IBM

Read This First

Installation Instructions for MPNP Upgrade to
* * * NP99935 * * *
(V1R4.1 at PTF NP00648)

To: Current Licensees of Multiprotocol Network Program

This document is intended for use with the Multiprotocol Network Program (MPNP) Version 1 Release 4.1 software upgrade package that you have requested.

The MPNP V1 R4.1 software upgrade package includes:

MPNP V1 R4.1 software upgrade (NP99935)
MPNP V1R4 Configuration Program (NP00668)
IBM Multiprotocol Network Program Configuration Guide, SC41-6691
IBM Multiprotocol Network Program Operations and Problem Management, SC41-6692
Installation information (this document)

Introduced with MPNP V1 R2.0, an improved upgrade methodology is being continued with MPNP V1 R4.1 by the use of Migration Software in place of the

component replacement used in prior releases. Detailed instructions for application of this upgrade package are provided in this document.

This document is subject to revision. This is Revision 3, effective May 21th, 1998, and valid until revised or replaced.

Installation Instructions for MPNP V1 R4.1

PSP Bucket

VERY IMPORTANT:

Before proceeding with this installation, contact IBM Software Service and ask that they read or send you any special considerations noted in the Preventive Service Package (PSP) facility for upgrade 5648016, subset MPNP140.

At this writing, the PSP bucket recommends that you stop all traces before applying/activating this MES Upgrade Package.

Note: With the enhanced function PTFs NP00640, NP00642, NP00644 and subsequent, there are **two different maintenance streams** for V1R4:

Base V1R4 function NP99932 (which replaces NP99931 and PTFs NP00620, NP00623 and NP00625) and maintenance PTFs NP00627, NP00629, NP00630... **The V1R4 Base maintenance stream is going "Out of Service" as of May 7, 1998.**

The new functions contained in **this MPNP MES Upgrade PTF NP99935.** The enhanced functions can also be obtained by applying NP00648 (or later) on the Base V1R4 maintenance stream.

Note: MPNP MES Upgrade NP99935 contains all fixes in base V1R4 PTFs NP00620, NP00623, NP00625, NP00627, NP00629 and NP00630. It also contains all fixes in the V1R4 Enhanced Function PTFs NP00640, NP00642, NP00644, NP00645, NP00646,NP00647 and NP00648. You do not need these PTFs if you have NP99935 installed on your 6611.

Note: Though there are two different maintenance streams (V1R4 and V1R4.1), the PSP subset for both is MPNP140. In addition, the software VPD data will still show both streams as Version 1 Release 4 when committed. If your 6611 has PTFs NP00640-659 or NP99935 active/committed, then it is running the Enhanced Function stream referred to here as V1R4.1.

Note: Once committed, the NP99935 upgrade is "Year 2000 (Y2K) tolerant." This means that while the 6611 maintains all dates as four digit numbers, some error log entries and other System Manager screens display the year as two digits. Other than these two-digit year displays, the 6611 handles all millennium related dates properly. There are no plans to upgrade the MPNP code to display years in four digits.

Once you commit NP99935 or one of the Enhanced Function PTFs (NP00640 - NP00648 and beyond...), you will not be able to revert back to the Base V1R4 maintenance stream. Fixes in the base maintenance stream will be picked up by subsequent mainentance PTFs in the Enhanced Function stream. For example, all fixes in PTF NP00630 are picked up in Enhanced Function PTF NP00648 and MES Upgrade NP99935.

Introduction

Note: If you are already familiar with IBM-6611 Installation & Service procedures, and if you have already performed the installation of an upgrade package, you may wish to go directly to the step by step procedure beginning with “Determining the Level of MPNP on Your IBM 6611” on page 9. However, you should be aware that the intervening sections contain a wide range of information relevant to the upgrade process and may be of interest in your specific environment.

This V1 R4.1 MES Upgrade Software (NP99935) allows an existing MPNP customer to upgrade to V1 R4.1 from prior MPNP service levels via the application of this Software. The prior MPNP levels to which this MES Upgrade Software can be applied are as follows:

Release 2 (V1R2) - all levels (base and all PTFs)
Release 3 (V1R3) - all levels (base and all PTFs)

This MES Upgrade Software can be rejected to produce the same PTF level that existed prior to applying this Upgrade Software.

Note: If you are using MPNP prior to V1 R2, please contact IBM Software Service for assistance in reaching a suitable starting level before performing this upgrade.

Note: If you are already running MPNP V1R4, you can **not** use this package to upgrade to the Enhanced Function maintenance stream. You must obtain a copy of PTF NP00648 (or subsequent) and apply/activate it.

Upgrade Package Contents

The MPNP V1 R4.1 software upgrade package includes these materials:

MPNP V1R4 Configuration Program (NP00668)[1]
MPNP V1 R4.1 software upgrade (NP99935)
IBM Multiprotocol Network Program Configuration Guide, SC41-6691
IBM Multiprotocol Network Program Operations and Problem Management, SC41-6692
Installation information (this Document)

[1] The V1R4 Configuration Program can be used to configure either BASE V1R4 (NP99932 or PTFs NP00620-639) or the Enhanced Function V1R4.1 (NP99933, NP99934, NP99935 should not be configured unless V1R4.1 is active on the router. At this writing, the current V1R4 and V1R4.1 PTFs are NP00630 and NP00648 respectively. **Note that base V1R4 goes "out of service" as of May 7th, 1998.**

Enhanced Software Service Support

MPNP V1R3 PTF NP00380 introduced Enhanced Software Service Support. This support allows software APPLICATION and ACTIVATION as separate steps. That is, software can be *applied* to a system but the actual running code is not changed until specifically *activated*. The apply operation loads the code into specific directories which are activated at a later time when operation of the new level of code is desired. This means that the re-boot previously associated with code upgrade is now part of the activation step (and thus allows the apply step to be done without disruption of the running code).

Enhanced Service Support will not allow active PTFs (or active Development PTFs known as EPTFs) to be rejected (since this code is in use). In order to reject an active PTF, you must first activate at a level that does not include the PTF to be rejected. This will cause the applied (but now NOT active) PTF to be eligible for a reject. That is, this PTF (or EPTF) will now be one of the choices when a reject operation is selected. These applied, but not active, PTFs (or EPTFs) can be rejected using the normal reject processing. Active PTFs (and active EPTFs) are not eligible for reject and do not appear on the list of PTFs to be selected for reject.

If you are running V1R2 or V1R3 prior to PTF NP00380 (Enhanced Software Service PTF), there are some installation differences that you must be aware of as you *apply* this package. The most notable difference is that there is NOT a separate *activate* step. You will also be required to have a valid V1R4/4.1 configuration prior to applying this upgrade. In addition, should you decide to *reject* this upgrade, the router will be restored to the starting level, including any Development PTFs that were present.

If you are running at V1R3 PTF NP00380 or beyond (Enhanced Software Service), you may return to the prior level via ACTIVATE rather than REJECT. This will leave the NP99935 Upgrade in the APPLY state so that you may choose to activate it again at some future time without first reapplying it.

Most IBM 6611 customers are running with the Enhanced Service Support (V1R3 PTF 380 or beyond) Therefore when instructions are presented that *apply only to users with 6611s prior to the Enhanced Service Support*, this special reference symbol **(*[3])** is included so that users already at V1R3 at or beyond PTF NP00380 will understand that such instructions do not apply (usually a restriction, such as having a valid V1R4/4.1 configuration present prior to application of this upgrade package).

Note: As a practical matter, only a limited number of MPNP PTFs can be accommodated while applying this V1R4.1 upgrade package due to space

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[2] Users at or beyond V1R3 PTF NP00380 should read “Enhanced Software Service Support” to understand the additional flexibility this new service support provides during this software upgrade.

limitations of the hardfile. Committing NP99935 will free space for subsequent Service and/or functional application.

Note: In all cases, a valid V1R4/4.1 configuration must be present to actually activate and operate at the V1R4.1 code level.

Upgrade Process Overview

The upgrade procedure includes these steps:

1. Determining the current level of MPNP on your IBM 6611 Network Processor
2. Loading the MPNP V1 R4.1 software upgrade into the transfer directory
3. Committing current PTF level (where you wish to return in the event of problems after the upgrade is installed).
4. Securing copies of any Development PTFs[4] that are currently applied (and that you may wish to re-apply if you wish to return to the current software level for any reason after applying this upgrade). The REJECT process will return you to the current PTF level, but any Development PTFs will be gone.
5. Installing the V1R4 Configuration Program and creating a new configuration file or converting an existing configuration file for use on MPNP V1R4.1. Any configuration files created with a prior release of the Configuration Program must be converted if they are to be used on MPNP V1R4.1. The conversion procedure is described in the README file contained in the Configuration Program that is shipped as part of this upgrade package. The converted configuration should be transported to the IBM 6611 so it takes effect when the IBM 6611 is restarted after the upgrade to MPNP V1 R4.1.
6. Applying the MPNP V1 R4.1 upgrade software.
7. Activating the new software (V1R3 at PTF 380 and beyond) and verifying operation of the IBM 6611 Network Processor.

As a general reference when installing this MPNP upgrade package, see “Using the Software Installation and Maintenance Facility” in *IBM Multiprotocol Network Program Operations and Problem Management,* SC41-6692. (In these instructions, this manual will be be called *Operations and Problem Management*.)

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[3] (*) Users running MPNP software that is prior to V1R3 PTF NP00380 should be careful to follow special instructions carefully. These special instructions **do not apply** to users running V1R3 PTF 380 or beyond.

[4] During the Upgrade process, all existing Development PTFs (EPTFs) should be automatically rejected as part of the upgrade. However, due to a bug in the initial V1R3 code this did not always happen. It is suggested that you remove all existing development PTFS (EPTFs) prior to applying this upgrade in order to have sufficient space for the Upgrade to successfully APPLY.

Installation Considerations

Users of this upgrade package should understand that rejection of this package restores the system to the PTF level prior to upgrade, less any Development PTFs that were present. Refer to footnote +[4] for additional information. Regardless of the release level you are currently at, if you have Development PTFs applied and these are critical to operation, you should have a copy of these Development PTFs available for use later in the event that you wish to return to the current software state.

Before loading this V1 R4.1 software upgrade into the IBM 6611, you *must delete* all existing PTF files contained in the transfer directory. No other PTFs can be applied at the same time as the upgrade package. Detailed instructions are contained in “Loading the Software Upgrade into the Transfer Directory” on page 10.

All currently applied PTFs *must be committed* before you can install the V1 R4.1 software upgrade. This will provide ample space for application of the upgrade package while still allowing you to return to this PTF level after upgrade.

For routers running V1R3 prior to PTF 380 (or V1R2), all Development PTFs should be rejected before the V1 R4.1 software upgrade is installed. If Development PTFs are present at the time of the upgrade application, a choice will be given to either reject these PTF or cancel the upgrade.

You *must complete* the installation of this package before loading any other PTFs into the transfer directory.

(*[3]**)** Before applying the V1 R4.1 software upgrade, you must convert the configuration file and transport the file to the IBM 6611. For more information on converting configuration files, see “Configuration Considerations” on page 8.

Note: Function keys F1-F10 do not always work as described when using some ASCII display terminals. For example, if you see Press **F9 (Esc+9)** and the F9 key does not work, try pressing **Esc** and then the *numeric key* **9**. When **F10** is needed, use **Esc+0** (you do not need to hold the **Esc** key down while pressing the numeric key. However, there is a timeout period: if you press the **Esc** key and do not press a numeric key within a few seconds, the combination (**Esc**+*numeric*) will not register.

If you accidentally press **Esc** plus a function key, you may be thrown out of the System Manger menu, depending on the ASCII terminal used to connect to the IBM 6611. When this happens, type **quit** or **exit** at the “>” prompt and press the **Enter** key until you reach the System Manager main menu or exit the System Manager. If the latter happens, login to the System Manager again as the controlling user (ibm6611c).

DLSw Considerations

DLSw enhancements compliant with RFC1795 were introduced in V1R3 PTF NP00385 and are included in this MES Upgrade code. There is no requirement for all DLSw partners to have these enhancements (or be without them) for proper DLSw operation.

MPNP V1 R3.0 customers at PTF NP00602 plus EPTF FX60202 has DLSw function compliant with RFC1434 and can inter-operate with DLSw at the V1 R4.0/4.1 level. This allows migration on a router by router basis. V1 R2 and V1 R3 customers prior to NP00602+FX60202 may experience some DLSw inter-operability problems if they mix RFC1434 and RFC1795 in the same network.

IBM 2210 MRS V1R1 supports DLSw Multicast Exploration and Frame Forwarding. This upgrade package is compatible with that DLSw function.

IBM 2216 MAS V1R1 also supports DLSw Multicast Exploration and Frame Forwarding. This upgrade package is compatible with that DLSw function.

Remote Install Considerations

Although remote sessions will not be maintained over an installation upgrade, the upgrade process can be initiated remotely and will run to completion (including re-boot).

(*3) Customers applying this upgrade remotely should be very careful to ensure that an upgraded configuration data file is available on the router **at the time** of the remote upgrade application. This can be done by either sending the configuration (tagged AT UPGRADE) from any connected work station or PC running the R4.0 Configuration Program or installing a diskette in the remote diskette drive. If the diskette method is used, ensure that the configuration data on the diskette is tagged as APPLY IMMEDIATELY.

Customers using **rinstall** to install the software should be aware that even with the *enhanced software service support*, applying this Upgrade PTF will result in an automatic activation of the applied software **causing the 6611 to reboot (re-IPL).**

(*3) If an upgraded configuration data file (from the V1R4 Configuration Program) is not present when migration processing begins, the migration will not proceed and a message will be issued warning that there is no source of valid configuration data for the new level.

To cover the unusual case where the upgrade is being performed on a router that does not require an operational configuration after migration, support is included such that **retrying the upgrade a second time will force the apply**. One practical use of this **force** feature is the case where routers are shipped to a central site for upgrade (perhaps prior to actual installation).

Misuse of this **force** feature could result in an upgraded router without a source of valid configuration data. At that point, the only recovery is a re-boot with a valid configuration diskette in the router.

If you have multiple routers to migrate, you may wish to automate the migration process. Please refer to the "Software Installation and Maintenance" section of the *Operations and Problem Management* publication for a description of how to service multiple routers from a common control point.

Configuration Considerations

Configuration files created using prior releases of the Configuration Program are *not* compatible with the MPNP V1R4 router software. Use the V1R4 Configuration Program to convert your existing configuration files for use by MPNP V1R4 or V1R4.1.

You should retain copies of the prior release Configuration Programs to be able to create and modify configuration files for those 6611s using prior releases of MPNP. This will be useful if you have prior releases of MPNP on 6611s in your network concurrently or if you wish to subsequently REJECT this upgrade and return to your current MPNP level. You can keep different releases of the configuration program on the same workstation by placing them in different directories. When you upgrade MPNP on an IBM 6611 to R4.1, you must convert its configuration file to the MPNP V1R4/4.1 format.

Converting Configuration Files

The V1R4 Configuration Program will automatically convert existing configuration files when they are read from diskette, from your workstation, or when you retrieve them with the Communicate function of the Configuration Program. After the configuration file is converted, you can configure additional function and then save the file to a diskette or database file, or send it to an IBM 6611. The V1R4 Configuration Program is shipped with this package.

Before continuing with this upgrade, it is suggested that you install the V1R4 version of the Configuration Program supplied with the package. Use the installation instructions found in the README file on the first diskette of the Configuration Program. You can install the Configuration Program on a RISC System/6000 running AIX Windows, on a workstation running Microsoft Windows 3.1 or Windows 95, or on an OS/2 workstation running OS/2 WARP or version 2.1. The 6611 Configuration Program will not run on Windows NT.[5]

[5] We have also had problems running on a 200MHz Pentium Pro, regardless of the operating system.

The README file shipped with the V1R4 Configuration Program has information on the installation and use of the Configuration Program. The README file contains detailed instructions on preparing and/or converting configurations for use on MPNP V1 R4.0/4.1. You should not proceed beyond this point until you have installed Release 4 of the Configuration Program and created a configuration file for use during upgrade/activation of NP99935.

If you are applying this upgrade to multiple IBM 6611's, you may wish to use the new feature of the Configuration Program that allows processing of multiple configurations from multiple IBM 6611's as a single processing step.

Determining the Level of MPNP on Your IBM 6611

Use the IBM 6611 System Manager to determine the level of MPNP currently installed on your IBM 6611. The System Manager can be accessed both locally and remotely. It is invoked automatically whenever the IBM 6611 is accessed through the EIA 242 S1 or S2 serial ports[6] or by using the **telnet** or **rlogin** commands.

When you login to the System Manager, check that the terminal type you are using is the one defaulted by the System Manager. If not, follow the instructions on the menu and select the correct terminal type before continuing.

Use the up or down arrow keys to move the selection bar up or down on the System Manager menu menus. This also causes the menu to scroll down or up. A "**>**" appears next to a selected field. *Do not use* the Page Up or Page Down keys.

For more information on using the System Manager, see *Operations and Problem Management.*

Use this procedure to determine the current level of MPNP on your IBM 6611.

1. Logon to the IBM 6611 System Manager as the controlling user (ibm6611c). The password for the controlling user ID is initially set to ibm6611c. This **default password** should be modified via the Configuration Program as soon as possible. For additional information about passwords and user IDs, see *Operations and Problem Management.*
2. Select[7] **Software Installation and Maintenance** and press **Enter.**
3. Select **View Software Vital Product Data.**

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6 S1 and S2 are the serial ports on the rear panel of the IBM 6611. An ASCII terminal is often connected into S1 (locally connected terminal) and a modem is connected into S2 (for a remotely connected terminal).

7 If you accidentally press **Esc+F9** or some other key combination that erases the menu menu, type **exit** or **quit** until you reach the System Manager main menu or exit the System Manager. If the latter happens, login again as the controlling user (ibm6611c).

4. Select **History**

   The software history is listed with fix ID, release level, fix status, last action taken and (with date, time, and user ID).

   The general form of the display is:

```
mpnp.obj
        vv.rr.mmmm.ffff COMPLETE COMMIT     date    time

      where vv = version number, rr = release number,
      mmmm = modification and ffff = fix level.
```

   Use this information to determine what (if any) extra setup activity is required prior to applying this upgrade as follows:

   If you are at V1 R2 (01.02.0000.0000) or at V1 R3 (01.03.0000.0000), you need no further PTFs applied prior to this upgrade. Proceed to "Loading the Software Upgrade into the Transfer Directory."

   Customers prior to R2 (01.01.xxxx.xxxx) should contact IBM Software Service for assistance in reaching a suitable starting level before performing this upgrade.

   If vv.rr is at or beyond 01.04 (01.04.x.x), STOP! You are at or beyond V1 R4.0 and this upgrade is not applicable.

   Note: If you are trying to obtain V1R4 Enhanced Function but are already at MPNP V1R4, then obtain PTF NP00648 (or subsequent). You can not use this MES Upgrade package.

5. Continue with "Loading the Software Upgrade into the Transfer Directory."

Loading the Software Upgrade into the Transfer Directory

Note: If you have multiple routers to migrate, you may wish to automate the migration process. Please refer to the "Software Installation and Maintenance" section of the *Operations and Problem Management* publication for a description of how to apply service to multiple routers from a common control point.

VERY IMPORTANT:

The instructions below show how to list all the files contained in the transfer directory. All existing PTF files *must be deleted* before loading the software upgrade into the transfer directory. You should have at least 45,000 1K blocks available (free) in the transfer directory before loading this upgrade.

You must complete the installation of this package before loading any other PTFs into the transfer directory.

If any installation step fails, see "Clean Up After a Failed Installation" in *Operations and Problem Management.*

To load the upgrade files:

1. Delete files from the transfer directory to make space for the MPNP V1 R4.1 software upgrade:
   a. Select **Operations** from the System Manager main menu.
   b. Select **File and Diskette Operations**.
   c. Select **Delete Transfer Directory Files**.

      The files currently contained in the transfer directory will be listed on the menu. All existing PTF files *must be deleted* from the transfer directory to ensure that there is sufficient space for the MPNP V1 R4.1 software upgrade.

      Deleting PTF files from the transfer directory will not affect the operation of the IBM 6611. You may save PTF files (or Development PTFs) somewhere else in the network (a workstation or another IBM 6611) so that you can easily restore these files in the event that you wish to return to the service level that existed prior to upgrade.

      If you have saved any prior release configuration files in the transfer directory for possible conversion to V1R4/4.1 format, you should copy them to diskette (or elsewhere) before deleting them.

      The transfer directory also contains dumps, traces, and logs used by service personnel. Unless told differently by IBM service personnel, these files can be deleted.

      You should have at least 45,000 1K blocks of free space available in the transfer directory prior to loading the upgrade software package.

   d. Press **F9 (Esc+9)** to select files to be deleted.
   e. Press **Enter** to delete the selected files.
   f. Press **F3 (Esc+3)** and check that free space (upper right) is at least 45,000 1K blocks.

g. Press **F3 (Esc+3)** three (3) times to return to the System Manager main menu.

2. Import NP99935 into the IBM 6611 transfer directory.

   There are several import procedures described in *Operations and Problem Management*. The procedure best suited to your situation will depend on the number of IBM 6611s to be updated and other procedures you have in place for maintaining your network. If you have multiple IBM 6611s to update, use a procedure that transfers the updates over the network rather than having to load diskettes into each IBM 6611.

   If you have specified tape media when ordering the upgrade package, you will load the upgrade package from tape rather than diskette. Otherwise, the upgrade process is the same as using diskette media. For either media (tape or diskette), import the upgrade to the transfer directory and apply the upgrade from the transfer directory, as described below.

   If you are updating a single IBM 6611, use this procedure:

   a. Select **Software Installation and Maintenance** from the System Manager main menu.

   b. Select

      From V1R2: **Receive Installation File(s)**.
      From V1R3: **Receive Software Updates**.

   c. Select **diskette**.

   d. Press **Enter** to import all software changes.[8]

3. After successfully importing all software changes, use use **F3 (Esc+3)** to return to the System Manager main menu.

   At this point, the transfer directory contains PTF NP99935, shown as file:

   mpnp.1.4. . .NP99935

Upgrading to MPNP V1 R4.1

Use the procedure provided here to upgrade to MPNP V1 R4.1 on an IBM 6611 with MPNP V1 R2 or MPNP V1 R3.0 installed.

If you are not starting with one of the above MPNP levels, please call IBM Software Service for assistance in reaching a suitable starting point for this upgrade.

[8] The message Please mount volume 1 on /dev/fd . may appear. This means you should put a diskette into the diskette drive on the IBM 6611; then press **Enter** to continue.

Commit All Uncommitted PTFs

You must commit all applied PTFs before you install the MPNP V1 R4.1 software upgrade. This will free space for the upgrade without changing your ability to return to your starting PTF level in the event that you wish to remove the upgrade.

1. Commit all uncommitted PTFs:
   a. Select **Software Installation and Maintenance** from the System Manager main menu.
   b. Select **Commit Applied Updates** and press **Enter.**

      Note: For V1R3 with Enhanced Service Support, this entry is:

      Commit Active Software Updates

      Some levels of code will generate a message ("an error occurred") if all software is already committed. This message can be ignored.
   c. If there are no uncommitted PTFs, proceed to “Installing the MPNP V1 R4.1 Software Upgrade” on page 14.
   d. Select each uncommitted PTF that is now listed with **F9 (Esc+9)**.
   e. Press **Enter** to commit the selected PTFs.
   f. Press **Enter** when the Warning Message appears.
2. Reject all Development PTFs:

   Note: As with any PTF application, Development PTFs (EPTFs) must be rejected before the new PTF is applied. If you do not reject Development PTFs at this point, the installation might eventually fail due to lack of space[4]. If the presence of the Development PTFs is critical to your operation, you may wish to defer this reject step and allow the reject operation to occur during the application of the upgrade.

   In any case, all Development PTFs should be rejected prior to the actual application of the upgrade. If these Development PTFs are critical to your operation, be sure that you have them available for subsequent application in the event that you choose to return to your starting level.

   a. Start at the System Manager main menu.
   b. Select **Software Installation and Maintenance**.
   c. Select **Reject Applied (Software) Updates** and press **Enter.**

      If there is nothing available to reject, there are two possibilities:

      1) There are no EPTFs applied, or
      2) There are EPTFs applied, but these EPTFs are active and thus will not appear on the reject list since they can not be rejected while they are active.

The second condition (applied and active and not eligible for reject) can only occur with Enhanced Service Support, as described in detail under “Enhanced Software Service Support” on page 4. If this is the case, and you wish to reject an active EPTF, you must first do an activate that does not include the EPTF to be rejected. This will allow the applied (but not active) EPTF to be included in the reject list. The reject can be done by selecting the (not active) EPTF as indicated in these steps.

d. Use **F9 (Esc+9)** to select each applied Development PTF (displayed as FXnnnnn) that is now listed.

e. If there are no applied Development PTFs, proceed to “Installing the MPNP V1 R4.1 Software Upgrade.”

f. Press **Enter** to reject the selected PTFs.

g. Press **Enter** when the Warning Message appears.

Installing the MPNP V1 R4.1 Software Upgrade

VERY IMPORTANT:

(*3) Do not proceed beyond this point until you have established that a new configuration data file, created using the V1R4 Configuration Program, is available on the IBM 6611 to be upgraded. Detailed steps are provided in the README file contained on diskette #1 of the Configuration Program and are variations of the following approaches:

1. Create or convert an existing configuration data file on a work station or PC with connectivity to the IBM 6611 being upgraded. Use the SEND CONFIGURATION option to send the V1R4 configuration file (tagged as APPLY AT NEXT UPGRADE) to the IBM 6611 that is being upgraded.
2. Create a V1R4 configuration file on diskette (tagged as APPLY IMMEDIATELY), then place that diskette in the diskette drive of the IBM 6611 that is being upgraded.

Note: The V1R4 Configuration Program NP00668 can be used to configure the functions in this V1R4.1 MES Upgrade package. It may also be used to configure base V1R4 function.

Note: If you are using an AIX workstation, you can access the README file by putting Configuration Program diskette #1 in the diskette adapter of the workstation and issuing the command "dosread -a README ./README". This will read a copy of the README file into your current workstation directory.

(*3) Failure to provide an V1R4 configuration file will result in cancellation of the APPLY step (as described earlier in “Remote Install Considerations” on page 7).

For routers running Enhanced Software Service Support (V1R3 PTF 380 or beyond), you can APPLY NP99935 but will not be able to ACTIVATE it until you create a new configuration file or convert an existing configuration file for that IBM 6611 with the V1R4 Configuration Program. For information on how to convert an existing configuration file, see “Converting Configuration Files” on page 8.

Install the MPNP V1 R4.1 Upgrade package:

1. Ensure that a V1R4/4.1 configuration file has been sent to the IBM 6611 or that an V1R4/4.1 configuration diskette has been inserted into the IBM 6611.
2. Select **Software Installation and Maintenance** from the System Manager main menu.
3. Select **Apply Software Updates**.

Note: For V1R2, select **transfer_directory**. The transfer_directory is the only source of updates in V1R3, so this selection step is not present in V1R3 and the latest levels of V1R2.

4. Select **NP99935** with **F9 (Esc+9)**.

   You should see only NP99935 available for installation.

5. Press **Enter** to register your selection.
6. Press **Enter** to proceed after the "Are you sure?" message.
7. For routers at code levels prior to V1R3 PTF NP00380, if you have not rejected Development PTFs yet (and you have some applied), you will be prompted to allow rejection of the existing Development PTFs (or cancel the upgrade). Press **Enter** to allow rejection of the existing Development PTFs.

   Time estimates shown on the screen may be inaccurate since they are generated by whatever level of code is currently installed. Our tests have shown that 45 minutes is a reasonable estimate for this step for all prior code levels. **Do not disconnect your ASCII terminal or IPL the IBM 6611 during this process.**

   The LED display will show "C65" while the upgrade is being applied. Near the end of the application, the LED will show "C81", followed by an IPL at the new code level.[9]

   Note: If the command failed, press **F8 (Esc+8)** to scroll down the menu looking for a specific message describing the failure, then refer to “Clean Up After a Failed Installation” in *Operations and Problem Management.*

8. Customers starting prior to MPNP V1 R3 at PTF NP00380(*3) can proceed to “Verify Apply:” on page 17 now since the activate step is part of the apply process prior to NP00380.
9. Customers at MPNP V1 R3 at or beyond PTF NP00380 will need to perform a separate activate step after the apply step completes since the Enhanced Service Support(*3) processing separates the apply step from the activate step. A valid V1R4 configuration is required for the activate step.

Activate NP99935

1. Select **Software Installation and Maintenance** from the System Manager main menu.
2. Select **Activate Applied Software Updates**
3. Select **NP99935** and press **Enter**
4. Select **none** (for EPTFs) and press **Enter**

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[9] Not applicable when the current level is **prior to** the Enhanced Software Service Support V1R3 PTF NP00380.

5. Position cursor on line asking to activate NOW (yes/no). Use the **TAB** key to change the "no" to "yes".
6. Press **Enter** to begin the activation process.
7. Reply **Y** to the "Are you sure?" prompt.

   Note: There will be several minutes of processing (without further prompts), then a restart will be performed.

Verify Apply:

When the IBM 6611 automatically completes the restart sequence, the installation of MPNP V1 R4.1 is complete.

1. Select **Software Installation and Maintenance** from the System Manager main menu.
2. Select **View Software Vital Product Data**.
3. Select **History**.

   The display will show MPNP V1R4.1 installed as follows:

   NP99935 1. 4. . COMPLETE APPLY date time

Verify Activation:

For V1R3 with Enhanced Service Support(*3), go to the System Manager main menu:

1. Select **Software Installation and Maintenance**
2. Select **List State of All Applied Software Updates**

   The display will show MPNP V1 R4.1 (NP99935) active as:

   NP99935 1. 4. . ACTIVE

   Note: NP99935 will appear as V1R4 when applied/active. Once committed, it will appear as V1R4 at PTF NP00648 committed.

3. Proceed to “Verify Operation of the IBM 6611.”

Verify Operation of the IBM 6611

Verify that the IBM 6611 is operating properly. If problems are encountered, ensure that they are not caused by incorrect configuration parameters or a configuration file created by a prior release Configuration Program.

If the IBM 6611 is *not* operating correctly, use the procedure as described in “Returning to the Previous MPNP Level” on page 18 or contact IBM Software Service for problem determination assistance.

Congratulations, you have completed the upgrade to MPNP V1 R4.1 !

Note: Once you COMMIT NP99935 or a subsequent PTF in the Enhanced Function PTF stream (NP0064x-65x), you will not be able to apply any PTFs or EPTFs in the BASE V1R4 maintenance stream (NP00620-639).

Returning to the Previous MPNP Level

If, for any reason, you wish to return to the previous MPNP level(*3), use the standard PTF REJECT procedure documented in *Multiprotocol Network Program Operations and Problem Management,* SC41-6692, shipped with this upgrade package.

Note: If the level prior to this upgrade included Enhanced Service Support(*3), you can return to the staring level via ACTIVATE and then do the REJECT at later time (or activate again at the V1R4.1 level to conduct further tests).

As described earlier, the reject process will restore the previous PTF level, less any Development PTFs. If you had Development PTFs on you system, and you wish to return to that code level, you must re-apply the Development PTFs after completing the reject of the upgrade.

REJECT processing is available until this code level is placed in the COMMIT state. Eventually, a COMMIT will be required in order to free space held by the intermediate code levels. This point will be indicated by messages from the service application process stating that *additional space is required*.

Since the configuration data is not interchangeable among MPNP code releases, careful tracking of configuration changes made after the upgrade is required if these same changes are to be applied in the event of a return to the prior level. There is no backward conversion support for configuration data.

Upon completion of the REJECT operation, the IBM 6611 configuration data is taken from the following sources (in order of precedence):

1. Configuration file in diskette drive (if proper level)
2. Original configuration file on harddisk (that was current prior to the migration).

For this reason, it is very important to control which configuration diskette is in the diskette drive during the REJECT operation. Either leave the diskette drive empty (to use the original configuration data on the harddisk prior to migration) or insert a configuration diskette of the proper (prior) level so that it will become the configuration data used.

A summary of the V1 R4.1 REJECT process follows:

1. Ensure the prior release configuration diskette is inserted in the diskette drive or the disk drive is empty, forcing the use of the original configuration data on the harddisk (that was current just prior to migration).

2. Select **Software Installation and Maintenance** from the System Manager main menu.
3. Select **Reject Applied Updates** and press **Enter.**
4. Use **F9 (Esc+9)** to select each applied PTF you wish to REJECT.

   The V1 R4.1 Upgrade is displayed as:

   NP99935 1. 4. . APPLY

   Select NP99935

   Note: For V1R3 with Enhanced Service Support(*3), active PTFs are not shown since they are not eligible for rejection as long as they are active. To Reject an active PTF, you must first do an activate that does not include the PTF to be rejected... *typically by activating the committed level*. This will cause the applied (but not active) PTF to be included in the reject list.

5. Press **Enter** to reject the selected PTFs.
6. Press **Enter** when the Warning Message appears.
7. Apply(*3) any prior Development PTFs (if required)

COMMIT the Upgraded MPNP Level

Eventually, a COMMIT will be required in order to free space held by the intermediate code levels. This point will be indicated by messages from the service application process indicating that additional space is required.

IBM recommends that you COMMIT levels as soon as practical so that you have ample free space for future service, but the COMMIT decision is left to the customer.

The COMMIT operation is identical to the normal PTF COMMIT function and is fully described in *Multiprotocol Network Program Operations and Problem Management,* SC41-6692, shipped with this upgrade package.

After a COMMIT operation, the only way to return to a prior level is via the tape backup/restore capability on the IBM 6611.

A summary of the V1 R4.1 upgrade COMMIT process follows:

1. Go to the System Manager main menu.
2. Select **Software Installation and Maintenance**.
3. Select **Commit Active Software Updates** and press **Enter.**
4. Select each uncommitted PTF that is now listed with **F9 (Esc+9)**.

The V1 R4.1 Upgrade is displayed as:

```
NP99935      1. 4.   .
```

5. Press **Enter** to commit the selected PTFs.
6. Press **Enter** when the Warning Message appears.

Note: When NP99935 is committed it will show up in the Software Vital Product Data history as V1R4 with maintenance PTFs NP00640-648:

```
          1. 4.   .    COMPLETE    COMMIT      date    time
          1. 4.   .    COMPLETE    APPLY       date    time
NP 64     1. 4.   .    COMPLETE    COMMIT      date    time
          1. 4.   .    COMPLETE    APPLY       date    time
NP 642    1. 4.   .    COMPLETE    COMMIT      date    time
          1. 4.   .    COMPLETE    APPLY       date    time
NP 644    1. 4.   .    COMPLETE    COMMIT      date    time
          1. 4.   .    COMPLETE    APPLY       date    time
NP 645    1. 4.   .    COMPLETE    COMMIT      date    time
          1. 4.   .    COMPLETE    APPLY       date    time
NP 646    1. 4.   .    COMPLETE    COMMIT      date    time
          1. 4.   .    COMPLETE    APPLY       date    time
NP 647    1. 4.   .    COMPLETE    COMMIT      date    time
          1. 4.   .    COMPLETE    APPLY       date    time
NP 648    1. 4.   .    COMPLETE    COMMIT      date    time
          1. 4.   .    COMPLETE    APPLY       date    time
```

Tape Backup & Restore

You may wish to save your new system via the tape backup & restore capability available in this release. More information on this facility is available in *Multiprotocol Network Program Operations and Problem Management,* SC41-6692, shipped with this upgrade package.

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