Multiprotocol Switched Services (MSS) Server

IBM

Installation and Initial Configuration Guide

Multiprotocol Switched Services (MSS) Server

IBM

Installation and Initial Configuration Guide

> **Note**
>
> Before using this information and the product it supports, be sure to read the general information under
> Appendix B, "Notices" on page B-1.

Third Edition (July 1998)

This edition applies to Version 2.1 of the Multiprotocol Switched Services Server.

Order publications through your IBM representative or the IBM branch office serving your locality. Publications are not stocked at the address given below.

A form for readers' comments appears at the back of this publication. If the form has been removed, address your comments to:

> Department CGF
> Design & Information Development
> IBM Corporation
> PO Box 12195
> RESEARCH TRIANGLE PARK NC 27709
> USA

When you send information to IBM, you grant IBM a nonexclusive right to use or distribute the information in any way it believes appropriate without incurring any obligation to you.

Contents

About This Guide

This guide explains how to set up the IBM 8210 Nways Multiprotocol Switched Services (MSS) Server Model 002 (8210-002), perform the initial configuration, and identify and correct some problems that might occur during installation.

Who Should Use This Guide

This guide is intended for the person responsible for installing the 8210-002. It is assumed that this person is familiar with installation and cabling charts.

How To Proceed

The following steps describe how to install your 8210-002. You should document all of the network information that will be required to install, connect, and configure the 8210-002.
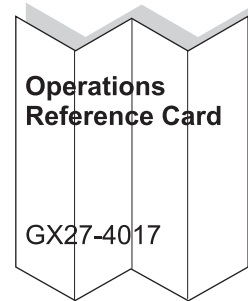
Installation

___ **1** Install the 8210-002. Chapter 1, "Installing the MSS Server" describes the hardware installation procedure. (Alternatively, installation by IBM service personnel is available. Contact your IBM representative for additional information.)

___ **2** Contact your network administrator to determine whether you can use the default configuration or whether you need to perform an initial configuration. If the network administrator wants you to use the default configuration (see "When to Use the Default Configuration" on page 4-1), then the installation and initial configuration tasks are completed. Otherwise, you need to perform an initial configuration.

Initial Configuration

___ **1** Access the 8210-002 as described in Chapter 3, "Accessing the MSS Server."

___ **2** Perform the initial configuration as Chapter 4, "Performing Initial Configuration of the MSS Server."

___ **3** Contact your network administrator to perform a full configuration, and refer to the *IBM Multiprotocol Switched Services (MSS) Server Interface Configuration and Software User's Guide* and the *IBM Multiprotocol Switched Services (MSS) Configuring Protocols and Features* provided in softcopy with the 8210-002.

MSS Server Library Overview

Planning and Installation

Introduction
and
Planning
Guide

GA30-3820

Installation
and
Initial
Configuration
Guide

GA27-4140

Operations
Reference Card

GX27-4017

Configuration

Configuration
Program
User's
Guide

GC30-3830

Configuration
Program
READ.ME
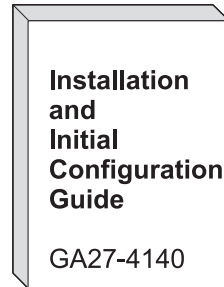
Configuration
Help
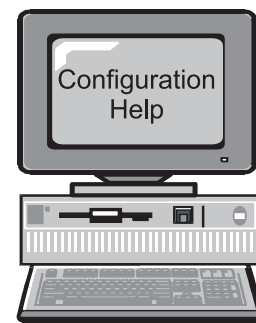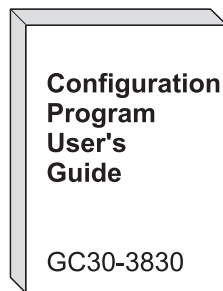
Diagnostics/ Maintenance

Service
and
Maintenance
Manual

GY27-0354

User's
Feature
Removal and
Replacement
Guide

GY27-0359
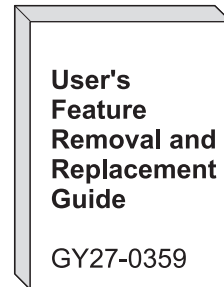
Operations and Network Administration

Interface
Configuration
User's
Guide

SC30-3818

Configuring
Protocols
and
Features

SC30-3819

Event
Logging
System
Messages
Guide

SC30-3682
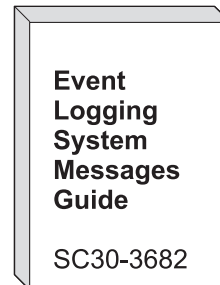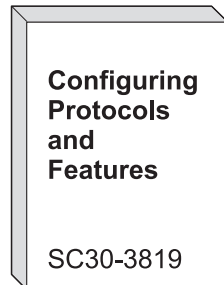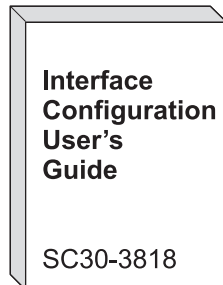
The following IBM hardcopy manuals are shipped with the product. The manuals in this list are also included in displayable softcopy form on the Multiprotocol Switched Services (MSS) Softcopy Library CD-ROM (LK2T-0378). This CD-ROM is shipped with initial orders for the 8210-002.

The reference card and the safety information booklet are shipped in hardcopy only and are not included on the CD-ROM.

- *Multiprotocol Switched Services (MSS) Server Installation and Initial Configuration Guide,* GA27-4140
- *IBM 8210 Nways Multiprotocol Switched Services (MSS) Server Operations Reference Card,* GX27-4017
- *8210 Nways Multiprotocol Switched Services (MSS) Server User's Feature Removal and Replacement Guide*, GY27-0359
- *Caution: Safety Information - Read This First,* SD21-0030

The following manuals are not shipped in hardcopy, but are provided in softcopy form on the Multiprotocol Switched Services (MSS) Softcopy Library CD-ROM. All of these manuals (with the exception of the *Event Logging System Messages Guide*) can be separately ordered in hardcopy form through your IBM marketing representative.

- *Multiprotocol Switched Services (MSS) Server Introduction and Planning Guide,* GC30-3820
- *Multiprotocol Switched Services (MSS) Server Service and Maintenance Manual,* GY27-0354
- *IBM Multiprotocol Switched Services (MSS) Server Interface Configuration and Software User's Guide,* SC30-3818
- *IBM Multiprotocol Switched Services (MSS) Configuring Protocols and Features,* SC30-3819
- *Configuration Program User's Guide for Nways Multiprotocol Access, Routing and Switched Services,* GC30-3830
- *Event Logging System Messages Guide,* SC30-3682

Accessing the MSS Server Softcopy Library

Important: Whether you choose to read the softcopy MSS Server publications directly from the CD-ROM or to copy the individual books to your hard disk, you first must install the Library Reader program (contained on the CD-ROM) on your workstation to enable you to view the publications.

The *Multiprotocol Switched Services (MSS) Server Softcopy Library* (included with the CD-ROM) describes how to install the Library Reader and how to access the softcopy books from a personal computer or PS/2 computer running DOS, Windows, or OS/2.

For alternative methods of managing your softcopy books, see the *Online Reference Online Library* that is on the CD-ROM.

Visit Our Web Sites

You can obtain the latest information on and support for the MSS Server by visiting our web sites.

Information Updates and Corrections

To remain informed of engineering changes, clarifications, and fixes that are implemented after the manuals have been printed, refer to the IBM MSS Server home page at:

```
http://www.networking.ibm.com/820/820prod.html
```

Online Support

To obtain support information, including technical tips, current product information, and code updates and fixes for the MSS Server, refer to the IBM Network Environment Support page at:

```
http://www.networking.ibm.com/nes/neshome
```

Summary of Changes

This manual has been revised to include the following changes and enhancements:

- Repackaging of the 8210 to a one-unit (1U) box

- 166-MHz 603ev PowerPC processor for the 8210-002

- Addition of a 10BASE-T Ethernet service port to the 8210-002

- Replacement of the MSS Server's PCMCIA hard drive with an internal integrated drive electronics (IDE) hard drive

- Addition of an optional 20-MB PCMCIA flash drive for the 8210-002

- Addition of hardware-assisted bridging to the FDDI adapter

The technical changes and additions are indicated by a vertical line (|) to the left of the change.

Chapter 1. Installing the MSS Server

These instructions explain how to unpack and rack-mount or surface-mount the MSS Server, how to attach the cables, and how to verify that the hardware is working correctly.

If you have any problems during setup, refer to Chapter 2, "Problem Solving."

Before You Begin

Before you begin, you need to be aware of the following requirements concerning cabling and rack-mounting the MSS Server.

Cabling

ATM or FDDI adapter cables are not provided and must be separately ordered. You can order them through your IBM representative.

Rack-Mounting

If you choose rack-mounting, you must provide the rack; it is not provided with the MSS Server.

You can use any EIA standard 19-inch rack. The rack can be open or closed. However, if you choose a closed rack, you must make sure that enough air flows through the MSS Server. To let air pass, you must remove or modify covers on the front of the rack that, otherwise, would not let air reach the MSS Server. Similarly, you must not use unvented rear rack covers that would not let air exit the MSS Server or would cause back pressure to build up from several machines.

1. Verify contents

Verify that the following items are included with your MSS Server:

Hardware

One or two adapters (as ordered)

- 155-Mbps ATM adapter, multimode
- 155-Mbps ATM adapter, single-mode
- Dual-ring optical fiber FDDI adapter
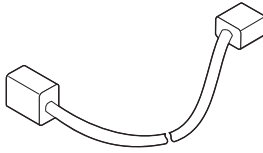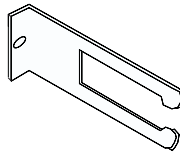
| Power
Cord | Cable
Management
Bracket | PCMCIA
Flash Drive
(Optional) | PCMCIA
Modem and
Cable |
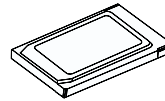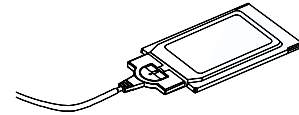
If any item is missing or damaged, contact your place of purchase.

Documentation

In addition to this document, the package should include the following items:

- *MSS Server Operations Reference Card*, GX27-4017

- *8210 Nways Multiprotocol Switched Services (MSS) Server User's Feature Removal and Replacement Guide*, GY27-0359

- *Multiprotocol Switched Services (MSS) Softcopy Library* (on CD-ROM)

- *Caution: Safety Information-Read This First*, SD21-0030

In addition to the above documentation, there may be Release Notes that describe changes that were received too late to be printed in the manuals.

Software

- Configuration Tool Program package (on CD-ROM)
- MSS Server microcode (on CD-ROM)

You will also need

- One adapter cable for each adapter (separately purchased and not in this shipping container)
- A Rack Inventory Chart and Cabling Chart from your network administrator

2. Familiarize yourself with front panel
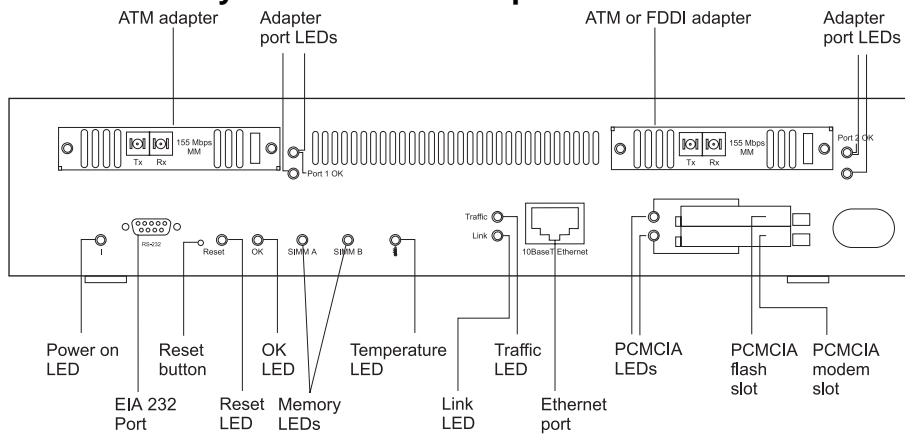
Important. Before you begin installing the MSS Server, read Appendix C, "Safety Information" on page C-1.

Familiarize yourself with the front panel of the MSS Server.

3. Remove top cover
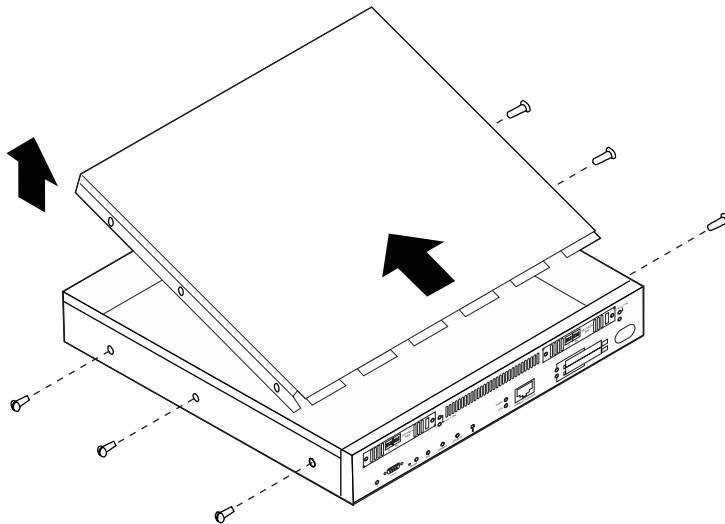
Remove the three screws on each side of the MSS Server. Lift the rear edge of the top cover and pull it to the rear of the MSS Server to disengage the tabs on the top cover that engage the front of the MSS Server. Lift up the rear of the top cover and pull it up and away from the front of the MSS Server.

4. Install ATM adapter in slot 1
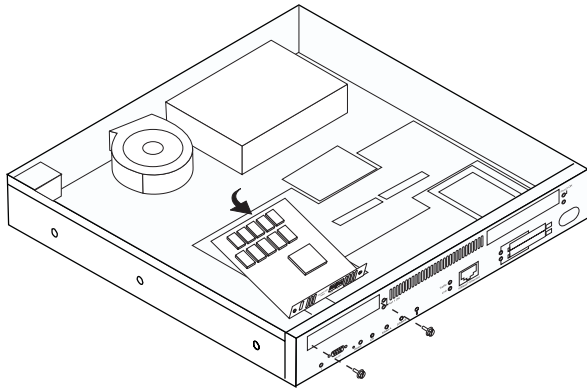
Note: Only ATM adapters can be installed in Port 1 (left slot).

Holding the adapter by the back edge, position it vertically inside the front of the MSS Server chassis, aligning it with the opening of Port 1.

Gently rotate the back of the adapter towards the bottom of the chassis, aligning the edge tabs to the connector on the PCI logic card. Carefully seat the edge tabs in the PCI logic card connector.

Install the two flat-head screws on the adapter faceplate.

5. Install ATM or FDDI adapter in slot 2
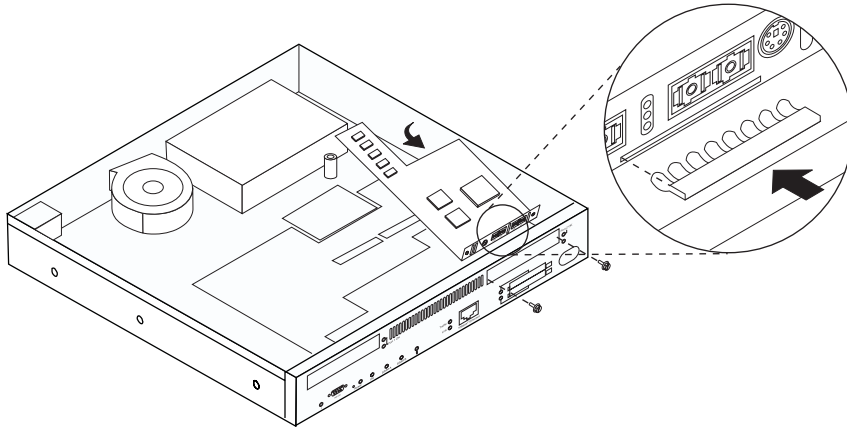
Note: FDDI and ATM adapters can be installed in Port 2 (right slot). This is the only slot in which FDDI adapters can be installed.

Remove the blank adapter faceplate from the front of the MSS Server. Remove the copper-colored ground clip from the bottom of the blank faceplate and attach it to the bottom of the adapter's faceplate so that the fingers are pointing to the back of the adapter.

If you installing a FDDI adapter, use a 4-mm nut driver to remove the screw holding the standoff on the bottom of the chassis and in front of the power supply. Save the screw.

Holding the adapter by the back edge, position it vertically inside the front of the MSS Server chassis with the faceplate resting on top of the PCMCIA connector.

Gently rotate the back of the adapter towards the bottom of the chassis, aligning the edge tabs to the connector on the PCI logic card. Carefully seat the edge tabs in the PCI logic card connector.

If you are installing a FDDI adapter, use a 4-mm nut driver to install the screw holding the back of the adapter to the standoff.

Install the two flat-head screws on the adapter faceplate.

6. Replace top cover
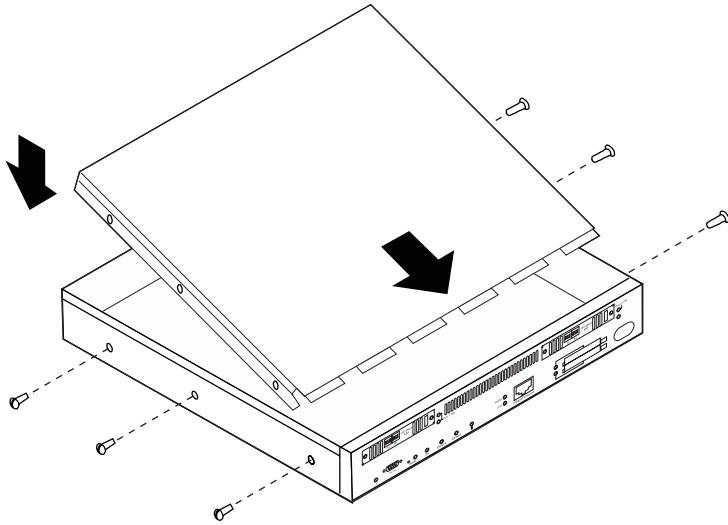
Align the top cover tabs with the slots inside the front of the MSS Server and slide the top cover forward until the tabs engage the slots.

Reinstall the three screws on each side of the MSS Server.

If you intend to rack-mount your MSS Server, continue with step 7. If you intend to surface-mount your MSS Server, go to step 9.

7. Position mounting brackets
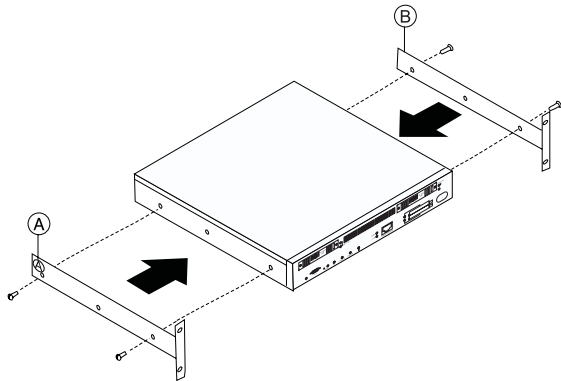
Remove the four screws (two on each side) that hold the rack-mounting brackets.

Note: Do not remove the center screws; they secure the cover.

Each rack-mounting bracket is labeled A or B. The letters can be seen after the brackets have been removed and rotated. Rotate the brackets and reattach them as shown.

8. Install unit in rack
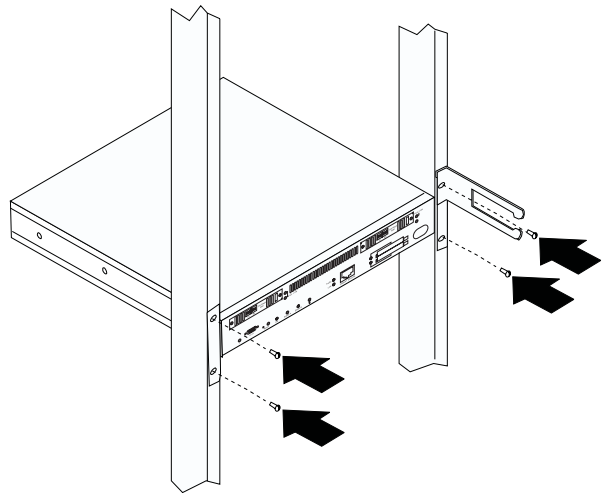
Use the Rack Inventory Chart provided by your network administrator to determine the location or place to mount the MSS Server in the rack.

Position the unit in the rack and tighten the bracket/rack screws.

9. Install PCMCIA device and attach cables
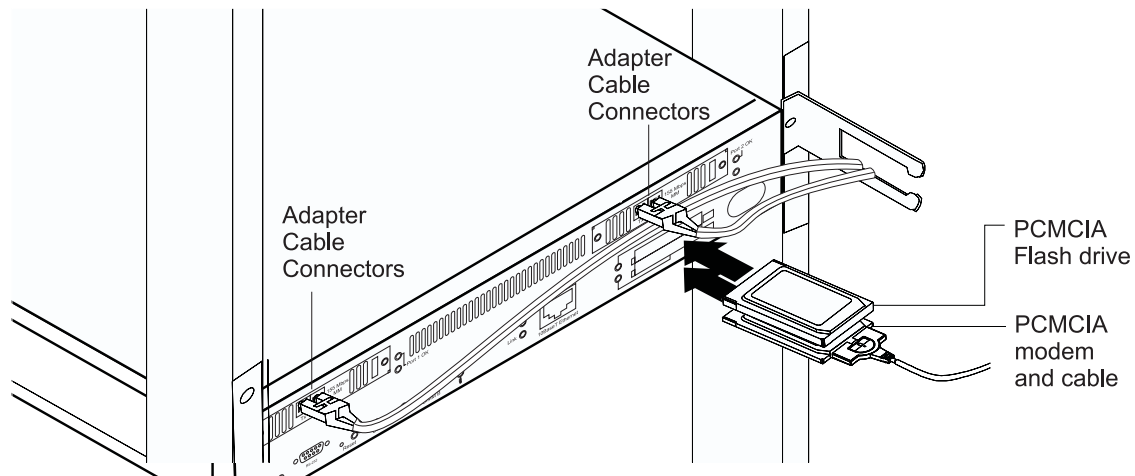
Note: Correct installation according to these instructions is a condition for compliance with the regulations of electromagnetic interference (see Appendix B, "Notices" on page B-1 for additional information.).

| Install the PCMCIA modem in the bottom PCMCIA slot and verify that it is correctly seated in the slot. Install the modem cable and pass it through the cable management bracket.

| Install the PCMCIA flash drive in the top PCMCIA slot and verify that it is correctly seated in the slot.

Attach the adapter cables to the corresponding adapter ports and pass the cables through the cable management bracket.

10. Apply power to the unit and verify correct operation of the unit
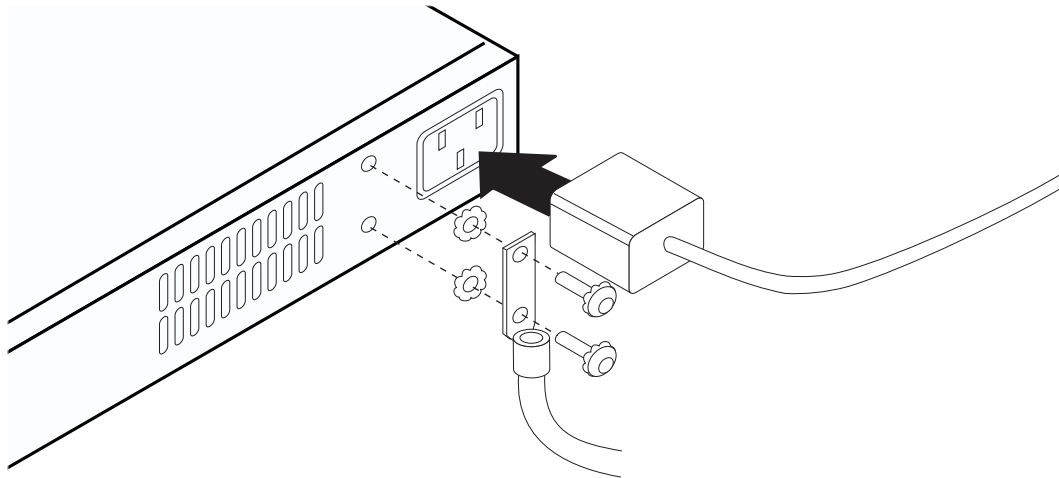
If you want to attach a frame ground, remove the two screws and lock washers next to the ac power cord plug on the back of the unit. Thread each screw first through the ground wire terminal or ground wire and then through a lock washer. Reinstall the two screws, with the attached lock washers and ground wire, on the chassis.

Note: It is recommended that you use a listed, 2-hole compression terminal as the ground wire terminal to connect the ground wire to the chassis.

Connect the power cord to the ac power cord plug on the back of the unit.

Important. Before you connect the power cord, read "Power Disconnect" on page C-4.

Connect the power cord to a power source, wait one minute, and verify that:

- The Power on LED labeled **|** (at left of the EIA 232 connector) is ON (green).
- The OK LED is ON (green).

See Chapter 2, "Problem Solving" if the LEDs are not lighted as described.

11. Record Information

Transfer relevant information from the Cabling Chart and the unit labels to the fanfold reference card and store it in a safe place.

Hardware installation is complete.

12. Contact Network Administrator

Inform your network administrator that you have installed the MSS Server and it is operating correctly, and provide that person with the access number for the modem in your MSS Server.

After installation, the MSS Server must be configured to be fully operational. The MSS Server is shipped with a default configuration that allows it to be configured remotely as described in "When to Use the Default Configuration" on page 4-1.

In most cases, your network administrator will not want to use this default configuration when performing the (full) configuration. Instead, the network administrator will want you first to set up a local configuration console (see Chapter 3, "Accessing the MSS Server"), and perform an initial (quick) configuration (see Chapter 4, "Performing Initial Configuration of the MSS Server").

Inform your network administrator when you are finished with the initial configuration so that he or she can perform the full configuration.

Hardware installation and initial configuration are complete.

Chapter 2. Problem Solving

| To identify and correct any problems that occur during setup, see the following chart.

Start

Is the Power On (I) LED On? (Green) — No → There is no ac source voltage.
1. Check the power source.
2. Ensure that the power cord is attached correctly.

Yes ↓

Is the temperature symbol LED On? (Yellow) — Yes → There is an overtemperature condition.
1. Ensure that fans are operating.
2. Check that all vents are open.

No ↓

Is the SIMM A or B LED On? (Yellow) — Yes → Fault in SIMM A or B.

No ↓

Is the OK LED blinking? (Green) — Yes → Operational code load in progress. Wait two minutes. Still blinking? — Yes → Not able to load operational code. Ensure that the boot device is operational.

No ↓   No ↓

Operational code initializing. Wait one minute.

Is the OK LED On? (Green) — No → Is the Reset LED On? (Yellow) — No → Fault in processor logic card. Push Reset button.

Yes ↓   Yes ↓

Reset is in progress. Wait one minute. Still on? — Yes →

No ↓

If there is a PCMCIA card in the bottom PCMCIA slot, is the PCMCIA LED On? (Yellow) — Yes → Fault with PCMCIA card. Reseat the PCMCIA card.

No ↓

If there is a PCMCIA card in the top PCMCIA slot, is the PCMCIA LED On? (Yellow) — Yes → Fault with PCMCIA card. Reseat the PCMCIA card.

No ↓

If there is a physical Ethernet connection, is the Link LED On? (Green) — No → Fault in Ethernet connection. Check Ethernet cable.

Yes ↓

If the Ethernet port is configured and in use, is the Traffic LED flickering? — No → Check Ethernet configuration of 8210 and Ethernet server.

Yes ↓

If there is an adapter in Port 1 or 2 is the YELLOW Port LED blinking? — Yes → Network Problem

No ↓

Is the YELLOW Port LED on? — Yes → Replace the adapter.

No ↓

Is the GREEN Port LED on? — No → Adapter disabled or not configured. Contact your network administrator to configure or enable the adapter.

Yes ↓

The adapter is configured, enabled and OK.

If the problem is not corrected, contact your service organization.

2-1

Chapter 3. Accessing the MSS Server

This chapter describes the methods supported for accessing the MSS Server.

Methods of Connecting

You have four methods of connecting to the MSS Server:

- Using a teletype (TTY) connection
- Using a serial line IP (SLIP) connection
- Using an Ethernet connection
- Using the ATM network

TTY, SLIP, and Ethernet are considered *out-of-band* connections. Out-of-band connectivity is usually employed when the ATM network is not operational, or the MSS Server has not been configured yet. Therefore, if you are performing an initial (quick) configuration, you should use an out-of-band method (usually TTY).

The connection via the ATM network is *in-band*. In-band connectivity requires IP connectivity over the MSS Server's ATM network attachment. To enable in-band IP connectivity, you must configure one of the following on your workstation:

- LIS client or server (for Classical IP)
- LE client to which an IP address has been assigned (for LAN emulation)
- IP host services

Note: The MSS Server is shipped with a default configuration that allows in-band access to the MSS Server from a workstation running Classical IP. Use caution when installing the MSS Server in your network with the default configuration. See "When to Use the Default Configuration" on page 4-1 for more information about the default configuration.

The in-band and out-band connectivity are discussed in detail in the following sections.

Teletype (TTY) Connection

For this method you have three alternatives:

- A local connection through a null modem cable attached to the EIA 232 service port (see Figure 3-1 on page 3-2)

- A remote connection through a modem attached to the EIA 232 service port (see Figure 3-2 on page 3-2)

- A remote connection through the PCMCIA modem, the Voice/Data/Fax PCMCIA Modem, or the Data/Fax PCMCIA Modem (see Figure 3-3 on page 3-3)

You can set up both remote and local connections, but only one connection can be active at any given time. For example, if a workstation is connected locally to the EIA 232 service port and a call comes in over the Voice/Data/Fax PCMCIA Modem or the Data/Fax PCMCIA Modem, priority is given to the call. After the call, the workstation will have to log back into the MSS Server.

Either connection, local or remote, must be made using communications software that enables terminal emulation and file transfer. You can continue to use local or remote access to the MSS Server after it has been configured.
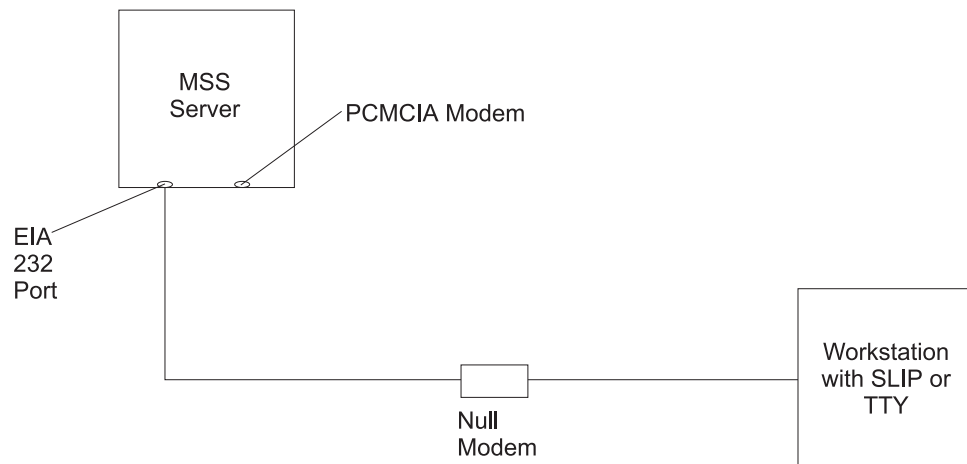
Figure   3-1. Local Serial Connection to the EIA 232 Port
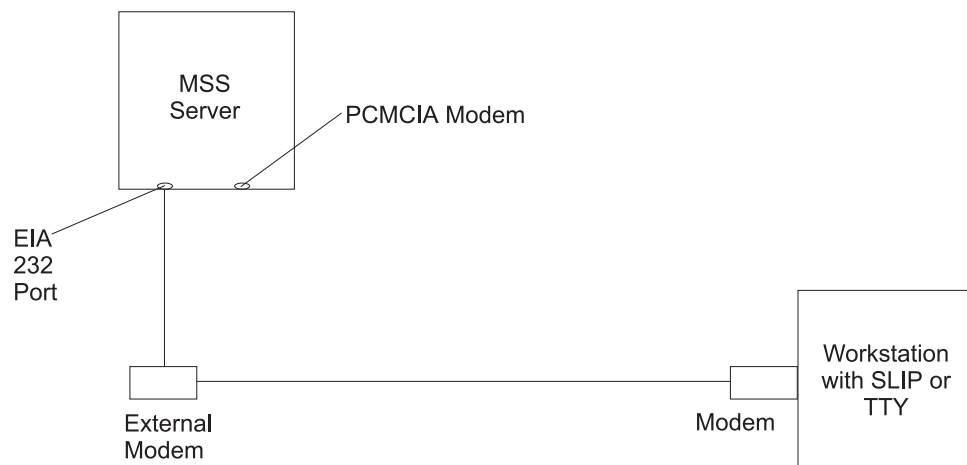
Figure   3-2. Remote Serial Connection to the EIA 232 Port
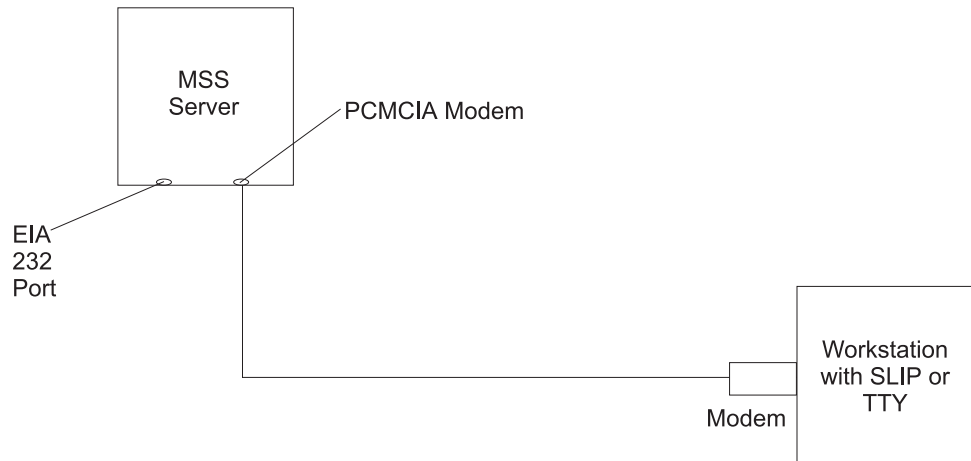
Figure 3-3. Remote Serial Connection to the PCMCIA Modem (Voice/Data/Fax PCMCIA Modem or Data/Fax PCMCIA Modem)

Local and Remote Console Access

When accessing the MSS Server locally on a null modem cable attached to the EIA 232 service port or remotely through the PCMCIA modem, use VT220 or VT100 terminal emulation. Because VT100 does not define function keys above F4, when using VT100, edit the keyboard mapping for your terminal emulation as follows: For key definition F6, enter the mapping (ESC)OU. For key definition F9, enter the mapping (ESC)(Left square bracket)009q.

Note: (ESC) represents the carat symbol followed by the left square bracket.

Default Settings for Serial Port

These are the default settings for the serial port:

Speed   19.2 Kbps
Parity   None
Data Bits 8
Stop Bits 1

Once the MSS Server operational code has loaded, the line speed for the serial port is automatically set to 19.2 Kbps.

Default Settings for PCMCIA Modem

The PCMCIA modem is a 28.8 Kbps V.32 bis modem. It is set up with a default speed of auto detect.

These are the default settings for PCMCIA modem:

Speed   Auto detect
Parity   None
Data Bits 8
Stop Bits 1

SLIP Connection

Over the local or remote connection described on page 3-1, you can choose to use the SLIP protocol instead of the TTY connection. Using SLIP requires TCP/IP on the workstation that connects to the MSS Server.

To configure SLIP, use these addresses:

The default SLIP address of MSS Server
    10.1.1.2

The default IP address of the workstation
    10.1.1.3

For instructions about installing SLIP, refer to the documentation for your version of TCP/IP.

Note: A PING done on the PCMCIA modem may take several minutes.

Ethernet Connection

Through a 10BASE-T Ethernet cable attached to the Ethernet service port, you can use Telnet (see Figure 3-4). Using Telnet requires TCP/IP on the workstation that connects to the MSS Server.
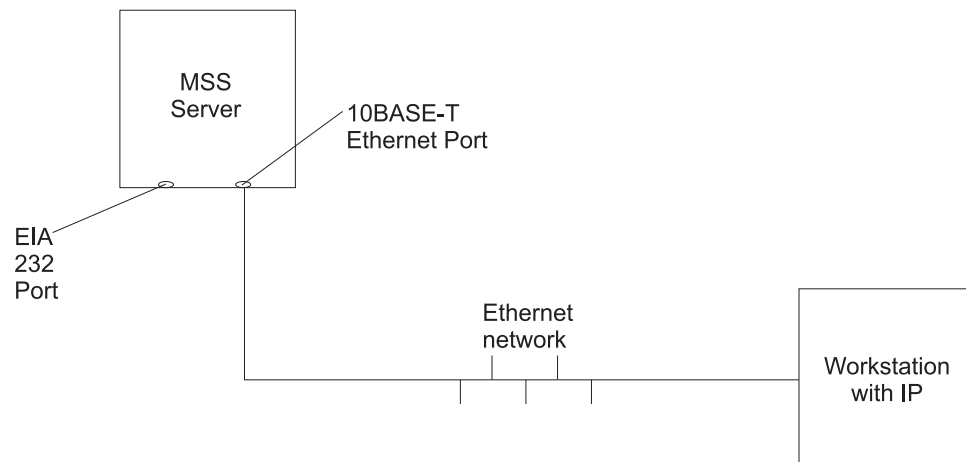
Figure 3-4. Connection Using IP through the Ethernet Port

To use Telnet over the Ethernet connection, use these addresses:

The default IP address of the MSS Server
    10.1.2.2

The default IP address of the workstation and gateway
    10.1.2.3

The default subnet mask of the MSS Server
    255.255.255.0

For instructions about using Telnet over Ethernet, refer to the documentation for your version of TCP/IP.

If you need to change these default IP addresses, refer to the firmware section of *IBM Multiprotocol Switched Services (MSS) Server Interface Configuration and Software User's Guide*.

ATM Network Connection

Figure 3-5 shows an *in-band* connection over the ATM network.
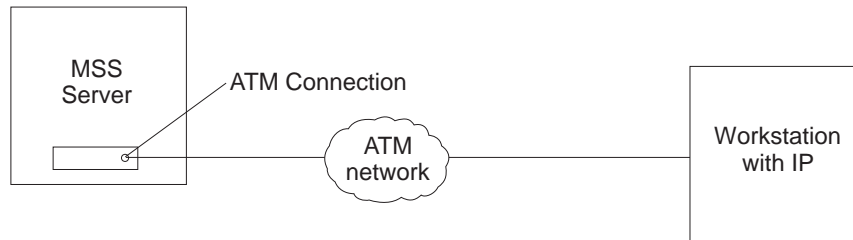
Figure 3-5. Connection Using IP Over the ATM Network (shown with the 8210). The 8210 or the module must be operational in the network to use this connection.

You can access the MSS Server via the ATM network only after it has been configured fully or by using the default configuration. Therefore, for an initial (quick) configuration, you usually use one of the three connection methods described in the previous three sections. See Chapter 4, "Performing Initial Configuration of the MSS Server" for more information on initial configuration.

After you have completed the initial configuration, you have to reload the MSS Server to activate the configuration. After this reload, the MSS Server is operational in the network, and you can access it via a LAN emulation or a Classical IP client.

Chapter 4. Performing Initial Configuration of the MSS Server

This chapter describes the default configuration, when and how to perform an initial (quick) configuration to enable the MSS Server to communicate with the network, and discusses full configuration of the MSS Server.

When to Use the Default Configuration

If you want to configure the MSS Server remotely, use the default configuration that is shipped with the MSS Server. The goal of the default configuration is to provide you with the capability to download a meaningful configuration to the MSS Server that is appropriate for your network. The default configuration enables you to configure the MSS Server remotely from a Classical IP workstation in the network using the Configuration Program via Telnet, the command line interface via Telnet, or the web browser interface.

Notes:

1. The default configuration is not intended for normal operation.

2. Use caution when installing the MSS Server in your network with the default configuration. If the default configuration conflicts with other devices in your network (such as using the IP or ATM address of another device), you must use one of the out-of-band connection methods described in "Methods of Connecting" on page 3-1.

3. Connect and configure MSS Servers using the default configuration one at a time. Conflicts arise if more than one MSS Server, using the default configuration, is connected to the network at the same time.

You can achieve connectivity through LAN switches connected to the appropriate ELAN, the serial port using a SLIP connection, using Classical IP over the native ATM attachment, or, after connection, using the Ethernet adapter,

Default Configuration Parameters

The following sections list the default configuration parameters.

LECS - General Parameters

Parameter	Value
ATM Device	0
ESI	4000 8210 0001
Selector	00

LECS - Assignment Policies

Parameter	Value
Priority	10, 20
Policy (priority 10)	By ELAN name
Policy (priority 20)	By LAN type

4-1

Signaling Protocol

Parameter	Value
ATM	Auto detect

IP Configuration - Classical IP

Parameter	Value
Interface	0
Type	ATM
Slot	1
Port	1
IP Address	10.1.0.1
IP Subnet Mask Address	255.255.255.0
ARP Server	Enabled
Refresh	5 minutes
Auto-refresh	Enabled
ESI	4000 8210 0001
Selector	00
Maximum SDU Size	9188

Note: The ESI and selector are for both a Classical IP server and client that are enabled in the default MSS Server configuration. These values are required when configuring a Classical IP workstation to use the MSS Server as its ARP server.

Emulated LAN Configuration - Token Ring

Parameter	Value
Name	TRelan1
Device	0
LES/BUS ESI	4000 8210 0001
LES/BUS Selector	04
Policies (Name)	TRelan1
Policies (Type)	Token Ring

LEC Interfaces - Token Ring

Parameter	Value
Interface	1
MAC Address	4000 8210 0001
Name	TRelan1
Type	Token Ring
Device	0
ESI	4000 8210 0001
Selector	02

IP Configuration - Token-Ring LAN Emulation

Parameter	Value
Interface	1
LEC	TRelan1
IP Address	10.1.1.1
IP Subnet Mask	255.255.255.0

Emulated LAN Configuration - Ethernet

Parameter	Value
Name	ETHelan1
Device	0
LES/BUS ESI	4000 8210 0002
LES/BUS Selector	04
Policies (Name)	ETHelan1
Policies (Type)	Ethernet

LEC Interfaces - Ethernet

Parameter	Value
Interface	2
MAC Address	4000 8210 0002
Name	ETHelan1
Type	Ethernet
Device	0
ESI	4000 8210 0002
Selector	02

IP Configuration - Ethernet LAN Emulation

Parameter	Value
Interface	2
LEC	ETHelan1
IP Address	10.1.2.1
IP Subnet Mask	255.255.255.0

SNMP Communities

Parameter	Value
Name	Public
Access Type	Read/write

When to Perform an Initial Configuration

If you have a new MSS Server and do not want to use the default configuration, if you have cleared the MSS Server's configuration, or if you have encountered a problem that cleared the configuration, you must perform the steps in "Performing an Initial (Quick) Configuration" on page 4-4 before the MSS Server can be operational in the network.

If you currently have a configuration (for example, the default configuration), you can clear it by performing the following steps:

1 From the prompt for OPCON, which is an asterisk (*), type **talk 6**. The prompt Config> appears.

2 Enter **boot**. The prompt Boot config> appears.

3 Enter **clear all**, **clear device**, **exit**, and then **write**.

4 Reboot the MSS Server.

Note: The Quick Configuration program assumes many defaults, some of which may not be appropriate for your installation. It is therefore advisable to use Quick Configuration to create only a partial configuration, to restart the MSS Server by

entering the **restart** command, and then to configure the MSS Server fully from a
TCP/IP station using one of the other configuration methods (the command line
interface, the Configuration Program, or the web browser).

Performing an Initial (Quick) Configuration

Before starting the Quick Configuration process, read these notes:

- Information shown in brackets [ ], is the default. To use the default, press
  Enter. To use a value other than the default, choose from the values in the
  parentheses. If no value appears in the brackets, there is no default and you
  must type a value.

- To start or restart Quick Configuration from the Config> or Config (only)>
  prompt, type **qc** and press **Enter**.

- To return to the beginning of the current Quick Configuration section at any
  time, type **r**. For example, if you are in the Bridging Configuration section, type
  r and press **Enter** to return to the beginning of that section.

- To exit Quick Configuration, type **q** and press **Enter**. The Config> prompt will
  appear. Type **qc** and press **Enter**.

- When you have completed your configuration, you must restart the MSS Server
  for the configuration to take effect. At the end of the Quick Configuration
  program, you are given that option.

To start the Quick Configuration process:

1 Access the MSS Server as described in Chapter 3, "Accessing the MSS
Server." The MSS Server responds with the operator console (OPCON)
prompt (*).

2 Configure the MSS Server's interface number:

- Enter **talk 6** at the * prompt.

- Enter **add dev atm** at the Config > prompt.

  ```
  * talk 6
  Config>
  Config> add dev atm
  Device Slot #(1-2) [1]?
  Adding CHARM ATM device in slot 1 port 1 as interface #0
  Use "net 0" to configure CHARM ATM parameter
  Config>
  ```

3 Configure the ATM address by entering the **net** command. The ATM address
should be provided by your network administrator.

```
Config> net 0
ATM user configuration
ATM Config> exit
```

4 Start the Quick Configuration program to configure interfaces and bridging
and routing protocols by entering **qconfig** or simply **qc** from the Config>
prompt.

```
Config> qc
```

The Quick Configuration program presents a series of panels.

5 **Configure LAN Emulation:**

If your configuration program platform:

    a Uses LAN Emulation to reach the MSS Server, answer **Yes** to the Configure LAN Emulation question, supply the LAN Emulation information, and press **Enter** to accept the defaults.

    b Uses Classical IP to reach the MSS Server, answer **No** to the Configure LAN Emulation question.

6 **Configure Bridging:**

Answer **No** to the Configure Bridging question.

7 **Configure Protocols:**

Answer **Yes** to the Configure Protocols question.

8 **Configure IP:**

    a Answer **Yes** to the Configure IP question.

    b If your configuration platform uses Classical IP to reach the MSS Server, answer **Yes** to the Configure IP on this interface question for interface 0, then enter the IP address at the *IP Address* prompt, enter the IP mask at the *Address Mask* prompt, and answer the ARP Server questions as appropriate.

    c If your configuration program platform uses LAN Emulation to reach the MSS Server, answer **Yes** to the Configure IP on this interface question for any LAN Emulation interface that will communicate with the configuration program, answer **No** to the Configure IP on this interface question for any LAN Emulation interface that will **not** communicate with the configuration program, enter the IP address at the *IP Address* prompt, and then enter the IP mask at the *Address Mask* prompt.

    d Answer **No** to the Enable Dynamic Routing question.

    e Answer **Yes** to the Define Community question.

    f Answer **Yes** to the read_write_trap question.

    g Enter the community name used by the configuration program.

    h Answer **Yes** to the Save this configuration question.

9 **Configure IPX, Booting, and Console Modem-Control:**

Answer **No** to the Configure IPX question.

10 **Write Configuration:**

Answer **Yes** to the Write Configuration question.

11 **Restart the MSS Server:**

Answer **Yes** to the Restart the MSS Server question.

12 Save the configuration.

Attention: After you have configured the MSS Server and it is operational, **always** back up the active configuration file. Keeping this file enables you to re-establish the MSS Server on the network should the active configuration become corrupted.

You can back up the active configuration file by retrieving it and storing it in the workstation.

13 Notify the network administrator that the initial configuration has been completed.

Full Configuration

The initial configuration procedure you have just performed will enable you to access the MSS Server over the network. The network administrator can now perform a full configuration of the module using any of these methods:

- Configuration Program
- Web browser HTML interface
- Command line interface (OPCON)

However, the Configuration Program is the preferred configuration method for these reasons:

- It can enable you to keep a number of copies of configuration files on a server for uploading to the appropriate MSS Servers.

- It does not alter any configuration parameters dynamically. This feature helps you control changes to the MSS Server configurations.

- It performs more input validation and cross-checking of the configuration parameters than the other methods.

The command line interface and the web browser interface cause certain parameters to be altered dynamically. The binary files that they create are saved on the MSS Server, not in the workstation. These characteristics make them more difficult to use for managing the configuration of the MSS Server. However, they can be used to monitor the operations of the MSS Server, whereas the Configuration Program cannot. They are also useful when you want to change one of the parameters that can be dynamically altered.

For the information needed to complete the configuration, refer to the *Configuration Program User's Guide*, the *IBM Multiprotocol Switched Services (MSS) Server Interface Configuration and Software User's Guide*, and the *IBM Multiprotocol Switched Services (MSS) Configuring Protocols and Features*.

Appendix A. Common Tasks

This appendix provides a series of questions and answers dealing with common MSS Server installation, operation, and maintenance tasks, with suggestions as to where to find further help in performing them.

Command Line Interface

Question: How do I access the command line interface (the operating code)?

Answer: From within the firmware menu system (the System Management Services panel): press **F9**.

The command line interface is described in the *IBM Multiprotocol Switched Services (MSS) Server Interface Configuration and Software User's Guide*.

Displaying a List of Active Hardware Interfaces

Question: How do I display a list of active hardware interfaces?

Answer:

1 Type **talk 6** and press **Enter** twice to reach the Config> prompt.

2 Enter **list dev**.

3 Press **Ctrl-p** to return to the command line interface.

Displaying the Operational State of the Interfaces

Question: How do I see the state (for example, up, down, disabled) of an interface?

Answer:

1 Type **talk 5** and press **Enter** twice to reach the + (monitoring) prompt.

2 Enter **configuration**.

3 Press **Ctrl-p** to return to the command line interface.

Verifying Connectivity

Question: How do I verify that a given IP address is online?

Answer:

1 Type **talk 5** and press **Enter** twice to reach the + prompt.

2 Type **protocol** and press **Enter**.

3 Type **ip** and press **Enter**. The prompt changes to IP>.

4 Type **ping** *IP address value* and press **Enter**. Press **Enter** to stop the ping process.

5 Type **exit** at the IP> prompt and press **Enter**. The prompt changes to +.

6 Press **Ctrl-p** to return to the command line interface.

Viewing Vital Software Data

Question: How do I view vital software data?

Answer:

and press **Enter** twice. The Config> prompt appears.

1 Enter **boot**.

2 Enter **describe**. The vital software data is displayed.

3 Press **Ctrl-p** to return to the command line interface.

Viewing Vital Hardware Data

Question: How do I view vital hardware data?

Answer:

1 Access the firmware main menu: During boot-up, press **F1** at the Prematurely terminate boot sequence prompt.

2 Select **4. Utilities**.

3 Select **9. View or Set Vital Product Data**.

4 Select **Hardware Vital Product Data**. The vital hardware data is displayed.

5 Return to the firmware main menu.

6 Press **F9** to load the operating software.

Adding an Adapter

Question: How do I add an adapter when the MSS Server is being initially configured?

Answer: First, perform hardware installation of the adapter as described in the *Multiprotocol Switched Services (MSS) Server Service and Maintenance Manual*. Then:

1 Access the command line interface (∗ prompt).

2 Type **talk 6** and press **Enter** twice to reach the Config> prompt.

3 Enter **add device** *type of device*.

For example, **add device atm**

4 Enter the device slot number (1–2).

5 Make a note of the interface number to which this port is assigned and the net number.

Note: The steps only create the interface. You still have to use the **net** command to configure characteristics unique to that interface. You also need to use the **protocol** command to configure protocols on the interface.

Adding an Adapter after Initial Configuration

Question: How do I add an adapter after the MSS Server has been initially configured?

Answer: First, perform hardware installation of the adapter as described in the *Multiprotocol Switched Services (MSS) Server Service and Maintenance Manual*. Then:

> **1** Access the command line interface (∗ prompt).
>
> **2** Type **talk 6** and press **Enter** twice to reach the `Config>` prompt.
>
> **3** Enter **add device** *type of device*.
>
> For example, **add device atm**
>
> The following two steps do not apply when a dial-circuit device is being added.
>
> **4** Enter the device slot number (1–2).
>
> **5** Make a note of the interface number to which this port is assigned and the net number.
>
> **6** Enter **net** *net number* to enable you to configure interface-unique characteristics.
>
> **7** Enter **write** to save your changes.
>
> **8** Reboot the MSS Server to make the configuration changes active.

For details of this procedure, refer to the *IBM Multiprotocol Switched Services (MSS) Server Interface Configuration and Software User's Guide*.

Running Quick Configuration

Question: How do I run the Quick Configuration program?

Answer: At the `Config (only)` prompt, enter **qc**.

Disabling an Adapter Port

Question: How do I disable a configured adapter port?

Answer:

> **1** Access the command line interface (∗ prompt).
>
> **2** Type **talk 6** and press **Enter** twice to reach the `Config>` prompt.
>
> **3** Enter **list device**.
>
> **4** Make a note of the interface number of the port that you wish to disable.
>
> **5** Enter **disable interface** *interface number*.
>
> **6** Enter **write** to save your changes.
>
> **7** Reboot the MSS Server to make the configuration changes active.

For details of this procedure, refer to the *IBM Multiprotocol Switched Services (MSS) Server Interface Configuration and Software User's Guide*.

Enabling an Adapter Port

Question: How do I enable a configured adapter port that was disabled using **disable interface** (in "Disabling an Adapter Port")?

| **Answer:**

| **1** Access the command line interface (∗ prompt).

| **2** Type **talk 6** and press **Enter** twice to reach the `Config>` prompt.

| **3** Enter **list device**.

| **4** Make a note of the interface number of the port that you wish to enable.

| **5** Enter **enable interface** *interface number*.

| **6** Enter **write** to save your changes.

| **7** Reboot the MSS Server to make the configuration changes active.

| For details of this procedure, refer to the *IBM Multiprotocol Switched Services (MSS) Server
| Interface Configuration and Software User's Guide*.

| Disabling an Adapter Port to Suspend Traffic

| **Question:** How do I disable a configured adapter port to suspend traffic?

| **Answer:**

| **1** Access the command line interface (∗ prompt).

| **2** Type **talk 5** and press **Enter** twice to reach the + prompt.

| **3** Enter the **configuration** command.

| **4** Make a note of the interface number of the port that you want to disable.

| **5** Enter **disable** *interface number*.

| Enabling an Adapter Port to Resume Traffic

| **Question:** How do I enable a configured adapter port (that was disabled using the **talk 5 disable**
| command in "Disabling an Adapter Port to Suspend Traffic") to resume traffic?

| **Answer:**

| **1** Access the command line interface (∗ prompt).

| **2** Type **talk 5** and press **Enter** twice to reach the + prompt.

| **3** Enter the **configuration** command.

| **4** Make a note of the interface number of the port that you wish to enable.

| **5** Enter **test** *interface number*.

| **Note:** If you use the **test** command to enable an interface that has been configured (in
| **talk 6**) as disabled, the next time that you reboot the MSS Server the interface will be
| disabled again.

| Therefore, you should also use the **talk 6 enable interface** command to ensure that the
| interface is enabled the next time a reboot does occur.

| For details of this procedure, refer to the *IBM Multiprotocol Switched Services (MSS) Server
| Interface Configuration and Software User's Guide*.

Deleting an Adapter from the Configuration

Question: How do I delete an adapter from the configuration?

Answer:

1 Access the command line interface (∗ prompt).

2 Type **talk 6** and press **Enter** twice to reach the `Config>` prompt.

3 Enter **list device**.

4 On a sheet of paper, write down the interface number of the adapter you wish to delete.

> **Note:** If you are removing a multi-port adapter, then you need to record the interface number of all interfaces configured for that adapter.

5 Enter **delete interface** *interface number*.

6 At the `Are you sure?` prompt, enter **y**.

7 Enter **write** to save your changes.

8 Reboot the MSS Server to make the configuration changes active.

For details of this procedure, refer to the *IBM Multiprotocol Switched Services (MSS) Server Interface Configuration and Software User's Guide*.

Up-to-Date MSS Server Information

Question: How can I find out the most current information about the MSS Server?

Answer: Point your web browser to:

`http://www.networking.ibm.com/820/820prod.html`

Appendix B. Notices

References in this publication to IBM products, programs, or services do not imply that IBM intends to make these available in all countries in which IBM operates. Any reference to an IBM product, program, or service is not intended to state or imply that only IBM's product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any of IBM's intellectual property rights may be used instead of the IBM product, program, or service. Evaluation and verification of operation in conjunction with other products, except those expressly designated by IBM, are the user's responsibility.

IBM may have patents or pending patent applications covering subject matter in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to the IBM Director of Licensing, IBM Corporation, 500 Columbus Avenue, THORNWOOD NY 10594 USA.

United Kingdom Homologation Compliance Statement

> STATEMENT OF COMPLIANCE
>
> The United Kingdom Telecommunications Act 1984. This equipment is approved under General Approval Number
> NS/G/1234/J/100003
>
> for indirect connections to the public telecommunications systems in the United Kingdom.

Electronic Emission Notices

Federal Communications Commission (FCC) Statement

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors (IBM part number 55H8694 or its equivalent for the data/fax/voice modem, or IBM part number 72H4447 or equivalent for the data/fax modem) must be used in order to meet the FCC emissions limits. IBM is not responsible for any radio or television interference caused by using other that recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications to this equipment may cause interference which could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Industry Canada Class A Emission Compliance Statement

This Class A digital apparatus complies with Canadian ICES-003.

Avis de conformité aux normes d'Industrie Canada

Cet appareil numérique de la classe A est conform à la norme NMB-003 du Canada.

European Union (EU) Mark of Conformity Statement

This product is in conformity with the protection requirements of EU Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility. IBM cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including fitting of non-IBM option cards.

Properly shielded and grounded cables and connectors (IBM part number 72H4447 or equivalent for the data/fax modem) must be used in order to reduce the potential for causing interference to radio and TV communications and to other electrical or electronic equipment. IBM cannot accept responsibility for any interference caused by using other than recommended cables and connectors.

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) vom 30. August 1995 (bzw. der EMC EG Richlinie 89/336).

Dieses Gerät ist berechtigt in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen.

Verantwortlich für die Konformitätserklärung nach Paragraph 5 des EMVG ist die IBM Deutschland Informationssysteme GmbH, 70548 Stuttgart.

Informationen in Hinsicht EMVG Paragraph 3 Abs. (2) 2:

Das Gerät erfüllt die Schutzanforderungen nach EN 50082-1 und EN 55022 Klasse A.

EN 55022 Klasse A Geräte müssen mit folgendem Warnhinweis versehen werden: "Warnung: dies ist eine Einrichtung der Klasse A. Diese Einrichtung kann im Wohnbereich Funkstörungen verursachen; in diesem Fall kann vom Betreiber verlangt werden, angemessene Maßnahmen durchzuführen und dafür aufzukommen."

EN 50082-1 Hinweis:

"Wird dieses Gerät in einer industriellen Umgebung betrieben (wie in EN 50082-2 festgelegt), dann kann es dabei eventuell gestört werden. In solch einem Fall ist der Abstand bzw. die Abschirmung zu der industriellen Störquelle zu vergrößern."

Anmerkung:
Um die Einhaltung des EMVG sicherzustellen sind die Geräte, wie in den IBM Handbüchern angegeben, zu installieren und zu betreiben.

Japanese Voluntary Control Council for Interference (VCCI) Statement

This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に
基づくクラスＡ情報技術装置です。この装置を家庭環境で使用すると電波妨害を
引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求
されることがあります。

Korean Communications Statement

Please note that this device has been certified for business purpose with regard to electromagnetic interference. If you find this is not suitable for your use, you may exchange it for one of residential use.

CISPR22 Compliance Statement

This product has been tested and found to comply with the limits for Class A Information Technology Equipment according to CISPR22 / European Standard EN 55022. The limits for Class A equipment were derived for commercial and industrial environments to provide reasonable protection against interference with licensed communication equipment.

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Taiwanese Class A Warning Statement

警告使用者:
這是甲類的資訊產品，在
居住的環境中使用時，可
能會造成射頻干擾，在這
種情況下，使用者會被要
求採取某些適當的對策•

Trademarks

The following terms are trademarks of the International Business Corporation in the United States and/or other countries:

IBM	Nways	PowerPC
Library Reader	OS/2	PS/2

Microsoft, Windows, Windows NT, and the Windows 95 logo are trademarks or registered trademarks of Microsoft Corporation.

Other company, product, and service names may be trademarks or service marks of others.

Appendix C. Safety Information

Safety Pointers

⚠ **Danger:** Before you begin to install this product, read the safety information in *Caution: Safety Information—Read This First*, SD21-0030. This booklet describes safe procedures for cabling and plugging in electrical equipment.

⚠ **Gevaar:** Voordat u begint met de installatie van dit produkt, moet u eerst de veiligheidsinstructies lezen in de brochure *PAS OP! Veiligheidsinstructies—Lees dit eerst,* SD21-0030. Hierin wordt beschreven hoe u electrische apparatuur op een veilige manier moet bekabelen en aansluiten.

⚠ **Danger:** Avant de procéder à l'installation de ce produit, lisez d'abord les consignes de sécurité dans la brochure *ATTENTION: Consignes de sécurité—A lire au préalable,* SD21-0030. Cette brochure décrit les procédures pour câbler et connecter les appareils électriques en toute sécurité.

⚠ **Perigo:** Antes de começar a instalar este produto, leia as informações de segurança contidas em *Cuidado: Informações Sobre Segurança—Leia Isto Primeiro,* SD21-0030. Esse folheto descreve procedimentos de segurança para a instalação de cabos e conexões em equipamentos elétricos.

⚠

危險：安裝本產品之前，請先閱讀
"Caution: Safety Information–Read
This First" SD21-0030　手冊中所提
供的安全注意事項。 這本手冊將會說明
使用電器設備的纜線及電源的安全程序。

⚠

Opasnost: Prije nego sto pǒcnete sa instalacijom produkta, pročitajte naputak o pravilima o sigurnom rukovanju u Upozorenje: Pravila o sigurnom rukovanju - Prvo pročitaj ovo, SD21-0030. Ovaj privitak opisuje sigurnosne postupke za priključivanje kabela i priključivanje na električno napajanje.

⚠

Upozornění: než zahájíte instalaci tohoto produktu, přečtěte si nejprve bezpečnostní informace v pokynech „Bezpečnostní informace" č. 21-0030. Tato brožurka popisuje bezpečnostní opatření pro kabeláž a zapojení elektrického zařízení.

⚠️ **Fare!** Før du installerer dette produkt, skal du læse sikkerhedsforskrifterne i *NB: Sikkerhedsforskrifter—Læs dette først* SD21-0030. Vejledningen beskriver den fremgangsmåde, du skal bruge ved tilslutning af kabler og udstyr.

⚠️ **Gevaar** Voordat u begint met het installeren van dit produkt, dient u eerst de veiligheidsrichtlijnen te lezen die zijn vermeld in de publikatie *Caution: Safety Information - Read This First*, SD21-0030. In dit boekje vindt u veilige procedures voor het aansluiten van elektrische appratuur.

⚠️ **VAARA:** Ennen kuin aloitat tämän tuotteen asennuksen, lue julkaisussa *Varoitus: Turvaohjeet—Lue tämä ensin*, SD21-0030, olevat turvaohjeet. Tässä kirjasessa on ohjeet siitä, miten sähkölaitteet kaapeloidaan ja kytketään turvallisesti.

⚠️ **Danger :** Avant d'installer le présent produit, consultez le livret *Attention : Informations pour la sécurité — Lisez-moi d'abord*, SD21-0030, qui décrit les procédures à respecter pour effectuer les opérations de câblage et brancher les équipements électriques en toute sécurité.

⚠️ **Vorsicht:** Bevor mit der Installation des Produktes begonnen wird, die Sicherheitshinweise in *Achtung: Sicherheitsinformationen—Bitte zuerst lesen,* IBM Form SD21-0030. Diese Veröffentlichung beschreibt die Sicherheitsvorkehrungen für das Verkabeln und Anschließen elektrischer Geräte.

⚠️

Κίνδυνος: Πριν ξεκινήσετε την εγκατάσταση αυτού του προϊόντος, διαβάστε τις πληροφορίες ασφάλειας στο φυλλάδιο *Caution: Safety Information-Read this first,* SD21-0030. Στο φυλλάδιο αυτό περιγράφονται οι ασφαλείς διαδικασίες για την καλωδίωση των ηλεκτρικών συσκευών και τη σύνδεσή τους στην πρίζα.

⚠️ **Vigyázat:** Mielôtt megkezdi a berendezés üzembe helyezését, olvassa el a *Caution: Safety Information— Read This First,* SD21-0030 könyvecskében leírt biztonsági információkat. Ez a könyv leírja, milyen biztonsági intézkedéseket kell megtenni az elektromos berendezés huzalozásakor illetve csatlakoztatásakor.

⚠️ **Pericolo:** prima di iniziare l'installazione di questo prodotto, leggere le informazioni relative alla sicurezza riportate nell'opuscolo *Attenzione: Informazioni di sicurezza — Prime informazioni da leggere* in cui sono descritte le procedure per il cablaggio ed il collegamento di apparecchiature elettriche.

⚠️

危険：　導入作業を開始する前に、安全に関する
小冊子SD21-0030　の「最初にお読みください」
(Read This First)の項をお読みください。
この小冊子は、電気機器の安全な配線と接続の
手順について説明しています。

⚠️

위험: 이 제품을 설치하기 전에 반드시
"주의: 안전 정보-시작하기 전에"
(SD21-0030)   에 있는 안전 정보를
읽으십시오.

⚠️

ОПАСНОСТ
Пред да почнете да го инсталирате овој продукт, прочитајте
ja информацијата за безбедност:
"Предупредување: Информација за безбедност: Прочитајте го
прво ова", SD21-0030.
Оваа брошура опишува безбедносни процедури за каблирање
и вклучување на електрична опрема.

⚠️ **Fare:** Før du begynner å installere dette produktet, må du lese sikkerhetsinformasjonen i *Advarsel: Sikkerhetsinformasjon — Les dette først*, SD21-0030 som beskriver sikkerhetsrutinene for kabling og tilkobling av elektrisk utstyr.

⚠️

Uwaga:
Przed rozpoczęciem instalacji produktu należy zapoznać się z instrukcją:
"Caution: Safety Information - Read This First", SD21-0030.
Zawiera ona warunki bezpieczeństwa przy podłączaniu do sieci elektrycznej
 i eksploatacji.

⚠️ **Perigo:** Antes de iniciar a instalação deste produto, leia as informações de segurança *Cuidado: Informações de Segurança — Leia Primeiro*, SD21-0030. Este documento descreve como efectuar, de um modo seguro, as ligações eléctricas dos equipamentos.

⚠️

ОСТОРОЖНО: Прежде чем инсталлировать этот
продукт, прочтите Инструкцию по технике безо-
пасности в документе "Внимание: Инструкция по
технике безопасности -- Прочесть в первую очередь",
SD21-0030. В этой брошюре описаны безопас-
ные способы каблирования и подключения элект-
рического оборудования.

Nebezpečenstvo: Pred inštaláciou výrobku si prečítajte
bezpečnosté predpisy v
Výstraha: Bezpeč osté predpisy - Prečítaj ako prvé,
SD21 0030. V tejto brožúrke sú opísané bezpečnosté
postupy pre pripojenie elektrických zariadení.

Pozor: Preden zaènete z instalacijo tega produkta
preberite poglavje: ´Opozorilo: Informacije
o varnem rokovanju-preberi pred uporabo,"
SD21-0030. To poglavje opisuje pravilne
postopke za kabliranje,

 Peligro: Antes de empezar a instalar este producto, lea la información de seguridad en *Atención: Información de Seguridad — Lea Esto Primero,* SD21-0030. Este documento describe los procedimientos de seguridad para cablear y enchufar equipos eléctricos.

 Varning — livsfara: Innan du börjar installera den här produkten bör du läsa säkerhetsinformationen i dokumentet *Varning: Säkerhetsföreskrifter— Läs detta först,* SD21-0030. Där beskrivs hur du på ett säkert sätt ansluter elektrisk utrustning.

危險：

開始安裝此產品之前，請先閱讀安全資訊。

注意：

請先閱讀 - 安全資訊 SD21-0030

此冊子說明插接電器設備之電纜線的安全程序。

Power Disconnect

 Danger: The main power disconnect for this unit is the appliance inlet located on the back of the machine. Therefore, the machine should be installed in such a way that the appliance inlet can be accessed.

اقبإفيجآبإ!حمنعبر("ق!لت"تف!ذ"ج)يُحجا!حمنعبر("قلحظعإع!حمغ٩آف عغفيآالا!حمنعبر("ق
!حمإفغغغةةآآحمىخ!لمع"ـبإحمإحمبس+ـبتمغ+!لمع"ـب(قبغف ـت"("حمغحجغم(؟؟آآالا!حمنعبر("ق
(تعغحمف

 DANGER. Le dispositif permettant de couper l'alimentation principale de cette unité se situe à l'arrière de la machine. Ce dispositif doit donc être accessible.

| ⚠ **Vorsicht:** Der Hauptschalter zur Unterbrechung der Stromversorgung für diese Einheit ist der
| Schalter, der sich auf der Rückseite der Maschine befindet. Die Maschine sollte daher so aufgestellt
| werden, daß dieser Schalter jederzeit zugänglich ist.

⚠ Κίνδυνος: Η αποσύνδεση της παροχής ρεύματος στη συσκευή
γίνεται από την υποδοχή που βρίσκεται στο πίσω μέρος της
μηχανής. Επομένως, η μηχανή πρέπει να εγκατασταθεί με τρόπο
που να επιτρέπει την πρόσβαση στην υποδοχή αυτή.

| ⚠ **Pericolo:** Per scollegare questa unità, occorre staccare la spina posta sul retro della macchina;
| pertanto la macchina deve essere installata in modo tale che tale spina sia accessibile.

⚠ 危険：

この装置の非常時の電源の切断は機械の背面にある電源入力
コネクターで行います。従って、装置を設置する場合はこの
コネクターへのアクセスに障害のないようにしてください。

| ⚠ **Fare:** Denne enheten frakobles hovednettet via apparatinntaket på baksiden av maskinen. Derfor
| må maskinen installeres slik at apparatinntaket er lett tilgjengelig.

| ⚠ **Perigo:** Para desligar a alimentação principal desta unidade é necessário desconectar o cabo da
| tomada eléctrica localizada na parte posterior da máquina. Por consequência, a máquina deve ser
| instalada de modo a permitir o fácil acesso a essa tomada.

⚠ ОПАСНО: Разъем для отключения питания данного блока
расположен на задней стенке. Поэтому устанавливайте
машину так, чтобы разъем питания был доступен.

| ⚠ **Peligro:** El interruptor principal de desconexión de esta unidad es la entrada de conexión del
| aparato situado en la parte trasera de la máquina. Por lo tanto, la máquina debe instalarse de modo que
| la entrada de conexión del aparato sea accesible.

| ⚠ **FARA:** Brytning av huvudströmmen till den här enheten görs vid elanslutningen på baksidan av
| maskinen. Placera därför maskinen så att elanslutningen är lättåtkomlig.

⚠ 危險：本機器的主電源插頭在機器背面。安裝本機器時，請預留空
間以方便連接或切斷電源。

⚠ **Tehlike:** Bu birimin elektrik bağlantısı, makinenin arkasındaki
aygıt girişinden kesilir. Bu nedenle makine, arkasındaki aygıt
girişine kolayca ulaşılabilecek biçimde kurulmalıdır.

| ⚠ **Caution:** Danger of explosion if battery is incorrectly replaced.

| Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used
| batteries according to the manufacturer's instructions.

| ⚠ **WAARSCHUWING:** Explosiegevaar als de batterij door een verkeerde batterij wordt vervangen.

| Vervang alleen door hetzelfde of gelijkwaardige type dat door de fabrikant is aanbevolen. Volg voor het
| wegdoen van gebruikte batterijen de instructies van de fabrikant.

| ⚠ **CUIDADO:** Perigo de explosão, se a bateria for substituída incorretamente.

| Substitua apenas por uma bateria igual ou equivalente, recomendada pelo fabricante. Descarte as
| baterias usadas de acordo com as instruções do fabricante.

| ⚠

注意

如果不正确地更换电池，它将会有爆炸的危险。

仅可用制造商推荐的同一种或相同类型的电池进行更换。
按制造商的指示来销毁使用过的电池。

| ⚠

注意
更换電池不當時，會有爆炸的危險。

請更換相同的電池或製造
商所建議的型號相當。
請依製造商的指示
回收廢棄的電池。

| ⚠

UPOZORENJE

Ako se kod zamjene baterija nepravilno uloži, postoji
opasnost od eksplozije.

Zamijenite samo s istim tipom ili istovrsnim
dijelom kojeg preporuča proizvođač.
Uklonite istrošene akumulatore prema
uputama proizvođača.

| ⚠ **Pas på!** Batteriet kan eksplodere, hvis det ikke udskiftes korrekt.

| Udskift batteriet med et batteri af samme eller tilsvarende type, som forhandleren anbefaler. Brugte
| batterier skal kasseres i overensstemmelse med gældende miljøbestemmelser.

| ⚠ **WAARSCHUWING:** Explosiegevaar als de batterij door een verkeerde batterij wordt vervangen.

| Vervang alleen door hetzelfde of gelijkwaardige type dat door de fabrikant is aanbevolen. Volg voor het
| wegdoen van gebruikte batterijen de instructies van de fabrikant.

| **Varoitus:** Paristo voi räjähtää, jos se asennetaan väärin.

| Pariston saa vaihtaa vain samanlaiseen tai vastaavaan valmistajan suosittelemaan paristoon. Hävitä
| paristo ongelmajätteistä säädettyjen lakien ja viranomaisten määräysten mukaisesti.

| **Attention:** Pour éviter tout risque d'explosion, remplacez la pile selon les instructions du fabricant
| qui en définit les équivalences.

| Conformez-vous à la réglementation en vigueur pour le recyclage ou la mise au rebut des piles usagées.

| **ACHTUNG:** Die Batterie kann bei unsachgemäßem Austauschen explodieren.

| Nur die vom Hersteller empfohlene oder eine gleichwertige Batterie verwenden. Nach Gebrauch als
| Sondermüll entsorgen.

|

ΠΡΟΣΟΧΗ

Κίνδυνος έκρηξης αν η μπαταρία δεν αντικατασταθεί σωστά.

Αντικαταστήστε τη μόνο με μπαταρία ίδιου ή ισοδύναμου
τύπου προτεινόμενη από τον κατασκευαστή.
Πετάξτε τις χρησιμοποιημένες μπαταρίες σύμφωνα
με τις οδηγίες του κατασκευαστή.

|

FIGYELEM!

A szakszerûtlenül kicserélt telep robbanást okozhat.
Csak azonos, vagy a gyártó által ajánlott másik
típusra cserélje!
Az elhasznált telepeket az erre kijelölt hulladék-
gyûjtõkben helyezze el..

| **ATTENZIONE:** Pericolo di esplosione se la batteria non è sostituita correttamente. Sostituirla solo
| con batterie dello stesso tipo o di tipo equivalente. Le batterie usate vanno smaltite in accordo alla
| normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali).

⚠

危険

『バッテリーの取扱いが正しくないと爆発の危険があります』

交換は製造者の勧める同一品または同等品
だけを使ってください。
使用済みバッテリーの廃棄は製造者の説月
どうりにして

⚠

주의

배터리를 올바르게 교체하지 않으면 폭발의 위험이 있습니다.

반드시 제조업체가 지정한,
같거나 비슷한 종류로 교체하십시오.
사용하신 배터리는 제조업체의
지시에 따라 폐기 처리하십시오.

⚠

ПРЕДУПРЕДУВАЊЕ

Опасност од експлозија ако батеријата е
погрешно заменета.

Заменете ја само со ист или еквивалентен тип
препорачан од производителот.
Ослободете се од употребените батерии според
инструкциите на производителот.

⚠ **ADVARSEL:** Batteriet kan eksplodere hvis det ikke settes inn riktig.

Batteriet må bare erstattes med samme type batteri eller med et tilsvarende batteri som anbefales av fabrikanten. Ikke kast det brukte batteriet som vanlig avfall. Lever det til forhandleren, på en miljøstasjon eller ved et mottak for spesialavfall.

⚠

UWAGA

Nieprawidłowe włożenie baterii grozi eksplozją.

Należy wymienić tylko na baterię tego samego lub zamiennego
typu zalecanego przez producenta.
Zużyte baterie należy usuwać zgodnie
z instrukcjami producenta.

| ⚠

| **CUIDADO:** Perigo de explosão se a bateria for incorrectamente substituída.

| Substitua a bateria por outra igual ou de um tipo equivalente recomendado pelo fabricante. Destrua as
| baterias usadas de acordo com as instruções do fabricante.

| ⚠

ОСТОРОЖНО

При неправильной замене батареи возможен взрыв.

Заменяйте батарею на такую
же или на батарею эквивалентного
типа, рекомендованного изготовителем.
При утилизации использованных батарей
следуйте инструкциям изготовителя.

| ⚠

VÝSTRAHA

Nebezpečie výbudchu pri nesprávnej výmene batérie.

Nahrádzajte iba za ten istý alebo equivalentný typ
podľa doporučenia výrobcu.
Použité batérie skladujte podľa
pokyno   výrob

| ⚠

OPOZORILO

Nevarnost eksploozije, če se baterija nepravilno zamenja.

Za zamenjavo uporabite enak ali enakovreden tip
baterije, kot ga priporoča proizvajalec.
Uporabljene baterije odstranite po navodilih proizvajalca.

| ⚠ **Precausión:** Peligro de explosión si se sustituye incorrectamente la batería.

| Sustituya solamente por el mismo tipo o tipo equivalente recomendado por el fabricante. Deseche las
| baterías usadas siguiendo las instrucciones del fabricante.

| ⚠ **Varning:** Explosionsrisk vid batteribyte.

| Byt endast till samma typ av batteri eller till likvärdigt batteri som rekommenderas av tillverkaren. Följ
| tillverkarens instruktioner vid kassering av uttjänta batterier.

Class 1 LED Statement

Class 1 LED Product
LED Klasse 1
LED Klass 1
Luokan 1 Ledlaite
Appareil À LED de Classe 1

To IEC 825-1:1993

Class 1 Laser Statement

Class 1 Laser Product
Laser Klasse 1
Laser Klass 1
Luokan 1 Laserlaite
Appareil À Laser de Classe 1

To IEC 825-1:1993

Lithium Battery Statement

The MSS Server processor card contains a clock module that has an embedded lithium battery that is not replaceable. Please dispose of this module in accordance with local ordinances.

Index

A

accessing the MSS Server
  in-band   3-1
  out-of-band   3-1
  overview   3-1
  physical connection   3-5
  remote connection   3-5
address
  ATM   4-4
  Ethernet   3-4, 4-4
  SLIP   3-4
asynchronous transport protocol
  See ATM (asynchronous transport protocol)
ATM (asynchronous transport protocol)
  address   4-4

B

backing up the configuration   4-6
bridging
  configuring, general   4-4
  configuring, Quick Configuration   4-5

C

CD-ROM
  installation   vii
  Library Reader   vii
  MSS Server publications   vii
CD-ROM publications   vii
changes since last edition   viii
command line interface (a configuration method)   4-6
common tasks   A-1
community name
configuration
  backup   4-6
  full
    managing problems   4-6
    setting up the MSS Server   4-6
  initial
    problems   4-6
    setting up the MSS Server   4-4
  IP   4-5
  IPX   4-5
  overview   v
  problems   4-6
  SLIP   3-4
  write configuration   4-5
Configuration Program (a configuration method)   4-6
connecting to the MSS Server   3-1
console access
  local   3-3

console access *(continued)*
  remote   3-3

D

default configuration   1-9, 4-1
default settings
  Data/Fax PCMCIA Modem   3-3
  MSS Server   4-1
  serial port   3-3

E

Ethernet
  10BASE-T cable   3-4
  address   3-4, 4-4

F

fax, default settings   3-3

H

hardware, methods of connection   3-1

I

in-band access   3-1
installation
  CD-ROM   vii
  MSS Server   1-1
  overview   v
  PCMCIA device   1-7
IP (Internet Protocol), configuring   4-5
IPX (Internet Package Exchange), configuring   4-5

L

LAN emulation
  configuring, Quick Configuration   4-5
  default configuration   4-1
local connection   3-1, 3-3

M

managing configuration problems   4-6
methods of connection   3-1
  ATM network   3-5
  SLIP   3-4
  TTY   3-1
modem   3-3
MSS Server
  accessing
    in-band   3-1

© Copyright IBM Corp. 1996, 1998

X-1

Tell Us What You Think!

**Multiprotocol Switched Services (MSS) Server
Installation and Initial Configuration
Guide**

Publication No. GA27-4140-02

We hope you find this publication useful, readable, and technically accurate, but only you can tell us!
Your comments and suggestions will help us improve our technical publications. Please take a few
minutes to let us know what you think by completing this form. If you are in the U.S.A., you can mail this
form postage free or fax it to us at 1-800-253-3520. Elsewhere, your local IBM branch office or
representative will forward your comments or you may mail them directly to us.

Overall, how satisfied are you with the information in this book?	Satisfied	Dissatisfied
	☐	☐

How satisfied are you that the information in this book is:	Satisfied	Dissatisfied
Accurate	☐	☐
Complete	☐	☐
Easy to find	☐	☐
Easy to understand	☐	☐
Well organized	☐	☐
Applicable to your task	☐	☐

Specific comments or problems:

_____

_____

_____

Please tell us how we can improve this book:

_____

_____

_____

Thank you for your comments. If you would like a reply, provide the necessary information below.

_____ _____
Name   Address

_____ _____
Company or Organization

_____
Phone No.

Tell Us What You Think!
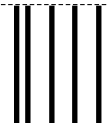GA27-4140-02

IBM®

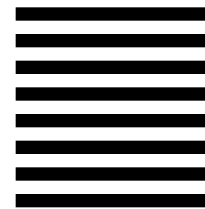Fold and Tape   **Please do not staple**   Fold and Tape

NO POSTAGE
NECESSARY
IF MAILED IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST-CLASS MAIL   PERMIT NO. 40   ARMONK, NEW YORK

POSTAGE WILL BE PAID BY ADDRESSEE

Design & Information Development
Dept. CGF/Bldg. 656
International Business Machines Corporation
PO BOX 12195
RESEARCH TRIANGLE PARK NC 27709-9990

Fold and Tape   **Please do not staple**   Fold and Tape

GA27-4140-02

IBM ®

Part Number: 86H2946

Printed in the United States of America
on recycled paper containing 10%
recovered post-consumer fiber.