3746 Nways Multiprotocol Controller Model 950

User's Guide

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3746 Nways Multiprotocol Controller Model 950

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User's Guide

Note!

Before using this information and the product it supports, be sure to read the general information under "Notices" on page xi.

Sixth Edition (October 1998)

The information contained in this manual is subject to change from time to time. Any such changes will be reported in later revisions.

Changes have been made throughout this edition, and this manual should be read in its entirety.

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When used near a radio or TV receiver, it may become the cause of radio interference.

Read the instructions for correct handling.

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Please note that this device has been approved for business purpose with regard to electromagnetic interference. If you find this is not suitable for your use, you may install the device on a raised metal floor, with cables underneath the floor. Under this condition, the device may be used in any environment including residential area.

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AIX	HPR	OS/2
APPN	IBM	PS/2
CCM	MOSS-E	RETAIN
DCAF	NetView	TCP/IP
ESCON	Nways	TME 10 Remote Control

The following terms, denoted by a double asterisk (**), used in this publication, are trademarks of other companies:

Console for Java	Windows 98
Macintosh	Windows NT
Windows 95	UNIX

Safety

This product meets IBM* Safety standards.

For more information, see the Safety Information, GA33-0400.

Safety Notices for United Kingdom

- 1. The IBM 3746 Nways Multiprotocol Controller Model 950 is manufactured according to the International Safety Standard EN 60950 and as such is approved in the UK under the General Approval Number NS/G/1234/J/100003 for indirect connection to the public telecommunication network.
- 2. The network adapter interfaces housed within the IBM 3746 Nways Multiprotocol Controller Model 950 are approved separately, each one having its own independent approval number. These interface adapters, supplied by IBM, do not use or contain excessive voltages. An excessive voltage is one that exceeds 42.4 V peak ac or 60 V dc. They interface with the IBM 3746 Nways Multiprotocol Controller Model 950 using Safety Extra Low Voltages (SELV) only. In order to maintain the separate (independent) approval of the IBM adapters, it is essential that other optional cards, not supplied by IBM, do not use mains voltages or any other excessive voltages. Seek advice from a competent engineer before installing other adapters not supplied by IBM.

About this Guide

This guide applies to the IBM 3746 Nways* Multiprotocol Controller Model 950.

It combines the *Basic Operations Guide*, SA33-0177, the *Console Setup Guide* SA33-0158, and *Connection and Integration Guide*, SA33-0129.

It describes how to do the following:

- Carry out daily routine operations on the IBM 3746.
- Install, test, and customize your 3746 after installation.
- Configure user workstations to remotely control the service processor using the following:
 - DCAF^{1*}.
 - Telnet Client.
 - Console for Java**.

Conventions Used in this Guide

Throughout this guide the terms:

3745	Refers to the IBM 3745 Models 17A, 21A, 31A, 41A, and 61A with any 3746 Expansion Unit Models A11, A12, L13, L14 and L15 that may be installed.
3746-950	Refers to the IBM 3746 Nways Multiprotocol Controller Model 950.
3746-950 NN	Refers to the part of the 3746-950 operating as an Advanced Peer-to-Peer Networking/High Performance Routing (APPN/HPR) Network Node.
3746-950 IP	Refers to the part of the 3746-950 operating as an IP router.
3746	Refers to the IBM 3746 Nways Multiprotocol Controller Models 900 and 950.

Who Should Use this Guide

- Personnel without specialist knowledge carrying out daily routine operations.
- Non-IBM personnel configuring remote consoles connected to the service processor running the MOSS-E.
- Personnel creating and maintaining 3746 configurations such as:
 - Network generalists
 - System programmers
 - System service personnel
 - IBM trained service representatives.

¹ The Distributed Console Access Facility (DCAF) 1.3. (or higher) is provided by TME 10 Remote Control. However, DCAF is used throughout this guide, although it is part of a larger Tivoli product and the installation diskettes refer to TME 10 Remote Control. For more information, see Chapter 6, "Introduction to Remote Access Programs" on page 6-1.

An understanding of Advanced Peer-to-Peer Networking/High Performance Routing (APPN*/HPR*), IP routing, and modems would be helpful in reading this guide.

For more information, see the following:

- On-line information (help, guides, and other material) for:
 - Maintenance and Operator Sub-System Extended (MOSS-E*)
 - Controller Configuration and Management (CCM*)
 - APPN/HPR and IP Control Point functions
 - Multiaccess Enclosure (MAE) management
 - DCAF* installation
 - TCP/IP* environment.

See also the publications listed in Appendix F, "Bibliography" on page F-1.

How this Guide is Organized

This guide consists of the following chapters and appendixes:

- Chapter 1, "General Information on 3745 and 3746 Controllers," gives an overview of 3745 and 3746 controllers, with specifics on the controller panel, and additonal pointers on problem solving.
- Chapter 2, "Service Processor," explains the functions of the service processor and how to connect a service processor to a remote console.
- Chapter 3, "Maintenance and Operator Sub-System-Extended (MOSS-E)," explains how to use MOSS-E and MOSS sessions for the 3746.
- Chapter 4, "Working with Network Node Processor (NNP) Functions," explains how to access the APPN/HPR control point and IP router functions of the NNP via the MOSS-E.
- Chapter 5, "Telnet IP Resource Management in CCM and MOSS-E," contains information on using CCM and and the MOSS-E for Telnet commands.
- Chapter 6, "Introduction to Remote Access Programs" to Chapter 13, "APPC LAN-Attached Remote Workstation," explains how to configure remote consoles that use DCAF to monitor and control the service processor and the MOSS-E. Examples are shown of five types of connection (LAN-APPC, LAN-TCP/IP, Modem, SNA, and APPN) between a remote console and the service processor.
- Chapter 14, "Telnet-attached Remote Workstation," explains how to configure remote consoles that use Telnet Client program. Access is given to the network node processor for IP purpose only.
- Chapter 15, "Console for Java Remote Access" on page 15-1 to Chapter 17, "Installing Console for Java Program" on page 17-1, describes how to configure remote workstations using the web-based or Java program-based Console for Java. Example configurations are given of two types of link (switched-line, and service ring LAN) via Console for Java to the target service processor.
- Appendix A, "3746 Operator Control Panel," explains how to work with the 3746 operator control panel.

- Appendix B, "Basic Service Procedures," explains how to activate, deactivate, and perform an IML for the 3746, and is designed as a reference to service procedures normally performed by service personnel.
- Appendix C, "Installing LCBs, ARCs, and Connecting Cables," describes how to connect the hardware for LICs, TICs, and communication line and service line cables.
- Appendix D, "Configuration for a Two-Target Remote Workstation," describes an example configuration of a remote workstation controlling two target service processors.
- Appendix E, "Modem Setup" on page E-1 describes the modem settings for IBM modems recommended for use with DCAF.
- Appendix F, "Bibliography," lists the available customer documentation related to the 3745 and 3746.

The following information is included at the back of this guide:

- A list of abbreviations used in this guide, on page X-1
- A glossary of terms which may be unfamiliar, on page X-3
- An index is provided on page X-7.

What is New in this Guide

This revised edition gives information concerning the new functions:

- Service Processor Customization.
- Licensed Internal Code Information.
- CCM/Telnet User Profiles Management.

Where to Find More Information

- "Customer Documentation for the 3746 Model 950" on page F-1.
- "Help Pull-Down Menu" on page 3-8.
- DCAF: Installation and Configuration Guide, SH19-4068.
- Using the Enterprise Systems Connection Analyzer, GA23-0386.
- IBM 3746 APPN/HPR Implementation Guide, SG24-2536.
- IBM 3746 IP Implementation Guide, SG24-4845.
- Subarea Network to APPN Network Migration Experience, SG24-4656.
- *IBM Networking Systems Collection*, SK2T-6012.

World Wide Web

You can access the latest news and information about IBM network products, customer service and support, and microcode upgrade via Internet at the URL:

http://www.networking.ibm.com

Chapter 1. General Information on 3745 and 3746 Controllers

The IBM 3745 and 3746 Controllers Family

For more than two decades, IBM's advanced line of communication controllers (3705, 3720, 3725, 3745, and 3746) have proved an effective solution for rapid changes in network technology. In particular, the 3745s and, more recently, the 3746-900 and the 3746-950, have proved cost effective for network evolution and adaptability to new functions.

IBM communication controllers include the following:

- 3745 Models 130, 140, 150, 160, and 170¹.
- 3745 Models 210, 310, 410, and 610¹.
- 3745 Models 17A, 21A, 31A, 41A, and 61A (3745 Models A).
- 3746 Model 900 (3746-900).
- 3746 Model 950 (3746-950).

These communication controllers were originally designed for the attributes and advantages of SNA. Later innovations in the same line incorporated developments in APPN, HPR, and IP. The following illustrates the adaptability of these controllers to advances in networking technology:

- The 3746-950 can operate as an IP router and APPN/HPR Network Node (NN), independent from any 3745 running a Network Control Program (NCP).
- The 3746-900 supports the same routing functions as the 3746-950.
- The 3746-900 can operate as an IP router and APPN/HPR NN, and simultaneously operate as an NCP-controlled SNA subarea node or APPN composite network node (CNN).

The 3746 Models 900 and 950 form a new generation of controllers, the *3746 Nways Multiprotocol Controllers*. These controllers form the basis of efficient and reliable multiprotocol networks that support both SNA applications and TCP/IP applications.

By integrating the 3746-900 and the 3746-950 into your network, you can add the advantages of APPN/HPR and IP, and still support your existing SNA configurations. Figure 1-1 on page 1-2 illustrates the development of 3745 and 3746 controllers in line with the evolution of networking technologies.

¹ These models are no longer manufactured.



Figure 1-1. The Networking Evolution of IBM 3745 and 3746 Controllers

Notes:

- 1. This controller configuration supports SNA networking and the APPN CNN function along with NCP and VTAM.
- 2. APPN networking, using a network node processor (NNP), independent from NCP and VTAM.
- 3. Connectivity with SNA devices using the Dependent Logical Unit Requester support (DLUR), and a VTAM with Dependent LU Server (DLUS).
- 4. IP networking using the NNP and 3746 IP routing features, independent from NCP and TCP/IP MVS.

Getting Started

To operate the 3745 and 3746, you will need the following:

- Service processor, color display, pointing device (usually a mouse), and keyboard.
- 3745 operator control panel. This is operational even when the 3745 is deactivated (see Appendix B, "Basic Service Procedures" for a description of control panel displays, indicators and switches).
- The 3746 operator control panel. This is operational even when the 3746 is deactivated (see Appendix B, "Basic Service Procedures" and Appendix A, "3746 Operator Control Panel" for a description of control panel displays, indicators and switches).

Locating Processors

The service processor and network node processors are located in a controller expansion unit next to the 3746 or the 3745 Models A (see Figure 1-2).



Figure 1-2. 3745 Model A or 3746 with Controller Expansion

Control Panels

- Note

The same control panel numbers on both the 3745 and 3746 do not always indicate the same function.

The 3745 Control Panel



The 3746 Control Panel



3746 control panel display. For more information on displays, see A-1.

Stop Switch for the 3745

Located on the 3745 control panel (see Figure 1-3 on page 1-5).

— Attention -

Even if the stop switch is in the OFF position, the primary power box is still connected to the electric current. To disconnect completely, do the following:

- 1. Turn off the main circuit breaker.
- 2. Remove the power plugs from supply outlets.



Figure 1-3. IBM 3745 Control Panel

The stop switch is meant only as a backup to the Power OFF button. If you use the stop switch to Power OFF, you will need an IBM service representative to restart the controller.

Solving Problems

There are three levels of problem resolution. If you encounter a problem, start at the first level and work down:

1. First Level

Use online help to solve the problem. See "Help Pull-Down Menu" on page 3-8.

2. Second Level

Contact the person in charge of 3745/3746 problem analysis.

Name:
Telephone:

3. Third Level

Forward a report to the IBM support center. Before you do this, try levels 1 and 2 first so that you will have as much information as possible for IBM support personnel.

Alarms

Alarms in the 3745 or 3746 are indicated by a red bell icon 4. This appears in the **MOSS-E View**, next to the controller that produced the alarm.

If the MOSS-E window is an icon or hidden, it will automatically appear in front of any open windows, and display the red alarm bell. Double-click the \ddagger to open **Display Alarms** (see the online help for more information).

If you use IBM's remote support facility (RSF) when a problem is reported to RETAIN* (either automatically or manually), two alarms are generated, one when the call is made to RSF, and a second when IBM answers the call.

Chapter 2. Service Processor

The newly released service processor 6275 type 3 includes the new Pentium II 350 MHz processor, and an improved system bus speed of 100 MHz.

Using the Service Processor

The service processor connects the 3745 to the 3746, and provides a single user interface for 3745 and 3746 operator and service functions.

The service processor runs MOSS-E to perform the following:

- Maintenance and operator subsystem (MOSS) functions in the 3745. MOSS screens are the same for the operator consoles of the 3745 Models 130, 150, 160, 170, 210, 310, 410, and 610.
- · Graphic status displays of the controllers connected to the service processor.
- Maintenance and operation of the 3745 Models A and the 3746-900.

The service processor also performs the following:

- Runs Controller Configuration and Management (CCM)¹ for the following:
 - Configuring the 3746 APPN/HPR Network Node and IP Router with ESCON Generation Assistant (EGA).
 - Displaying information about 3746 resources, for example, the current local network topology.
 - Managing multiple configurations of 3746 resources.
- Loads 3746 microcode.
- Stores information, for example, configuration data file-extended (CDF-E) files on 3746 hardware resources.
- Reports 3746 errors as alerts to NetView* and sends error codes to the IBM Remote Support Facility (RSF). Error codes are locally stored by the service processor and can be displayed by the user.

The service processor normally runs unattended and should always be operational. However, normal network operations are not affected if the service processor is temporarily disabled.

Connecting the Service Processor

The service processor communicates with the 3745 MOSS, the 3746, and the network node processor via a Service Processor Access Unit (SPAU). The SPAU can be shared with other 3745s and 3746s.

If a SPAU is connected to a 3746 network node or a 3746-950, it cannot be shared by other user stations, as it must be isolated from user traffic. Otherwise, DCAF consoles can be connected to the SPAU for remotely controlling the service processor or operating the 3746 network node and 3746 IP router. If remote console access runs via bridges, there must be appropriate LAN filtering to protect the SPAU segment. The SPAU is packaged with a service processor and provides

¹ CCM is also available in a stand-alone OS/2 version.

a LAN connection between the service processor and equipment attached to controllers 3745, 3746-900, and 3746-950.

The 3745 includes specific MOSS hardware and microcode to support communications with the service processor.



Sharing the Service Processor

Figure 2-1. Example 1 of a Maximum Configuration. Service Processor running four 3745s, one 3746-900 (SNA), and one 3746-950 (IP, or APPN/HPR).



Figure 2-2. Example 2 of a Maximum Configuration. Service processor running four 3745s and two 3746-900s, one operating as an APPN/HPR network node.

A service processor can run the following controller and expansion unit combinations:

- Four 3745s and two 3746-900s operating in an SNA mode (controlled by NCP).
- Four 3745s, one 3746-900 operating in an SNA mode (controlled by NCP), and one 3746-950 (see Figure 2-1 on page 2-2).
- Four 3745s and two 3746-900s, one operating as an IP Router and APPN/HPR network node (see Figure 2-2 on page 2-2).

IBM recommends that controllers be installed in the room, within 10 m of the service processor. Connecting an additional controller to the service processor will not interfere with ones already installed.

Large installations that need more than four 3745s and two 3746-900s require several service processors and controllers. If all the groups are attached to the same token-ring LAN (either directly attached or through a token-ring bridge), then one remote DCAF console located at a central control point can access and control all the 3745s/3746s located in the same or different machine rooms.

Using Console for Java to Remotely Log on to the Service Processor

Console for Java is a program that enables the user to control the service processor and the NNP(s) from a remote workstation. Microcode level &f12. supports Console for Java on the service processor.

There are two different ways of accessing Console for Java:

- Via the Internet using a Java Applet. This requires on the remote workstation to have a WEB browser like the *Microsoft Internet Explorer version 4.0 and higher* or *Netscape Navigator* with the *Java 1.1* version enabled.
- · Console for Java as a program running on a remote workstation.

The remote workstation is platform-independent, and can run one of the following operating systems:

- OS/2 WARP version 3.0 and higher.
- Windows 95 (WIN95) and Windows NT (WIN NT), Windows 98.
- AIX/UNIX.
- Macintosh.

Communication between the remote workstation and the service processor is supported over a switched PPP link or via the IP network.

In order to use Console for Java, you must enable an option and customize several parameters in the MOSS-E, including IP addresses and passwords. For more information on Console for Java, see *Console Setup Guide*, SA33-0158.

Communication over the IP Network

The service processor runs the Console for Java server configured as the TCP/IP socket 7787. Access over the IP network is possible via the 3746-9x0 network node IP, feature code 5033 (TIC3, port 2080), the 3745 (using the TIC2), the MAE, or via a bridge or router connected to the service ring.

Point-to-Point Protocol Communication

The service processor runs the point-to-point protocol (PPP) server over the communication port 1 (COM 1) connected to an asynchronous modem for remote links. The remote controlling workstation communicates with the service processor via the PPP server using a switched line.

Security Features

Console for Java security features include the following:

- A set of passwords that are specified in the MOSS-E.
- PPP link security with the Challenge Handshake Authentication Protocol (CHAP).

Enabling and Configuring Console for Java in the MOSS-E

Console for Java is enabled and configured in the **SP Customization** menu of the MOSS-E.

IP addresses for the PPP server and client are required for communicating with the service processor and NNP(s) over a switched line. You are also required to customize several passwords.

Note that... -

The management password is required to define or modify Console for Java passwords.

Using DCAF to Remotely Log On to the Service Processor

PS/2* (or equivalent) workstations can remotely access the service processor MOSS-E and CCM functions through DCAF, an IBM licensed program. A DCAF session allows the user to either:

- Control a target service processor from a remote workstation keyboard and mouse.
- Monitor a target service processor in the DCAF window of a remote workstation.

DCAF enables the remote workstation to operate as a controlling workstation and the service processor to operate as a target workstation. When a DCAF session is established between a remote workstation and a service processor, the user of the remote workstation can perform MOSS-E functions as though seated before the service processor.

Remote Consoles

There are five types of remote console. These types define how the console is connected to the service processor.

LAN-attached

APPC type consoles that attach either:

- Directly to the same token-ring LAN as the service processor.
- Indirectly through token-ring LAN bridges.

LAN-attached

TCP/IP type consoles that attach to the Service Processor Access Unit (SPAU) via a bridge with filtering.

SNA-attached

Consoles that communicate with a service processor via an LU6.2 session on a backbone.

APPN-attached

Consoles that communicate with the service processor via an LU6.2 session on a backbone.

Modem-attached

Consoles using a public switched telephone network to access a service processor via its SDLC port and modem.

A remote console can be configured for many different types of network access. For example, a single console at a central control site LAN-attached to a local service processor, can also provide APPN and modem access to remote service processors.

For more information, see *Console Setup Guide* or the *DCAF: Installation and Configuration Guide*, SH19-4068.

Backing Up the Service Processor

Backing up the service processor requires the following:

- Setting up a backup service processor.
- · Saving the following configuration data:
 - Active MOSS-E to the backup hard disk
 - Active MOSS-E microcode to the backup hard disk.

Setting Up a Backup Service Processor

Before you set up a backup service processor, check that the microcode levels are the same for both the backup and the primary service processor.

If the microcode levels are not the same, use one of the following methods to set the same level in both:

- Install the microcode of the active service processor onto the hard drive of the backup service processor (see "Installing Microcode to a Backup Service Processor" on page 2-7).
- Copy the active configuration onto the hard disk of the backup service processor (see "Backing Up Configurations to a Backup Service Processor" on page 2-6).

Follow the procedure below to check the microcode levels of the primary and backup service processor:

Procedure for Displaying EC level D46130x ECA 167 and Above

Step 1. Log on to the MOSS-E (see "Logging On to MOSS-E" on page 3-4).

- Step 2. Click Help.
- Step 3. Click About.

- Step 4. Click Licensed Internal Code.
- **Step 5.** Compare the two microcode levels.

Backing Up Configurations to a Backup Service Processor

When configuration data is updated on the active service processor, you must save it on to backup diskettes (see "Backing up Controller Configurations" on page 3-18). This process takes about five minutes.

— Service Processors with CD-ROM -

This procedure applies to service processors with a CD-ROM drive, feature code 5052. Previous versions of service processors included an Optical Disk for saving and backing up configurations.

Save new configuration data by copying it onto the hard disk of the backup service processor as follows:

- Step 1. Power ON the backup service processor. This produces an error message because the backup service processor is not connected to the LAN. Cancel this message by clicking OK.
- **Step 2.** Log on to the backup service processor (see "Logging On to MOSS-E" on page 3-4).
- Step 3. Open the Service Processor menu.
- Step 4. Click Operation Management.

E Servic	e Processor Menu 🛛 🕅	□ □
<u>F</u> unction	<u>Options H</u> elp	
Operation Management		
	Manage Disks and Databases	
- 🗀	Manage Passwords	
	Capture and save screens	•

Step 5. Click Manage Disks and Databases.

📱 Service Processor Menu 🛛 🖬 🗖	
<u>F</u> unction	<u>O</u> ptions <u>H</u> elp
Coperation Management	
	Manage Disks and Databases 📐
Hanage Passwords	
	Capture and save screens

Step 6. Select Restore databases from diskettes(s).

☑ Disks and Databases Management		
Select an option:		
Optimize databases on hard disk		
 Restore databases from diskette(s) 		
<u>O</u> K <u>Cancel H</u> elp		

Step 7. When you have finished, power OFF the backup service processor.

At power ON, the backup service processor automatically registers the new configuration data.

Installing Microcode to a Backup Service Processor

Use the following procedure to install microcode onto a backup service processor.

Step 1. Power ON the backup service processor. This produces an error message because the backup service processor is not connected to the LAN. Cancel this message by clicking OK.

T٩

- Step 2. Double-click the MDSS-EVIEW icon.
- **Step 3.** Type in a password and click **OK**.

MOSS-E Logon		
MOSS-E is logged off, enter your password to		
log on:		

<u>OK</u> <u>Cancel</u> <u>H</u> elp		
·		

Step 4. In **MOSS-E View**, open the service processor machine menu.

Step 5. Click on Change Management.

Service	e Processor Menu 🛛 🛛 🖬	
<u>F</u> unction	<u>Options</u> <u>H</u> elp	
Cha	nge Management	•
	Switch to non-active version	
- 🗀	Update SP (& NNP) LIC on non-active version	II.
- 🗀	Restore SP (& NNP) LIC on non-active version	=
- 🗀	Manage Microcode Changes	-
	Change Active Code	*

Step 6. Insert the CD with the service processor installation code into the CD-ROM.



📱 Service Processor Menu 🛛 🗵	
<u>F</u> unction <u>O</u> ptions <u>H</u> elp	
Change Management	
- 🗀 Switch to non-active version	
– 🗀 Update SP (& NNP) LIC on non-active version	ıI.
– 🗀 Restore SP (& NNP) LIC on non-active version	=
- C Manage Microcode Changes	-
Change Active Code	*



Installing a Backup Service Processor

If the active service processor fails, replace it with the backup service processor as follows:

Attention

Make sure the microcode and configuration levels are the same in both the primary and the backup service processor.

- **Step 1.** Power OFF the active service processor.
- **Step 2.** Verify that the backup service processor is powered OFF.
- **Step 3.** Disconnect the active (failed) service processor from the token-ring LAN.
- Step 4. If necessary, disconnect any RSF modem or telephone lines.
- **Step 5.** Connect the backup service processor to the token-ring LAN.
- **Step 6.** If necessary, connect the backup service processor to any RSF modem or telephone lines.
- Step 7. Check that the service processor installation diskette is not in the backup service processor disk drive.
- Step 8. Power ON the backup service processor.

Chapter 3. Maintenance and Operator Sub-System-Extended (MOSS-E)

- Beginners should read this... -

The following procedures assume that you know how to operate a mouse in a windows environment.

Before you begin, make sure that the service processor is on and that **MOSS-E View** is displayed.

Q MOSS-E View 🛛 🗆 🗆	ERS6 854 B /3745/Menu
Logged in product engineer mode	← MOSS Console ← Problem Management
	Operation Management FRS6.854.B /3746-9x0/Menu
	Function Options Help
-Service Processor: PU MOSSNMVT-	Problem Management Operation Management
	Network Node Processor (NNP) Manaç Multiascass Englasura (MAE) Managa
ERS6 854 B : 3746-900, SN: 12-34568	Change Management
	Service Processor Menu
	← Configuration Management ← Problem Management
	 ← Operation Management ← Change Management

Figure 3-1. MOSS-E View Window with Machine Menus

The basic **MOSS-E View** window (left in Figure 3-1) provides access to other windows and functions. The figure above shows a minimum configuration, with two areas:

- For 3745 Model A, 3746, and network node processors.
- For service processors.

Double-click the machine icon to open a menu with associated tasks (this does not apply to the network node processor). A <u>machine</u> next to each machine icon indicates an open machine menu (see the right side of Figure 3-1).

The contents of the menu depends on the logon mode that you used (see "Logging On to MOSS-E" on page 3-4).

Select an object and click the right mouse button to display a pull-down menu.



From a pull-down menu, you can do the following:

- Open a machine menu.
- Close a machine menu.
- Display the status of a machine (this does not apply to the service processor).
- Clear alarm bells.

MOSS-E Passwords

When logging on to the MOSS-E through the **MOSS-E View** window, choose the password that corresponds to the mode and functions that you want to use.

There are four password modes for secure access to customer and maintenance functions of MOSS-E menus.

Controller customer password

Access to operator functions in the 3746 and 3745 menus. For first level operators.

Controller maintenance password

Access to operator and maintenance functions in the 3746 and 3745 menus. For IBM Service personnel.

Service processor customer password

Access to operator functions in the service processor and controllers. For supervisors and system programmers.

Service processor maintenance password

Access to functions in the service processor and controllers. Take care in distributing this password because IBM requires it for service procedures.

Note: Use 5 to 8 alphanumeric characters for passwords. Each mode must have a password unique from passwords in the other modes.
Changing Passwords

To change a password:

- Step 1. Open the Service Processor menu.
- Step 2. Select Operation Management.
- Step 3. Select Manage Passwords. Enter the management password (the default is IBM3745) and click OK.
- Step 4. Click MOSS-E view passwords and click OK.

Z Password Management		
Select an option:		
MOSS-E view passwords		
Management paceword		
D management passworu		
💭 CCM/Telnet user profiles management		

Step 5. Re-enter new passwords and click **Apply**.

MOSS-E View Password			
Service processor	Controllers		
Customer Maintenance	Customer Maintenance		
IBM3745 [IBM3745	IBM3745 IBM3745		
Status: Permanent 💌	Status: Permanent		
Failed attempts: 18 Attempt threshold: 99			
Apply Reset Reset failed attempt counter Cancel Help			

Step 6. Click Management password and click OK.

Step 7. Enter the new management password and click **Apply**.

Management Password				
Password:	IBM3745			
Failed attempts:	0			
Attempt threshold:	99			
Apply Reset Reset failed attempt counter Cancel Help				

Step 8. Click CCM/Telnet user profiles management if you want to use CCM functions for Telnet access and IP resource management. For more information, see Chapter 5, "Telnet IP Resource Management in CCM and MOSS-E" on page 5-1.

Step 9. Enter a Userid and Password and click OK.

CCM/Telnet User Profiles Management	Z I
Enable CCM/telnet user profiles	
Configure a User Profile	
Userid: Password:	Add
Access type: 💭 Hu access 💭 Mew unity 💿 Att	Modify
CAccess on which 3746-9X0?	
🗐 3746-9X0 S/N: 12-34568 Name: ERS6 854 B	
in the transmission of transmission of transmi	
User Profiles Already Configured Userid Password Access type 3746-9X0 S/N	Delete
	1
ГГ	
OK Cancet Hetp	

Step 10. Click Cancel to exit.

Logging On to MOSS-E

Step 1. If the **MOSS-E View** window displays, go to Step 3 on page 3-5. Otherwise continue with next step.



Step 2. Double-click the MDSSEView icon. If MOSS-E View does not display, either:



WarpCenter 🔎
Distributed Console Access F
DCAF Target
MOSS-E View
B - B - 3270 Emulator 🤊
ERS6 854 B /3746-9x0/t
Service Processor Menu
ERS6 854 B /3745/Menu 🔳

• See "Problems with MOSS-E or the Service Processor" on page 3-9.

Q MOSS-E View		
Program <u>W</u> indow In	formation	<u>H</u> elp
Log on MOSS-E Log off MOSS-E	logged on	
<u>O</u> pen		
<u>C</u> lose	1	MAE
Status		NNRA
Liear alarms <u>p</u> ell		
<u>R</u> estore passwords		
Shut <u>d</u> own	MOSSNM	νт
You can le	og on to M	0SS-E

Step 3. Click Program, then Log on MOSS-E.

Step 4. Type in a password that corresponds to a logon mode and click **OK**.

MOSS-E Logon		
MOSS-E is logged off, enter your password to		
log on:		

<u>OK</u> <u>C</u> ancel <u>H</u> elp		
•		

Step 5. If the logon is successful, a message at the top of the MOSS-E View window shows the mode that you have logged into.

Q MOSS-	E View				
Program	<u>W</u> indow	Information	<u>H</u> elp		
Logged	in service	processor r	naintenance	moo	le

If there are problems with logging on, see one of the following:

- "Help Pull-Down Menu" on page 3-8.
- "Problems with MOSS-E or the Service Processor" on page 3-9.

Otherwise, contact the person in charge of 3745 and 3746 problem analysis (see "Solving Problems" on page 1-5).

Step 6. MOSS-E menus and functions are now available (see page 3-8).

Logging Off the MOSS-E

Step 1. Click **Program** in the **MOSS-E View** window and click **Log off MOSS-E**. Then click **OK**. A logoff is successful message displays.

Q MOSS-E View		
Program <u>W</u> indow	Information	<u>H</u> elp
Log o <u>n</u> MOSS-E	ocessor n	naintenance mode
Log off MOSS-E		
Open ``		
Close	i co è	MAE
<u>S</u> tatus	The second secon	NNRA
Clear alarms <u>b</u> ell		
Search CPN		
Restore nasswords.		NT
	MUSSIN	141
Shuf <u>d</u> own	!	
Ser	vice Process	sor

Step 2. A message at the bottom of the **MOSS-E View** window indicates that you can logon if you want.



Program Pull-Down Menu

🔍 MOSS-E View 🛛 🗉 🗖
Program Window Information Help
Log on MOSS-E pcessor maintenance mode
Log off MOSS-E
Open
Status
Clear alarms <u>b</u> ell
Search CPN
Restore passwords J MOSSNMVT
Shut down
Service Processor

As well as logging on or off, this menu provides the following selections:

Open	Opens menus for 3745, 3746, and service processor.
Close	Closes a menu.
Status	Displays information on 3745 or 3746.
Clear alarms bell	Clears alarms with a pending status.

Search CPNFor controller maintenance by a customer engineer.Restore PasswordsFor restoring default passwords (IBM3745 in capital letters).ShutdownExits all programs and shuts down, with a message prompt to
turn off or restart the system.

Window Pull-Down Menu

Q MOSS	-E View	1 E 🗌
Program	Window Information Help	
	<u>Cascade menus</u> neer mode	
Default arrangement		

Cascade menus Arranges the menus that you have open in a stacked formation, like index cards.

Default arrangement Restores your own arrangement.

Information Pull-Down Menu

Note: You can work with the Information menu without being logged on.



For detailed information on the 3745, 3746, and service processor.

Search	Searches for information on an entry that you make in a text box.
Contents	Lists the main tasks related to the communication controller.
Installing a controller	Information on installing a controller.
Starting a controller	Information on starting a controller.
Servicing a controller	Information on servicing a controller.
APPN Online books	Information that can be accessed directly from the service processor, for example, <i>Problem Analysis Guide</i> .
CD-ROM Documentation	A listing of books available on CD-ROM.
Glossary	Abbreviations and definitions about the 3745 and 3746 with any diagrams of main components.

Index	An alphabetical list of subjects related to the 3745 and 3746 and any main components.
Legend	A list of colors for machine objects in the MOSS-E View window. Each color indicates the status or condition of the machine.

Help Pull-Down Menu

Note: You can access the Help menu without being logged on.

🔍 MOSS-E View 🛛	□ □
Program Window Information Help	
ERS6 840 V7.7 ERS6 8	
Service Processor: PU MOSSNMYT	
ERS6 840 V7.7: 3746-900, SN: 12-3456	8

Help for help Explains how to use Help.

- Extended help Information about the functions of the MOSS-E View window.
- Keys help Lists the function keys of the MOSS-E.
- Help index Lists Help items in alphabetical order.

Your comments Information on where to send your reader's comments on MOSS-E information and usability.

About Information on MOSS-E copyright and Licensed Internal Code.

MOSS-E Menus, Tasks, and Functions

MOSS-E menus are the link between you and MOSS-E functions. There is a MOSS-E menu for the 3745, 3746, and also for the service processor as well.

How to Use a Machine Menu

To display the menu for a machine, you must be logged on to the MOSS-E (see "Logging On to MOSS-E" on page 3-4). After logging on, double-click a machine object to open a menu with a task list (see the following **Service Processor** menu).

Service Processor Menu	
<u>F</u> unction <u>O</u> ptions <u>H</u> elp	
Configuration Management	Â
Problem Management	1
← Operation Management	
🕆 Change Management	-

Clicking a task will displays a list of functions. Clicking an open menu closes it.

🗄 Servic	e Processor Menu	
<u>F</u> unction	<u>O</u> ptions <u>H</u> elp	
Cor	ifiguration Management	<u> </u>
- C	SP Customization	1
- 🗀	Customize DCAF Target Settings	E P
- 🗀	Install 3746 and NNP LIC on SP hard disk	
	(M) Manage 3745/3746-9x0 Installation/Re	moval 🚽

Double-clicking a function runs it. This is indicated by the color change of the function when it runs.

Service	e Processo	Menu 🛛 🖄 🖬	
<u>F</u> unction	Options	Help	
Con	figuration	Management	*
- 🗀	SP Cust	omization	
	Customi	ze DCAF Target Settings	۳
-	Install 3	746 and NNP LIC on SP hard disk	
	(M) Mana	age 3745/3746-9x0 Installation/Removal	•

Problems with MOSS-E or the Service Processor

If the keyboard and mouse are not responding to input, the service processor may be under the control of a DCAF remote console. To regain control of the service

processor, press the DCAF hotkeys Alt T together.

The following problems may occur:

- Service processor screen is dark.
- Service processor screen does not contain a MOSS-E View window or icon (see Figure 3-1).
- OS/2 or Communication Manager error message displays.

If any of the above occurs, IPL the service processor as follows:

— Attention ·

Performing an IPL disrupts traffic. Before performing an IPL, ask the network administrator to stop traffic, or wait until the next maintenance window is available.

If your service processor is powered OFF, go to Step 1. Otherwise, go to Step 2.

- Step 1. Turn on your service processor. Wait until the first MOSS-E View displays.
- **Step 2.** IPL your service processor by doing the following:
 - Press Ctrl Alt Del . Wait until the MOSS-E View displays.
 - Turn off the service processor, wait a few seconds and turn it on again. Wait until the **MOSS-E View** displays.

If this does not work, contact the person in charge of 3745 or 3746 problem analysis (see "Solving Problems" on page 1-5 and "Help Pull-Down Menu" on page 3-8).

MOSS Window

A MOSS window is a link between you and the MOSS running in the 3745. There is one window for each 3745 attached to the service processor.

This section provides information on the following:

- MOSS screens
- Using certain keys
- Opening a MOSS window
- Accessing MOSS functions.

How to Open the MOSS Window

After you log on to the MOSS-E (see page 3-4), follow the steps below:

Step 1. Double-click the 3745 in the MOSS-E View to display the menu.

Step 2. Double-click MOSS Console.

<u>Function Options Help</u>	
MOSS Console	
Problem Management	LL (
Coperation Management	-

Opening a MOSS-E window for the first time displays the **FUNCTION SELECTION RULES** screen (see Figure 3-3 on page 3-13).

You can review the status of a machine in the **MOSS-E View** window by clicking **Information**, then **Legend**.

If you have problems logging on the MOSS-E, see the following:

- "Help Pull-Down Menu" on page 3-8.
- "Problems with MOSS-E or the Service Processor" on page 3-9.

If you still have a problem, contact the person in charge of 3745 and 3746 problem analysis. See "Solving Problems" on page 1-5.

Service Processor MOSS Screen Layout

See the following for an example of a service processor MOSS screen.

COMMCTRL ID: xxxxxxxxxxxxxxx	x 3745-XXA	SERIAL NUMBER: nnnnnn
	Machine Status Area	
FUNCTION ON SCREEN:	FUNC	mm/dd/yy hh:mm TION PENDING:
FUN	CTION AREA	
===> Message Area Function Keys		

Figure 3-2. General Format of a MOSS Screen

The following is a list of definitions for text on a MOSS screen.

COMMCTRL ID	Communication controller id. Always displayed as 16 characters.
	Note: To modify the controller id, use the MOSS-E Manage 3745/3746-9x0 Installation/Removal function of the Service Processor menu.
3745-XXA	The machine type and model.
SERIAL NUMBER	Serial number of the 3745 (seven characters).
MACHINE STATUS AREA	Information on the Central Control Unit (CCU), scanners, and IPL. For more information, see the <i>Advanced Operations Guide</i> , SA33-0097.
FUNCTION ON SCREEN	The name of the function being displayed.
FUNCTION PENDING	The name of the function waiting to be displayed.
FUNCTION AREA	Function display and operator input.
MESSAGE AREA	Area to display messages. For more information, see the <i>Advanced Operations Guide</i> .
FUNCTION KEYS	Available function keys appear on this line.

Keyboard Terminology

As consoles may be of different types, the console keyboard may vary. For consistency, the following terminology applies to certain keys:



Sends data to the 3745. Verify that the data is correct before you use this key. This key is often called SEND.



If you want to regain control of the service processor, pressing these keys together temporarily suspends any function that is running.



This key moves the cursor from one input area to another.

Common Commands and Function Keys

OFF	Enter OFF to logoff and close the MOSS window. If a function is		
	active or pending, press F1 first.		
F2	Closes any active functions. Menu 1 or Menu 2 displays, depending on the function that you close.		
F2	Displays menu 1, menu 2, or a pending function.		
F6	Displays the Function Selection Rules screen.		

Selecting MOSS Functions

When you open a MOSS window, the Function Selection Rules screen displays.

More information on the **Function Selection Rules** screen is shown in the *Advanced Operations Guide*.

📺 🖞 MOSS Console			
COMMCTRL ID: ERS7-854d (ver1) CCU-A PROCESS MOSS-ONLI RUN BYP-IOC-CHK STOP-CCU-C	3745-41 NE HK	a serial	NUMBER: 123456
CCU-B PROCESS MOSS-ONLI RUN BYP-IOC-CHK STOP-CCU-C	NE HK		05/11/98 14:45
FUNCTI - TO SELECT ONE OF THE MENUS, PR	ON SELECTION R ESS THE APPROP	ULES RIATE F KEY	
- TO SELECT A FUNCTION, ENTER IT THEN PRE - ONCE YOU HAVE SELECTED A FUNCT A FUNCTION FROM THE OTHER	S 3-CHARACTER SS ENTER (ABBR ION FROM ONE M	NAME EVIATED "ENTR") ENU, YOU MAY SEL	ECT
- TO END THE FUNCTION ON SCREEN,	PRESS F1		
- TO RETURN TO THE PENDING FUNCT	ION, PRESS F2		
- TO LOG OFF, ENTER OFF THEN PRE ===> _ DISK(ETTE) STOPPED	SS ENTR		
F1:END F2:MENU2 KEYBOARD UNLOCKED	F4:MENU1	F5:MENU3	

Figure 3-3. Function Selection Rules Screen

The following keys are available:

ſ	F1	1
Ŀ		y.

Ends a function.



Displays Menu 2 functions (see "Menu 1 and 2 Functions" on page 3-14).



Displays Menu 1 functions (see "Menu 1 and 2 Functions" on page 3-14).

You can also enter the three-letter codes of MOSS function on the command line. For more information, see the next section "Menu 1 and 2 Functions" on page 3-14).

Menu 1 and 2 Functions

Note: Depending on the model of your 3745, some of the functions shown below may not be available.

📺 🖞 MOSS Console			
COMMCTRL ID: ERS7-854d (ver CCU-A PROCESS MOSS RUN BYP-IOC-CHK STOP-	1) 3745-411 -ONLINE CCU-CHK	ə seri	AL NUMBER: 1234568
CCU-B PROCESS MOSS RUN BYP-IOC-CHK STOP-	-ONLINE CCU-CHK		05/11/98 14:46
	MENU 1		
CONFIG DATA FILE.: CDF CONTROL PGM PROC.: CPP DISK FUNCTIONS: DIF DISK IPL INFO: DII EVENT LOG DISPLAY: ELD FALLBACK: FBK IML MOSS: IML	IML ONE SCANNER: IPL CCU(S): LD LINK TEST REQ.: LD LINK TEST RESP. LINE INTERF DSPLY: LINK IPL PORTS MACHINE LVL TABLE: MICROCODE FIXES ESS INTERF DSPLY.:	IMS PORT IPL POWEF LTQ SCANN LTS STAND LID TIME LKP SWITC MLT TRSS MCF WRAP EID	SWAP FILE: PSF SERVICES: POS ER I/F TRACE: SIT PLONE TESTSAT SERVICES: TIM HORCKSBK INTERF DSPLY: TID TEST
===> _ DISK(ETTE) STOPPE	ENTER OFF TO LOG (D	DFF	
F1:END F2:MENU2 KEYBOARD UNLOCKED		F5:MENU3	F6:RULES

Figure 3-4. Menu 1 Functions

🔤 🕆 MOSS Console			🗹 🗆 🖂
COMMCTRL ID: ERS7-854d (ver	1) 3745-41	A SERI	AL NUMBER: 1234568
DUN DVD-TOC-CHK CTOD	5-UNLINE		
NUN BYF-10C-CRK STOF	-000-0HN		
CCU-B PROCESS MOSS	S-ONLINE		
RUN BYP-IOC-CHK STOP	-CCU-CHK		
			05/11/98 14:47
	MENUL O		
	MENU Z		
AC/BT PARAMETERS.: ABP	DISPLAY LONG:	DLO RESET	IOC(S): RIO
BYPASS CCU CHECK.: BCK	MOSS OFFLINE:	MOF RESET	I-STEP: RIS
BYPASS IOC CHECK.: BIK	MOSS ONLINE:	MON SET A	IDDR COMPARE.: SAC
CA INTERF DISPLAY: CID	REPAIRED CCU:	REP SET B	RANCH TRACE.: SBT
CCU LV3 INTERRUPT: IL3	RESET HOUR COMP:	RHU SELLI	-SIEP SIP
COUNTRAL MODELLE CAM	RESET CON INDUE.:		
	BESET COULCHECK	BCK STOP	ON COLL CHECK SCK
DATA EXCHANGE DEX	BESET CCU/LSSD	BCI STOP	ON TOC CHECK: STK
DISPLAY/ALTER: DAL	12021 0001 20001111	102 0101	011 100 01120111 0111
	ENTER OFF TO LOG (DFF	
===> DISK(ETTE) STOPPE	ED		
			56 DUI 50
FICENU FZCHENUI		F5:MEN03	FO:HULES
REYDURNU UNLUUKEU			

Figure 3-5. Menu 2 Functions

Enter the three letter code of a function on the command line and press Enter.

Note: For Models 41A and 61A, enter CSR (CCU Selection and Release) on the command line to select a CCU. The selected CCU appears in the machine status area.

If a function is unavailable, the following message displays on the command line:

PRESS ENTER TO DISPLAY FUNCTION MENU

Switching between Menu 1 and Menu 2 Functions

Use the $\boxed{F2}$ key to switch between menu 1 and menu 2. If you see $\boxed{F2}$ on the bottom part of the screen, this indicates that you can switch from one menu to the other.

You can enter the three letter code of a function from either menu on the command line at any time.

Switching from a Menu 1 Function to a Menu 2 Function

Step 1. Press F2 to switch from menu 1 to Menu 2.

Step 2. Enter the code letters of a function and press Enter

Notes:

If you press F2, any menu 2 functions that are running will be suspended, and any menu 1 functions that are suspended will be re-activated.

Once any active functions of menu 1 have ended, any pending menu 2 functions will be re-activated.

Switching from a Menu 2 Function to a Menu 1 Function

Step 1. Press F2 to switch from menu 2 to Menu 1.

Step 2. Enter the code letters of a function and press

Notes:

If you press [F2], any menu 2 functions that are running will be suspended, and any menu 1 functions that are suspended will be re-activated.

Once any active functions of menu 1 have ended, any pending menu 2 functions will be re-activated.

How to Start and Stop Refresh

Press F5 to refresh the information in a function area.

If you start a refresh and want to stop it, press [Ctrl] Pause together.

How to Close MOSS

You can close MOSS by doing one of the following:

- Double click the system menu icon in the upper left corner of the MOSS window.
- Enter OFF on the command line.

If you have problems closing MOSS, refer to the online help.

If you have technical problems, contact the person in charge of 3745 problem analysis (see page 1-5).

Updating the Active CDF-E

Use the procedure below to record any new hardware as part of the controller hardware configuration, for example, lines connected to a LIC11.

This procedure ensures that the following information is recorded:

- Hardware character strings
- New CDF-E configuration saved as the working CDF-E
- Backup CDF-E copied on to diskette.
- **Step 1** Double-click a 3746 object icon, or select a 3746 menu in the window list (see Step 2 on page 3-4).
- Step 2 Click Configuration Management, then double-click Display/Update Active Configuration (CDF-E).

📱 ERS6 854 B /3746-9x0/Menu 🔽 🗉 🛛	
<u>Function</u> Options <u>H</u> elp	_
Configuration Management	~
- C (M) Add/Retrieve Resources in Concurrent Mode	
- 🗀 (M) Remove Resources in Concurrent Mode	l
– 🗀 (M) Replace Resources in Concurrent Mode	l
– 🗀 Display/Update Active Configuration (CDF-E)	≣
– 🗀 Display Reference CDF-E	l
Compare Reference CDF-E with Active CDF-E	l
- 🗀 Save Active CDF-E as Reference CDF-E	l
— 🗀 Manage ESCON Processors	7
– 🗀 Define Backup CLP	
— 🗀 Copy Reference CDF-E on Diskette	
- 🗀 Restore Reference CDF-E from Diskette	
Create Flat Active CDF-E on Disk	•

Step 3 New or changed LCBs and ARCs for each CLP are shown in the Resource Locator screen (see the notes for Figure 3-6).

Active CDF - E Display - Resource Selector									
Select a	resour	ce:							
3746-	9x0	avail.							*
CS		active							
SPS		avail.							
CBSP	2048	active	CBC	2048	active	TIC3	2080	active	
TRP	2112	active	CBC	2112	active	T1C3	2144	active	=
CLP	2176	active	LIC11	2176	active LCB/ARC	LIC12	2208	avail.	=
ESCP	2240	active	ESCC	2240	active				
TRP	2304	active	T1C3	2304	active	T1C3	2336	active	
CLP	2368	avail.							
CLP	2432	active	LIC12	2432	avail.	LIC12	2464	avail.	
			LIC11	2368	active LCB/ARC	LIC12	2400	avail.	
	2496								
TRP	2560	active	TIC3	2560	active	TIC3	2592	avail.	
TRP	2624	active	TIC3	2624	active	TIC3	2656	active	-
*									>
<u>QK</u> <u>Specific Selections <u>LCB and ARC information</u> <u>Cancel Help</u></u>									

Figure 3-6. Resource Locator screen

Notes:

- A new LCB with an ARC is indicated by LCB/ARC to the right of the associated LIC11.
- A new LCB is indicated by LCBB to the right of the associated LIC11.
- A new LCBE will not display without an ARC installed in it, or until an IML procedure has been performed for the LCBE adapter.
- Step 4 Click LCB and ARC information.
- **Step 5** Select the LCBB line, or for an LCBE, select the line just below the associated LCB.

Display and U	pdate LCB Number /	Location		
CLP address	LIC type LIC address	LCB type	LCB Number / Location	
CLP 2176	LIC11 2176	LCBB		
CLP 2176	LIC11 2176	LCBB		*
active CLP 2368 avail.	LIC12 2208		ς	
CLP 2432	LIC12 2432			
active	LIC12 2464			н.
	LIC11 2368	LCBB LCBE		
	LIC12 2400			-
ARC	information	Save	<u>Cancel</u> <u>H</u> elp	

Step 6 Enter or update the LCB Number / Location field. You can use up to 25 alphanumeric characters to identify an LCB attached to a processor. Existing codes should already be recorded in the *Planning Guide*, GA33-0457.

- Step 7 Press Enter and repeat steps 5 and 6 to identify more LCBs if you need to. Then click Save and OK.
- **Step 8** If you have ARCs attached to a selected LCB, click **ARC information**. Otherwise, go to step 12.
- Step 9 Select an ARC, and enter or update the Symbolic line name field. You can use up to 8 alphanumeric characters to identify the ARC. Existing codes should already be recorded in the *Planning Guide*.

Display an	d Update ARC Syn	bolic Line Name	
LCB range	address:	2176-2190	
LCB Numbe	er / Location:		
ARC type	Line address	Position Symbolic line name	
ARC3A2	2176	+ 0	
		+ 1	
		+ 2	
ARCIB	2179	+ 3	
ARC1A2	2180	+ 4	
ARC1B	2181	+ 5	
ARCIB	2182	+ 6	
		+ /	
ARC4B	2184	+ 8	
ARCID	2185	+ 9	
ARCIB	2186	+ 10	
ARCID	2187	+ 11	
100140	0100	+ 12	
ARCIAZ	2189	+ 13	
ARCIB	2130	+ 14	
Save	Cancel	Help	

- **Step 10** Press **Enter** and repeat steps 5 to 11 if you want to identify more ARCs. Then click **Save** and **OK**.
- **Step 11** To identify ARCs on other LCBs, repeat step 9 and step 11 for each LCB.
- Step 12 When you have finished with all the LCBs and ARCs, click Cancel.
- Step 13 Double-click Save Active CDF-E as Reference CDF-E. Then click OK.

Note: It is recommended that you save the CDF-E onto diskette. For more information, see "Backing up Controller Configurations."

Backing up Controller Configurations

It is recommended that you backup the MOSS-E current controller configurations to diskette if you have done any of the following:

- Updated the CDF-E
- Customized DCAF target settings
- Managed passwords
- Configured remote operations
- Set automatic microcode download
- Updated CCM configurations.

Follow the steps below for backing up the controller configuration:

Step 1. Insert the backup diskette into the drive.

- **Step 2.** Double-click the service processor object icon, or open the service processor menu in the window list (see step 2 on page 3-4).
- Step 3. Click Operation Management.
- Step 4. Double-click Manage Disks and Databases.

🔋 Service Processor Menu 🛛 🗹 🗉
<u>Function</u> Options <u>H</u> elp
Cperation Management
– 🦳 Manage Disks and Databases 🗼
Anage Passwords
Capture and save screens

Step 5. Click Save Databases on diskette(s).

Disks and Databases Management
Select an option:
Optimize databases on hard disk
Save databases on diskette(s)
Restore databases from diskette(s)
<u>Q</u> K <u>Cancel H</u> elp

Step 6. Click OK.

- **Step 7.** Follow the prompts to save the active CDF-E onto the hard disk, and then onto diskettes.
- Step 8. Click Cancel to exit.

Note: This procedure takes about 5 minutes and does not interfere with the operation of the service processor.

Chapter 4. Working with Network Node Processor (NNP) Functions

The newly released network node processor type 3 includes a new Pentium II 350 MHz processor, and an improved system bus speed of 100 MHz.

Unless otherwise noted, this chapter applies to APPN/HPR and IP configurations.

Accessing NNP Functions

The APPN/HPR control point and IP router functions are located in the NNP and accessible via MOSS-E.

To access the functions of a NNP, follow the steps below:

- Step 1. Open the 3746 menu (see "How to Use a Machine Menu" on page 3-8).
- **Step 2.** Click **Network Node Processor (NNP) Management** to display NNP functions.

DCS2 8	353Ba / 3746 - 9x0/Menu 🛛 🛛 🛛	
<u>F</u> unction	<u>Options H</u> elp	
C Net	work Node Processor (NNP) Management	
-	Manage Control Points on NNPs	
- 🗀	CCM - Controller Configuration and Management	۳
	IP Commands	•

Manage Control Points on NNPs

🛓 Manage Control Points (CP) on NNP 🛛 🛛 🖾
CP/NNP Messages CP is activated with configuration = ERS6 841P SNA/APPN/IP
CP/NNP-A Status
Options Select the CP/NNP that you want to manage: •••••••••••••••••••••••••••••
Stort CP Stop and restart CP Activate configuration Dump CP Help Close Shutdown and restart NNP Manage NPM

The following describes the buttons in the **Manage Control Points for NNPs** window.

CP/NNP Messages Area

The message shows you the progress of a chosen function.

CP/NNP-A (or -B) Status Areas

Information on the links between the service processor, network node processor, and controller. The status can be any of the following:

- Down
- Standby
- Waiting for operator activation
- Link not ready
- Link ready
- · Link operational.

More status information is given in "NNP Status" on page 4-4.

CP/NNP-A Radio Button

For working with NNP A control point functions.

CP/NNP-B Radio Button

For working with the NNP B control point functions.

Automatic Configuration Activation Option

Enables automatic resource activation after a network failure (see Table 4-1).

Enable CP/NNP Backup Option

Activates dual NN functions (see Table 4-1).

Table 4-1. Control Point Management					
Options	Status	Comments			
Automatic Configuration Activation	Off	Click Stop and restart , Shutdown and restart , or an active NNP failure to stop all active sessions, and then restart the control point			
Enable CP/NNP Backup	Off	up to Waiting for operator activation status.			
		Click Activate configuration to re-activate resources.			
Automatic Configuration Activation	On	• Click Stop and restart or Shutdown and restart to restart the control point, automatically reactivating the active configuration.			
Enable CP/NNP Backup	Off	An active NNP failure will drop the active sessions.			
Automatic Configuration Activation	Off	 No operator action available. An active NNP failure will activate the backup network node 			
Enable CP/NNP Backup	On	processor up to the Waiting for operator activation status.			
		Then do the following:			
		1. Set the Enable CP/NNP backup option to Off.			
		2. Click Activate configuration to reactivate resources.			
Automatic Configuration Activation	On	 No operator action available. An active NNP failure results in the following: 			
Enable CP/NNP Backup	On	 Activates and starts the backup network node processor. Activates the configuration (dropping resources temporarily). Reactivates active sessions. 			

Start CP Button

Initiates the control point program after using Stop CP.

Stop CP Button

Ends the control point program without deactivating the network node resource configuration. Connecting to additional resources is no longer possible.

Stop and Restart CP Button

Select this button to:

- 1. Stop control points.
- 2. Automatically restart the control point.
- 3. Automatically reactivates a configuration. This will only work if **Automatic configuration activation** is selected (see "Automatic Configuration Activation Option" on page 4-2).

Activate configuration Button

Manually activates configuration of NN resources when **Automatic configuration activation** is not selected. Use this after the **Start CP** button.

Dump CP Button

To be used only by an IBM representative.

Help Button

Online information for managing the control point program.

Close Button

Saves changes and returns to the previous panel.

Shutdown and Restart NNP Button

Use this button to:

- 1. Stop the control point program and deactivate the configuration.
- 2. Shut down the NNP.
- 3. Restart the NNP.

Then, if Automatic configuration activation is selected:

- 4. Restart the CP program.
- 5. Re-activate the configuration.

Manage the NPM Push-Button

Allows you to add, update, or remove a NetView Performance Monitor (NPM) configuration.

NNP Status

The following describes the status of the NNP as indicated in the **Manage Control Points (CP) on NNP** window.

```
— Attention –
```

If you select **Enable CP/NNP backup**, the configuration buttons will be unavailable. This is because priority is given to dual network node functions.

Down Status

🛓 Manage Control Points (CP) on NNP 🛛 🖉 🛛	4			
-CP/NNP Messages Shutdown and Restart NNP : initiating				
Please wait				
CP/NNP-A Status				
Options Select the CP/NNP that you want to manage: Image:				
Start CP Stop and restart CP Activate configuration Dump CP Help Close Shutdown and restart NNP Manage NPM				

The NNP icon appears grey in color in the **MOSS-E View** window. This means that the link between the service processor and NNP has failed because of one of the following problems:

- Inactive service processor.
- Power OFF in the NNP.
- Defective cabling between the service processor and NNP.

For any of the above, see the online Problem Analysis Guide.

Click **Close** to exit.

Standby Status

Anage Control Points (CP) on NNP
CP/NNP Messages Stop CP : completed. Control point is stopped by operator
CP/NNP-A Status
Options Select the CP/NNP that you want to manage: Image:
Start CP Stop and restart CP Activate configuration Dump CP Help Close Shutdown and restart NNP Manage NPM

The NNP icon appears blue in color in the **MOSS-E View** window. This means that the NNP is active and ready for input. To select automatic configuration, click one of the following buttons:

- Start CP to initiate the control point program, ready for a configuration to be activated.
- Shutdown and restart NNP to:
 - Stop the control point program
 - Deactivate a configuration
 - Shut down and restart NNP
 - Restart the control point program
 - Re-activate a configuration.
- Close to save changes and exit.

To de-select automatic configuration, select one of the following buttons:

- Start CP, to initiate the control point program, ready for a configuration to be activated.
- · Shutdown and restart NNP to:
 - Stop the control point program
 - Deactivate a configuration
 - Shut down and restart NNP
 - Restart the control point program
 - Re-activate a configuration.
- Close to save changes and exit.

Waiting Operator Activation Status

🚊 🛛 Manage Control Points (CP) on NNP	
CP/NNP Messages Start CP : completed. Autostart is disabled, use ACTIVATE command	i
CP/NNP-A Status Waiting operator activation	CP/NP-E Status
_ Options	
Select the CP/NNP that you want to manage:	CP/NNP-A CP/NNP-B
Automatic configuration activation	Enable CP/NNP backup
Start CP Stop and restart C	P Activate configuration Dump CP
Help <u>Close</u> Shut <u>d</u> own and resta	art NNP Manage NPM Debug

The NNP icon appears pink in color in the **MOSS-E** View window. This means that the NNP and control point program are ready but the configuration has not been activated. To activate a configuration, click one of the following buttons:

- Activate configuration completes the Start CP command by activating the NN.
- Stop CP ends the control point program and returns to Standby status.
- Stop and restart CP activates automatic configuration by:
 - Stopping the control point program
 - Deactivating the configuration
 - Restarting the control point program
 - re-activating the configuration.
- Stop and restart CP. This will de-select automatic configuration by:
 - Stopping the control point program
 - Deactivating the configuration
 - Restarting the control point program
 - Waiting for you to restart the configuration.
- Close saves changes and exits.

Link Not Ready Status

🛓 Manage Control Points (CP) on NNP 🛛 💆 🗉
CP/NNP Messages Shutdown and Restart NNP : initiating
CP/NNP-A Status
Link not ready
_ Options
Select the CP/NNP that you want to manage: OCP/NNP-A OCP/RRP-B
Automatic configuration activation
Start CP Stop CP Stop and restart CP Activate configuration Dump CP
Help Close Shutdown and restart NNP Manage NPM Debug

The NNP icon appears grey in color in the **MOSS-E View** window. This status means that the control point program is active and ready to be connected to the 3746.

There are no operator requirements.

Link Ready Status

🛓 Manage Control Points (CP) on NNP	
CP/NNP Messages Shutdown and Restart NNP : completed.	
CP/NNP-A Status	NHP- 8 Status
Link ready	
_ Options	
Select the CP/NNP that you want to manage: OCP	/NNP-A OCP/NNP-B
Automatic configuration activation	able CP/NNP backup
Stort CP Stop CP Stop and restart CP Help Close Shutdown and restart NNF	Activate configuration Dump CP

The NNP icon appears as white in color in the **MOSS-E View** window. This means that the NNP and control point are ready and the configuration is active. For further options, click the following buttons:

- Stop CP to end the control point program without deactivating the NN resource configuration.
- Dump CP is for IBM representatives only.
- Select Automatic configuration by clicking:
 - Stop and restart CP. This will do the following:
 - Stop and restart the 3746 control points
 - Automatically re-activate the configuration.
 - Shutdown and restart NNP. This will do the following:
 - Stop the control point program
 - Deactivate the configuration
 - Shut down the NNP
 - Restart the NNP
 - Restart the control point program
 - Re-activate the configuration.
- De-select automatic configuration by clicking:
 - Stop and restart CP. This will do the following:
 - Stop and restart the 3746 control points
 - Wait for your action.
 - Shutdown and restart NNP results in the following:
 - Stops the control point program
 - Deactivates the configuration
 - Shuts down the NNP
 - Restarts the NNP
 - Waits for your action.
- Close saves any changes and returns you to the previous panel.

Link Operational Status

🛓 Manage Control Points (CP) on NNP 🛛 🛛 🗹 🖬
CP/NNP Messages
CP/NNP-A Status
Options Select the CP/NNP that you want to manage: Image:
Stort CP Stop and restart CP Activate configuration Dump CP Help Close Shutdown and restart NNP Manage NPM

The NNP icon appears as green in color in the **MOSS-E View** window. This continues the **Link ready** status, and means that the control point is ready and the configuration is active.

Controller Configuration and Management (CCM)

For configuring and managing APPN/HPR or IP resources in an OS/2 environment.

) La Gaude/									• 0
<u>File</u> Configur	ation	Managei	ment	<u>O</u> ptions	Help				
Opened configu Active configu	uration ration i	is: is:							
2752 2784	2816	2848	2880	 2912	2944 297	6 3008	 3040	 3072	3104
2368 2400	2432	2464	2496	2528	2560 259	2624	2656	2688	 2720
	2048	 2080	2112	2144	2176 220	8 2240	2272	2304	2336

The above screen shows CCM without an open configuration.

Refer to Chapter 5, "Telnet IP Resource Management in CCM and MOSS-E" or to the *CCM: Users Guide*, SH11-3081.

IP Commands

A method of configuring and managing IP resources using Telnet commands and without using CCM. Details about these commands are in "Accessing IP Commands from the MOSS-E" on page 5-4.

Dual NNP

The 3746 can be equipped with one or two network node processors (NNPs) which provide the following:

- IP router functions.
- APPN/HPR control point functions including DLUR.
- Controller Configuration and Management (CCM) application.
- Storage utility for the network node files.



Figure 4-1. Dual Network Node Processors. Dual NNPs in twin-standby mode for 3745 Models 41A and 61A.

To activate dual NNP, select **Enable CP/NNP backup** (see "Manage Control Points on NNPs" on page 4-1).

Each NNP (A or B) can be in **active** or **standby** mode alternatively. The active NNP runs the APPN/HPR Control Point or IP router functions. The standby NNP takes control if the active NNP fails. The service processor monitors both NNPs, and if one fails, activates the standby NNP after a 2 minute timer confirmation. Choosing automatic configuration resets and restarts traffic for the 3746 NNP (see "NNP Status" on page 4-4). Otherwise, you must restart traffic manually.

NNP States

In twin-standby mode, the NNPs display color status messages similar to the 3746 NNP (see "Information Pull-Down Menu" on page 3-7).

Network Node Processor (NNP) Adapter Trace Function

The NNP adapter trace function collects data on the line activity of any processor (CLP, TRP, and ESCP) that you have installed on the 3746. You use the trace function if you have a problem with traffic flow through the processors.

On the service processor, you start a trace in the NNP which produces a data file. You then format the data file and view the formatted results on the service processor. You can select from three types of formatter, each one designed to read and format the data in your trace:

- APPN (but not HPR) protocols and above.
- IP protocols and above.
- DLC (this does not include PPP and ISDN) protocols, including APPN/HPR.

Running the Trace

The trace is initiated manually by you on the service processor. You have to manually stop the trace after you have encountered the problem with traffic flow.

6 MB file limit: There is a 6 MB limit on the size of the trace file. If the trace is not manually stopped, when the file reaches the 6 MB maximum, the data will wrap, replacing the original data.

— Careful! -

Running a trace impacts the performance of 3746 network operations.

For further reference on formatted trace file interpretation, see the standards as described in the following:

- Token-Ring Network Architecture, SC30-3374.
- Synchronous Data Link Control Concepts, GA27-3093.
- SNA Formats, GA27-3136.
- Planning Guide, GA33-0457.
- The ANSI/IEEE 802.2 standard for Token ring and Frame relay.
- ITU-T recommendation X.25.

You can also use a search engine on the web to access the most current RFCs on trace file interpretation.

Using the Adapter Trace Function

To use the adapter trace function, follow the steps below:

- **Step 1.** Open the 3746 menu.
- Step 2. Click Network Node Processor (NNP) Management to display NNP functions.

B 85461 Vers2/3746 9x0/h Function Options Help	tenu 🕅 🕅
Network Node Proces	sor (NNP) Management 🔥 🦻
🛛 🗕 🗀 (M) Install/Remo	ove/Change/Restore LIC/NNP
🛛 🗕 🗀 Manage Control F	Points on NNPs
CCM - Controller	Configuration and Management
📙 🦳 Connect To an N	NP
📙 🗀 IP Commands	



854M Vers2/3746-9x0/Menu	
Network Node Processor (NNP) Management	
(M) Install/Remove/Change/Restore LIC/NNP	
– 🗀 Manage Control Points on NNPs	
- CCM - Controller Configuration and Managemen	t
- Connect To an NNP	
IP Commands	

Step 4. Select the NNP and click **Connect**. (In MOSS-E, the active NNP is green in colour.)

🚊 Connect To	an HHP				
-Connection	Messages				
Select the NM	VP that you want	to connect via	DCAF: 🏽 🎆 NN	P-A (1960))	
	ittacromen (Close	Finchen	Help	

Step 5. The State Active screen displays with the host name for the NNP (in Figure 4-2, this is CA11111) and the Control Point APPN menu. Click NNP Management to initiate a DCAF session between the service processor and the NNP.

Euroction	Options	Holo			
		1115114 		1	ř.
	- манаден			ku use	
	(M) Perto	orm adaj	pter trac	e	
⊢≏⊐	PRAS Tr	ace			
	(PE) 0S/	2 Full \$	Screen		
	(PF) Acc	ess PF	Tools		
		Distribut	ed Console		
		<i>#30</i> 083	o r cloffy		

Figure 4-2. State Active screen. The State Active screen displays the Control Point APPN menu.

Step 6. Double-click Perform adapter trace.



Step 7. From the File menu of the Adapter Traces screen, click Create a new trace.



- Step 8. In the Trace Creation Port Selection screen, select the port name of the line that you want to trace. (You can select up to two lines.) The following options are available:
 - Select On for Checkpoint mode if you are running a trace with the help of an IBM service representative. Otherwise, select Off.
 - Click Logical resources if you want to run a trace on a specific station or DLCI. If you select this button, continue with Step 9 on page 4-15.
 - Select Maximum Path Information Unit data size click OK and click OK on the following congestion warning message. Continue with Step 10 on page 4-15.

Congestion Message: If the trace fails to produce data because of congestion, de-select this option and run the trace again.

///////////////////////////////////////	lection List 1 / 1	
	*	
2560-APDL2560	236833683 6	
257 J-APUL257 J		
25/4-APUL25/4		
2070-APDL2070		
2300-APDL2300	2222222 2	
2300-APDL2300		
2561-APDI 2561		
2368-DLUR07		
Maximum Path Inform or PIU data size (bytes):	nation Unit data size [16] [16-40]	
Checkpoint mode: 🏽 🎆	Ď <u>n</u>	

NPALU		

Step 9. Select a link station from the list and click **OK**.

- Step 10. The Adapter Traces screen reappears, displaying the port and adapter that you selected, and the status message of New.
- Step 11. From the Options menu, click Start trace. The status message reads WaitStart, then changes to Started.

Keystrokes Se	state Active - Keystr ssion - Services - H	akes jemote elp		
	Management - Fund M) Perform adapte PRAS Trace PEI OS/2 Full Scr	ctions to use 2 r trace		
	Adapter traces File Options Hel Stat Frace Set: Stop frace Stop all trace Frace trace Epase all trac Deselect all			
				- Ph

Step 12. When you have encountered the problem with the line, click Stop trace from the Options menu.

Sel	Start trace							
	Stop all traces							
R	Erase trace Frase all traces							~~~
	Deselect all							
		2				668		
	90996992	234	888	883 (282	209	2002	

You can check that the trace is producing data by selecting **Display trace parameters** from the **File** menu. This displays the **Trace Parameters Display** screen.

	lers Display
Resource	: CBSP2080
Line address	: 2080
Trace level	: Physical line
Line speed	: High
Buffer size	: 32768 bytes
PIU size	: 255 bytes
Checkpoint m	ode: ON
Stop cause	:
Wrap indicate	vr∶has not wrapped.
Bytes collect	ed: 717 bytes
Disk problem	s : No.
Į	
Cancel Het	p
g suumuuuuuuu si suumuuu	TIIIII.

Step 13. A message indicates that trace data has been successfully stored with a file name (for example, APC00001.APC). Record the name of the file and click **OK**.

Step 14. From the File menu, click Trace files list. The Management of Adapter Trace Files screen displays all trace files and the new trace file.



Step 15. In the Management of Adapter Trace Files screen, select the .apc file generated from the trace. Open the **Options** menu for the following formatters:

Format APPN trace data

Use this formatter for SNA/APPN data. The file extension .sum indicates a full summary of data (this is recommended for viewing), .trc indicates an intermediary summary, and .det indicates full data details.

Format IP trace data

The file extension .ip indicates a full summary of data (this is recommended for viewing), and .sit indicates detailed data.

Format DLC data (FAPC)

Formatting produces a summary file with extension .res.

To format APPN or IP trace data, continue with Step 16 on page 4-18. To format DLC trace data, continue with step 19 on page 4-19.

Format DLC data (FAPC)				
Associated trace files list				
Delete selected file Delete selected file and associated	Irce	Date	Time	Data siz
De <u>s</u> elect all Exit	R2560A	06/16/1998	17:27:57	184
арсоооос сооо	#482560A TKR25601	06/16/1998	17:32:07	104 595
apc00004 2560	TKR2560 I	06/16/1998	17:47:07	79501
apc00005 2560	TKR25601	06/16/1998	17:57:59	80003

- Step 16. Click Format APPN trace data or Format IP trace data. A message indicates that the format has been successful.
- Step 17. From the Options menu, click Associated trace files List.

nmat APPH trace data nmat IP trace data nmat DL <u>E</u> data (FAPC)				
elete selected file elete selected file elete selected file and associate	d Irce	Date	Time	Data size
eselect all dit	(R2080) (R2560A (R2560A	06/08/1998 06/16/1998 06/16/1998	10:49:22 17:27:57 17:30:30	2024676 184 184
pc00003 2560 pc00004 2560	TKR25601 TKR25601	06/16/1998 06/16/1998	17:32:07 17:47:07	595 79501
pc00005 2560 pc00007 2080	TKR20801	0671671998 0770671998	17:57:59	20606

- Step 18. In the Formatted trace file list screen, select a file, and from the Options menu, click Display file.
 - **Note:** You cannot display the .apc file, which is the binary file result of the trace.
 - Go to Step 21 on page 4-20.

lions Help Display file - N				
Delete selected file				
xil				
File	Date	Time	Size	
apc00007.trc	07/06/1998	12:46:46	0	
00007 1 1	0710611000	MARINA STANSTON	FF	
apc00007.sum	0770671998	12:46:46	55 262	
**				
Management of Adapter Trace L alions Help Format APPH trace data format IP trace data format DLC data (PAPC)				
--	--------	------	------	-----------
2 2elete selected file 2elete selected file and associate	I Irce	Date	Time	Data size
)eselect all xit				

Step 19. From the Options menu, select Format DLC data (FAPC).

Step 20. The FAPC screen displays. This screen differs slightly, according to protocol. For SDLC, Token ring, and ESCON, Figure 4-3 displays. For other protocols and screen settings, see "FAPC screen buttons" on page 4-21.

When you have finished with the settings in this screen, click Format.

Protocol	: Token Ring	
Line	: 2080	
Date	: 1990/08/21	11:36:54
Nb.of Stati	ons : 3	
Station p	er station	APPN/SNA
. Detail da	la	Activation Parameters
% EBCD	K ASCH	
		Suppress N/LDPSA
		Code Checkpoints
		6

Figure 4-3. FAPC screen for SDLC, Token ring, and ESCON

Step 21. The formatted file displays in the Browse screen.

1.04	- H:\M1\	apc00000	. RES					DDAF			
esize	1777	Line 22	of	31	Col	1	of	89	Tabs(8)	CHA
c. Use	r DLC Re	note									
	1	1									
0.0 !	1<	1 802.2:	UIframe	, C		(LSAP=x'	AA'	RSAP=x'AA'	RMAC		0800
0.7 1	1<	1 802.2:	UIframe	, C		(LSAP=x'	AA'	RSAP=x'AA'	RMAC	- ***	0000
0.71	1>	1 802.2:	UIframe	, C		(LSAP=x*	AA'	RSAP=x'AA'	RMAC		000
1.4 !	1<	1 802.2:	UIframe	,c		(lsap=x'	AA'	RSAP=x'AA'	RMAC		4001
5.71	1 <	1 802.2:	UIframe	.c		(LSAP=x'	AA'	RSAP=x'AA'	RMAC		000
5.7 !	!>	1 802.2:	UIframe	c		(LSAP=x'	88*	RSAP=x'AA'	RMAC		000
9.7 1	1<	1 802.2:	Ultrame	c		(LSAP=x'	88°	RSAP=x'AA'	RMAC		000
a 7 1	15	1 892 2.	WIframe	F		(I SAP-V	ee?	RSOD V'OO'	PMAR		aaa

Step 22. To close the trace session, open the **Session** menu in the **State Active** screen, and click **Terminate**. This closes the DCAF session between the service processor and the NNP.



FAPC screen buttons

Station per station

The **Station per station** button is enabled if there is more than one station. Select this button if you want to format the trace data station by station. Otherwise, if there is more than one station, the formatter will include data on all stations.

Detail data

Clicking this button enables the **EBCDIC** and **ASCII** buttons.

APPN/SNA

This button includes first level format of data, for example XID (eXchange ID).

Activation Parameters

This button includes all port and station activation parameters.

Suppress N/LDPSA

This button omits all interface control point data.

Code Checkpoints

This button includes internal microcode level information. Generally used by an IBM service representative.

LAPB

The Link Access Procedure Balanced (LAPB) button displays for X.25 protocol.

LMI

The Link Management Interface (LMI) button displays for Frame relay protocol.

Chapter 5. Telnet IP Resource Management in CCM and MOSS-E

This section describes how to access and manage IP resources using Telnet commands via CCM or MOSS-E.

CCM provides menu options that access IP resources by running commands similar to Telnet (see "CCM IP Resource Management" on page 5-2).

You can also run Telnet commands for IP resources directly in MOSS-E (see "Accessing IP Commands from the MOSS-E" on page 5-4 for more information).

The advantage to directly accessing Telnet is that you do not need to use the resources of the service processor, which can then be reserved for other tasks.

For more information on CCM, see CCM: Users Guide, SH11-3081.

For more information on Telnet, see the *Nways Multiprotocol Routing Services*, SC30-3680 and the *Software User's Guide*, SC30-3681.

Controller Configuration and Management (CCM)

CCM runs in the network node processor (NNP). You can open CCM on the service processor and use the application for the following:

- Defining configuration parameters for APPN and IP resources.
- Viewing configuration parameters.
- Performing management tasks.

The following describes how to configure CCM to access Telnet and run Telnet commands.

CCM and Telnet User Profiles

First make sure that the MOSS-E option for configuring CCM and Telnet user profiles is enabled.

- Step1Double-click the service processor object icon or open an MOSS-EView menu from the window list (see Step 2 on page 3-4).
- Step 2 Click Operation Management.
- Step 3 Double-click Manage Passwords. Enter the management password (the default is IBM3745) and click OK.

Z Password Management					
Select an option:					
🖉 MOSS-E view passwords					
🖉 Management password					
CCM/Telnet user profiles management					
<u>OK</u> <u>Cancel Help</u>					

Step 4 Click CCM/Telnet user profiles management.

Step 5 Enter a Userid and Password and click OK.

CCM/Telnet User Profiles Management	<u> </u>
Enable CCM/telnet user profiles	
Configure a User Profile	
Userid: Password:	<u>A</u> dd
Access type: 🗐 Nu access 🔅 View only 💿 All	Modify
Access on which 3746-9X0?	
🔲 3746-9X0 S/N: 12-34568 Name: ERS6 854 B	
I I I I I I I I I I I I I I I I I I I	
User Profiles Already Configured	
Userid Password Access type 3746-9X0 S/N	Delete
	N N
<u>O</u> K Cancel Help	



CCM IP Resource Management

You can configure IP resource management parameters by using the **Management** menu in CCM.

Step 1 Double-click the 3746-900 machine object icon, or open the 3746-900 menu in the window list (see Step 2 on page 3-4).

Step 2 Click Network Node Processor (NNP) Management then double-click Controller Configuration and Management (CCM). The CCM main window displays.

)꽃 La Gaude/3	746-9x0700N				• D
<u>File</u> Configura	ation <u>M</u> anag	ement <u>O</u> ptions	Help		
Opened configu Active configu	ration is: ration is:				
2752 2784	2816 2848	2880 2912	2944 2976	3008 3040	3072 3104
2368 2400	2432 2464	2496 2528	2560 2592	2624 2656	2688 2720
	2048 2080	2112 2144	2176 2208	2240 2272	2304 2336

Figure 5-1. Controller Configuration and Management (CCM) Main Window

<u>践</u> CCM	
File Configuration Management	Options Help
Active configuratio	de <u>resources</u> rces with <u>filter</u> 1998)
Opened contigurati Opened reference (Stations Non intermedia	ate s <u>e</u> ssions
APP <u>N</u> specifics	<u>Configuration</u>
Activate all res Deactivate all Deactivate all	sources Dump routing table resources (normal mode) Dump <u>A</u> RP table resources (forced mode) <u>Ping</u> <u>Restart</u> <u>Rout</u> e
	16 2528 2560 2592 2 Traceroute 0 □SPF BGP □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
2048 2080 211	2 2144 2176 2208 2240 2272 2304 2336
IP specifics cascaded menu choic	e

Step 3 Open the Management menu, and click IP specifics.

Step 4 CCM commands for Telnet functions are listed in the IP specifics sub-menus. For more detailed information on using CCM commands for IP management, see the *Planning Guide*, GA33-0457.

Accessing IP Commands from the MOSS-E

First make sure that the MOSS-E option for configuring CCM and Telnet user profiles is enabled (see "CCM and Telnet User Profiles" on page 5-1).

- **Step 1** Double-click a 3746-900 machine object icon, or open a 3746-900 menu in the window list (see Step 2 on page 3-4).
- Step 2 Click Network Node Processor (NNP) Management, then double-click IP Commands.

📱 DCS2 853Ba / 3746-9x0/Menu 🛛 🗹 🗖						
<u>Function</u> <u>Options</u> <u>H</u> elp						
🎦 Network Node Processor (NNP) Management 🔺						
Hanage Control Points on NNPs						
CCM - Controller Configuration and Management						
P Commands						

Step 3 Enter your Userid and Telnet Password to access the OPCON environment (see "Navigating in the IP Environment" for more information on OPCON).

Note: You can enter your own userid and password or the default Telnet values of **NNPIP** and **37469X0A**.

Step 4 At the Telnet RANGE XXXX-YYYY * command line, you can configure and manage available IP resources (see "Configuring Resources" on page 5-5 and "Managing Resources" on page 5-6).

Navigating in the IP Environment

IP is divided in three main environment levels (see Figure 5-2 on page 5-5).

- Level 1 OPCON environment.
- **Level 2** CONFIG (T 6) environment for configuration, or GWCON (T 5) environment for management.
- Level 3 Protocol environments (Netxxxx, P ARP, P IP, P OSPF, P BGP).

You can configure and manage IP resources within these levels. Navigating these levels requires the following simple commands:

- Level 3 commands allow you into a specified environment.
- Typing **EXIT** returns you to the previous level.
- Pressing [Ctrl] and [0] together returns you from the environment that you are in back to OPCON (the *RANGE XXXYYYY* * command prompt).



Figure 5-2. Internet Protocol (IP) Environment

OPCON Commands

At the OPCON command prompt **RANGE XXXX-YYYY** *, enter **?** for available OPCON commands.

Logout	Exits the Telnet session without saving changes (the keyboard						
	shortcut is pressing true and true together).						
Memory	Displays information on adapter memory.						
Range	Selects an adapter by specific port number.						
Restart	Restarts the IP router with the current or new configuration.						
Status	Displays the status of adapter processes.						
Talk	For configuration (Talk 6 or T 6) or management (Talk 5 or T 5) IP.						

For working on a specific processor, you can use the port number, interface number, or port name in OPCON and GWCON environments. The command prompt automatically updates to the processor that you are working on.

Commands that include a port number, interface number, or port name, take you automatically to the appropriate processor.

Some commands include a parameter for entering a port number (for example, BUFFER). If a parameter is entered, the command applies to the specified address. Otherwise, the command applies to the entire processor.

Configuring Resources

For a more detailed description on using these commands, see *Nways Multiprotocol Routing Services*, and the *Software User's Guide*.

- Step 1 On the Range XXXX-YYYY * command line, enter T 6 for the Config> command prompt.
- **Step** 2 Enter **?** to display the list of the available configuration commands.
 - **Exit** Returns to the previous environment level.
 - List Displays the configuration and devices list.

Logout	Exits the Telnet session without saving changes (the
	keyboard shortcut is pressing Ctrl and C together).
Network	Enters the configuration network (port) environment.
Patch	Used only by an IBM representative.
Protocol	For entering a protocol environment (IP, ARP, etc).
Set	For setting parameters.
Unpatch	Used only by an IBM representative.

Step 3 Entering **?** after a command name displays any associated sub-commands.

Pressing **Ctrl** and **0** together returns you from the environment that you are in back to OPCON (the *RANGE XXXX-YYYY* * command prompt).

Managing Resources

For detailed use of these commands, refer to the *Nways Multiprotocol Routing Services* and to the *Software User's Guide*.

Step 1 On the **Range XXXX-YYYY** * command line, enter **T 5** to display the GWCON command prompt (shown as **RANGE XXXX-YYYY** +).

Step	2	Enter 7	? to	display	the	list	of the	available	management	commands.
------	---	---------	------	---------	-----	------	--------	-----------	------------	-----------

Range	For other adapter range addresses.
Buffer	Displays the interface buffer size and utilization.
Clear	For clearing interface statistics.
Configuration	Displays adapter protocol and interface configuration.
Disable	Disables adapter interfaces.
Error	Displays interface error statistics.
Interface	Displays interface statistics.
Logout	Exits the Telnet session without saving changes (the
	keyboard shortcut is pressing Ctrl and C together).
Memory	Displays memory information.
Network	For entering a network (or port) environment.
Protocol	For entering a protocol environment.
Queue	Displays interface queue length.
Statistics	Displays interface traffic.
Test	For enabling or verifying an adapter interface.
Uptime	Display the time statistics of an adapter.
Debug	Used by an IBM representative only.
Phdump	Used by an IBM representative only.

Trcon Used by an IBM representative only.

- **Trcoff** Used by an IBM representative only.
- **Step 3** Enter **?** after a command name to display any available associated sub-commands.

Pressing **Ctrl** and **1** together returns you from the environment that you are in back to OPCON (the *RANGE XXXX-YYYY* * command prompt).

Single IP Control Point for the 3746 and the MAE

The 3746 and the MAE (feature code 3001) share a single IP control point. You can use the **IP Commands** function of the **Network Node Processor (NNP) Management** menu to display the resources of the 3746 and the MAE. However, if you display the resources of the 3746, only the coupler assigned to the MAE is initially shown. To access the interfaces configured for the MAE, use the following procedure.

- **Step 1** Follow Steps 1 on page 5-4 to 3 on page 5-4.
- **Step** 2 At the Telnet RANGE XXXX-YYYY * command line, type T 5.
- Step 3 Type Net xxxx (where xxxx represents the coupler number of the MAE).

A warning message informs you that using the **T 6** command to modify any interface or IP address will cause the MAE to malfunction.

- **Step 4** Type **T 5**, then **c** to display the interfaces of the MAE. Press **Enter** to display information on MAE interfaces line by line. If you want to view information screen by screen, press **Enter** and the space-bar.
- **Step 5** To return to the previous level, type **Range 0**.

MONITR Process

The MONITR process displays the activity inside the router and the network. To access MONITR from OPCON, type **T 2**.

Chapter 6. Introduction to Remote Access Programs

PS/2 (or equivalent) workstations can be used to remotely access the service processor (and network node processor, if installed). These workstations access the service processor MOSS-E and Controller Configuration and Management (CCM) by using remote access programs, for example DCAF¹ and Console for Java. The operator at a remote workstation using a remote access program can either:

- Control a target service processor with a remote workstation keyboard and mouse.
- Monitor the target service processor in a window displayed on the remote workstation.

The remote workstation operates as a controlling workstation and the service **processor** as a **target workstation**. When an active session connection is established between a remote workstation and the service processor, you can perform MOSS-E, CCM, APPN and IP functions as though seated in front of the service processor.

Chapter 6 to Chapter 17 of this guide include:

- Information about the parameters needed to configure consoles as remote (controlling) workstations
- Procedures for configuring remote (controlling) workstations.

Remote Workstations Using Console for Java

Console for Java can be run as a web-based or Java program-based remote access control program that allows a remote workstation to control the service processor across the network. Console for Java provides the same tools for controlling remote service processors as DCAF. While DCAF is more suitable for SNA-based networking, Console for Java takes advantage of the flexibility in IP networking.

Console for Java can be run by the controlling workstation on any platform (OS/2*, Windows 95**, Windows 98**, Windows NT**, Macintosh**, and AIX*/UNIX**) and can control both graphic based programs (OS/2 Presentation Manager), and character mode programs (OS/2 and DOS terminals).

Microcode Support Options for Console for Java

Microcode level &f12. installed in the service processor supports DCAF or Console for Java remote control access.

¹ Tivoli Management Environment (TME) 10 Remote Control contains the microcode for the Distributed Console Access Facility (DCAF) program (PN 5697RCL). However, DCAF is referred to throughout this guide.

Remote Workstations Using DCAF

Figure 6-1 illustrates five types of remote workstation access to the service processor through using DCAF.



Figure 6-1. DCAF Console Attachments

The numbers in the figure above represent the following console connections to the service processor:

1, **Modem-attached** consoles that use the public switched telephone network to access the service processor via a Synchronous Data Link Control (SDLC) port and modem. For more information, see Chapter 9, "Modem-Attached Remote Workstation Configuration."

2, **APPN-attached** console communicating with the service processor via an LU6.2 session over the network backbone. For more information, see Chapter 10, "APPN-Attached Remote Workstation."

3, **SNA-attached** console communicating with the service processor via an Logical Unit (LU) 6.2 session over the network backbone. For more information, see Chapter 11, "SNA-Attached Remote Workstation."

4, **TCP/IP LAN-attached** console attached to the SPAU via a bridge or a router with appropriate filtering. For more information, see Chapter 12, "TCP/IP LAN-Attached Remote Workstation."

5, **APPC LAN-attached** console attached directly to the Service Processor Access Unit (SPAU), or indirectly through a token-ring LAN bridge. For more information, see Chapter 13, "APPC LAN-Attached Remote Workstation."

Note: The port and modem can also be used for Remote Support Facility (RSF), Remote Technical Assistance Information Network (RETAIN*), and Alert calls.

A remote console can be configured for all categories of access. This means that a single console at a central control site could be LAN-attached to a local service processor while providing APPN and modem access to other service processors.

— Attention! -

Sending an alert to NetView via a service processor SDLC port or calling RSF has a higher priority for the MOSS-E than DCAF, SDLC, or SNA remote sessions.

A more complex two-target (two service processors) configuration is described in Appendix D, "Configuration for a Two-Target Remote Workstation." Each target uses a LAN, a Modem, and SNA to link to the remote workstation.

Notes:

- In the parts of this guide that refer to the 3746 Models A, "console" means an "OS/2 workstation."
- The keyboard and mouse of the service processor cannot be used when it is being controlled by a remote workstation. However, you can regain

control of the keyboard and mouse by using DCAF hot keys, **A**tt **T** pressed together.

If a service processor is not working, check if it is being controlled by a remote workstation.

- A service processor can only be controlled by one remote workstation at a time.
- A remote workstation can be configured to have access to more than one service processor.
- DCAF is a separate product from the IBM Communication Controllers. Installing DCAF on a PS/2 (or equivalent) workstation is the customer's responsibility. See Chapter 7, "Program Support for Remote Workstation Access" for details.

DCAF Logon Password and Service Processor Security

To access a target service processor using a remote workstation, you must first establish a DCAF link with certain parameters unique to the target service processor. This is explained later in this guide.

Passwords provide additional security for the service processor:

1. The **DCAF target password** establishes the link for accessing the target service processor. It can be unique for each target service processor.

There is no factory default password. Press **Enter** when you are asked for the password. To install or change a password, use **Customize DCAF Target Settings** on the service processor **Configuration Management** menu.

- You must enter a local MOSS-E password (controller or service processor password) to log onto the MOSS-E and remotely control the service processor. See the *Planning Guide*, GA33-0457 for more information on these passwords.
- **Note:** By default, the security level of the DCAF sessions between a remote console and the service processor is *non-secure* (password-only).

The security administrator and authentication components of DCAF can be used with the service processor to increase the security of the DCAF link.

Regaining Control of the Service Processor

During an active DCAF session, the remote workstation prevents the target service processor from responding to input from the keyboard or mouse.

However, the local service processor operator can use a hot key combination to override the controlling workstation and regain control of the service processor.

The default hot keys are Alt pressed together.

Minimum Workstation (Remote Console) Configuration

This section contains an overview of the system requirements for remote workstations using DCAF. For detailed information, refer to the *DCAF Installation and Configuration Guide*, SH19-4068, provided with the DCAF installation diskettes.

Programming Requirements

You need the following minimum program levels on your workstation to remotely access the service processor:

- DCAF, Version 1.3.3 (also known as TME10 Remote Control, PN 5697RCL).
- OS/2 Version 2.1 or higher with Warp 3.x and LAPS Version 5.10, or Warp 4.x, with Multiple Protocol Transport Services (MPTS) for OS/2 4.x.
- CM/2 Version 1.11 or higher, or CS/2 Version 4.1 (with OS/2 Warp, MPTS, and TCP/IP).
- MPTS Version 2.2 or higher for LAN-attached workstations.
- Transmission Control Protocol/Internet Protocol (TCP/IP) Version 2.0 or higher for TCP/IP-attached workstations.

The following additional program support is needed for specific types of console attachment:

- Network Transport Services/2 (NTS/2) for LAN-attached and SNA-attached consoles that connect to SNA networks via a LAN.
- To access the service processor via an SNA or APPN network backbone, check that the following programming support is available:
 - 1. DCAF remote workstations and gateway workstations are configured as physical units (PUs) type 2.1. If the DCAF workstation is downstream from a 3174 control unit, then the 3174 must have either one of the following:
 - Configuration Support B plus 8Q0800 Programming Request for Price Quotation (PRPQ).
 - Configuration Support C (APPN feature).
 - NCP V5 R2, operating under Virtual Telecommunications Access Method (VTAM*) V3 R2 for 3720 and 3745 Communication Controllers on the network backbone.
 - 3. NCP V4 R3, operating under VTAM V3 R2 for 3725 Communication Controllers on the network backbone.

Later releases of these programs may be used unless otherwise stated.

Hardware Requirements and Recommendations

For remote workstations, IBM recommends using the following items:

- PS/2s (or equivalent) with at least a 80386 microprocessor and Video Graphics Adapter (VGA) display such as an IBM 8515 color display. A Pentium**-level microprocessor is recommended.
- A hard disk of at least 80 MB and at least 10 MB of RAM.
- A pointing device (usually a mouse).

To find the equivalent keys on IBM non-QWERTY keyboards, refer to OS/2 documentation for keyboard layouts or codes.

The following is recommended for different types of console attachments:

- LAN-attached console (SNA or TCP/IP type), an IBM Token-Ring Network Adapter/A operating at 16 Mbps.
- Modem-attached console, a synchronous modem (such as IBM 7855, 7857, 7858, or equivalent) and a multi-protocol adapter (MPA) card.
- Modem-attached console with an asynchronous modem (for example, an IBM 7858 or equivalent) connected to the COM1 port.

Technical information on the service processor is provided in the *Planning Guide*.

Chapter 7. Program Support for Remote Workstation Access

Required Program Support

First collect the worksheets from the *Planning Guide*, GA33-0457, at your workstation. These contain the parameters that are required for customizing the service processor.

Make sure that you have a workstation already installed and running OS/2 (see "Minimum Workstation (Remote Console) Configuration" on page 6-4).

Use the OS/2 command **SYSLEVEL** to verify the programs you have already installed on the workstation and the Service Pak levels you are using.

Prepare the following:

- Installation diskettes for CS/2 Version 4.1 or higher or CM/2 Version 1.11 or higher.
- LAPS Version 2.2 or higher.
- DCAF Version 1.3 or higher installation diskettes.
- TCP/IP Version 2.0 or higher installation diskettes.
- Information from the *Planning Guide* worksheets.

Installing DCAF

Support for DCAF is provided in microcode level &f12.. Licenses for a new installation of DCAF is provided in PID 5799-XEN (RPQ P85585). This also provides a compliance with specifications for Year 2000 for existing DCAF installations and for new DCAF licenses. The DCAF (non-secure password) component is installed by the MOSS-E in the service processor on customer request.

Warning: The DCAF secure option, once selected on the service processor, is permanent. Re-enabling the non-secure password option requires restoring the microcode from CD-ROM.

When DCAF has been installed on your remote workstation, see "Customizing CS/2 and CM/2."

Customizing CS/2 and CM/2

To enable a DCAF link between the remote workstation and the service processor, you will need to customize CS/2 (or CM/2).

Note: Procedures for CS/2 in this Guide are the same for CM/2 unless otherwise indicated.

Customizing a CS/2 Remote Workstation

This procedure applies to the following type of workstation connections to a network:

- Modem-attached.
- APPN-attached
- SNA-attached
- APPC LAN-attached

Depending on the workstation you are configuring, see:

- Chapter 9, "Modem-Attached Remote Workstation Configuration"
- Chapter 10, "APPN-Attached Remote Workstation."
- Chapter 11, "SNA-Attached Remote Workstation"
- Chapter 13, "APPC LAN-Attached Remote Workstation"

Configuring Data Link Control (DLC) for a Service Processor

The following is a list of recommended CM/2 and CS/2 parameters for a remote workstation, enabling it to correspond with the DLC definitions of the service processor. Although they are a guide to help you with selecting parameters, you must supply the actual values that correspond to your network.

Create or Change the Token-Ring Network DLC Adapter Profile

The parameters for this screen apply to LAN- (APPC-type), SNA-, and APPN- (via a LAN) attached consoles.

Adapter number	0
Load DLC	Yes
Maximum number of link stations	4
Percent of incoming calls	50
Free unused link	Νο
Congestion tolerance	80
Maximum RU size	2024
Send Window Count	4
Receive Window Count	4
C&SM LAN ID	(Customer defined)
Send alert for beaconing	Yes

Create or Change the SDLC DLC Adapter Profile

The parameters for this screen apply to modem- and SNA- (SDLC) attached consoles.

Adapter number	0
Load DLC	Yes
Free unused link	No
Maximum RU size	4096
Send Window Count	4
Receive Window Count	4

Line type	Switched
Link station role	Primary
Line mode	Constant request to send
NRZI	Yes
Modem rate	Full speed
Data set ready timeout	5
XID repoll count	10
Non-XID repoll count	7

Installing TCP/IP

Follow the procedures in the TCP/IP installation procedure that come with the product that you are using.

Physical Installation

Any remote workstation or associated modem is installed by using procedures in the documentation provided with the product. For IBM 7855, 7857, 7858, or Hayes Modems, see "Configuring CS/2 Remote Workstations" on page 9-4.

Chapter 8. Using DCAF for Remote Access to the Service Processor

For more information about DCAF, see the *DCAF: Installation and Configuration Guide*, SH19-4068.

In this procedure, the service processor is the DCAF target workstation, and the remote workstation is the DCAF controlling workstation.

Starting a Session

Use the following procedure to start a DCAF session that controls the service processor and the network node processor (NNP).

Step 1. Double-click the Distributed Console Access Facility icon.

Step 2. Double-click the DCAF Controller icon.

Step 3. In the Session pull-down menu, select Open Workstation directory.



- **Step 4.** Double-click the icon of the target service processor that you want.
- Step 5. Enter the DCAF target password defined at "DCAF Logon Password and Service Processor Security" on page 6-4. If there is no password for the target workstation, click OK.
- **Step 6.** Click **Yes** if you have a non-QWERTY keyboard (see "Hardware Requirements and Recommendations" on page 6-5).
- **Step 7.** Click **Start a session** from the **Session** pull-down menu.
- **Step 8.** Maximize the window to see the target service processor screen.
- **Note:** If you are using an SDLC link that seems too slow, check your modem speed. If it is not at full speed, close the DCAF session and try a new SDLC connection. A better line might reduce the target response time.

Closing a Session

From the Remote Workstation

In the **Session** pull-down menu on the DCAF window action bar, click **Stop a session**.

– Attention -

Do not close the session by de-selecting "Enable DCAF Link/Operations" from the "SP Customization" function.

From the Target Service Processor

To close the session of the target service processor, use the DCAF hot keys,

Alt	1[T	pressed	together
	11	-	presseu	logenier

When your DCAF session is finished, make sure that SDLC link is disconnected. This frees SDLC resources for other tasks.

Chapter 9. Modem-Attached Remote Workstation Configuration



Figure 9-1. Modem-Attached Remote Workstation

This chapter shows you how to configure a DCAF session for controlling the service processor (see Figure 9-1).

- If you have more than one target service processor

You must respect the parameter value matching rules given in Appendix D, "Configuration for a Two-Target Remote Workstation."

Configuring a Target Service Processor

Important

You can use the worksheets in the *Planning Guide*, GA33-0457 to record the necessary parameter values described in this section.

This section describes the following:

- The MOSS-E configuration for a DCAF link to the communication controller
- The MOSS-E parameters required for use in the controlling workstation.

Parameter Values that Must Be the Same

Table 9-1 gives the sets of MOSS-E parameters that must have the same value in both the remote workstation and the target service processor.

Table 9-1. Identical Target and Controlling Parameters (APPN)		
In Service Processor	In Remote Workstation	
Local Node Network ID (Figure 9-2 on page 9-3)	Partner network ID (Step 19 in the configuration procedure)	
SDLC LU name (Figure 9-3 on page 9-3)	Partner node name (Step 19 in the configuration procedure) Partner LU alias (Step 19 in the configuration procedure)	

Each modem configuration procedure in this chapter explains how to find these parameters in the remote workstation.

Configuring the Service Processor in MOSS-E

The following procedure explains how to find, record, and configure the service processor parameters:

- Step 1. In MOSS-E, double-click the Service Processor object.
- Step 2. Click Configuration Management.
- Step 3. Double click SP Customization.

Service Processor Menu 🛛 🕅 🕫	
<u>Function</u> Options Help	
Configuration Management	
- Customization	
– 🗀 Customize DCAF Target Settings	
- 🗀 Install 3746 and NNP LIC on SP hard disk	
🖵 🦳 (M) Manage 3745/3746-9x0 Installation/Removal	¥

Step 4. Select **Enable DCAF Link/Operations** and select **View Customize** in the parallel column, **NetView Link/Operations** and click **Next**.

🖄 Service Processor (SP)	Eustomization	
	Cu	View Istomize
Customer Information		1
SP Time and Date		
Service LAN Addresses		
NetView Link/Operation	ıs	×.
🕅 Enable Retain Link/C)perations	
💥 Enable DCAF Link/Oj	perations	X
" (Indian Conseller), Ink/	Opplations its New	662
Screen resolution:	640x480	1
Modern type: 18M 7857/58 on COM1 port		
Next>>		

Step 5. Record the values in the Network ID field (see Figure 9-2 and refer to Table 9-1 on page 9-1) and click Next and Next again.

NetView Link(s)/Reporting Eustomization		
🎆 Generate alerts		
NetView Link(s) Link(s) through? I SNA // APPN How many? // 1 I 2 Link type?		
Machine Identification		
Machine type Model Serial number		
3745 🖌 17A 🖌 57 - 97474		
Network ID Local node name SPNETID •		
-LAN Link		
TIC2 or TIC3 LAA: 400000632080 hex		
TIC3 RSAP: 114 📈 hexadecimal (04-9C)		
Customize 3270 sessions? 🕷 Yes 🚿 No		
Switched SDLC Link Telephone Number		
0143457280		
Kext>> Help		

Figure 9-2. NetView Link/Reporting Customization

Step 6. Record the value in the SDLC LU name field.

📈 SNA DCAESHA 400000632080			
	04 💥		
APPN DCAFAPEN 400000632030	08 %		
I LAN DCAFLAN			
SDLC Attached Console			
SDLC DCAFSDLC			
Accept any incoming calls on SP? 🕷 Yes 🚿 No			
Local phone number: 111111111			

Figure 9-3. DCAF Customization

- Step 7. Set Accept any incoming calls on SP? to Yes.
- Step 8. Enter the Local phone number, click Next, click Close and Yes to save the configuration.
- Step 9. From Desktop Manager, shutdown and restart the service processor.
- Step 10. Go to "Remote Workstation Modems" on page 9-4.

Remote Workstation Modems

- Important!

Modem configurations in CS/2 (or CM/2) will not work unless your modem is set correctly.

The procedures in "Configuring CS/2 Remote Workstations" and Appendix E, "Modem Setup" on page E-1 have been optimized for DCAF.

	Modem	Settings	-
--	-------	----------	---

If you do not have one of the recommended modems, make sure you have an equivalent modem, with the same mode settings (ASYNC) as the service RSF modem.

For each of the modems listed in Table 9-2, this guide supplies a modem setup procedure in Appendix E, "Modem Setup" on page E-1.

Table 9-2. Settings for Recommended Modems	
Modem and Mode	Settings Page Number
7857 ASYNC on COM1	E-5
7858 ASYNC on COM1	E-6
Hayes ASYNC	None needed

Configuring CS/2 Remote Workstations

— Important

The procedures in this section are the same in CM/2 unless otherwise indicated.

The table in this section give the page number of the procedures for configuring CS/2 (or CM/2) in your workstation. The specific procedure that you need depends on a combination of the following:

- Service processor
- Service processor modem
- Workstation modem.

Configuring the Remote Workstation Modem

Table 9-3 on page 9-5 gives the page number of the CS/2 (or CM/2) configuration procedure that corresponds to your service processor (6275, 3172, or 7585).

- 1. In the table, find the **row** with the service processor modem, connection type and mode.
- 2. Find the **column** with the remote workstation modem, connection type and mode.
- 3. The intersection of the **row** and **column** gives the page number of the procedure that you need to configure in CS/2 (or CM/ 2).

Procedures for Service Processors 6275, 3172, 7585

Table 9-3. IBM	Modems for Remote	e Workstations and Target Service Processors 6275, 3172, and 7585			and 7585
		Remote Workstation Modem Type			
Service Processol Connection Type and Mode	Service Processor Modem Type	IBM 78	57, 7858¹, or Haye Serial Asy Port Co	es ¹ AT Compatible /nchronous nnection	Modem
	7857	9-6	9-6	9-6	9-6
COM1	7858 ¹	9-6	9-6	9-6	9-6
	Hayes ¹	9-11	9-11	9-11	9-11
Notes:					
1. For increased	l data transfer speed	I, IBM recommends	the IBM 7858 mod	em or a Hayes com	patible modem.

7855 Asynchronous Modem to Service Processor 6275, 3172, and 7585

- Step 1. Double-click the Communications Server icon on your desktop.
- Step 2. Click Setup.
- **Step 3.** Under **Directories**, double-click the CMLIB directory and double-click **I7855ASY** to display the configuration file.
- Step 4. Click OK. A message prompts you to select the configuration file for your workstation. Click OK and then Continue.
- Step 5. Select SDLC (in CM/2, SDLC using SNA Phone Connections), APPC APIs, and click Configure.
- Step 6. Select SNA Phone Connect Port Connection Manager, click Configure and Continue.

× € Co	nmunications *Required	Manager Profile List SHA Phone Connect - Port Connection Manager SNA Phone Connect - Connection Manager	
V	Required Required *Required Optional	SNA local node characteristics SNA connections SNA connections	
	Optional	SNA Dependent LU Server definitions	
Con	figure	Close Help	

Step 7. Select Asynchronous switched, a 7855 modem type and click Configure.

dodem connection	Asynchronous switched		%
РСМ		Status	
BM 7851 External	Modem	Not configures	
BM 7852 010 V.34	Data/Fax Modem	Not configure	
BM 7852 013 V.34	Commercial Data/FAX M	la Not configure	Configure
BM ASYNUZSULU V BM Miereolootropia	.32 Modem/A a DCMCIA 14 4Kbpa Data:	Not configure	
DM MICTORIECTIONIC	s PCMCIA 14.4Kops Data	'I NOT CONTIGUIE	
	//////////////////////////////////////	9	
			an an an an an an an an an an an an an a

Step 8. Enter the port number in the Port name field, the number of your modem in the Local phone number field, click OK and Close.

dodem connection type	Asynchronous
^o ort name	COM1
Accept incoming calls	NO
Serial port speed	19200
Local phone number	12345678
Dial prefix string	ATDT

- Step 9. Select SNA Phone Connect Connection Manager and click Configure.
- Step 10. Select SP123456 and click Change.
 - **Note:** The directory entry file contains information on the target service processor that you are dialing. You can use **SP123456** and rename it for your own purposes. If you add a new workstation, you must create a new name.

Connection Manager Configuration	
Incoming Call Directory Entries	Outgoing Call Directory Entries
	SP123456
Create Ciranga Delete	Create
<u>Close</u> Help	

Step 11. Select Modem/Line characteristics and click Change.

F .		······································	
Entry name	SP123456		
<u>C</u> urrently Cor	rfigured Subfields		
			Change
			<u>D</u> elete
Type of Subf	ield to Create		
Called party	number		fave e
		11.11	

- Step 12. Select Asynchronous, ISO3309 as the framing standard and click OK.
- Step 13. Select the Called party number (in CM/2, this is SP123456) and click Change.
- Step 14. Enter the phone-number of the service processor modem and click OK, then OK again on the subsequent screen.

		,	
Phone nu	mber	12345678	
		¢	

Step 15. Select SNA local node characteristics and click Configure and Continue.

Step 16. Modify the Network ID and Local node name fields for your remote workstation and click OK.

⊻/ Local Node Cha	acteristics	
Network ID	MYNETID	
<u>L</u> ocal node name	MYWSID	
Node type		
💓 <u>N</u> etwork node		
🖉 Branch extensio	a support	
Lo <u>c</u> al node ID	(hex)	05D 00000
Local no <u>d</u> e alias n	ame	MYWSID
<u>M</u> aximum compres	sion level	NONE
Maximum compres	sion <u>t</u> okens	0 (0 - 30400)
🖋 <u>A</u> ctivate Attach	Manager at s	tart up
💹 Search required		
Optional comment		Local node information
	(R)) Car	ncel] [Help]

- Step 17. Select SNA connections, click Configure and Continue.
- Step 18. Select To peer node, the service processor link name and click Change and Continue.

ns List ;		
ork node M To peer node 🎡 To	host	
Adapter	Adapter Number	
Token-ring or other LAN types SDLC	0	
Token-ring or other LAN types	0	
Change	e Help	<i>1</i> 2
	ns List e ork node I To geer node I To Adapter Token-ring or other LAN types SDLC Token-ring or other LAN types SDLC I Change	ns List e brk node To peer node To host Adapter Adapter Token-ring or other LAN types 0 SDLC 0 Token-ring or other LAN types 0 SULC 0 Change

Step 19. Check that the entries in the Partner network ID and Partner node name fields match the entries in the MOSS-E (see Table 9-1 on page 9-1). Select the service processor directory name in the Outgoing call directory entry field.

djacent node ID (I	hex)			
Partner LU definition Partner <u>n</u> etwork ID	SPNETI	D	Define Partner L	_Us
Pa <u>r</u> tner node name	DCAFSE)LC		
Permanent connectio	n name		n bahada baha 🕅	
Permanent connectio	n name			
Outgoing call directo	ry entry	SP12345	6	

Step 20. Click OK.

- Step 21. Close the subsequent screens until you exit CS/2.
- **Step 22.** See "Configuring DCAF for a Modem" on page 9-21 for installing a target service processor.

7857 Asynchronous Modem to Service Processor 6275, 3172, and 7585

The following procedure uses configuration file I7857ASY.

- Step 1. Double-click the Communications Server icon on your desktop.
- Step 2. Click Setup.
- **Step 3.** Under **Directories**, double-click the CMLIB directory and double-click **I7857ASY** to display the configuration file.
- Step 4. Click OK. A message prompts you to select the configuration file for your workstation. Click OK and then Continue.
- Step 5. Select SDLC (in CM/2, SDLC using SNA Phone Connections), APPC APIs, and click Configure.
- Step 6. Select SNA Phone Connect Port Connection Manager, click Configure and Continue.

~ Co ~	mmunications Required *Required Required Required *Required	Manager Profile List SNA Phone Connect - Port Connection Manager SNA Phone Connect - Connection Manager DLC - SDLC SNA local node characteristics SNA connections	
~	Optional Optional	SNA features SNA Dependent LU Server definitions	
	figure	Nose Help	M

Step 7. Select Asynchronous switched, User defined and click Configure.

dodem connection	Asynchronous switche	ed	
РСМ		Status	
200M EVFXV32 Int	ernal Modern	Not configures	
ZOOM EVFPV32bis	Modern	Not configure	
ZOOM EVFPV32bis	Internal Modern	Not configure	Configure
200M VFX 28.8 Ex	ternal Modern	Not configure	
2yXEL U-1496 Seri	ies Universal Modem	Not configure	<u>Osen</u>
			uuuuuuuu a

Step 8. Enter the port number in the Port name field, the number of your modem in the Local phone number field, click OK and Close.

Parameters for User Defined Asyn Edit the parameters as needed.	chronous Switched Connection Moder
Modern connection type	Asynchronous
Port name	COM1
Accept incoming calls	NO
Modern class	Unspecified
Serial port speed	9600
Local phone number	12345678

- Step 9. Select SNA Phone Connect Connection Manager and click Configure.
- Step 10. Select SP123456 and click Change.
 - **Note:** The directory entry file contains information on the target service processor that you are dialing. You can use **SP123456** and rename it for your own purposes. If you add a new workstation, you must create a new name.

ncoming Call Directory Entries	<u>Outgoing Call Directory Entries</u>				
Create Champa Datate	Create Change N Delete				
Step	11. Select	Modem/Line	characteristics	and click	Change.
------	------------	------------	-----------------	-----------	---------
------	------------	------------	-----------------	-----------	---------

🛫 Outgoing Call Directory Entry		
Entry name SP123456		
Currently Configured Subfields		
Mudom/Line characteristics		
		Change
		Delete
Tune of Subfield to Create		
Modern / Line characteristics		
Called party number		
		(spato)
	<i>M_</i>)	
OK Cancel Help		

Step 12. Select Asynchronous, ISO3309 as the framing standard and click OK.

🖉 Synchronous	
MutoSync	
Asynchronous paran	neters
<u>r</u> raming standard	190309
Ruardwarane / AutoR	enc naramatare
Synchronous/AutoS Encoding scheme	ync parameters Use default

Step 13. Select the Called party number (in CM/2, this is SP123456) and click Change.

Step 14. Enter the phone-number of the service processor modem and click OK, then OK again on the subsequent screen.

Number
12345678
el Help

- Step 15. Select SNA local node characteristics, click Configure and Continue.
- Step 16. Modify the Network ID and Local node name fields for your remote workstation and click OK.

🛫 Local Node Char	acteristics	
Network ID	MYNETID	
Local node name	MYWSID	
Node type		
💓 <u>N</u> etwork node		
💹 Branch extende	r support	
Lo <u>c</u> al node ID	(hex)	05D 00000
Local no <u>d</u> e alias na	ame	MYWSID
<u>M</u> aximum compress	sion level	NONE
Maximum compress	ion <u>t</u> okens	0 (0 - 30400)
🖋 <u>A</u> ctivate Attach	Manager at s	tart up
💹 <u>S</u> earch required		
Optional comment		Local node information
OK NetWare	(R) Can	cel] [Help]

Step 17. Select SNA connections, click Configure and Continue.

Step 18. Select To peer node, the service processor link name and click Change and Continue.

Name A		Augutei	
	dapter	Number	
DCAFLAN 1	oken-ring or other LAN types	0	
DCAESDLC S DCAESNA 1	iDLC feken-ring or other LAN tupes	U 0	

Step 19. Check that the entries in the Partner network ID and Partner node name fields match the entries in the MOSS-E (refer to Table 9-1 on page 9-1). Select the service processor directory name in the Outgoing call directory entry field.

djacent node ID (I	nex)			•	
Partner LV definition	S				
Partner <u>n</u> etwork ID	SPNETI	D	Define	Partner LUs.	
Pa <u>r</u> tner node name	DCAFSE	DLC			
connection Tabe		Annhhilidhdan 		M 3	
^o er <u>m</u> anent connectio	n name	Latha Datha			
Outgoing call directo	ry entry	SP1234	56		

Step 20. Click OK.

- Step 21. Close the subsequent screens until you exit CS/2.
- **Step 22.** See "Configuring DCAF for a Modem" on page 9-21 for installing a target service processor.

Hayes Asynchronous Modem to Service Processor 6275, 3172, and 7585

- Step 1. Double-click the Communications Server icon on your desktop.
- Step 2. Click Setup.
- **Step 3.** Under **Directories**, double-click the CMLIB directory and double-click **HAYESASY** to display the configuration file.
- Step 4. Click OK. A message prompts you to select the configuration file for your workstation. Click OK and then Continue.
- Step 5. Select SDLC (in CM/2, SDLC using SNA Phone Connections), APPC APIs, and click Configure.
- Step 6. Select SNA Phone Connect Port Connection Manager, click Configure and Continue.

× Comm *R Re V Re *R	unications I anned quired quired quired tequired tional	Manager Profile List SNA Phone Connect - Port Connection Manager SNA Phone Connect - Connection Manager DLC - SDLC SNA local node characteristics SNA connections SNA features	Ś
Op	tional	SNA Dependent LU Server definitions	

Step 7. Select Asynchronous switched, a Hayes modem type and click Configure.

 Port Connection N 	lanager Configuration		
Modern connection	Asynchronous switched		
РСМ		Status	
Hayes ACCURA 2880	10 Modem	Not configure®	
Hayes OPTIMA 9600	Modem 0. Modem	Not configure	Configure
Trages of TIMA 1440		not configure	
Hayes OPTIMA144 +	FAX144 Pocket Modem	Not configure	Detete
Hayes Smartmodem (24UU Modem	Not configure	l
	X.		
;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;			uuuuuuuuu ahaa ahaa
<u>C</u> lose Help			

Step 8. Enter the port number in the Port name field, the number of your modem in the Local phone number field, click OK and Close.

Modern connection type	Asynchronous
Port name	COM1
Accept incoming calls	NO
Serial port speed	57600
Local phone number	12345678
Dial prefix string	ATDT

- Step 9. Select SNA Phone Connect Connection Manager and click Configure.
- Step 10. Select SP123456 and click Change.
 - **Note:** The directory entry file contains information on the target service processor that you are dialing. You can use **SP123456** and rename it for your own purposes. If you add a new workstation, you must create a new name.

Create Delate	Create Change Delete

Step 11. Select Modem/Line characteristics and click Change.

🛫 Outgoing	Call Directory Entry	
Entry name	SP123456	
<u>C</u> urrently Cor	rfigured Subfields	
		Change
		Delete
<u>Type</u> of Subf	ield to Create	
Colled portu	numbor	
caueu party	number	Capate
<u>O</u> K Ca	ncel Help	

Step 12. Select Asynchronous, ISO3309 as the framing standard and click OK.

Masynchronous	.36~	
🖗 Synchronous		
Asunchronous narar	neters	
Framing standard	IS03309	
Synchronous/AutoS	ync parameters	
Encoding scheme	Use default	

Step 13. Select Called party number (in CM2, this is SP123456) and click Change.

Step 14. Enter the phone-number of the service processor modem and click OK, then OK again on the subsequent screen.

Phone number	12345678	

- Step 15. Select SNA local node characteristics, click Configure and Continue.
- Step 16. Modify the Network ID and Local node name fields for your remote workstation and click OK.

🗠 Local Node Chai	acteristics	
Network ID	MYNETID	
Local node name	MYWSID	
Node type		
∭ <u>N</u> etwork node		
∭ Branch extende	e support	
Lo <u>c</u> al node ID	(hex)	05D 00000
Local no <u>d</u> e alias n	ame	MYWSID
<u>M</u> aximum compress	sion level	NONE
Maximum compress	ion <u>t</u> okens	0 (0 - 30400)
💥 <u>A</u> ctivate Attach	Manager at s	tart up
<u>Search</u> required		
Optional comment		Local node information
OK NetWare	(R)) Can	cel] [Help]

Step 17. Select SNA connections, click Configure and Continue.

Step 18. Select To peer node, the service processor link name and click Change and Continue.

∭ lo <u>n</u> etw	ork node 🕷 To peer node 🛞 To	host
Link Name	Adapter	Adapter Number
DCAFLAN DCAFSDLC	Token-ring or other LAN types SDLC	0
UCAF SNA	Token-ring or other LAN types	

Step 19. Check that the entries in the Partner network ID and Partner node name fields match the entries in the MOSS-E (refer to Table 9-1 on page 9-1). Select the service processor directory name in the Outgoing call directory entry field and click OK.

SP12	23456	💹 Activate at startup
nex)		·////
s		
SPNETI)	Define Partner LUs
DCAFSD	LC	,
	Annhhilitititititi.	
a nama	Pullin Autom	e tha tha tha tha 🚯
.,	B	
	s SPNETII DCAFSD ress (hex) arameters	Nex) s SPNETID DCAFSDLC ress (hex) 01 arameters

Step 20. Close the subsequent screens until you exit CS/2.

Step 21. See "Configuring DCAF for a Modem" on page 9-21 for installing a target service processor.

Configuring DCAF for a Modem

Step 1. From Desktop Manager, double-click the Distributed Console Access Facility icon.

Step 2. Double-click the DCAF Controller icon.

- Step 3. Select Session then Open workstation directory.
- **Step 4.** Click **OK** for a first installation. Otherwise continue with next step.
- **Step** 5. In the DCAF Directory window, select **Workstation** then **Add**.

¥ X	Add a workstation		·····
	Workstation name	ERS1SNA	General
	Protocol	Connection	Protocol 📐
		💓 Target	
	💓 APPN	∭ Gateway Administrator	
	🎆 Asynchronous	1.4M Directory	
	💓 IPX/SPX	Securitu	
	💓 NetBIOS		
	🎲 TCP/IP	#385////////////////////////////////////	
	Undo Help		•
	<u>S</u> ave Cance	l Help	

¥ X	Add a workstation		
	Workstation name	SP123456	General
	Protocol	Connection	Protocol
	🕷 APPC	💓 Target	
	🎆 APPN	Gateway Administrator	
	🎆 Asynchronous	1.6H Directory	
		Security	
		// (es # No	
	<u>U</u> ndo Help		
	<u>S</u> ave Cancel	l Help	

Step 6. Enter a name in the **Workstation name** field and click **Protocol**.

Step 7. Fill in the Local LU alias field, the Partner LU alias field (refer to Table 9-1 on page 9-1).

Add a workstation	11.531.531.533	
APPO	2	General
	-	
 		Protocol
Local LU alias	CTRESDEC	
	💹 Use CP name	
B		
Partner LU alias	DUAFSDLU	
Mada pama	DCAEMODE	
·······		
 <u>U</u> ndo Help		
	<i>,</i>	
%		
Save Cancel	Help	

Enter DCAFMODE in the **Mode name** field.

- **Step 8.** Click **Save** and **Cancel**. The new workstation icon appears in the DCAF Directory window.
- **Step 9.** From Desktop Manager, shutdown and restart the workstation.
- **Step 10.** The installation is complete. Go to Chapter 8, "Using DCAF for Remote Access to the Service Processor" for using this new DCAF session.

Chapter 10. APPN-Attached Remote Workstation



Figure 10-1. APPN Remote Workstation

This chapter shows you how to configure a DCAF session for controlling the service processor (see Figure 10-1 above).

If you have more than one target service processor

You must respect the parameter value matching rules in Appendix D, "Configuration for a Two-Target Remote Workstation."

Configuring a Target Service Processor

— Important

You can use the worksheets in the *Planning Guide*, GA33-0457 to record the necessary parameter values described in this section.

This section describes the following:

- The MOSS-E configuration for a DCAF link to the communication controller
- The MOSS-E parameters required for use in the controlling workstation.

Parameter Values that Must Be the Same

Table 10-1 gives the sets of MOSS-E parameters that must have the same value in both the remote workstation and the target service processor.

Table 10-1. Identical Target and Controlling Parameters (APPN)		
In the Service Processor	In the Remote Workstation	
APPN LU name	LU name	
(Figure 10-2 on page 10-3)	(Step 9 on page 10-6)	
APPN Destination address	LAN Destination address	
(Figure 10-2 on page 10-3)	(Step 9 on page 10-6)	
RSAP	Remote SAP	
(Figure 10-2 on page 10-3)	(Step 9 on page 10-6)	

The configuration procedure in this chapter explains how to find these parameters in the remote workstation.

Configuring the Service Processor in MOSS-E

The following procedure explains how to find, record, and configure the service processor parameters:

- Step 1. In MOSS-E, double-click the Service Processor object.
- Step 2. Click Configuration Management.
- Step 3. Double click SP Customization.

	Menu Zoren	
Function Uptions	Help	
Configuration	Managem en t	×,
- 🗀 SP Custo	mization	
🛛 🗕 🗀 Customiz	e DCAF Target Settings	
- 🗀 Install 3	746 and NNP LIC on SP hard disk	
📙 🦳 (M) Mana	ge 3745/3746-9x0 Installation/Removal	*

🖄 – Service Processor (SP)	tustomization	
	Ci	View Istomize
Customer Information		
SP Time and Date		
Service LAN Addresses	3	
NetView Link/Operatio	ins	
∭ Enable Retain Link∕	Operations	
💥 Enable DCAF Link/C	perations	%
("Cristile Conselle), ink	Opplations in Jay	\$ (2)
Screen resolution:	640×480	
Modem type: IBM 7857	758 on COM1 port	
<u>N</u> ext>>, <u>C</u> lose	Help	

Step 4. Select Enable DCAF Link/Operations, View Customize, and click Next.

Step 5. Record the value in the APPN LU name and APPN Destination address fields (refer to Table 10-1 on page 10-2). You will need them in Step 9 on page 10-6.

	LV name	(hexadecimal)	(hex [04-9C]
💓 SNA	DCAFSHA	400000632080	04 👷
🚿 APPN	DCAFAPPN	400000632080	08 🐮
💓 LAN	DCARLAN		
SDLC Att	ached Console		
SDLC 🕅	DCAPSOLC		
Accept ar	ng incoming calls o	n SP? 🥑 909 🧷 909	
Local pho	ne number: [11111	11111	

Figure 10-2. DCAF Customization

- Step 6. Click Next, click Close and Yes to save the configuration.
- Step 7. From Desktop Manager, shutdown and restart the service processor.
- Step 8. Go to "Configuring an APPN-Attached Remote Workstation."

Configuring an APPN-Attached Remote Workstation

The following procedure shows you how to establish a link between a controlling workstation and the target service processor.

Configuring CS/2

— Important -

The procedure below is the same in CM/2 unless otherwise indicated.

- Step 1. Perform steps 1 to 5 on page 13-4
- Step 2. Select DLC Token-ring or other LAN types and click Configure.

Co	mmunication	s Manager Profile List	
	Doguirod	DLC - Taken-ring or other LAN types	m
Y	Optional Optional	SNA connections SNA Dependent LU Server definitions	
V	Optional	SNA features	Ŵ
şatalılılı.			<i>M</i> .
Con	figure	Close Help	

- Step 3. Select Free unused links (in CM/2, select Free unused links and click OK). From the Additional Parameters list, highlight and check the following using the Change button.
 - Select HPR parameters and de-select HPR support.
 - Check that the defaults apply to Link station protocol parameters, Network management parameters, and Resource parameters.

Then click OK.

Mapter 0 13)	Adurtonial parameters LPR parameters Link initialization parameters Link station protocol parameters Network management parameters Resource parameters
D4 (04 - 9C) Effective capacity (bits per se	cond)
Connection network parameter	rs (optional) <u>ML</u> imited resource

Step 4. Select SNA local node characteristics and click Configure.

Continue SNA connections Optional SNA connections Optional SNA Dependent LU Server definitions ✓ Optional SNA features		DLC - Ioken-ring or other LAN types	211
✓ Optional SNA features	Optional Optional	SNA connections SNA beneardent LU Server definitions	
	 Optional 	SNA features	

Step 5. Enter SPNETID in the Network ID field, and the name that you are using for the local node in the Local node name field. Select End node and click OK.

😒 Local Node Char	acteristics	87777777777777777777777777777777777777
Network ID	SYSTST	
<u>L</u> ocal node name	CPCTRL1	
Node type 🕷 End node		
🛞 <u>N</u> etwork node		
🖉 Branch extende	r support	
Lo <u>c</u> al node ID	(hex)	05D 00000
Local no <u>d</u> e alias na	me	CPCTRL1
<u>M</u> aximum compress	ion level	NONE
Maximum compress	ion <u>t</u> okens	0 (0 - 30400)
<u>₩ A</u> ctivate Attach <u>∭ S</u> earch required	Manager at s	tart up
Optional comment		created on 7/27/97
OK NetWare	R) (Can	cel] [Help]

Step 6. Select SNA connections and click Configure.

× Comr	nunications I	Manager Profile List	
	lequired	DLC - Token-ring or other LAN types	
	equireu Iptional	SNA total houe characteristics SNA connections SNA Dependent LU Server definitions	
V O	ptional	SNA features	,
			*
Config	jure	lose Help	

Step 7. Select To network node, DCAFAPPN in the Link name list, and click Change.

Y Connect	tions List		
🕷 To <u>n</u> etv	work node 🛛 🕅	To peer node 🛛 To <u>h</u> ost	<i></i>
Link		Adaptor	
Name	Adapter	Number	
		ar other LAN types B	
Create	Change	Lelete Close Help	

Step 8. Select Token-ring or other LAN types and click Continue.

😒 Adapter List	
Select the local a	adapter to be used for this connection.
Adapter Type Ethernet (ETHER PC Network Twinaxial SDLC SDLC multipoint	AND) network primary server
Configured	Yes
Continue	Cancel Help

Step 9. Refer to Table 10-1 on page 10-2 and fill in the Link name, LAN destination address, and Remote SAP fields. Then click OK.

2 CONTRACTOR OF STREET	work Node	
Link name	DCAFAPF	PN 🕷 Activate at startup
Adjecent node ID (I	юк) [[]	
Partner LV definition	S	
Partner <u>n</u> etwork ID	SPNETID	Define Partner LUs
Pa <u>r</u> tner node name	DCAFAPPN	
LAN destination addr	ess (hex) A	Address <u>f</u> ormat Remo <u>t</u> e SAP (hex)
400000000000	i	

Step 10. Click Close on the intermediate window.

Step 11. Select SNA features and click Configure.

2/ Co	mmunications	lanager Profile List	
	Required	DLC - Token-ring or other LAN types	22
	Required	SNA local node characteristics	
	Optional	SNA connections	
	Optional	SNA Dependent LU Server definitions	
		SYME CONTRACTOR	4
			¥2
Cor	figure	ose Help	

Step 12. Select Local LUs in the Features list, CTRLAPPN in the Definition list, and click Change.

<u>F</u> eatures			Definition	Comment
Partner LUs Modes Transaction Transaction Transaction Conversation LU-to-LU s CPI Commun	program defir program defau program secu program security security nications side	itions Jus rily Information	CTRLLAN CTRLSDLC CTRLSNA	Created on 7. Created on 7. Created on 7. Created on 7.

Step 13. Modify the LU name and Alias fields and select use this local LU as default local LU alias. Then select Independent LU and click OK.

lias (C	TRLAPPN		
NAU address ∭Independe	ent LU		
∭Dependen	t lu nau	(1 - 254)	
Host link			
Optional LU <u>m</u> odel nas	10		
<u>Use this loc</u>	al LU as yo	our default local LU ali	as
ptionat com	11811 7 0 7 0 7		

- Step 14. Select Modes and verify that DCAFMODE is in the Definition list. If you do not find DCAFMODE, add it to the list with the Create button.
- Step 15. Select Transaction program definitions from the SNA Features List and click Create.
- Step 16. Enter the command line in the Transaction program (TP) name field, the path of the DCAF directory in the OS/2 program path and file name field, and click Continue.

ransaction program (TP) name	IBM.DCAF.CONTROLLING.TRANSACTION.PROC
OS/2 program path and <u>f</u> ile name	C:\DCAF13\EQNCTRAM.EXE
Optional comment	
Optional values	
)ptional values ∭ Progr <u>a</u> m Initialization Parameter	(PIP) allowed
)ptional values Progr <u>a</u> m Initialization Parameter Conversation security <u>r</u> equired	(PIP) allowed
Dptional values MProgr <u>a</u> m Initialization Parameter Conversation security <u>r</u> equired Program parameter string	(PIP) allowed

- Step 17. Click Close on the subsequent screens until you exit CS/2.
- Step 18. Continue with "Configuring DCAF for APPN."

Configuring DCAF for APPN

- Step 1. From Desktop Manager, double-click the Distributed Console Access Facility icon.
- Step 2. Double-click the DCAF Controller icon.
- Step 3. Click Session, then Open workstation directory.
- **Step 4.** Click **OK** for a first installation. Otherwise continue with next step.
- Step 5. From the DCAF Directory window, click Workstation, then on Add.
- Step 6. Fill in the Workstation name field, select APPN, Target, and click Protocol.

[¥ ∭	Add a workstation			
			Mb	
	Workstation name	CTRLAPPN	General	
	Protocol	Connection	Protocol	
	💓 APPC	💓 Target		
	💓 APPN	Gateway		
	💓 Asynchronous	AAN Directory		
	💓 IPX/SPX	Securitu		
	💓 NetBIOS	area and a		
	💓 TCP/IP	# 365		
	Undo Help	· · · · · · · · · · · · · · · · · · ·	•	
	······			
	<u>S</u> ave Cance	l Help		
Inner and the second				////

Step 7. Fill in the Local LU alias (see Step 13 on page 10-8), and the Fully qualified PLU:

- a. First field matches the Local Node Network ID in Step 5 on page 10-5
- b. Second field matches the **APPN LU name** in Figure 10-2 on page 10-3.

Add a workstation	
APPN	General
Local LU alias CTRLAPPN	
Fully qualified PLU SPNETID . DCAFAPPN	
Mode name DCAFMODE	
Save Cancel Help	

- **Step 8.** Enter DCAFMODE in the **Mode name** fields.
- Step 9. Click Save, OK (on the subsequent window), and then Cancel.
- Step 10. In Desktop Manager, shutdown and restart the workstation.
- Step 11. Go to Chapter 8, "Using DCAF for Remote Access to the Service Processor."

Chapter 11. SNA-Attached Remote Workstation



Figure 11-1. SNA-Attached Remote Workstation

This chapter shows you how to configure a DCAF session for controlling the service processor (see Figure 11-1).

— If you have more than one target service processor

You must respect the parameter value matching rules given in Appendix D, "Configuration for a Two-Target Remote Workstation."

Configuring a Target Service Processor

— Important

You can use the worksheets in the *Planning Guide*, GA33-0457 to record the necessary parameter values described in this section.

This section describes the following:

- · The MOSS-E configuration for a DCAF link to the communication controller
- The MOSS-E parameters required for use in the controlling workstation.

Parameter Values that Must Be the Same

Table 11-1 gives the sets of MOSS-E parameters that must have the same value in both the remote workstation and the target service processor.

Table 11-1. Identical Target and Controlling Parameters (SNA)			
In the Service Processor	In the Remote Workstation		
Local Node Network ID (Figure 11-2 on page 11-3)	Partner network ID (Step 9 on page 11-7) and Network ID (Step 10 on page 11-8)		
SDLC LU name (Figure 11-3 on page 11-4)	Partner node name (Step 9 on page 11-7) and LU name (Step 10 on page 11-8) and Partner LU alias (Step 7 on page 11-11)		
TIC2 or TIC3 LAA (Figure 11-2 on page 11-3)	LAN Destination address (Step 9 on page 11-7)		
TIC3 RSAP (Figure 11-2 on page 11-3)	Remote SAP (Step 9 on page 11-7)		

The configuration procedure in this chapter explains how to find these parameters in the remote workstation.

Configuring the Service Processor in MOSS-E

The following procedure explains how to find, record, and configure the service processor parameters:

- Step 1. In MOSS-E, double-click the Service Processor object.
- Step 2. Click Configuration Management.
- Step 3. Double click SP Customization.

🗄 Service Processor Menu	
<u>F</u> unction <u>Options Help</u>	
Configuration Management	
F Customization	
Customize DCAF Target Settings	
- 🗀 Install 3746 and NNP LIC on SP hard disk	
└─ (M) Manage 3745/3746-9x0 Installation/Remova	l I

Step 4. Select Enable DCAF Link/Operations, the adjacent View Customize, and NetView Link/Operations. Then click Next.

		View
		Customiz
Customer Information		
SP Time and Date		
Service LAN Addresses		
NetView Link/Operatio	ns	×.
🏼 Enable Retain Link/	Operations	
🏽 Enable DCAF Link/O	perations	*
Cratile Console), lak	Operations its 34	X6 [5]
Screen resolution:	640×480	
Modem type: IBM 7857	/58 on COM1 port	t 🌌
	Hala	

Step 5. Record the values in the Local Node Network ID, TIC2 or TIC3 LAA, and TIC3 RSAP fields (see Figure 11-2 and refer to Table 11-1 on page 11-2). Then click Next.

Generate ale	©7/200000 rts	ng Customization
~NetView Link(Link(s) throug How many? Link type?	s) h? ⊛ SNA ∅ 1 ◎ €/4	A (
Machine Identi Machine tune	ification	Serial number
3745	17A 👻	57 - 97474
	- MOS	
TIC2 or TIC3	LAA: 400	000632080 hex
TIC3 RSAP: 🛽	a 📝 hexe	decimal (04-9C)
Customize 327	70 sessior	ns? 🕷 Yes 🚿 No
Switched SDL 0143457280	C Link Te	lephone Number
<< Previous	Next>>	Help

Figure 11-2. NetView Link/Reporting Customization

Step 6. Record the value in the **SNA LU name** and **SNA Destination address** fields (refer to Table 11-1 on page 11-2). You will need them for Step 9 on page 11-7.

	LV name	(hexadecimal)	(hex [04-9C]
🛒 SNA	DCAFSNA	400000632080	84 🏂
APPN	DCAFAPPH	400000632080	08 💓
💹 LAN	DCAFLAN		
SDLC Atta	ched Console		
💓 SDLC	DCAFEDLC		
Accept and	y incoming calls o	n SP? @ 969 //Mg	
Local phor	e number: 1111	11111	

Figure 11-3. DCAF Customization

- Step 7. Click Next, click Close and Yes to save the configuration.
- Step 8. Shutdown and restart the service processor.
- Step 9. Go to "Configuring a SNA-Attached Remote Workstation."

Configuring a SNA-Attached Remote Workstation

The following procedure shows you how to establish a link between the controlling workstation and the target service processor.

Configuring CS/2

— Important -

The procedure below is the same in CM/2 unless otherwise indicated.

Step 1. Perform Steps 1 to 5 on page 13-4.

Step 2. Select DLC - Token-ring or other LAN types and click Configure.

۲ (t	ommunication	s Manager Profile List	
		DLC Taken ring ar other LAN types	11
	Optional	SNA tocat houe characteristics SNA connections	
	Optional Optional	SNA Dependent LU Server definitions SNA features	
			×.
Co	nfigure	<u>Close</u> Help	

- Step 3. Select Free unused links (in CM/2, select Free unused links and click OK). From the Additional Parameters list, highlight and check the following, using the Change button.
 - Select HPR parameters and de-select HPR support.
 - Check that the defaults apply to Link station protocol parameters, Network management parameters, and Resource parameters.

Then click OK.

∰ree unused ∭Branch exte Maximum [-fi¢ 2224 (265	l links Inder support eld size - 16393)	Link initialization parameters Link station protocol parameters Network management parameters Resource parameters
Local <u>S</u> AP (he 04 (04 -	x) 9C)	Change
<u>E</u> ffective capa 4000000	city (bits per secon	d)

Step 4. Select SNA local node characteristics and click Configure.

	Communicatio	ns Manager P	ofile List		
	/ Required	DLC - T	ken-ring or other LAN tu	ipes	22
	Optional	SNA coni	ections		
	Optional	SNA Dep	ndent LU Server definiti	ons	
	🖊 Optional	SNA feat	res		
tinini T		······································			
	Configure	<u>C</u> lose	эlр		

Step 5. Fill in the Network ID and Local node name fields, select End node and click OK.

⊻ Local Node Char	acteristics				
Network ID	SYSTST				
<u>L</u> ocal node name	CPCTRL1				
Node type M End node					
💓 <u>N</u> etwork node					
💹 Branch extende	a support				
Lo <u>c</u> al node ID	(hex)	05D 00000			
Local no <u>d</u> e alias na	Local no <u>d</u> e alias name CPCTRL1				
<u>M</u> aximum compress	sion level	NONE			
Maximum compress	ion <u>t</u> okens	0 (0 - 30400)			
<u>∰ A</u> ctivate Attach Manager at start up					
<u>∭ S</u> earch required					
Optional comment		created on 7/27/97			
OK NetWare(R) Cancel Help					

Step 6. Select SNA connections and click Configure.

	mmunication Dequired	ns Manager Profile List	
ž	Required	SNA local node characteristics	
~	Optional Optional	SNA Dependent LU Server definitions SNA features	
Cor	figure	Close Help	min

Step 7. Click To peer node, select DCAFSNA from the list and click Change.

Connecti Partner typ	ons List e	²² To bost	
Link		Adapter	
Name DCAFLAN DCAFSDLC	Adapter Token-ring or other LAN tu SDLC Token-ring or other LAN tu	Number pes 0 0	
£ C <u>r</u> eate	Change	<u>Close</u> Help	M. M.

Step 8. Select Token-ring or other LAN types and click Continue.

😒 Adapter List		
Select the local a	adapter to be used for	this connection.
<u>A</u> dapter Type		
Ethernet (ETHED	AND) petwork	
PC Network	AND I NELWOIN	
Twinaxial SDLC		
SDLC multipoint	primary server	
Configured	Yes	
Adapter <u>n</u> umber	0 👔 (0-15)	Configure DLC
Continue 🔥	Cancel Help	

Step 9. Refer to Table 11-1 on page 11-2 and fill in the Partner network ID (the network that contains the target processor), the Partner node name, LAN destination address (the MAC address of the target service processor), and Remote SAP fields. Then click Define Partner LUS.

ink name	DCAFSNA	Activate at startup
djecent node ID 🛛 (I	hex)	
Partner LU definition	IS	
Partner <u>n</u> etwork ID	SPNETID	Define Partner LUs
Partner node name DCAFSNA		
Partiner node hanne Destination informati	ion for peer no	de
Patination informati LAN destination <u>a</u> ddr 400000502080	ion for peer nov	de Address <u>f</u> ormat Remo <u>t</u> e SAP (hex) Token-Ring X 08
Destination informati	ion for peer nor ress (hex)	de Address format Remote SAP (hex) Token-Ring 8 08
Destination informati LAN destination <u>a</u> ddr 400000502080 p provide unique link ose specified in the	ion for peer no ress (hex) /	de Address <u>format</u> Remo <u>l</u> e SAP (hex) Token-Ring 1 08 meters that are different than Override

Step 10. Refer to Table 11-1 on page 11-2 and fill in the Network ID, LU name (service processor LU name), and Alias fields. Then click Add and OK.

 Partner LUs To add a Partner LU, enter the LU name, alias, and comment. Then select Add. To change a Partner LU, select an LU from the list, change the LU name, alias, and/or comment fields and select Change. 				
To delete a f	Partner LV, select an LV fr	om the list and select	Delete.	
Network ID	SYSTST	LU name	Alias	
- LV name	DCAFSNA	SYSTST.DCAFSNA	DCAFSNA	
Alia <u>s</u>	DCAFSNA			
Dependent partner LU Partner LU is dependent Uninterpreted nome Construction Uninterpreted nome Construction Uninterpreted nome Construction				
Optional comment Add OK N Cancel				

Step 11. Click OK on the intermediate window and Close.

Step 12. Select SNA features and click Configure.

x 0	ommunications	Manager Profile List
V	Required	DLC - Token-ring or other LAN types
	Required	SNA local node characteristics
	Optional	SNA connections
	Optional	SNA Dependent LU Server definitions
Co	nfigure	<u>Close</u> Help

Step 13. Select Local LUs, CTRLSNA and click Change.

19000000000000000000000000000000000000		Comment
Partner LUS Modes Transaction program definitions Transaction program defaults Transaction program security Conversation security LU-to-LU security CDL Security	CTRLAPPN CTRLLAN CTRLSDLC	Created on 7. Created on 7. Created on 7.

Step 14. Fill in the LU name and Alias fields, select use this local LU as your default local LU alias and click OK.

Local L	J	
U name	CTRLSNA	
Alias	CTRLSNA	
NAU addro M <u>I</u> ndeper	ess ndent LU	
🛞 <u>D</u> epend	ent LU NAU	[1 - 254]
Host link		
Optional I model r	LU Iame	

Step 15. Click Close on each subsequent screen until you exit CS/2.

Step 16. Continue with "Configuring DCAF for SNA" on page 11-10.

Configuring DCAF for SNA

Step 1. From Desktop Manager, double-click the Distributed Console Access Facility icon.

- Step 2. Double-click the DCAF Controller icon.
- 3. Click Session and Open workstation directory. Step
- **Step 4.** Click **OK** for a first installation, otherwise continue with next step.
- Step 5. Click Workstation, then Add.
- Step 6. Fill in the Workstation name field (see Step 14 on page 11-9), select APPC, Target, and click Protocol.

Add a workstation		
 Workstation name	CTRLSNA	General
Protocol	Connection	Protocol
 💓 APPC	💓 Target	
🏼 APPN	🕼 Gateway Administrator	
 🎆 Asynchronous	AN Directory	
💓 IPX/SPX	, Security	
💓 NetBIOS		
💓 TCP/IP	# No.	
Undo Help	i L	
<u>S</u> ave Cance	l Help	

Step 7. Fill in the Local LU alias field, the Partner LU alias field (refer to Table 9-1 on page 9-1), and enter DCAFMODE in the Mode name field. Then click Save, OK (on the subsequent window), and Cancel.

Add a workstation		
AP	PC	General
Local LV alias	CTRLSNA	Protocol
	🎆 Use CP name	
Partner LU alias	DCAFSNA	
Mode name	DCAFMODE	
<u>Undo</u> Help		
	<u>یک</u> :	
Save Cancel	Help	

Step 8. From **Desktop Manager**, shutdown and restart the workstation.

NCP Definitions

The definitions in this section apply to NCP Version 6 Release 2.

All NCP generations attached to LUs that support LU 6.2 DCAF sessions must contain the following statement:

LUDRPOOL NUMILU=(any number > 0)

Remote Controlling Workstation

The following definitions apply to NCP1 between the controlling workstation LAN and the SNA network (see Figure 11-1 on page 11-1).

The address must be the same as defined in Step 9 on page 11-7.

1. Physical line and physical PU:

•		
•		
** * TIC3 BNN	I/INN: PORT 2144	* * *
K23C2144 L	INE ADDRESS=(2144,FULL),PORTADD=0,LOCADD=400000232144 MAXTSL=16732,LSPRI=PU,PUTYPE=1,ANS=CONTINUE,	* *
S23C2144 P	ADAPTER=TIC3,TRSPEED=16,TRANSFR=254 PU ADDR=01, INNPORT=YES	*

2. Logical group with at least one LINE/PU to be used by the service processor:

```
.
*
                                             *
 TIC3 GROUP L23G2144: LAN LOGICAL DEFINITIONS FOR 37CS
                                             *
*
                                             *
                                             *
*
L23G2144 GROUP DIAL=YES,LNCTL=SDLC,TYPE=NCP,ECLTYPE=(LOGICAL,PER),
                                              *
         CALL=INOUT, PHYSRSC=S23C2144,
                                              *
         LINEAUT=YES,
                                              *
         MAXPU=1,
                                              *
         NPACOLL=NO,
                                              *
         PUTYPE=2,
                                              *
         RETRIES=(6,0,0,6)
R23A0001 LINE
Z23A0001 PU
```

Target Service Processor

The following definitions apply to NCP2 between the service LAN and the SNA network (see Figure 11-1 on page 11-1).

1. Physical line and physical PU:

.

•	
•	
*	*
* TIC3 BNN/INN	: PORT 2080 ATT TO CONTROLLER FF PORT 1092 - PHYSICAL *
*	*
K50C2080 LINE	ADDRESS=(2080,FULL),PORTADD= 0 P,LOCADD=400000502080,*
	MAXTSL=16732,LSPRI=PU,PUTYPE=1,ANS=CONTINUE, *
	ADAPTER=TIC3,TRSPEED=16,TRANSFR=254
S50C2080 PU	ADDR=01,*
	INNPORT=YES
•	

2. Logical group with at least one LINE/PU to be used by the service processor:

**************** * * TIC3 GROUP L78G2080: LAN LOGICAL DEFINITIONS FOR 37CS L50G2080 N GROUP DIAL=YES,LNCTL=SDLC,TYPE=NCP,ECLTYPE=(LOGICAL,PER), * CALL=INOUT, PHYSRSC=S50C2080, LINEAUT=YES, * MAXPU=1, * NPACOLL=NO, * PUTYPE=2, RETRIES=(6,0,0,6) R50A0001 LINE Z50A0001 PU .

VTAM Definitions

The VTAM* definitions in this section are for Version 3 Release 4.1.

Start Definitions

The following VTAM start definitions must be used in both VTAM1 and VTAM2, as shown in Figure 11-1 on page 11-1:

* VTAM START DEFINITIONS
*
HOSTSA=10,SSCPID=10,MAXSUBA=63,
CONFIG=10,NETID= SYSTST A,SSCPNAME=CDRM12,

XNETALS=YES, DYNLU=YES,

NOPROMPT, DLRTCB=32, SUPP=NOSUP, NOTNSTAT, NOTRACE, TYPE=VTAM,LPBUF=(120,,0,,60,60),LARGE GENERAL PURPOSE _ PAGEABLELFBUF=(96,,0,,24,10),LARGE GENERAL PURPOSE _ FIXEDSFBUF=(128,,0,,32,10),SMALL GENERAL PURPOSE _ FIXEDCRPLBUF=(160,,13,,80,80),RPL_COPY _ PAGEABLEIOBUF=(256,256,34,,68,68)I/O BUFFERS _ FIXED (NP & PP BUF REMOVED)

Logmode Table

The following VTAM logmode table must be used in both VTAM1 and VTAM2 as shown in Figure 11-1 on page 11-1:

SOCMOTAB MODETAB DCAFMODE MODEENT LOGMODE=DCAFMODE I, TYPE=0, FMPROF=X'13', TSPROF=X'07', PRIPROT=X'80', SECPROT=X'80', COMPROT=X'50B1', SSNDPAC=X'08', RUSIZES=X'8787', PSNDPAC=X'08', PSERVIC=X'06020000000000000002F00' MODEEND END SOCMOTAB

Major Node Definitions

Remote Workstation

The following VTAM major node definitions must be used in VTAM1 as shown in Figure 11-1 on page 11-1:

* MAJNODE FOR CONNECTION : Remote console <==> VTAM V3R4 * * NTVCTRL VBUILD TYPE=SWNET,MAXGRP=1,MAXNO=1 *-----* CTRL PU ADDR=04,PUTYPE=2,NETID=SYSTST E,CPNAME=CPCTRL F Х Х MAXPATH=8, MAXDATA=265, MAXOUT=1, DISCNT=NO, CTRI 1 LU LOCADDR=0,MODETAB=SOCMOTAB

Target Service Processor

The following VTAM major node definitions must be used in VTAM-2, shown in Figure 11-1 on page 11-1:

* MAJNODE FOR CONNECTION : MOSS-E <==> VTAM V3R4 * * * NTVMOSSE VBUILD TYPE=SWNET,MAXGRP=1,MAXNO=1 *-----* ADDR=04, PUTYPE=2, NETID= SYSTST A , CPNAME= MOSSNMVT PU XC MOSSE MAXPATH=8, MAXDATA=265, MAXOUT=1, Х DISCNT=NO, PATHMOSS PATH DIALNO= P 00 04 400000000007 D,GRPNM=L50G2080 N DCAFSNA B LU LOCADDR=0,MODETAB=SOCMOTAB M

Chapter 12. TCP/IP LAN-Attached Remote Workstation



Figure 12-1. Types of TCP/IP Service LAN-Attached Remote Workstations

This chapter shows you how to configure a DCAF session for controlling a target service processor.

The path between the controlling workstation and the service processor can be either through:

- A bridge with filtering to the service LAN (see 1 in Figure 12-1).
- A router to the service LAN, which can be either:
 - A non-3746 router (see 2 in Figure 12-1)
 - The **3746** router (see **3** in Figure 12-1).

A controlling workstation can be connected as in **2** or **3**, but you cannot have both types of connections at the same time.

Configuring a Target Service Processor

— Important

You can use the worksheets in the *Planning Guide*, GA33-0457 to record the necessary parameter values described in this section.

The following procedure configures the MOSS-E to answer a controlling workstation:

Step 1. Open the Service Processor Menu.

Step 2. Click Configuration Management.

Step 3. Double-click SP Customization.

Service Processor Menu	
<u>F</u> unction <u>Options</u> <u>H</u> elp	
Configuration Management	
- C SP Customization	
– 🗀 Customize DCAF Target Settings	ļ.
\vdash 🗀 Install 3746 and NNP LIC on SP hard dis	sk 🛛
(M) Manage 3745/3746-9x0 Installation	/Removal 🖌

Step 4. Select Service LAN Addresses in the View Customize button list. Click Next to display the Service LAN Addresses screen.

Service Processor (SP) Eustemization		
	Cu	View stomize
Customer Information		
SP Time and Date		
Service LAN Addresses		
NetView Link/Operations		
💹 Enable Retain Link/Operations		
Image: DCAF Link/Operations		
🗱 Enable Console Link/Operations for Java		
Screen resolution:	640x480	
Modem type: IBM 7857/58 on COM1 port		
<u>Next>></u>	Help	
Step 5. Record the Service Processor IP address (this will be used in Step 7 on page 12-4). If you have a link through the 3746 (see 3 in Figure 12-1 on page 12-1), enter the TIC3 2080 address in the SP default router field and click Next and Close.

SCIVICS FAN Adoli	2202			
	IP address	Subnet mask	Hostname	UAA/LAA
Service Processor:	9.100.77.71	255.255.255.0	SP11111	400000631111
NNP-A:	9.100.77.72	255.255.255.0	CA097474	
NNP-B:	pat installed			
TIC3 2080:	9.100.77.73	255.255.255.0		
SP default router:	9.100.77.1	*		
MAE:	9.100.77.74	255.255.255.0	DA097474	
LAN Manager Do you have a LA	N manager? í Yes	s 🏽 No C&SM	4 LAN ID: M	OSSE
<< <u>P</u> revious <u>N</u>	ext>> Help			

Otherwise, click **Next**, **Close** and **Yes** to save the configuration.

Step 6. Go to "Configuring a TCP/IP LAN-Attached Remote Workstation" for using this new DCAF session.

Configuring a TCP/IP LAN-Attached Remote Workstation

The following procedures shows you how to establish a link between a controlling workstation and the target service processor.

Configuring DCAF for TCP/IP

The following procedure configures a service processor in the remote DCAF.

- Step 1. From Desktop Manager, double-click the Distributed Console Access Facility icon.
- Step 2. Double-click the DCAF Controller icon.
- Step 3. Click Session, then Open workstation directory.

 Open Workstation directory	Ctrl+0
Stop a session	¶ _{Ctate} s
22. T. Y. T. T. T. T. T. Y.	

Step 4. Click **OK** for a first installation. Otherwise continue with next step.

Step 5. From the DCAF Directory window, click Workstation then on Add.

Workstation name	XXXXXX	General Protocol
APPC APPN Asynchronous IPX/SPX NetBIOS	Target Contour og Administrator LAN Directory Security	~ ³
<u>Undo</u> Help		

Step 6. Fill in the Workstation name field, select TCP/IP and click Protocol.

Step 7. Fill in the **Remote host name** (the IP address of the target service processor recorded in Step 5 on page 12-3) and **Port number** fields. Then click **Save** and **Cancel**.

Add a workstation		
тсри тори	IP	General
Remote host name	XXXXXX	FTUIULDI
Port number	2501	
Security Authenticator-		n
Remote bast name		
Part menter		
	×	
Save 💦 Cancel	Help	

Step 8. Continue with "Configuring TCP/IP" on page 12-5.

Configuring TCP/IP

The following procedure adds a service processor in the remote workstation TCP/IP.

Step 1. Double click the TCP/IP Configuration icon on your desktop.



Step 2. Click Host names, open page 2, and click Add.

Note: If you are using an earlier version of TCP/IP, click **Services** and select page **3 of 3**.

23/1					
ostname Contig	juration wi	thout a Names	ierver		Network
IP address	Hos	tname			Routing
	S ///////// ///////////////////////////		S. M. 3. S. M. 31 S. M.		Hostnames
					Autostart
					General
					Security
1 ook tbround	HOSTS II	st before naio	n to nameserver		Servers
genne on aug		o. co.oro gon.			Socks
Add	<u>C</u> hange	De <u>l</u> ete			Printing
Unda	<u>D</u> efault	Help			Mail
		Hostnar	nes - Page 2 of 2	+ +	
			8		Maa

Step 3. Fill in the IP address field of the target workstation (the IP address of the TIC 2080), the Host name field (optional) and click Add.

IP address	9.100.30.127	
Hostname		
Aliases		
Comment		

Step 4. Close the TCP/IP window.

Step 5. Click Save.

Step 6. Go to Chapter 8, "Using DCAF for Remote Access to the Service Processor" for using this new DCAF session.

Chapter 13. APPC LAN-Attached Remote Workstation



Figure 13-1. APPC Service LAN-Attached Remote Workstation

This chapter describes how to configure a DCAF session for controlling a target service processor (see Figure 13-1).

— If you have more than one target service processor

You must respect the parameter value matching rules given in Appendix D, "Configuration for a Two-Target Remote Workstation."

Configuring a Target Service Processor

Important

You can use the worksheets in the *Planning Guide*, GA33-0457 to record the necessary parameter values described in this section.

This section describes the following:

- The MOSS-E configuration for a DCAF link to the communication controller
- The MOSS-E parameters required for use in the controlling workstation.

Parameter Values that Must Be the Same

Table 13-1 on page 13-2 gives the sets of MOSS-E parameters that must have the same value in both the remote workstation and the target service processor.

Table 13-1. Identical Target and Controlling	Parameters (APPC LAN)
In the Service Processor	In the Remote Workstation
Local Node Network ID (Figure 13-2 on page 13-3)	Partner network ID (Step 13 on page 13-9) and Network ID (Step 14 on page 13-9)
SDLC LU name (Figure 13-3 on page 13-4)	Partner node name (Step 13 on page 13-9) and Partner LU alias (Step 7 on page 13-12) and LU name (Step 14 on page 13-9)
TIC2 or TIC3 LAA (Figure 13-2 on page 13-3)	LAN Destination address (Step 13 on page 13-9)
TIC3 RSAP (Figure 13-2 on page 13-3)	Remote SAP (Step 13 on page 13-9)

The workstation configuration procedure in this chapter explains how to find these parameters in the remote workstation.

Configuring the Service Processor in MOSS-E

The following procedure explains how to find, record, and configure service processor parameters:

- Step 1. In MOSS-E, double-click the Service Processor object.
- Step 2. Click Configuration Management.
- Step 3. Double click SP Customization.

Eunction	Dotions	Menut Holo	
Con	figuration	Management	
1-6	SP Custo	mization	
[Customiz	e DCAF Target Settings	
- 🗀	install 3	746 and NNP LIC on SP hard disk	
	(M) Mana	ge 3745/3746-9x0 Installation/Removal	*

Step 4. Select **Enable DCAF Link/Operations** and **NetView Link/Operations** in the **View Customize** button list. Click **Next** and **Next** again.

Customer Information Image: Customer Information SP Time and Date Image: Customer Information Service LAN Addresses Image: Customer Information NetView Link/Operations Image: Customer Information Image: Enable Retain Link/Operations Image: Customer Information Image: Enable DCAF Link/Operations Image: Customer Information Image: Customer Information Image: Customer Information Screen resolution: 640x480 Modem type: IEM 7857/58 on COM1 port Image: Customer Information			View Customize
SP Time and Date Image: Construct and Constructions Image: Construction and Constructin and Constructin and Constructin and Construc	Customer Information		
Service LAN Addresses A NetView Link/Operations A Enable Retain Link/Operations A Enable DCAF Link/Operations A Creative Consoler Mak/Operations As Asta Screen resolution: 640x480 A Modem type: IBM 7857/58 on COM1 port	SP Time and Date		
NetView Link/Operations Image: Comparison of the Compari	Service LAN Addresses	:	
Imable Retain Link/Operations Image: Constant of the state of t	NetView Link/Operatio	ns	
Enable DCAF Link/Operations Creater Consoler And/Operations for Advecting to Advect the Consoler And/Operations for Advecting for A	🎆 Enable Retain Link/	Operations	
Chally Console Mak/Operations Na 3kx6 # Screen resolution: 640x480 Modem type: IEM 7857/58 on COM1 port	💥 Enable DCAF Link/O	perations	*
Screen resolution: 640x480	Gratily Consolv) link	Opelations (in).	X6 [2]
Modern type: IBM 7857/58 on COM1 port	Screen resolution:	640x480	
	Modem type: IBM 7857	/58 on COM1 port	t 🖌
	«		

 Step 5. Record the values in the Network ID, TIC2 or TIC3 LAA, and TIC3 RSAP fields (see Figure 13-2 and refer to Table 13-1 on page 13-2). Then click Next.

HetView Link(s)/Reporting Customization
💹 Generate alerts
NetView Link(s) Link(s) through? I SNA // APPN How many? I I 2 Link type?
Machine Identification
Machine type model Serial number
1743 TITA 7 37 - 97474
Local Node Characteristics Network ID Local node name SPNETID -
LAN Link TIC2 or TIC3 LAA: 400000632080 hex
Customize 3270 sessions? 🕷 Yes 🚿 No
Switched SDLC Link Telephone Number
<< Previous Next>> Help

Figure 13-2. NetView Link/Reporting Customization

Step 6. Record the value in the SDLC LU name field, select Yes to Accept any incoming calls on SP? and fill in the Local phone number field.

	LV name	Destination address (hexadecimal)	RSAP [hex [04-9C]
💓 SNA	DCAFSHA	400000632080	04 🐋
💓 APPN	DCAFAPPH	400000632030	08 20
M LAN	DCAFLAN		
SDLC Att	ached Console		
Accept a	ny incoming calls o	n SP? 🕷 Yes 💓 No	
Local pho	one number: 11111	11111	

Figure 13-3. DCAF Customization

- Step 7. Click Next, click Close and Yes to save the configuration.
- **Step 8.** Shutdown and restart the service processor.
- Step 9. Go to "Configuring a APPC LAN-Attached Remote Workstation."

Configuring a APPC LAN-Attached Remote Workstation

The following procedure shows you how to establish a link between the controlling workstation and a service processor, via an APPC type LAN environment.

Configuring CS/2

— Important

The procedure below is the same in CM/2 unless otherwise indicated.

- Step 1. From Desktop Manager, double-click the CS/2 icon.
- Step 2. Double-click the Ecommunications Manager Setup icon.
- Step 3. Click Setup.
- Step 4. Select a configuration from the Configurations list, and click OK.

Step 5. Select Additional definitions, Token-ring or other LAN types, and APPC APIs, then click Configure.

Definition selection @ Commonly used <u>d</u> efinitions <u>A</u> dditional definitions	Selec to us Close comp	t a connection type and a feature e, and select Configure. Select when the configuration is lete.
Workstation Connection Type		Feature or Application
Taken ring or other LAU types Ethernet (ETHERAND) network PC Network Twinaxial Asynchronous	~	APPC APIs and 3270 support APPC APIs for 5250 support LUA APIs (and 3270 support) LUA APIs with DLUS CPI Communications
	₽,	
APPC APIs (and 3270 support) o	ver Token	-ring for communications

Step 6. Select DLC - Token-ring or other LAN types and click Configure.

<u>*</u> C	ommunication	s Manager Profile List	
	Required	DLC Token ring or other LAN types SNA local node characteristics	M
	Optional	SNA connections	////
	Optional	SNA Dependent LU Server definitions	
\checkmark	Optional	SNA features	4
			- MA
Co	nfigure	<u>Close</u> Help	

- Step 7. Select Free unused links (in CM/2, select Free unused links and click OK). From the Additional Parameters list, highlight and check the following, using the Change button.
 - Select HPR parameters and de-select HPR support.
 - Check that the defaults apply to Link station protocol parameters, Network management parameters, and Resource parameters.

Then click OK.

Adapter 0 (0 - 15) Free unused links Franch extender support Maximum 1-field size 2224 (265 - 16393) Local SAP (hex) 04 (04 - 9C)	Additional parameters Additional parameters IPR parameters Link initialization parameters Link station protocol parameters Network management parameters Resource parameters Resource parameters Change
Effective capacity (bits per sector) 4000000 Connection network parameters Name OK Delete Cancet	nd) [optional] Limited resource Help

Step 8. Select SNA local node characteristics and click Configure.

Y Co	mmunication	s Manager Profile List	
	Required	DLC - Token-ring or other LAN types	2
	Optional Optional	SNA connections SNA Dependent LU Server definitions	
	Optional	SNA features	*
	figure	<u>Close</u> Help	

Step 9. Modify the Network ID and Local node name fields, select End node and click OK.

🛫 🛛 Local Node Cha	acteristics	
Network ID	SYSTST	
<u>L</u> ocal node name	CPCTRL1	
Node type		
💓 <u>N</u> etwork node		
💹 Branch extende	a support	
Lo <u>c</u> al node ID	(hex)	05D 00000
Local no <u>d</u> e alias n	ame	CPCTRL1
<u>M</u> aximum compres	sion level	NONE
Maximum compres	sion <u>t</u> okens	0 (0 - 30400)
🖋 <u>A</u> ctivate Attach	Manager at s	tart up
💹 <u>S</u> earch required		
Optional comment		created on 7/27/97
<u>OK</u> Net <u>W</u> are	(R)) Can	

Step 10. Select SNA connections and click Configure.

	mmunication Required	s Manager Profile List DLC - Token-ring or other LAN tupes	
١.	Required	SNA local node characteristics	
	Optional	SNA connections SNA Dependent LU Server definitions	
V .	Optional	SNA features	¥.
			Ma.
Cor	figure	Close Help	

Step 11. Click To peer node, select DCAFLAN from the list and click Change.

× Connectia	ns List	
Choose the t to nodes of	ype of node to change or creations that type.	ate connections
Selecting a nodes of tha	partner type will display conr t type in the list.	nections to
_Partner typ ∭ To <u>n</u> etw	e ork node 🕷 To peer node	🎆 To <u>h</u> ost
Link Name	Adaptar	Adapter Number
DCAFSDLC DCAFSNA	Token ring or other LAN in SDLC Token-ring or other LAN ty	D pes 0
Comment		
Create	Change 🕅 📃 🔤	<u>Close</u> Help

Step 12. Select Token-ring or other LAN types and click Continue.

Adapter List
Select the local adapter to be used for this connection.
Adapter Type
Tokan ring or other AN type: Ethernet (ETHERAND) network PC Network Twinaxial SDLC SDLC multipoint primary server
Configured Yes
Adapter number 0 (0 - 15) Configure DLC
ContinueN Cancel Help

Step 13. Refer to Table 13-1 on page 13-2 and fill in the Partner network ID (the network name), the Partner node name (the network of the target service processor), the LAN destination address (the address of the service processor), and the Remote SAP fields. Then click Define Partner LUS.

djecent node ID - (I Partner I I I definition	hex)		
Partner network ID	SPNETID	Define Partner LUs	
Partner node name	DCAFLAN	······································	
 Destination informati	ion for peer	node	
- Destination informati LAN destination <u>a</u> ddr	ion for peer ress (hex)	node Address format Remote SAI	P (hex)
- Destination informati LAN destination <u>a</u> ddr 400000502080	ion for peer ress (hex)	node Address <u>format</u> Remo <u>t</u> e SAI Token-Ring	D (hex)

Step 14. Refer to Table 13-1 on page 13-2 and fill in the Network ID and LU name fields. Fill in the Alias field, click OK and then Close.

∽∣ Partner L	Us			
To add a Pai	rtner LU, enter th	ie LU name,	alias, and com	ment. Then select Add.
To change a and/or comm	Partner LU, sele nent fields and se	ct an LU fror lect Change.	n the list, cha	nge the LV name, alias,
To delete a l	Partner LU, selec	t an LV from	the list and s	elect Delete.
<u>N</u> etwork ID	SPNETID		LU name	Alias
<u>L</u> V name	DCAFLAN			
Alia <u>s</u>	DCAFLAN			
- Dependent p	oartner LU LU is dependent			
<u>U</u> ninterpreti	ed name		Cha	inge Delete
Optional <u>c</u> om	ment			
Add				
<u>О</u> К 💦 Са	ncel Help			

Step 15. Select SNA features and click Configure.

	Cor	nmunications	Manag	er Profile List	
	V	Required	DLC	- Token-ring or other LAN types	M
	\checkmark	Required	SNA	local node characteristics	
		Optional	SNA	connections	
		Optional	SNA	Dependent LU Server definitions	
ģ		lan halinaan liililili			Ŵ
Į.					
	Cont	ligure	<u>C</u> lose	Help	

Step 16. Click Add and OK.

Step 17. Select Local LUs and CTRLLAN, then click Change.

eatures		Definition	Comment
		CTRLAPPN	Created on 7.
Partner LUs Modes		CTRI SDI C	Created on 7
Transaction pro	gram definitions	CTRLSNA	Created on 7.
Transaction pro	gram defaults		
Transaction proj Conversation se	gram security curitu		
LU-to-LU secur	rity		
CPI Communica	tions side information		

Step 18. Refer to Table 13-1 on page 13-2 and fill in the LU name and Alias fields. Select use this local LU as your default local LU alias and click OK.

II name CTRI I	AN
Llias CTRLL	AN
NAU address	
🕷 Independent LU	J
💓 <u>D</u> ependent LU I	NAU [1 - 254]
<u>H</u> ast link	
Optional LU model name	
model name	
	1
∥ <u>U</u> se this local Ll)ptional comment	o as your default local LO alfas

Step 19. Click Close on each subsequent screen until you exit CS/2.

Step 20. Continue with "Configuring DCAF for APPC."

Configuring DCAF for APPC

Step 1. On your desktop, double-click the Distributed Console Access Facility icon.



- Step 2. Double-click the DCAF Controller icon.
- Step 3. Click Session, then Open workstation directory.
- **Step 4.** Click **OK** for a first installation. Otherwise, continue with next step.
- Step 5. Click Add in the Workstation directory.

Step 6. Fill in the Workstation name field (refer to Local LU name in Step 18 on page 13-11), select APPC, Target, and click Protocol.

Workstation name	CTRLLAN	General
Protocol	Connection	Protocol
💓 APPC	💓 Target	
🎲 APPN	Gateway	
🏼 Asynchronous	AN Birectory	
💓 IPX/SPX	Securitu	
💓 NetBIOS	2.45.45.47.47.47.47.47.4	
💓 ТСР/ІР	1 Yes	
<u>U</u> ndo Help		

Step 7. Fill in the Local LU alias field (refer to Local LU name in Step 18 on page 13-11), and Partner LU alias field (refer to Table 13-1 on page 13-2). Enter DCAFMODE in the Mode name field.

🔄 Add a workstation		
APPC		General
		Protocol
	CIRLLAN	
	💹 Use CP name	
Partner LU alias	DCAFLAN	
	L	
Mode name	DCAFMODE	
Undo Help		
	* **	
Save Cancel	Help	

- **Step 8.** Click **Save** and **Cancel**. The new workstation icon appears in the DCAF Directory window.
- **Step 9.** Shutdown and restart the workstation.
- Step 10. Go to Chapter 8, "Using DCAF for Remote Access to the Service Processor."

Chapter 14. Telnet-attached Remote Workstation

Introduction

Any workstation that runs the Telnet Client program can remotely access the IP functions of a Network Node Processor (NNP). You can use Telnet on a remote workstation to configure and manage IP functions without disturbing the operations of the service processor.

However, when using Telnet:

- You cannot access the MOSS-E functions
- Only one remote workstation can access a NNP at a time.

Any remote workstation can access a NNP via Telnet.

Notes:

TCP/IP and Telnet Client programs are separate products from IBM applications for Communication Controllers. See the documentation that comes with these products for information on installation procedures.



Consoles

Figure 14-1. Telnet Workstation Configuration

A Telnet remote console can be attached to the service LAN (the Service Processor Access Unit in Figure 14-1) via a bridge with appropriate filtering, or via an IP network using resources controlled by the target Network Node Processor (NNP). See Figure 14-1 above.

These workstation attachments can be through either:

- LAN (Token-ring, Ethernet)
- WAN links (Frame-relay, Point-to-Point Protocol).

Logon Password

Telnet passwords are defined for access to the service processor during the installation of the NNP. If you have problems, see your network administrator.

Programming Requirements

For remote access to the functions of a NNP, your workstation must have an operating system (OS/2, for example) that can run TCP/IP.

Hardware Requirements and Recommendations

Any remote workstation can be used that supports IP and runs the Telnet Client program.

Installation

Before you begin the installation procedure for the network node processor, make sure that your workstation can run TCP/IP.

For installing or upgrading the TCP/IP application including the Telnet Client program, refer to the TCP/IP installation guide that comes with the product.

Using Telnet to Remotely Log On to the Network Node Processor

Starting a Session

Step 1. Open an operating system window (OS/2, for example).

- **Step 2.** On the command line, type telnet followed by the IP address or nickname of the network node processor.
- **Step 3.** Enter the Telnet password. The Telnet user session starts automatically.
- **Step 4.** Enter one of the following:
 - T 6 to configure
 - T 5 to manage.

For more information, refer to the *3745 Communication Controller Models A, 3746 Nways Multiprotocol Controller Model 900: Basic Operations Guide*, SA33-0177.

Closing a Session

To close the session, press **Ctrl** and **C** together.

Chapter 15. Console for Java Remote Access

Overview of Console for Java

Communications

Console for Java supports communications using TCP/IP protocol over the following:

- Asynchronous cable and modem
- LAN.

Flexibility Support

Console for Java can run on the workstation as an Applet in a web browser, or as a Java program.

Programming Requirements

Requires microcode level &f12. on the service processor. Console for Java runs on OS/2 Warp (versions 3 and 4), Windows (95, 98, and NT), AIX/UNIX, and Macintosh workstations, with TCP/IP protocol installed, via a web browser or Java application program.

Network browsers

Console for Java has been tested with the following network browsers:

- Internet Explorer Version 4.01 for Windows 95
- Netscape Communicator Version 4.04 for Windows 95
- Netscape Explorer Version 2.02 with Java Version 1.1 for OS/2 Warp.

Mouse and Keyboard

Both the mouse and keyboard remain active for the remote workstation and the service processor during a session.

Remote Access with Console for Java

Console for Java can enable a remote workstation to access and control a service processor and network node processor (NNP) across the network. When a link has been established to the target service processor using Console for Java, you can run and control the programs and utilities running on the service processor. For example, with a link activated between the service processor and a remote workstation, you can monitor controller operations in MOSS-E. Console for Java also provides a utility for file transfer between the service processor and the remote workstation, for example, CCM configuration files.

Note: You can download files from the service processor to the remote workstation with Console for Java running as an Applet (web browser-based). However, to upload files from the workstation to the service processor, you need to install the Console for Java program onto your workstation hard disk.

For more information on installing Console for Java on your remote workstation, see "Installing Console for Java as a Program on a Remote Workstation" on page 17-1.

Remote Workstation Access to a Service Processor

There are two possible links between the remote workstation and the service processor:

Remote Access Via Switched-Line (Modem)

In this scenario, the service processor is configured to run PPP server over a COM1 port attached to an asynchronous modem. Using Console for Java, a remote workstation asynchronous modem can connect with PPP dial-up client to the service processor and other devices on the service ring, including other service processors and NNPs.

The configuration for this type of link is described in "Remote Workstation Access Via Switched Line (Modem)" on page 16-2.

Remote Access Via the Service LAN

In this scenario, the remote workstation connects to the service processor through the TIC 3 2080 port of the 3746, or the TIC 2 port of a 3745, or via a bridge or router installed on the service ring.

Prerequisite: The TIC 3 2080 port on the 3746 requires 3746 IP Routing, feature code 5033.

The configuration for this type of link is described in "Remote Workstation Access Via Service LAN" on page 16-12.

Configuring Console for Java

Support for Console for Java (either as an Applet or as a program) and for DCAF is provided by microcode level &f12.. When the new level of microcode is installed, you have the option of retaining support for DCAF or selecting Console for Java for remote access.

The procedure for making this selection is described in "Procedure for Configuring the Service Processor."

To install Console for Java as a program on your workstation, see Chapter 17, "Installing Console for Java Program" on page 17-1.

Procedure for Configuring the Service Processor

Use the following procedure to select Console for Java after the new microcode upgrade on your service processor.

- Step 1. In MOSS-E, double-click the Service Processor object.
- Step 2. Click Configuration Management.

Step 3. Double click SP Customization.

3	SPILICE SO	Menu	
<u>F</u> unction	<u>O</u> ptions	<u>H</u> elp	
🗀 Con	figuration	Management	
	SP Custo	omization	
- 🗀	Customiz	ze DCAF Target Settings	
- 🗀	install 3	746 and NNP LIC on SP hard disk	
	(M) Mana	age 3745/3746-9x0 Installation/Removal	

Step 4. In the Service Processor (SP) Customization screen, de-select Enable DCAF Link/Operations if it is enabled, and select Enable Console Link/Operations for Java and View Customize in the parallel column. Select a modem from the Modem type field and click Next.

Solvice Processor (SP)	Elistomization	
	Cus	View stomize
Customer Information		
SP Time and Date		
Service LAN Addresses		
NetView Link/Operation	15	
🏼 Enable Retain Link/C	perations	
S Enable DCAF Link/O	isrations	
💥 Enable Console Link/	Operations for Java	
Screen resolution:	640x480	%
Modern type:		Ŵ
<u>N</u> ext>>	Help	

Step 5. In this Step, you need to assign IP addresses for the PPP Server and PPP Client. (These are different from the IP address of the service processor and the remote workstation.)

Customizing the PPP Server on the service processor

Fill in the **PPP Server**¹ with an IP address for the Server assigned within the same subnet range as the IP address of the service processor.

Customizing the PPP Client on the service processor

Fill in the **PPP Client** field with an IP address for the Client assigned within the same subnet range as the IP address of the service processor.

Select **Incoming calls** and enter the modem phone number in the **Phone number** field. Enter the speed of workstation communication port in the **DTE Speed** field.

DTE speeds: For modem 7858, enter 115200. For modem 7857, enter 19200. If you have a problem with these settings, select a lower speed.

Enter a value in the **MRU Size**² field. (You can also leave the default values.)

Click View/Change Passwords.

Accept any I	ncoming calls o	n SP? 🛞 Yes	🖉 No
Local phone	number: 33 04	92 11 40 00	
	IP Address	Subnet	mask Hostname
PPP Server	192.9.200.7	255.255	.255.0 SSP11111
PPP Client	192.9.200.8	255.255	.255.0
DTE Speed	57600 💌	MRU Size	1500
PP Client Lo	igin Customizati	on	
	Custor	ner	IBM Service
User Name	CSP11	111	ISP11111
Password	>>>>>>		××××××××
		inu/Chanan Da	cesuorde

Figure 15-1. Point-to-Point Protocol Configuration Screen

¹ You can assign any IP address in this field, but if you want to access other devices connected to the service processor (the NNP, for example), then assign a number within the same subnet range.

² MRU stands for maximum request/reply unit, and any value entered into this field must fall within the range 476-1500. If you have performance problems, specify a lower value.

Step 6. Enter your management password and click OK.

Management Password: The management password is the same as the one assigned to the service processor in MOSS-E. The default is IBM3745.

nage Passwords
Enter your management password:

3
OK Cancel Help

- Step 7. If there are any passwords, they are now visible in the Customer and IBM Service field. Modify or enter new passwords for you and the IBM service representative and click Next. Passwords must be in upper case and up to 8 alphanumeric characters in length. New passwords appear in the fields in asterisk format.
 - **Note:** It is recommended that you provide new passwords for additional security over the network. The default passwords are **IBM3745C** for you and **IBM3745I** for the IBM service representative. However, you will only need these passwords if you are configuring or using a switched line (modem) connection between the service processor and the remote workstation.

Accept any	incoming calls on	SP? 🛞 Yes	🖉 No	
Local phone	number: 33 04 9	92 11 40 00		
	IP Address	Subnet	mask	Hostname
PPP Server	192.9.200.7		255.0	SSP11111
PPP Client	192.9.200.8	255.255.	.255.0	
DTE Speed	57600 💌	MRU Size	1500	
PPP Client Lo	ogin Customizatio	m		
	Custom	er	IBM S	ervice
User Name	CSP111	11	ISP11	111
Password		.		
	Vie	w/Change Pa	sswords	

Figure 15-2. Entering Customer and IBM Service Passwords

Step 8. In this Step, you can change the Login IDs and assign passwords to the service processor and the NNP (A and B).

Customizing Console for Java Remote Access

The entries for the service processor and the both NNPs under the **Login** field are the default. For the service processor, the default login is:

• SPxxxxx

where SP indicates the service processor, and xxxxx indicates the last five digits of the service processor serial number.

For the NNP, the default login is:

• CA1xxxxx (or CB1xxxxx for the backup NNP) where CA1 indicates the NNP, and xxxxx indicates the last five digits of the NNP serial number.

Change the Login IDs if you need to. If you want to enter or modify a password for the service processor or an NNP, click **View/Change Passwords** (see Figure 15-2 on page 15-5). The default is no password.

SP:	SP11111	
NNP-A:	CA097474	
NNP-B:		
	¥104/03100	a trace produce

Figure 15-3. Console Configuration for Java Screen

- **Step** 9. Click Next, Close, and Yes to save the configuration.
- **Step 10.** Go to Chapter 16, "Using Console for Java to Remotely Access a Service Processor with a Web Browser" on page 16-1.

Chapter 16. Using Console for Java to Remotely Access a Service Processor with a Web Browser

Running Console for Java on a remote workstation either as an Applet or as a program, you can access and control a service processor across the network. Console for Java can access the service processor over two types of network connection:

- Using a modem on the remote workstation to connect across a switched line to a modem of the service processor¹.
- · Using the workstation to connect to a service processor across a LAN.

This section includes procedures for configuring the Console for Java link using a web browser. Procedures include the following:

- Configuring the Console for Java link between the remote workstation and the service processor (either through modem or on a LAN).
- Initiating a configured link between the remote workstation and the service processor using a web browser.

The procedure for initiating a link with Console for Java are the same unless otherwise noted. However, the procedures for configuring a remote workstation and service processor are different according to the type of link established on the network. To proceed, see one of the following:

- "Remote Workstation Access Via Switched Line (Modem)" on page 16-2.
- "Remote Workstation Access Via Service LAN" on page 16-12.

For the procedure on installing Console for Java as a program on your workstation, see "Installing Console for Java as a Program on a Remote Workstation" on page 17-1.

Remote Workstation Requirements

Console for Java runs on the following platforms:

- OS/2 Warp (version 3.0 and higher).
- Windows 95, NT, and 98.
- AIX/UNIX.
- Macintosh.

With any of the platforms listed above, the workstation requires a web browser, and Java 1.1 (or higher). Recommended web browsers include the following:

- Netscape 2.02 (for OS/2 Warp)
- Internet Explorer 4.01 (for Windows 95)
- Netscape Communicator 4.04 (for Windows 95).

¹ Service processors 3172, 7585, and 6275 are shipped with an asynchronous modem. However, if you are using a service processor with an integrated modem, you will not be able to configure a workstation modem for Console for Java access.

Remote Workstation Access Via Switched Line (Modem)



Figure 16-1. Modem-Attached Remote Workstation Using Console for Java

This section contains the following example procedures for two different remote workstation platforms:

- In "Configuring the Remote Workstation in Windows 95."
- In "Configuring the Remote Workstation in OS/2 Warp" on page 16-8.

Configuring the Remote Workstation in Windows 95

It is assumed that the TCP/IP network component and workstation modem is correctly installed and configured.

- Step 1. Click My Computer and double-click the Dial-Up Networking folder.
- **Step 2.** Double click **Make New Connection**. Enter a name for the configuration, check that your modem is displayed, then click **Configure**.

Make New Connection	
	Lype a name for the computer you are dialing: My Connection Select a modem: Image: Contract of the computer you are dialing: Image: Cont
	< <u>Rack</u> Next > Cancel

Step 3. Enter the COM port of the modem, the modem speed (the maximum speed, for example, 115200 for modem 7858, or 19200 for modem 7857), and click the **Connection** tab.

Hayes Optima 288 V.34 + FAX + Voice Properties 🛛 ? 🗙
General Connection Options
No. Internet in the second sec
Hayes Optima 288 V.34 + FAX + Voice
Port: Communications Port (COM1)
Speaker volume
Off High
Maximum speed
57600
OK Cancel

Step 4. Enter 8 in Data bits, None in Parity and 1 in Stop bits. Check Wait for dial tone before calling and Cancel the call if not connected within 60 seconds, the click the Advanced button.

Hayes Optima 288 V.34 + FAX + Voice Properties 🛛 🔋 🗙
General Connection Options
Connection preferences
Data bits:
Parity: None
Stop bits: 1
Call preferences
✓ Wait for dial tone before dialing
☑ Cancel the call if not connected within 60 secs
Disconnect a call if idle for more than 30 mins
Port Settings
OK Cancel

Advanced Connection Settings	? ×
Use error control Bequired to connect Compress data Use cellular protocol	Use flow control <u>H</u> ardware (RTS/CTS) <u>S</u> oftware (XON/XOFF)
Standard	T
Extra settings	
Record a log file	OK Cancel

Step 5. Select Use flow control and Hardware (RTS/CTS) and click OK.

Step 6. Select the **Options** tab, select **Display modem status** and click **OK**. The click **Next**.

Hayes Optima 288 V.34 + FAX + Voice Properties 🛛 ? 🗙
General Connection Options
Connection control
Bring up terminal window after dialing
Dial control
Operator assisted or <u>m</u> anual dial
Wait for credit card tone: 0 🚖 seconds
Status control
✓ Display modem <u>s</u> tatus
OK N Cancel

Step 7. Enter the phone number of the service processor modem. Click **Next** then **Finish**.

Make New Connection	
	Type the phone number for the computer you want to call: Area code: Ielephone number: 33 • 0492116106 Country code: France (33) •
	< <u>B</u> ack Next > N

- Step 8. The new configuration displays in the **Dial-Up Networking** folder.
- **Step 9.** Click the new configuration file once with the right mouse button and select **Properties**.
- Step 10. Click Server Type.

My Connection ? 🗙
General
In the second se
Phone number:
Area code: Telephone number:
- 0492116106
Country code:
France (33)
Use country code and area code
Connect using:
Hayes Optima 288 V.34 + FAX + Voice 💌
Configure Server Type
OK Cancel

Step 11. In the Type of Dial-Up Server list, select PPP:Windows95, Windows NT, Internet, select Log on to network, disable NetBEUI and select TCP/IP. Then click the TCP/IP Settings button.

Server Types ? X
Type of Dial-Up <u>S</u> erver:
PPP: Windows 95, Windows NT 3.5, Internet
Advanced options:
Log on to network
Enable software compression
Require encrypted password
Allowed network protocols:
□ <u>N</u> etBEUI
[PX/SPX Compatible]
ICP/IP TC <u>P</u> /IP Settings
OK Cancel

Step 12. Select Server assigned IP address, Server assigned name server addresses, and Use default gateway on remote network. Then click OK until the Dial-Up Networking folder displays.

IP <u>a</u> ddress:	0.0.0.0
Server assigned na	ame server addresses
Specify name serv	er addresses
Primary DNS:	0.0.0.0
Secondary D <u>N</u> S:	0.0.0.0
Primary WINS:	0.0.0.0
Secondary WINS:	0.0.0.0
_ ,	

Step 13. Go to "Initiating a Switched Line Connection in Windows 95" on page 16-7.

Initiating a Switched Line Connection in Windows 95

- **Step 1.** Open the **Dial-Up Networking** folder, and double-click your configuration file (see Step 2 on page 16-2).
- Step 2. Check the entry in the User name field and enter a password. Then click Connect.

⊑ ຂ€Connect To	? ×
Hy My	Connection
<u>U</u> ser name:	CSPXXXXX
<u>P</u> assword:	******
	Save password
Phone <u>n</u> umber:	0492116106
Dialing from:	france <u>D</u> ial Properties
	Connect Cancel

Step 3. A status message displays. Wait until the message indicates a successful connection.

a د Conne	ecting to My Connection	×
	Status: Dialing	Cancel

- **Step 4.** Go to "Initiating a Remote Workstation Connection to the Service Processor" on page 16-12.
- **Step** 5. When you are finished with the connection, click **Disconnect**.

≣e Conn ≝	ected to My Connection	- 🗆 ×
	Connected at 28800 bps Duration: 000:01:08	Dis <u>c</u> onnect

Configuring the Remote Workstation in OS/2 Warp

It is assumed that the TCP/IP network component is correctly installed and configured.

This procedure requires a network dialer program.

Network Dialer Program

The location of a network dialer program depends on the version of OS/2 you have running on your workstation. For example:

- IBM TCP/IP for OS/2
 - OS/2 System folder
 - TCP/IP file
 - Network Dialer icon.

Configuring the Network Dialer Program in OS/2 Warp



Step 1. Double click Dialer

Step 2. In the IBM Dial-Up for TCP/IP screen, click Add Entry.

≅ 18 <u>C</u> onnec	l Dial tion	-Up for TCP/IP C <u>o</u> nfigure <u>H</u> elp	1	
Ø				Ø
Dia	l	Add Entry	Modify Entry	Remove Entry
Dial Prefix	Curr	ent Connection		
Name	; ;	Login I	D	Description
🎆 Enal	ole De	bug		
- Stat	us			

Step 3. Fill in the Name and Description fields. Enter the name of the service processor in the Login ID field. Enter a password in the Password field. Enter the phone number of the service processor in the Phone Number field. Click the PPP button, and then click the arrow button on the lower right to advance to the next page.

×Name:	3745Com	Mittan and a start and a start a start a start a start a start a start a start a start a start a start a start
Description:	Connect SP	Login lato
Login ID:	sp01234	Connect Int Second Info
Password:	xxxxxx 💥 Require	d Modern Inf
Phone Number:	,0,0492114207	
Login Sequence:	NONE	
Connection Type	🕼 SLIP 🕷 PPP	1
Inactivity Timeou Minutes to Wait I	ut Option Before Automatic Hangup: 15	
	<u>Help</u> (x = required field)	
	Page 1 of 4 -	<u>n</u>

Step 4. Make sure the VJ Compression box is not checked. Enter the name of your domain server in the Domain Nameserver field, and the name of your domain in the Your Domain Name field. Then click the arrow button twice on the lower right to advance to the last page.

		Login Int
Your IP Address:		Connect Info
Destination IP Address:		Server Info
Netmask:		Modern Info
*MRU Size:	1500	
	📓 VJ Compression	
*Domain Nameserver:	9.100.40.40	
Your Host Name:	pscfranoux	
*Your Domain Name:	lagaude. ibm. com	
Help	(x = required field)	

Step 5. Select a modem type from the Modem Type field (if your modem type is not available, select Hayes Compatible). Select the COM port of your modem in the Com Port field, the DTE port rate in the Speed (Baud) field, select 8 in the Data Bits field, and NONE in the Parity field. When you have finished, close the screen.

I	Modern Type:	Hayes Compatible		Logia Info
	Com Part:	ເພາກ1	6	Connect Infe
9	Speed (Baud):	57600		Server Infa
	Data Bits:	8	e M	adem Into
- Mode Mode	Parity:	NONE		
🍏 Answei	Prefix:	ATDT]	
Initializa	tion String 1:	AT8F] [
Initializa	tion String 2:	ATE0Q0S0=0V1X1&C18	D	
-Call Waiti	ng isable	Disable Sequence: 270		
		lp		
		Page 4 or	(4 4 -	

Step 6. Click Save.

Step 7. Go to "Initiating a Switched Line Connection in OS/2 Warp."

Initiating a Switched Line Connection in OS/2 Warp



Step 1. On your workstation, double-click Network Dialer .

Step 2. In the **IBM Dial-Up for TCP/IP** screen, select the name entry for the controller (see 3 on page 16-9) and click **Dial**. The **Status** field displays connecting information.

IBM Dial-Up for TCP/IP Connection Configure Help						
	ð		Ø			
Dial ^{rr}	Add Entry	Modify Entry	Remove Entry			
Dial ^{Curre} Prefix	nt Connection					
Name	Login I 30 2		Description			
💥 Enable Debug						
-Status						

- Step 3. If you are prompted, enter your password.
- **Step 4.** Go to "Initiating a Remote Workstation Connection to the Service Processor" on page 16-12.
- **Step 5.** When you have finished with the connection, click **Hang-Up**.

æ; IBM <u>C</u> onnec	Dial-U tion C	lp for TCP/IP Configure <u>H</u> elp)			
		ð		Ø		
Hang-	Up	Add Entry	Modify Entry	Remove Entry		
Dial	- Curren	t Connection	Time Online:	00:00:00		
Prefix	Prefix Trying 3745Com					
	Total Time Online: 0 day(s), 00:00:00			(s), 00:00:00		
Name		Login I	D D	escription		
"Anata Raha						
notice : Linking: ppp0 <> com1 info : Time critical priority level 1 info : Connecting with <slattach at&f="" ateoqos<br="" ok="">slattach Version 2.0 Revision: 1.4a 01 Feb 1995 11</slattach>						

Remote Workstation Access Via Service LAN



Figure 16-2. LAN-Attached Remote Workstation Using Console for Java

Configuring the Remote Workstation on a LAN

An IP-attached remote workstation can connect to a service processor via a 3746, 3745, Multiaccess Enclosure (MAE), bridge, or router. The connection to the 3746 is made over the TIC3 and the connection for a 3745 is made through a TIC2.

Go to "Initiating a Remote Workstation Connection to the Service Processor."

Initiating a Remote Workstation Connection to the Service Processor

It is assumed that you have established a connection between a remote workstation and a target service processor either via modem or across the LAN. This section describes how to connect to the target service processor with the web browser on your workstation. The procedure is the same for the following scenarios:

- Console for Java is running as an Applet on a modem-attached workstation.
- Console for Java is running as an Applet on a LAN-attached workstation.
- **Step 1.** Open the web browser on your workstation (in the following procedure, Netscape is used as an example).
- **Step** 2. Type the URL http://1.2.3.4:7787/java

where 1.2.3.4 is the IP address of the service processor and 7787 is the

TCP/IP socket. Then press
Step 3. In the Java Client screen, enter the Userid and password for the service processor (see Step 8 on page 15-6) and click OK.

嶽Ri	dax Ja	ava Clier	nt - Nets	cape				-	
<u>F</u> ile	<u>E</u> dit	<u>V</u> iew	<u>G</u> o <u>C</u>	ommunic	ator <u>H</u> e	lp			
	¢.	<u>ک</u>	2		ø	÷	ä,	s.	Ν
<u> </u>	lack	Forward	Reload	Home	Search	Guide	Print	Security	
ē 🔌	🎉 🖁 Bo	okmarks	🥼 Loo	ation: http:	://9.100.7	7.71:7787	/java		-
š 🖪	l Inter	net 📹	Lookup	📹 New	/&Cool				
Enter	user IL) and pas	sword to I	ogon					
User	ID	CSPXXX	~~						
Pass	word	******							
				ſ	кd				
				_					
									-
ď			Applet J	ava2You.9	Start runnin	g 🗏 💥	, C.,	<u>s</u> p 4	

Step 4. The MOSS-E View screen displays.

Example 2 Client licensed by IBM 4998FR0389 / #7012-4 Actions Settings Keys	8011 <u>- 🗆 ×</u>
Hours Jeenings Keys MOSS-E View Program Window Information Help Logged in product engineer mode -BS8 863E BS8 863E Service Processor: PU MOSSNMVT Service Processor: PU MOSSNMVT	BS8 363E Function 0 P Config Proble Proble Poperat P Natwo Multia Chango Service Pr Function 0 Config
 ✓ Java Applet Window 	· · ·

Step 5. To end the Console for Java session, click **Disconnect** from the **Actions** menu.

🦉 Ridax Java Client li	censed by IBM 4998FR0389 / #7012-	8011 _ 🗆 🗙
Actions Settings	Keys	
Chat Task List HTTP File Server Exit Desktop Disconnect Reboot	Information Help product engineer mode	BS8 863E <u>Function 0</u> [↑] Config [↑] Proble [↑] Operat [↑] Netwo [↑] Multia
Service Processor	: PU MOSSNMVT	Change Change Service P Function 0 Config

Step 6. If you are connected via modem, click Disconnect.



Initiating a Remote Workstation Connection to the NNP

Console for Java can also connect a remote workstation to an NNP (A or B). Enabling this type of connection requires setting the service processor in MOSS-E. There are two methods for connecting your remote workstation to the NNP (A or B) on the 3746.

- "Connecting to the NNP in MOSS-E"
- "Connecting to the NNP from a Web Browser" on page 16-15.

Connecting to the NNP in MOSS-E

- **Step** 1. Follow Steps 1 on page 16-12 to 4 on page 16-13.
- Step 2. In MOSS-E View, open the 3746 menu.

- Step 3. Click Network Node Processor (NNP) Management.
- Step 4. Double click Connect To an NNP.



Step 5. When you have finished working with the NNP, click Disconnect from the Actions menu.



Connecting to the NNP from a Web Browser

- **Step 1.** Open the web browser on your workstation (in the following procedure, Netscape is used as an example).
- **Step 2.** Type the URL http://1.2.3.4:7787/java

where 1.2.3.4 is the IP address of the NNP and 7787 is the TCP/IP

socket. Then press

Step 3. In the Java Client screen, enter the Userid and password for the NNP (see Step 8 on page 15-6) and click **OK**.



Step 4. The Java Client screen displays with the Control Point APPN menu.



Step 5. To close the session with the NNP, click **Disconnect** from the **Actions** menu.



Console for Java Menus

The following text describes some Console for Java menu functions. These are mainly the same if Console for Java is running as an Applet in a web browser or installed as a program on the remote workstation. The only exception is **HTTP File Server** in the Console for Java Applet which displays as **File Manager** in the Console for Java program. For more information, see "Console for Java File Manager" on page 17-5.

Actions Menu

👹 Ridax Java Client li	censed by IBM 4998FR0389 / #7012-	8011 💶 🗆 🗙
Actions Settings	Keys	
Chat k Task List		BS8 863E /
HTTP File Server	Information Help	<u>Function</u> Opt
Exit Desktop	product engineer mode	(M)
Disconnect Beboot		H - C Ma
		- <u>C</u>

Chat

👹 Chat window	- 🗆 ×
Past conversation	
CLIENT> calling host	
Edit line	
	Send Exit
Java Applet Window	

A **Chat window** opens on the remote workstation and the service processor. Type your message into the **Edit line** field and click **Send**. Your message, prefixed by CLIENT>, appears in the **Past conversation** window. Any response of the operator at the service processor appears in the **Past conversation** window prefixed by HOST>. Click **Exit** to close the window.

Task List

Displays the **Window List** with all the current programs running on the processor.

Exit Desktop

Closes Console for Java

Reboot

Reboots the service processor from the remote workstation.

Settings Menu



Stretch

Adjusts the desktop displayed of the service processor to the screen size of the remote workstation.

Keys Menu

This menu contains enables the function keys and keyboard short cuts assigned to service processor for use by the remote workstation.

🦉 Ridax Java Client lic	ensed by IBM 4998FF	10389 / #7012-	8011 <u>- 🗆 ×</u>
Actions Settings	Keys		
Q MOSS-E View <u>Program Window</u> Logged in BS8 863E	F1 ^{VS} F10 F11 Escape Alt F4 Ctrl Alt Del (NT) Alt Down	de	BS8 863E / Function Opt - (M) - (M) - (C) Ma - (C) - (C) - (D) -

F1

Opens help screens on the service processor.

Chapter 17. Installing Console for Java Program

Console for Java can be run on the remote workstation as an application installed on your hard disk.

Installing Console for Java as a Program on a Remote Workstation

Microcode &f12. installed on the service processor supports running the Console for Java program on your remote workstation. The following procedure describes how to download the Console for Java program file from the service processor to the hard disk of the remote workstation.

Remote Workstation Requirements for Console for Java

To install Console for Java as an application on your workstation, make sure you have the software support as specified in "Overview of Console for Java" on page 15-1.

Procedure for Installing the Console for Java Program

The procedure is as follows:

- Step 1. Make sure you have a link established (modem or LAN) between the remote workstation and the service processor (see "Procedure for Configuring the Service Processor" on page 15-2).
- **Step 2.** Using your web browser (Netscape 2.02, for example) and with the Java 1.1 Applet running, type in the following:

http://1.2.3.4:7787/java where 1.2.3.4 is the IP address of the service

processor, and 7787 is the TCP/IP socket. Then press

Step 3. In the main Console for Java window, open the Actions menu and click HTTP File Transfer.

🦉 Ridax Java Client lic	censed by IBM 4998FR0389 / #7012 💶 🗖 🗙
Actions Settings	Keys
Chat Task List HTTP File Server	Information Help product engineer mode
Exit Desktop Disconnect Reboot	
	T A MAR Sor (SP) Cu:
Service Processor:	PU MOSSNMVT
Java Applet Win	dow

Step 4. In the **File Transfer Web Server** window, select the hard disk of the service processor (drive K), the OS2YOU directory, and click the file Java2You.jar.

氎Bi	idax Fil	e Trans	fer Wel	Server -	Netsca	pe			- 🗆 🗙
<u>F</u> ile	<u>E</u> dit	<u>V</u> ie₩	<u>G</u> o <u>(</u>	<u>Communica</u>	ator <u>H</u>	elp			
Ť	<u>ک</u>	<u>ک</u>	2	<u></u>	all.	4		ച്	N
E	3ack	Forward	Reload	Home	Search	Guide	Print	Security	
i 🖌	🎉 🖁 Boo	okmarks	🧶 Lo	cation: ArZC	RfxHB@	9.100.77.7	1:7785/0	J*K:\0S2Y	00 🖵
T. E	🕽 Interr	net 📠	Lookup	Mew8	Cool				
<u></u>	20-90	, 11. .	7	30310	T IFD2	.100.EA	-		
05-	28-98	3 14:3	6	5005	FTPRE	CSET.EXH	2		
05-	28-98	3 14:3	7	9392	FTPSH	HOW.EXE			
05-	28-98	3 14:4	0	191	HAZEI	PRM			
05-	28-98	3 14:4	2	191	IBM31	LO1.PRM			
05-	29-98	09:0	1	32934	JAVA2	YOU.JA	2		
05-	28-98	3 14:4	5	364	JAVAN	IAP.BAT	հ		
05-	28-98	3 14:4	8	219	K1FII	TER.CO	М		_
٩Ľ			-				-		
ď			http://d	wXigugueu:	sArZQRf	xHI≣ -‱	. 🕒	de s	l 11.

Step 5. Download the file to the LIB directory in the main Java directory on your workstation. In OS/2, this is would be C:\JAVA0S2\LIB. (The file size is 32 Kb.)

Save As					? ×
Save jn:	🛅 Lib	-	£	<u>الله</u>	8-8- 8-8- 8-8-
			_	_	
File <u>n</u> ame:	JAVA2YOU				Save
Save as <u>t</u> ype:	All Files (*.*)		-		Cancel

Step 6. Go to "Remote Workstation Settings for Console for Java."

Remote Workstation Settings for Console for Java

Depending on your workstation platform, you must configure a few workstation settings to enable the Console for Java program.

The following workstation settings apply to Windows 95 and OS/2 Warp.

— Important! -

These settings are intended as examples only, and you must supply the actual values that apply to your workstation.

Windows 95

Step 1. Create a batch file (.bat) and enter the following:

@echo OFF
jre -cp "C:\Program Files\Java\1.1\lib\Java2You.jar" Java2You.Start %1

where %1 represents the IP address of the service processor or the NNP.

- **Note:** Make sure you enter the .jar file name as it appears in the example (uppercase J and Y).
- **Step 2.** Save and close the new batch file.

OS/2 Warp

Step 1. Create a command file (.CMD) and enter the following:

@echo OFF
java Java2You.Start % 1

where %1 represents the IP address of the service processor or NNP.

Step 2. Save and close the new batch file.

Note: Make sure the Java2You.jar file is correctly allocated in your CONFIG.SYS file.

Running the Console for Java Program in Windows

For a connection between the remote workstation and the service processor across a PPP switched line, initiate the modem connection first (see "Initiating a Switched Line Connection in Windows 95" on page 16-7 for Windows, and "Initiating a Switched Line Connection in OS/2 Warp" on page 16-10 for OS/2). Then continue with the procedure below.

To use the Console for Java program for a connection between the remote workstation and the service processor across a LAN, continue with the following procedure.

Step 1. In a DOS window, type in the name of the batch file (connect in the following example) followed by the IP address of the service processor (or

///0185		KIQKIS			
C:∖>cc	onnect	9.100.	.57.96		

NNP). Then press

Step 2. Enter the Userid and password for the service processor and click OK.

👹 Ridax Remote Control Logon				
User ID	SP11111			
Password	*****			
	OK			

Step 3. To close the session with the service processor, click **Disconnect** from the **Actions** menu.

Running the Console for Java Program in OS/2

Step 1. In an OS/2 window, type in the name of the command file followed by the

IP address of the service processor or the NNP. Then press Enter



Step 2. Enter the Userid and password for the service processor and click **OK**.

👹 Ridax R	emote Control Logon
User ID	SP11111
Password	*******
	OK

Step 3. To close the session with the service processor, click **Disconnect** from the **Actions** menu.

Console for Java File Manager

When Console for Java has been installed on your workstation, you can use **File Manager** to upload files from the workstation to the service processor, for example, CCM configuration files.

For more information on CCM configuration files, see the *CCM: Users Guide*, SH11-3081.

Go to "Uploading Files to the Service Processor" on page 17-6.

Uploading Files to the Service Processor

Step 1. In the Java Client window, click File Manager from the Actions menu.

🦉 Ridax Java Cli	ent licensed by IBM 4998FR0389 / #701	- 🗆 🗙
Actions Settings	Keys	
Chat Task List File Manager Exit Desktop Disconnect Reboot	Information Help in product engineer mode	
Service Proce	ssor: PU MOSSNMVT	

Step 2. Select the directory of the file on your remote workstation. Select the destination for the file in a service processor directory. Locate the directory of the file that you want to upload on the workstation and double-click the file. The file transfer takes place immediately.

👼 File Manager			×
Local:	ChDir	Remote:	
CA		K3	
[.] [WINDOWS] [Program Files] [RECYCLED] [psp] BOOTLOG.TXT COMMAND.COM SUHDLOG.DAT MSDOS.SYS MSDOS SETUPLOG.TXT CONFIG.WIN DETLOG.TXT NETLOG.TXT NETLOG.TXT NETLOG.TXT CONFIG.SYS AUTOEXEC.BAT SYSTEM.1ST IO.SYS BOOTLOG.PRV		[S3TRIO64] 05F2285.ECK 43G3438.ECK ACC144.PIF COPYRIGH.DAT DCAF.INI DCAF.CONF.RSP DEFAULT.PIF EQN.MSG EQN32GRE.DLL EQNCD.DLL EQNCD.DLL EQNCCD.DLL EQNCCM01.DLL EQNCM01.DLL EQNCM01.DLL EQNCM03.DLL EQNCM03.DLL EQNCM03.DLL	4
	E	ixit L	

Step 3. When the file upload is successfully completed, click the **Exit** button to close **File Manager**.

Downloading Files from the Service Processor

Step 1. In the Java Client window, click File Manager from the Actions menu.



Step 2. Select the directory of the file on the service processor. Select the destination for the file in the remote workstation directory. Locate the directory of the file that you want to download on the workstation and double-click the file. The file transfer takes place immediately.

👹 File Manager			×
Local:	ChDir	Remote:	
C:X		K3	
[.] [WINDOWS] [Program Files] [RECYCLED] [psp] BOOTLOG.TXT COMMAND.COM SUHDLOG.DAT MSDOS.SYS MSDOS SETUPLOG.TXT CONFIG.WIN DETLOG.TXT NETLOG.TXT NETLOG.TXT NETLOG.TXT CONFIG.SYS AUTOEXEC.BAT SYSTEM.1ST IO.SYS BOOTLOG.PRV		[S3TRIO64] 05F2285.ECK 43G3438.ECK ACC144.PIF COPYRIGH.DAT DCAF.INI DCAF.CONF.RSP DEFAULT.PIF EQN.MSG EQN32GRE.DLL EQNCD.DLL EQNCD.DLL EQNCLHOT.DLL EQNCCM01.DLL EQNCM00.DLL EQNCM02.DLL EQNCM02.DLL EQNCM03.DLL EQNCM03.DLL EQNCM04.DLL	•

Step 3. When the file upload is successfully completed, click the **Exit** button to close **File Manager**.

Appendix A. 3746 Operator Control Panel



Figure A-1. 3746 Control Panel



The same control panel numbers on the 3746 and the 3745 do not always share the same function.

Specific Button Selections

Functions 0, 1, and 2 are enabled by the **Function** button on the display panel, and also display automatically when you press the corresponding control panel buttons (**General IML**, **CBSA IML**, and **CBSP Dump**). Functions 3 to 8 are also enabled by the **Function** button on the display panel.

0 - General IML

Resets and performs an IML for all 3746 processors.

```
— Attention –
```

You must perform function "8 - CBC/ESCC logical disconnection" on page A-3 before running function 0.

Use this function after one of the following:

- Power ON.
- In an emergency, when the MOSS-E function **Perform a general IML** does not run. For more information, see "Activation and IML from the 3746 Operator Control Panel" on page B-10.

1 - CBSA IML with Diags

Runs a diagnostics and IML for the CBSA (Controller Bus and Service Adapter).

Note: Mainly used by an IBM service representative.

2 - CBSP Dump

Transfers a CBSP dump to the MOSS-E on the service processor disk.

Note: Mainly used by the an IBM service representative.

Selections Using the Function Button

To select functions 3-8, perform the following:

- 1. Press **Function** repeatedly until the number of the function that you want displays on the control panel.
- 2. Press Validate to start the function.

3 - General IML with Diags

Performs an IML and diagnostics for all 3746 processors.

Note: Mainly used by an IBM service representative.

4 - CBSA IML

Performs an IML for the CBSA (Controller Bus and Service Adapter).

Note: Mainly used by an IBM service representative.

5 - Panel Test

Runs a diagnostics of the control panel. Before you can use this function, make sure that **Service Mode 1** is selected (see "Service Mode" on page A-3).

Note: Mainly used by an IBM service representative.

6 - Console Link Restart

Re-establishes the link between the 3746 and the service processor.

Note: Only used by an IBM service representative.

7 - Display Error Code

Displays error codes.

Note: Only used by an IBM service representative.

8 - CBC/ESCC logical disconnection

Press this before using function 0, General IML without diags.

Hexadecimal Codes

Hexadecimal codes display on the control panel during the following processes:

IML and IPL progression codes

Track the different phases of a process and indicate when a process is complete.

Error codes

Blink on the display and indicate a problem with normal operations.

Standby codes

Indicate the status of the machine when it is not totally activated.

More information on hexadecimal codes is contained online, in the *Problem Analysis Guide*.

Service Mode



0 - Normal

The mode for normal operations.

1 - Maintenance

Used only by an IBM service representative.

D - Diagnostics

You cannot select this from the control panel. Displays only when certain diagnostics are run by the service representative.

Power Control



1 - Remote

Mode for normal operations. In normal mode, you can perform the following:

- Activate and deactivate the 3746 from:
 - Attached host
 - 3745
 - Service processor.
- Automatic power ON restart, and IML if ac power is lost and restored.
- For a remote 3746, deactivation from a VTAM remote power OFF command (RPO).

3 - Local

Used only by an IBM service representative.

All ESCON Channel Adapters Disabled



The display is blank if at least one channel adapter (CA) is enabled.

* All CAs are disabled.

Service Processor Inaccessible



The display is blank if the MOSS-E console is accessible.

MOSS-E console is inaccessible. This means that the link between the MOSS-E in the service processor and the 3746 has failed or was not established. The MOSS-E can run, but it cannot exchange data with the 3746.

Other codes briefly display during power ON, IML or when there is a problem. If you want more details on these characters, see the *Problem Analysis Guide*.

Appendix B. Basic Service Procedures

3745 MOSS IML from the Service Processor

Before you begin, make sure that you have a MOSS window open on the service processor (see page 3-10).

Step 1

Type IML then press

The screen on the right displays. \rightarrow

- IML REQUESTED TERMINAL DISCONNECTED
- 1. Wait until **MOSS-E View** displays. IML is complete when the 3745 icon turns pink in color.
- 2. Double-click **MOSS Console** in the MOSS-E 3745 menu.
- 3. Enter the three letter code of the MOSS function you want to use.

mm/dd/yy hh:
FUNCTION SELECTION RULES - TO SELECT ONE OF THE MENUS, PRESS THE APPROPRIATE F KEY
- TO SELECT A FUNCTION, ENTER ITS 3-CHARACTER NAME THEN PRESS SEND THEN PRESS ENTER (ABBREVIATED "ENTR") - ONCE YOU HAVE SELECTED A FUNCTION FROM ONE MENU, YOU MAY SELECT A FUNCTION FROM THE OTHER
- TO END THE FUNCTION ON SCREEN, PRESS F1
- TO RETURN TO THE PENDING FUNCTION, PRESS F2
- TO LOG OFF, ENTER OFF THEN PRESS SEND
F1:END F2:MENU2 F3:ALARM F4:MENU1

3745 Scanner (Line Adapter) IML

Step 1

Make sure a MOSS window is open on the service processor (see page 3-10).

The screen on the lower right displays.

Step 2

A or **B** on the screen shows the MOSS status of the CCU, attached to a scanner.

Is the MOSS online?			
Yes	Go to S	otep 3.	
No	Is the M	IOSS off-line?	
	Yes	 Type CSR, then 1, or 2 to select a CCU, then press Enter. Type MON and press Enter to bring the MOSS online. 	
	3. Go to Step 3.		
	No	 Load the control program on to the CCU by performing an IPL. Then go to the next step. 	



Step 3

To IML a scanner, type **IMS** and press

The screen on the right displays. \rightarrow



- Enter either the scanner (line adapter) number or the address of a line attached to the scanner at A.
- 2. Type **SX** or **SY** and press Enter (where **X** equals the scanner number, and **Y** equals the line address).

The IML begins when the following message displays:

IML FOR SCANNER xx IN PROGRESS.

If the message INVALID INPUT displays, restart this step.

If the following message displays: SCANNER CANNOT BE IMLED: MOSS IS NOT ONLINE, set the MOSS online by performing Step 2.

If any other messages display, contact the person in charge of 3745 problem analysis (see page 1-5).

Step 5

Wait approximately one minute. If the IML is successful, the following message displays:

IML FOR SCANNER xx COMPLETED: SCANNER IS CONNECTED. \rightarrow

COMM CTF CCU-A RUN	RL ID:xxxxxxx PROCESS MOSS-ONL	3745-XXX INE	SERIAL NUMBER:nnnnnn
CCU-B RUN	PROCESS MOSS-OFF	LINE	
FUNCTION	ON SCREEN: IML ONE	SCANNER	mm/dd/yy nn:mm
	- ENTER:		
	THE SCANNER NUM OR THE LINE ADDRES (0 TO 895 FOR T (1024 TO 1039 F) (1056 TO 1071 F)	BER PRECEDED BY S S (000 TO 1071) SS) DR HPTSS) DR ESS)	S (S1 TO S32) ==> A
===>	IML FOR SCANNER xx I	N PROGRESS	
F1.END	F2:MENU2 F3:ALARM		

COMM CT CCU-A RUN	RL ID:xxxxxxx PROCESS MOSS-ONLIM	3745-XXX IE	SERIAL NUMBER:nnnnn
CCU-B RUN	PROCESS MOSS-OFFL	INE	
FUNCTIO	N ON SCREEN: IML ONE SC	CANNER	mm/dd/yy nn:m
	- ENTER:		
	THE SCANNER NUMBE OR THE LINE ADDRESS (0 TO 895 FOR TSS (1024 TO 1039 FOF (1056 TO 1071 FOF	ER PRECEDED BY 5 (000 TO 1071) 5) 8 HPTSS) 8 ESS)	S (S1 TO S32) ==>
>	IML FOR SCANNER XX COM	IPLETED: SCANNEI	R IS CONNECTED

Step 6

Press F1 to end the procedure.

MOSS IML from the 3745 Control Panel

If you have a problem with this step, see the online Problem Analysis Guide.

ls Serv	Is Service Mode set to 0?		
Yes	Go to Step 2.		
No	 Press Service Mode repeatedly until 0 displays. 		
	2. Press Validate.		
	3. Go to step 2.		

Step 2

Is the I	Is the Power Control set to 3?	
Yes	Go to Step 3.	
No	1. Note the Power Control setting; you will need to reset it at the end of this procedure.	
	 Press Power Control repeatedly until 3 displays. 	
	3. Press Validate and go to Step 3.	

- Note

Power Control 3 (local mode) is intended for service procedures and is not recommended for normal operations. If the controller is left in local mode and there is a power failure, you will have to manually power ON.

Also, if there is a power failure, the power control must be set to **1** (remote mode) for the 3746 to automatically re-start.

Step 3

Is Function set to 1?		
Yes	Go to Step 4.	
No	1. Press Function repeatedly until 1 displays.	
	2. Go to Step 4.	







Press Validate.

The MOSS IML begins. You can see the progress of the IML on the hex display.



Step 5

Wait for about 3 minutes until you see one of the following on the display:

- F0E indicating the MOSS, without NCP loaded.
- F0F indicating that the MOSS is offline, or that the IPL has completed in diskette mode.

To change the status of the MOSS, refer to the *Advanced Operations Guide*, SA33-0097.



3746 Power State

When the main switch is on and connected to the main power supply, the 3746 has two power states (this applies to the entire 3745/3746 family). The power state can be either:

- Activated (IML complete, ready to work).
- Deactivated (only the main power box and the operator control panel are active).

Power Control Mode Switching

This section describes changing from one power mode to the other (whether the 3746 is activated or de-activated).

To switch between local and remote mode from the control panel, perform the following:

Step 1. Press Power Control repeatedly until a 1 or a 3 displays, blinking. (1 means remote and 3 means local.)



Step 2. Press Validate.

Notes:

You can activate or deactivate the 3746 from the control panel when it is in **local** mode (see "Activation and IML from the 3746 Operator Control Panel" on page B-10).

The power state of the 3746 in **remote** mode depends on external power commands received from the following:

- 3745 base frame.
- Service Processor (see "Activation/Deactivation from the Service Processor" on page B-7).
- Host via the External Power On (EPO) cable (see "Activation/Deactivation from a Host" on page B-9).

Any one of the above sending a power ON command will activate the 3746.

Any one of the above sending a power OFF command will de-activate the 3746.

Switching from Remote to Local (1 to 3)

The power state does not change.

Switching from Local to Remote (3 to 1)

The power state depends on the initial settings of the 3746, and any pending power commands.

The 3746 is activated if the following applies:

- The 3745 is powered ON.
- A power ON command is pending from a connected host.

Otherwise, the 3746 remains deactivated.

The 3746 is deactivated if the following applies:

- The 3745 is powered OFF.
- No power ON command pending from a connected host.
- No power ON command pending from the service processor.

Otherwise, the 3746 remains active.

Activation/Deactivation from the Service Processor

Before activating or de-activating the 3746 from the service processor, make sure the Power Control is set to **1 (Remote)** mode. If necessary, change the power control setting as follows:

- Step 1. Press Power Control repeatedly until 1 blinks.
- Step 2. Press Validate.

Activation

Before activating the 3746, make sure the **Standby** light on the control panel is ON.

- **Step 1.** Open a MOSS-E menu to activate the 3746 (see to "MOSS-E Menus, Tasks, and Functions" on page 3-8).
- Step 2. Click Operation Management.

Step 3. Double-click Manage MOSS-E/3746-9x0 Power Dependency.

📱 ERS6 854 B /3746-9x0/Menu 🛛 🗹 🗖
<u>Function</u> Options <u>H</u> elp
C Operation Management
- 🗀 Perform General IML
🖵 🗀 Manage MOSS-E/3746-9x0 Power Dependency 🔪 🚽

Step 4. Click Set Power Dependency and click OK.

☑ Power Dependency
💭 Reset Power Dependency
Set Power Dependency
<u>OK</u>
<u> </u>

The 3746 is activated. If there are errors, see the **Display Alarms** function, or the online help for more information.

Deactivation

Before de-activating the 3746-900, make sure the Ready light is ON, but not blinking.

- **Step 1.** Open a MOSS-E menu to de-activate the 3746 (see "MOSS-E Menus, Tasks, and Functions" on page 3-8).
- Step 2. Click Operation Management.
- Step 3. Double-click Manage MOSS-E/3746-9x0 Power Dependency.
- Step 4. Click Reset power dependency.
- Step 5. Click OK.

The 3746 remains active if any of the following applies:

- Activation locally or from a network mode.
- · Power ON request from a connected host.
- 3745 is powered ON.

The 3746 is deactivated if any of the following applies:

• 3745, 3746, and connected hosts powered OFF.

Attempt to activate the 3746 in remote mode when there is no power ON request from a connected host.

If there are errors, see the **Display Alarms** function, or online help for more information.

Activation/Deactivation from a Host

This section describes the results of power ON/OFF commands from a host connected to the 3746 via the external power off (EPO) cable. Results may differ, depending on whether the power mode is local or remote.

Power ON Command

Make sure the Standby light is ON, but not blinking.

When the host generates a Power ON command, the 3746 is inactivated in local mode, and activated in remote mode.

The Ready light blinks and stays ON.

If an error occurs, call the IBM representative (see "Solving Problems" on page 1-5).

Power OFF Command

The Ready light must be ON, but not blinking.

When the host generates a Power OFF command, the following occurs:

- The 3746 stays active in local mode.
- In remote mode:
 - 3746 stays active if the following applies:
 - 3745 is powered ON.
 - Service processor requests activation (see "Activation" on page B-7).
 - Power ON command is generated by another host connected to the 3746 via an EPO cable.
 - The 3746 is deactivated if the following applies:
 - 3745 is powered OFF.
 - Service processor requests deactivation (see "Deactivation" on page B-8).
 - No power ON commands from other hosts connected to the 3746 via EPO cable.

The **Standby** light begins to blink and then goes ON.

If an error occurs, call the IBM representative (see "Solving Problems" on page 1-5).

VTAM Remote Power OFF Command

A remote power OFF (RPO) command can be sent to a remote 3745 and attached 3746 from VTAM. The remote 3746 powers OFF only if the following applies:

- 3745 Power Control is in a network mode.
- 3746 Power Control is in remote mode.

Activation and IML from the 3746 Operator Control Panel

Note: For more information about the 3746 control panel, see Appendix A, "3746 Operator Control Panel."

To activate the 3746, use the following procedure:

Step 1

Is the Ready light ON or blinking?	
Yes	Go to Step 4.
No	Go to Step 2.

Step 2

Is the Power Control set to 3?	
Yes	Go to Step 3.
No	1. Press Power Control repeatedly until 3 is blinking.
	2. Press Validate and go to Step 3.

Note

Power Control 3 (local mode) is intended for service procedures and is not recommended for normal operations. If the controller is left in local mode and there is a power failure, you will have to manually power ON.

Also, if there is a power failure, the Power Control must be set to **1** (remote mode) for the 3746 to automatically re-start.



Do you want to do an IML with diagnostics?			
Yes	Does Function display 3?		
	Yes	Press Validate and go to Step 5.	
	No	 Press Function repeatedly until 3 is blinking. 	
		2. Press Validate.	
		3. Go to Step 5.	
No	Does Function display 8?		
	Yes	1. Press Validate.	
		2. Press General IML.	
		3. Go to Step 5.	
	Νο	 Press Function repeatedly until 8 is blinking. 	
		2. Press Validate.	
		3. Press General IML.	
		4. Go to Step 5.	

Function

Step 4

Do you want to do an IML with diagnostics?			
Yes	Does Function display 3?		
	Yes	1. Press Validate.	
		2. Go to Step 6.	
	No	 Press Function repeatedly until 3 is blinking. 	
		2. Press Validate.	
		3. Go to Step 6.	
No	Does Function display 8?		
	Yes	1. Press Validate.	
		2. Press General IML.	
		3. Go to Step 6.	
	Νο	 Press Function repeatedly until 8 is blinking. 	
		2. Press Validate.	
		3. Press General IML.	
		4. Go to Step 6.	

Wait until the hex code 05 28 2806 displays and the Standby light remains ON.		
Yes	1. Press Start on the control panel.	
	The 3746 activates and begins an IML. The Ready light starts blinking and the Standby light goes OFF.	
	2. Go to Step 6.	
No	 Check the 3746 link with the MOSS-E. 	
	If * is not displayed in the Service not accessible field, see "Service Processor Inaccessible" on page A-5.	
	2. Start again from Step 3.	
	 If the problem persists, refer to the progress codes in the online <i>Problem Analysis Guide</i>. 	



Step 6

After a few minutes, check the following:			
 Is the hex code 00 00 0000 displaying? Is the Ready light remaining ON, without blinking? 			
Yes	IML is finished and the 3746 is ready for operation.		
No	Is there another code displaying and the Ready light blinking?		
	Yes	1. Restart from Step 4.	
		 If the problem persists, see the progress codes in the online <i>Problem</i> <i>Analysis Guide</i>. 	
	No	Contact the person in charge of 3746 problem analysis, (see page 1-5).	



Deactivation from the 3746 Operator Control Panel

To deactivate the 3746 from the control panel, use the following procedure:

Step 1

Is Power Control set to 3?	
Yes	Go to Step 2.
No	 Press Power Control repeatedly until 3 is blinking.
	2. Press Validate.
	3. Go to Step 2.

Note -

Power Control 3 (local mode) is intended for service procedures and is not recommended for normal operations. If the controller is left in local mode and there is a power failure, you will have to manually power ON. Also, if there is a power failure, the power control must be set to **1** (remote mode) for the 3746 to automatically re-start.

Step 2

Press **Standby**. After a few seconds, the **Ready** light changes from ON to OFF, and the **Standby** light blinks and then goes ON.



Auto-Restart after a Power Failure

The 3746 automatically powers ON and performs an IML (the same as the 3745).

If there is a total power failure, the 3746 goes into standby mode. When power is restored, the 3746 automatically performs an IML. However, IML is only automatic if the following applies:

If a power failure occurs while the 3746 is activated:

- 3746 goes into power OFF state.
- When power is restored, the 3746 goes on standby and continues to perform an IML up to the ready state, and the following applies:
 - 3745 is powered ON.
 - Power ON commands are pending from a host attached to the 3746 via EPO cable.
 - The 3746 is activated by the power dependency function (see "Activation" on page B-7).

If the power failure occurs while the machine is on standby:

- The machine goes into power OFF state.
- When power is restored, the 3746 returns to standby status until:
 - Power ON command is received from a host attached to the 3746 via EPO cable.
 - Power ON command is received from the service processor.
 - 3745 is powered ON.

Appendix C. Installing LCBs, ARCs, and Connecting Cables

You can leave the 3746-950 powered ON during these procedures.

Attention

It is very important that you touch the plate on the inside face of the frame door before you handle anything inside the unit. Otherwise, you may give off electrostatic discharges (ESD) that cause errors in system operation, or damage the equipment.



Connection Tasks

This chapter describes the connection procedures for the following:

- Ethernet Bridge.
- Multiaccess Enclosure (MAE).
- Token-Ring Interface Coupler (TIC3).
- Line Interface Coupler (LIC11 and LIC12).
- Line Connection Box (LCB and LCBE).
- Active Remote Connector (ARC) assembly A, with permanent cable.
- ARC assembly B, with separate cable.

Note: The color of the ARC is light grey.



Figure C-1. ARC Assemblies A and B

You can install LCBs and ARCs in a 3746-950 base-frame, a controller expansion, or in a stand-alone 19 inch rack. An ethernet bridge and an MAE can be installed in either a controller expansion or a stand-alone 19 inch rack. See Figure C-2 on page C-3 and Figure C-4 on page C-4 for a typical base-frame mounted configuration.

Connection Procedures

– Labels -

Before you begin, label all the external cables from DTEs/DCEs to the 3746-950. Do not forget to add or change labels if you make later modifications.

Step 1 Review the necessary plugging sheets from the *Planning Guide* GA33-0457.

If you are not working with 3746-950 base frame, see the following sections for the items that you need to install:

- "Unplugging or Plugging In Ethernet LAN Cables" on page C-8.
- "Unplugging or Plugging In Multiaccess Enclosure (MAE) Cables" on page C-11.
- "Installing LCBs" on page C-13.
- "Removing or Installing ARC Assembly A and B" on page C-17.

Otherwise, continue with the next step.

- Step 2 Open the rear door with the key by pushing in and turning the screws in the upper and lower corners of the door.
- **Step 3** Locate a coupler slot.


Figure C-2. 3746-950 Rear View Configuration (Coupler Side)

Enclosure slots are labeled with slot addresses. Each coupler slot is labeled according to their address range (see the figure below):





After you have located a coupler slot, see any of the following as needed:

- "Unplugging or Plugging In TIC3 Cables" on page C-4.
- "Unplugging or Plugging In LIC Cables" on page C-7.

Otherwise, go to the next step for locating an LCB.

Step 4 Locate the LCBs.



Figure C-4. 3746-950 LCB Locations in a Base Frame and a Controller Expansion

After you have located an LCB, see "Removing or Installing ARC Assembly A and B" on page C-17.

Unplugging or Plugging In TIC3 Cables

Before you start

First see the "Connection Procedures" on page C-2.



There are two types of cable for a TIC3:

- Token-ring shielded twisted pair (STP) cable, only available from IBM.
- Untwisted pair (UTP) cable, through a Token-Ring MAU Media Filter, unavailable from IBM.

- Attention

This section does not apply to TIC3 cables for an ethernet bridge or for a Service Processor Access Unit (SPAU).

If you are unplugging an attachment cable, start at Step 1 on page C-5. Otherwise, see the following step references for different types of cable:

- Plugging in an attachment cable, Step 1.
- Unplugging a UTP cable, Step 1.
- Plugging in a UTP cable, Step 1 on page C-6.

Unplugging Attachment Cables

- **Step 1** To unplug an attachment cable, first ask the network operator to deactivate the line.
- **Step 2** Loosen the retaining screws and pull out the connector. Repeat this step for every attachment cable that you need to unplug.



Figure C-5. Installing or Removing a Token-Ring Attachment Cable

Step 3 Update the plugging sheets, and to integrate the changes that you have made, go to "Updating the Active CDF-E" on page 3-16.

Plugging in Attachment Cables

- **Step 1** To plug in an attachment cable, check that the cable is correctly labeled at both ends.
- Step 2 Push in the connector and tighten the retaining screws (see Figure C-5). Repeat this step for every cable that you need to plug in.
- Step 3 Ask the network operator to activate the lines of any newly installed or replaced cables. If activation does not work, see "Solving Problems" on page 1-5.

Unplugging UTP Cables

- **Step 1** To unplug a UTP cable, ask the network operator to deactivate it.
- **Step 2** Pinch the UTP cable connecter and pull it out (see A in Figure C-6 on page C-6).



Figure C-6. Installing or Removing a Token-Ring UTP Cable and Media Filter

Unplugging Token-Ring UTP Media Filter

- **Step 1** To unplug a token-ring UTP media filter, ask the network operator to deactivate it.
- **Step 2** Loosen the retaining screws and pull out the media filter (see A in Figure C-6).
- Step 3 Update the plugging sheets, and to integrate the changes that you have made, go to "Updating the Active CDF-E" on page 3-16.

Plugging in Token-Ring UTP Media Filter

- **Step 1** To plug in a token-ring UTP media filter, check that the cable is correctly labeled at both ends.
- **Step 2** Insert the media filter into the TIC3 connector and tighten the retaining screws (see A in Figure C-6).

Plugging in UTP Cables

- **Step 1** To plug in a UTP cable, push the connector into the media filter socket until it clicks into place (see B in Figure C-6).
- Step 2 Ask the network operator to activate the lines of any new or replaced cables. If activation does not work, see "Solving Problems" on page 1-5.

Unplugging or Plugging In LIC Cables

Before you start

First see the "Connection Procedures" on page C-2.



Unplugging Coupler Cables

- **Step 1** To unplug a coupler cable, ask the network operator to deactivate the appropriate lines.
- **Step** 2 Loosen the retaining screws and pull out the connector.



Figure C-7. LIC11, LIC12, and their Cables

Step 3 Update the plugging sheets, and to integrate the changes that you have made, see "Updating the Active CDF-E" on page 3-16.

Plugging in Coupler Cables

- **Step 1** To plug in a coupler cable, first make sure that any cables are correctly labeled at both ends.
- **Step** 2 Push in the connector and tighten the retaining screws (see Figure C-7).
- **Note:** If you connect a LIC 12 to DTE equipment for RLSD signal propagation (for example, a 2210 router), the DCE side of the cable must be connected to the LIC 12, and the DTE side of the cable to the router.

Unplugging or Plugging In Ethernet LAN Cables

- Important: read this before you start \cdot

Please consult the *Safety Information*, GA33-0400 before you install any AUI cables. Also, please take into consideration the following:

- To attach your controller to an ethernet LAN, the SQE TEST switch on the Access Unit must be set to ENABLE. Otherwise, ethernet LAN operations may be interrupted.
- If you need to replace an AUI cable with a 10BASE-T cable, contact your IBM service representative.

Unplugging AUI Cables

Before you start

First see the "Connection Procedures" on page C-2.

- **Step 1** To unplug an AUI cable, first ask the network operator to deactivate the appropriate line.
- **Step 2** Unlock the AUI connector latch by pushing it to the left.

Locking Latch

Note: The locking latch is sometimes difficult to move.

- **Step 3** Pull out the plug.
- **Step 4** Close and lock the door with the key.

Plugging in AUI cables

- **Step 1** Make sure that all cables are correctly labeled at both ends. Repeat this step for every AUI that you need to plug in.
- **Step 2** Locate a port that matches the label on the cable.
- **Step 3** Slide the latch to the left.



Step 4 Hold the cable connector with the longest side up.



Step 5 Push the plug firmly into the port connector.





Step 6 Push the locking latch right to lock it.

- Step 7 Check that the cable is locked in place by gently moving the cable connector from side-to-side as you try to pull it out of the connector. Do not jerk the cable.
- **Step** 8 Ask the network operator to activate the new lines.

Note: The line number is the TIC3 address to the ethernet attachment.

Step 9 Close and lock the door with the key.

Unplugging 10BASE-T cables

Before you start

First see the "Connection Procedures" on page C-2.

Step 1 The 10BASE-T connector is located next to the AUI connector on the ethernet bridge.



10BASE-T Connection

- **Step 2** To unplug a 10BASE-T cable, first ask the network operator to deactivate the appropriate lines.
- Step 3 Push the latch left to unlock it.
- **Step 4** Pull out the plug.
- **Step 5** Close and lock the door with the key.

Plugging In 10BASE-T Cables

- **Step 1** To plug in a 10BASE-T cable, first make sure that all the cables are correctly labeled at both ends.
- **Step** 2 Locate a port that matches the label on a cable.
- **Step 3** Slide the latch to the left.

- **Step 4** Push the plug into the port connector until it clicks into place.
- **Step 5** Close and lock the door with the key.
- **Step** 6 Ask the network operator to activate the new lines.

Unplugging or Plugging In Multiaccess Enclosure (MAE) Cables

— Before you start ·

First see the "Connection Procedures" on page C-2.



Unplugging Multiaccess Enclosure (MAE) Cables

- **Step** 1 Locate the MAE cables between the MAE and the controller expansion.
- Step 2 In MOSS-E View, open the 3746-9x0 Menu and click Multiaccess Enclosure (MAE) Management.

📱 ERS7-854d (ver1)/3746-9x0/Menu 🛛 🗆 🗖
<u>Function</u> Uptions Help
Configuration Management
🕆 Problem Management
+ Operation Management
Management
🗂 Multiaccess Enclosure (MAE) Management
🕆 Change Management
Performance Management
🕆 Functions to Use Under PE Guidance Only

Step 3 Double-click (M) MOS Console.

📱 ERS7-854d (ver1)/3746-9x0/Menu 🛛 🗹 🗉	
<u>Function</u> Options <u>H</u> elp	
Multiaccess Enclosure (MAE) Management	
- C Install/Remove/Change LIC on MAE	
- C (M) MAE/SAC Debug Services	L
- C [M] MOS Console	
- C (M) Debug Console	
(M) Retrieve MAE engineering data on SP	
ASCII Console	Ш
Perform Maintenance on MAE	
Selective IML on MAE	

Step 4 Type **T** 6 then press Enter to display a Config> prompt.



- Step 5 Type list device to display the interface number of the cable (shown as ifc x).
- Step 6 Type disable interface ifc x.
- **Step 7** Type write to save your changes.
- **Step 8** Unplug the cable.

Plugging In Multiaccess Enclosure (MAE) Cables

- **Step 1** To plug in an MAE cable, first make sure that all cables are correctly labeled at both ends.
- **Step 2** Plug a cable into the appropriate connector.
- **Step 3** Follow Steps 2 on page C-11 to 4.
- **Step 4** Type **T 6** then press **Enter** to display a **Config**> prompt.
- **Step 5** Type **enable interface ifc x** where **x** is the number of the cable.
- **Step 6** Type write to save your changes.
- Step 7 Press Ctrl and P together.
- Step 8 Type reload.

Note: During the reload process, MAE traffic will be interrupted.

Step 9 After reloading has finished, type **yes** or wait for the next maintenance period.

Installing LCBs

Before you start

First see the "Connection Procedures" on page C-2.



Line connection boxes (LCBs) can house up to 15 ARCs, each one having a communication line multiplexed to the same LIC11. Two LCBs can connect to the same LIC11 for a total of 30 lines.

There are two types of LCBs:

Line Connection Box Base (LCB base or LCBB)

Connects to the LIC11 and contains slots for 15 lines labeled 0 through 14.

Line Connection Box Expansion (LCB expansion or LCBE)

Connects to the LCB base and contains slots for 15 lines labeled 16 through 30.

Recommendations for LCB Installation -

Before using an LCB, make sure it is properly fastened to a steady surface. It is recommended that you install LCBs in a 3746-950 base frame, a 19 inch rack, or in a controller expansion (see Figure C-2 on page C-3 and Figure C-4 on page C-4).

You can install LCBs into a 19 inch rack or controller expansion, but only an IBM service representative can install LCBs in the 3746-950 base frame.

Use the following procedure to install LCBs:

Step 1 Identify the LCB types.

The two types of LCBs (*bases* and *expansions*) are identified by the different numbering of the ARC slots, and by the connectors on the right side of the chassis front.

The LCB base (LCBB) is numbered in the following way:

- ARC slots, labeled +0 through +14.
- Two connectors for cables to LIC11 and LCB expansion.



LCCB

Figure C-8. LCB Base (LCBB)

The LCB expansion (LCBE) is numbered in the following way:

- ARC slots labeled +16 through +30
- Cable connector to the LCB base.



LCBE

Figure C-9. LCB Expansion (LCBE)

- **Step** 2 Label the LCBs, and verify that the following information from the plugging sheet is on the LCB label (Part Number 63F2503):
 - 3746-950 name
 - LCB number
 - LCB location
 - Range of LIC11 addresses.
- Step 3 Put the label on the inner left side of the LCB (see 3 in Detail A of Figure C-10 on page C-15).

If a label already exists, put the new one on top of the old label.



Figure C-10. LCBB and LCBE Connections (Installed with ARC Assembly A)

Step 4 Install the LCBs (this includes LCBBs and LCBEs), making sure that an LCBE is installed **above** the LCBB to which it will be attached.

— Future expansion

Leave a 4U space¹ above each LCBB. This will make future installation of LCBEs easier.

If you are installing the LCB on to a table or the floor, continue with Step 7 on page C-16.

If you are installing an LCB in to a controller expansion or a 19 inch rack, proceed with the next step.

Step 5 Insert each LCB firmly into the rack.

¹ One international unit for height (1U) equals 44.45 mm or 1.75 inches.

- **Step 6** Secure the LCB with the four screw sets supplied with the unit. If you are installing an LCBE, go to 8 on page C-16.
- **Step 7** Ground the LCB.

If you install an LCB onto a table or a floor, you must also install a ground wire to ensure the connection. See Figure C-11 below.



Figure C-11. LCB Grounding

To insure good grounding, it is recommended that you use the following items:

- AWG 12 wire (minimum 2.5 square millimeter).
- 5 mm diameter screw, length from 6 mm to 10 mm (see Figure C-12).

Note: IBM does not provide these items.



Figure C-12. Standard Grounding Connection

- **Step** 8 Connect the LCBE cable to the LCBB. It does not matter which end of the cable you use.
- **Step 9** Tighten the retaining screws of the cable connector.
- **Step 10** Label LIC11 cables with the two LIC11 labels (Part Number 63F2504). Record the following information from the plugging sheets onto the labels:
 - 3746-950 name

- LCB number
- LCB location
- Range of LIC11 addresses.
- **Step 11** Put two identical labels at both ends of the cable (see the two **4** s in Figure C-10 on page C-15).
- Step 12 Connect the LIC11 cable to the LCB base and tighten the cable plug retaining screws (see "Unplugging or Plugging In LIC Cables" on page C-7 for details, and also 2 in Figure C-10 on page C-15).

Removing or Installing ARC Assembly A and B

Before you start

First see the "Connection Procedures" on page C-2.



Removing ARC Assembly A and B

Step 1 Ask the network operator to deactivate the communication lines of the ARC that you wish to unplug.

Step 2 Unplug the ARC cable from the DTE/DCE or 3745-type connector.

When you disconnect a 3745-type connector:

- a. Hold the connectors with both hands.
- b. Squeeze the side levers and at the same time pull the connectors apart with a side-to-side rocking motion.
- c. Store the connecting seal with the ARC for future use.





Step 3 Loosen the retaining screws and pull the ARC from the LCB. Repeat Steps 2, and 3 for every ARC you want to remove.

Figure C-13. ARC Assembly A (top) and ARC Assembly B (bottom) in an LCB

Step 4 Update the plugging sheets as necessary.

Installing ARC Assembly A and B

Use the following procedures to install ARC assembly A or B:

- **Step 1** Identify the ARC assembly from the following description:
 - ARC assembly A is light grey in color, with a permanently attached cable and connector corresponding to the physical interface of the ARC.
 - ARC assembly B is light grey in color, with a separate cable and connector corresponding to the physical interface of the ARC.



Figure C-14. ARC Assembly A and B

For details on available cable lengths, see the *Planning Guide*.

Step 2 Locate the ARC slot in the LCB. An LCB pair, the base (LCBB) and expansion (LCBE), contain a total of 30 slots (see the figures below).





Step 3 Identify the ARC physical interface type from one of the following connectors:

• 3745 type

• ITU-T interface type, V.24, V.35, and X.21.

A label on the front of the ARC identifies the ITU-T interface type. See Figure C-15 below for the different type of ARC cable connectors.



Figure C-15. ARC Assembly A and Connector Types



Figure C-16. ARC Assembly B and Connector Types

- **Step 4** Label the ARC cable with the following information from the corresponding plugging sheets (Part Number 63F2505):
 - LCB number
 - LCB location
 - IBM 3746-950 name
 - Range of LIC11 addresses
 - Connector slot position (+0 to +14 or +16 to +30)
 - Symbolic line name.
- Step 5 Put ARC labels at both end of the cable (see 5 in Figure C-10 on page C-15). Remove any old labels first.
- **Step** 6 Repeat Steps 3 and 4 for each ARC that you install.

Step 7 Insert the ARC, pushing it until the front ARC touches the LCB, then tighten the two retaining screws (see Figure C-13 on page C-19).

The guide rails of the LCB help you to install the ARC correctly (with the ARC type label below the cable).

- **Step** 8 Connect the ARC cable to a DTE or DCE using the following guidelines:
 - If you are using a V.24, V.35, or X.21 ARC, plug the cable interface connector into the DTE or DCE connector and tighten the retaining screws.
 - If you are using an ARC with a 3745 cable connector, use the following procedure:
 - a. Place the connecting seal on one of the connectors.
 - b. Hold a connector in each hand.
 - c. Ensure that the pins are correctly aligned with the holes in the female connector. Push the two connectors firmly together.
 - d. Make sure the side levers *click* into place.



Figure C-17. IBM 3745-Type Connector

- **Step 9** Repeat Steps 7 and 8 for each ARC that you install.
- Step 10 If you have a V.35 connection to a French modem, go to Step 11. If you have a V.35 connection to a French terminal, go to Step 12. Otherwise, go to Step 13.

Step 11 Connect the V.35 DCE adapter between the ARC cable and the French modem.







Figure C-18. French V.35 DCE Adapter

Step 12 Connect the V.35 DTE adapter between the ARC cable and the French terminal.



To the ARC Cable

To the Terminal

- Figure C-19. French V.35 DTE Adapter
- **Step 13** Ask the network operator to activate the line for the new or changed ARC. If activation does not work, see "Solving Problems" on page 1-5.
- **Step 14** Update the plugging sheets, if necessary.
- **Step 15** To integrate the changes that you have made, go to "Updating the Active CDF-E" on page 3-16.

Appendix D. Configuration for a Two-Target Remote Workstation

The following example shows the configuration for a remote workstation controlling two target service processors, ERS1 and BS12 (see Figure D-1 below).



Figure D-1. A Two-Target Configuration

The example in Figure D-1 on page D-1 assumes that the workstation is running:

- CS/2 or CM/2.
- NCP Version 6, Release 2 or higher with 3746-900 features.
- VTAM Version 3, Release 4.1.

NCP Definitions

NCP must contain definitions for the TIC2 or TIC3. These ports are used to attach the controlling workstation and the two service processors to token-ring LANs.

The only other requirement is to manage dynamic LUs by entering the following definition:

LUDRPOOL NUMILU=(a number > 0)

VTAM Definitions

Start List

The VTAM start list below should contain the XNETALS=YES statement to enable the cross-network SSCP-PU session activation (without SNI), and the statement DYNLU=YES to handle dynamic LUs (see the example below).

```
HOSTSA=10,SSCPID=10,MAXSUBA=63
CONFIG=10,NETID=SYSTST,SSCPNAME=CDRM20,
XNETALS=YES,DYNLU=YES,
NOPROMPT,DLRTCB=32,SUPP=NOSUP,NOTNSTAT,NOTRACE,TYPE=VTAM,
LPBUF=(120,,0,,60,60), LARGE GENERAL PURPOSE_PAGEABLE
LFBUF=(96,,0,,24,10), LARGE GENERAL PURPOSE_FIXED
LFBUF=(128,,0,,32,10), SMALL GENERAL PURPOSE_FIXED
LFBUF=(160,,13,,80,80), RPL_COPY_PAGEABLE
IOBUF=(256,256,34,,68,68) I/O BUFFERS_FIXED (NP&PP BUF REMOVED)
```

Logmode Table

The logmode table below is called SOCMOTAB:

DCAFMODE MODEENT LOGMODE=DCAFMODE 22, TYPE = 0,

FMPROF = X'13', TSPROF = X'07', PRIPROT = X'80', SECPROT = X'80', COMPROT = X'50B1', SSNDPAC = X'08', SRCVPAC = X'08', RUSIZES = X'8787', PSNDPAC = X'08', PSERVIC = X'06020000000000000002F00'

Switched Major Nodes

```
MAJNODE FOR CONNECTION : CONTROLLING <==> NETVIEW V2R3
*
*
DCAFCTRL VBUILD TYPE=SWNET,MAXGRP=1,MAXNO=1
         ADDR=04, PUTYPE=2, NETID=SYSTST 1, CPNAME=CPCTRL 2,
CPCTRL
     PU
                                           Х
                                           Х
         MAXPATH=8,MAXDATA=265,MAXOUT=1,
         DISCNT=NO
CTRL1
     LU LOCADDR=0,MODETAB=SOCMOTAB
MAJNODE FOR CONNECTION : MOSS-E ERS1 <==> NETVIEW V2R3
*
                                           *
NTVERS1 VBUILD TYPE=SWNET,MAXGRP=1,MAXNO=1
*-----*
         ADDR=04,PUTYPE=2,NETID=SYSTST 10,CPNAME=CPERS1 23,
CPERS1 PU
                                           Х
         MAXPATH=8,MAXDATA=265,MAXOUT=1,
                                           Х
         DISCNT=NO
PATHERS1 PATH DIALNO=0204400000761111, GRPNM=L76G2080
MOSSERS1 LU LOCADDR=0,MODETAB=SOCMOTAB
MAJNODE FOR CONNECTION : MOSS-E BS12 <==> NETVIEW V2R3
*
                                           *
NTVBS12 VBUILD TYPE=SWNET,MAXGRP=1,MAXNO=1
*-----
         ADDR=04, PUTYPE=2, NETID=SYSTST 10, CPNAME=CPBS12 22, X
CPBS12 PU
         MAXPATH=8,MAXDATA=265,MAXOUT=1,
                                           χ
         DISCNT=NO
PATHBS12 PATH DIALNO=0204400000761112, GRPNM=L76G1088
MOSSBS12 LU LOCADDR=0,MODETAB=SOCMOTAB
```

DCAF Remote Workstation Configuration

- **Step 1.** From Desktop Manager, double-click the Distributed Console Access Facility icon.
- Step 2. Double-click the DCAF Controller icon.
- Step 3. Click Session, then Open workstation directory.
- **Step 4.** Click **OK** for a first installation. Otherwise continue with next step.

¥.	Add a workstation		
			<u> </u>
	Workstation name	ERS1SNA	General
	Protocol	Connection	Protocol 📐
	MAPPC	💓 Target	
	🎆 APPN	Gateway	
	🏼 Asynchronous	LAN Directory	
	💓 IPX/SPX	Securitu	
	💓 NetBIOS	SVes /////	
	💓 ТСР/ІР	*,365////////////////////////////////////	
			•
	<u>S</u> ave Cancel	Help	

Step 5. From the DCAF Directory window, click **Workstation** then **Add**.

Step 6. Enter ERS1SNA in the Workstation name field and click Protocol.

🔄 Add a work	station		
	APPC		General
Local LV a	lias	CTRL1 Wse CP name	Protocol
Partner LU	alias	ERSISNA	
Mode name		DCAFMODE	
	Help	×	*
<u>S</u> ave	Cancel	Help	

- Step 7. Fill in the Local LU alias, Partner LU alias, and Mode name fields respectively with CTRL1, ERS1SNA, DCAFMODE, and click Save.
- Step 8. Repeat Step 6 and Step 7 by entering the following in the Workstation name and Partner LU alias fields:
 - a. ERS1SDLC, then click **Save**.
 - b. ERS1LAN, then click **Save**.
 - c. BS12SNA, then click **Save**.
 - d. BS12SDLC, then click Save.
 - e. BS12LAN, then click Save.
- Step 9. Click Cancel to finish.
- Step 10. Run the EQNSFPAR program to verify link records.

Appendix E. Modem Setup

Modems for 3745 Models 130 to 160

The following is a list of modems that can be set up to operate between the remote console and the 3745:

In the U.S.A.:

- IBM 5841 Modem.
- IBM 5842 Modem.

In the U.S.A., Canada, and Japan:

- IBM 5853 Modem (set to half speed).
- Equivalent compatible with Bell 212 A or ITU-T V.22 (1200 bps).

In other countries:

Modems compatible with ITU-T V.22 alternative B (1200 bps).

For information about setting up RSF modems, refer to "RSF Modems" on page E-7.

Setting Up

For the modem to be compatible between the remote console and the 3745, refer to the modem's documentation and set the following modem characteristics:

- · Switched line connection
- Duplex operation
- Asynchronous operation
- 1200 bps speed
- 3745 modem set to auto-answer
- Remote console modem set to manual dialing.

Notes:

- 1. Review the modem documentation to ensure compatibility with the 3745. In particular, check the following:
 - Error Checking Link (ECL) is disabled.
 - If the modem has a 'Test Mode', turn it off at the 3745 end.
 - If the modem is programmable, set the control of the Data Set Ready (DSR) signal to normal, so that it does not get raised by the Data Terminal Ready (DTR).
- Some IBM PC modems disconnect from the switched network when the carrier signal drops. To prevent this, set the modem at the PC end to RTS Permanent. For more information, refer to your modem documentation.

Switch Settings for IBM Modems 5841, 5842, and 5853

IBM 5841 Modem

Set the modem switches of the remote console as follows:

- 1. Set back panel DIP switches SW7 and 8 DOWN, all others UP.
- 2. Set all front panel switches OUT.

Set the modem switches of the 3745 as follows:

- 1. Set back panel DIP switches SW7 and 8 DOWN, all others UP.
- 2. Set all front panel switches OUT.

IBM 5842 Modem

Set the switches at the remote console site as follows:

- 1. Set back panel DIP switches SW7 and 8 DOWN, all others UP.
- 2. Set front panel switches FS IN, all others OUT.

Set the switches at the 3745 site as follows:

- 1. Set back panel DIP switches SW7 and 8 DOWN, all others UP.
- 2. Set front panel switches FS IN, all others OUT.

IBM 5853 Modem

Set the switches at the 3745 site as follows:

- 1. Set back panel DIP switches to UP.
- 2. Set front panel switches FS IN, all others OUT.

Set the switches at the remote console site as follows:

- 1. Set back panel DIP switches to UP.
- 2. Set front panel switches FS IN, all others OUT.

Note: Before you set any modem configurations, make sure that both modems have been initialized and then do the following:

- 1. Push in all the front panel switches.
- 2. Turn power ON and wait five seconds.
- 3. Turn power OFF.
- 4. Set the front panel switches as described above.
- 5. Turn power ON again.

Modems for the 3746

The procedures in this section explain how to manipulate the IBM modems recommended for DCAF.

Note: The Hayes modem does not need to be set manually.

Setting the IBM 7855 Modem

- Press both the ← and → buttons on the front panel of the modem. The modem displays the message '<Exit Enter>'.
- 2. Press the → button. If the modem displays View 0nly, go to Step 3. If the modem displays 'Password.....■■■■', use the → and the ↑ buttons to change the display to 'Password.....B293' by changing one character at a time. Press the → button one more time, and then check the display again to make sure it shows 'View 0nly'.
- Press and release the ↑ or ↓ button as needed to change the display to 'First Setup'.
- Press the → button once, press and release the ↑ or ↓ button to change the display to 'Reset to Factory'.
- 5. Press the ← button. The lights on the front panel flash briefly.
- 6. Set the modem speed to 12000 bps by doing the following:
 - a. Press both the ← and → buttons. The modem displays: '<Exit Enter>'.
 - b. Press and release the \rightarrow button. The modem displays: 'View Only'.
 - c. Press the ↓ button twice. The modem displays: 'Quick Customize'.
 - d. Press the \rightarrow button. The modem displays: 'DTE interface'.
 - e. Press the \$\u00e4 button twice. The modem displays: 'PSN Telco speed'.
 - f. Press the \rightarrow button. The modem displays: 'PSN Bps 9600'.
 - g. Press the ↓ button. The modem displays: 'PSN Bps 12 000'.
 - h. Press the ← button 6 times. The modem displays: 'SYNC INT 12 000'.
- 7. Turn the modem off.

Setting and Saving the Target Service Processor Phone Number

- Press both the ← and → buttons on the front panel of the modem. The modem displays the message '<Exit Enter>'.
- 3. Press and release the ↑ or ↓ button as needed to change the display to 'Directories'.
- 4. Press the → button to display 'No Password'. If the display shows 'Password needed', use the ↑ button and the ↑ button once to change the display to 'Local Pass B293' by changing one character at a time.

- 5. Press the \rightarrow button to display 'Store and View'.
- 6. Press the \rightarrow button to display 'Directories xx'.
- Set the target service processor phone number with the ↑ and ↓ buttons. Switch to the next number with the → button.
- 8. Press the \leftarrow button 8 times to exit.

Setting the IBM 7857 Modem Connected to MPA Card (SYN)

- 1. Press the \downarrow key until the 'CONFIG' message displays at the top of the screen.
- Press the → key until the 'Sel Factory' message displays at the bottom of the screen.
- 3. Press Enter.
- 4. Press the ↑ key until '3' displays.
- 5. Press Enter to load the predefined factory configuration 3.
- 6. Press the ↑ key until 'U1' displays at the top of the screen.
- 7. Press the \rightarrow key until 'Sync mode 3' displays. Press **Enter** to validate.
- 8. Press the ↑ key until 'U2' displays.
- 9. Press the \rightarrow key until 'Internal' displays. Press **Enter** to validate.
- 10. Press the ↑ key until 'U3' displays.
- 11. Press the \rightarrow key until 'Autobaud' displays. Press **Enter** to validate.
- 12. Press the ↑ key until 'U4' displays.
- 13. Press the \rightarrow key until 'CCITT' displays. Press **Enter** to validate.
- 14. Press the ↑ key until 'U5' displays.
- 15. Press the \rightarrow key until '9600 V32 TRE' displays. Press **Enter** to validate.
- 16. Press the ↑ key until 'U6' displays.
- 17. Press the → key until 'V42Bis/MNP5 Enabled' displays. Press Enter to validate.
- 18. Press the ↑ key until 'U7' displays.
- Press the → key until 'Auto Reliable/V42/MNP' displays. Press Enter to validate.
- 20. Press the ↑ key until 'U8' displays.
- 21. Press the \rightarrow key until 'Xon/Xoff passed' displays. Press **Enter** to validate.
- 22. Press the ↑ key until 'U9' displays.
- 23. Press the \rightarrow key until 'Xon/Xoff' displays. Press **Enter** to validate.
- 24. Press the ↑ key until 'U10' displays.
- 25. Press the \rightarrow key until 'C108/2' displays. Press **Enter** to validate.
- 26. Press the ↑ key until 'U11' displays.
- Press the → key until 'C106 Always follow C105' displays. Press Enter to validate.
- 28. Press the ↑ key until 'U12' displays.

- 29. Press the \rightarrow key until 'C107/C109 Normal Mode' displays. Press **Enter** to validate.
- 30. Press the ↑ key until 'U13' displays.
- 31. Press the → key until 'C107 Follow C109(CD)' displays. Press Enter to validate.
- 32. Press ↓ until 'Mode' displays.
- 33. Press \rightarrow until the message 'V25HDLC NRZIASC' displays.
- 34. Press Enter.

The modem is now in ITU-T V.25 bis synchronous mode. See "Saving the Modem Configuration" below.

Setting the 7857 Modem Connected to COM1 (ASYN)

- 1. Power OFF the modem
- 2. Press and hold the ↑ key while power ON the modem.
- 3. The modem is set to Factory 0 in AT command mode.

See "Saving the Modem Configuration" below.

Setting the 7857 Modem Connected to MPA Card on COM2 (ASYN)

- 1. Power OFF the modem
- 2. Press and hold the ↑ key while power ON the modem.
- 3. The modem is set to Factory 0 in AT command mode.

See "Saving the Modem Configuration" below.

Saving the Modem Configuration

- 1. Press the 1 key until the 'CONFIG' message displays at the top of the screen.
- 2. Press the → key until the 'Store User Conf' message displays at the bottom of the screen.
- 3. Press Enter.
- 4. Press the ↑ key, to select the User Configuration Location (0 to 9) where you want to save the configuration.
- 5. Press Enter to save the current modem configuration.

The defined configuration is now active and saved. Every time the modem is reset (powered ON), this configuration is loaded.

Transmission Speed The IBM 7857 uses an **Adaptive line rate facility** which can automatically decrease or increase the modem's transmission speeds. This means that if telecommunication line conditions deteriorate, the modem can still function at the highest possible efficiency.

Setting and Saving the Target Service Processor Phone Number

- 1. Press the \downarrow key until 'Store phone number' displays at the top of the screen.
- 2. Press the \rightarrow key to select the first location number.
- 3. Press Enter.

- Press the ↑ key to select a digit. Press the → key to move to the next position (↓ key can be used for backspacing).
- 5. Press Enter twice to save the target service processor's phone number.

Setting the IBM 7858 Modem Connected to MPA Card (SYN)

- 1. Press the \downarrow key until the 'CONFIG' message displays at the top of the screen.
- Press the → key until the 'Sel Factory' message displays at the bottom of the screen.
- 3. Press Enter.
- 4. Press the ↑ key until 3 displays.
- 5. Press Enter to load the predefined factory configuration 3.
- 6. Press the *†* key until 'U4' displays at the top of the screen.
- 7. Press the \rightarrow key until '9600bps V32' displays. Press **Enter** to validate.
- 8. Press the ↑ key until 'U7' displays.
- 9. Press the \rightarrow key until 'Xon/Xoff Passed' displays. Press **Enter** to validate.
- 10. Press the ↑ key until 'U8' displays.
- 11. Press the \rightarrow key until 'Xon / Xoff' displays. Press **Enter** to validate.
- 12. Press the ↑ key until 'U10' displays.
- 13. Press the \rightarrow key until 'Forced on' displays. Press **Enter** to validate.
- 14. Press the ↑ key until 'U12' displays.
- 15. Press the → key until Follow CD displays. Press Enter twice to select this option.
- 16. Press ↓ until 'Mode' displays.
- 17. Press \rightarrow until the message 'V25HDLC NRZIASC' displays.
- 18. Press Enter twice.

The modem is now in V.25 bis synchronous mode. See "Saving the Modem Configuration" on page E-7 below.

Setting the 7858 Modem Connected to COM1 (ASYN)

- 1. Power OFF the modem
- 2. Press and hold the ↑ key while power ON the modem.
- 3. The modem is set to Factory 0 in AT command mode.

See "Saving the Modem Configuration" on page E-7 below.

Setting the 7858 Modem Connected to MPA Card on COM2 (ASYN)

- 1. Power OFF the modem
- 2. Press and hold the ↑ key while power ON the modem.
- 3. The modem is set to Factory 0 in AT command mode.

See "Saving the Modem Configuration" on page E-7 below.

Saving the Modem Configuration

- 1. Press the \downarrow key until the 'CONFIG' message displays at the top of the screen.
- Press the → key until the 'Store User Conf.' message displays at the bottom of the screen.
- 3. Press Enter.
- 4. Press the ↑ key, to select the User Configuration Location (0 to 9) where you want to save the configuration.
- 5. Press Enter to save the current modem configuration.

The defined configuration is now active and saved. Every time the modem is reset (powered ON), this configuration is loaded.

Transmission Speed The IBM 7858 uses an Adaptive line rate facility which can automatically decrease or increase the modem's transmission speeds. This means that if telecommunication line conditions deteriorate, the modem can still function at the highest possible efficiency.

Setting and Saving the Target Service Processor Phone Number

- 1. Press the \downarrow key until 'Store phone number' display at the top of the screen.
- 2. Press the \rightarrow key to select the first location number.
- 3. Press Enter.
- Press the ↑ key to select a digit. Press the → key to move to the next position (↓ key can be used for backspacing).
- 5. Press Enter twice to save the target service processor's phone number.

RSF Modems

This chapter applies to 3745 Models 130 to 610. It does not apply to Model A.

If you have an RSF link to the Remote Technical Assistance Information Network (RETAIN), your IBM service representative will install the RSF modem.

If a RSF modem is not provided with the 3745, follow the installation procedure below for compatibility with ITU-T V.23. This will set your modem in half-duplex mode, with BSC protocol set at 1200 bps, and without clocking.

Note: Operating characteristics for RSF modems are country-dependent.

IBM 5858 Modem

1. Set the rear panel switches for a V.23 modem as below:



2. Set all the front panel switches to OUT.

IBM 7855 Modem

Refer to "Setting the 7857 Modem Connected to COM1 (ASYN)" on page E-5.

IBM 7857 Modem

Refer to "Modems for 3745 Models 130 to 160" on page E-1.
Appendix F. Bibliography

Customer Documentation for the 3746 Model 950



Table F-1 (Page 2 of 2). Customer Documentation for the 3746 Model 950						
Operating and Testing						
	SA33-0356	IBM 3746 Nways Multiprotocol Controller Model 950				
		User's Guide ²				
		Explains how to:				
		 Carry out daily routine operations on Nways controller Install, test, and customize the Nways controller after installation Configure user's workstations to remotely control the service processor using: DCAF program Telnet client program. 				
	On-line information	Controller Configuration and Management Application				
		Provides a graphical user interface for configuring and managing a 3746 APPN/HPR network node and IP Router, and its resources. Is also available as a stand-alone application, using an OS/2 workstation. Defines and explains all the 3746 Network Node and IP Router configuration parameters through its on-line help.				
	SH11-3081	IBM 3746 Nways Multiprotocol Controller Models 900 and 950				
	Controller Configuration and Management: User's Guide ²					
		Explains how to use CCM and gives examples of the configuration process.				
Managing Problems						
	On-line information	Problem Analysis Guide				
		An on-line guide to analyze alarms, events, and control panel codes on:				
(E		 IBM 3745 Communication Controller Models A³ IBM 3746 Nways Multiprotocol Controller Models 900 and 950. 				
	SA33-0175	IBM 3745 Communication Controller Models A ³ IBM 3746 Expansion Unit Model 900 IBM 3746 Nways Multiprotocol Controller Model 950				
		Alert Reference Guide				
		Provides information about events or errors reported by alerts for:				
		 IBM 3745 Communication Controller Models A³ IBM 3746 Nways Multiprotocol Controller Models 900 and 950. 				
 ¹ Models 130 to 61A. ² Documentation shipped with the 3746-950 ³ 3745 Models 17A to 61A. 						

List of Abbreviations

ac	Alternating Current	ESCON	Enterprise System Connection
ACF	Advanced Communications Functions	ESD	Electrostatic Discharge
APPC	Advanced Program-to-Program	FCC	Federal Communications Commission
	Communication	FP	Focal Point
APPN	Advanced Peer to Peer Networking	GWCON	Gateway Console (IP)
ARC	Active Remote Connector	HPR	High Performance Routing
ARP	Address Resolution Protocol	IBM	International Business Machines
AUI	Attachment Unit Interface		Corporation
BGP	Border Gateway Protocol	ID	Identifier
bps	bits per second	IDF	Internet Protocol Definition File
Bps	Bytes per second	IML	Initial Microcode Load
CA	Channel Adapter	IP	Internet Protocol
CBSA	Controller Bus and Service Adapter	IPL	Initial Program Load
CBSP	Controller Bus and Service Processor	ISDN	Integrated Services Digital Network
ССМ	Controller Configuration and Management	ITU-T	International Telecommunications Union-Telecommunications
CCITT	Comité Consultatif International		(Formerly: CCITT)
	Télégraphique et Téléphonique	LAA	Locally Administered Address
	The International Telegraph and Telephone Consultative Committee	LAN	Local Area Network
	(Now: ITU-T)	LAPS	LAN Adapter Protocol Support
CDF-E	Configuration Data File-Extended	LCB	Line Connection Box
CLP	Communication Line Processor	LCBB	Line Connection Box Base
СМ	Communications Manager	LCBE	Line Connection Box Extension
СР	Control Point	LEN	Low Entry Networking
CSD	Corrective Service Diskette	LIC	Line Interface Coupler
DCAF	Distributed Console Access Facility	LU	Logical Unit
DCE	Data Circuit-terminating Equipment	m	meter; 1.09 yards; 3.28 feet; 39.37 inches
DLC	Data Link Control	MAC	Medium Access Control
DLUR	Dependent LU Requester	MAE	Multiaccess Enclosure
DOS	Disk Operating System	MAU	Multistation Access Unit
DTE	Data Terminal Equipment	Mbps	Megabits per second; 1 048 476 bits
EC	Engineering Change		per second
ELS	Event Logging System	MOSS	Maintenance and Operator Subsystem
EPO	External Power ON	MOSS-E	Maintenance and Operator
ES	Extended Services		Subsystem-Extended

NCP	Network Control Program	SNA	Systems Network Architecture
NDF	Network Definition File	SNMP	Simple Network Management Parameters
NN	Network Node		
NNP	Network Node Processor	SPAU	Service Processor Access Unit
NPM	NetView Performance Monitor	SRC	Service Reference Code
NTS	Network Transport Services	STP	Shielded Twisted Pair
OPCON	Operator Console (IP)	TCP/IP	Transmision Control Protocol/Internet Protocol
OS	Operating System	тіс	Token-ring Interface Coupler
OSPF	Open Shortest Path First	UEPO	Unit Emergency Power OFF
PE	Product Engineer	URL	Uniform Resource Locator
PPP	Point-to-Point Protocol	UTP	UnTwisted Pair
PU	Physical Unit	VCCI	Japanese Voluntary Control Council for
RETAIN	Remote Technical Assistance	1001	Interference
	Information Network	VTAM	Virtual Telecommunications Access
RIP	Routing Information Protocol		Method
RLSD	Received Line Signal Detector	WRS	WAN Restoral
RPO	Remote Power OFF	3746-900	IBM 3746 Nways Multiprotocol
RSF	Remote Support Facility		Controller Model 900
SA	Subarea	3746-950	IBM 3746 Nways Multiprotocol
SDLC	Synchronous Data Link Control		Controller Model 950

Glossary

This glossary defines all new terms used in this manual. It also includes terms and definitions from the *IBM Dictionary of Computing*, SC20-1699.

Address Resolution Protocol (ARP). One of the protocol provided by TCP/IP that dynamically maps between Internet addresses, baseband adapter addresses, X.25 addresses, and token-ring adapter addresses on a local area network.

Advanced Communication Function (ACF). A group of IBM licensed programs. principally VTAM programs. TCAM*, NCP, and SSP, that use the concepts of Systems Network Architecture (SNA), including distribution of function and resource sharing.

addressing. A technique where the control station selects, among the DTEs that share a transmission line, the DTE to which it is going to send a message.

Advanced Program-to-Program

Communication (APPC). An implementation of the SNA/SDLC LU6.2 protocol that allows interconnected systems to communicate and share the processing of programs.

advanced peer-to-peer networking (APPN).

An extension of SNA featuring: (a) greater distributed network control that avoids critical hierarchical dependencies, thereby isolating the effects of single point failure; (b) dynamic exchange of network topology information to foster ease of connection reconfiguration, and adaptive route selection; (c) dynamic definition of network resources; and (d) automated resource registration and directory lookup. APPN extends the LU 6.2 peer orientation for end-user services to network control and supports multiple LU types, including LU 2, LU 3, and LU 6.2.

alarm. A message sent to the MOSS operator console. In case of an error, a reference code identifies the nature of the error.

alert. A message sent to the host console. In case of an error, a reference code identifies the nature of the error.

channel adapter (CA). A communication controller hardware unit used to attach the controller to a host processor.

channel interface. The interface between the controller and the host processors.

communication controller. A device that directs the transmission of data over the data links of a network; its operation may be controlled by a program executed in a processor to which the controller is connected or it may be controlled by a program executed within the device. Examples are the IBM 3705, IBM 3720/3725/3726, IBM 3745 models 130 to 61A, and IBM 3746 models 900/950.

communications manager. A function of the OS/2 that lets a workstation connect to a host computer and use the host resources as well as the resources of the other personal computers to which the workstation is attached, either directly or through a host system.

configuration data file (CDF). A 3745 MOSS file that contains a description of all the hardware features (presence, type, address, and characteristics).

configuration data file - extended (CDF-E). A 3746 MOSS-E file that contains a description of all the hardware features (presence, type, address, and characteristics).

control panel. A panel that contains switches and indicators for the customer's operator and service personnel.

control point (CP). A collection of tasks, which provide directory and route selection functions for APPN. An end node control point provides its own configuration, session, and management services with assistance from the control point in its serving network node. A network node control point provides session and routing services.

control program. A computer program designed to schedule and to supervise the execution of programs of the controller.

Customer engineer. See: *IBM service representative*.

data circuit-terminating equipment (DCE). The equipment installed at the user's premises that provides all the functions required to establish, maintain, and terminate a connection, and the signal conversion between the data terminal equipment (DTE) and the line. For example, a modem is a DCE.

data link control (DLC). In SNA, a set of rules used by two nodes on a data link to accomplish an orderly exchange of information. Synonymous with line control.

data terminal equipment (DTE). That part of a data station that serves as a data source, data link, or both, and provides for the data communication control function according to protocols. For example, the IBM 3745 can be a DTE.

dependent logical unit (DLU). Any logical unit (LU) that is made active by a command from the host system over a data link. Such logical units can be used only as secondary logical units, and can have only one active LU-to-LU session at a time. Contrast with independent logical unit.

direct attachment. The attachment of a DTE to another DTE without DCE.

disk operating system (DOS). An operating system for computer systems that use disks and diskettes for auxiliary storage of programs and data.

diskette. A thin, flexible magnetic disk, and its protective jacket, that records diagnostics, microcode, and communication controller files.

diskette drive. A mechanism that reads and writes diskettes.

Distributed Console Access Facility (DCAF).

(1) This program product provides a remote console function that allows a user at one programmable PS/2 workstation to remotely control the keyboard input and monitor the display of output of another programmable workstation. The DCAF program does not affect the application programs that are running on the workstation that is being controlled. (2) An icon that represents the Distributed Console Access Facility. **dump**. (1) To record, at a particular instant, the contents of all or part of one storage device in another storage device. Dumping is usually the purpose of debugging. (T) (2) Data that as been dumped. (T) (3) To copy data in a readable format from main or auxiliary storage onto an external medium such as tape, diskette, or printer. (4) To copy the contents of all or part of virtual storage for collecting error information.

Enterprise System Connection (ESCON). A set of IBM products and services that provides a dynamically connected environment within an enterprise.

ESCON channel. A channel having an Enterprise System Connection channel to control-unit I/O interface that uses optical cables as a transmission medium.

focal point (FP). An APPN network node that is the destination of alerts. A focal point allows a customer to centrally manage a network.

host processor. (1) A processor that controls all or part of a user application network. (2) In a network, the processing unit in which the access method for the network resides. (3) In an SNA network, the processing unit that contains a system services control point (SSCP). (4) A processing unit that executes the access method for attached communication controllers. Also called *host*.

IBM service representative. An individual in IBM who carries out maintenance services for IBM products or systems. Also called the *Customer engineer*.

initial microcode load (IML). The process of loading the microcode into an adapter.

initial program load (IPL). The initialization procedure that causes the 3745 control program to begin operation. Also available for the service processor.

integrated services digital network (ISDN). A digital end-to-end telecommunication network that supports multiple services including, but not limited to, voice and data.

International Telecommunication Union (ITU). The specialized telecommunication agency of the United Nations, established to provide standardized communication procedures and practices, including frequency allocation and radio regulations worldwide. (Formerly CCITT).

Internet Protocol (IP). In TCP/IP, a protocol that routes data from its source to its destination in an Internet environment.

line interface coupler (LIC). A circuit that attaches up to four transmission cables to the controller (from DTEs, DCEs, or telecommunication lines).

local area network (LAN). A computer network located on a user's premises within a limited geographical area. Communication within a LAN is not subject to external regulation; however, communication across the LAN boundary may be subject to some form of regulation.

logical unit (LU). In SNA, a port through which an end user accesses the SNA network in order to communicate with another end user and through which the end user accesses the functions provided by system services control points (SSCPs). An LU can support at least two sessions, one with an SSCP and one with another LU, and may be capable of supporting many sessions with other logical units.

log OFF. To end a session. Synonymous with log out.

logoff. The procedure by which a user ends a terminal session.

log ON. To initiate a session. Synonymous with log in

logon. The procedure by which a user begins a terminal session.

low-entry networking (LEN). In SNA, a capability in type 2.1 nodes allowing them to be directly attached to one another using peer-to-peer protocols and allowing them to support multiple and parallel sessions between logical units (LU).

maintenance and operator subsystem extended (MOSS-E). The licensed internal code loaded on the service processor hard disk to provide maintenance and operator facilities to the user and IBM service representative.

medium access control (MAC). For LAN, the method of determining which device has access to the transmission medium at any time.

microcode. A program that is loaded in a processor (for example, the MOSS-E processor) to replace a hardware function. The microcode is not accessible to the customer.

mouse. (1) A hand-held locator operated by moving it on a flat surface. (2) The pointer moving on the screen.

multistation access unit (MAU). In the IBM token-ring network, a wiring concentrator that connect up to eight lobes to a ring.

NetView Performance Monitor (NPM). An IBM licensed program that collects, monitors, analyses, and displays data relevant to the performance of a VTAM telecommunication network. It runs as an on-line VTAM application program.

network. See user application network.

Network Control Program (NCP). An IBM licensed program that provides communication controllers supports for single-domain, multiple domain, and interconnected network capability.

network node processor (NNP). The processor that is attached to the 3746-950 via a token-ring LAN, running the APPN Network Node functions.

object. (1) In computer security, anything to which access is controlled; for example, a file, a program. (2) A passive entity that contains or receives data. Access to an object implies access to the information it contains. (3) Something that a user works with to perform a task.

on-line information and help. Information stored in a computer system than can be displayed, used, and sometimes modified in an interactive manner without any need to obtain a hard copy.

physical unit (PU). In SNA, the component that manages and monitors the resources, such as attached links and adjacent link stations, associated with a node, as requested by an SSCP via an SSCP-PU session. An SSCP activates a session with the physical unit in order to indirectly manage, through the PU, resources of the node such as attached links. This term applies to type 2.0, type 4, and type 5 nodes only.

pull-down menu. (1) On the display screen, a menu that emerges in a downward direction from a point or line at or near the top of the screen; for example a menu that appears when the user selects a particular display element or points to a line in another menu by using a device such as a mouse. (2) A list of choices extending from a selected menu-bar choice that gives users access to actions, routings, and settings related to an object.

received line signal detector (RLSD). A signal defined in the EIA-232 standard that indicates to the data terminal equipment (DTE) that it is receiving a signal from the remote data circuit-terminating equipment (DCE).

remote console. A PS/2 attached to the IBM 3746-950 either by a switched line (with modems) or by one of communication lines of the user network.

remote support facility (RSF). RSF provides IBM maintenance assistance when requested via the public switched network. It is connected to the IBM RETAIN database system.

service processor. The processor that is attached to the 3746-950 via a token-ring LAN, running the MOSS-E functions.

shutdown. The process of ending a operation of a system or subsystem, following a defined procedure.

subarea network. Connected subareas, their directly attached peripheral nodes, and the lines that connect them.

Synchronous Data Link Control (SDLC). A discipline for managing synchronous, code transparent, serial-by-bit information transfer over a link connection. Transmission exchanges may be duplex or half-duplex over switched or nonswitched links. The configuration of the link

connection may be point-to-point, multipoint, or loop. SDLC conforms to subsets of the Advanced Data Communication Control Procedures of the American National Standards Institute and High-Level Data Link Control (HDLC) of the International Standard Organization (ISO).

time out. The interval allotted for certain operations to occur.

token ring. A network with a ring topology that passes tokens from one attaching device to another.

token-ring adapter (TRA). Line adapter for IBM Token-Ring Network, composed of one token-ring processor card (TRP), and two token-ring interface couplers (TICs).

token-ring interface coupler type 3 (TIC3). A circuit that attaches an IBM Token-Ring network to an IBM 3746-900 or 3746-950.

transmission interface. The interface between the controller and the user application network.

transmission line. The physical means for connecting two or more DTEs (via DCEs). It can be nonswitched or switched. Also called a *line*.

user application network. A configuration of data processing products, such as processors, controllers, and terminals, for data processing and information exchange. This configuration may use circuit-switched, packet-switched, and leased-circuit services provided by carriers or the PTT. Also called *user network*.

Virtual Telecommunication Access Method (VTAM). A set of programs that maintain control of the communication between terminals and application programs running under DOS, OS/1, and OS/2 operating systems.

V.24 and V35. ITU-T recommendations on transmission interfaces.

X.21. ITU-T recommendations on transmission interfaces.

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