.

__ 4. The **Upgrade Status** area will show the processors to be changed in reverse video.

__ 5. Click on **OK** to start the upgrade function, wait (up to 20 minutes) until the Upgrade Status is completed for each processor.

__ 6. Click on **Cancel** to leave the function.

10.3.2 Performing a General IML

After installing the code, numerous **SRCs** and **alarms** can be generated. Just clear the messages and continue with the current procedure.

__ 1. On the **MOSS-E View** screen, double-click on the **3746-9x0** icon.

__ 2. On the **3746-9x0 Menu** screen, click on **Operation Management**.

__ 3. Double-click on **Perform a General IML**, then click on the **Yes** button

__ 4. On the **Perform a General IML** window, click on **NO** to start an IML without diagnostic.

10.3.3 Configuring NetView Performance Monitor (NPM)

__ 1. Is there an NNP installed?

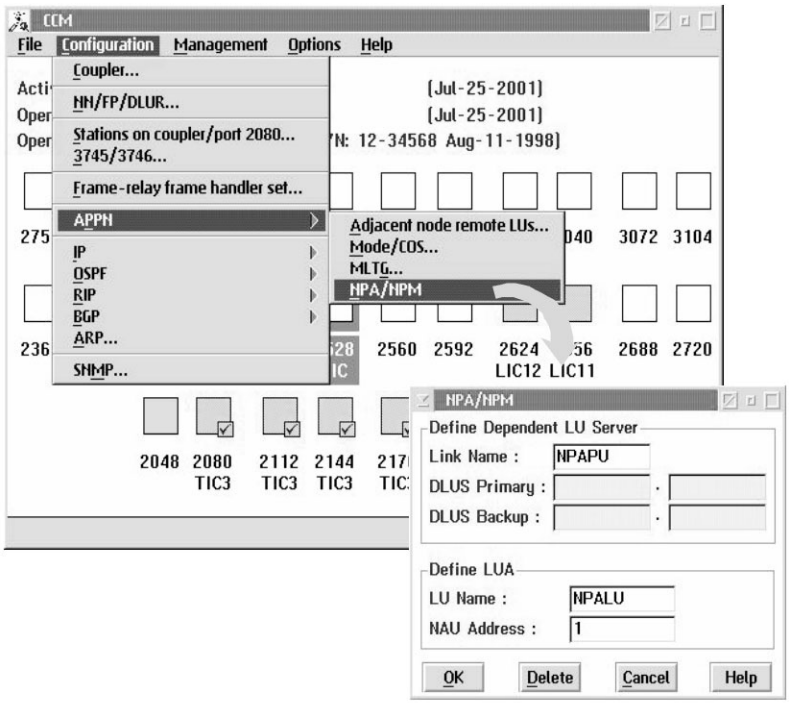
- **Yes**, Continue with the next step.
- **No**, Go to 10.6, “Returning the Machine to the Customer” on page 50.

__ 2. Do you intend to use NPM?

- **Yes**, Continue with the next step.
- **No**, Go to 10.3.4, “Migrating the Active Configuration Using CCM” on page 35.

__ 3. From **CCM**, configure NPM:

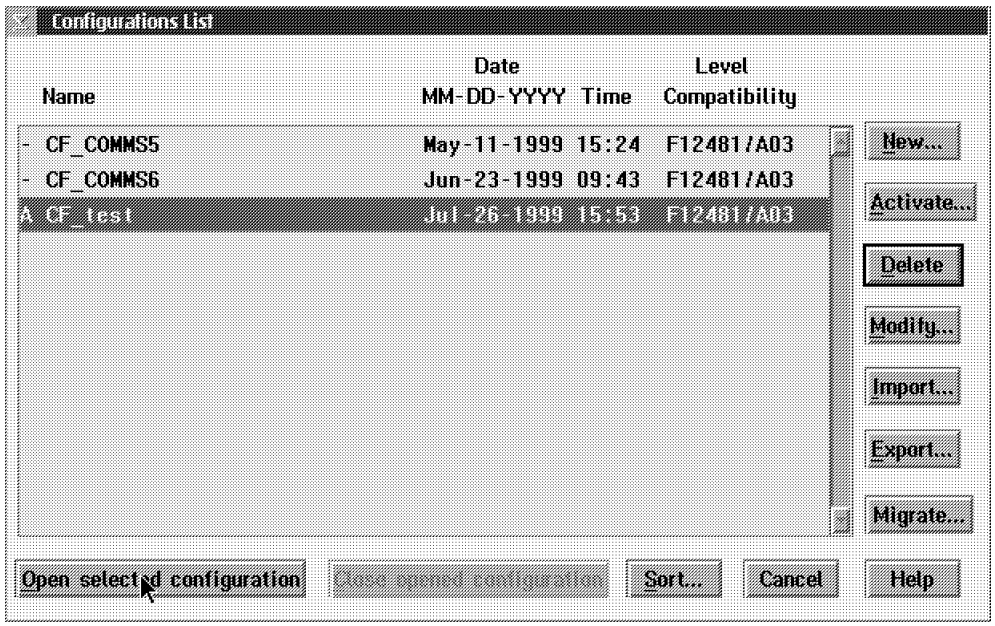
Only DLUS_PRIMARY and DLUS_BACKUP parameters can be changed. The PU and LU names are fixed to 'NPALU.' We do not need to make these parameters match with the PU and LU definitions done in Switch Major Node. The NAU_ADDRESS is fixed to 1 and should be the same as the LOCADDR specified in Switch Major Node.



10.3.4 Migrating the Active Configuration Using CCM

__ 1. From the **Network Node Processor (NNP) Management** menu, select **CCM - Controller Configuration and Management**.

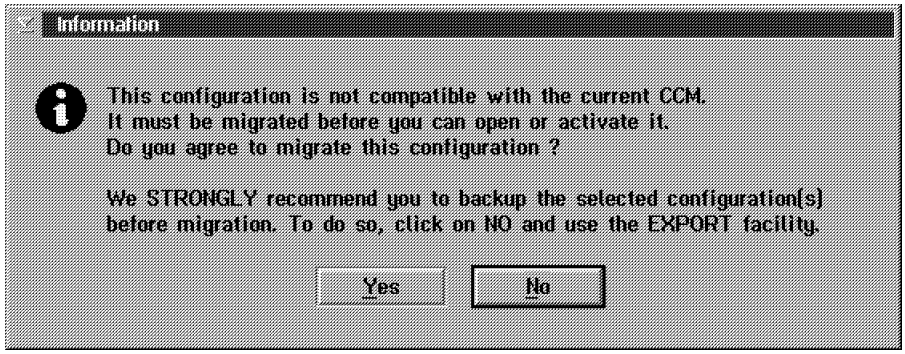
__ 2. From the CCM main window, select **File** → **Open...**. The following window is then displayed:



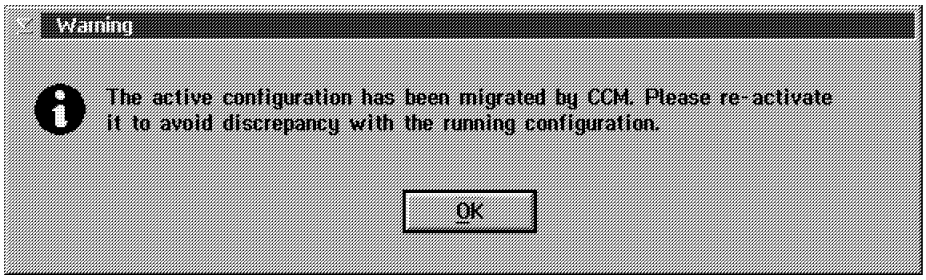
___ 3. From the configuration list, select the configuration with the letter **A** before the configuration name and click on **Open selected configuration**.

___ 4. According to the configuration compatibility with the current CCM, one of the following occurs:

- The configuration is compatible with the current CCM. Then, the procedure is complete. Go to 10.3.5, “Activating the Migrated Configuration” on page 37.
- Otherwise, the configuration is not compatible with the current CCM, then the following information window is displayed. Continue with the next step.



___ 5. Press **Yes** to migrate the configuration. It is not necessary to save the configuration before migrating it, because it has been already saved on the configuration parameter diskette. When the configuration has been successfully migrated, the following window is displayed:



__ 6. Press **OK**.

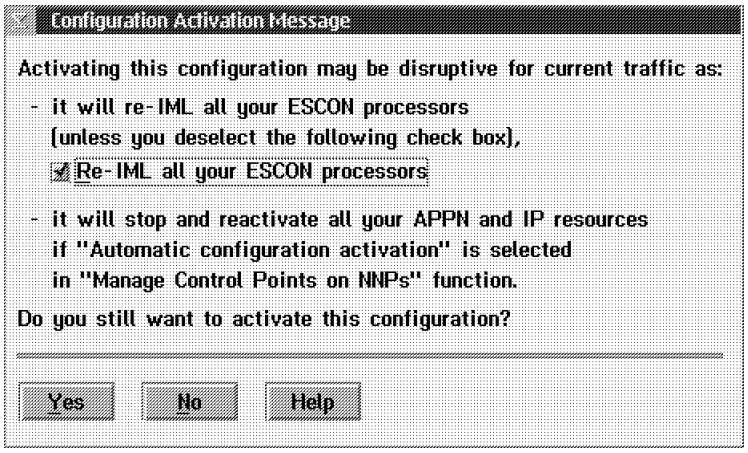
__ 7. Close the opened configuration by selecting **File** → **Close opened configuration**.

__ 8. You can now activate the migrated configuration. Go 10.3.5, “Activating the Migrated Configuration.”

10.3.5 Activating the Migrated Configuration

__ 1. From the CCM main window, select **File** → **Open...**.

__ 2. From the configuration list, select the configuration with the letter **A** and click on **Activate...**. The following window is then displayed:



__ 3. Check that the **Re-IML all your ESCON processors** option is selected and click **Yes**.

End of Procedure 2.

Is there another 3746-9x0 installed:

- **Yes,** then return to 10.3, “Procedure 2 - 3746-9x0 Code Level Upgrade.”
- **No,** then go to 10.6, “Returning the Machine to the Customer.”

10.4 Procedure 3 - Restore SP (and NNP) LIC on Non-Active Version

Before you start...

- In order to use the current function, the LIC **F64810** or higher must be already installed.
- Restoring the non-active version is not operation- or traffic-disruptive, but switching to the new version is disruptive.
- No maintenance window is required to run the current function.

10.4.1 Saving Configuration on Diskette

__ 1. If not already logged, enter the **Service Processor maintenance password** (default is IBM3745).

__ 2. Double-click on the **Service Processor** icon.

__ 3. Click on **Operation Management**.

__ 4. Double-click on **Manage Disks and Databases**.

__ 5. Click on **Save database on diskette** radio button.

__ 6. Click on **OK** and follow the prompts.

__ 7. When prompted, insert the Configuration Parameters diskette, **PN 02L3427**, in the diskette drive.

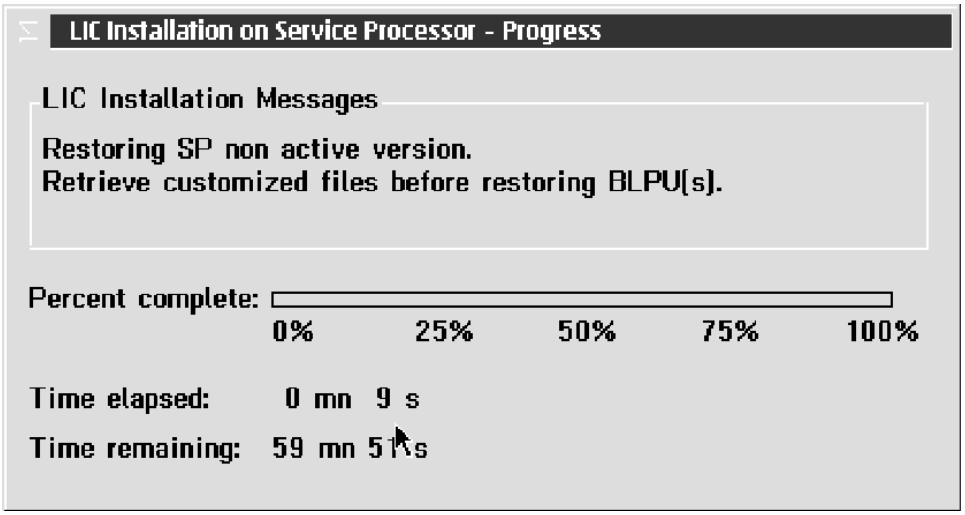
Note: Only one **Configuration Parameters diskette** is provided. If more than one diskette is required, obtain additional blank 1.44MB diskettes.

__ 8. When completed, click on **OK** and remove the diskette.

10.4.2 Updating the Non-Active LIC Version

__ 1. Insert the CD-ROM that contains the new LIC version.

__ 2. From the **Change Management** folder, select the **Restore SP (and NNP) LIC on non-active version**.



__ 3. Click **OK** when complete.

During the LIC Restore...

You are continuously informed of the progress. The non-active version LIC restore takes approximately 30 minutes to complete.

When the pop-up window displays the LIC restore completion on the non-active version, proceed to the next step.

__ 4. After restoring the LIC non-active version, switch to the new version.

Before switching to the non-active version

Switching to the non-active version is **disruptive**.

Please check with the Customer prior to performing Steps 5 through 9. These steps can be scheduled for a later time if necessary.

Switching to the Non-Active LIC Version

__ 5. From the **Change Management** folder, select the **Switch to non-active version** function.

__ 6. Press the **Switch to inactive code level** pushbutton.

__ 7. Click **Yes** to confirm.

Switching to the inactive level takes about ten minutes. During this operation, the service processor and the network node processors automatically re-boot.

__ 8. Log onto the MOSS-E program and IML the 3746 from the operator panel as prompted.

__ 9. Click **OK** when complete.

10.4.3 Updating the MAE LIC

__ 1. If there is an MAE FC3001 installed, the MAE LIC must be updated. Go to the next step. Otherwise, go to 10.4.5 on page 46 to upgrade the EEPROM.

Changing the MAE LIC

__ 2. From the **3746-900 menu**, select the **Multiaccess Enclosure (MAE)** folder.

__ 3. From the **Multiaccess Enclosure (MAE)** folder, select the **Install/Remove/Change LIC on MAE** function, in order to replace the MAE LIC on the MAE hard disk with the MAE LIC stored on the service processor hard disk. The following window is displayed (Figure 5).

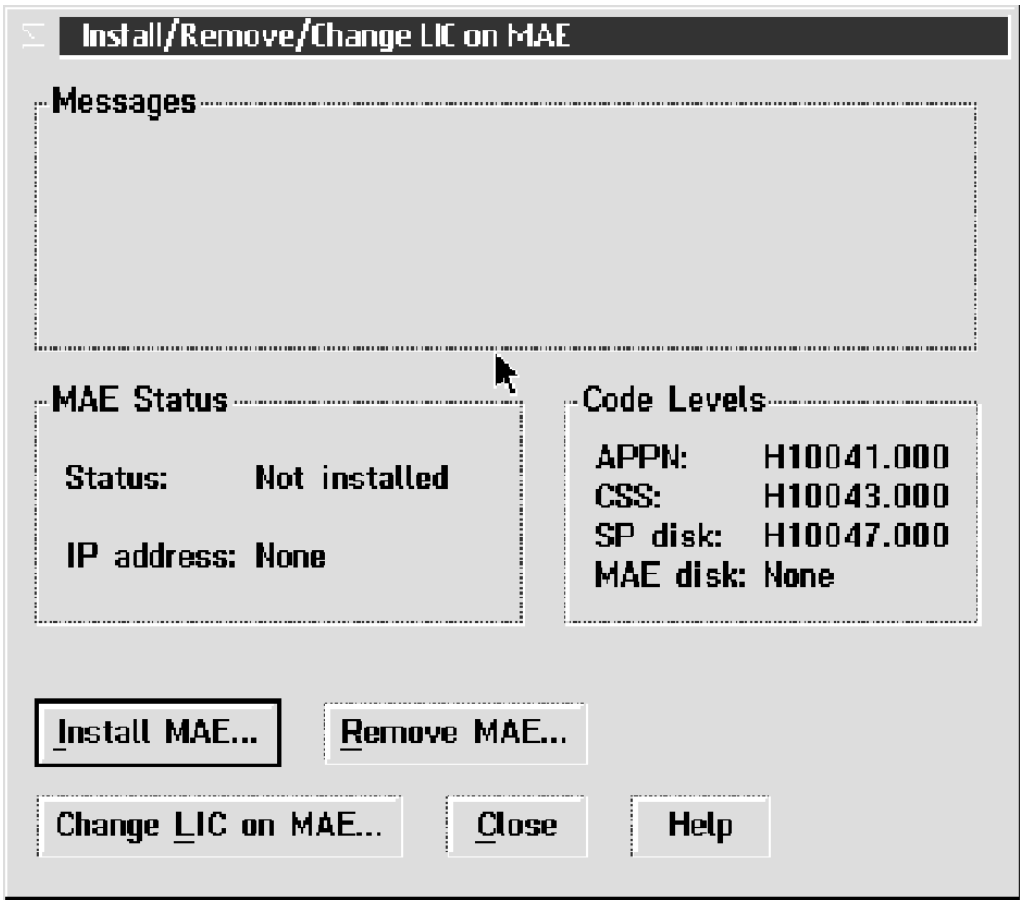


Figure 5. Changing MAE LIC Installation Window

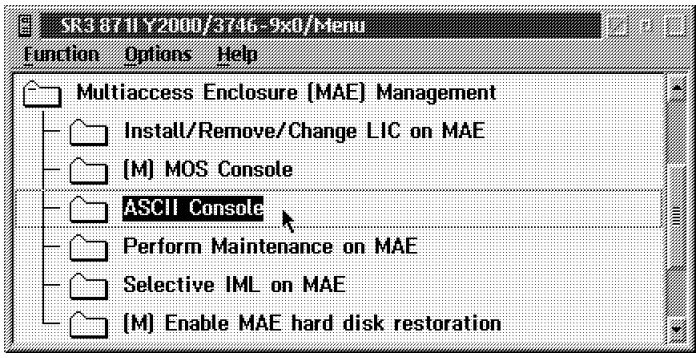
__ 4. Press the **Change LIC on MAE** pushbutton.

__ 5. Click **OK** when prompted to confirm.

It takes about 10 minutes to update the MAE LIC.

10.4.4 Installing the Firmware

__ 1. Double-click on **ASCII Console**.



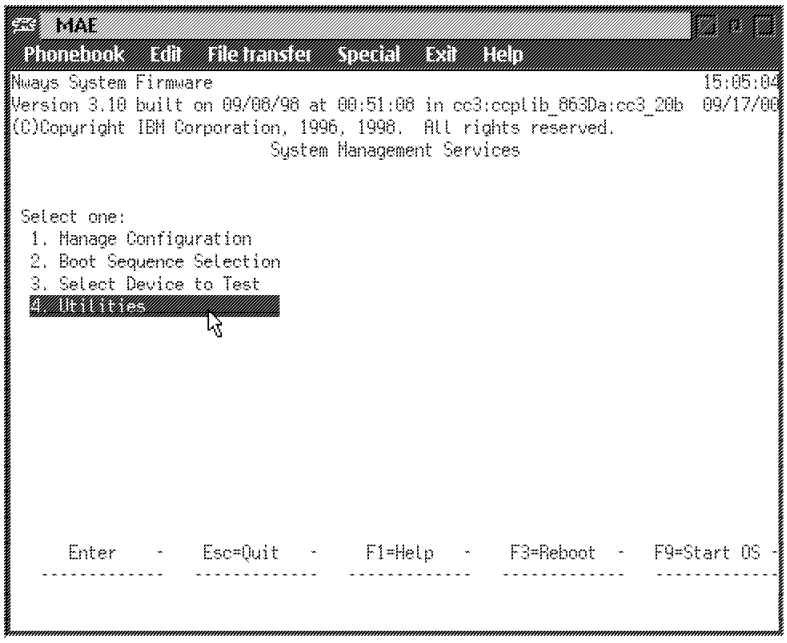
__ 2. Press the **Reset** button on the MAE (located on the front of the MAE system card).

__ 3. Several windows are displayed during tests. Wait until the **Boot Information** window is displayed.

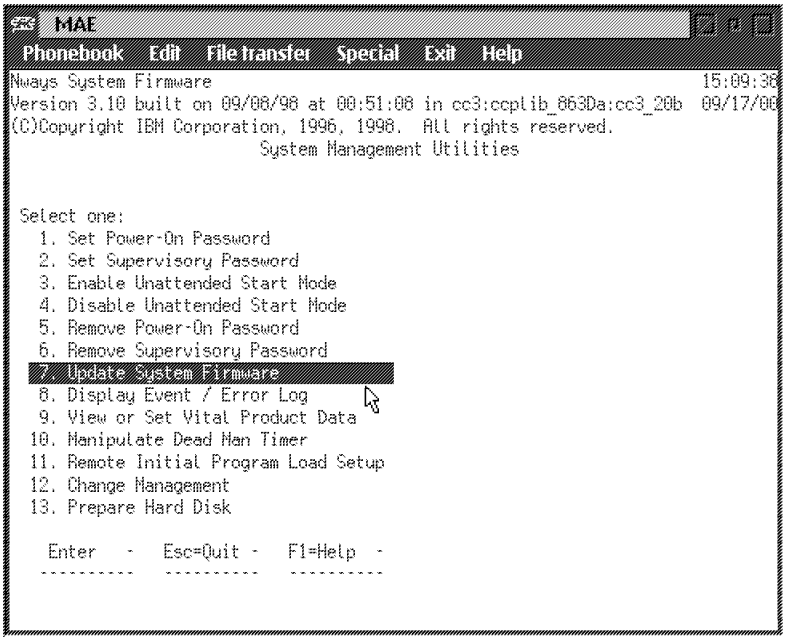
__ 4. Terminate the boot by pressing **F1**.

__ 5. Enter the Multiaccess Enclosure supervisory password if required: **2216**.

__ 6. On the **System Management Services** window, select **option 4 - Utilities**, press **Enter**.

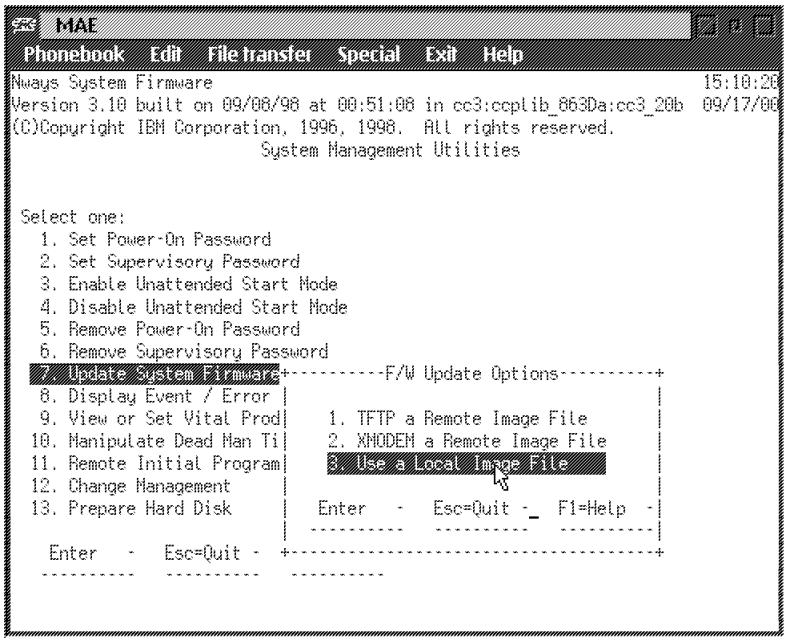


__ 7. Select **7. Update System Firmware** from the utilities panel, press **Enter**



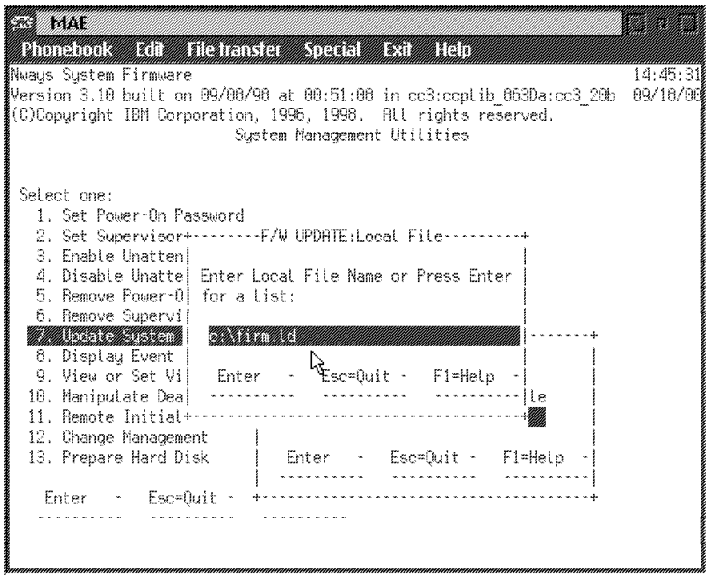
Do not power off the multiaccess enclosure during the process of updating the firmware. If the update fails, the multiaccess enclosure will boot a backup firmware image. If this happens, repeat the update procedure to reload the onboard firmware image.

__ 8. From the **F/W Update Options** menu, select **3. Use a Local Image File**, then press **Enter** and follow the prompts.

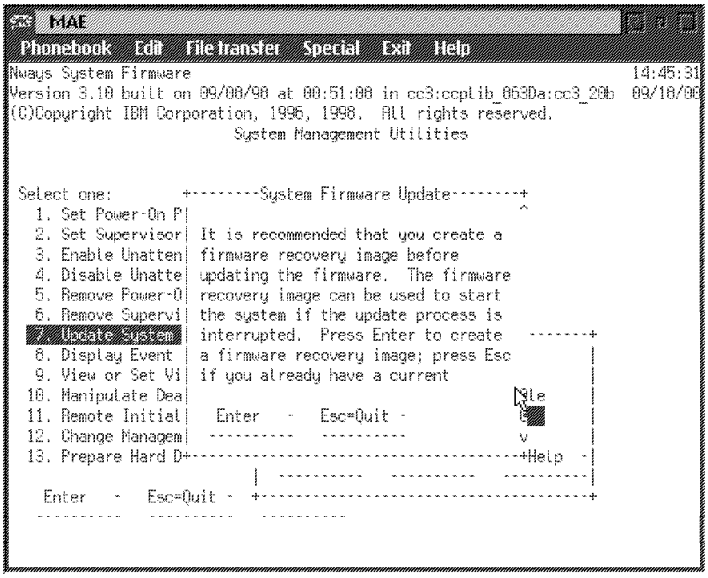


__ 9. Enter the **Local File Name**: **c:\firm.ld**, make sure that it is entered correctly, then press **Enter**.

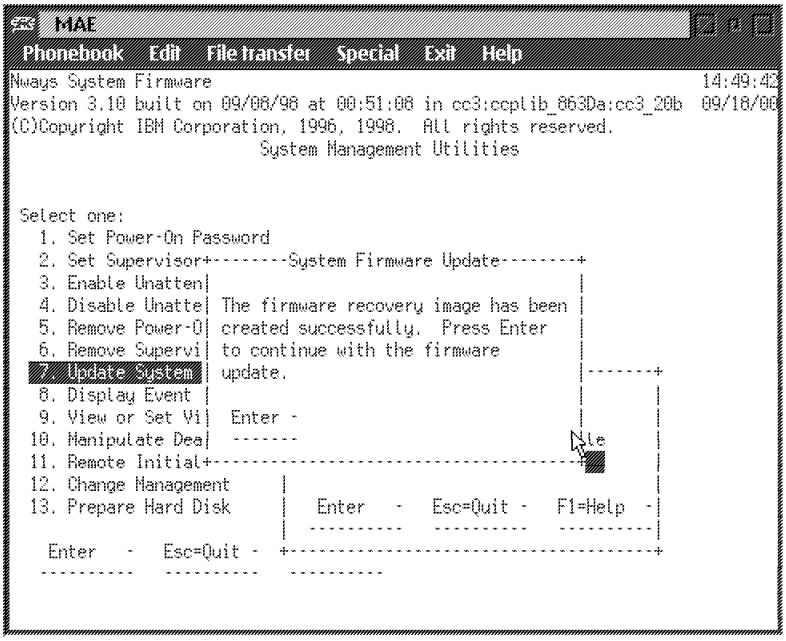
Note: If the firmware loaded on the MAE system card is at the same level as the firmware loaded on the SP hard drive, you will get the following message: *The firmware update file is at the same level as the system firmware. Firmware update cancelled. Press enter.* Then go to 10.4.6, “Applying the Mandatory MCFs, If Any” on page 46, otherwise continue with the next step.



__ 10. When this window is displayed, press **Enter**.

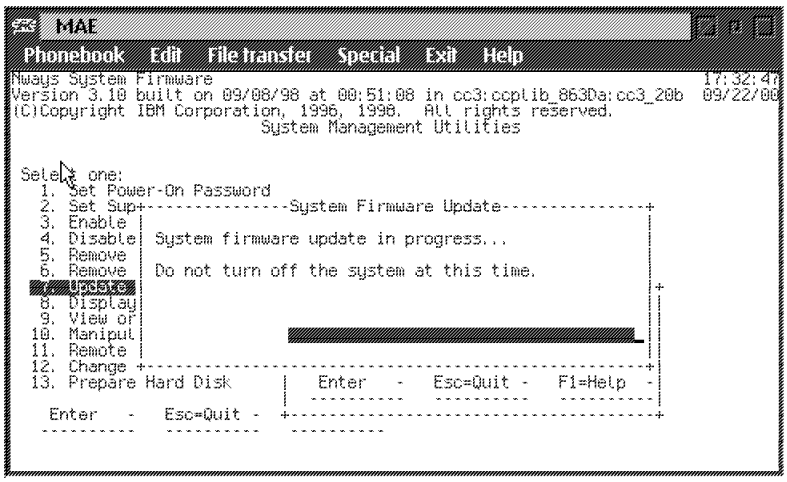


__ 11. When recovery image has been done, press **Enter**.



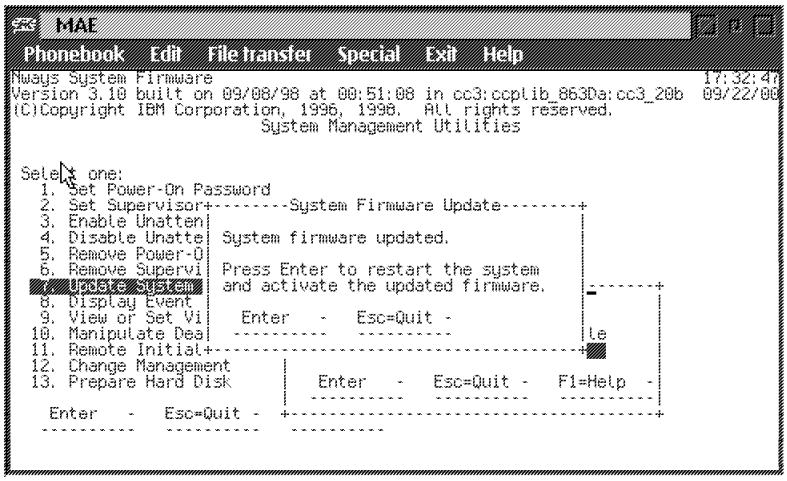
__ 12. On confirmation window, press **Y**. Then when this window is displayed, press **Enter**.

__ 13. Several windows are displayed until the following firmware update message appears:



Do not switch the system off. The process erases the old firmware and copies the new firmware into flash memory. If the machine is powered off before the process is complete, you will need to reload the firmware from the recovery image.

__ 14. A message appears when the firmware update is complete.



__ 15. Press **Enter** to restart the system. Ignore the message reading, "Hot Reboot - force service."

__ 16. Wait until the boot information window is displayed, then terminate the MAE boot by pressing **F1** when prompted.

__ 17. Close the ASCII window and continue with Step 10.4.5, “3746-9x0 EEPROM Upgrade.”

10.4.5 3746-9x0 EEPROM Upgrade

The EEPROM upgrade is not required if you are upgrading a system from a suffix level of F64810 to H10040, any suffix.

Important Note: If you invoke the EEPROM upgrade anyway, the processors will appear on a black background, and the EEPROM upgrade can be requested. The reason is that the current EEPROM code level on the SP disk is at H10040, any suffix, while the EEPROM code level in the adapters is at a lower level. But, because the EEPROM does not change when going from level F64810, any suffix, to H10040, any suffix, the EEPROM upgrade must not be requested.

10.4.6 Applying the Mandatory MCFs, If Any

__ 1. Apply the mandatory MCFs on the new LIC according to the procedure under the heading **‘Handling Microcode Fixes on the Licensed Internal Code’** in the SPIM or Service User’s Guide shipped with your Service Processor.

When finished, go to the next step to perform a general IML.

10.4.7 Performing a General IML

__ 1. Click on **Close**.

__ 2. On the **MOSS-E View** screen, double click on the **3746-9x0** icon.

__ 3. On the **3746-9x0 Menu** screen, click on **Operation Management**.

__ 4. Double click on **Perform a General IML**; then click on the **Yes** button

__ 5. On the **Perform a General IML** window, click on **No** to start an IML without diagnostic.

__ 6. Click **OK** when prompted.

10.4.8 Configuring NetView Performance Monitor (NPM)

__ 1. Is there an NNP installed?

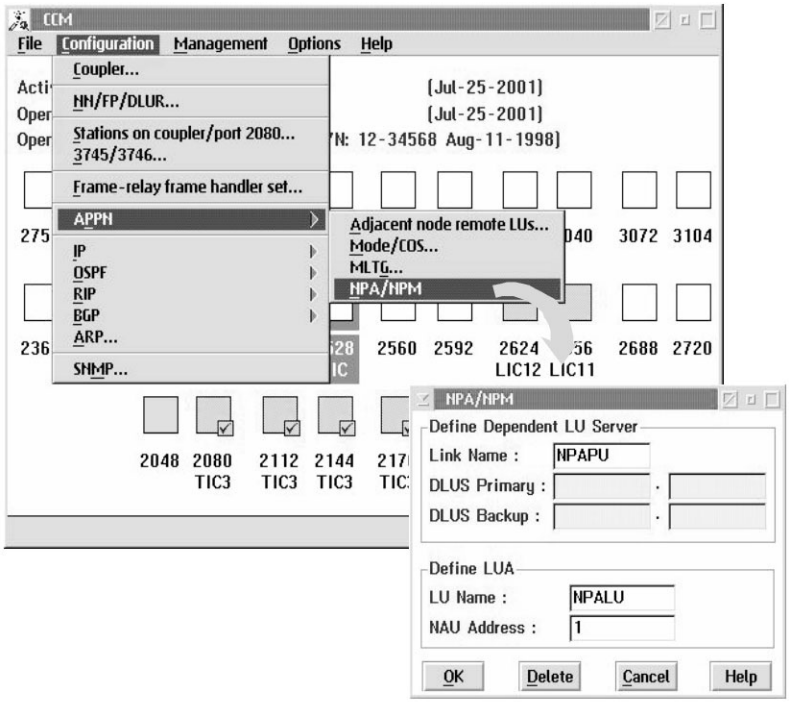
- **Yes**, Continue with the next step.
- **No**, Go to 10.5, “Recording the Customer Configuration Settings” on page 50.

__ 2. Do you intend to use NPM?

- **Yes**, Continue with the next step.
- **No**, Go to 10.4.9, “Migrating the Active Configuration Using CCM” on page 47.

__ 3. From CCM, configure NPM:

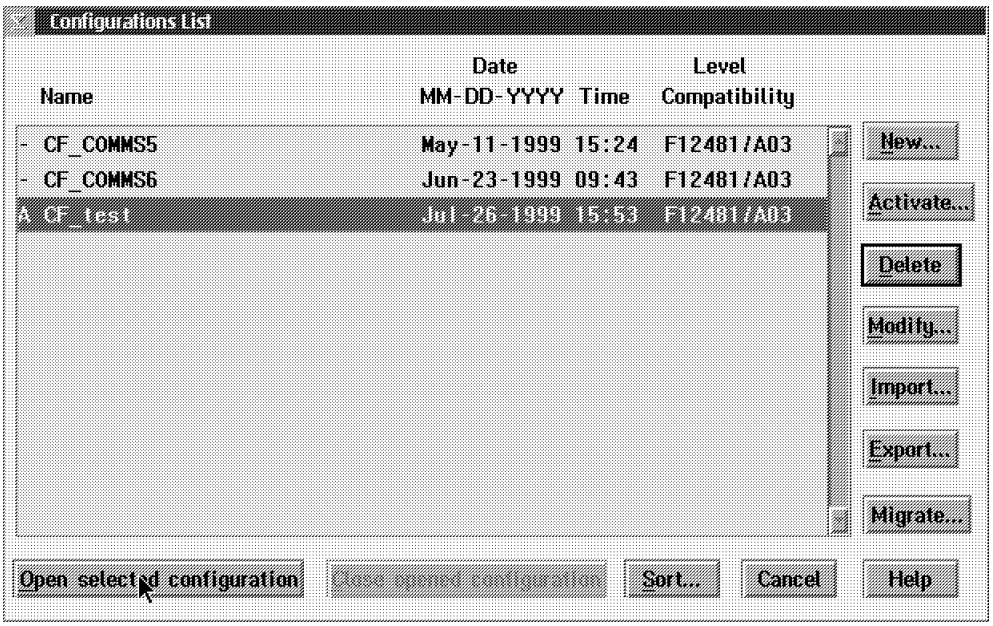
Only DLUS_PRIMARY and DLUS_BACKUP parameters can be changed. The PU and LU names are fixed to 'NPAPU' and 'NPALU.' We do not need to make these parameters match with the PU and LU definitions done in Switch Major Node. The NAU_ADDRESS is fixed to 1 and should be the same as the LOCADDR specified in Switch Major Node.



10.4.9 Migrating the Active Configuration Using CCM

__ 1. From the Network Node Processor (NNP) Management menu, select **CCM - Controller Configuration and Management**.

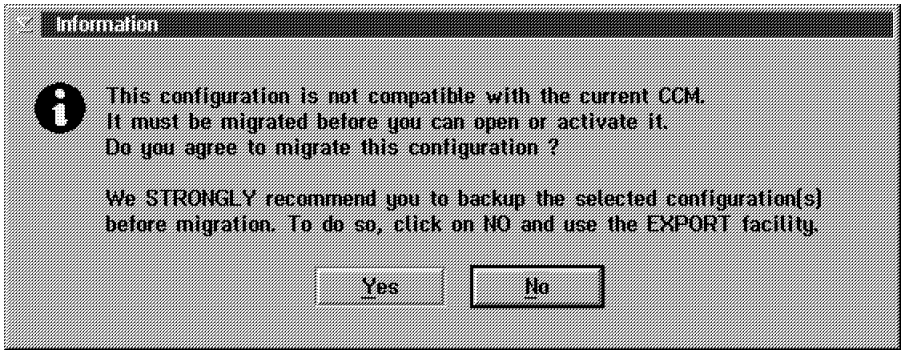
__ 2. From the CCM main window, select **File** → **Open...**. The following window is displayed:



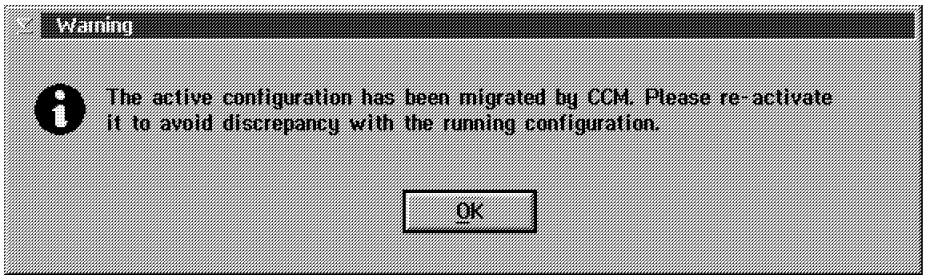
___ 3. From the configuration list, select the configuration with the letter **A** before the configuration name and click on **Open selected configuration**.

___ 4. According to the configuration compatibility with the current CCM, one of the following occurs:

- The configuration is compatible with the current CCM. Then, the procedure is complete. Go to 10.4.10, “Activating the Migrated Configuration” on page 49.
- Otherwise, the configuration is not compatible with the current then the following information window is displayed. Continue with the next step.



___ 5. Press **Yes** to migrate the configuration. It is not necessary to save the configuration before migrating it, because it has already been saved on the configuration parameter diskette. When the configuration has been successfully migrated, the following window is displayed:



__ 6. Press **OK**.

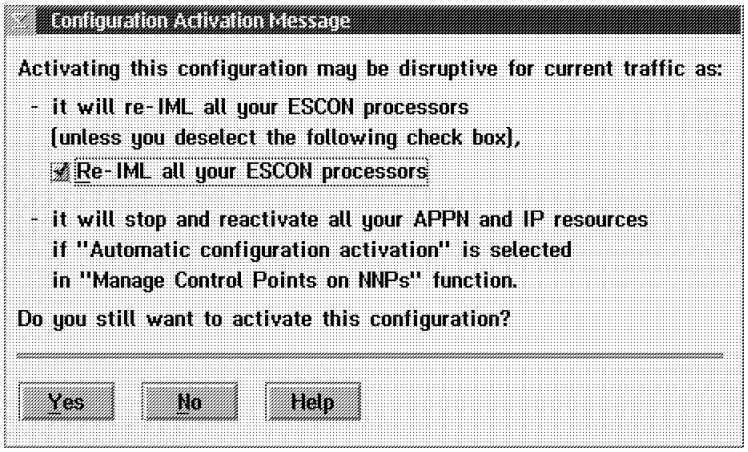
__ 7. Close the opened configuration by selecting **File** → **Close opened configuration**.

__ 8. You can now activate the migrated configuration. Go to 10.4.10, “Activating the Migrated Configuration.”

10.4.10 Activating the Migrated Configuration

__ 1. From the CCM main window, select **File** → **Open...**.

__ 2. From the configuration list, select the configuration with the letter **A** and click on **Activate...**. The following window is then displayed:



__ 3. Check that the **Re-IML all your ESCON processors** option is selected and click **Yes**.

End of Procedure 3.

Is there another 3746-9x0 installed:

- **Yes,** then return to Step 8 on page 39.
- **No,** then go to 10.6, “Returning the Machine to the Customer” on page 50.

10.5 Recording the Customer Configuration Settings

When performing the service processor customization during the LIC Installation (see step 10 in 10.1.8, “LIC Installation” on page 14), use Table 1 below to keep record of the configuration of the following options:

- Generate alerts
- Enable Remote Support Facility

When returning the machine to the customer, if you modify any of these options, you must re-configure these options as they were previously configured.

Table 1. Customer Configuration Settings

Option Customer Setting	Selected	Not Selected
Generate alerts		
Enable Remote Support Facility		

10.6 Returning the Machine to the Customer

__ 1. If you installed the FC 3000 to FC 3001 update on the MAE during this LIC upgrade, continue with the next step.

If no FC 3001 upgrade was performed, go to Step 3.

__ 2. If the customer has decided to remove the token-ring link between the MAE and the 3746-9x0 (no APPN or NCP traffic between the MAE and 3746), ask the customer to update the configuration by removing the definition of the resources used for this link. Then continue with the next step.

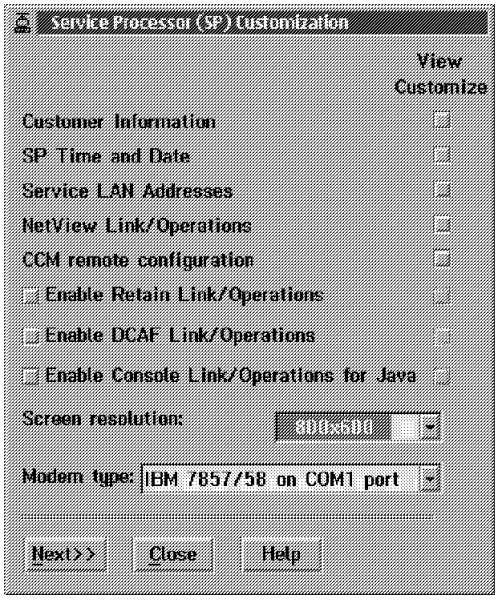
__ 3. Check in Table 1 above whether, during the service processor customization, you have modified the following options:

- **Generate alerts** option
- **Enable Remote Support Facility** option.

If you have changed one or both of these options, continue with Step 10.6.1, “Re-Configuring Service Processor Customization Options” on page 51. Otherwise, go to 10.6.2, “Adapter Code Loading per Processor Type” on page 53.

10.6.1 Re-Configuring Service Processor Customization Options

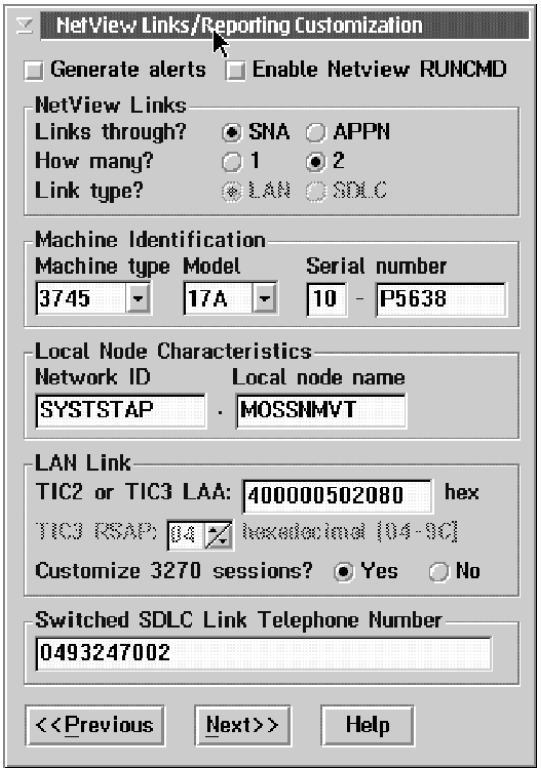
__ 1. Select the **SP Customization** function from the **Service Processor configuration** menu to display the **Service Processor (SP) Customization** window.



__ 2. Depending on the change you made, do one of the following:

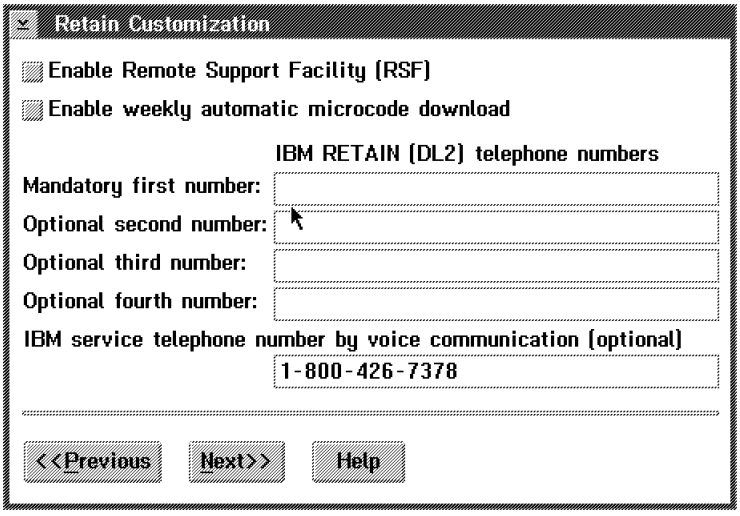
- If you have modified both options, click on the **NetView Link/Operations** and the **Enable Retain Link/Operations View Customize** check-boxes and go to the next step.
- If you have modified only the **Generate alerts** option then select the **NetView Link/Operations View Customize** check-box and go to the next step.
- If you have modified only the **Enable Remote Support Facility** option then select the **Retain Link/Operations View Customize** check-box and go to step 5 on page 52.

___ 3. Press **Next>>** to display the **NetView Links/Reporting Customization** window.



___ 4. Select the **Generate alerts** option.

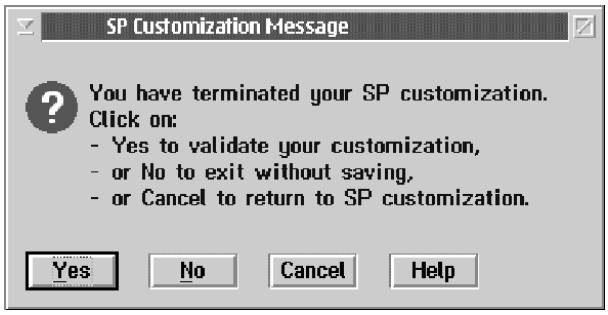
___ 5. Click on **Next>>** button to display the **Retain Customization** window.



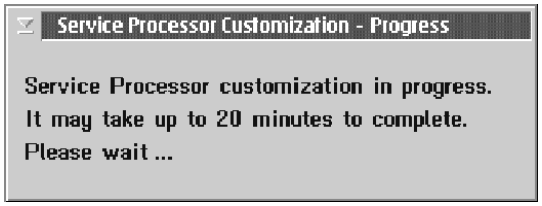
___ 6. Select the **Enable Remote Support Facility (RSF)** option.

___ 7. Click on **Next>>** button to return to the **Service Processor (SP) Customization** window.

__ 8. Click on **Close**. The **SP customization Message** is then displayed:



__ 9. Click on **Yes** button to confirm your customization and start the Service Processor customization updating.



__ 10. Wait until completion. When completed, the following window is displayed:

__ 11. Click on the **OK** button.

__ 12. Go to 10.6.2, “Adapter Code Loading per Processor Type.”

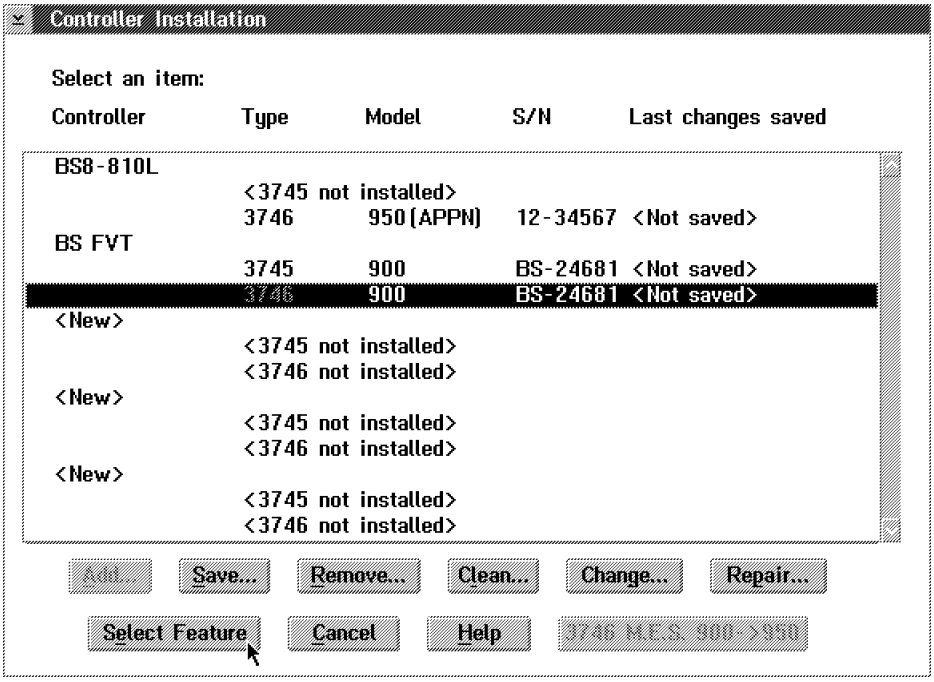
10.6.2 Adapter Code Loading per Processor Type

Before you start...

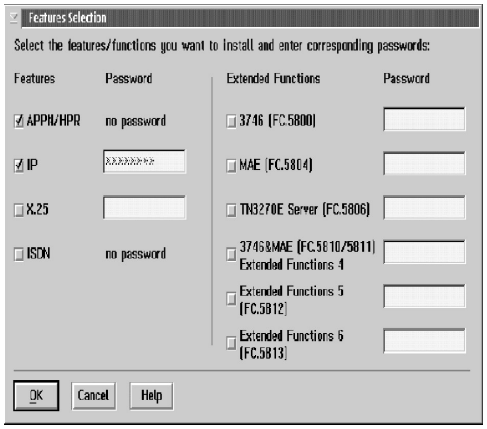
Perform the following procedure to define the network routing protocol to be loaded per processor type. If the customer does not want to modify this information, go to 10.6.3, “Saving Configuration Parameters” on page 55 (All protocols will be loaded in all types of processors).

__ 1. On the **Service Processor** menu, click on **Configuration Management**, then double-click on **Manage 3745/3746 Installation/Removal**.

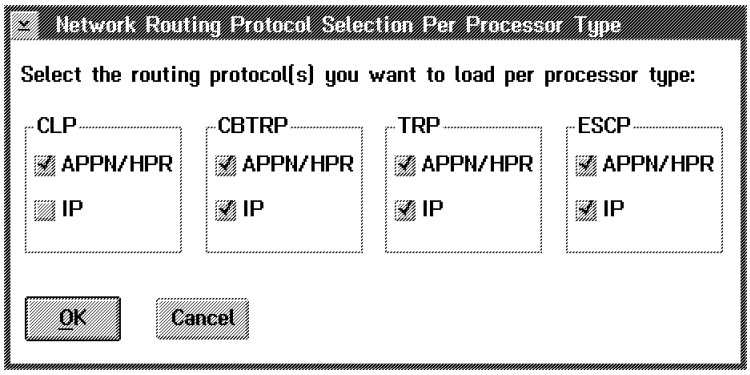
__ 2. On the **Controller Installation** menu, select the 3746-9x0 by clicking on the **<3746-9x0>** line, then click on **Select Feature**.



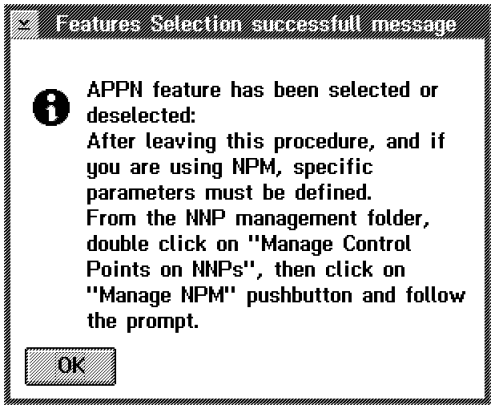
__ 3. On the **Features Selection** menu, click on **OK**.



__ 4. According to the customer's requirement, On the **Network Routing Protocol Selection Per Processor Type** menu, disable or enable the protocol loaded per processor type, then click on **OK**.



__ 5. Read the information message, then click on **OK** button.



__ 6. When completed, click on **OK** and perform a general IML to activate the feature installed.

__ 7. Is there another 3746-9x0 installed:

- **Yes,** then return to 10.6.2, "Adapter Code Loading per Processor Type" on page 53.
- **No,** then continue with 10.6.3, "Saving Configuration Parameters."

10.6.3 Saving Configuration Parameters

__ 1. Double-click on the **Service Processor** icon.

__ 2. Click on **Operation Management**.

__ 3. Double-click on **Manage Disks and Databases**.

__ 4. Use the radio button to select **Save databases on diskette** to save the configuration parameters. When prompted, insert Configuration Parameters diskette, **PN 02L3427**, into the diskette drive.

__ 5. Click on **OK** and wait for completion. If there is an error, record the message and contact support.

__ 6. Remove the diskette, then click on **Cancel** to exit from the function.

10.6.4 Updating Installation Parameters Diskettes

Once you have upgraded the hardware of the machine, you have to regenerate the format on the Installation Parameters Diskettes using the following procedure: (Duration approximately 13 minutes)

__ 1. On the **Service Processor** menu, click on **Configuration Management**, double-click on **Manage 3745/3746 Installation/Removal**.

__ 2. On the **Controller Installation** menu, Click on the **3746-9x0** installed, then Click on **Save**.

__ 3. After the **Saving Active CDF-E as Reference** pop-up window has been displayed, insert the **3746-900 installation parameters diskette (PN 17G5878)** of the 3746-9x0 and click on **OK**.

__ 4. On the third pop up screen confirming CDF-E saved to diskette, remove diskette as instructed and click on **OK**.

__ 5. Perform the above saving procedure for the backup diskettes, then click on **Cancel**.

__ 6. Is there another 3746-9x0 installed:

- **Yes,** then return to 10.6.4, “Updating Installation Parameters Diskettes.”
- **No,** then continue with 10.6.5, “Logging OFF from Service Processor.”

10.6.5 Logging OFF from Service Processor

__ 1. On **MOSS-E View** window, click on **Program**.

__ 2. Click on **LOG OFF MOSS-E**.

11.0 Test Procedures

Not applicable.

12.0 Field Updating

None.

After Installation (13-16)

13.0 Publications Update

None.

14.0 Parts Disposition

14.1 Purchased Machines

Refer to the part ownership matrix to determine the correct owner of removed/unused parts.

- For non US Areas, refer to *Hardware and General Service Code Description*.
- For Domestic Areas, returns parts to the customer.

15.0 Machine Records

- Install updated machine history provided.

16.0 Activity Reporting

- Record the EC or MES installation using country-specific guidelines.
- For U.S. personnel:
  - For MES microcode installation, record the MES number under Service Code 33.
  - For EC microcode installation, record the ECA number under Service Code 33. The ECA number can be found on the CD-ROM label.

    Note: Do NOT use ECA #933 or any 9xx ECA number for MES or EC installation activity.
  - For MCF installation, record the MCF file activity separately under ECA 933 only and note the PMR or MCF file numbers in the QSAR comments.

End of instructions.