Multiprotocol Network Program

Configuration Quick Reference

Multiprotocol Network Program GX27-3927-00

Configuration Quick Reference

IBM

First Edition (May 1993)

This is the first edition of the *Multiprotocol Network Program Configuration Quick Reference*. This edition applies to Version 1.1 and Version 1.2 of the IBM Multiprotocol Network Program.

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Multiprotocol Network Program Configuration Quick Reference

A Brief Introduction to the IBM 6611

The IBM* 6611 product is composed of three main user components: the IBM 6611 (Model 120, 140 or 170), the Multiprotocol Network Program *MPNP* Configuration Program, and the System Manager. The IBM 6611 provides documentation with additional information for each component.
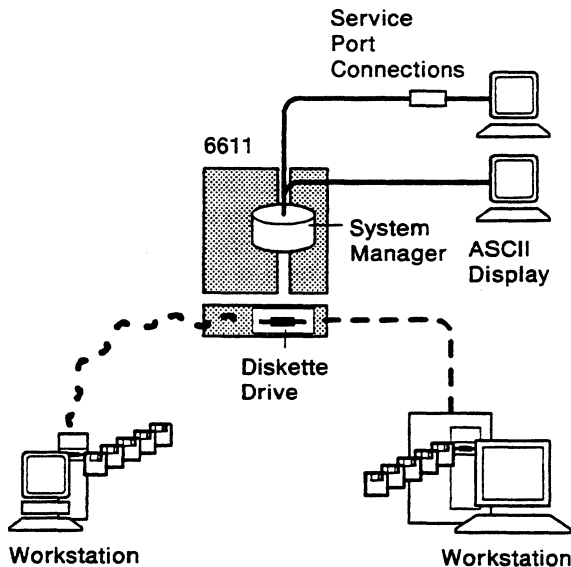

Figure 1. IBM 6611 Configuration Process

The Configuration Program provides a graphical user interface for configuring the IBM 6611 from a stand-alone workstation. The program is shipped on five diskettes and can be loaded onto either a RISC* System/6000* workstation or a PS/2* workstation.

The System Manager resides on the hard disk of
the IBM 6611. This program will provide you with a
view of the internal workings of the IBM 6611. It is
a menu-driven program used for operation and
management functions. You can access the System
Manager either locally or remotely through an
ASCII terminal connected to the IBM 6611.

This Quick Reference Guide

The instructions provided in this guide describe
how to install the MPNP Configuration Program on a
RISC System/6000 workstation or a PS/2
workstation, create a valid configuration, and then
transfer that valid configuration from the
workstation to your IBM 6611. The Configuration
Program must be used to create the initial IBM 6611
configuration.

This information is a subset of the information
provided in the *Multiprotocol Network Program
User's Guide* and the *6611 Network Processor
Introduction and Planning Guide*. If you require
additional information, refer to one of these
manuals.

Note: The information contained in the *6611
Network Processor Introduction and Planning Guide*
on configuration planning may prove beneficial if
this is the initial configuration of your IBM 6611.

The next section describes the installation of the
Configuration Program on a RISC System/6000
workstation. If you have a PS/2 workstation, see
"The Configuration Program on a PS/2 Workstation"
on page 5.
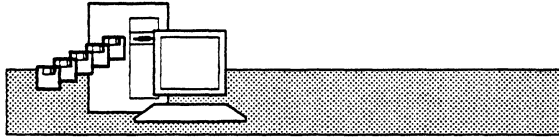
The Configuration Program on a RISC System/6000 Workstation

This section describes the set up, installation, and startup procedures of the Configuration Program on an IBM RISC System/6000 workstation.

These hardware and software features are required to operate the Configuration Program on a RISC System/6000 workstation:

- AIX* 3.1.5 or higher with Transmission Control Protocol/Internet Protocol (TCP/IP) enabled
- AIXwindows*
- 16 MB of memory
- 1.44-MB, 3.5-inch diskette drive
- 5 configuration diskettes
- 10 MB of available space on the fixed disk drive
- Graphics display
- Mouse.

Installing the Configuration Program on a RISC System/6000 Workstation

Before installing the Configuration Program on the RISC System/6000:

- The **dosread, doswrite**, and **dosdir** commands must be installed on your workstation
- X11fnt.corex.fnt must be installed to access the M.I.Tx11.4 (75 DPI and 100 DPI) fonts
- XWindows** must be installed.

To install the Configuration Program on a RISC System/6000 workstation:

Step 1   Place Diskette 1 in the 3.5-inch diskette drive.

Step 2   At the AIX prompt, type the following command:

dosread -a install.aix install.aix

Press Enter.

Step 3   At the AIX prompt, type the following command:

chmod 550 install.aix

Press Enter.

Step 4   At the AIX prompt, type the following command:

install.aix

Press Enter.

Step 5   Follow the prompts that appear on the screen to complete the installation.

Note: You can access additional installation information in the README file on Configuration Diskette 1.

Starting the Configuration Program on the RISC System/6000 Workstation

To start the Configuration Program on the RISC System/6000 workstation:

1. Add the current directory (.) to the Path environment variable.

2. Type **xinit** to start Xwindows; then, press Enter.

3. Type **cd cfg.** and press Enter.

4. Type **cfg** and press Enter to begin the Configuration Program.

After you have started the Configuration Program, see "Creating a Configuration File on Your Workstation" on page 6 for instructions.

The Configuration Program on a PS/2 Workstation

This section describes the setup, installation and startup procedures of the Configuration Program on a PS/2 workstation.

These hardware and software features are required to operate the Configuration Program on a PS/2 workstation:

- Intel** 80386, or higher processor
- IBM DOS 3.2 (or higher) or MS-DOS** 3.3 (or higher)
- Microsoft Windows** 3.0 or later, Enhanced Mode
- 8 MB of memory
- 1.44-MB, 3.5-inch diskette drive
- 5 configuration diskettes
- 10 MB of available disk space on the disk drive
- 8514 mode or SVGA display or higher resolution display, either monochrome or color
- Mouse.

Installing the Configuration Program on a PS/2 Workstation

To install the Configuration Program on a PS/2 workstation:

Step 1   If you are not already in Windows, type **win** beside the DOS prompt.

Step 2   Place Diskette 1 in the diskette drive.

Step 3   Select **File** from the menu bar.

Step 4   Select **Run** from the pull-down menu.

Step 5   Type a:install on the command line and select **OK** to start the installation.

Step 6   Follow the prompts that appear on the screen.

Note: You can access additional installation information in the README file on Configuration Diskette 1.

After a successful installation, an IBM 6611 Configuration icon is added to the Main program group.

Note: In a subsequent installation, a second icon labeled *6611 Configuration* is added to the Main program group. To delete one of the icons, follow these steps:

Step 1   Select the icon that you want to delete.

Step 2   Select **File** from the menu bar.

Step 3   Select **Delete** from the pull-down menu.

Step 4   An information message window is displayed. Select **Yes** to delete the icon.

Starting the Configuration Program on a PS/2 Workstation

To start the Configuration Program on a PS/2 workstation, click on the Configuration Program icon. Continue with "Creating a Configuration on Your Workstation."

Creating a Configuration File on Your Workstation

Click on the **OK** button of the copyright panel and you will see the main window (MPNP Configuration Program). Figure 2 on page 7 illustrates the main window.

Figure 2. Main Window of the Configuration Program

Then, follow these steps to create a configuration file for an IBM 6611:
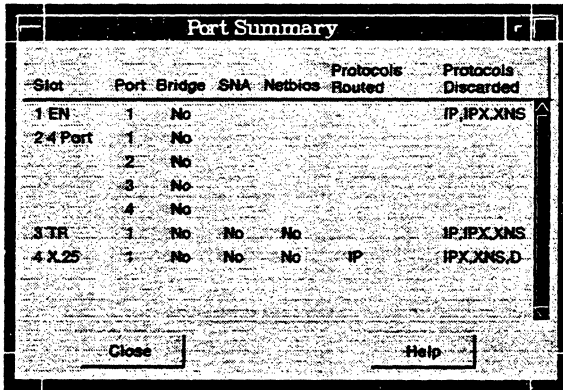
Step 1 At the main window, verify that the correct model of the IBM 6611 is displayed. If you want to configure a Model 120 (2 slots) or Model 170 (7 slots), but a Model 140 (4 slots) is displayed, follow these steps.

1. Select **Configure** from the menu bar.

2. Select **New configuration** from the pull-down menu.

3. Select **Model 120** or **Model 170** from the pull-down menu.

Step 2   Display the Port Summary window:

1. Select **Options** from the menu bar.

2. Select **Port Summary** from the cascade menu.

Figure 3. Port Summary Window

The Port Summary window displays current configuration information about the ports and protocols for each adapter slot. Unless you choose to close it, the Port Summary window remains in view throughout configuration (you can relocate it to another area of the screen). This window dynamically updates information about the adapters and protocols while you create a configuration.

Note: If you are planning to configure DECnet** filters, you must perform **System Configuration** *before* configuring the slot ports. Go to Step 5 on page 10 and complete System Configuration for DECnet filtering; then, return to Step 3 on page 9.

Step 3   Now, configure the adapter slots (labeled **Slot Ports**). Select an adapter slot by clicking on the numbered push button that corresponds to the slot that you want to configure (you cannot select the Physical slot). A pop-up menu appears that allows you to add adapters. The other actions (Delete, Move, or Swap) cannot be selected when the adapter slot is empty.
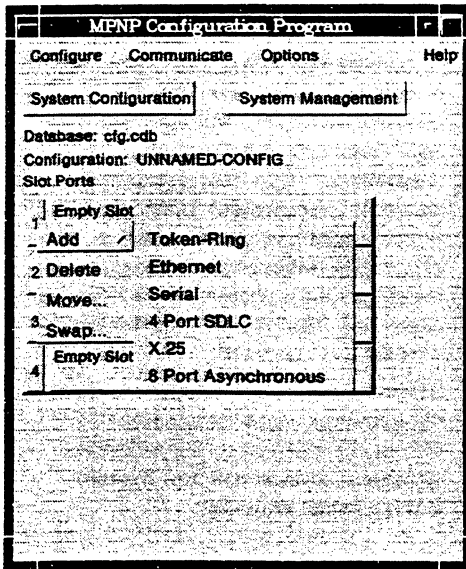
Figure 4. Slot Ports Displayed on the Main Window

When you select **Add**, a pull-down menu appears. Your adapter choices are as follows:

- Token-Ring
- Ethernet
- Serial
- 4-Port SDLC
- X.25.

Note: *Serial* applies to the EIA 422/449
Serial Adapter and to the V.35/36 Serial
Adapter.

Step 4 Now, configure the adapter ports. The
serial adapters and the SDLC Adapter
have more than one port. You must
configure each port that will be used.

To configure a port, select the port by
clicking on the port push button icon in
the slot. If you are configuring an SDLC
Adapter or a serial adapter, a
pull-down menu window appears, with
choices for selecting the specific type
of port. When the port window
appears, select the **Physical Interface**
push button to configure the adapter
parameters. Then, configure the
port-level parameters for the adapter
port. In addition, you can define
bridging (transparent and source
route), routing, protocols, and data link
switching. Repeat this step for each
port that will be used.

Step 5 Select **System Configuration** to define
the system or global parameters.
Figure 5 on page 11 illustrates the
topics associated with the System
Configuration window.
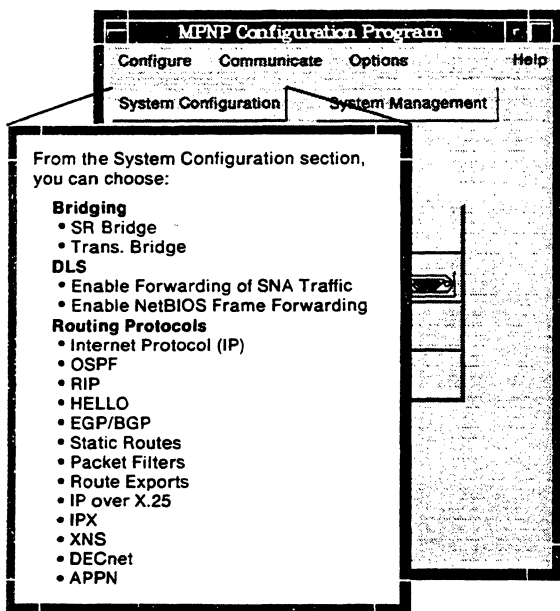
Figure 5. Preview of System Configuration Section

Use System Configuration to configure the routing, bridging, and data link switching (DLS) functions at the system level. A system configuration enables the IBM 6611 to handle routing, bridging, and DLS.

Step 6 Select **System Management** to configure the network system management functions. Figure 6 on page 12 illustrates the topics associated with the System Management section.
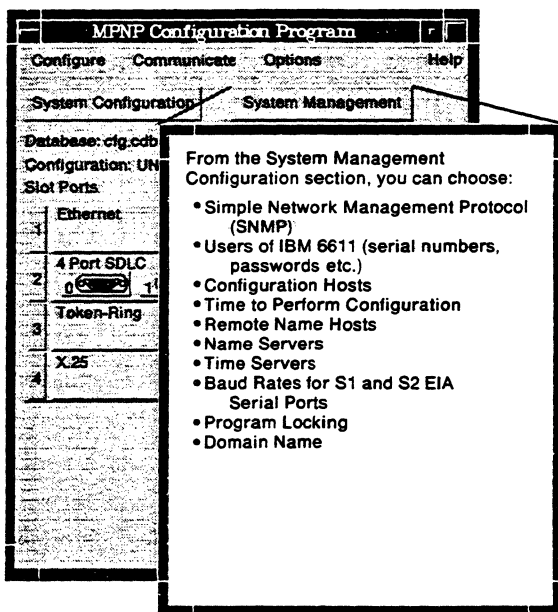
```
┌─┤    MPNP Configuration Program    ├─┐ r │─┐
│  Configure   Communicate   Options         Help │
│  ╔═══════════════════╗╔════════════════╗         │
│  ║ System Configuration ║║ System Management ║───────┐
│  Database: cfg.cdb ┌──────────────────────────────────┐
│  Configuration: UN│ From the System Management         │
│  Slot Ports       │ Configuration section, you can choose: │
│   ┌─Ethernet──┐   │ • Simple Network Management Protocol │
│   │1          │   │   (SNMP)                            │
│   ├──────────┤   │ • Users of IBM 6611 (serial numbers, │
│   │4 Port SDLC│   │   passwords etc.)                   │
│   │2  0███ 1'│   │ • Configuration Hosts               │
│   ├──────────┤   │ • Time to Perform Configuration     │
│   │Token-Ring │   │ • Remote Name Hosts                 │
│   │3          │   │ • Name Servers                      │
│   ├──────────┤   │ • Time Servers                      │
│   │X.25       │   │ • Baud Rates for S1 and S2 EIA      │
│   │4          │   │   Serial Ports                      │
│   │           │   │ • Program Locking                   │
│   │           │   │ • Domain Name                       │
│   │           │   │                                    │
│   │           │   │                                    │
│   │           │   │                                    │
│   │           │   │                                    │
└──┴───────────┴───└────────────────────────────────────┘
```

Figure 6. Preview of System Management Section

Use System Management to specify:

• The host name and domain name for the IBM 6611

• The baud rate for the S1 and S2 serial ports

• The lock value of the Multiprotocol Network Program

• Simple Network Management Protocol (SNMP) network management information

• Controlling and viewing user IDs and passwords for the IBM 6611

• The time when a configuration file is to be applied to the system

- The list of host systems that can configure the IBM 6611 from the Configuration Program

- Mapping of host names to IP addresses

- The name and time servers on the network that you want the IBM 6611 to use.

Step 7 After you have configured all of the functions and protocols that you want enabled for the IBM 6611, save the configuration file.

At the main window, select **Configure**.

Then, select the **Save As** option to save the file in a configuration database that is attached to the Multiprotocol Network Program. Other options on the menu bar include **Create config diskette** and **Write IML File. Write IML File** allows you to write your configuration to your hard disk. Help is available for all options.

You may find it helpful to read the database installation information at the end of this reference before continuing to the next section. See "Database Installation Notes" on page 18.

See the next section, "Transporting the Configuration File to the IBM 6611" for instructions on transporting the file to the IBM 6611.

Transporting the Configuration File to the IBM 6611

After you have created a configuration file at your workstation using the Configuration Program, you must transport the configuration file to the IBM

6611. You can transport the file by diskette or without a diskette.

When you choose the diskette method of transfer, you physically carry your newly created configuration diskette to the IBM 6611. If this is the initial configuration for your IBM 6611, it is preferable to use the diskette method to transport the configuration. See "Transporting the File Using a Diskette" for instructions on this method.

Network connection transfer (without a diskette) allows you to send the configuration to your IBM 6611 electronically over a network connection. Network connection transfer allows you to control your network from a single IBM 6611. See "Transporting the File Without Using a Diskette" on page 16 for information on this method.
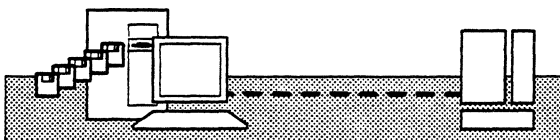

Transporting the File Using a Diskette

Follow these steps to create a configuration diskette and load the diskette on the IBM 6611:

Step 1   Place a 3.5 inch formatted diskette into the diskette drive.

Step 2   Select **Configure** from the menu bar of the Configuration Program main window.

Step 3   Select **Create configuration diskette** from the pull-down menu. Enter the requested information so that the program can copy the file to the desired drive.

Step 4   Carry the configuration diskette to the IBM 6611 and place it in the diskette drive.

Step 5   Set the IBM 6611 keymode switch to
Normal; then, turn the power switch to
On. This causes the configuration file
to be read.

Note: If the IBM 6611 is already on,
refer to the shutdown procedures
contained in the *Multiprotocol Network
Program User's Guide*, "Operating the
IBM 6611," before performing this step.

The Configuration Program installs the
configuration parameters and uses
those parameters as the current
configuration.

Step 5   Observe the 3-digit display while the
configuration process reads the file.
Refer to the *Multiprotocol Network
Program User's Guide* for an
explanation of the displayed codes.
When the configuration process has
read the file and has initialized the IBM
6611, the code c89 is displayed on the
3-digit display.

Step 6   Remove the diskette from the drive
when the transfer is complete.

Warning: You must remove the
diskette to prevent it from being read
accidentally during a subsequent
configuration of the IBM 6611.
Removing the diskette also prevents
accidentally overwriting the
configuration file on the diskette.

Transporting the File Without Using a Diskette

After you have created a configuration file using the Configuration Program, you can use one of three methods to transport the file over a network connection to the IBM 6611

- Direct IP Connection (for RISC System/6000 only)
- Modem Transfer Method (for RISC System/6000, PS/2)
- File Transport Program (FTP) (for RISC System/6000, PS/2).

Direct IP Connection: You can send a configuration file from the Configuration Program workstation to an IBM 6611 if the following conditions are met:

- The Configuration Program workstation is a RISC System System/6000 workstation which has a network connection to the IBM 6611.

- For initial configuration, a minimal configuration is installed on the IBM 6611 and the IBM 6611 is active on the network. You must ensure that the IBM 6611 has:

  − An IP address

  − A controlling user ID and password

  − Any 6611 adapter except for the SDLC Adapter.

  Refer to the *Multiprotocol Network Program User's Guide* for more information on the Direct IP Connection method.

After these conditions have been met, use the
following procedure to send a configuration file
from a RISC System System/6000 workstation to an
IBM 6611:

Step 1 Select **Communicate** from the menu bar
of the Configuration Program window.

Step 2 Select **Send configuration** from the
pull-down menu. Enter the requested
information so that the program can
send the file to the desired IBM 6611.

Modem Transfer Method: You can send your
configuration from a remote workstation to an IBM
6611 using a modem connection. The following
conditions must be met:

• The workstation must be connected to the IBM
6611 by a modem, or to the same IP network as
the IBM 6611 needing the configuration.

• The workstation must support outgoing calls
and the Xmodem protocol.

Refer to the *Multiprotocol Network Program User's
Guide* for more information on the modem transfer
method of sending a configuration file. Minimum
configuration is not required.

FTP Transfer Method: You can send a
configuration file from a remote workstation to an
IBM 6611 using the FTP over an Internet Protocol
(IP) network. The following conditions must be met:

• For initial configuration, a minimal
configuration must be installed on the IBM 6611
and the IBM 6611 must be active on the IP
network.

• The workstation must be active on the IP
network and must support FTP.

Refer to the *Multiprotocol Network Program User's
Guide* for more information on sending a
configuration file using the FTP transfer method.

After Installing the Configuration Program

After installing the Configuration Program on your IBM 6611, employ System Manager to view the adapter route table. The adapter route table allows you to verify that the adapter routes are functional (X.25 is an exception). Refer to the *Multiprotocol Network Program User's Guide* for instructions on viewing the adapter route table.

Note: *System Manager* and *System Management* are different facilities.

Database Installation Notes

When you run the Configuration Program, other files or databases are created in the installation directory. Databases with the extension *cdb* are created when you request the Configuration Program to create or save a configuration. Files that you save are placed *within these databases*. The files themselves have no extensions and are not visible without using the Configuration Program. These configuration files are in binary format and cannot be changed using a text editor.

To summarize:

• config.cdb is the default database

• All databases end in cdb, and are *only visible while outside of the Configuration Program*

• Configuration files are placed in databases (no extension) and *are not visible outside of the Configuration Program*.

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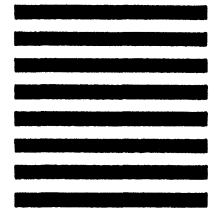
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