

3745 Communication Controller All Models  
3746 Nways Multiprotocol Controller Model 900



# Console Setup Guide



3745 Communication Controller All Models  
3746 Nways Multiprotocol Controller Model 900



# Console Setup Guide

**Note**

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

**Thirteenth Edition (September 2000)**

This edition applies to the 3745 Communication Controller All Models, and the 3746 Nways<sup>®</sup> Multiprotocol Controller Model 900.

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

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

Department CGFA  
Design & Information Development  
IBM Corporation  
PO Box 12195  
Research Triangle Park NC 27709

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

© **Copyright International Business Machines Corporation 1992, 2000. All rights reserved.**

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

# Contents

<b>Notices</b>	ix
Electronic Emission Notices	x
Industry Canada Class A Emission Compliance Statement	x
Avis de conformité aux normes d'Industrie Canada	x
European Union (EU) Mark of Conformity Statement	x
Japanese Voluntary Control Council for Interference (VCCI) Statement	xi
Korean Communications Statement	xi
Taiwanese Class A Warning Statement	xii
New Zealand Radiocommunications (Radio) Regulations	xii
Notice to UK Users	xii
Safety	xiii
Trademarks	xiii
 <b>About this Guide</b>	 xv
Conventions Used in This Guide	xv
Who Should Use This Guide	xvi
How This Guide Is Organized	xvi
What Is New in This Edition	xvii
Where to Find More Information	xvii
Additional Information Available on the Web	xvii
Year 2000 Statement	xvii
 <b>Chapter 1. Introduction to Remote Access Programs</b>	 1-1
Remote Workstations Using Java Console	1-1
Remote Workstations Using DCAF	1-1
DCAF Logon Password and Service Processor Security	1-3
Regaining Control of the Service Processor	1-4
Minimum Workstation (Remote Console) Configuration	1-4
Programming Requirements	1-4
Hardware Requirements and Recommendations	1-5
 <b>Chapter 2. Program Support for Remote Workstation Access</b>	 2-1
Required Program Support for DCAF	2-1
Installing DCAF	2-1
Customizing CS/2 and CM/2	2-2
Customizing a CS/2 Remote Workstation	2-2
Configuring Data Link Control (DLC) for a Service Processor	2-2
Physical Installation	2-3
 <b>Chapter 3. Using DCAF for Remote Access to the Service Processor</b>	 3-1
Starting a Session	3-1
Closing a Session	3-2
 <b>Chapter 4. Modem-Attached Remote Workstation</b>	 4-1
Configuring a Target Service Processor	4-1
Configuring the Service Processor in MOSS-E	4-2
Remote Workstation Modems	4-4
Configuring CS/2 Remote Workstations	4-4
Configuring the Remote Workstation Modem	4-5
Procedures for Service Processors 6275, 3172, 7585	4-5

7855 Asynchronous Modem to Service Processor 6275, 3172, and 7585 . . .	4-6
7857 Asynchronous Modem to Service Processor 6275, 3172, and 7585 . . .	4-11
Hayes Asynchronous Modem to Service Processor 6275, 3172, and 7585 . . .	4-16
Configuring DCAF for a Modem . . . . .	4-21
<b>Chapter 5. APPN-Attached Remote Workstation . . . . .</b>	<b>5-1</b>
Configuring a Target Service Processor . . . . .	5-1
Parameter Values that Must Be the Same . . . . .	5-2
Configuring the Service Processor in MOSS-E . . . . .	5-2
Configuring an APPN-Attached Remote Workstation . . . . .	5-4
Configuring CS/2 . . . . .	5-4
Configuring DCAF for APPN . . . . .	5-9
<b>Chapter 6. SNA-Attached Remote Workstation . . . . .</b>	<b>6-1</b>
Configuring a Target Service Processor . . . . .	6-1
Parameter Values that Must Be the Same . . . . .	6-2
Configuring the Service Processor in MOSS-E . . . . .	6-2
Configuring a SNA-Attached Remote Workstation . . . . .	6-4
Configuring CS/2 . . . . .	6-4
Configuring DCAF for SNA . . . . .	6-10
NCP Definitions . . . . .	6-11
Remote Controlling Workstation . . . . .	6-11
Target Service Processor . . . . .	6-12
VTAM Definitions . . . . .	6-13
Start Definitions . . . . .	6-13
Logmode Table . . . . .	6-13
Major Node Definitions . . . . .	6-14
<b>Chapter 7. TCP/IP LAN-Attached Remote Workstation . . . . .</b>	<b>7-1</b>
Configuring a Target Service Processor . . . . .	7-1
Configuring a TCP/IP LAN-Attached Remote Workstation . . . . .	7-3
Configuring DCAF for TCP/IP . . . . .	7-3
Configuring TCP/IP . . . . .	7-5
<b>Chapter 8. APPC LAN-Attached Remote Workstation . . . . .</b>	<b>8-1</b>
Configuring a Target Service Processor . . . . .	8-1
Parameter Values that Must Be the Same . . . . .	8-1
Configuring the Service Processor in MOSS-E . . . . .	8-2
Configuring an APPC LAN-Attached Remote Workstation . . . . .	8-4
Configuring CS/2 . . . . .	8-4
Configuring DCAF for APPC . . . . .	8-10
<b>Chapter 9. Telnet-attached Remote Workstation . . . . .</b>	<b>9-1</b>
Introduction . . . . .	9-1
Consoles . . . . .	9-1
Logon Password . . . . .	9-2
Programming Requirements . . . . .	9-2
Hardware Requirements and Recommendations . . . . .	9-2
Installation . . . . .	9-2
Using Telnet to Remotely Log On to the Network Node Processor . . . . .	9-2
Starting a Session . . . . .	9-2
Closing a Session . . . . .	9-2
<b>Chapter 10. Java Console Remote Access . . . . .</b>	<b>10-1</b>

Overview of Java Console	10-1
Remote Access with Java Console	10-1
Workstation Access to a Service Processor	10-2
Configuring Java Console	10-2
Procedure for Configuring the Service Processor	10-3
 <b>Chapter 11. Using Java Console to Remotely Access a Service Processor with a Web Browser</b>	 11-1
Remote Workstation Requirements	11-1
Remote Workstation Access Via Switched Line (Modem)	11-2
Configuring the Remote Workstation in Windows 95	11-2
Configuring the Remote Workstation in OS/2 Warp	11-8
Network Dialer Program	11-8
Remote Workstation Access Via Service LAN	11-12
Configuring the Remote Workstation on a LAN	11-12
Initiating a Remote Workstation Connection to the Service Processor	11-12
Initiating a Remote Workstation Connection to the NNP	11-14
Connecting to the NNP in MOSS-E	11-14
Connecting to the NNP from a Web Browser	11-15
Java Console Menus	11-17
Actions Menu	11-17
Settings Menu	11-18
Keys Menu	11-18
 <b>Chapter 12. Installing the Java Console Program</b>	 12-1
Installing Java Console as a Program on a Remote Workstation	12-1
Remote Workstation Requirements for Java Console	12-1
Procedure for Installing the Java Console Program	12-1
Remote Workstation Settings for Java Console	12-3
Running the Java Console Program in Windows	12-4
Running the Java Console Program in OS/2	12-6
Java Console File Manager	12-6
Uploading Files to the Service Processor	12-7
Downloading Files from the Service Processor	12-8
 <b>Appendix A. Setting Up Local, Alternate, or Remote Consoles</b>	 A-1
General Information on Consoles	A-1
3151 in Native Mode (Local, Alternate or Remote)	A-2
3151 in 3101 Emulation Mode (Local, Alternate, or Remote)	A-3
3153 in 3151 Emulation Mode (Local, Alternate, or Remote Consoles)	A-5
Starting the Console Configuration	A-5
Closing the Console Configuration	A-6
3161 or 3163 (Local, Alternate, or Remote)	A-6
IBM PS/2 (Local, Alternate, or Remote)	A-6
MOSS Local or Alternate Console Emulation with CM/2 and Softerm	A-10
MOSS Remote Console Emulation with CM/2 and Softerm	A-10
Starting Custom Plus	A-10
Defining a New Session	A-10
Ending Definition of a New Session	A-12
Testing a Connection with a Local or Alternate Console	A-13
Testing the Modem Connection to a Remote Console	A-13
Location of 3745 Console Connectors	A-15
3745 Communication Controller Models 130, 150, 160, and 170	A-15
3745 Communication Controller Models 210, 310, 410, and 610	A-15

Console and RSF Interface Cables . . . . .	A-16
Cable from the 3745 to a Local Console . . . . .	A-16
Cable from the 3745 to an Alternate Console . . . . .	A-16
Cable Adapters for Local/Alternate Console . . . . .	A-17
Console Connection through the IBM 7427 Console Switching Unit . . . . .	A-17
Cable from the 3745 to the 7427 Switching Unit (A) . . . . .	A-18
Cable from the 7427 to a 31xx, PS/2, or PC Console (B) . . . . .	A-18
Cable from the 7427 to a 3727 Console (B) . . . . .	A-18
Remote Console Cable . . . . .	A-19
Cable to Modem for RSF . . . . .	A-19
 <b>Appendix B. Modem Setup . . . . .</b>	 B-1
Modems for 3745 Models 130 to 160 . . . . .	B-1
Setting Up . . . . .	B-1
Switch Settings for IBM Modems 5841, 5842, and 5853 . . . . .	B-2
Modems for the 3746 . . . . .	B-3
Setting the IBM 7855 Modem . . . . .	B-3
Setting the IBM 7857 Modem Connected to MPA Card (SYN) . . . . .	B-4
Setting the 7857 Modem Connected to COM1 (ASYN) . . . . .	B-5
Setting the 7857 Modem Connected to MPA Card on COM2 (ASYN) . . . . .	B-5
Setting the IBM 7858 Modem Connected to MPA Card (SYN) . . . . .	B-6
Setting the 7858 Modem Connected to COM1 (ASYN) . . . . .	B-6
Setting the 7858 Modem Connected to MPA Card on COM2 (ASYN) . . . . .	B-6
RSF Modems . . . . .	B-7
IBM 5858 Modem . . . . .	B-7
IBM 7855 Modem . . . . .	B-8
IBM 7857 Modem . . . . .	B-8
 <b>Appendix C. Configuration for a Two-Target Remote Workstation . . . . .</b>	 C-1
NCP Definitions . . . . .	C-2
VTAM Definitions . . . . .	C-2
Start List . . . . .	C-2
Logmode Table . . . . .	C-2
Switched Major Nodes . . . . .	C-3
DCAF Remote Workstation Configuration . . . . .	C-3
 <b>Appendix D. Bibliography . . . . .</b>	 D-1
Customer Documentation for the IBM 3745 (Models 210, 310, 410, 610, 21A, 31A, 41A, and 61A), and 3746 (Model 900) . . . . .	D-1
Additional Customer Documentation for the IBM 3745 Models 130, 150, 160, 170, and 17A . . . . .	D-7
 <b>List of Abbreviations . . . . .</b>	 X-1
 <b>Glossary . . . . .</b>	 X-3
 <b>Index . . . . .</b>	 X-7



## Figures

1-1.	DCAF Console Attachments	1-2
4-1.	Modem-Attached Remote Workstation	4-1
4-2.	NetView Link/Reporting Customization	4-3
4-3.	DCAF Customization	4-3
5-1.	APPN Remote Workstation	5-1
5-2.	DCAF Customization	5-3
6-1.	SNA-Attached Remote Workstation	6-1
6-2.	NetView Link/Reporting Customization	6-3
6-3.	DCAF Customization	6-4
7-1.	Types of TCP/IP Service LAN-Attached Remote Workstations	7-1
8-1.	APPC Service LAN-Attached Remote Workstation	8-1
8-2.	NetView Link/Reporting Customization	8-3
8-3.	DCAF Customization	8-4
9-1.	Telnet Workstation Configuration	9-1
10-1.	Service Processor (SP) Customization Panel	10-3
10-2.	Point-to-Point Protocol Configuration Panel	10-4
10-3.	Manage Passwords Panel	10-5
10-4.	Entering Customer and IBM Service Passwords	10-5
10-5.	Console Configurations for Java Panel	10-6
10-6.	Service Processor (SP) Customization Panel	10-7
10-7.	Service Processor Customization - Progress Panel	10-8
11-1.	Modem-Attached Remote Workstation Using Java Console	11-2
11-2.	LAN-Attached Remote Workstation Using Java Console	11-12
C-1.	A Two-Target Configuration	C-1

## Tables

4-1.	Identical Target and Controlling Parameters (APPN)	4-1
4-2.	Settings for Recommended Modems	4-4
4-3.	IBM Modems for Remote Workstations and Target Service Processors 6275, 3172, and 7585	4-5
5-1.	Identical Target and Controlling Parameters (APPN)	5-2
6-1.	Identical Target and Controlling Parameters (SNA)	6-2
8-1.	Identical Target and Controlling Parameters (APPC LAN)	8-2
D-1.	Customer Documentation for the 3745 Models x10 and x1A, and 3746 Model 900	D-1
D-2.	Additional Customer Documentation for the 3745 Models 1x0 and 17A	D-7



---

## Notices

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area.

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

IBM may have patents or pending patent applications covering subject matter in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing  
IBM Corporation  
North Castle Drive  
Armonk, NY 10504-1785  
U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

IBM World Trade Asia Corporation  
Licensing  
2-31 Roppongi 3-chome, Minato-ku  
Tokyo 106, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

This information is for planning purposes only. The information herein is subject to change before the products described become available.

This information is for planning purposes only. The information herein is subject to change before the products described become available.

---

## Electronic Emission Notices

### Federal Communications Commission (FCC) Statement

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

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. IBM is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

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

### Industry Canada Class A Emission Compliance Statement

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

### Avis de conformité aux normes d'Industrie Canada

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

### European Union (EU) Mark of Conformity Statement

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

This product has been tested and found to comply with the limits for Class A Information Technology Equipment according to CISPR 22/European Standard EN 55022. The limits for Class A equipment were derived for commercial and industrial environments to provide reasonable protection against interference with licensed communication equipment.

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

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

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

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

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

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

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

EN 50082-1 Hinweis:

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

Anmerkung:

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

## **Japanese Voluntary Control Council for Interference (VCCI) Statement**

This product is a Class A Information Technology Equipment and conforms to the standards set by the Voluntary Control Council for Interference by Technology Equipment (VCCI). In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

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

## **Korean Communications Statement**

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

### A급 기기(업무용)

이 기기는 업무용으로 전자파적합등록을 받은 기기이오니  
판매자 또는 이용자는 이점을 주의하시기 바라며, 만약  
구입하였을 때에는 구입한 곳에서 가정용으로 교환하시기  
바랍니다.

## Taiwanese Class A Warning Statement

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

## New Zealand Radiocommunications (Radio) Regulations

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

---

## Notice to UK Users

The IBM 3746 Model 900 and IBM 3746 Model 950 are manufactured according to the International Safety Standard IEC950 and, as such, are approved in the UK under the General Approval number NS/G/1234/J/100003.

The Active Remote Couplers (ARCs) and the X.21 Interface, housed within the 3746 Model 900 and 3746 Model 950, are approved separately, each having their own independent approval number. These interface adapters, supplied by IBM, do not contain excessive voltages. An excessive voltage is one which exceeds 42.4 V peak ac or 60 V dc. They interface with the 3746 Model 900 or 3746 Model 950, using Safe Extra Low Voltages only.

In order to maintain the 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.

---

## Safety

This product meets IBM safety standards.

For more information, see the following manual: *Safety Information*, GA33-0400.

---

## Trademarks

The following terms are trademarks of International Business Machines Corporation in the United States, or other countries, or both:

AIX	OS/2
APPN	PS/2
AT	RETAIN
IBM	VTAM
Nways	XT

NetView, Tivoli, and TME are trademarks of Tivoli Systems, Inc. in the United States, or other countries, or both.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Sun Microsystems, Inc. in the United States and/or other countries.

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

Pentium is a registered trademark of Intel Corporation in the U.S. and other countries.

UNIX is a registered trademark of the Open Group in the United States and other countries.

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





---

## About this Guide

This guide includes information on remote access programs that enable remote user workstations to access and control the service processor of a 3745/3746-900. Information on remote access programs includes DCAF<sup>1</sup>, Java™ Console, and Telnet.

Procedures are given on configuring remote workstation access to a service processor across different network environments:

- Using Java Console to access the service processor. With IP protocol, Java Console can be run either as a Web-based program, or as a Java program.
- Installing and using DCAF to access the service processor for modem, APPN®/HPR, SNA, LAN-TCP/IP, and LAN-APPC links.
- Using Telnet to access the service processor or network node processor for Internet Protocol (IP) communications.

Further information includes:

- Customizing Communications Server for OS/2 Warp®<sup>2</sup> ).
- Installing local, alternate, and remote Maintenance and Operating Subsystem (MOSS) consoles for the 3745 Models 170 to 610.
- Modem settings.

---

## Conventions Used in This Guide

When used in this guide, the term:

- |                      |  |
|----------------------|--|
| <b>3745</b>          | Refers to the IBM 3745 Models 130 to 170 and 210 to 610 with 3746 Expansion Unit Models A11, A12, L13, L14, and L15. |
| <b>3745 Models A</b> | Refers to the IBM 3745 Models 17A, 21A, 31A, 41A, and 61A.   |
| <b>3746-900</b>      | Refers to the IBM 3746 Nways® Multiprotocol Model 900.   |

---

<sup>1</sup> Tivoli Management Environment (TME™) 10 Remote Control contains the microcode for the Distributed Console Access Facility (DCAF) program.

<sup>2</sup> CS/2 procedures in this guide are the same for CM/2 unless otherwise indicated.

---

## Who Should Use This Guide

This guide is intended for:

- Network engineers
- System programmers
- System service personnel

An understanding of teleprocessing, modem operations, APPN/HPR, and IP networking would be useful in reading this guide. Information is accessible online (help, guides and other materials) for information on:

- MOSS-E
- Controller Configuration and Management (CCM)
- APPN/HPR and IP control point functions
- DCAF
- TCP/IP

For more information, see the publications listed in Appendix D, “Bibliography” on page D-1.

---

## How This Guide Is Organized

This guide is divided into the following sections:

### **Chapter 1, “Introduction to Remote Access Programs” to Chapter 9, “Telnet-attached Remote Workstation”**

Describes how to configure remote workstations in DCAF to monitor and control a service processor running MOSS-E. Example configurations are given of five types of link (modem, APPN, SNA, TCP/IP, and APPC) via DCAF to a target service processor.

Also describes how to configure a remote workstation in Telnet with access to the Network Node Processor (NNP) for IP communications.

### **Chapter 10, “Java Console Remote Access” to Chapter 12, “Installing the Java Console Program”**

Describes how to configure remote workstations using the web-based or Java program-based Java Console. Example configurations are given of two types of link (switched-line, and service ring LAN) via Java Console to the target service processor.

### **Appendix A, “Setting Up Local, Alternate, or Remote Consoles” on page A-1**

Describes how to configure the following equipment as local, alternate, or remote MOSS consoles attached to 3745:

- 3151 and 3153 Display Station.
- 3163 and IBM 3161 ASCII Display Station.
- Personal System/2 (Models 30 286, 50, 50Z, 60, 70, or 80).
- Personal Computer (PC), AT®, and XT® Model 286.

### **Appendix B, “Modem Setup” on page B-1**

Describes the required settings for IBM and RSF modems.

### **Appendix C, “Configuration for a Two-Target Remote Workstation” on page C-1**

Gives a scenario for configuring a two-target workstation.

A Bibliography, List of Abbreviations, Glossary, and Index follows at the end of this guide.

---

## What Is New in This Edition

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

- Ability to define the user login names to connect the service processor by means of a Point-to-Point Protocol (PPP) session over the public switching network (PSN).
- Ability to use the Java Console feature to establish up to four simultaneous connections to the service processor and the network node processor.

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

---

## Where to Find More Information

For more information, see the Bibliography on page D-1 and the additional publications listed below:

- *DCAF: Installation and Configuration Guide*, SH19-4068.
- IBM Redbooks:
  - *TCP/IP Tutorial and Technical Overview*, GG24-3376
  - *TCP/IP Implementation in an OS/2 Warp Environment*, SG24-4730.

For Operating System (OS/2®), consult the documents delivered as part of the OS/2® product package.

For the 3151, 3153, 3161, and 3163 display stations, refer to the terminal documentation. The following book should not normally be needed for setting up a PS/2® as a MOSS console; it does however contain supplementary information that you may find useful:

- *IBM Operating System/2 Extended Edition: System Administrator's Guide for Communications*, PN 90X7908.

## Additional Information Available on the Web

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

<http://www.ibm.com/networking>

---

## Year 2000 Statement

This product is Year 2000 ready. When used in accordance with its associated documentation, it is capable of correctly processing, providing, and/or receiving date data within and between the 20th and 21st centuries, provided all other products (for example, software, hardware, and firmware) used with the product properly exchange accurate date data with it.

For more information, refer to:

<http://www.ibm.com/year2000>

---

## Chapter 1. Introduction to Remote Access Programs

IBM Personal System/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 DCAF<sup>1</sup> and Java™ Console. 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 panel 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 1 to Chapter 12 of this guide include:

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

---

### Remote Workstations Using Java Console

Java Console 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. Java Console provides the same tools for controlling remote service processors as DCAF. While DCAF is more suitable for SNA-based networking, Java Console takes advantage of the flexibility in IP networking.

Java Console can be run by the controlling workstation on any platform (OS/2, Windows® 95, Windows 98, Windows NT®, Macintosh, AIX®, and UNIX®).

For more information on Java Console, see Chapter 10, “Java Console Remote Access” on page 10-1.

---

### Remote Workstations Using DCAF

Figure 1-1 on page 1-2 illustrates five types of remote workstation access to the service processor through using DCAF.

---

<sup>1</sup> 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.

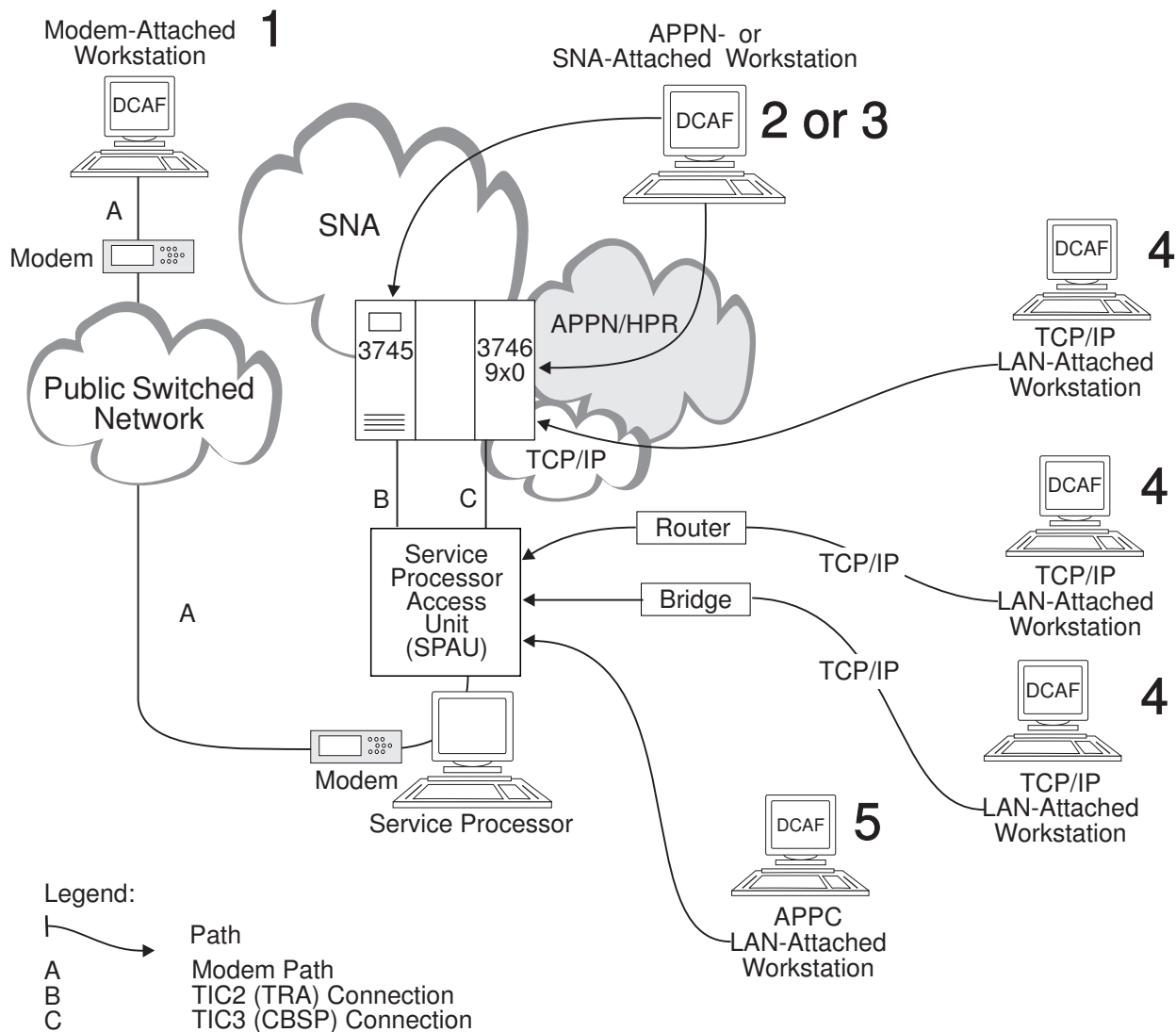


Figure 1-1. DCAF Console Attachments

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 4, “Modem-Attached Remote Workstation.”

**2**, **APPN-attached** console communicating with the service processor via an LU 6.2 session over the network backbone. For more information, see Chapter 5, “APPN-Attached Remote Workstation.”

**3**, **SNA-attached** console communicating with the service processor via an LU 6.2 session over the network backbone. For more information, see Chapter 6, “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 7, “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 8, “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 C, “Configuration for a Two-Target Remote Workstation.” Each target uses a LAN, a Modem, and SNA to link to the remote workstation.

**Notes:**


1. In the parts of this guide that refer to the 3745 Models A, “console” means a “workstation.”
2. 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,   pressed together.  
If a service processor is not working, check if it is being controlled by a remote workstation.
3. A service processor can only be controlled by one remote workstation at a time.
4. A remote workstation can be configured to have access to more than one service processor.
5. DCAF is a separate product from the IBM Communication Controllers. Installing DCAF on a PS/2® (or equivalent) workstation is the user’s responsibility. See Chapter 2, “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 in the following chapters.

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  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.

2. 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 *3745/3746 Planning Series: Management Planning*, GA27-4239 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   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 later 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 later, or CS/2 Version 4.1 (with OS/2 Warp, MPTS, and TCP/IP).
- MPTS Version 2.2 or later for LAN-attached workstations.
- Transmission Control Protocol/Internet Protocol (TCP/IP) Version 2.0 or later for TCP/IP-attached workstations.

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

- For LAN-attached and SNA-attached consoles that connect to SNA networks via a LAN, Network Transport Services/2 (NTS/2).
- For access to a service processor via an SNA or APPN network backbone:
  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 features:
    - Configuration Support B plus 8Q0800 Programming Request for Price Quotation (PRPQ).
    - Configuration Support C (APPN feature).



2. For 3720 and 3745 Communication Controllers on the network backbone, NCP V5 R2, operating under Virtual Telecommunications Access Method (VTAM®) V3 R2.
3. For 3725 Communication Controllers on the network backbone, NCP V4 R3, operating under VTAM V3 R2.

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

## Hardware Requirements and Recommendations

For remote workstations, IBM recommends using the following equipment:

- PS/2 workstations (or equivalent) with at least a 80386 microprocessor and Video Graphics Adapter (VGA) display such as an IBM 8515 color display. A Pentium® processor-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).
- A QWERTY keyboard. If this type of keyboard is unavailable, then the QWERTY equivalent keys must be used. For example, on an AZERTY, you must use the "q" key when you want to type an "a." To find the equivalent keys on IBM non-QWERTY keyboards, see the 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 *3745/3746 Planning Series: Management Planning*.



---

## Chapter 2. Program Support for Remote Workstation Access

Program support for remote workstation access via DCAF is described in this chapter. For information on program support for a remote workstation via Java Console, see "Overview of Java Console" on page 10-1.

---

### Required Program Support for DCAF

First collect the worksheets from the *3745/3746 Planning Series: Management Planning*, GA27-4239, 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 1-4).

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 *3745/3746 Planning Series: Management Planning* worksheets.

### Installing DCAF

Support for DCAF is provided by microcode level F12720 and higher. 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.

#### Attention

The DCAF secure option, once selected on the service processor, is permanent. Reenabling 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" on page 2-2.

---

## 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.

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

## Customizing a CS/2 Remote Workstation

For the different types of workstation connections, see the following:

- Modem-attached, see Chapter 4, “Modem-Attached Remote Workstation.”
- APPN-attached, see Chapter 5, “APPN-Attached Remote Workstation.”
- SNA-attached, see Chapter 6, “SNA-Attached Remote Workstation.”
- APPC LAN-attached, see Chapter 8, “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 panel apply to LAN- (APPC-type), SNA-, and APPN- (via a LAN) attached consoles.

<i>Adapter number</i>	<b>0</b>
<i>Load DLC</i>	<b>Yes</b>
<i>Maximum number of link stations</i>	<b>4</b>
<i>Percent of incoming calls</i>	<b>50</b>
<i>Free unused link</i>	<b>No</b>
<i>Congestion tolerance</i>	<b>80</b>
<i>Maximum RU size</i>	<b>2024</b>
<i>Send Window Count</i>	<b>4</b>
<i>Receive Window Count</i>	<b>4</b>
<i>C&amp;SM LAN ID</i>	(Customer defined)
<i>Send alert for beaconing</i>	<b>Yes</b>

### Create or Change the SDLC DLC Adapter Profile

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

<i>Adapter number</i>	<b>0</b>
<i>Load DLC</i>	<b>Yes</b>
<i>Free unused link</i>	<b>No</b>
<i>Maximum RU size</i>	<b>4096</b>

<i>Send Window Count</i>	<b>4</b>
<i>Receive Window Count</i>	<b>4</b>
<i>Line type</i>	<b>Switched</b>
<i>Link station role</i>	<b>Primary</b>
<i>Line mode</i>	<b>Constant request to send</b>
<i>NRZI</i>	<b>Yes</b>
<i>Modem rate</i>	<b>Full speed</b>
<i>Data set ready timeout</i>	<b>5</b>
<i>XID repoll count</i>	<b>10</b>
<i>Non-XID repoll count</i>	<b>7</b>

---

## 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 compatible modems, see “Configuring CS/2 Remote Workstations” on page 4-4.



---

## Chapter 3. 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.

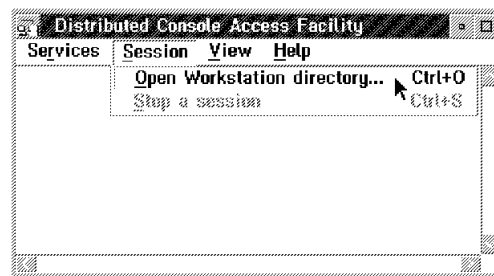
### Starting a Session

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 in "DCAF Logon Password and Service Processor Security" on page 1-3). 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 1-5).

**Step 7.** Click **Start a session** from the **Session** pull-down menu.

**Step 8.** Maximize the panel to see the target service processor panel.

**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 panel action bar, click **Stop a session**.

#### Attention

Do not close the session by deselecting **Enable DCAF Link/Operations** in the **Service Processor (SP) Customization** panel of the MOSS-E.

### From the Target Service Processor

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

  pressed together.

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



---

## Chapter 4. Modem-Attached Remote Workstation

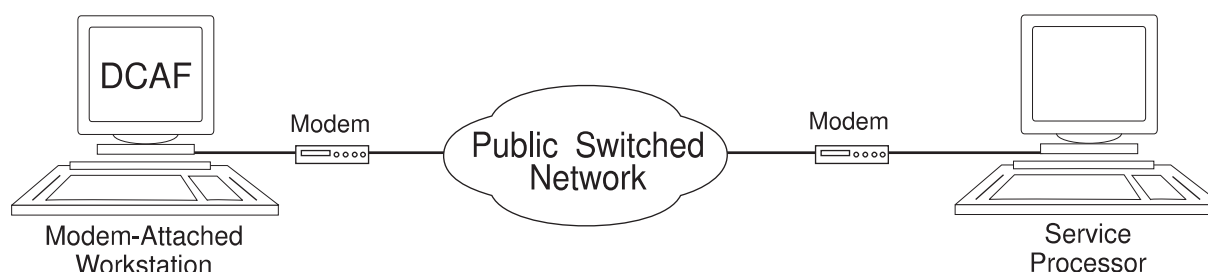


Figure 4-1. Modem-Attached Remote Workstation

This chapter describes how to configure a DCAF session for controlling the service processor (see Figure 4-1). If you have more than one target service processor, you must respect the parameter value matching rules given in Appendix C, "Configuration for a Two-Target Remote Workstation."

---

### Configuring a Target Service Processor

Use the worksheets in the *3745/3746 Planning Series: Management Planning*, GA27-4239 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 4-1 gives the sets of MOSS-E parameters that must have the same value in both the remote workstation and the target service processor.

Table 4-1. Identical Target and Controlling Parameters (APPN)	
Service Processor	Remote Workstation
<b>Local Node Network ID</b> (Figure 4-2 on page 4-3)	<b>Partner network ID</b> (Step 19 in the configuration procedure)
<b>SDLC LU name</b> (Figure 4-3 on page 4-3)	<b>Partner node name</b> (Step 19 in the configuration procedure) <b>Partner LU alias</b> (Step 19 in the configuration procedure)

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

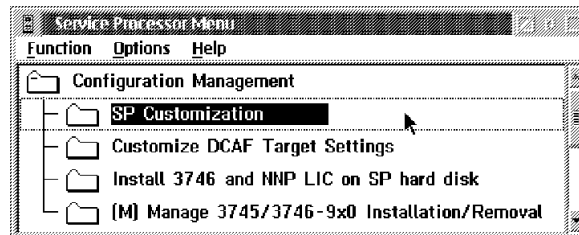
## Configuring the Service Processor in MOSS-E

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

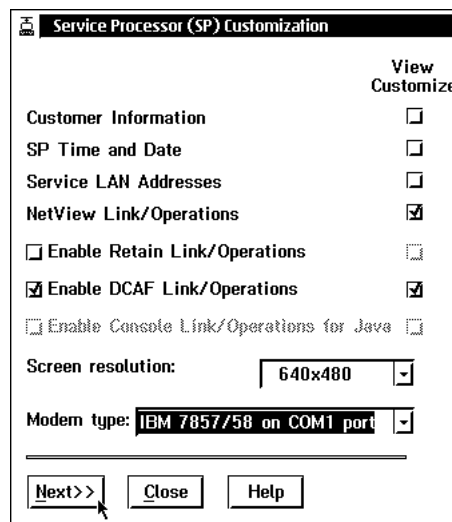
**Step 1.** In MOSS-E, double-click the **Service Processor** object.

**Step 2.** Click **Configuration Management**.

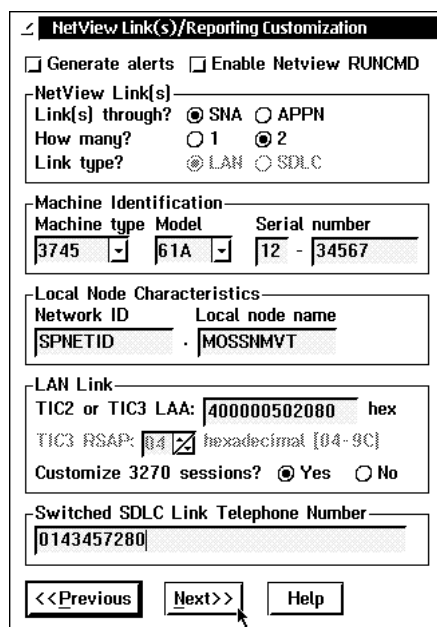
**Step 3.** Double-click **SP Customization**.



**Step 4.** Select **Enable DCAF Link/Operations**, **View Customize** in the parallel column, and **NetView Link/Operations**. Check that your modem is selected in the **Modem type** field and click **Next**.



**Step 5.** Record the values in the **Network ID** field (see Figure 4-2 and see Table 4-1 on page 4-1) and click **Next** and **Next** again.



**NetView Link(s)/Reporting Customization**

☐ Generate alerts ☐ Enable Netview RUNCMD

NetView Link(s)

Link(s) through? ☒ SNA ☐ APPN

How many? ☐ 1 ☒ 2

Link type? ☒ LAN ☐ SDLC

**Machine Identification**

Machine type	Model	Serial number
3745	61A	12 - 34567

**Local Node Characteristics**

Network ID	Local node name
SPNETID	MOSSNMVT

**LAN Link**

TIC2 or TIC3 LAA: 400000502080 hex

TIC3 RSAP: 04 ☒ hexadecimal [04-9C]

Customize 3270 sessions? ☒ Yes ☐ No

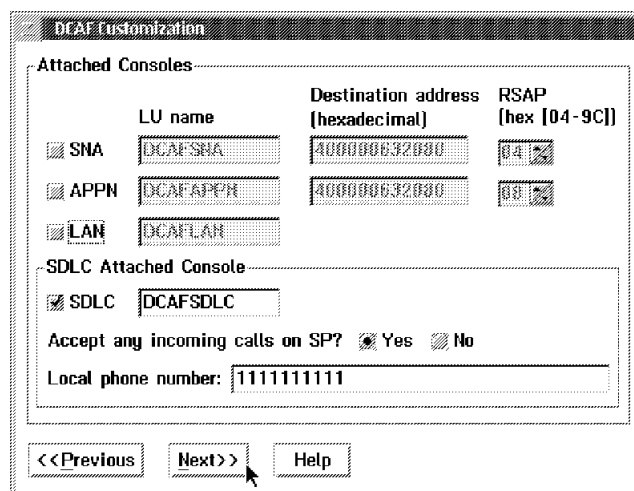
**Switched SDLC Link Telephone Number**

0143457280

<<Previous Next>> Help

Figure 4-2. NetView Link/Reporting Customization

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



**DCAF Customization**

**Attached Consoles**

	LU name	Destination address [hexadecimal]	RSAP [hex [04-9C]]
<input checked="" type="checkbox"/> SNA	DCAFSNA	400000632080	04 <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> APPN	DCAFAPPN	400000632080	03 <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> LAN	DCAFLAN		

**SDLC Attached Console**

☒ SDLC DCAFS DLC

Accept any incoming calls on SP? ☒ Yes ☐ No

Local phone number: 1111111111

<<Previous Next>> Help

Figure 4-3. 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.** Shutdown and restart the service processor.

**Step 10.** Go to "Remote Workstation Modems" on page 4-4.

---

## Remote Workstation Modems

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 B, “Modem Setup” on page B-1 have been optimized for DCAF.

**Note:** 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 4-2, this guide supplies a modem setup procedure in Appendix B, “Modem Setup” on page B-1.

<i>Table 4-2. Settings for Recommended Modems</i>	
<b>Modem and Mode</b>	<b>Page Number</b>
<b>7857</b> ASYNC on COM1	B-5
<b>7858</b> ASYNC on COM1	B-6
<b>Hayes</b> 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 4-3 gives the page number of the CS/2 (or CM/2) configuration procedure that corresponds to your service processor (6275, 3172, or 7585).

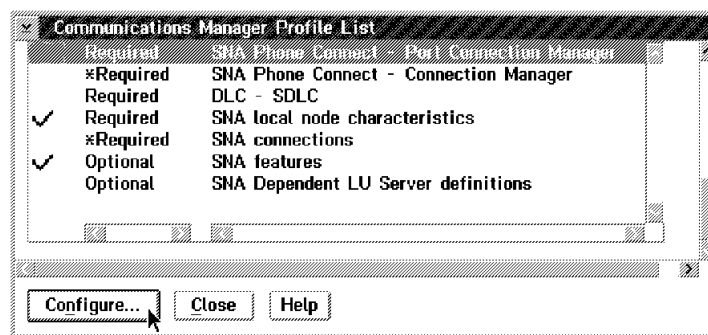
1. In the table, find the **row** with the service processor modem, connection type and mode.
2. Find the **column** with the remote workstation modem, connection type and mode.
3. The intersection of the **row** and **column** gives the page number of the procedure that you need to configure in CS/2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

## Procedures for Service Processors 6275, 3172, 7585

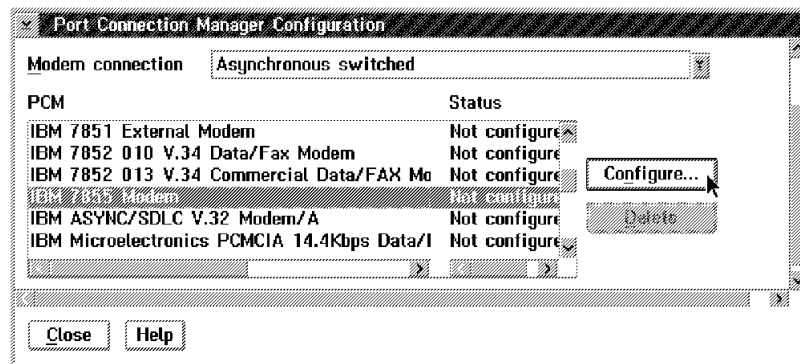
<i>Table 4-3. IBM Modems for Remote Workstations and Target Service Processors 6275, 3172, and 7585</i>		
Connection Type and Mode	Modem Type	Remote Workstation Modem Type
		7855, 7857/7858 <sup>1</sup> , or Hayes Optima Modem <sup>2</sup>
COM1	7855	"7855 Asynchronous Modem to Service Processor 6275, 3172, and 7585" on page 4-6
	7857/7858 <sup>3</sup>	"7857 Asynchronous Modem to Service Processor 6275, 3172, and 7585" on page 4-11
	Hayes <sup>3</sup>	"Hayes Asynchronous Modem to Service Processor 6275, 3172, and 7585" on page 4-16
<b>Notes:</b>		
1. The procedure for modem 7857 is the same as for modem 7858.		
2. AT® workstation-compatible modem, serial asynchronous/autosynchronous, via port connection.		
3. For increased data transfer speed, IBM recommends the IBM 7858 modem or a Hayes Optima-compatible modem.		

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

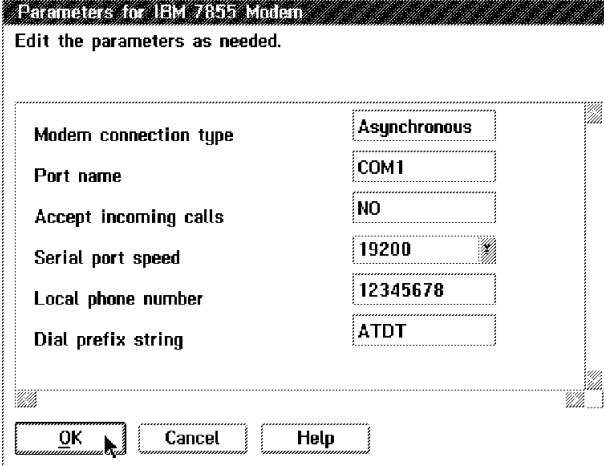
- Step 1.** Double-click the **Communications Server** icon on your desktop.
- Step 2.** Click **Setup**.
- Step 3.** Under **Directories**, double-click the CMLIB directory and double-click **I7855ASY** to display the configuration file.
- Step 4.** Click **OK**. A message prompts you to select the 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**.



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



**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 IBM 7855 Modem  
Edit the parameters as needed.

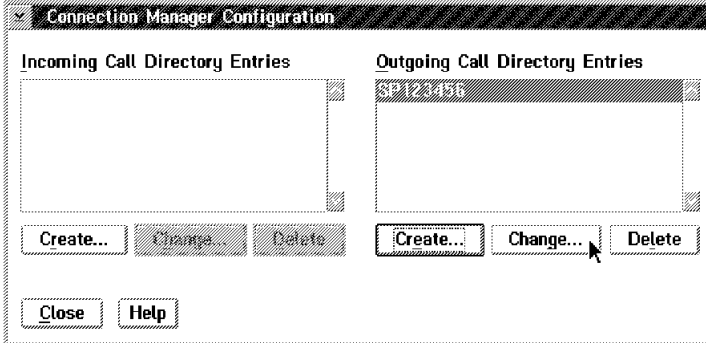
Modem connection type	Asynchronous
Port name	COM1
Accept incoming calls	NO
Serial port speed	19200
Local phone number	12345678
Dial prefix string	ATDT

OK Cancel Help

**Step 9.** The Communications Manager Profile List panel reappears. Select **SNA Phone Connect - Connection Manager** and click **Configure**.

**Step 10.** Select **SP123456** and click **Change**.

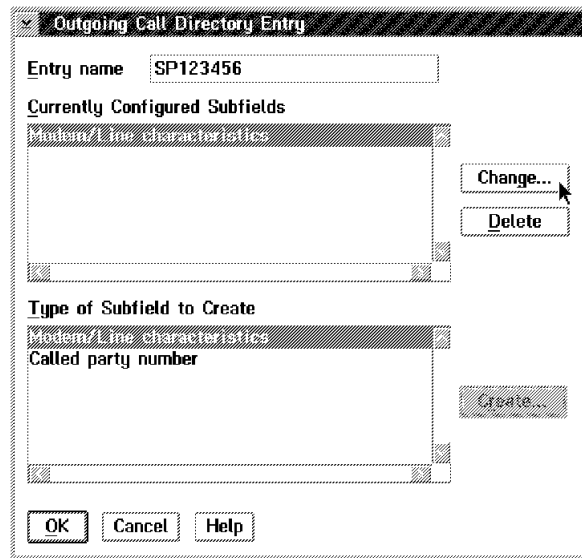
**Note:** The directory entry file contains information on the target service processor that you are dialing. You can use **SP123456** and rename it for your own purposes. If you add a new workstation, you must create a new name.



Connection Manager Configuration

Incoming Call Directory Entries	Outgoing Call Directory Entries
	SP123456
Create... Change... Delete	Create... Change... Delete
Close Help	

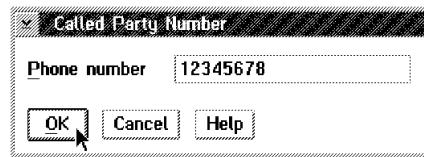
**Step 11.** Select **Modem/Line characteristics** and click **Change**.



**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**.

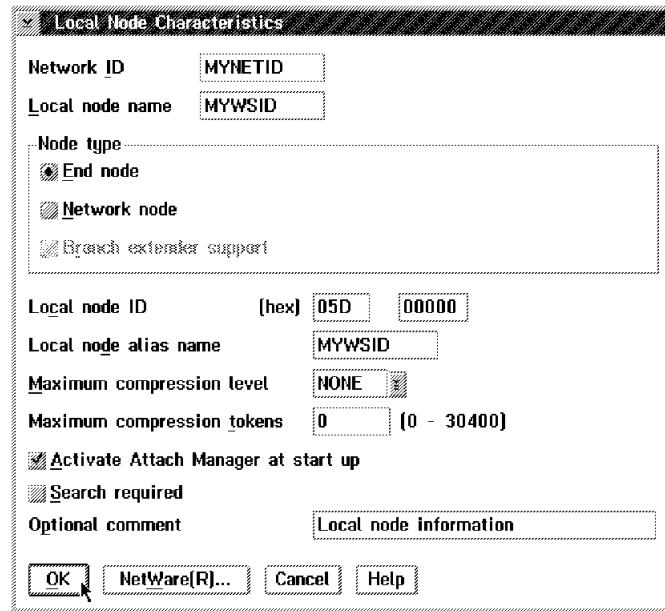
**Step 14.** Enter the phone number of the service processor modem and click **OK**, then **OK** again on the subsequent panel.



**Step 15.** The Communications Manager Profile List panel reappears. 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**.

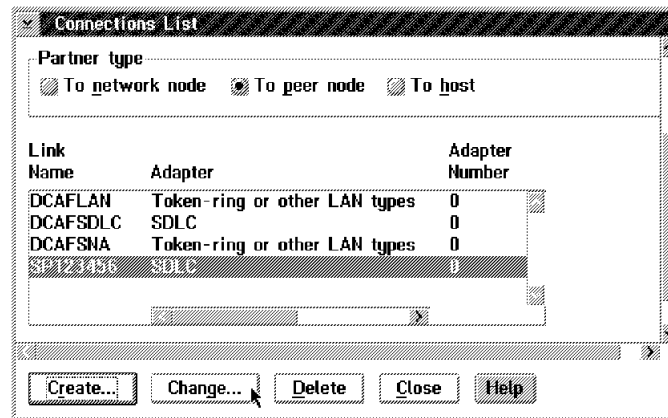


The 'Local Node Characteristics' dialog box contains the following fields and options:

- Network ID:** MYNETID
- Local node name:** MYWSID
- Node type:**
  - ☒ End node
  - ☐ Network node
  - ☐ Branch extender support
- Local node ID (hex):** 05D 00000
- Local node alias name:** MYWSID
- Maximum compression level:** NONE
- Maximum compression tokens:** 0 (0 - 30400)
- ☒ Activate Attach Manager at start up
- ☐ Search required
- Optional comment:** Local node information
- Buttons:** OK, NetWare[R]..., Cancel, Help

**Step 17.** The Communications Manager Profile List panel reappears. Select **SNA connections**, click **Configure** and **Continue**.

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



The 'Connections List' dialog box contains the following elements:

- Partner type:**
  - ☐ To network node
  - ☒ To peer node
  - ☐ To host
- Table:**

Link Name	Adapter	Adapter Number
DCAFLAN	Token-ring or other LAN types	0
DCAFSDLC	SDLC	0
DCAFSNA	Token-ring or other LAN types	0
SP123456	SDLC	0
- Buttons:** Create..., Change..., Delete, Close, Help

**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 4-1 on page 4-1). Select the service processor directory name in the **Outgoing call directory entry** field.

**Connection to a Peer Node**

Link name: SP123456 ☒ Activate at startup

Adjacent node ID (hex):

Partner LU definitions

Partner network ID: SPNETID Define Partner LUs...

Partner node name: DCAFS DLC

Secondary station address (hex): 01 (01-FE)

SNA Phone Connect parameters

Connection type: Autodial

Permanent connection name: DCAFS MOSS-E

Outgoing call directory entry: SP123456

To provide unique link protocol parameters that are different than those specified in the DLC adapter profile, select Override...

OK Additional parameters... Cancel Help

**Step 20.** Click **OK**.

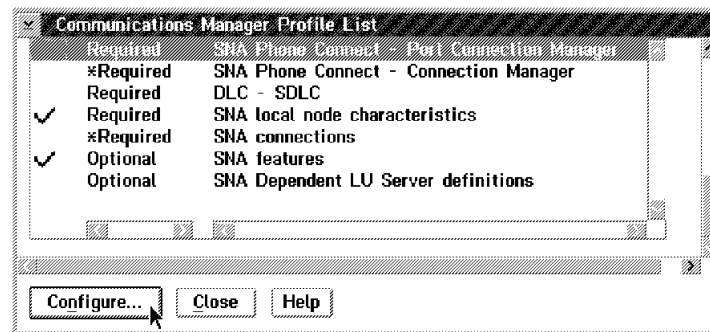
**Step 21.** Close the subsequent panels until you exit CS/2.

**Step 22.** See “Configuring DCAF for a Modem” on page 4-21 for installing a target service processor.

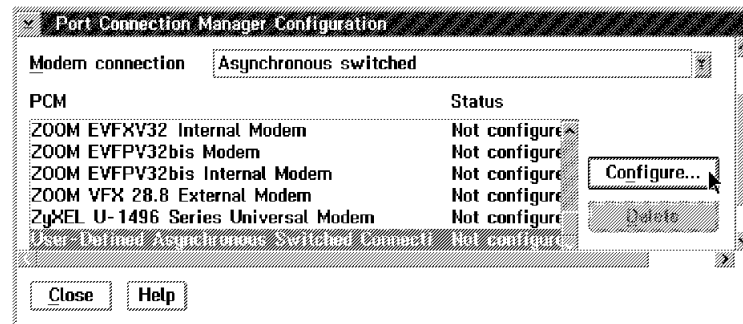
## 7857 Asynchronous Modem to Service Processor 6275, 3172, and 7585

The following procedure uses configuration file I7857ASY.

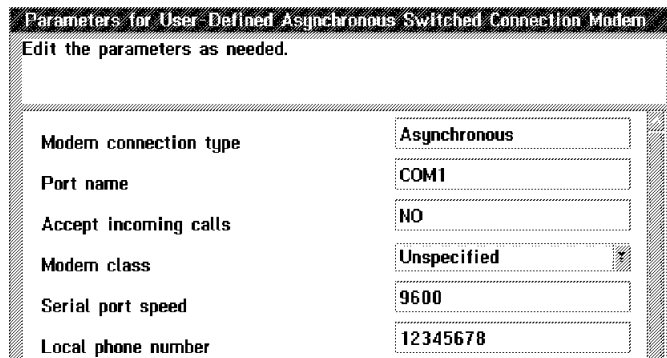
- Step 1.** Double-click the **Communications Server** icon on your desktop.
- Step 2.** Click **Setup**.
- Step 3.** Under **Directories**, double-click the CMLIB directory and double-click **I7857ASY** to display the configuration file.
- Step 4.** Click **OK**. A message prompts you to select the 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**.



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



**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**.



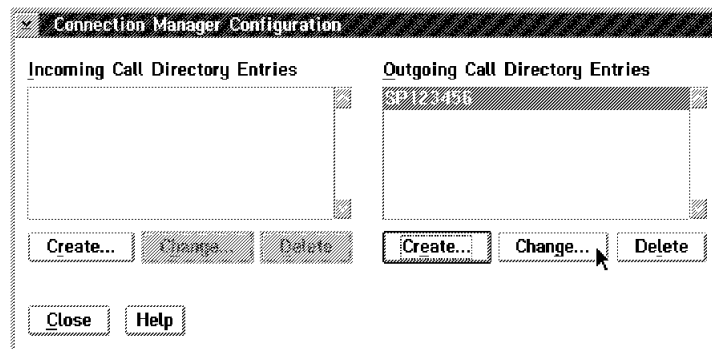
Parameters for User Defined Asynchronous Switched Connection Modem  
Edit the parameters as needed.

Modem connection type	Asynchronous
Port name	COM1
Accept incoming calls	NO
Modem 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...**

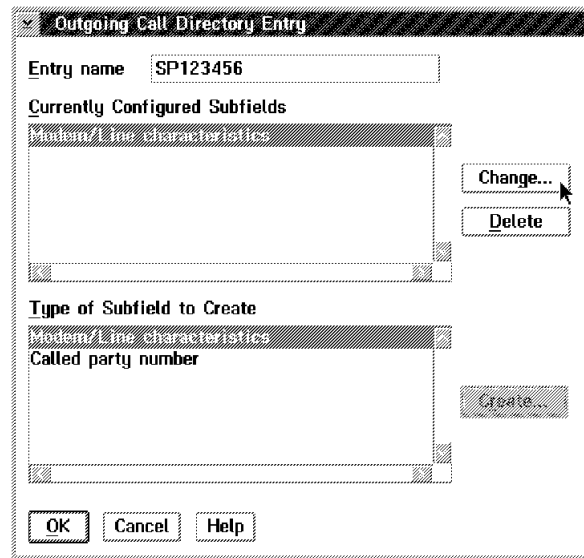
**Note:** The directory entry file contains information on the target service processor that you are dialing. You can use **SP123456** and rename it for your own purposes. If you add a new workstation, you must create a new name.



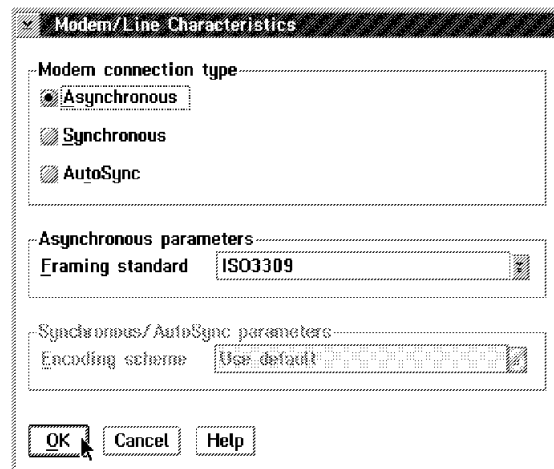
Connection Manager Configuration

Incoming Call Directory Entries	Outgoing Call Directory Entries
	SP123456
Create... Change... Delete	Create... Change... Delete
Close Help	

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

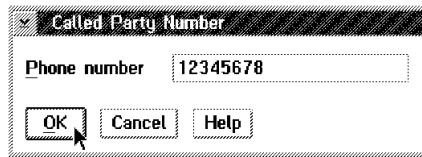


**Step 12.** Select **Asynchronous, ISO3309** as the framing standard and click **OK**.



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

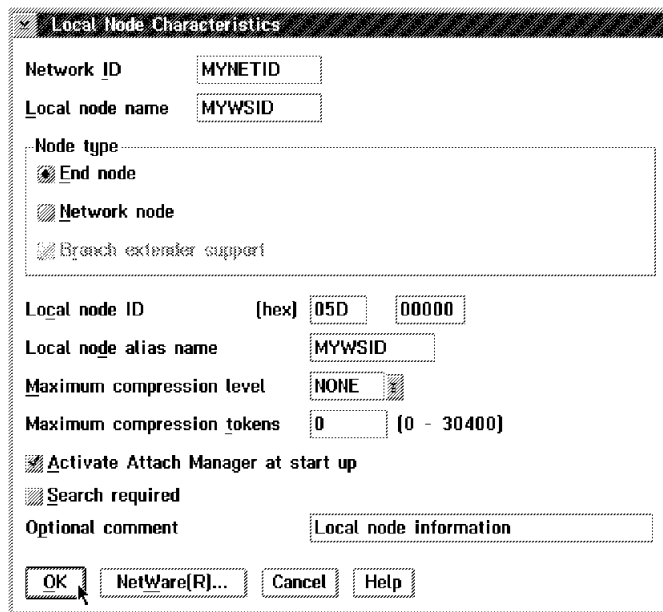
**Step 14.** Enter the phone number of the service processor modem and click **OK**, then **OK** again on the subsequent panel.



A dialog box titled "Called Party Number" with a "Phone number" field containing "12345678". At the bottom are "OK", "Cancel", and "Help" buttons. A mouse cursor is pointing at the "OK" button.

**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**.



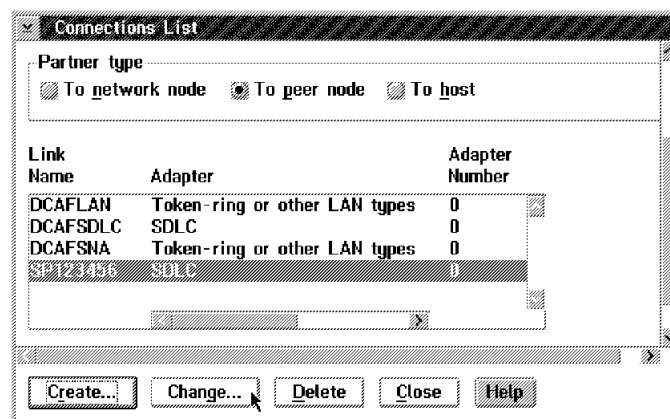
A dialog box titled "Local Node Characteristics" with the following fields and options:

- Network ID:** MYNETID
- Local node name:** MYWSID
- Node type:**
  - ☒ End node
  - ☐ Network node
  - ☐ Branch extender support
- Local node ID:** [hex] 05D 00000
- Local node alias name:** MYWSID
- Maximum compression level:** NONE
- Maximum compression tokens:** 0 (0 - 30400)
- ☒ Activate Attach Manager at start up
- ☐ Search required
- Optional comment:** Local node information

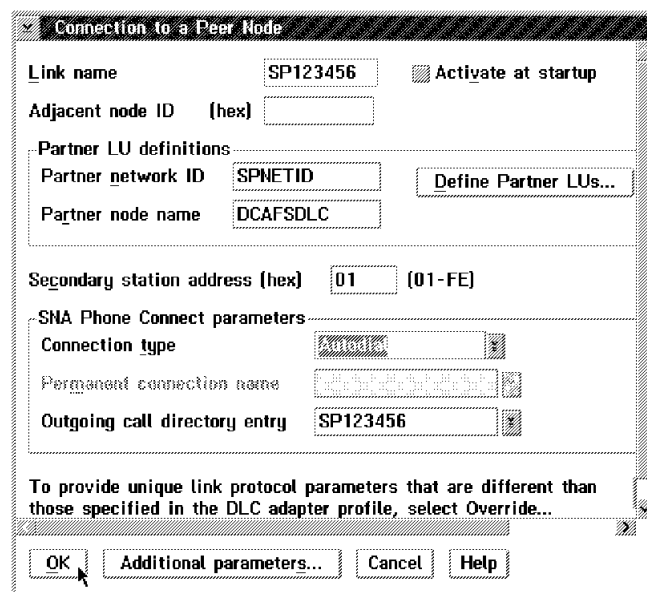
At the bottom are "OK", "NetWare[R]...", "Cancel", and "Help" buttons. A mouse cursor is pointing at the "OK" button.

**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**.



**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 4-1 on page 4-1). Select the service processor directory name in the **Outgoing call directory entry** field.



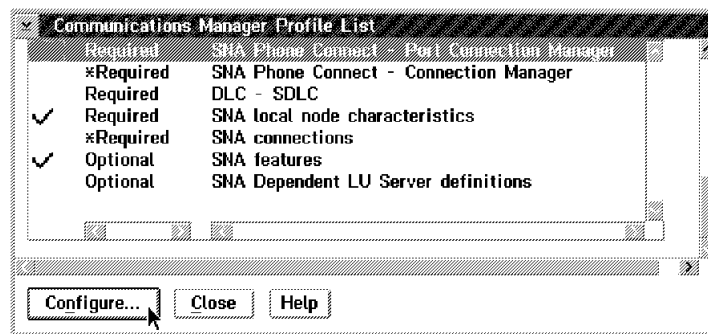
**Step 20.** Click **OK**.

**Step 21.** Close the subsequent panels until you exit CS/2.

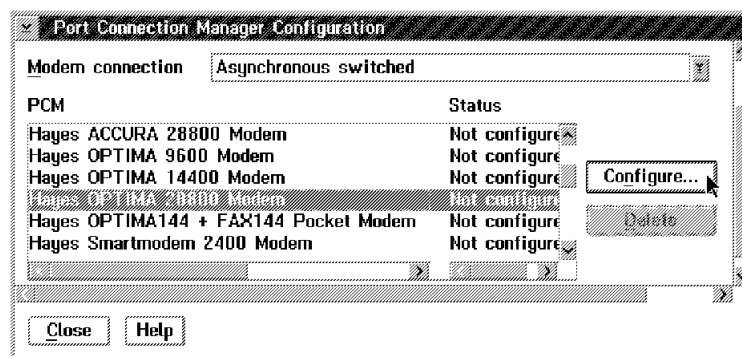
**Step 22.** See “Configuring DCAF for a Modem” on page 4-21 for installing a target service processor.

## 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**.

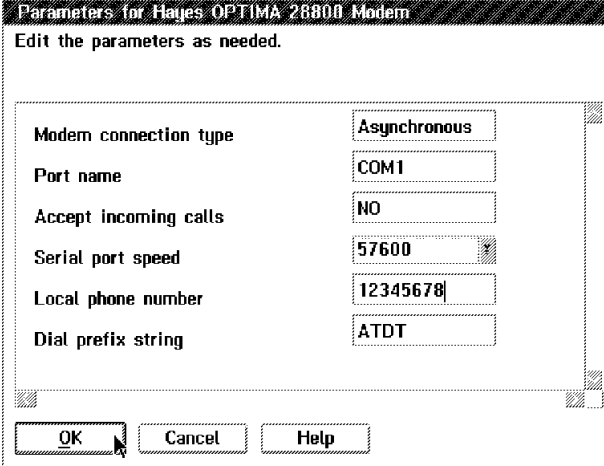


- Step 7.** Select **Asynchronous switched**, a Hayes modem type and click **Configure**.





**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 Hayes OPTIMA 28800 Modem  
Edit the parameters as needed.

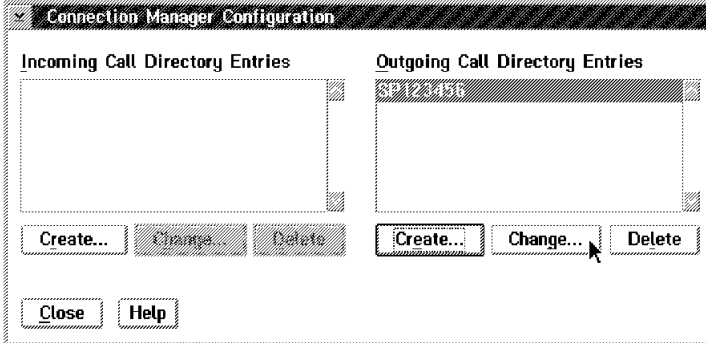
Modem connection type	Asynchronous
Port name	COM1
Accept incoming calls	NO
Serial port speed	57600
Local phone number	12345678
Dial prefix string	ATDT

OK Cancel Help

**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

<b>Incoming Call Directory Entries</b>	<b>Outgoing Call Directory Entries</b>
	SP123456
Create... Change... Delete	Create... Change... Delete
Close Help	

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

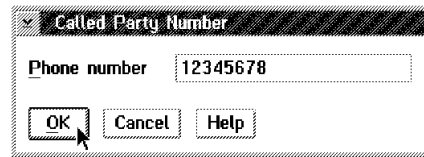
The screenshot shows the 'Outgoing Call Directory Entry' dialog box. At the top, the title bar reads 'Outgoing Call Directory Entry'. Below the title bar, there is a text field labeled 'Entry name' containing the text 'SP123456'. Underneath this is a section titled 'Currently Configured Subfields' which contains a list box with 'Modem/Line characteristics' selected. To the right of this list box are two buttons: 'Change...' and 'Delete'. Below the 'Currently Configured Subfields' section is another section titled 'Type of Subfield to Create' which contains a list box with 'Modem/Line characteristics' and 'Called party number' listed. To the right of this list box is a 'Create...' button. At the bottom of the dialog box are three buttons: 'OK', 'Cancel', and 'Help'.

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

The screenshot shows the 'Modem/Line Characteristics' dialog box. The title bar reads 'Modem/Line Characteristics'. Inside the dialog, there is a section titled 'Modem connection type' with three radio button options: 'Asynchronous' (which is selected), 'Synchronous', and 'AutoSync'. Below this is a section titled 'Asynchronous parameters' which contains a text field labeled 'Framing standard' with the value 'ISO3309' and a dropdown arrow. Below that is a section titled 'Synchronous/ AutoSync parameters' which contains a text field labeled 'Encoding scheme' with the value 'Use default' and a dropdown arrow. At the bottom of the dialog box are three buttons: 'OK', 'Cancel', and 'Help'.

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

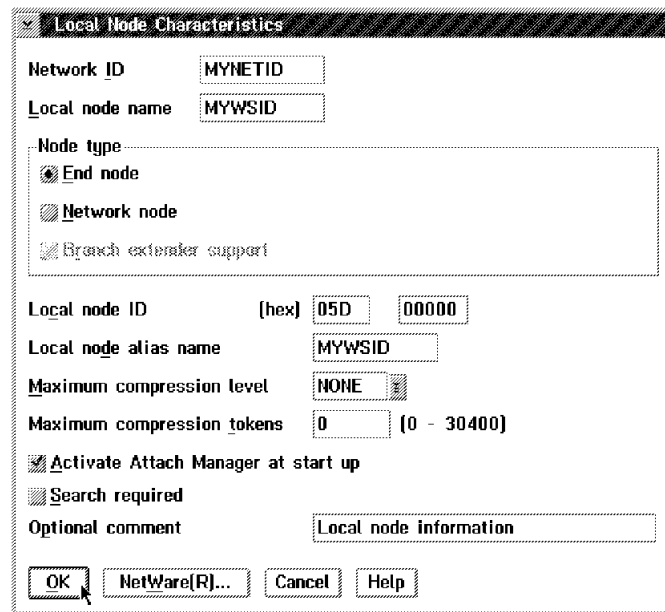
**Step 14.** Enter the phone number of the service processor modem and click **OK**, then **OK** again on the subsequent panel.



A dialog box titled "Called Party Number" with a "Phone number" text field containing "12345678". At the bottom are three buttons: "OK", "Cancel", and "Help". A mouse cursor is pointing at the "OK" button.

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

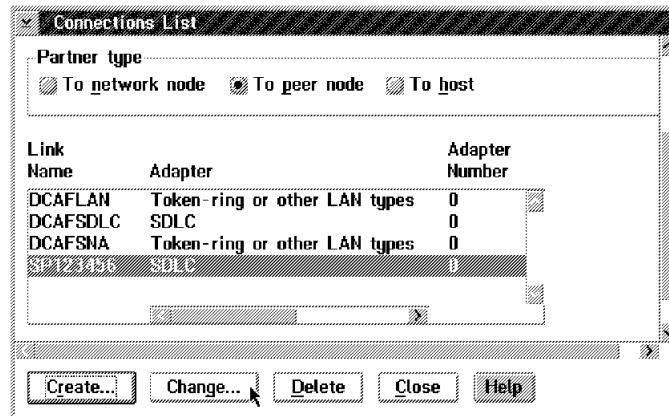
**Step 16.** Modify the **Network ID** and **Local node name** fields for your remote workstation and click **OK**.



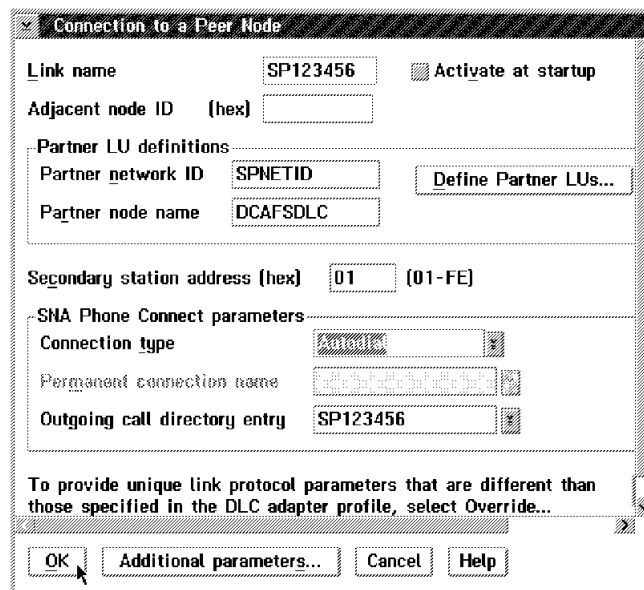
A dialog box titled "Local Node Characteristics" with several fields and options. The "Network ID" field contains "MYNETID". The "Local node name" field contains "MYWSID". Under "Node type", there are three radio buttons: "End node" (selected), "Network node", and "Branch extender support". Below these are fields for "Local node ID" (with a "[hex]" label) containing "05D" and "00000", "Local node alias name" containing "MYWSID", "Maximum compression level" set to "NONE", and "Maximum compression tokens" set to "0" with a range "(0 - 30400)". There are two checked checkboxes: "Activate Attach Manager at start up" and "Search required". An "Optional comment" field contains "Local node information". At the bottom are four buttons: "OK", "NetWare[R]...", "Cancel", and "Help". A mouse cursor is pointing at the "OK" button.

**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**.



**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 4-1 on page 4-1). Select the service processor directory name in the **Outgoing call directory entry** field and click **OK**.



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

**Step 21.** See “Configuring DCAF for a Modem” on page 4-21 for installing a target service processor.

## Configuring DCAF for a Modem

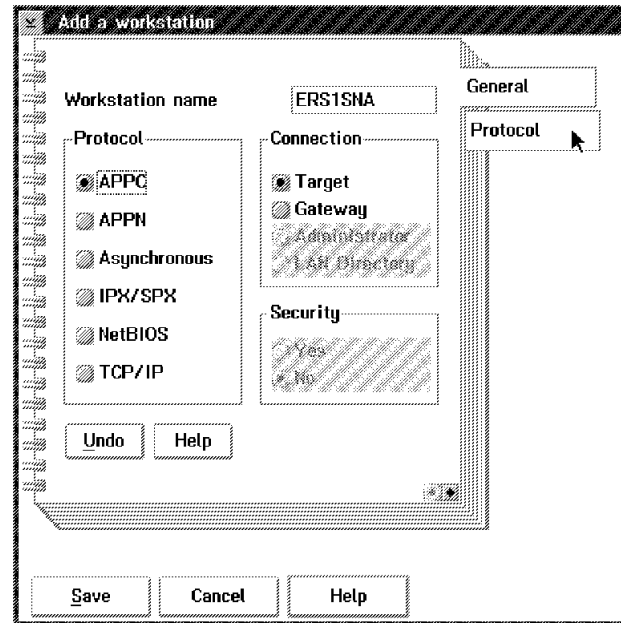
**Step 1.** From Desktop Manager, double-click the **Distributed Console Access Facility** icon.

**Step 2.** Double-click the  icon.

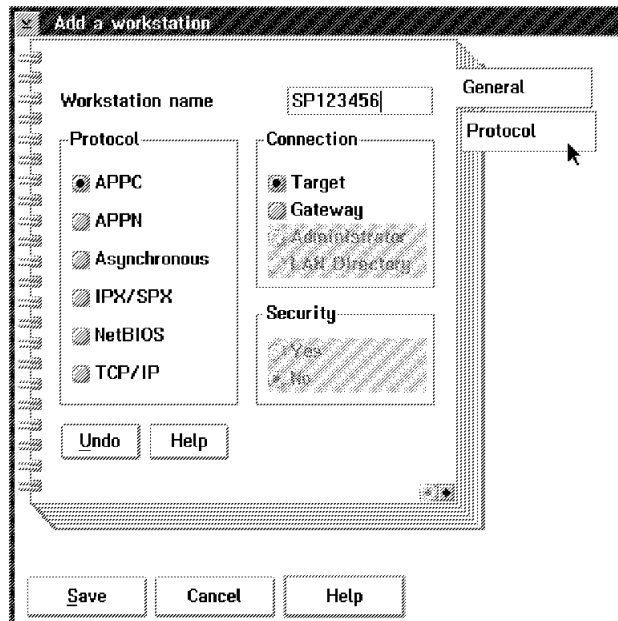
**Step 3.** Select **Session** then **Open workstation directory**.

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

**Step 5.** In the DCAF Directory panel, select **Workstation** then **Add**.

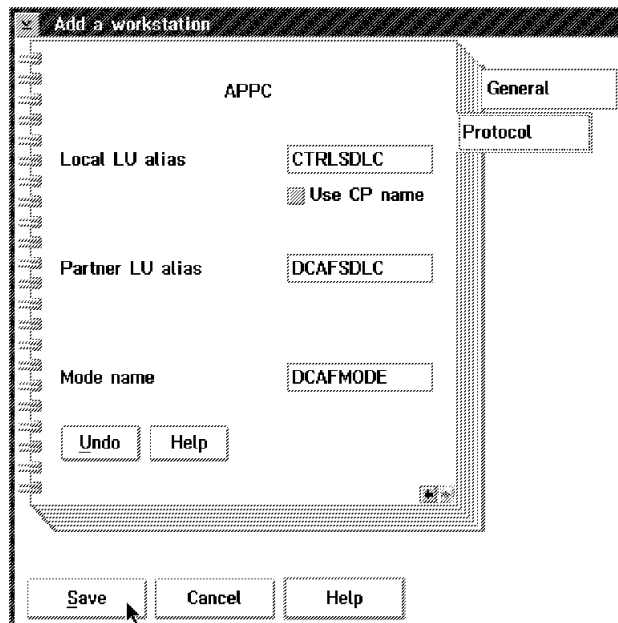


**Step 6.** Enter a name in the **Workstation name** field and click **Protocol**.



**Step 7.** Fill in the **Local LU alias** field, the **Partner LU alias** field (see Table 4-1 on page 4-1).

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



**Step 8.** Click **Save** and **Cancel**. The new workstation icon appears in the DCAF Directory panel.

**Step 9.** Shutdown and restart the workstation.

**Step 10.** The installation is complete. For more information on using this new DCAF session, see Chapter 3, "Using DCAF for Remote Access to the Service Processor."

---

## Chapter 5. APPN-Attached Remote Workstation

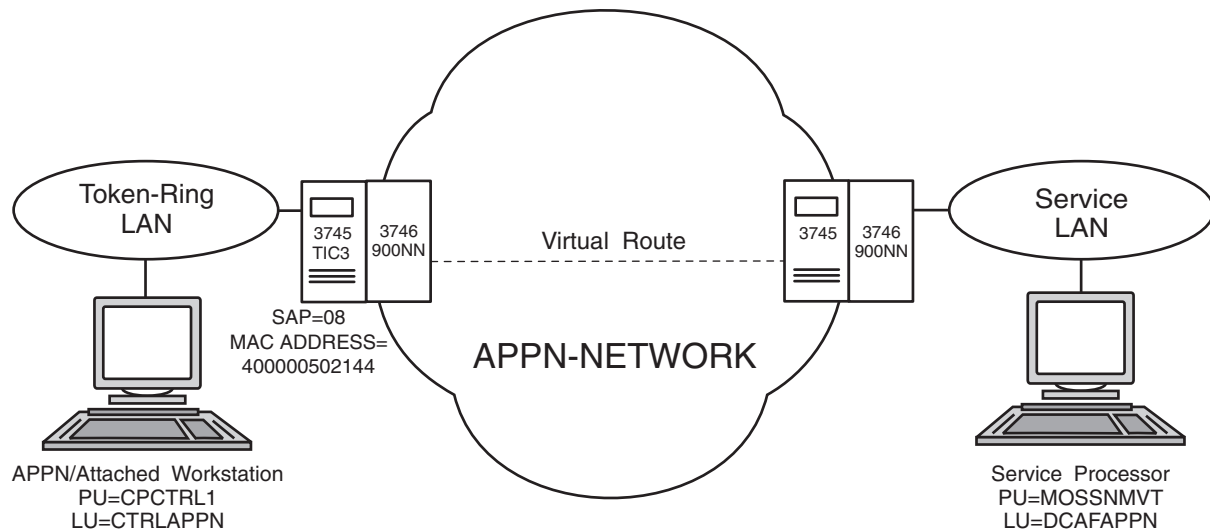


Figure 5-1. APPN Remote Workstation

This chapter describes how to configure a DCAF session for controlling the service processor (see Figure 5-1). If you have more than one target service processor, you must respect the parameter value matching rules in Appendix C, "Configuration for a Two-Target Remote Workstation."

---

### Configuring a Target Service Processor

Use the worksheets in the *3745/3746 Planning Series: Management Planning*, GA27-4239 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 5-1 gives the sets of MOSS-E parameters that must have the same value in both the remote workstation and the target service processor.

Table 5-1. Identical Target and Controlling Parameters (APPN)	
Service Processor	Remote Workstation
<b>APPN LU name</b> (Figure 5-2 on page 5-3)	<b>LU name</b> (Step 13 on page 5-7)
<b>APPN Destination address</b> (Figure 5-2 on page 5-3)	<b>LAN Destination address</b> (Step 13 on page 5-7)
<b>RSAP</b> (Figure 5-2 on page 5-3)	<b>Remote SAP</b> (Step 13 on page 5-7)

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

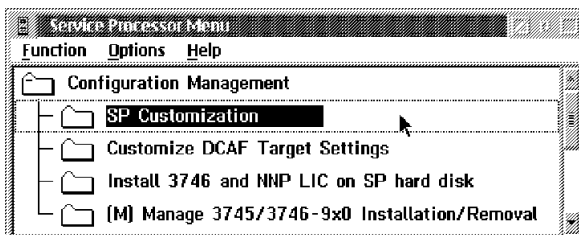
## Configuring the Service Processor in MOSS-E

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.

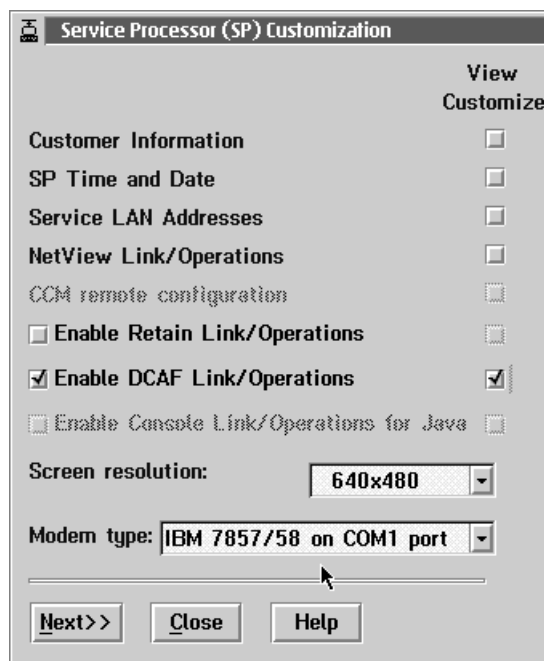
**Step 2.** Click **Configuration Management**.

**Step 3.** Double-click **SP Customization**.





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



**Step 5.** Record the value in the **APPN LU name** and **APPN Destination address** fields (see Table 5-1 on page 5-2). You will need them in Step 13 on page 5-7.

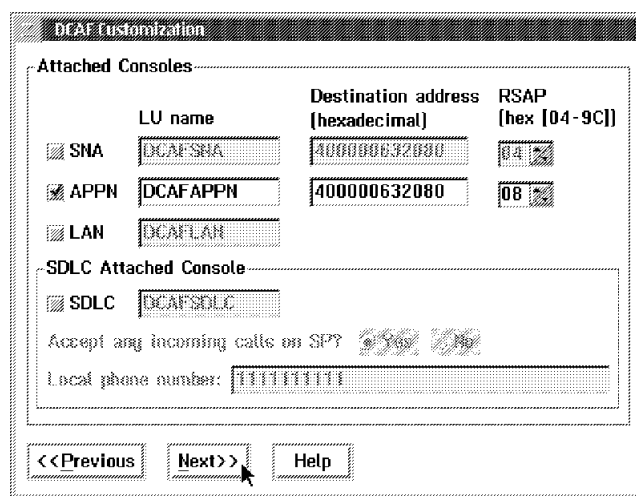


Figure 5-2. DCAF Customization

**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” on page 5-4.


## 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

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

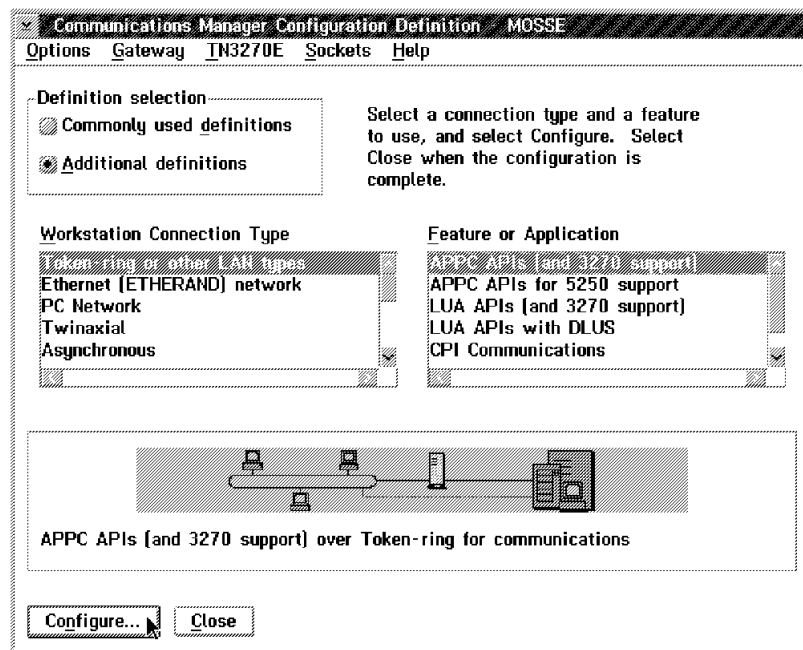
**Step 1.** From **Desktop Manager**, double-click the **CS/2** icon.

**Step 2.** Double-click the  icon.

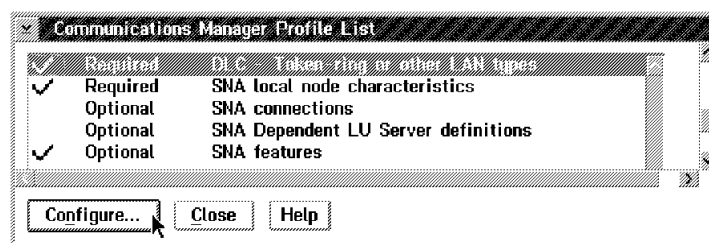
**Step 3.** Click **Setup**.

**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 (and 3270 support)**, then click **Configure**.



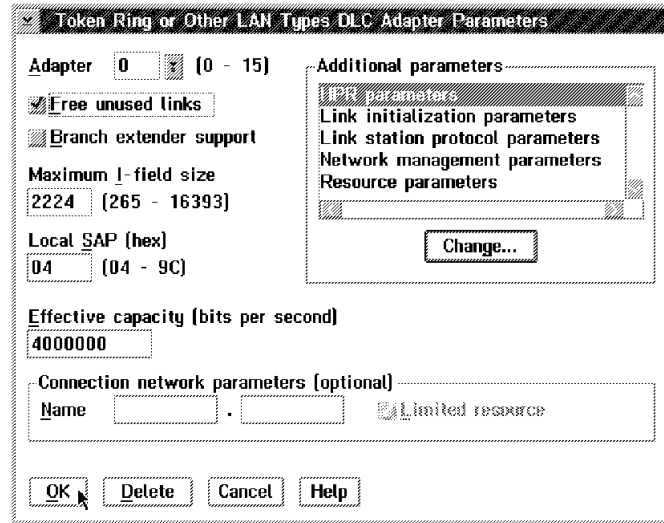
**Step 6.** Select **DLC - Token-Ring or other LAN types** and click **Configure**.



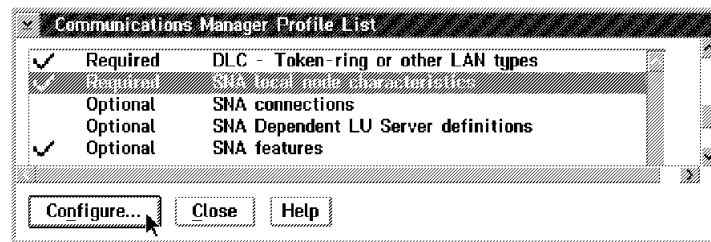
**Step 7.** Select **Free unused links** (in CM/2, select **Free unused links** and click **OK**). From the **Additional Parameters** list, highlight and check the following using the **Change** button.

- Select **HPR parameters** and de-select **HPR support**.
- Check that the defaults apply to **Link station protocol parameters**, **Network management parameters**, and **Resource parameters**.

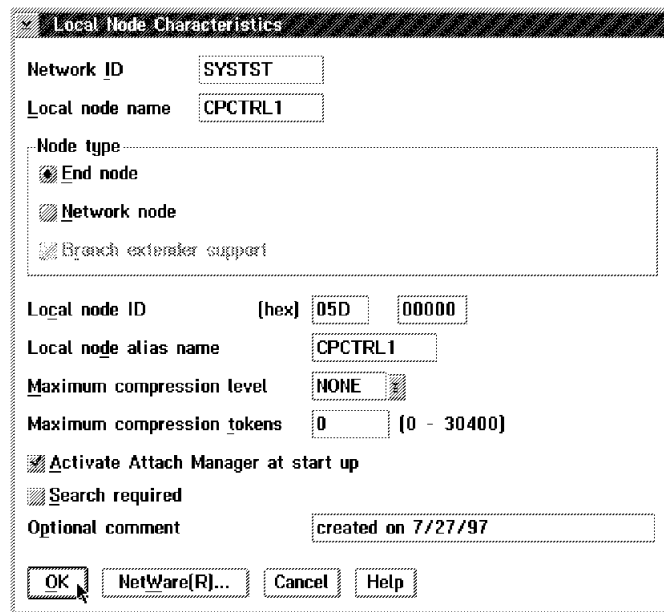
Then click **OK**.



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



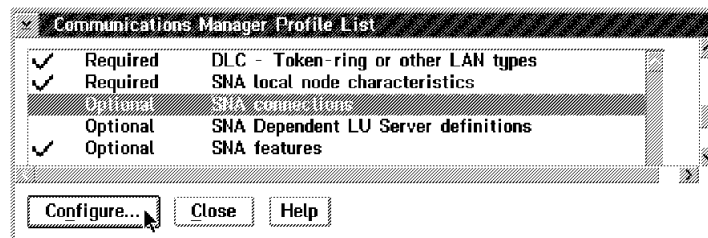
**Step 9.** Enter SPNETID in the **Network ID** field, and the name that you are using for the local node in the **Local node name** field. Select **End node** and click **OK**.



The 'Local Node Characteristics' dialog box contains the following fields and options:

- Network ID:** SYSTST
- Local node name:** CPCTRL1
- Node type:**
  - ☒ End node
  - ☐ Network node
  - ☐ Branch extender support
- Local node ID (hex):** 05D 00000
- Local node alias name:** CPCTRL1
- Maximum compression level:** NONE
- Maximum compression tokens:** 0 (0 - 30400)
- ☒ Activate Attach Manager at start up
- ☐ Search required
- Optional comment:** created on 7/27/97
- Buttons: OK, NetWare[R]..., Cancel, Help

**Step 10.** Select **SNA connections** and click **Configure**.

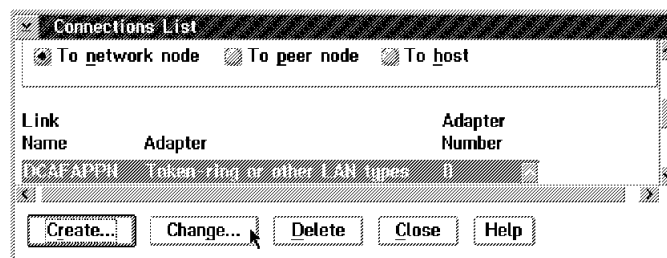


The 'Communications Manager Profile List' dialog box shows a list of profiles with the following items selected:

- ☒ Required DLC - Token-ring or other LAN types
- ☒ Required SNA local node characteristics
- ☐ Optional SNA connections
- ☐ Optional SNA Dependent LU Server definitions
- ☒ Optional SNA features

Buttons at the bottom: Configure..., Close, Help

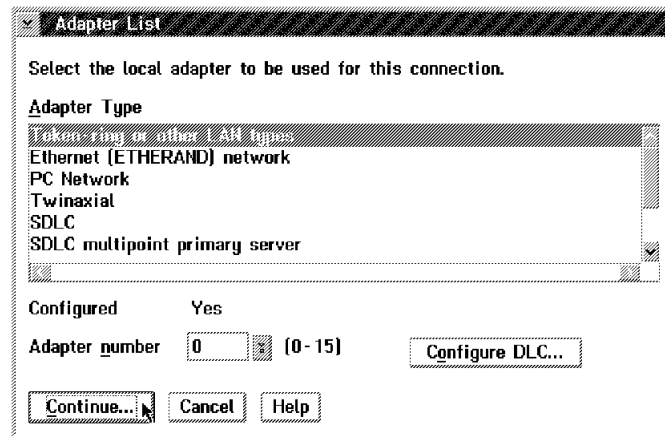
**Step 11.** Select **To network node**, **DCAFAPPN** in the **Link name** list, and click **Change**.



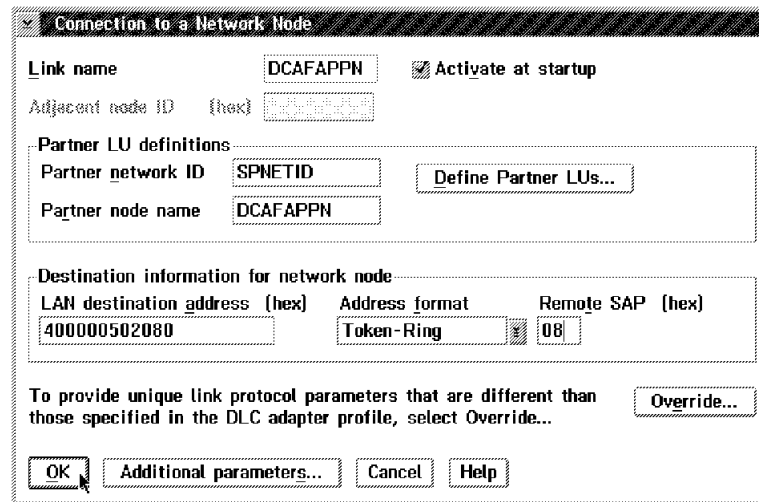
The 'Connections List' dialog box shows the following configuration:

- Connection type:** ☒ To network node, ☐ To peer node, ☐ To host
- Link Name:** DCAFAPPN
- Adapter:** Token-ring or other LAN types
- Adapter Number:** 0
- Buttons: Create..., Change..., Delete, Close, Help

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

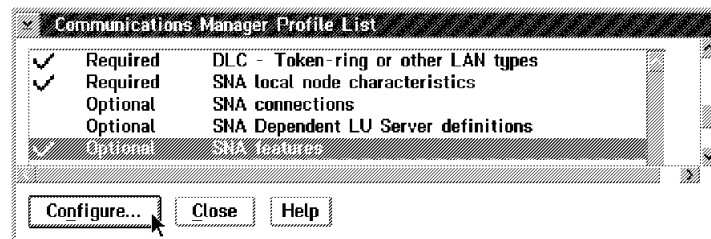


**Step 13.** See Table 5-1 on page 5-2 and fill in the **Link name**, **LAN destination address**, and **Remote SAP** fields. Then click **OK**.

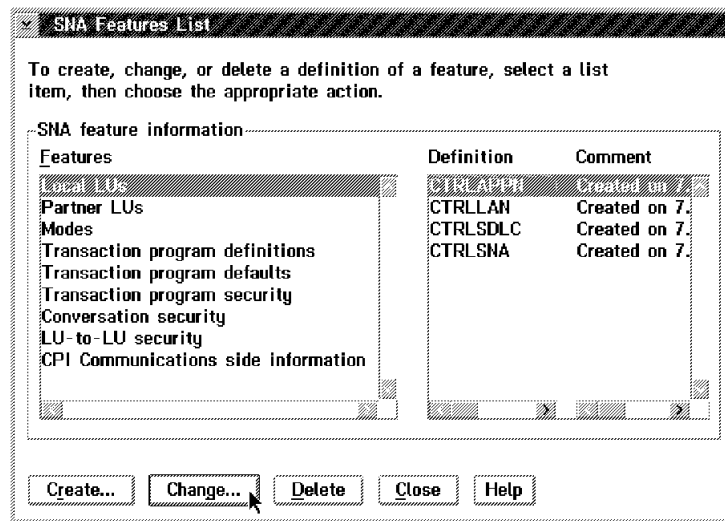


**Step 14.** Click **Close** on the intermediate panel.

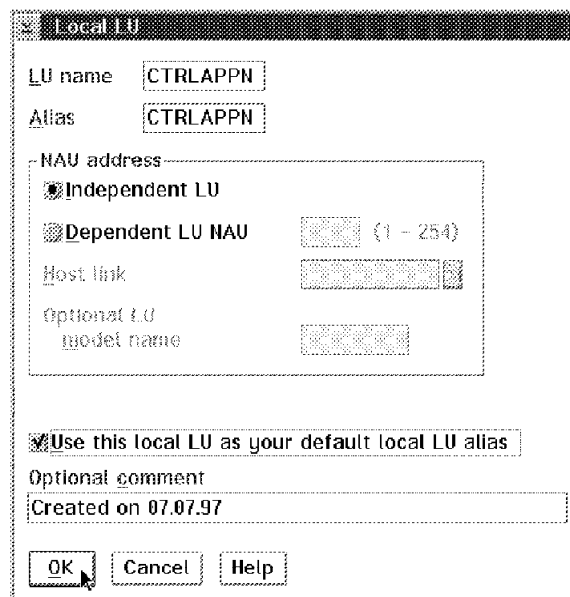
**Step 15.** Select **SNA features** and click **Configure**.



**Step 16.** Select **Local LUs** in the **Features** list, **CTRLAPPN** in the **Definition** list, and click **Change**.



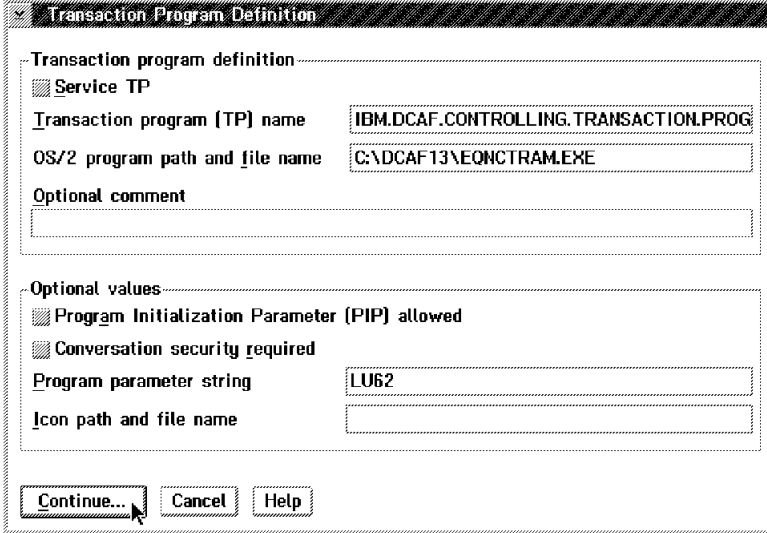
**Step 17.** Modify the **LU name** and **Alias** fields and select **use this local LU as default local LU alias**. Then select **Independent LU** and click **OK**.



**Step 18.** 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 19.** Select **Transaction program definitions** from the **SNA Features List** and click **Create**.

**Step 20.** 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**.



The image shows a dialog box titled "Transaction Program Definition". It has two main sections: "Transaction program definition" and "Optional values".

**Transaction program definition:**

- ☒ **Service TP**
- Transaction program (TP) name:** IBM.DCAF.CONTROLLING.TRANSACTION.PROG
- OS/2 program path and file name:** C:\DCAF13\NEONCTRAM.EXE
- Optional comment:** (empty text box)

**Optional values:**

- ☒ **Program Initialization Parameter (PIP) allowed**
- ☒ **Conversation security required**
- Program parameter string:** LU62
- Icon path and file name:** (empty text box)


At the bottom, there are three buttons: "Continue..." (with a mouse cursor over it), "Cancel", and "Help".

**Step 21.** Click **Close** on the subsequent panels until you exit CS/2.

**Step 22.** Continue with "Configuring DCAF for APPN."

## Configuring DCAF for APPN

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

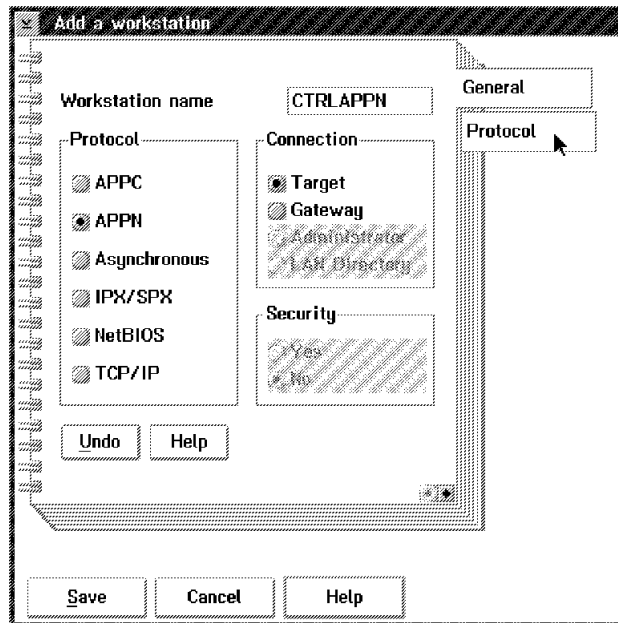
**Step 2.** Double-click the  **DCAF Controller** icon.

**Step 3.** Click **Session**, then **Open workstation directory**.

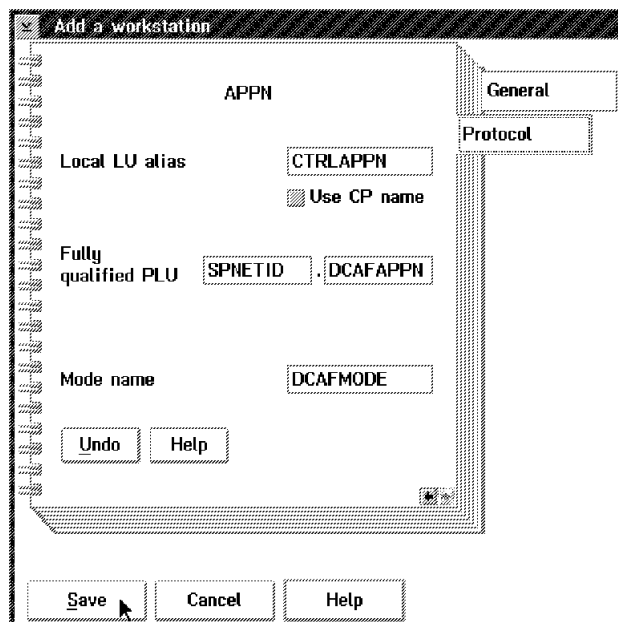
**Step 4.** Click **OK** for a first installation. Otherwise continue with the next step.

**Step 5.** From the DCAF Directory panel, click **Workstation**, then **Add**.

**Step 6.** Fill in the **Workstation name** field, select **APPN**, **Target**, and click **Protocol**.



**Step 7.** Fill in the **Local LU alias** (see Step 17 on page 5-8), and the **Fully qualified PLU**. Make sure the first field matches the **Local Node Network ID** in Step 9 on page 5-6, and that the second field matches the **APPN LU name** in Figure 5-2 on page 5-3.



**Step 8.** Enter DCAFMODE in the **Mode name** fields.

**Step 9.** Click **Save**, **OK** (on the subsequent panel), and then **Cancel**.

**Step 10.** Shutdown and restart the workstation.



**Step 11.** The installation is complete. For more information on using this new DCAF session, see Chapter 3, “Using DCAF for Remote Access to the Service Processor.”



---

## Chapter 6. SNA-Attached Remote Workstation

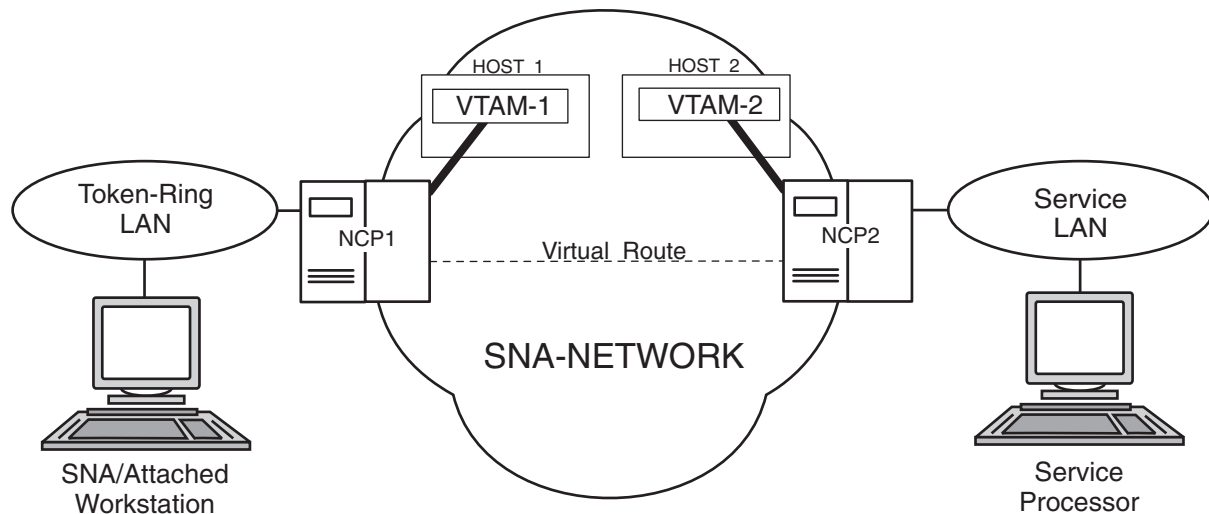


Figure 6-1. SNA-Attached Remote Workstation

This chapter describes how to configure a DCAF session for controlling the service processor (see Figure 6-1). If you have more than one target service processor, you must respect the parameter value matching rules given in Appendix C, "Configuration for a Two-Target Remote Workstation."

---

### Configuring a Target Service Processor

Use the worksheets in the *3745/3746 Planning Series: Management Planning*, GA27-4239 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 6-1 gives the sets of MOSS-E parameters that must have the same value in both the remote workstation and the target service processor.

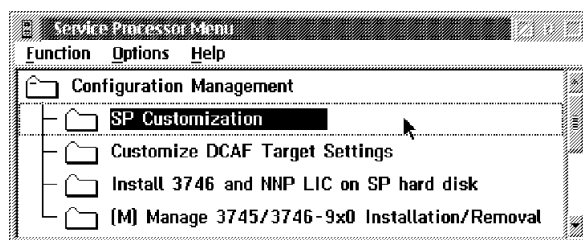
Table 6-1. Identical Target and Controlling Parameters (SNA)	
Service Processor	Remote Workstation
<b>Local Node Network ID</b> (Figure 6-2 on page 6-3)	<b>Partner network ID</b> (Step 9 on page 6-7) and <b>Network ID</b> (Step 10 on page 6-8)
<b>SDLC LU name</b> (Figure 6-3 on page 6-4)	<b>Partner node name</b> (Step 9 on page 6-7) and <b>LU name</b> (Step 10 on page 6-8) and <b>Partner LU alias</b> (Step 7 on page 6-11)
<b>TIC2 or TIC3 LAA</b> (Figure 6-2 on page 6-3)	<b>LAN Destination address</b> (Step 9 on page 6-7)
<b>TIC3 RSAP</b> (Figure 6-2 on page 6-3)	<b>Remote SAP</b> (Step 9 on page 6-7)

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

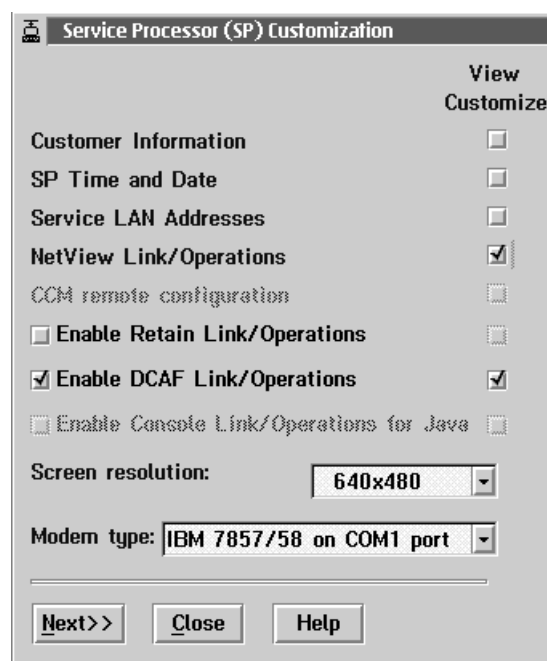
## Configuring the Service Processor in MOSS-E

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**.

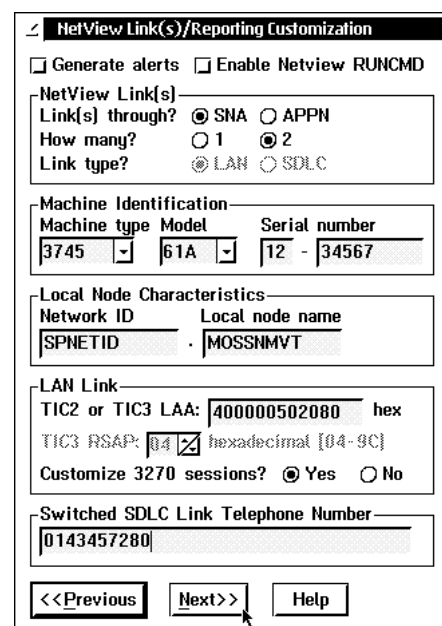


**Step 4.** Select **Enable DCAF Link/Operations**, the adjacent **View Customize**, and **NetView Link/Operations**. Then click **Next**.



The image shows the 'Service Processor (SP) Customization' dialog box. It has a title bar with a small icon and the text 'Service Processor (SP) Customization'. On the right side, there is a 'View Customize' button. The main area contains several options with checkboxes: 'Customer Information' (unchecked), 'SP Time and Date' (unchecked), 'Service LAN Addresses' (unchecked), 'NetView Link/Operations' (checked), 'CCM remote configuration' (unchecked), 'Enable Retain Link/Operations' (unchecked), 'Enable DCAF Link/Operations' (checked), and 'Enable Console Link/Operations for Java' (unchecked). Below these are two dropdown menus: 'Screen resolution' set to '640x480' and 'Modem type' set to 'IBM 7857/58 on COM1 port'. At the bottom are three buttons: 'Next>>', 'Close', and 'Help'.

**Step 5.** Record the values in the **Local Node Network ID**, **TIC2 or TIC3 LAA**, and **TIC3 RSAP** fields (see Figure 6-2 and see Table 6-1 on page 6-2). Then click **Next**.



The image shows the 'NetView Link(s)/Reporting Customization' dialog box. It has a title bar with a small icon and the text 'NetView Link(s)/Reporting Customization'. The main area is divided into several sections: 'Generate alerts' (unchecked) and 'Enable Netview RUNCMD' (unchecked); 'NetView Link(s)' with sub-options 'Link(s) through?' (radio buttons for SNA and APPN, SNA is selected), 'How many?' (radio buttons for 1 and 2, 2 is selected), and 'Link type?' (radio buttons for LAN and SDLC, LAN is selected); 'Machine Identification' with fields for 'Machine type' (3745), 'Model' (61A), and 'Serial number' (12 - 34567); 'Local Node Characteristics' with fields for 'Network ID' (SPNETID) and 'Local node name' (MOSSNMVT); 'LAN Link' with fields for 'TIC2 or TIC3 LAA' (400000502080, hex), 'TIC3 RSAP' (04, hexadecimal [04-9C]), and 'Customize 3270 sessions?' (radio buttons for Yes and No, Yes is selected); and 'Switched SDLC Link Telephone Number' (0143457280). At the bottom are three buttons: '<<Previous', 'Next>>', and 'Help'.

Figure 6-2. NetView Link/Reporting Customization

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

The image shows a 'DCAF Customization' dialog box. It has two main sections: 'Attached Consoles' and 'SDLC Attached Console'.

**Attached Consoles:**

	LU name	Destination address (hexadecimal)	RSAP (hex [04-9C])
<input checked="" type="checkbox"/> SNA	DCAFSNA	400000632080	04
<input checked="" type="checkbox"/> APPN	DCAFAPPN	400000632080	08
<input checked="" type="checkbox"/> LAN	DCAFLAN		

**SDLC Attached Console:**

☒ SDLC DCAFSOLC

Accept any incoming calls on SP? ☒ Yes ☐ No

Local phone number: 11111111

At the bottom are buttons: <<Previous, Next>>, and Help. A mouse cursor is pointing at the 'Next>>' button.

Figure 6-3. 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

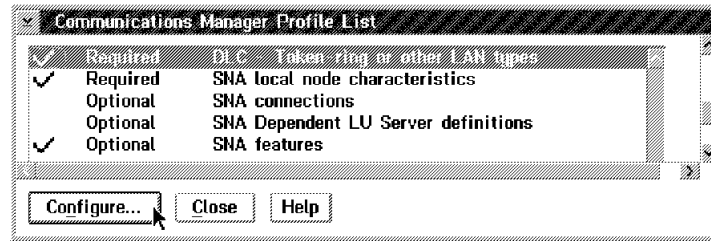
The following procedure shows you how to establish a link between the controlling workstation and the target service processor.

### Configuring CS/2

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

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

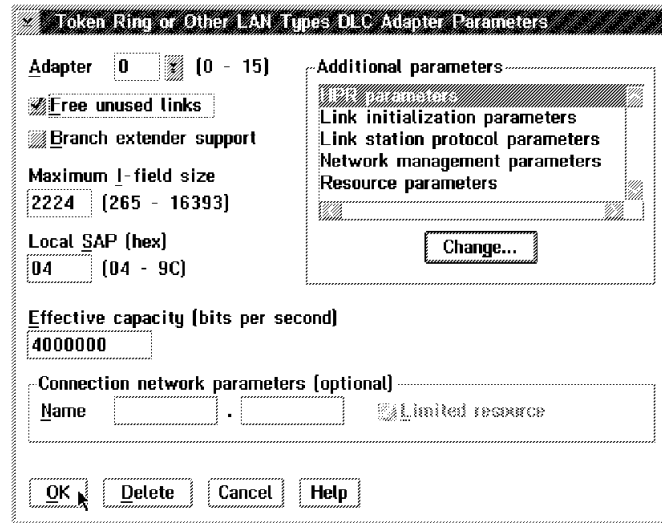
**Step 2.** Select **DLC - Token-Ring or other LAN types** and click **Configure**.



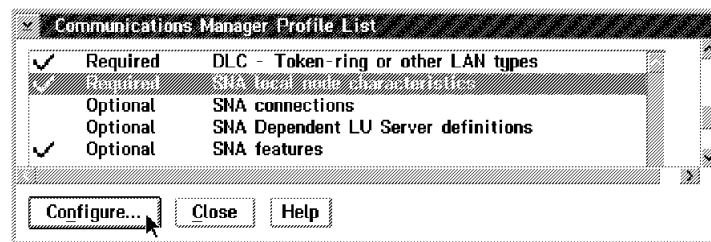
**Step 3.** Select **Free unused links** (in CM/2, select **Free unused links** and click **OK**). From the **Additional Parameters** list, highlight and check the following, using the **Change** button.

- Select **HPR parameters** and de-select **HPR support**.
- Check that the defaults apply to **Link station protocol parameters**, **Network management parameters**, and **Resource parameters**.

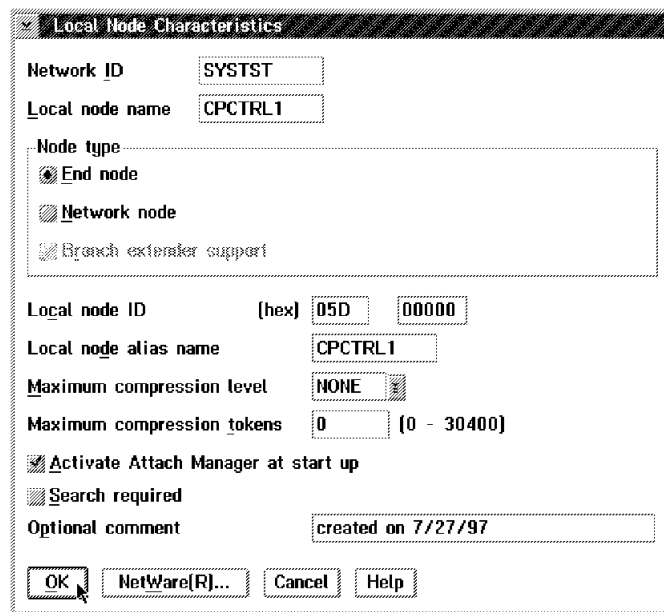
Then click **OK**.



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



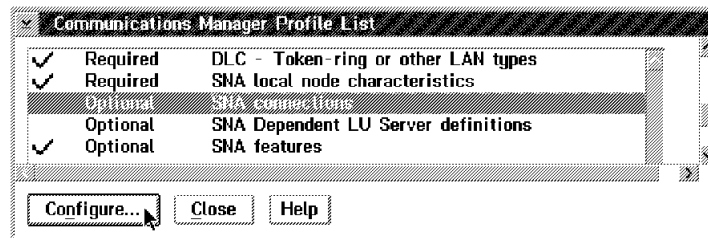
**Step 5.** Fill in the **Network ID** and **Local node name** fields, select **End node** and click **OK**.



The 'Local Node Characteristics' dialog box contains the following fields and options:

- Network ID:** SYSTST
- Local node name:** CPCTRL1
- Node type:**
  - ☒ End node
  - ☐ Network node
  - ☐ Branch extender support
- Local node ID (hex):** 05D 00000
- Local node alias name:** CPCTRL1
- Maximum compression level:** NONE
- Maximum compression tokens:** 0 (0 - 30400)
- ☒ Activate Attach Manager at start up
- ☐ Search required
- Optional comment:** created on 7/27/97
- Buttons:** OK, NetWare[R]..., Cancel, Help

**Step 6.** Select **SNA connections** and click **Configure**.

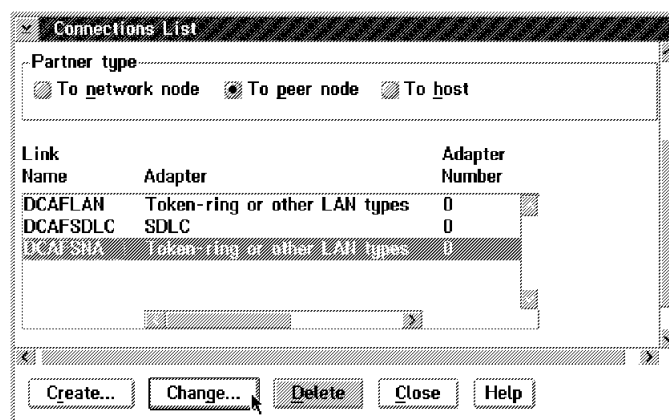


The 'Communications Manager Profile List' dialog box shows a list of profiles with the following items:

- ☒ Required DLC - Token-ring or other LAN types
- ☒ Required SNA local node characteristics
- ☐ Optional SNA connections (highlighted)
- ☐ Optional SNA Dependent LU Server definitions
- ☒ Optional SNA features

**Buttons:** Configure..., Close, Help

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



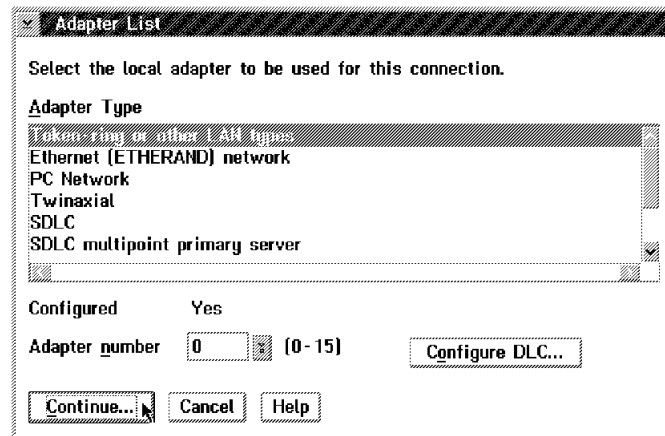
The 'Connections List' dialog box shows the following configuration:

- Partner type:**
  - ☐ To network node
  - ☒ To peer node
  - ☐ To host
- Table:**

Link Name	Adapter	Adapter Number
DCAFLAN	Token-ring or other LAN types	0
DCAFS DLC	SDLC	0
DCAFSNA	Token-ring or other LAN types	0
- Buttons:** Create..., Change..., Delete, Close, Help

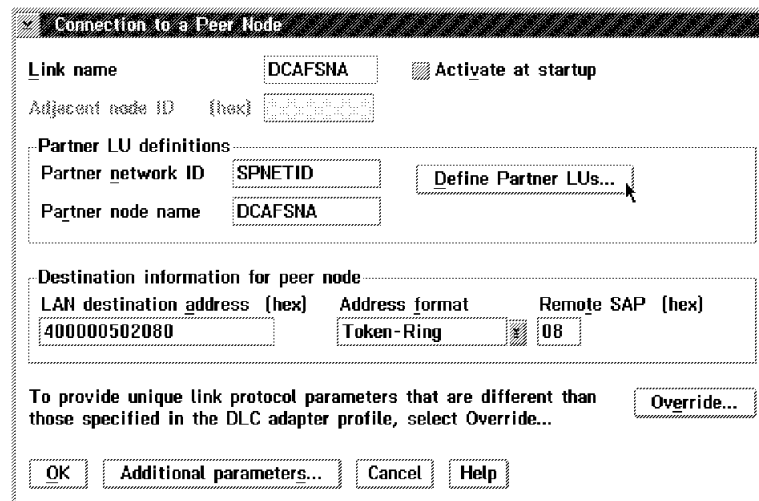


**Step 8.** Select **Token-Ring or other LAN types** and click **Continue**.



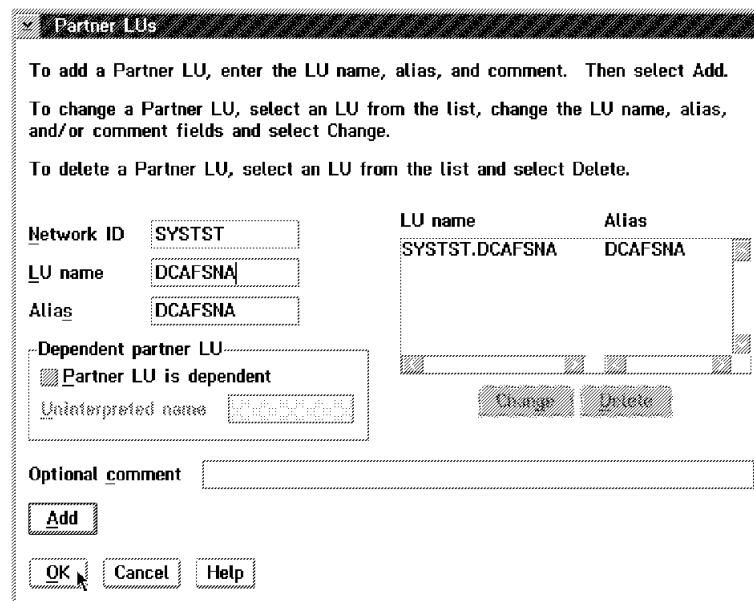
The **Adapter List** dialog box is shown. It has a title bar with a dropdown arrow. Below the title bar is the text "Select the local adapter to be used for this connection." followed by the label "Adapter Type". A list box contains the following items: "Token-ring or other LAN types" (highlighted), "Ethernet (ETHERAND) network", "PC Network", "Twinaxial", "SDLC", and "SDLC multipoint primary server". Below the list box is a "Configured" checkbox which is checked, and the text "Yes". Below that is the "Adapter number" field with the value "0" and a range "(0-15)". To the right of the number field is a "Configure DLC..." button. At the bottom are three buttons: "Continue..." (with a mouse cursor over it), "Cancel", and "Help".

**Step 9.** See Table 6-1 on page 6-2 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**.



The **Connection to a Peer Node** dialog box is shown. It has a title bar with a dropdown arrow. Below the title bar are several sections. The first section has a "Link name" field with the value "DCAFSNA" and an "Activate at startup" checkbox which is checked. Below that is the "Adjacent node ID (hex)" field with a dotted pattern. The second section is titled "Partner LU definitions" and contains a "Partner network ID" field with the value "SPNETID", a "Partner node name" field with the value "DCAFSNA", and a "Define Partner LUs..." button (with a mouse cursor over it). The third section is titled "Destination information for peer node" and contains a "LAN destination address (hex)" field with the value "400000502080", an "Address format" dropdown menu with "Token-Ring" selected, and a "Remote SAP (hex)" field with the value "08". Below these sections is a text box that says "To provide unique link protocol parameters that are different than those specified in the DLC adapter profile, select Override..." and an "Override..." button. At the bottom are four buttons: "OK", "Additional parameters...", "Cancel", and "Help".

**Step 10.** See Table 6-1 on page 6-2 and fill in the **Network ID**, **LU name** (service processor LU name), and **Alias** fields. Then click **Add** and **OK**.



**Partner LU**

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 Partner LU, select an LU from the list and select Delete.

Network ID: SYSTST

LU name: DCAFSNA

Alias: DCAFSNA

Dependent partner LU:

☐ Partner LU is dependent

Uninterpreted name: [empty]

LU name Alias

LU name	Alias
SYSTST.DCAFSNA	DCAFSNA

Change Delete

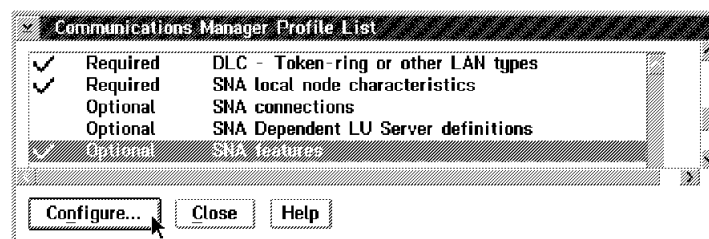
Optional comment: [empty]

Add

OK Cancel Help

**Step 11.** Click **OK** on the intermediate panel and **Close**.

**Step 12.** Select **SNA features** and click **Configure**.

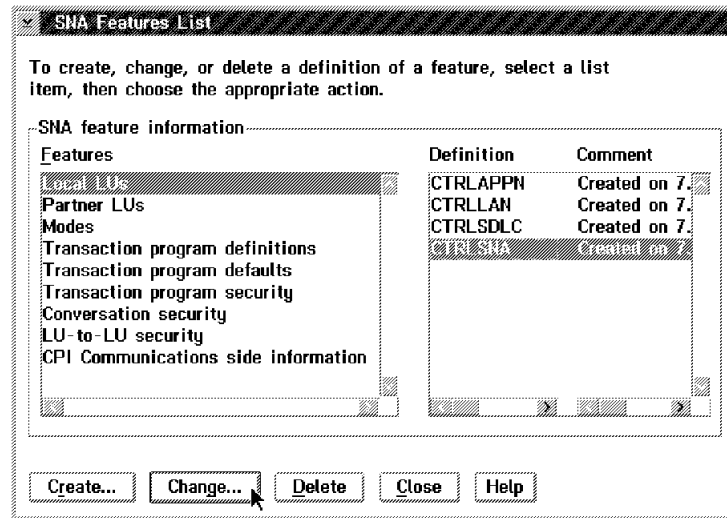


**Communications Manager Profile List**

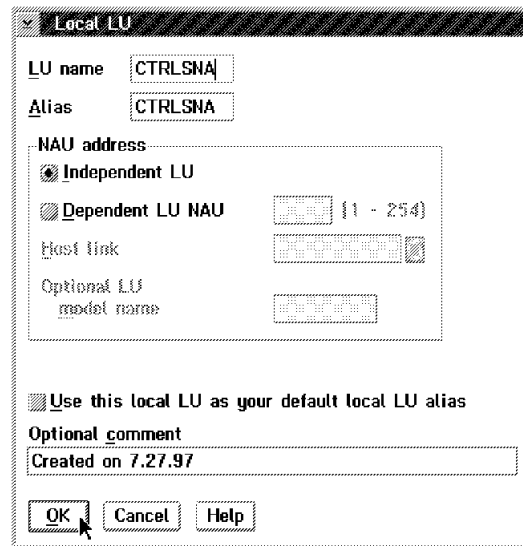
<input checked="" type="checkbox"/>	Required	DLC - Token-ring or other LAN types
<input checked="" type="checkbox"/>	Required	SNA local node characteristics
<input type="checkbox"/>	Optional	SNA connections
<input type="checkbox"/>	Optional	SNA Dependent LU Server definitions
<input checked="" type="checkbox"/>	Optional	SNA features

Configure... Close Help

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



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




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

**Step 16.** Continue with "Configuring DCAF for SNA" on page 6-10.

## Configuring DCAF for SNA

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

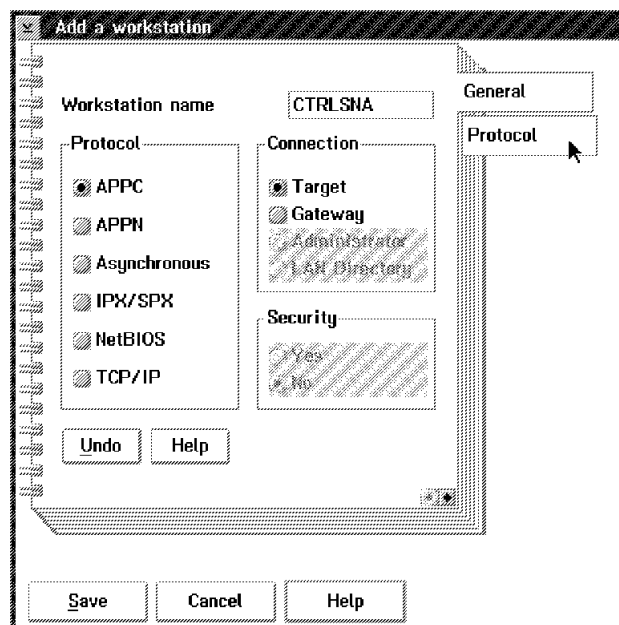
**Step 2.** Double-click the  icon.

**Step 3.** Click **Session** and **Open workstation directory**.

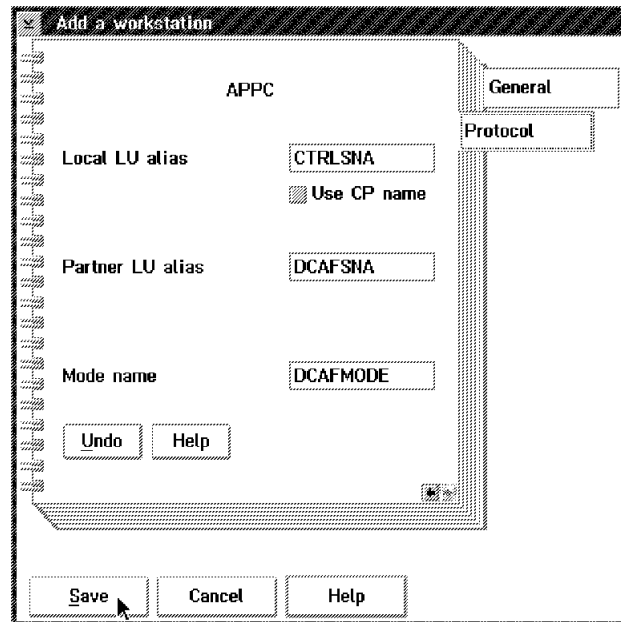
**Step 4.** Click **OK** for a first installation, otherwise continue with the next step.

**Step 5.** Click **Workstation**, then **Add**.

**Step 6.** Fill in the **Workstation name** field (see Step 14 on page 6-9), select **APPC**, **Target**, and click **Protocol**.



**Step 7.** Fill in the **Local LU alias** field, the **Partner LU alias** field (see Table 4-1 on page 4-1), and enter DCAFMODE in the **Mode name** field. Then click **Save**, **OK** (on the subsequent panel), and **Cancel**.



**Step 8.** Shutdown and restart the workstation.

**Step 9.** The installation is complete. For more information on using this new DCAF session, see Chapter 3, "Using DCAF for Remote Access to the Service Processor."

## 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 6-1 on page 6-1).

The address must be the same as defined in Step 9 on page 6-7.

1. Physical line and physical PU:

```

.
.
*-----*
* TIC3 BNN/INN:  PORT 2144                                     *
*-----*
K23C2144 LINE  ADDRESS=(2144,FULL),PORTADD=0,LOCADD=400000232144      *
                MAXTSL=16732,LSPRI=PU,PUTYPE=1,ANS=CONTINUE,        *
                ADAPTER=TIC3,TRSPEED=16,TRANSFR=254                *
S23C2144 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 6-1 on page 6-1).

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 6-1 on page 6-1:

```

*
*           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 _ PAGEABLE
LFBUF=(96,,0,,24,10),      LARGE GENERAL PURPOSE _ FIXED
SFBUF=(128,,0,,32,10),      SMALL GENERAL PURPOSE _ FIXED
CRPLBUF=(160,,13,,80,80),    RPL_COPY _ PAGEABLE
IOBUF=(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 6-1 on page 6-1:

```

SOCMOTAB M MODETAB
DCAFMODE MODEENT LOGMODE=DCAFMODE I ,
        TYPE=0,
        FMPROF=X'13',
        TSPROF=X'07',
        PRIPROT=X'B0',
        SECPROT=X'B0',
        COMPROT=X'50B1',
        SSNDPAC=X'08',
        SRCVPAC=X'08',
        RUSIZES=X'8787',
        PSNDPAC=X'08',
        PSERVIC=X'060200000000000000002F00'
MODEEND
END SOCMOTAB

```

## Major Node Definitions

### Remote Workstation

The following VTAM major node definitions must be used in VTAM1 as shown in Figure 6-1 on page 6-1:

```

*****
*
*      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      X
          MAXPATH=8,MAXDATA=265,MAXOUT=1,
          DISCNT=NO,
CTRL1    LU      LOCADDR=0,MODETAB=SOCMOTAB M

```

### Target Service Processor

The following VTAM major node definitions must be used in VTAM-2, shown in Figure 6-1 on page 6-1:



```

*****
*
*      MAJNODE FOR CONNECTION :  MOSS-E  <==>  VTAM V3R4
*
*
*
*****
NTVMOSSE  VBUILD  TYPE=SWNET,MAXGRP=1,MAXNO=1
-----*
MOSSE      PU      ADDR=04,PUTYPE=2,NETID= SYSTST  A ,CPNAME= MOSSNMVT  X C
              MAXPATH=8,MAXDATA=265,MAXOUT=1,
              DISCNT=NO,
PATHMOSS  PATH  DIALNO= P  00 04 4000000000007  D ,GRPNM=L50G2080  N
DCAFSNA  B  LU      LOCADDR=0,MODETAB=SOCMOTAB  M

```



---

## Chapter 7. TCP/IP LAN-Attached Remote Workstation

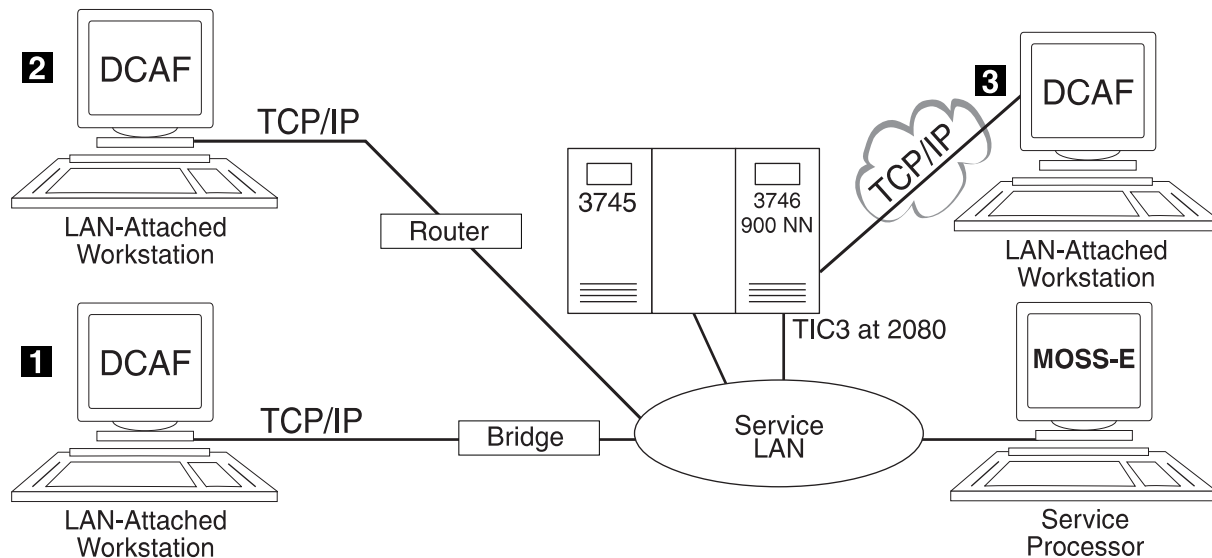


Figure 7-1. Types of TCP/IP Service LAN-Attached Remote Workstations

This chapter describes 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 7-1).
- A **router** to the service LAN, which can be either:
  - A **non-3746** router (see **2** in Figure 7-1)
  - The **3746** router (see **3** in Figure 7-1)

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

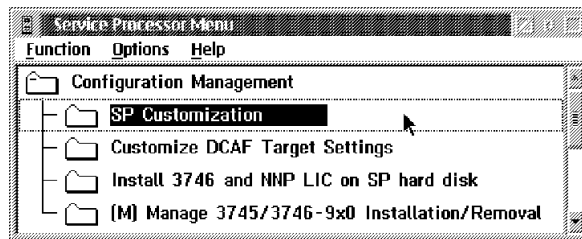
Use the worksheets in the *3745/3746 Planning Series: Management Planning*, GA27-4239 to record the necessary parameter values described in this section.

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

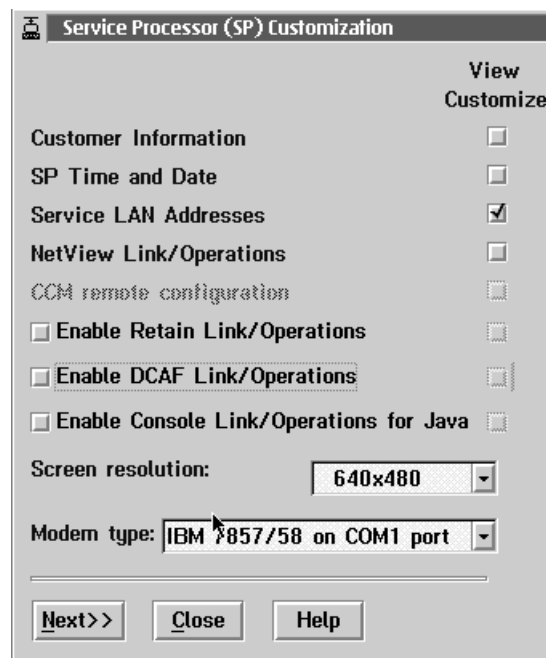
**Step 1.** Open the **Service Processor Menu**.

**Step 2.** Click **Configuration Management**.

**Step 3.** Double-click **SP Customization**.



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



**Step 5.** Record the **Service Processor IP address** (this will be used in Step 7 on page 7-4). If you have a link through the 3746 (see **3** in Figure 7-1 on page 7-1), enter the **TIC3 2080** address in the **SP default router** field and click **Next** and **Close**.

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

	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:	not 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 LAN manager? ☒ Yes ☐ No C&SM LAN ID: MOSSE

<<Previous Next>> Help

**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.

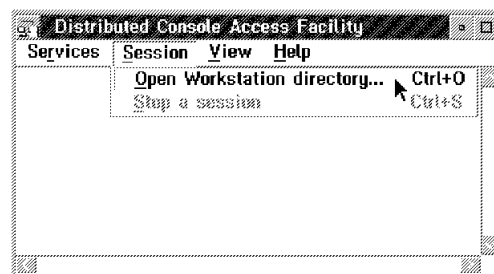
### Configuring DCAF for TCP/IP

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  icon.

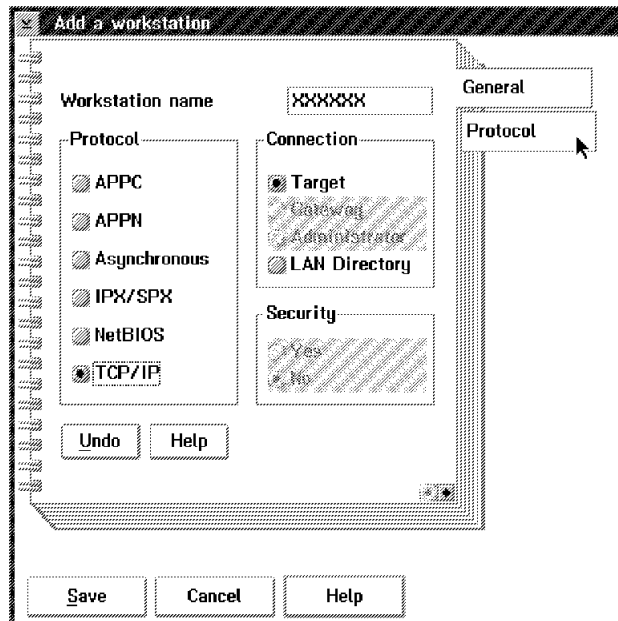
**Step 3.** Click **Session**, then **Open workstation directory**.



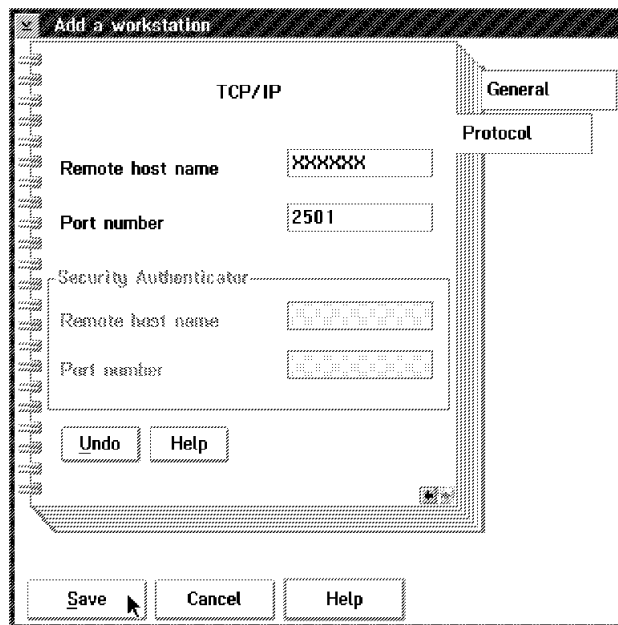
**Step 4.** Click **OK** for a first installation. Otherwise continue with the next step.

**Step 5.** From the DCAF Directory panel, click **Workstation** then **Add**.

**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 7-3) and **Port number** fields. Then click **Save** and **Cancel**.



**Step 8.** Continue with "Configuring TCP/IP" on page 7-5.

## Configuring TCP/IP

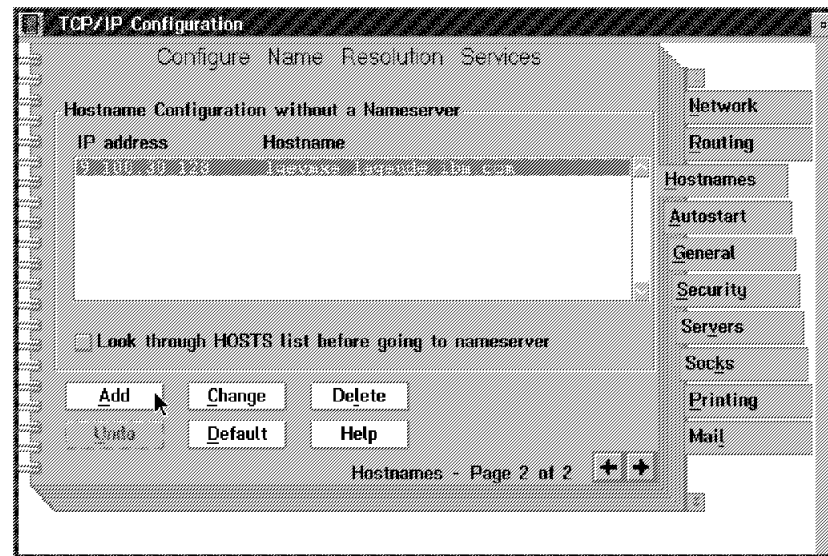
The following procedure adds a service processor in the remote workstation TCP/IP.

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

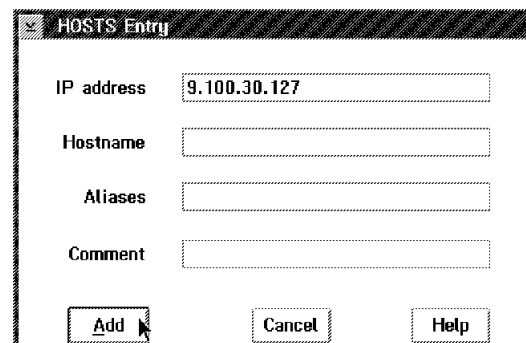


**Step 2.** Click **Host names**, open **page 2**, and click **Add**.

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



**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**.



**Step 4.** Close the TCP/IP panel.

**Step 5.** Click **Save**.

**Step 6.** The installation is complete. For more information on using this new DCAF session, see Chapter 3, "Using DCAF for Remote Access to the Service Processor."





---

## Chapter 8. APPC LAN-Attached Remote Workstation

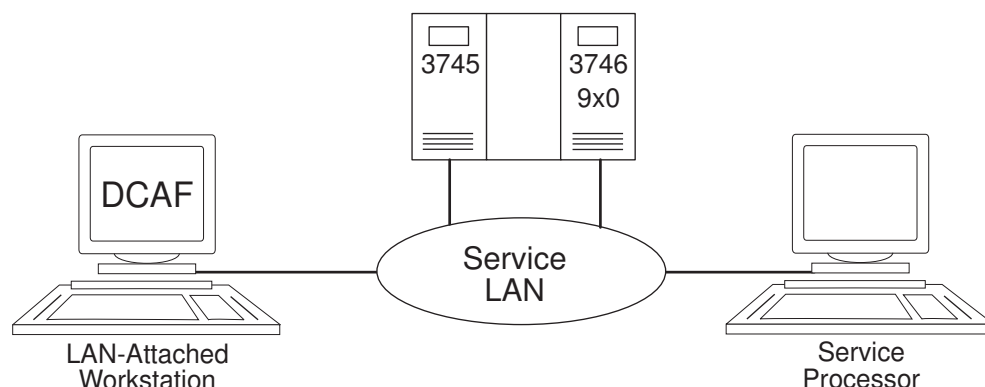


Figure 8-1. APPC Service LAN-Attached Remote Workstation

This chapter describes how to configure a DCAF session for controlling a target service processor (see Figure 8-1). If you have more than one target service processor, you must respect the parameter value matching rules given in Appendix C, "Configuration for a Two-Target Remote Workstation."

---

### Configuring a Target Service Processor

Use the worksheets in the *3745/3746 Planning Series: Management Planning*, GA27-4239 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 8-1 on page 8-2 gives the sets of MOSS-E parameters that must have the same value in both the remote workstation and the target service processor.

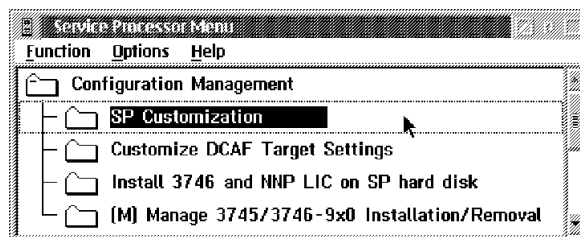
<i>Table 8-1. Identical Target and Controlling Parameters (APPC LAN)</i>	
<b>Service Processor</b>	<b>Remote Workstation</b>
<b>Local Node Network ID</b> (Figure 8-2 on page 8-3)	<b>Partner network ID</b> (Step 9 on page 8-8) and <b>Network ID</b> (Step 10 on page 8-8)
<b>SDLC LU name</b> (Figure 8-3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

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

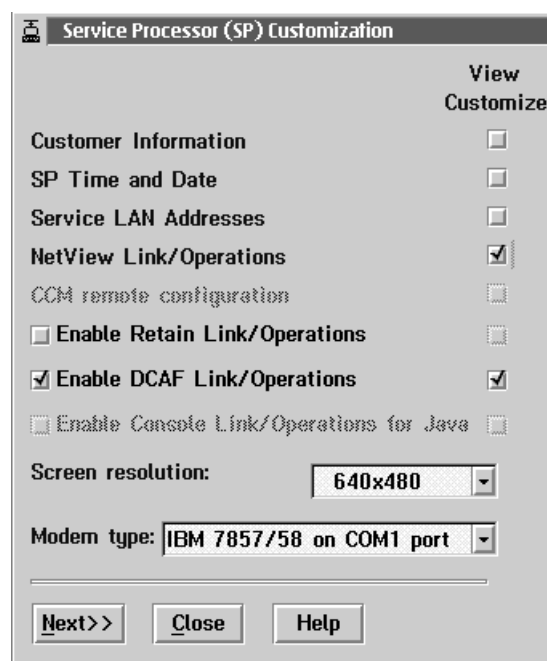
## Configuring the Service Processor in MOSS-E

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**.



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



The dialog box is titled "Service Processor (SP) Customization". It has a "View Customize" button in the top right corner. The main area contains several options with checkboxes:

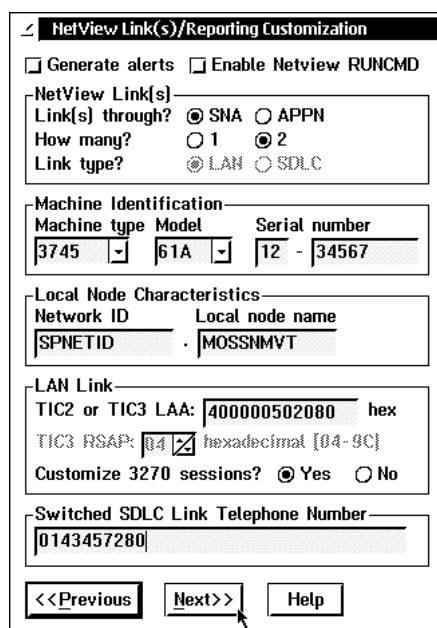
- Customer Information ☐
- SP Time and Date ☐
- Service LAN Addresses ☐
- NetView Link/Operations ☒
- CCM remote configuration ☐
- ☐ Enable Retain Link/Operations
- ☒ Enable DCAF Link/Operations
- ☐ Enable Console Link/Operations for Java

Below these options are two dropdown menus:

- Screen resolution: 640x480
- Modem type: IBM 7857/58 on COM1 port

At the bottom are three buttons: "Next>>", "Close", and "Help".

**Step 5.** Record the values in the **Network ID**, **TIC2 or TIC3 LAA**, and **TIC3 RSAP** fields (see Figure 8-2 and see Table 8-1 on page 8-2). Then click **Next** and **Next** again.



The dialog box is titled "NetView Link(s)/Reporting Customization". It contains several sections with various options and fields:

- ☐ Generate alerts ☐ Enable Netview RUNCMD
- NetView Link(s)
  - Link(s) through? ☒ SNA ☐ APPN
  - How many? ☐ 1 ☒ 2
  - Link type? ☒ LAN ☐ SDLC
- Machine Identification
 

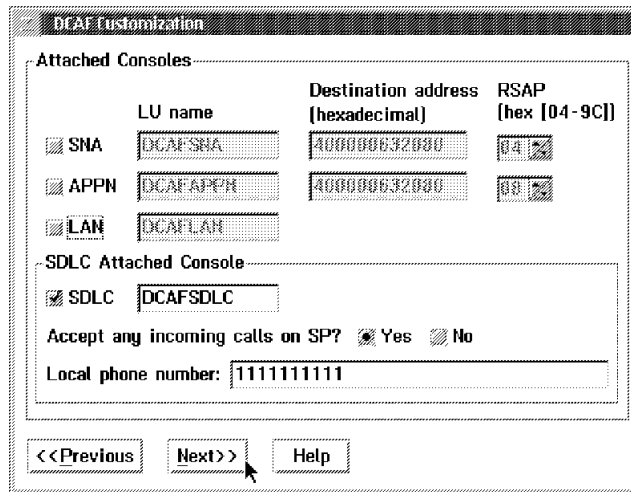
Machine type	Model	Serial number
3745	61A	12 - 34567
- Local Node Characteristics
 

Network ID	Local node name
SPNETID	MOSSNMVT
- LAN Link
  - TIC2 or TIC3 LAA: 400000502080 hex
  - TIC3 RSAP: 04 hexadecimal [04-9C]
  - Customize 3270 sessions? ☒ Yes ☐ No
- Switched SDLC Link Telephone Number
  - 0143457280

At the bottom are three buttons: "<<Previous", "Next>>", and "Help".

Figure 8-2. 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.



The DCAF Customization dialog box contains the following fields and controls:

- Attached Consoles:**
  - SNA:** LU name: DCAFSNA, Destination address (hexadecimal): 400000632000, RSAP (hex [04-9C]): 04
  - APPN:** LU name: DCAFAPPN, Destination address (hexadecimal): 400000632000, RSAP (hex [04-9C]): 08
  - LAN:** LU name: DCAFLAN
- SDLC Attached Console:**
  - ☒ SDLC: DCAFSDLC
- Accept any incoming calls on SP?** ☒ Yes ☐ No
- Local phone number:** 111111111
- Navigation buttons: <<Previous, Next>>, Help

Figure 8-3. DCAF Customization

**Step 7.** Click **Next**, click **Close** and **Yes** to save the configuration.

**Step 8.** Shut down and restart the service processor.

**Step 9.** Go to “Configuring an APPC LAN-Attached Remote Workstation.”

## Configuring an APPC LAN-Attached Remote Workstation

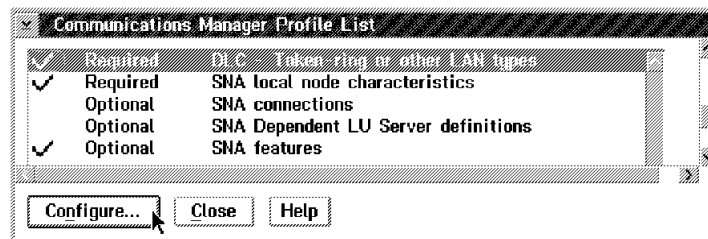
The following procedure shows you how to establish a link between the controlling workstation and a service processor, via an APPC type LAN environment.

### Configuring CS/2

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

**Step 1.** Perform steps 1 to 5 on page 5-4.

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



The Communications Manager Profile List dialog box displays a list of profile types with their status:

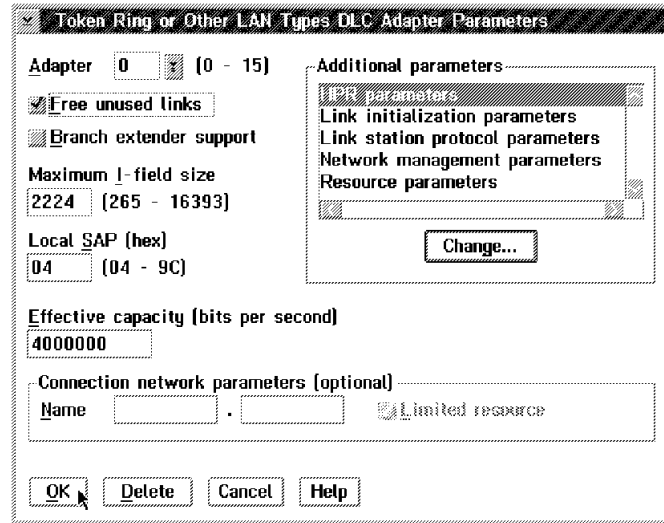
Status	Profile Type
✓ Required	DLC - Token-ring or other LAN types
✓ Required	SNA local node characteristics
Optional	SNA connections
Optional	SNA Dependent LU Server definitions
✓ Optional	SNA features

Buttons at the bottom: Configure..., Close, Help

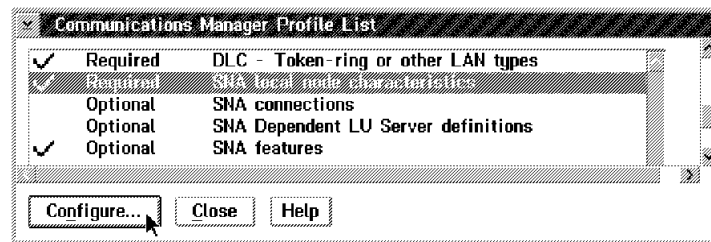
**Step 3.** Select **Free unused links** (in CM/2, select **Free unused links** and click **OK**). From the **Additional Parameters** list, highlight and check the following, using the **Change** button.

- Select **HPR parameters** and de-select **HPR support**.
- Check that the defaults apply to **Link station protocol parameters**, **Network management parameters**, and **Resource parameters**.

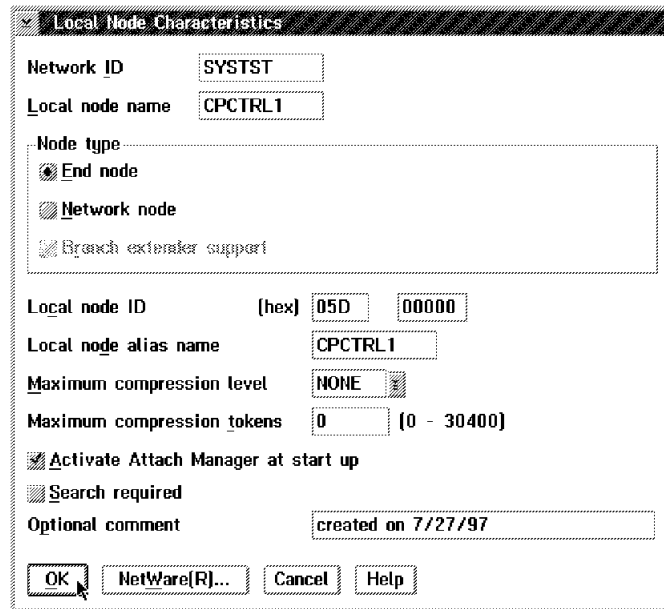
Then click **OK**.



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



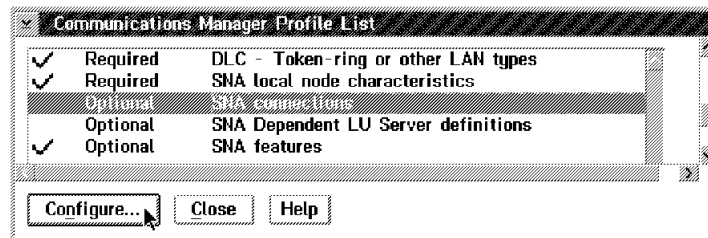
**Step 5.** Modify the **Network ID** and **Local node name** fields, select **End node** and click **OK**.



The 'Local Node Characteristics' dialog box contains the following fields and options:

- Network ID:** SYSTST
- Local node name:** CPCTRL1
- Node type:**
  - ☒ End node
  - ☐ Network node
  - ☒ Branch extender support
- Local node ID (hex):** 05D 00000
- Local node alias name:** CPCTRL1
- Maximum compression level:** NONE
- Maximum compression tokens:** 0 (0 - 30400)
- ☒ Activate Attach Manager at start up
- ☐ Search required
- Optional comment:** created on 7/27/97
- Buttons:** OK, NetWare[R]..., Cancel, Help

**Step 6.** Select **SNA connections** and click **Configure**.



The 'Communications Manager Profile List' dialog box displays a list of profiles with the following items:

Checkmark	Category	Description
✓	Required	DLC - Token-ring or other LAN types
✓	Required	SNA local node characteristics
	Optional	SNA connections
	Optional	SNA Dependent LU Server definitions
✓	Optional	SNA features

**Buttons:** Configure..., Close, Help

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

Choose the type of node to change or create connections to nodes of that type.

Selecting a partner type will display connections to nodes of that type in the list.

Partner type:

☐ To network node ☒ To peer node ☐ To host

Link Name	Adapter	Adapter Number
DCAFLAN	Token-ring or other LAN types	0
DCAFSDLC	SDLC	0
DCAFSNA	Token-ring or other LAN types	0

Comment

Create... Change... Delete Close Help

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

Select the local adapter to be used for this connection.

Adapter Type

Token-ring or other LAN types  
Ethernet (ETHERAND) network  
PC Network  
Twinaxial  
SDLC  
SDLC multipoint primary server

Configured Yes

Adapter number 0 (0-15) Configure DLC...

Continue... Cancel Help

**Step 9.** See Table 8-1 on page 8-2 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**.

**Connection to a Peer Node**

Link name: DCAFLAN ☒ Activate at startup

Adjacent node ID (hex): 000000

**Partner LU definitions**

Partner network ID: SPNETID Define Partner LUs...

Partner node name: DCAFLAN

**Destination information for peer node**

LAN destination address (hex): 400000502080 Address format: Token-Ring Remote SAP (hex): 04

To provide unique link protocol parameters that are different than those specified in the DLC adapter profile, select Override...

**Step 10.** See Table 8-1 on page 8-2 and fill in the **Network ID** and **LU name** fields. Fill in the **Alias** field, click **OK** and then **Close**.

**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 Partner LU, select an LU from the list and select Delete.

Network ID: SPNETID

LU name: DCAFLAN

Alias: DCAFLAN

**Dependent partner LU**

☒ Partner LU is dependent

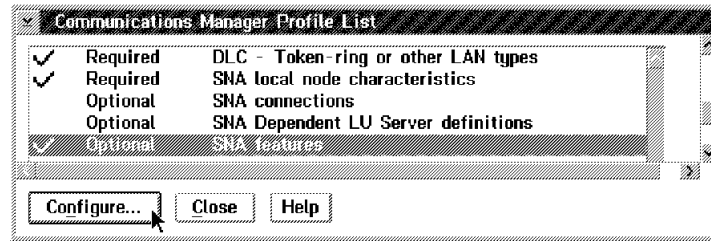
Uninterpreted name: 000000

LU name	Alias
SPNETID.DCAFLAN	DCAFLAN

Optional comment:

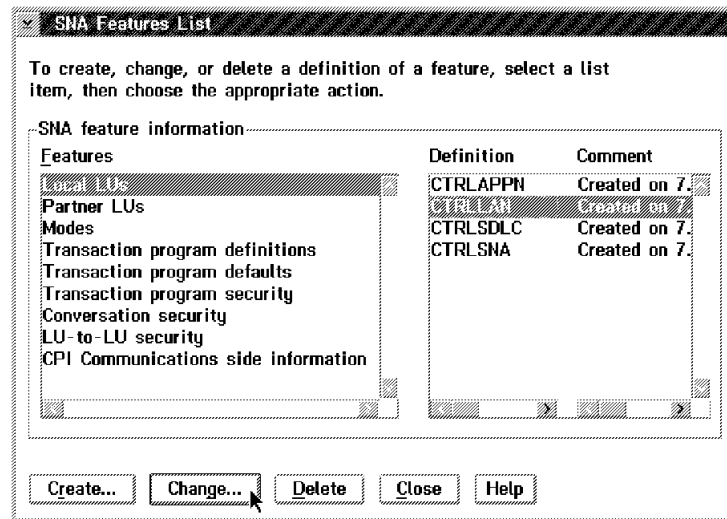


**Step 11.** Select **SNA features** and click **Configure**.



**Step 12.** Click **Add** and **OK**.

**Step 13.** Select **Local LUs** and **CTRLLAN**, then click **Change**.



**Step 14.** See Table 8-1 on page 8-2 and fill in the **LU name** and **Alias** fields.  
Select **use this local LU as your default local LU alias** and click **OK**.

**Local LU**

LU name: CTRLLAN

Alias: CTRLLAN

NAU address:

- ☒ Independent LU
- ☐ Dependent LU NAU: 11 - 254

Host link: 11111111

Optional LU model name:

☒ Use this local LU as your default local LU alias

Optional comment: Created on 7.27.97


OK Cancel Help

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

**Step 16.** Continue with “Configuring DCAF for APPC.”

## Configuring DCAF for APPC

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

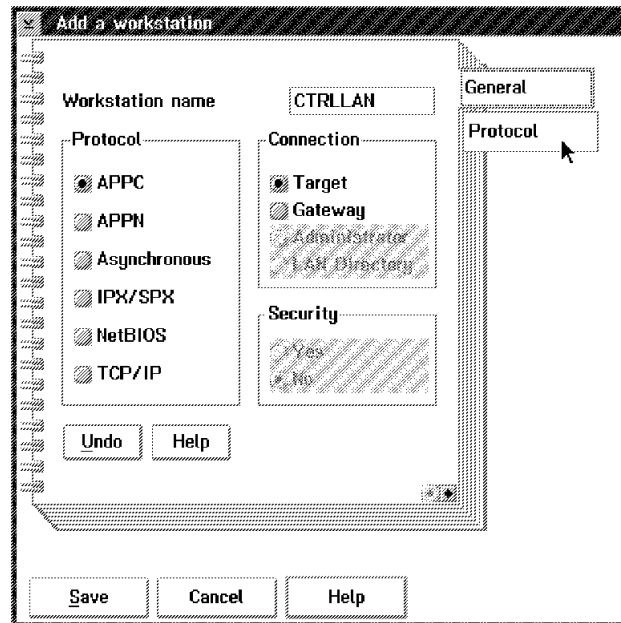
**Step 2.** Double-click the  icon.

**Step 3.** Click **Session**, then **Open workstation directory**.

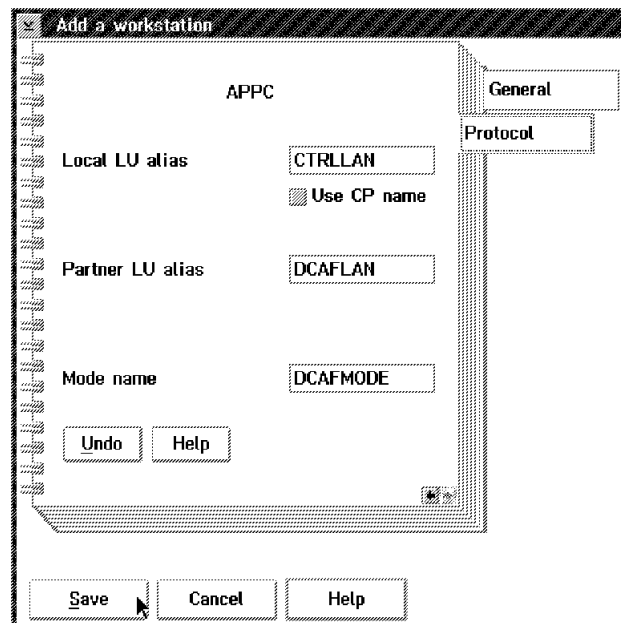
**Step 4.** Click **OK** for a first installation. Otherwise, continue with the next step.

**Step 5.** Click **Add** in the **Workstation** directory.

**Step 6.** Fill in the **Workstation name** field (see **Local LU name** in Step 14 on page 8-10), select **APPC**, **Target**, and click **Protocol**.



**Step 7.** Fill in the **Local LU alias** field (see **Local LU name** in Step 14 on page 8-10), and **Partner LU alias** field (see Table 8-1 on page 8-2). Enter **DCAFMODE** in the **Mode name** field.



**Step 8.** Click **Save** and **Cancel**. The new workstation icon appears in the DCAF Directory panel.

**Step 9.** Shutdown and restart the workstation.

**Step 10.** The installation is complete. For more information on using this new DCAF session, see Chapter 3, “Using DCAF for Remote Access to the Service Processor.”

---

## Chapter 9. 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

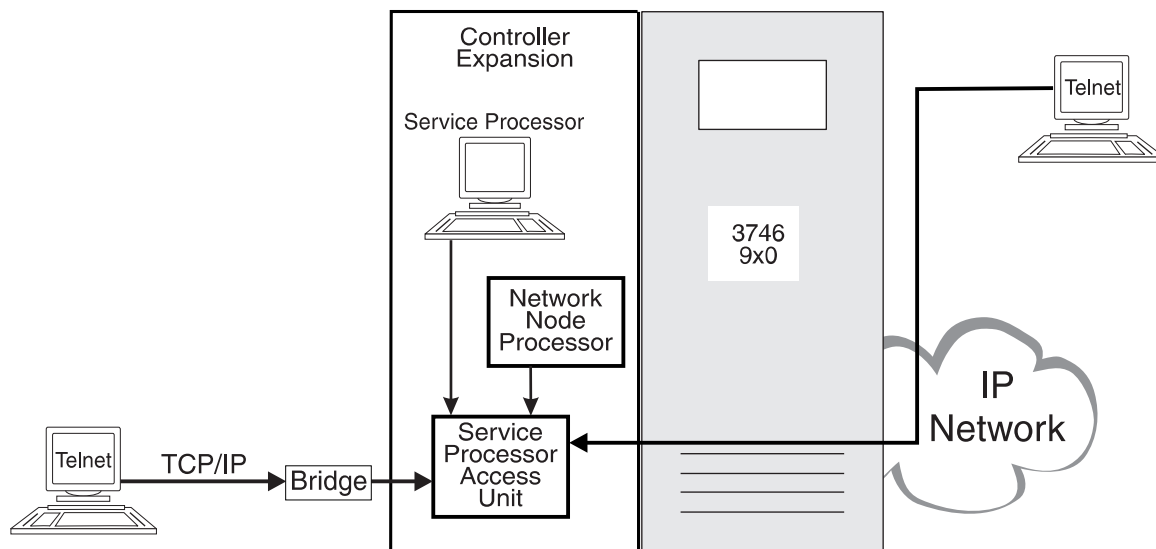


Figure 9-1. Telnet Workstation Configuration

A Telnet remote console can be attached to the service LAN (the Service Processor Access Unit in Figure 9-1) via a bridge with appropriate filtering, or via an IP network using resources controlled by the target Network Node Processor (NNP). See Figure 9-1 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 panel (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 *Basic Operations Guide*, SA33-0177.

### Closing a Session

To close the session, press  and  together.

---

## Chapter 10. Java Console Remote Access

---

### Overview of Java Console

#### Communications

Java Console supports communications using TCP/IP protocol over the following:

- Asynchronous cable and modem
- LAN

#### Flexibility Support

Java Console can run on the workstation as an applet in a Web browser, or as a Java program.

#### Programming Requirements

Requires microcode level F12720 or later on the service processor. Java Console runs on OS/2 Warp (Versions 3 and 4), Windows (95, 98, and Windows NT), AIX, UNIX, and Macintosh workstations, with TCP/IP protocol installed, via a Web browser or Java application program.

The Java Runtime Environment (JRE™) program must be installed on your workstation. The JRE program is platform dependent, and available at no charge from the following Web sites:

- **WARP 4**

<http://www.ibm.com/java/jdk/JREsite.html>

- **Windows 95, Windows 98, and Windows NT 4.0**

<http://java.sun.com/products/jdk/1.1/jre/download-jre-windows.html>

- **Sun Solaris**

<http://www.sun.com/solaris/jre/index.html>

If you are using AIX, JRE is part of the Java Development Kit (JDK).

#### Network browsers

Java Console 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 Java Console

Java Console enables a link for a remote workstation to access and control a service processor and network node processor (NNP) across the network. With a link established to the target service processor using Java Console, the user has access to the programs and utilities running on the service processor. For example, with a link activated between the service processor and a remote workstation, MOSS-E functions are available to the user.

## Java Console File Transfer

Java Console provides a utility for file transfer, for example, CCM configuration files, between the service processor and the remote workstation.

With Java Console running as an applet (web browser-based), this function downloads files from the service processor to the remote workstation. However, to upload files from the workstation to the service processor, the Java Console program has to be installed onto your workstation hard disk. For more information on installing Java Console on your remote workstation, see “Installing Java Console as a Program on a Remote Workstation” on page 12-1.

## Workstation Access to a Service Processor

There are three possible ways to access the service processor from a remote workstation:

### 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 Java Console, a remote workstation asynchronous modem connects to the service processor with PPP dial-up client.

The configuration for this type of link is described in “Remote Workstation Access Via Switched Line (Modem)” on page 11-2.

### Local Access Via the Service Ring

In this scenario, Java Console directly connects to the service ring for TCP/IP communication with the service processor.

The configuration for this type of link is described in “Remote Workstation Access Via Service LAN” on page 11-12.

### Remote Access Via the User Network

In this scenario, the network provides IP access to the service processor via a router or a bridge connected to the service ring of the 3745/3746. If the 3746 is the router providing this connection (via a TIC 3 port), it must run the IP Routing FC 5033.

**Note:** Java Console can establish a connection to one 3745/3746 service processor and then use this connection to access other service processors. The other service processors can be accessed through the following:

- Service ring, if connected to the same service ring.
- IP network, as long as there is IP connectivity, bridged or routed, between the first service processor and the other service processors.

---

## Configuring Java Console

Support for Java Console (either as an applet or as a program) and for DCAF is provided by microcode level F12720 and later. When the new level of microcode is installed, you have the option of retaining support for DCAF or selecting Java Console for remote access.



The procedure for making this selection is described in “Procedure for Configuring the Service Processor” on page 10-3.

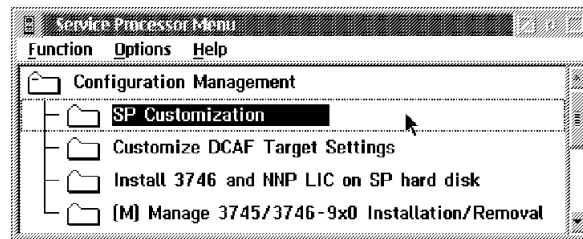
To install Java Console as a program on your workstation, see Chapter 12, “Installing the Java Console Program” on page 12-1.

## Procedure for Configuring the Service Processor

Use the following procedure to select Java Console after the new microcode upgrade on your service processor.

**Step 1.** In MOSS-E, double-click **Service Processor**.

**Step 2.** Click **Configuration Management**. The **Service Processor Menu** panel appears.



**Step 3.** Double-click **SP Customization**. The **Service Processor (SP) Customization** panel appears.

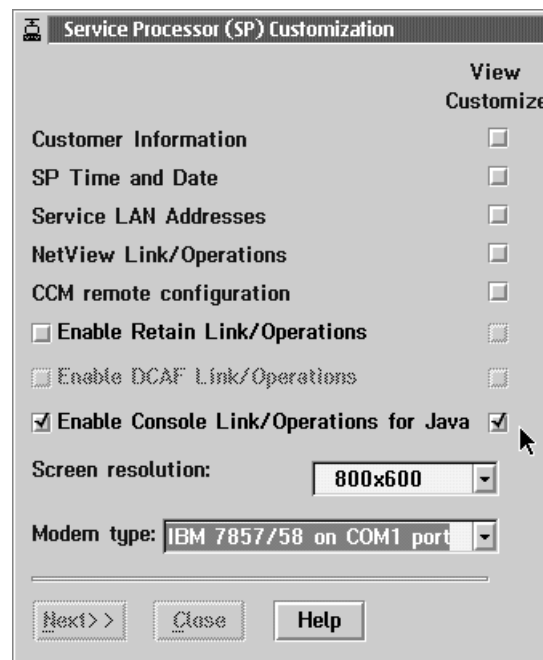


Figure 10-1. Service Processor (SP) Customization Panel

**Step 4.** Deselect **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**. The **Point-to-Point Protocol Configuration** panel appears.

The screenshot shows the 'Point-to-Point Protocol Configuration' window. It is divided into two main sections: 'PPP Server Customization' and 'PPP Client Login Customization'. In the 'PPP Server Customization' section, there are radio buttons for 'Accept any incoming calls on SP?' (Yes is selected), a 'Local phone number' field with '1111111111', and fields for 'PPP Server' (IP: 9.100.77.77, Subnet: 255.255.255.0, Hostname: SP11111S) and 'PPP Client' (IP: 9.100.77.78, Subnet: 255.255.255.0). There are also fields for 'DTE Speed' (57600) and 'MRU Size' (1500). The 'PPP Client Login Customization' section has fields for 'User Name' and 'Password' for both 'Customer' and 'IBM Service', with a 'View/Change Login Properties' button. At the bottom are navigation buttons: '<<Previous', 'Next>>', and 'Help'.

Figure 10-2. Point-to-Point Protocol Configuration Panel

**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.)

**a. Customizing the PPP Server on the service processor**

Fill in the **PPP Server**<sup>1</sup> with an IP address for the Server assigned within the same subnet range as the IP address of the service processor.

**b. 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.

**c.** Select **Incoming calls** and enter the modem phone number in the **Local phone number** field.

**d.** 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.

<sup>1</sup> 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.

<sup>2</sup> MRU stands for maximum request/reply unit, and any value entered into this field must fall within the range from 476 to 1500. If you have performance problems, specify a lower value.

- e. Enter a value in the **MRU Size**<sup>2</sup> field. (You can also leave the default values.)
- f. Click **View/Change Login Properties**. The **Manage Passwords** panel appears.

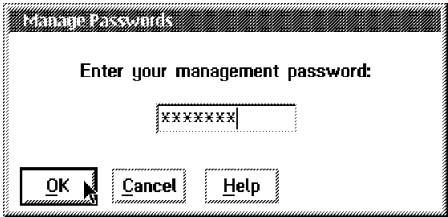


Figure 10-3. Manage Passwords Panel

**Step 6.** Enter your management password and click **OK**.

**Note:** The management password is the same as the one assigned to the service processor in MOSS-E. The default is **IBM3745**.

The **Point-to-Point Protocol Configuration** panel appears again with the PPP client login user names and passwords accessible in the **Customer** and **IBM Service** fields.

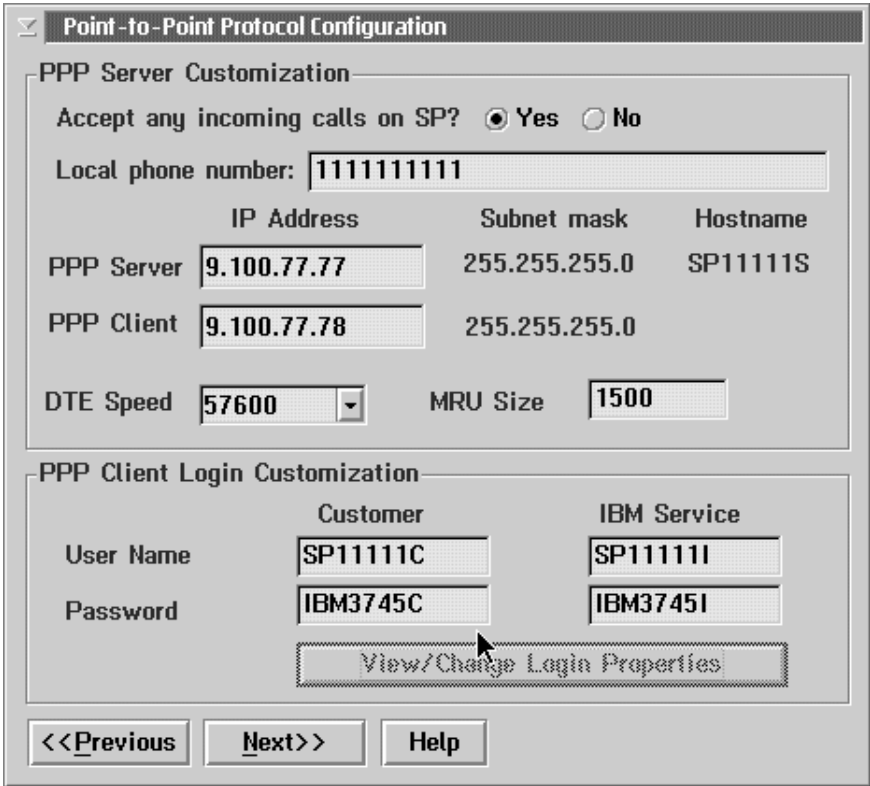


Figure 10-4. Entering Customer and IBM Service Passwords

**Step 7.** Modify or enter new user names and passwords for you and the IBM service representative. New passwords appear as asterisks in the field.

### Notes:

- a. Passwords must be in uppercase and up to 8 alphanumeric characters in length.
- b. 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, these passwords are only needed if you are configuring or using a switched line (modem) connection between the service processor and the remote workstation.

**Step 8.** Click **Next**. The **Console Configurations for Java** panel appears, displaying the connections of users at remote workstations.

The screenshot shows the 'Consoles Configuration for Java' window. It is divided into four panes for User #1 through User #4. Each pane has a 'Default' section and a 'Login' section. User #1 is the default user with 'Full' access. Users #2, #3, and #4 have 'View only' access. The 'View/Change properties' button is at the bottom center. Navigation buttons '<<Previous', 'Next>>', and 'Help' are at the bottom left.

Figure 10-5. Console Configurations for Java Panel

Up to four users can have concurrent access to the 3746 by means of the Java Console program. The default user (user 1) always has full-access privileges. Full-access privileges allow the user full control of the 3746 by means of both the keyboard and the mouse and the ability to upload and download files and to reboot the remote processor. The other users (users 2, 3, and 4) can have either full-access privileges or view-only access privileges. View-only access privileges allow the user to view the remote processor screen but not to perform any actions.

**Step 9.** In this step, you can change the logins (user names), assign or modify passwords to the service processor and any installed NNPs A and B (the default is no password), and change the access privileges for users 2, 3, and 4.

**Note:** For user 1 only, the entries for the service processor and the both NNPs under the **Login** field are the default logins.

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.

**Step 10.** Click **Next >>**. The **Service Processor (SP) Customization** panel reappears.

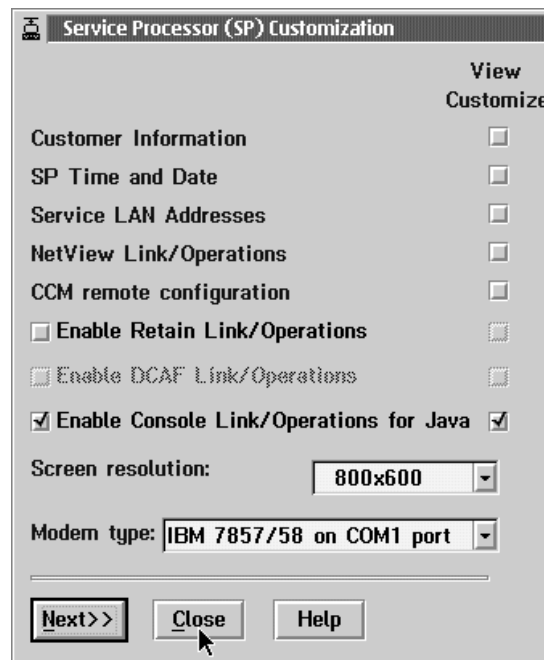
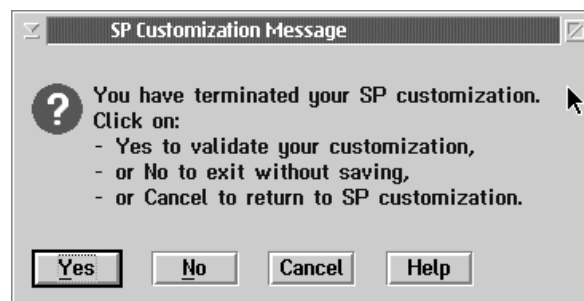
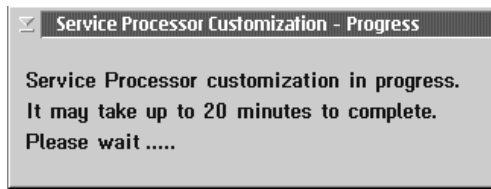


Figure 10-6. Service Processor (SP) Customization Panel

**Step 11.** Click **Close**. The **SP Customization Message** panel appears.



**Step 12.** Click **Yes** to save the configuration. The **Service Processor Customization - Progress** panel appears.



*Figure 10-7. Service Processor Customization - Progress Panel*

**Step 13.** Go to Chapter 11, "Using Java Console to Remotely Access a Service Processor with a Web Browser."

---

## Chapter 11. Using Java Console to Remotely Access a Service Processor with a Web Browser

Java Console on a remote workstation (as an applet or as a program) provides a link for controlling a service processor across the network. Java Console 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 processor<sup>1</sup>.
- Using the workstation to connect to a service processor across a LAN.

This section includes procedures for configuring the Java Console link using a Web browser. Procedures include the following:

- Configuring the Java Console 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 Java Console 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 11-2.
- “Remote Workstation Access Via Service LAN” on page 11-12.

For the procedure on installing Java Console as a program on your workstation, see “Installing Java Console as a Program on a Remote Workstation” on page 12-1.

---

### Remote Workstation Requirements

Java Console runs on the following platforms:

- OS/2 Warp (Version 3.0 and later)
- Windows 95, Windows NT, and Windows 98
- AIX/UNIX
- Macintosh

With any of the platforms listed above, the workstation requires a Web browser, and Java 1.1 (or later). Recommended Web browsers include the following products:

- Netscape 2.02 (for OS/2 Warp)
- Internet Explorer 4.01 (for Windows 95)
- Netscape Communicator 4.04 (for Windows 95)

---

<sup>1</sup> 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 Java Console access.

## Remote Workstation Access Via Switched Line (Modem)

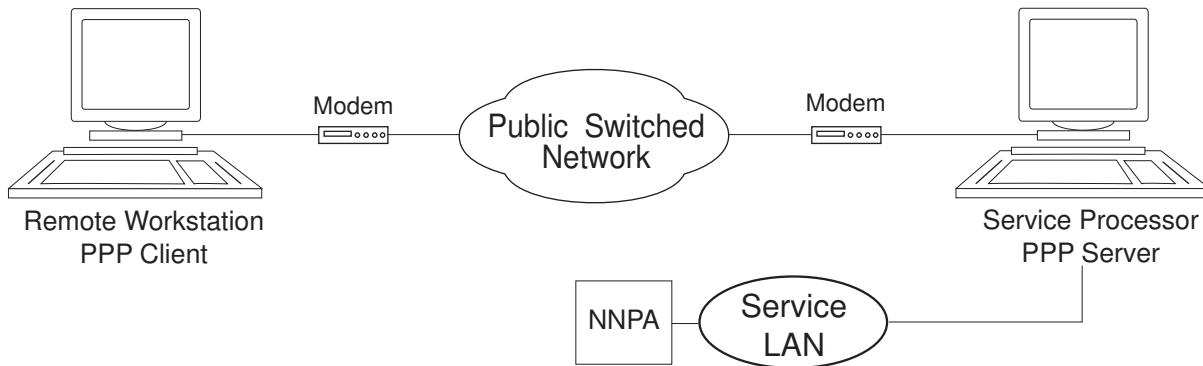


Figure 11-1. Modem-Attached Remote Workstation Using Java Console

This section contains the following example procedures for two different remote workstation platforms:

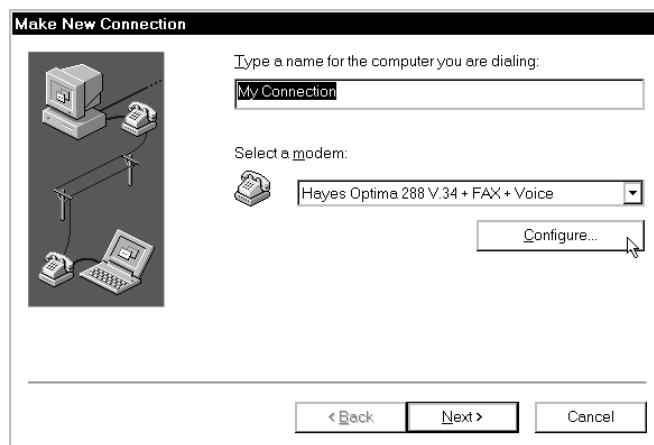
- In “Configuring the Remote Workstation in Windows 95.”
- In “Configuring the Remote Workstation in OS/2 Warp” on page 11-8.

### Configuring the Remote Workstation in Windows 95

It is assumed that the TCP/IP network component and workstation modem is correctly installed and configured.

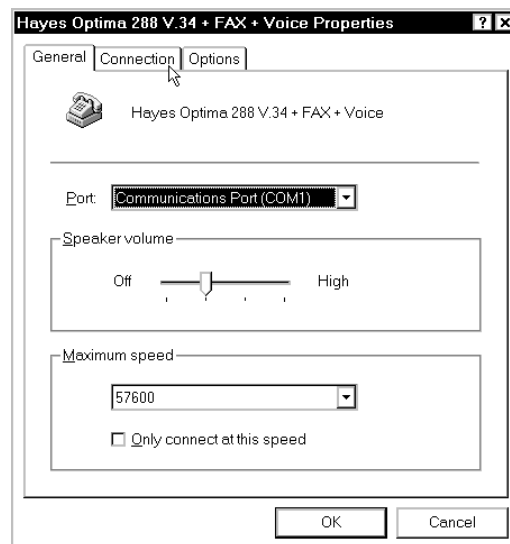
**Step 1.** Click **My Computer** and double-click the **Dial-Up Networking** folder.

**Step 2.** Double-click **Make New Connection**. Enter a name for the configuration, check that your modem is displayed, then click **Configure**.

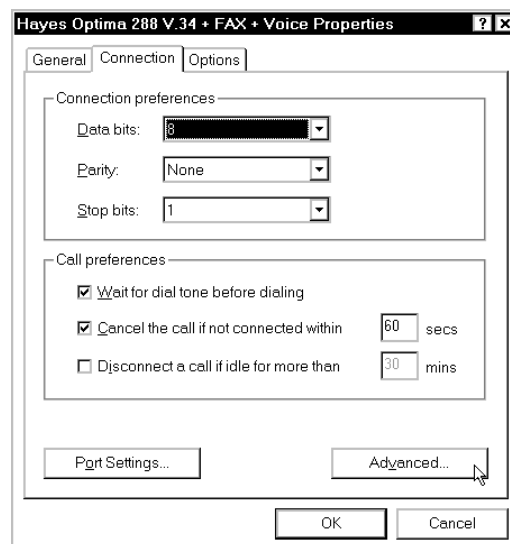




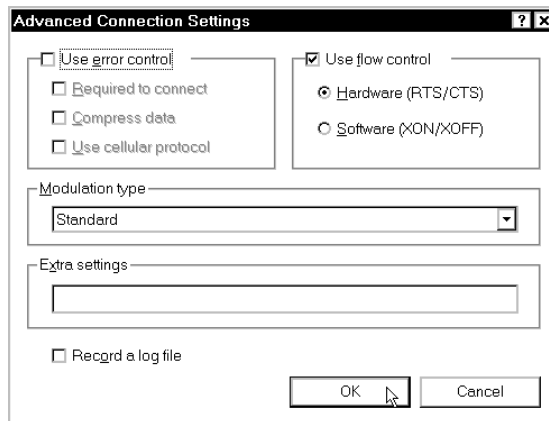
**Step 3.** Enter the COM port of the modem, the modem speed (the maximum speed, for example, 115200 for modem 7858, or 19200 for modem 7857), and click the **Connection** tab.



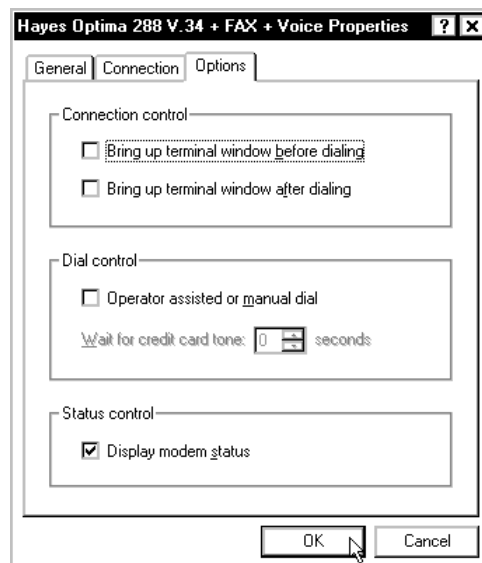
**Step 4.** Enter 8 in **Data bits**, None in **Parity** and 1 in **Stop bits**. Check **Wait for dial tone before calling** and **Cancel the call if not connected within 60 seconds**, then click the **Advanced** button.



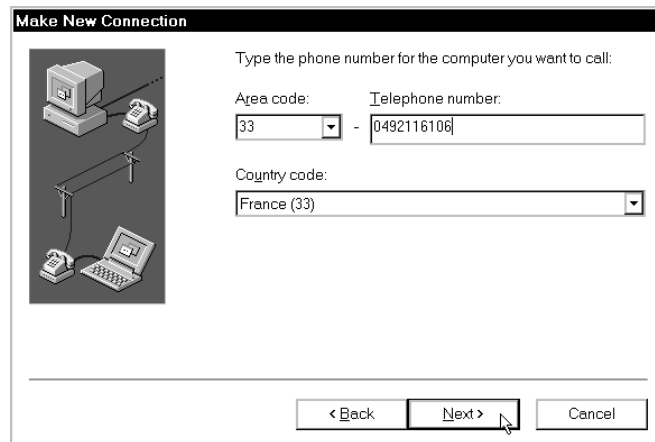
**Step 5.** Select **Use flow control** and **Hardware (RTS/CTS)** and click **OK**.



**Step 6.** Select the **Options** tab, select **Display modem status** and click **OK**. Then click **Next**.



**Step 7.** Enter the phone number of the service processor modem. Click **Next** then **Finish**.

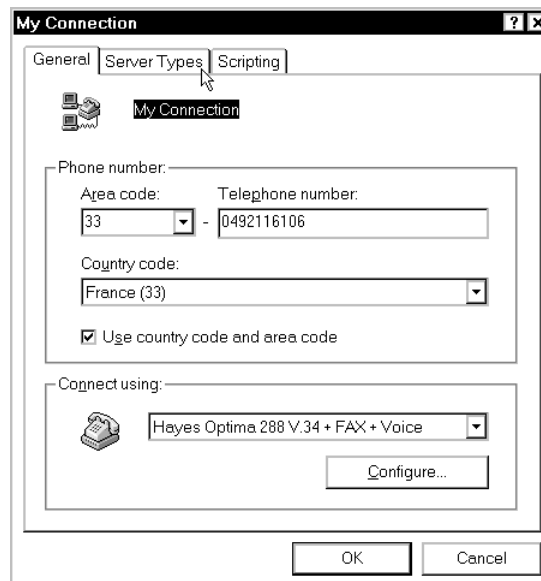


The 'Make New Connection' dialog box is shown. It has a title bar with the text 'Make New Connection'. On the left, there is an illustration of a computer and a telephone. The main area contains the text 'Type the phone number for the computer you want to call:'. Below this, there are two input fields: 'Area code:' with a dropdown menu showing '33', and 'Telephone number:' with a text box containing '0492116106'. Below these, there is a 'Country code:' dropdown menu showing 'France (33)'. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'. A mouse cursor is pointing at the 'Next >' button.

**Step 8.** The new configuration displays in the **Dial-Up Networking** folder.

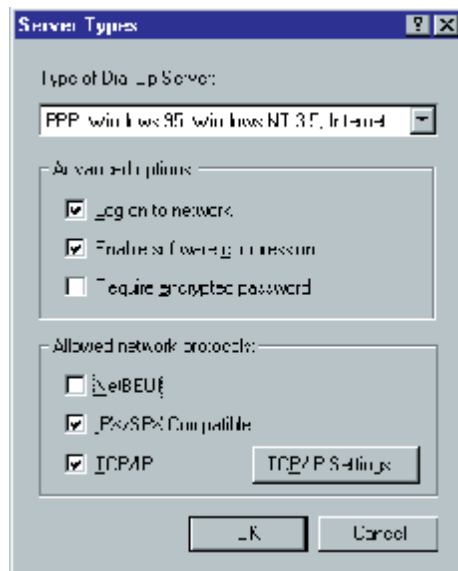
**Step 9.** Click the new configuration file once with the right mouse button and select **Properties**.

**Step 10.** Click the **Server Types** tab.

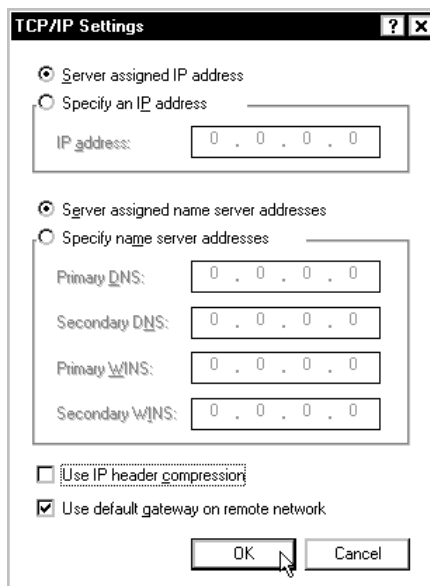


The 'My Connection' properties dialog box is shown. It has a title bar with the text 'My Connection' and a question mark icon. There are three tabs: 'General', 'Server Types', and 'Scripting'. The 'Server Types' tab is selected. The main area contains a 'Phone number:' section with 'Area code:' (dropdown '33') and 'Telephone number:' (text box '0492116106'). Below this is a 'Country code:' dropdown menu showing 'France (33)'. There is a checkbox labeled 'Use country code and area code' which is checked. Below this is a 'Connect using:' section with a dropdown menu showing 'Hayes Optima 288 V.34 + FAX + Voice'. There is a 'Configure...' button next to the dropdown. At the bottom, there are two buttons: 'OK' and '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.



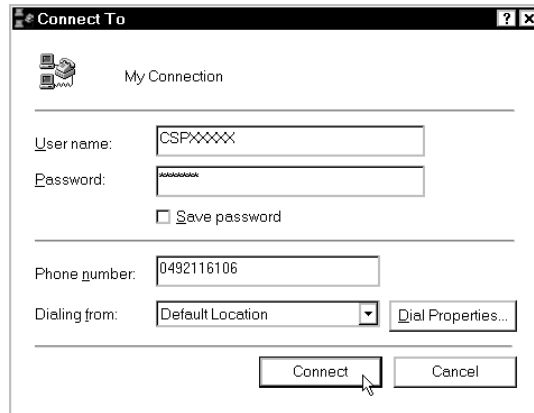
**Step 12.** Select **Server assigned IP address**, **Server assigned name server addresses**, and **Use default gateway on remote network**. Then click **OK** until the **Dial-Up Networking** folder displays.



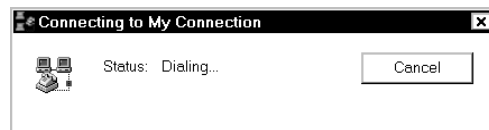
**Step 13.** Go to “Initiating a PPP Switched Line Connection in Windows 95” on page 11-7.

## Initiating a PPP 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 11-2).
- Step 2.** Check the entry in the **User name** field and enter a password. Then click **Connect**.

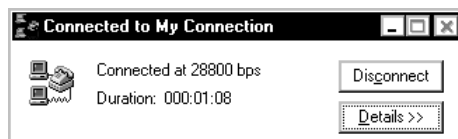


- Step 3.** A status message displays. Wait until the message indicates a successful connection.



- Step 4.** Go to “Initiating a Remote Workstation Connection to the Service Processor” on page 11-12.

- Step 5.** When you are finished with the connection, click **Disconnect**.



## 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:

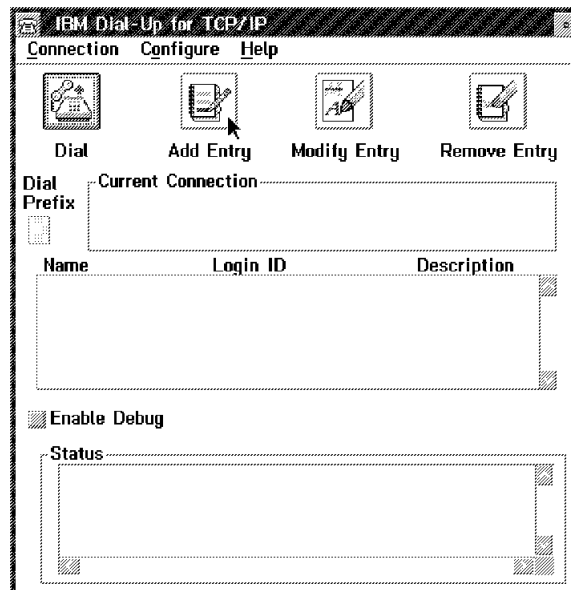
- IBM TCP/IP for OS/2
  - **OS/2 System** folder
  - **TCP/IP** file
  - **Network Dialer** icon.

### Configuring the Network Dialer Program in OS/2 Warp



**Step 1.** Double-click **Network Dialer**.

**Step 2.** In the **IBM Dial-Up for TCP/IP** panel, click **Add Entry**.



- 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.

**Add Entries**

xName: 3745Com

Description: Connect SP

Login ID: sp01234

Password: xxxxxx ☒ Required

Phone Number: 0,0492114207

Login Sequence: NONE

Connection Type: ☐ SLIP ☒ PPP

Inactivity Timeout Option

Minutes to Wait Before Automatic Hangup: 15

Help [x = required field]

Page 1 of 4

- 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.

**Add Entries**

Your IP Address:

Destination IP Address:

Netmask:

\*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]

Page 2 of 4

- 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 panel.

The screenshot shows the 'Add Entries' dialog box with the following settings:

- Modem Type:** Hayes Compatible
- Com Port:** com1
- Speed (Baud):** 57600
- Data Bits:** 8
- Parity:** NONE
- Prefix:** ATDT
- Mode:** ☒ Dial, ☐ Answer
- Initialization String 1:** AT&F
- Initialization String 2:** ATE0Q0S0=0V1X1&C1&D
- Call Waiting:** ☒ Disable, **Disable Sequence:** 270

Buttons: Login Info, Connect Info, Server Info, Modem Info, Help.

Page 4 of 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

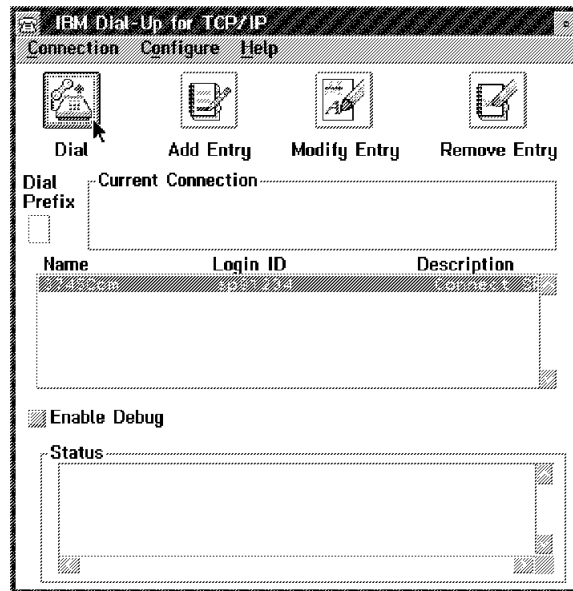


Network  
Dialer

- Step 1.** On your workstation, double-click



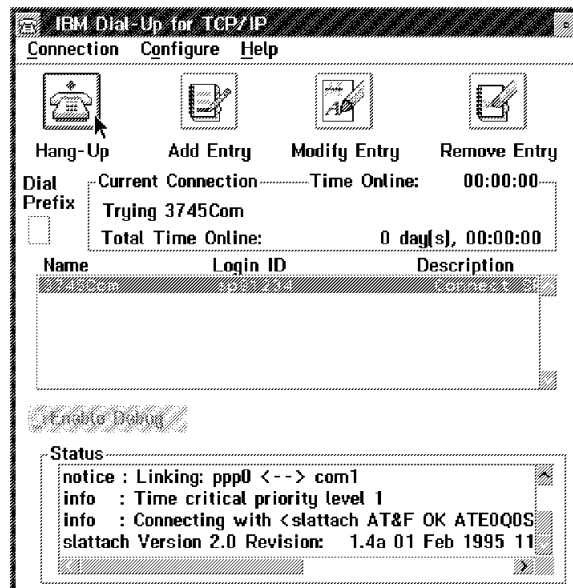
**Step 2.** In the **IBM Dial-Up for TCP/IP** panel, select the name entry for the controller (see 3 on page 11-9) and click **Dial**. The **Status** field displays connecting information.



**Step 3.** If you are prompted, enter your password.

**Step 4.** Go to “Initiating a Remote Workstation Connection to the Service Processor” on page 11-12.

**Step 5.** When you have finished with the connection, click **Hang-Up**.



---

## Remote Workstation Access Via Service LAN

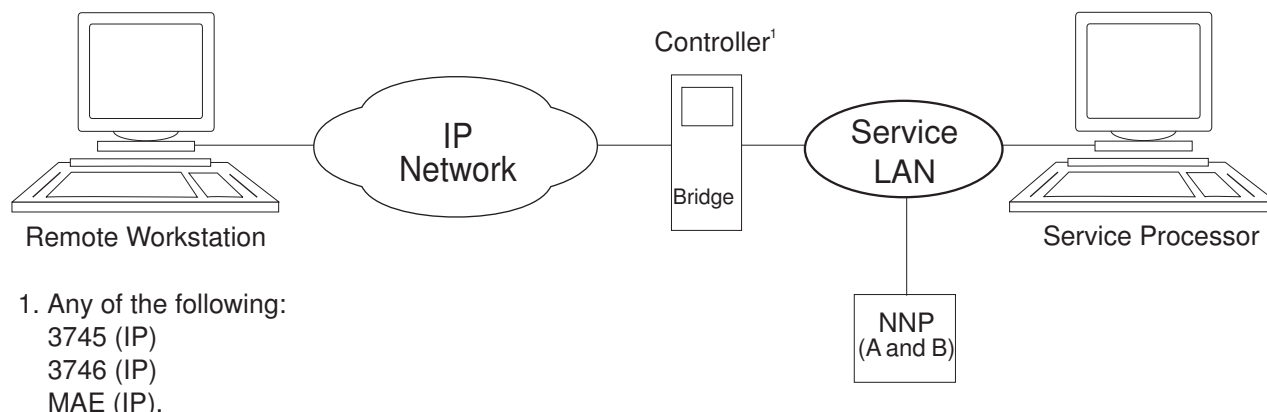


Figure 11-2. LAN-Attached Remote Workstation Using Java Console

## 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:

- Java Console is running as an applet on a modem-attached workstation.
- Java Console is running as an applet on a LAN-attached workstation.

**Step 1.** Open the Web browser on your workstation (in the following procedure, Netscape<sup>2</sup> is used as an example).

**Step 2.** Type the URL: `http://1.2.3.4:77xx/java` where 1.2.3.4 is the IP address of the service processor, and 77xx is the TCP/IP socket for the specific user:

<b>7787</b>	User 1 (the default user)
<b>7788</b>	User 2
<b>7789</b>	User 3
<b>7790</b>	User 4

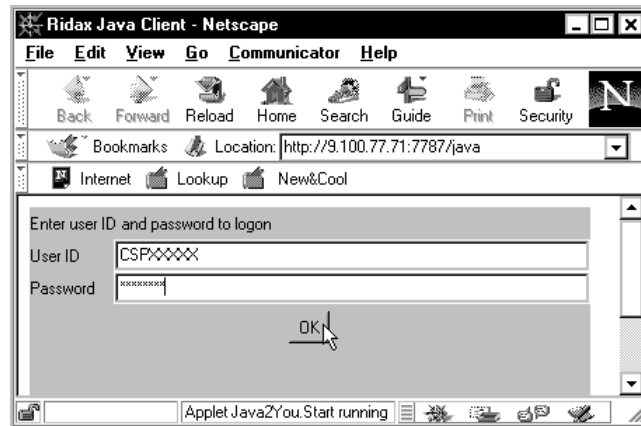
Then press .

---

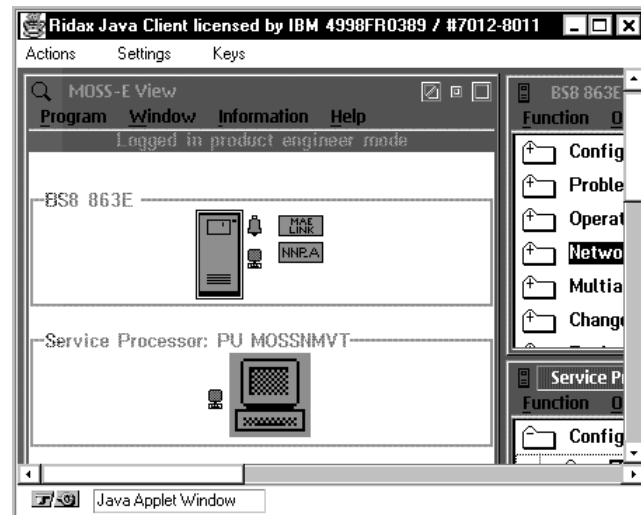
<sup>2</sup> Configure your browser without a proxy connection to the network. In Netscape, for example, select **No proxies** in the options for **Network Preferences**.

**Step 3.** In the Java Client panel, enter the user ID and password for the service processor (see Step 9 on page 10-6) and click **OK**.

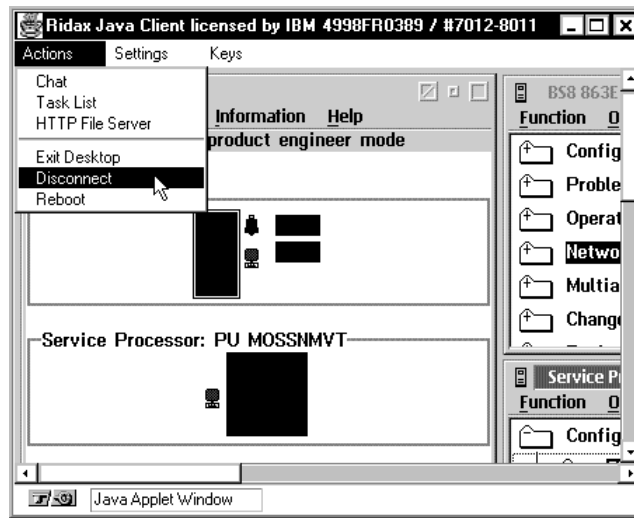
**Important!:** Make sure you enter the user ID and password in uppercase.



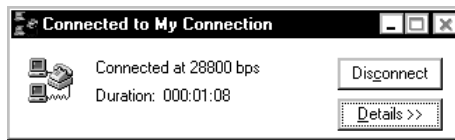
**Step 4.** The **MOSS-E View** panel displays.



**Step 5.** To end the Java Console session, click **Disconnect** from the **Actions** menu.



**Step 6.** If you are connected via modem, click **Disconnect**.



---

## Initiating a Remote Workstation Connection to the NNP

Java Console 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 11-15.

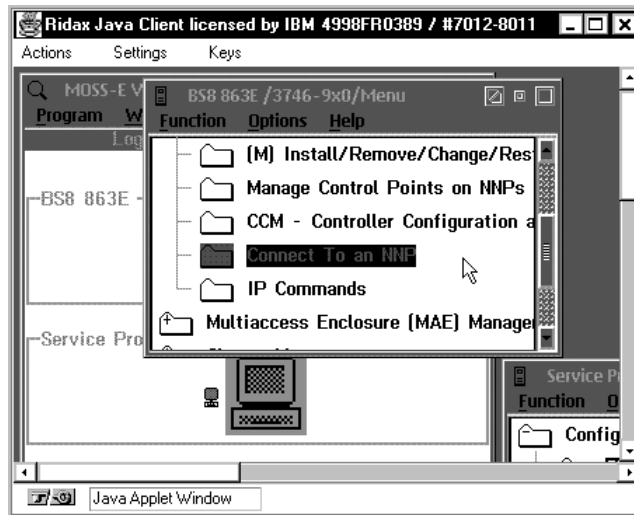
## Connecting to the NNP in MOSS-E

**Step 1.** Follow Steps 1 on page 11-12 to 4 on page 11-13.

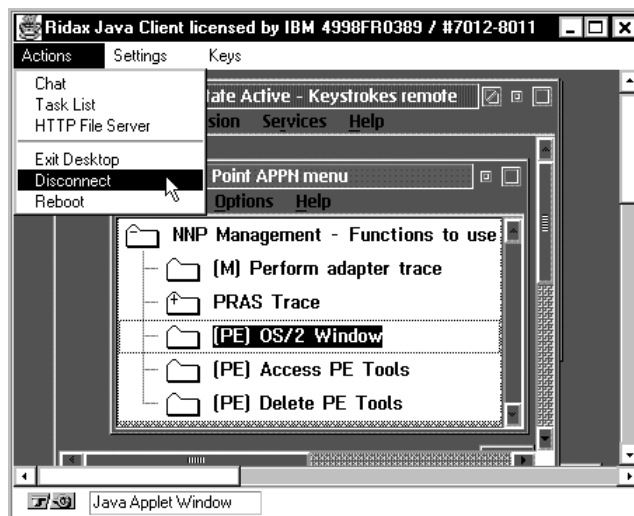
**Step 2.** In **MOSS-E View**, open the 3746 menu.

**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

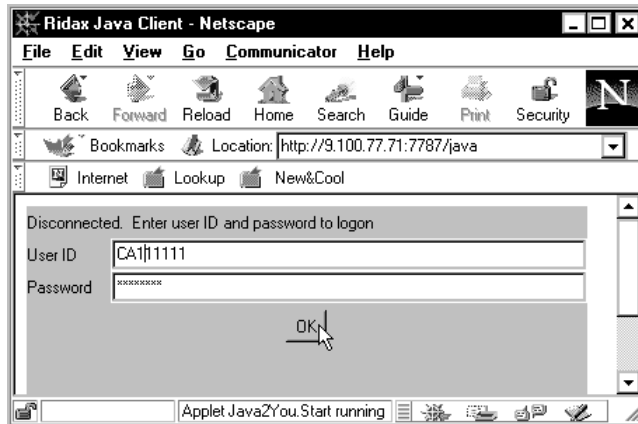
**Step 1.** Open the Web browser on your workstation (in the following procedure, Netscape is used as an example).

**Step 2.** Type the URL: `http://1.2.3.4:77xx/java` where 1.2.3.4 is the IP address of the service processor, and 77xx is the TCP/IP socket for the specific user:

7787	User 1 (the default user)
7788	User 2
7789	User 3
7790	User 4

Then press .

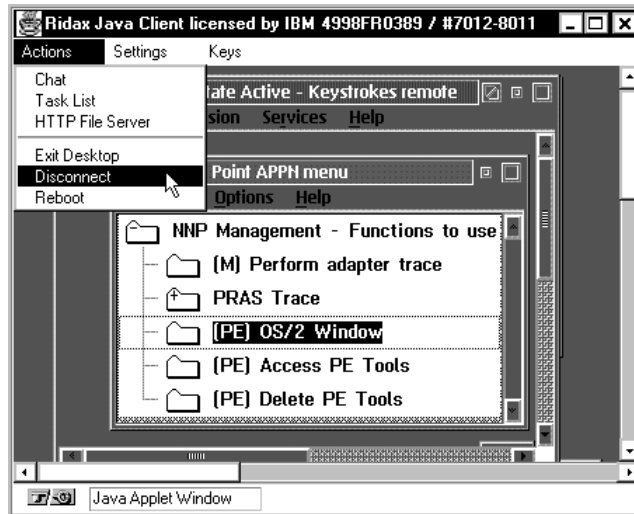
**Step 3.** In the Java Client panel, enter the user ID and password (in uppercase) for the NNP (see Step 9 on page 10-6) and click **OK**.



**Step 4.** The **Java Client** panel displays with the **Control Point APPN** menu.



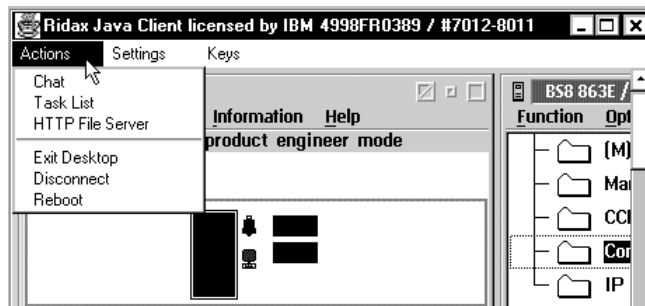
**Step 5.** To close the session with the NNP, click **Disconnect** from the **Actions** menu.



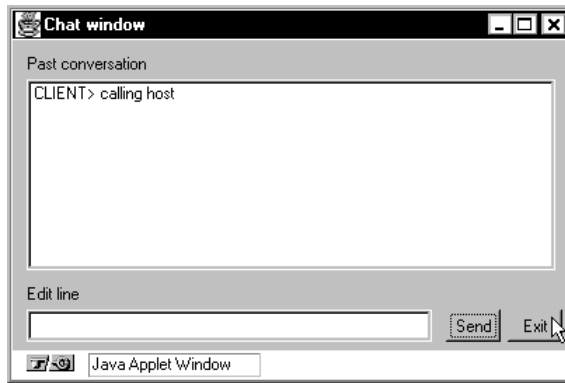
## Java Console Menus

The following text describes some Java Console menu functions. These are mainly the same if Java Console 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 Java Console applet, which displays as **File Manager** in the Java Console program. For more information, see “Java Console File Manager” on page 12-6.

## Actions Menu



### Chat



A **Chat panel** 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** panel. Any response of the operator at the service processor appears in the **Past conversation** panel prefixed by HOST>. Click **Exit** to close the panel.

#### Task List

Displays the **Window List** with all the current programs running on the processor.

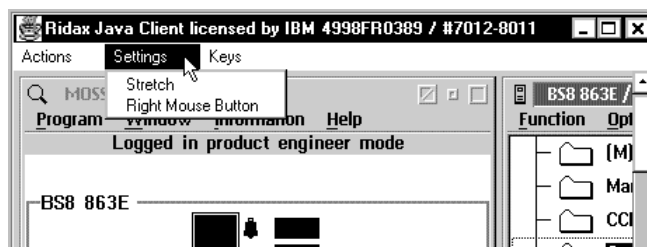
#### Exit Desktop

Closes Java Console.

#### Reboot

Reboots the service processor from the remote workstation.

## Settings Menu



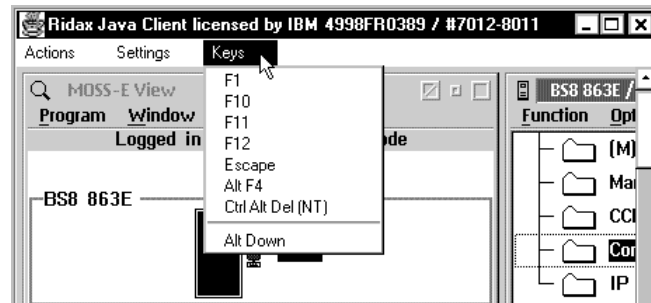
#### Stretch

Adjusts the desktop displayed of the service processor to the panel 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.





## F1

Opens help panels on the service processor.



---

## Chapter 12. Installing the Java Console Program

Java Console can be run on the remote workstation as an application installed on your hard disk.

---

### Installing Java Console as a Program on a Remote Workstation

Microcode F12720 and later on the service processor supports running the Java Console program on your remote workstation. The following procedure describes how to download the Java Console program file from the service processor to the hard disk of the remote workstation.

### Remote Workstation Requirements for Java Console

To install Java Console as an application on your workstation, make sure you have the software support as specified in "Overview of Java Console" on page 10-1.

### Procedure for Installing the Java Console 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 10-3).

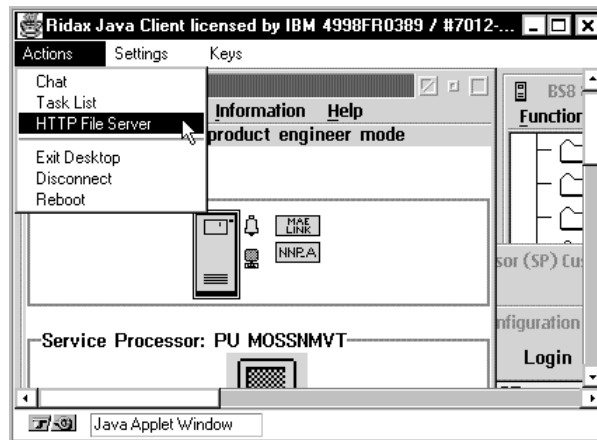
**Step 2.** Up to four users at remote workstations can have concurrent access to the 3746 by means of the Java Console program.

Using your Web browser (Netscape 2.02, for example) and with the Java 1.1 applet running, establish a user-specific pathway to the service processor by typing the following code: `http://1.2.3.4:77xx/java` where 1.2.3.4 is the IP address of the service processor, and 77xx is the TCP/IP socket for the specific user:

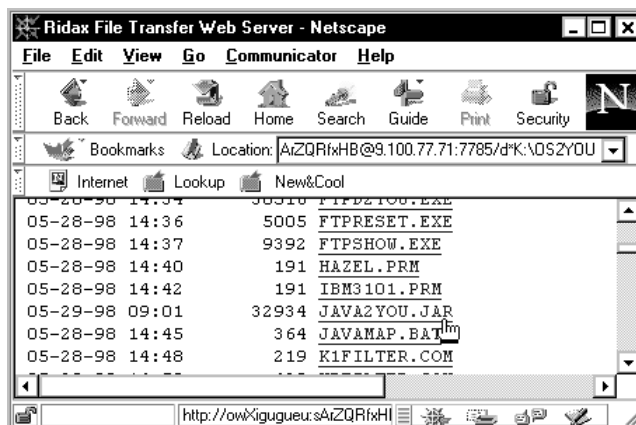
<b>7787</b>	User 1 (the default user)
<b>7788</b>	User 2
<b>7789</b>	User 3
<b>7790</b>	User 4

and pressing .

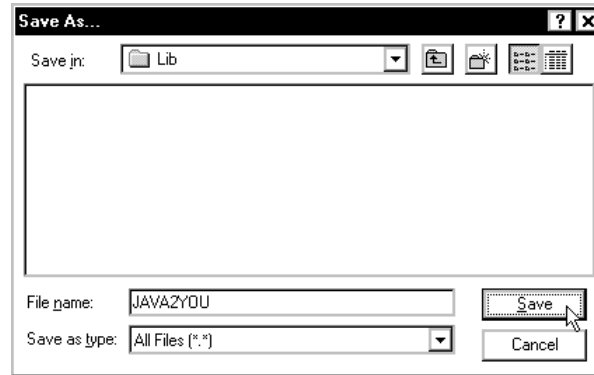
**Step 3.** In the main Java Console panel, open the **Actions** menu and click **HTTP File Server**.



**Step 4.** In the **File Transfer Web Server** panel, select the OS2YOU directory on the service processor (drive K). You can check that the path and drive letter are correct in the URL field on your browser. Then click the file **JAVA2YOU.JAR**.



- Step 5.** Download the file to the LIB directory in the main Java directory on your workstation. If your workstation is running OS/2, for example, this would be C:\JAVAXXX\LIB (where XXX represents the version of OS/2). If your workstation is running the JRE program, for example, this would be C:\Program Files\JavaSoft\JRE\1.1\lib\Java2You.Jar. The file is 32 KB.



- Step 6.** Go to “Remote Workstation Settings for Java Console.”

## Remote Workstation Settings for Java Console

Depending on your workstation platform, you must configure some workstation settings to enable the Java Console program.

**Note:** The information under this heading, “Remote Workstation Settings for Java Console,” and the following, “Running the Java Console Program in Windows” on page 12-4, give example configurations for enabling the transfer of data between the workstation and the service processor. For this to occur, the JRE program must be installed on your workstation. The JRE program is platform dependent, and available at no charge from the following Web sites:

- **WARP 4**

<http://www.ibm.com/java/jdk/JREsite.html>

- **Windows 95, Windows 98, and Windows NT 4.0**

<http://java.sun.com/products/jdk/1.1/jre/download-jre-windows.html>

- **Sun Solaris**

<http://www.sun.com/solaris/jre/index.html>

If you are using AIX, JRE is part of the Java Development Kit (JDK).

The following workstation settings apply to Windows 95 and OS/2 Warp.

### Windows 95

- Step 1.** Create a batch file (.BAT) and enter the following:

```
@echo OFF
jre -cp "C:\Program Files\JavaSoft\JRE\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 path and file name as it appears in the example (with the mix of upper- and lower-case lettering).

**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.

---

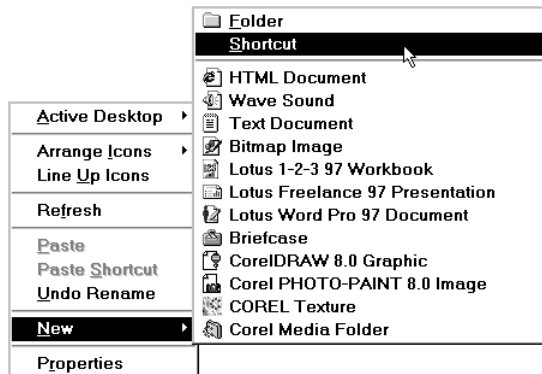
## Running the Java Console Program in Windows

For a connection between the remote workstation and the service processor across a PPP switched line, initiate the modem connection first (see “Initiating a PPP Switched Line Connection in Windows 95” on page 11-7 for Windows, and “Initiating a Switched Line Connection in OS/2 Warp” on page 11-10 for OS/2). Then continue with the procedure below.

To use the Java Console program for a connection between the remote workstation and the service processor across a LAN, continue with the following procedure.

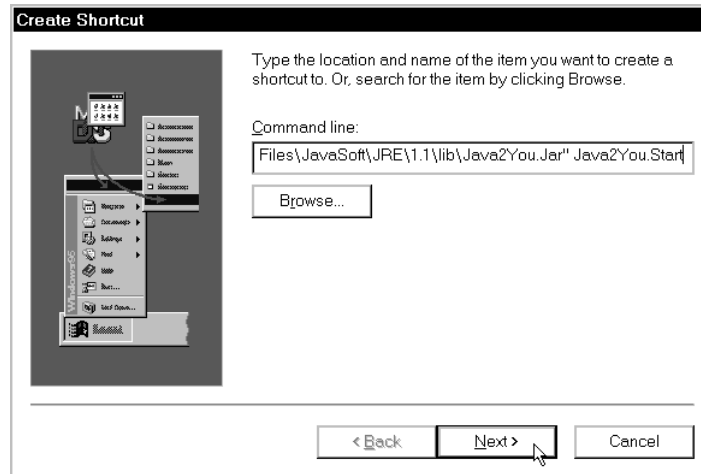
**Step 1.** On your desktop, click the right mouse button.

**Step 2.** Select **New** and **Shortcut** from the menu.



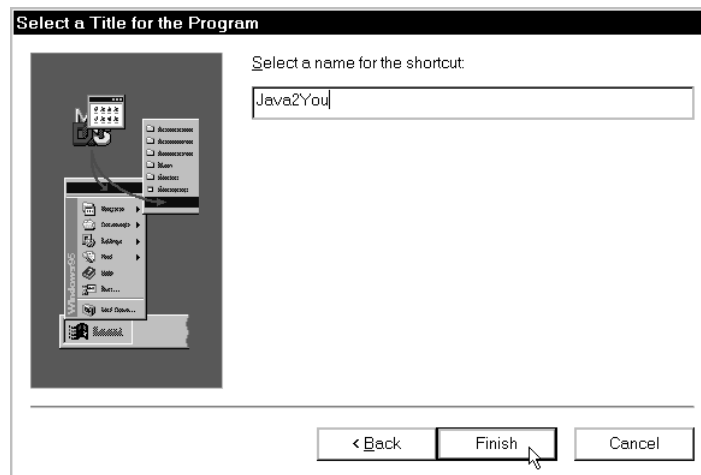
**Step 3.** The **Create Shortcut** panel displays. Type the following command in the **Command line** field:

```
jrew -cp "C:\Program Files\JavaSoft\JRE\1.1\lib\Java2You.Jar" Java2You.Start
```



**Step 4.** Click **Next**.

**Step 5.** Enter a name for the shortcut and click **Finish**.




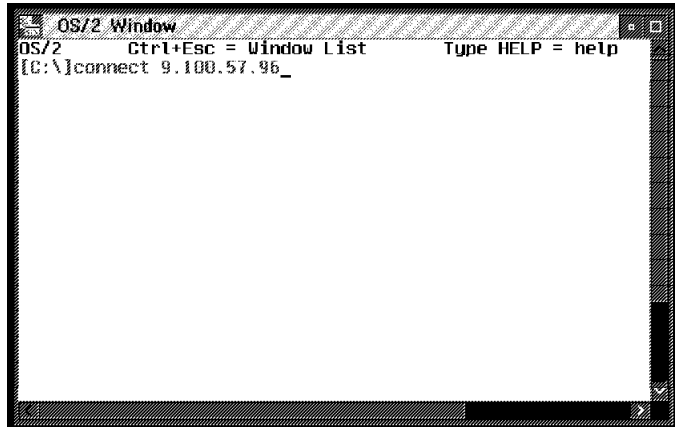
**Step 6.** A new icon appears on your desktop. Double-click the icon.

**Step 7.** Enter the IP address of the service processor in the **Host** field. Enter the User ID and password if necessary (in uppercase), then click **OK**.

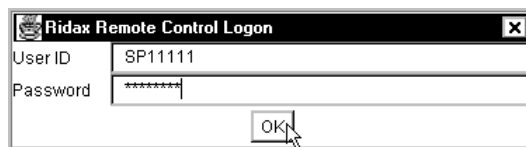
---

## Running the Java Console Program in OS/2

- Step 1.** In an OS/2 panel, type the name of the command file followed by the IP address of the service processor or the NNP. Then press .



- Step 2.** Enter the Userid and password for the service processor and click **OK**.



- Step 3.** To close the session with the service processor, click **Disconnect** from the **Actions** menu.

---

## Java Console File Manager

When Java Console 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.

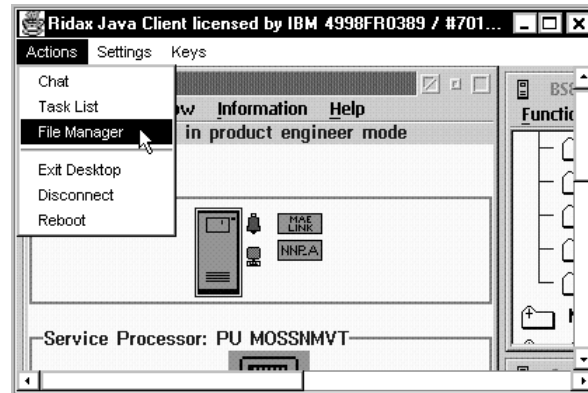
For more information on CCM configuration files, see the *CCM: Users Guide*, SH11-3081.

Go to “Uploading Files to the Service Processor” on page 12-7.

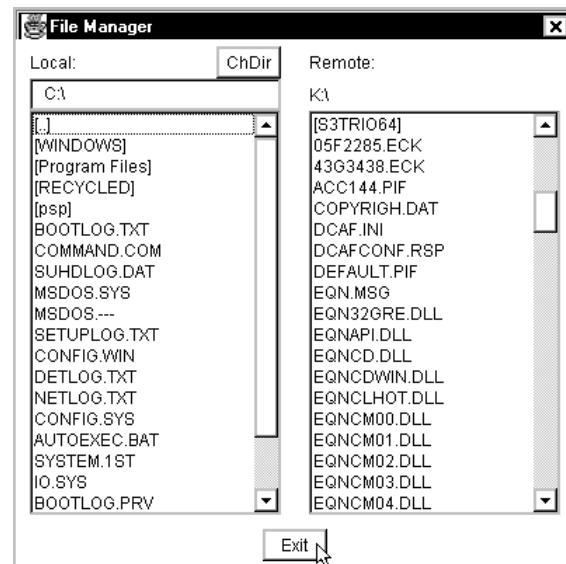


## Uploading Files to the Service Processor

**Step 1.** In the **Java Client** panel, click **File Manager** from the **Actions** menu.



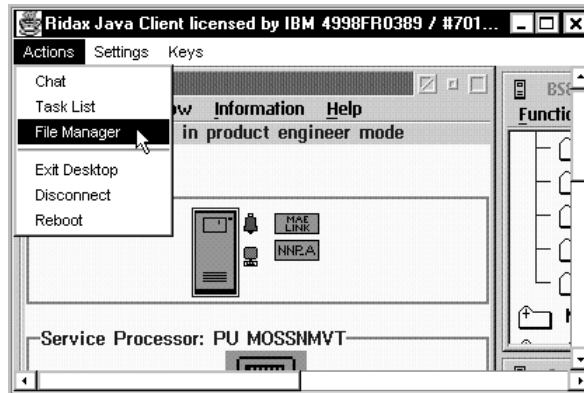
**Step 2.** Select the directory of the file on your remote workstation. Select the destination for the file in a service processor directory. Locate the directory of the file that you want to upload on the workstation and double-click the file. The file transfer takes place immediately.



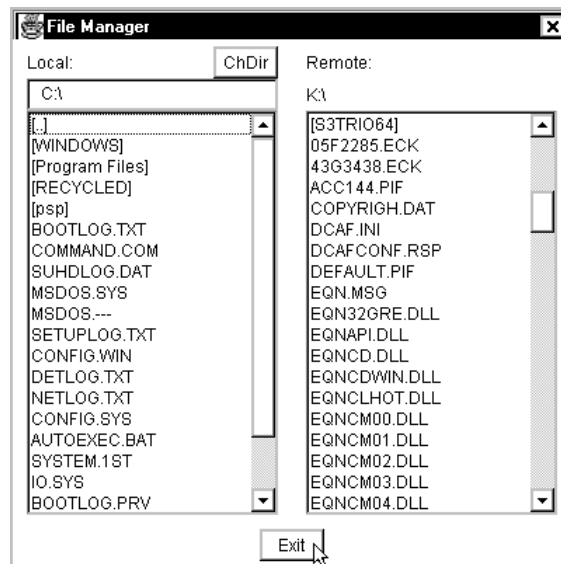
**Step 3.** When the file upload is successfully completed, click the **Exit** button to close **File Manager**.

## Downloading Files from the Service Processor

**Step 1.** In the Java Client panel, 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.



**Step 3.** When the file upload is successfully completed, click the **Exit** button to close **File Manager**.

---

## Appendix A. Setting Up Local, Alternate, or Remote Consoles

This chapter applies to **3745 Models 130 to 610**. It does not apply to **Models A**.

---

### General Information on Consoles

A local console is required, while an alternate or remote console is optional. You can use any of the following devices:

- An IBM 3151 Display Station (Models 110, 160, 310, 360, 410, or 460) in native mode (recommended) or in IBM 3101 emulation mode.

**Note:** Models which do not support block mode cannot be used as consoles for the IBM 3745 Communication Controller.

- An IBM 3153 Display Station in IBM 3151 emulation mode.
- An IBM 3161 ASCII Display Station (Model 11, 12, 21, or 22) in IBM 3101 emulation mode.
- An IBM 3163 ASCII Display Station (Model 11, 12, 21, or 22) in IBM 3101 emulation mode (feature code 8235).
- An IBM PS/2, running OS/2 Extended Edition, Release 1.1 or later.
- An IBM 3727 Operator Console with adhesive keypad labels (part number 03F7773), or any equipment providing equivalent functions (including cable and keyboard).

Check your console cables (for more information, refer to Appendix C in this manual and the *Technical News Letter*, GN22-5490 part of *Input/Output Equipment Installation Manual - Physical Planning*, GN22-5490).

If a cable or console does not work correctly, contact your installation coordinator.

#### Notes:

1. Consoles can be shared by an IBM 7427 Console Switching Unit. A maximum of four IBM 3745 or IBM 3725 Communication Controllers can share a local console. The maximum distance is 7 m (23 ft). A maximum of six 3745 or 3725 Communication Controllers can share an alternate console. The maximum distance is 122 m (400 ft).
2. If you set up certain consoles in an established system, you will need to reload MOSS (IML). Refer to the *Advanced Operations Guide*, SA33-0097.

## Procedures for Local, Alternate, and Remote Consoles

The procedures in this chapter are the same for local, alternate, or remote consoles unless otherwise indicated.

---

### 3151 in Native Mode (Local, Alternate or Remote)

#### Notes:

1. **Native mode is the recommended mode of operation.**
2. The 3151 Model 110 can only be used in native mode because it does not support 3101 emulation.
3. The MOSS function keys are PF1 through PF8.
4. The line **not Model 110** does not appear on the Model 110 menu.

#### Setting Up

1. Hold down  and press  to display the **Setup** menu.

**Note:** If the 3151 is new, the **Setup** menu appears automatically when you power ON.

2. Fill in the fields as follows, using the ↑ and ↓ keys to move between items and the spacebar to select the parameter values:

Machine Mode	IBM3151
Screen	NORMAL
Row and Column	24 X 80
Scroll	JUMP
Auto LF	ON
CRT Saver	OFF
Line Wrap	ON
Forcing Insert	OFF
Tab	FIELD

3. Press Send for the next menu.
4. Open the **Setup** menu and fill in the fields as follows:

Operating Mode	BLOCK
Line Speed (bps)	2400 <sup>1</sup>
Word Length (bits)	7
Parity	EVEN
Stop Bit	1
Turnaround Character	DC3
Line Control	PRTS
Break Signal (ms)	500
Send Null Suppress	ON

5. Press Send.

---

<sup>1</sup> 1200 for remote consoles.

6. Open the Keyboard/Printer Menu and fill in the fields as follows:

**Keyboard**

Enter	RETURN (not Model 110)
Return	FIELD
New line	CR
Send	PAGE
Insert character	MODE

**Printer**

Line speed	2400
Word length (bits)	7
Parity	EVEN
Stop bit	1
Characters	NATIONAL (not Model 110)

7. Press .

8. Use the arrow keys to highlight **Save data**.

9. Press the spacebar to save the configuration.

10. Hold down  and press  to return.

11. Go to “Testing a Connection with a Local or Alternate Console” on page A-13 and check the connection to the 3745.

---

## 3151 in 3101 Emulation Mode (Local, Alternate, or Remote)

The procedure below is the same for local, alternate, or remote consoles unless otherwise noted.

**Important Note:** If you have difficulty in using the 3151 remote console for a 3745 Model 210 or 410, contact your IBM service representative to ensure that you have the correct MOSS Console Adapter (MCA) card installed.

**Notes:**

1. **Native mode is the recommended mode of operation.**
2. The 3151 Model 110 must be used in native mode because it does not support 3101 emulation.
3. The line **not Model 110** does not appear on the Model 110 menu.

**Setting Up**

1. Hold down  and press  to display the **Setup** menu.

**Note:** If the 3151 is new, Setup displays automatically when you turn the power ON.

2. Fill in the fields as follows, using the ↑ and ↓ keys to move between items and the spacebar to select the parameter values:

Machine Mode	IBM3101
Screen	NORMAL
Row and Column	24 X 80
Scroll	NO
Auto LF	ON
CRT Saver	OFF
Line Wrap	ON
Forcing Insert	OFF
Tab	FIELD

3. Press Send for the next menu.

4. Open the **Setup** menu and enter the following:

Operating Mode	BLOCK
Line Speed (bps)	2400 <sup>1</sup>
Word Length (bits)	7
Parity	EVEN
Stop Bit	1
Turnaround Character	DC3
Line Control	PRTS
Break Signal (ms)	500
Send Null Suppress	ON
Pacing	OFF (ON in native mode)




5. Open the Keyboard/Printer Menu and enter the following:

#### Keyboard

Enter	RETURN (not Model 110)
Return	FIELD
New line	CR
Send	PAGE
Insert character	MODE

#### Printer

Line speed	2400
Word length (bits)	7
Parity	EVEN
Stop bit	1
Characters	NATIONAL (not Model 110)

6. Press .
7. Use the arrow keys to highlight **Save data**.
8. Press the spacebar to save the configuration.
9. Hold down  and press  to return.
10. Go to "Testing a Connection with a Local or Alternate Console" on page A-13 and check the connection to the 3745.

---

## 3153 in 3151 Emulation Mode (Local, Alternate, or Remote Consoles)

### Recommended Settings

Refer to the *Users Guide*, SA33-0356 for information on console settings in the country where you reside.

### Starting the Console Configuration

Hold down  and press  to display the **Setup** menu.

#### Key F1 (QUICK)

Emulation=3151	EIA Baud Rate=2400 <sup>1</sup>	EIA Data Format=7/1/E
Enhanced=OFF N/A	AUX Baud Rate=2400	Aux Data Format=7/1/E
Comm Mode=FULL BLOCK	Language=US	Sessions=ONE
Host/Printer=EIA/AUX		

#### Key F2 (GENERAL)

Emulation=3151	Enhanced=OFF N/A	Auto Wrap=0N
Curs Dir= LEFT TO RIGHT	Auto Scroll=0N	Monitor Mode=OFF
Screen Saver=OFF	Bell Vol=06	Warning Bell=0N
Bell Length=140ms	Setup Lang=US	Sessions=ONE

#### Key F3 (DISPLAY)

Display Cursor=0N	Cursor=STEADY BLOCK	Viewports=ONE
Pages=01	Page Length=24	Screen Video=NORMAL
Columns=80	Scroll=JUMP	Overscan Borders=0N
Width Change Clear=OFF	Speed=FAST	Refresh Rate=71 HZ

#### Key F4 (KEYBOARD)

Language=US	Char Set=NATIONAL	Key Mode=ASCII
KeyClick=OFF	Key Repeat=0N	Key Rate=20 CPS
Margin Bell=OFF	Key Lock=CAPS	Caps Lock=TOGGLE
Num Lock=TOGGLE		

#### Key F5 (KEYS)

Return Key=field	Enter Key=RETURN	New Line=CR
Send Key=PAGE	Insert Character=MODE	Backspace=BS BS
Desk Acc=ctrl <-	Pound Key=US	Return Key REPEAT=OFF
UDKS=EMUL DEPENDENT		

#### Key F6 (PORTS)

EIA Baud Rate=2400 <sup>1</sup>	EIA Data Format=7/1/E	EIA Parity Check=off
AUX Baud Rate=2400	AUX Data Format=7/1/E	Aux Parity Check=off
EIA Xmt=Xon-Xoff <sup>2</sup>	EIA Recv= Xon-Xoff(XPC) <sup>2</sup>	EIA Xmt Pace= Baud
Aux Xmt=Xon-Xoff	Aux Recv= Xon-Xoff(XPC)	Aux Xmt Pace= Baud

#### Key F7 (HOST)



---

<sup>2</sup> No Protocol for remote consoles.

<sup>3</sup> HALF BLOCK for remote consoles.



Comm Mode= FULL BLOCK <sup>3</sup>	Local= OFF	Null Suppress=OFF
Break= 500MS	Line Control=PRTS	Disconnect=2 SEC
Recv <CR>=<CR><LF>	Recv <Del>=IGNORE	Send Ack=OFF
Alt Input DATA=ON	Turnaround Char=DC3	Send Null=ON

## Closing the Console Configuration

- Hold down  and press  to display the **Setup** menu.
  - Type Y to save the configuration.
  - Type N to cancel the new configuration or keep the previous one.
  - Type C to review the configuration.

---

## 3161 or 3163 (Local, Alternate, or Remote)

- Hold down  and press .
- Fill in the fields as follows, using the ↑ and ↓ keys to move between items and the spacebar to select the parameter values:

Machine Mode	IBM3101
Operating Mode	BLOCK
Interface	RS232C
Line Control	PRTS
Line Speed (bps)	2400 <sup>1</sup>
Parity	EVEN
Turnaround Character	DC3
Stop Bit	1 <sup>4</sup>
Word Length (bits)	7 (3161 only)
Response Delay	100 (3161 only)
Break Signal (ms)	500 (3161 only)

- Press Send.
- Press Select.
- Use the spacebar to enter as follows:
 

Scroll=OFF	Return=CR	Line Wrap=ON
AutoLf=ON	Send=PAGE	Null Supp=ON
- Press Select to return.
- Go to “Testing a Connection with a Local or Alternate Console” on page A-13 for checking the connection to the 3745.

---

## IBM PS/2 (Local, Alternate, or Remote)

**Note:** To complete this procedure successfully, you must be running OS/2 Extended Edition, Version 1.1 or later, at SYSLEVEL 03030 or later.

Use the following procedure to configure a PS/2 as a local, alternate console, or remote console.

---

<sup>4</sup> 2 for remote consoles.



1. Open an OS/2 panel.
2. Type `CD \CMLIB`.
3. At the prompt, type `COPY ACSCFG.CFG MOSSLLOC.CFG`. (MOSSREMM for remote consoles)
4. Type `CD\...`

5. Add the following line to the CONFIG.SYS file:

```
DEVICE=C:\CMLIB\ASYNCDDB.SYS COM1
```


**Notes:**

- a. If you are using a PC/AT or a PC/XT equipped with an 80286 microprocessor, type ASYNCDDB.SYS instead of ASYNCDDB.SYS.
- b. Open the CONFIG.SYS file and search for the line:


```
DEVICE=C:\OS2\COMxx.SYS (wherexx = 01 ,02, or 03)
```

If you find it, insert this line before it:

```
ASYNCDDB/A
```


6. On your desktop, open Communications Manager program (this takes 10 seconds to load).
7. When the Communications Manager program menu appears, select **Advanced**.
8. Select **Configuration**.
9. Type MOSSLLOC (MOSSREM for remote consoles), then press . The Communications Configuration menu displays.
10. Select **Workstation profile**.
11. Select **Change** and customize as follows:



Error log file name	ERROR.DAT (for example)
Error log size	16 (for example)
Error log overflow option	WRAP
Message log file name	MESSAGE.DAT (for example)
Message log size	500 (for example)
Message log overflow option	WRAP
Enable auto-start options	YES


12. Press  to open the next panel, and continue with the Auto-Start Options:
  - ACDI service
  - ASCII terminal emulation
    - 3270 terminal emulation (DFT)
    - 3270 terminal emulation (SDLC)

Display this panel first:


- Communication Manager main menu
- ASCII Terminal Emulation
- 3270 Terminal Emulation

13. Press . The message **The profile has been saved** displays.
14. Select **Asynchronous feature profiles**.
15. Select **Asynchronous communication port profile**.
16. Select **Create** and enter the following:


Country code	xxx
(where xxx is your country code)	
Profile name	COM1
17. Press **Enter**, then select **Other modem or device**.
18. Press **Enter** and in the following panel, select **NON-SWITCHED**.
19. Press . The message **The profile has been saved** displays.
20. Select **ASCII terminal emulation profiles** twice.
21. Select **Create**. Enter the profile name M6 and a new profile name **MOSSL** (**MOSSR** for remote consoles).
22. Press .
23. Customize the profile as follows:

Communication port name	COM1
(same as port profile name)	
Emulation mode	IBM 3101
Line speed	2400 <sup>1</sup>
Bits per character	7
Parity type	EVEN
Number of stop bits	1 <sup>4</sup>
Local display	NO
Auto return	YES
Enter key	CR/LF
Line ending control	YES
24. Press  and enter the following:

Turnaround character	DC3
Scrolling	NO
Mode	BLOCK
Null suppression	YES


25. Press  and modify the following.

Type of connection	DIRECT
Automatic XON/XOFF flow control	YES
Minimum time for break signal	500
Enhanced keyboard profile name	ACSAENUS *
At keyboard profile name	ACSAATUS *
Transfer to IBM protocol converter	NO
Change parameters for ASCII text files	NO
Data capture file name	CAPTURE.XXX (for example)
Auto-start data capture	NO
Auto-activate data filter	YES

\* These are the default U.S.A. profiles. For other countries, use  to select the relevant profile. For more information, see Appendix A.

26. Press .

27. Select **Default ASCII terminal emulation profile name**.

28. Type MOSSL (MOSSR for remote consoles) and press . The message **The profile has been saved** displays.

29. Press **Esc** twice to display the Communications Configuration menu.

30. Select **Verify**, then **Run Verify**. The **Verified** message displays. If the message does not display, check that you have entered the data correctly.

Press .

31. Select **Exit**, and **Exit communication configuration**.

32. Select **Exit**, and **Exit Communication Manager**, and then **Yes**.

33. When the **Display Feature Status** panel disappears, select **F3=Exit**.

34. The Start Programs menu displays.

35. Select **OS/2 full-panel command prompt**.

36. Use the system editor to create a STARTUP.CMD file with the following lines:

```
@ECHO OFF
CD\CMLIB
START "COMM.MGR MOSSL" (or MOSSR for remote consoles)
/FS /N DMPC ACS.CNF /A:ACS ACS.EXE
EXIT
```

37. Shutdown and restart the console.

38. Go to "Testing a Connection with a Local or Alternate Console" on page A-13 and check the connection to the 3745.

---

## MOSS Local or Alternate Console Emulation with CM/2 and Softerm




For a description of how to set up a 3101 terminal emulator, using CM/2 and Softerm as a connections to 3745 MOSS, see “MOSS Remote Console Emulation with CM/2 and Softerm.”

**Note:** The baud rate for a local or alternate console is 2400 bps.

---

## MOSS Remote Console Emulation with CM/2 and Softerm

The following is the setup procedure for a 3101 terminal emulator connection with a 3745 MOSS, using CM/2 and Softerm. To install Softerm, use the following procedure:

- Step 1.** Open an OS/2 panel or panel.
- Step 2.** Insert the Softerm diskette into drive A.
- Step 3.** Type a: and press .
- Step 4.** Type cd\ and press .
- Step 5.** Type a:\install and press .
- Step 6.** Wait for the installation to complete. A new **Custom Plus** icon displays.

**Note:** In the following procedure, panel displays are indicated by an ⇒ followed by the title of the panel.

### Starting Custom Plus

- Step 1.** To start, click the **Custom Plus** icon twice.  
⇒ panel **Custom Plus - Icon View**
- Step 2.** Double-click the **Custom Plus** icon.  
⇒ panel **Softerm Session Manager - CUSTOM.MDB**

This panel lists several predefined sessions.

### Defining a New Session

- Step 1.** Click **Session** and then **Add**.  
⇒ panel **Add Session - Untitled**
- Step 2.** Click **Setup Profiles**.  
⇒ panel **Setup Profiles**

There are two setup profiles, Terminal Emulation and Connection Path.

See the following procedures to setup the Terminal Emulation profile, and the Connection Path profile.

#### Defining the Terminal Emulation Profile

- Step 1.** Click **Terminal**.  
⇒ panel **Terminal Emulation Profile Module - CUSTOM.MDB**
- Step 2.** Click **Add**.  
⇒ panel **Terminal Emulation**
- Step 3.** In the terminal types list, select **3101-2X** and click **OK**.  
⇒ panel **Terminal Emulation Settings - Untitled**

**Step 4.** In the **Comment** entry field, type: 3101-2X Settings for MOSS Console.

For the keyboard profile:

- a. Click **Setup**.  
⇒ panel **Keyboard Profile Module - CUSTOM.MDB**
- b. Click **Add**.  
⇒ panel **Add keyboard**
- c. In the keyboard type list, select **AT 84 key**, or **101 Enhanced** or **102 Enhanced** depending on your keyboard.
- d. In the terminal keyboard type list, select **IBM 3101-2X**.
- e. In the nationality list, select the country where you reside.
- f. Click **OK**.  
⇒ panel **Keyboard Settings - Untitled**

The default keyboard mapping is displayed. The Control, Alt and Function keys are used for 3101 functions.

**Note:** Function keys F1 to F10 correspond to the same keys, and F11 to F20 correspond to Shift-F1 through Shift-F10.

If you want to change the keyboard mapping, use the following procedure:

- 1) On panel **Keyboard Settings - Untitled**, click **Change**.  
⇒ panel **Keyboard Remap**
  - 2) When the keyboard map displays on the panel, click a key to see the corresponding 3101 definition. For example, if you want to remap the **Send** key to **Enter** instead of the default **Control-F1**, click the **Enter** key on the map, and then click **Open Base**.  
⇒ panel **Open/Edit Key**
  - 3) In the **Key contents** entry field, delete Return and type Send.
  - 4) Click **OK**. You can remap any other key(s).
- g. When you have finished, click **Remap**.  
⇒ panel **Keyboard Settings - Untitled**
  - h. Click **Save as** to save the keyboard profile.  
⇒ panel **Save Keyboard - CUSTOM.MDB**
  - i. Enter the keyboard profile name, for example, 3101 keyboard.
  - j. Click **Save**.  
⇒ panel **Keyboard Profile Module - CUSTOM.MDB**
  - k. Click **Close**.  
⇒ panel **Terminal Emulation Profile Module - CUSTOM.MDB**

**Step 5.** Customize the 3101 terminal settings, and change the following parameters:

- Operating mode,
- Line Turn Around Character.

All the other parameters keep their default values.

**Step 6.** In **Terminal Emulation Settings** list, select the parameter and click **Change**:

- For Operating mode, click **Block** and then **OK**.
- For Line Turn Around Character, click **Xoff(\$13)** and **OK**.

**Step 7.** Click **Save as**.

⇒ panel **Save Terminal Emulation - CUSTOM.MDB**

**Step 8.** Enter the terminal emulation profile name, for example, 3101 emulation.

**Step 9.** Click **Save**.

⇒ panel **Terminal Emulation Profile Module - CUSTOM.MDB**

**Step 10.** Click **Close**.

## Defining Connection Path Profile

Click **Setup Profiles**.

⇒ panel **Setup Profiles**

**Step 1.** Click **Connection**.

⇒ panel **Connection Path Profile Module - CUSTOM.MDB**

**Step 2.** Click **Add** twice.

⇒ panel **Add Connection Path**

**Step 3.** Enter Standard COM for the communication interface and click **OK**.

⇒ panel **Connection Path Settings - Untitled**

- COM1 (default setting) for the COM port
- Select **(None)** for the modem profile name.

**Note:** You can add a customized profile with modem-supported features, such as auto-dial and auto-answer.

- Connection Path Settings:
  - Select an item in the list and click **Change** then **OK**.
  - Communications parameters:
    - Baud rate = 1200
    - Data bits = 7
    - Stop bits = 1
    - Parity = Even
- Flow Control: None (default setting).

**Step 4.** Click **Save as**.

⇒ panel **Save Connection Path - CUSTOM.MDB**

**Step 5.** Enter the connection path profile name, for example connection.

**Step 6.** Click **Save**.

⇒ panel **Connection Path Profile Module - CUSTOM.MDB**

**Step 7.** Click **Close**.

## Ending Definition of a New Session

**Step 1.** In the ⇒ panel **Add Session - Untitled**, click **Add**.

⇒ panel **Admittance data**

**Step 2.** Click **Save as**.

⇒ panel **Save Session**

**Step 3.** Enter the session name, for example MOSS Console.

**Step 4.** Click **Save**.

⇒ panel **Softterm Session Manager - CUSTOM.MDB**

### Notes:

This panel includes a **MOSS Console** session. You can start the session by double-clicking it. If you want to remotely connect to MOSS, attach a modem (1200 or 2400 bauds) to the COM1 port of your PS/2, and establish a connection to the 3745 modem.

---

## Testing a Connection with a Local or Alternate Console

1. Turn on the operator console.
2. A **CA INTERFACE DISPLAY** panel similar to the following one should be displayed (for the alternate console, wait 25 seconds):

----- mm/dd/yy/ hh : mm						
CA INTERFACE DISPLAY						
INTERFACE NUMBER	CHANGE E/D REQ	E/D REQUEST	INTERFACE STATUS SWITCH	HOST OR UNIT ADDRESS	CHANNEL ADDRESS	NSC
1A		-	-			
2A		-	-			
3A		-	-			
4A		-	-			
5A	==>	E	ENABLED			40
5B	==>	D	DISABLED			41
7A	==>	D	DISABLED			42
8A		-	-			
- TYPE E OR D TO CHANGE THE ENABLE/DISABLE REQUEST, THEN PRESS SEND						
F4: MOSS FUNCTIONS			F5: UPDATE			

3. If this panel displays, the console setup was successful.
4. If the panel is not displayed, check that the console cables are connected, and that power is on, then try again to connect.

Other possible causes of a faulty console setup are as follows:

- The console is set to 1200 bps instead of 2400.
- The cable adapter P/N 54F0490 is plugged incorrectly. Check that the arrow on the adapter points toward the console.
- The 3151 console is set up in both native and emulation modes.

If the problem continues, refer to the *Problem Determination Guide*, SA33-0096.

**Note:** You can also diagnose problems by using the console link test, as described in the *Problem Determination Guide*.

---

## Testing the Modem Connection to a Remote Console

1. Make sure that the modem associated with your remote console is powered ON and in voice mode.
2. Turn on the console.
3. Dial the telephone number of the 3745 with your modem.

You will hear the **ringback** tone. When you hear the **answer** tone (steady tone), go to the next Step.

If you do not hear the answer tone, the local console could be logged on. Try again later.

4. Set the modem associated with your remote console to data mode.
5. Hang up the handset, and the following panel displays:

```
3745 MICROCODE (C) COPYRIGHT IBM CORP. 1988  
MAXIMUM ADAPTER CONFIGURATION: CHANNEL ADAPTERS 5,6,7,8  
                                LINE   ADAPTERS 1,2,3,9,10,11,12  
  
ENTER PASSWORD ==>  
  
F4: CHANNEL INTERFACE DISPLAY
```

6. If this panel is displayed, setup was successful.
7. If the panel is not displayed, check that the console cables are connected and that power is ON to both console and modem, then try to connect again.

Other possible causes of a faulty console setup are as follows:

- The console is set to 2400 bps instead of 1200.
- The 3151 console is set in both native and emulation modes.

If the problem still persists, refer to the *Problem Determination Guide*, SA33-0096.

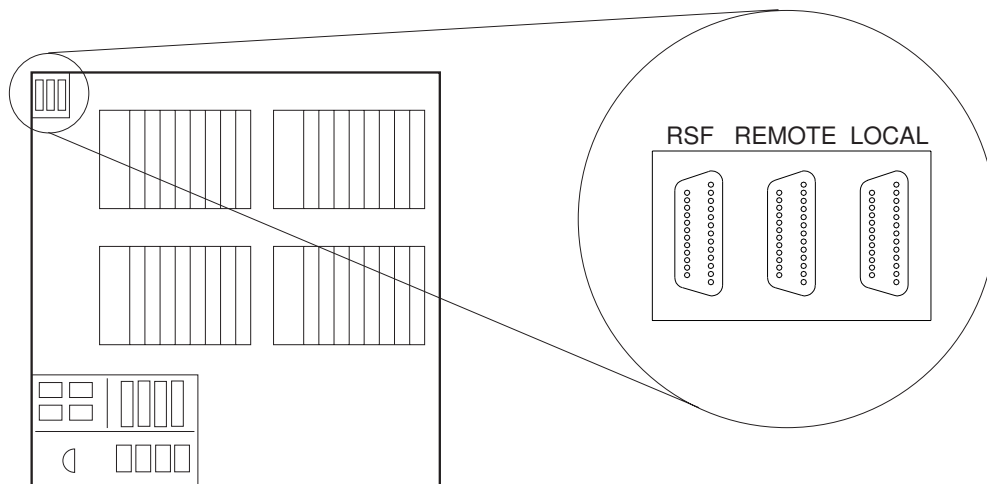
**Note:** You can also diagnose problems by using the console link test, described in the *Problem Determination Guide*.



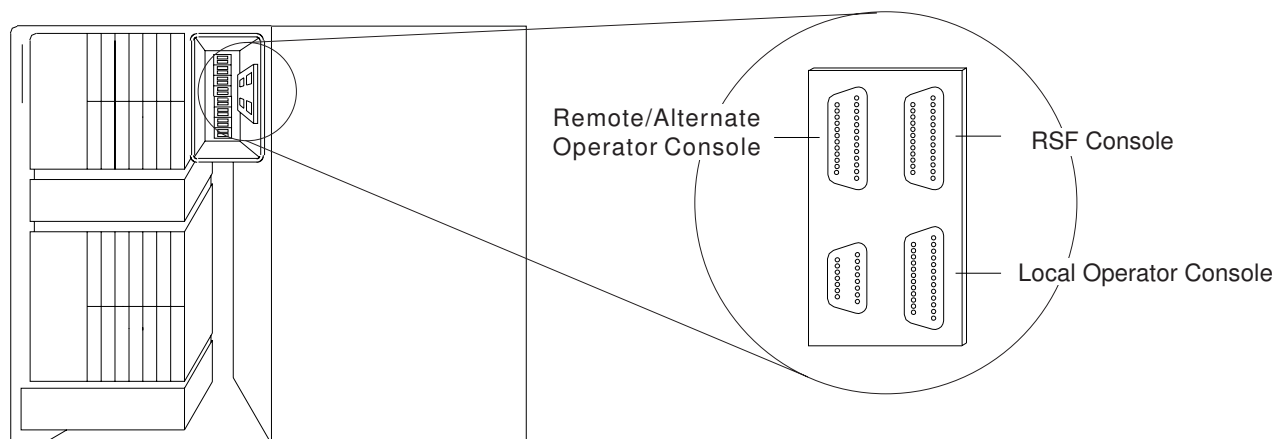
## Location of 3745 Console Connectors

This section applies to **3745 Models 130 to 610**.

### 3745 Communication Controller Models 130, 150, 160, and 170



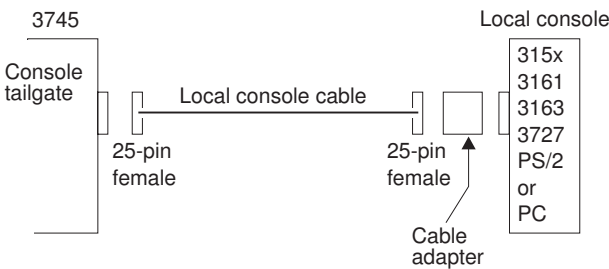
### 3745 Communication Controller Models 210, 310, 410, and 610



# Console and RSF Interface Cables

This section applies to **3745 Models 130 to 610**.

## Cable from the 3745 to a Local Console



### Local Console Cable Assembly

This cable assembly is for a 3745-to-7427 with three adapters to connect with 31xx, 3727, and PS/2 or PC consoles (see “Cable Adapters for Local/Alternate Console” on page A-17).

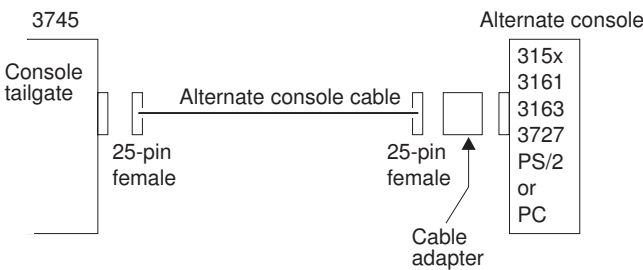
#### World Trade Only

3745 Model	Cable Type	Length, m (ft)	Cable Group	Assembly PN	Cable PN
130/150/160/170	Fixed length	7 m (23)	Shipped	26F1794	03F4948
210/310/410/610	Fixed length	7 m (23)	Shipped	26F1792	03F4487

#### U.S.A. Only

3745 Model	Cable Type	Length, m (ft)	Cable Group	Assembly PN	Cable PN
130/150/160/170	Fixed length	7 m (23)	Shipped	76F8600	76F8639
210/310/410/610	Fixed length	7 m (23)	Shipped	76F8607	76F8640

## Cable from the 3745 to an Alternate Console

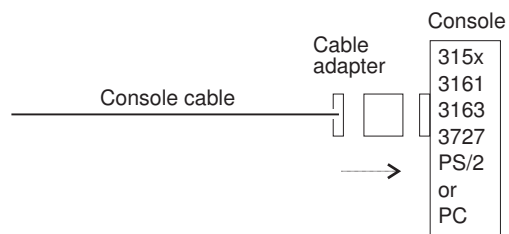


## Alternate Console Cable Assembly

This cable assembly is a variable length with three adapters to connect with 31xx, 3727, and PS/2 or PC consoles (see “Cable Adapters for Local/Alternate Console”).

3745 Model	Cable Type	Length, m (ft)	Cable Group	Assembly PN	Cable PN
130/150/160/170	Variable Length	Up to 35 m (115) Up to 122 m (400)	6147 NA	26F1799 26F1799	03F5026 03F5026
210/310/410/610	Variable Length	Up to 35 m (115) Up to 122 m (400)	5826 NA	34F1262 34F1262	65X8984 65X8984

## Cable Adapters for Local/Alternate Console

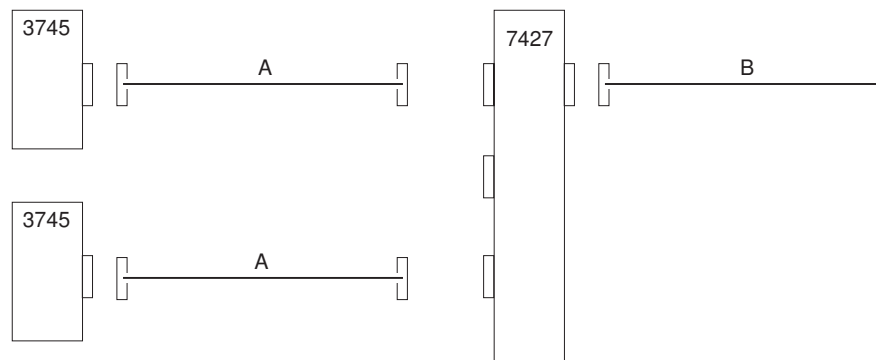


**Note:** For console 3727, use Cable Adapter P/N 54F0488. For console PS/2 or PC, use Cable Adapter P/N 54F0490. For console 31xx, use Cable Adapter P/N 54F0489.

**Warning:** When you install the 31xx adapter (P/N 54F0489), ensure that the arrow on the side of the adapter points towards the console. If the arrow is reversed, the console will not work.

## Console Connection through the IBM 7427 Console Switching Unit

The 7427 can switch one console (3151/3153/3161/3163/3727, PS/2, or PC) to as many as four 3745s for a local console, or up to six 3745s for an alternate console.



## Cable from the 3745 to the 7427 Switching Unit (A)

### Cable Assembly for Local Console

See “Local Console Cable Assembly” on page A-16. The cable is used without any console adapter.

### Cable Assembly for Alternate Console

See “Alternate Console Cable Assembly” on page A-17. The cable is used without any console adapter.

## Cable from the 7427 to a 31xx, PS/2, or PC Console (B)

### Cable Assembly for 31xx Console

3745 Model	Cable Type	Length, m (ft)	Cable Group	Cable PN
All Models	Fixed length	1 (3)	5828	65X8985

### Cable Assembly for PS/2 or PC Console

3745 Model	Cable Type	Length, m (ft)	Cable Group	Cable PN
All Models	Fixed length	2 (6.5)	8148	26F0317

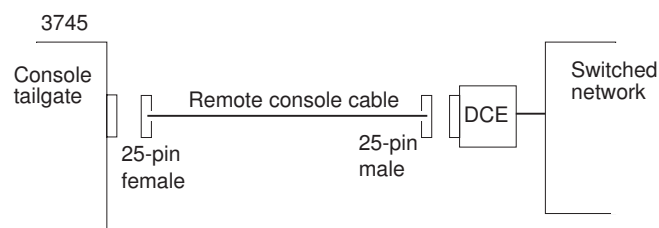
## Cable from the 7427 to a 3727 Console (B)

### Cable Assembly

The cable for the 3727 console is delivered with the 7427 switching unit.

3745 Model	Cable Type	Length, m (ft)	Cable Group	Cable PN
All Models	Fixed length	1 (3)	NA	6081308

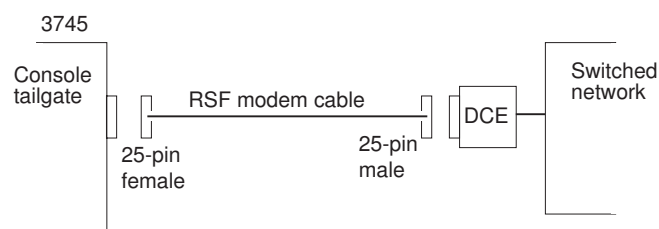
## Remote Console Cable



## Cable to Modem for Remote Console

3745 Model	Cable Type	Length, m (ft)	Cable Group	Cable PN
130/150/160/170	Variable Length	Up to 13.5 m (45) Up to 122 m (400)	6148 NA	03F5027 03F5028
210/310/410/610	Variable Length	Up to 13.5 m (45) Up to 122 m (400)	6153 NA	03F4404 03F4405

## Cable to Modem for RSF



## RSF Modem Cable

*World Trade Only*

3745 Model	Cable Type	Length, m (ft)	Cable Group	Cable PN
130/150/160/170	Fixed length	13.5 m (45)	Shipped	03F4945
210/310/410/610	Fixed length	13.5 m (45)	Shipped	65X8920

## *U.S.A. Only*

3745 Model	Cable Type	Length, m (ft)	Cable Group	Cable PN
130/150/160/170	Fixed length	13.5 m (45)	Shipped	76F8604
210/310/410/610	Fixed length	13.5 m (45)	Shipped	76F8611



---

## Appendix B. 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, see “RSF Modems” on page B-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).
2. 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

1. 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 Only, 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 Only'.
3. Press and release the ↑ or ↓ button as needed to change the display to 'First Setup'.
4. 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 → button. The modem displays: 'View Only'.
  - c. Press the ↓ button **twice**. The modem displays: 'Quick Customize'.
  - d. Press the → button. The modem displays: 'DTE interface'.
  - e. Press the ↓ button **twice**. The modem displays: 'PSN Telco speed'.
  - f. Press the → 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***

1. 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 Only', go to Step 3. If the modem displays 'Password.....■■■■', use the → button and the ↑ button 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 Only'.
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 → button to display 'Store and View'.
6. Press the → button to display 'Directories xx'.
7. Set the target service processor phone number with the ↑ and ↓ buttons.  
Switch to the next number with the → button.
8. Press the ← button 8 times to exit.

## Setting the IBM 7857 Modem Connected to MPA Card (SYN)

1. Press the ↓ key until the 'CONFIG' message displays at the top of the panel.
2. Press the → key until the 'Sel Factory' message displays at the bottom of the panel.
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 panel.
7. Press the → key until 'Sync mode 3' displays. Press **Enter** to validate.
8. Press the ↑ key until 'U2' displays.
9. Press the → key until 'Internal' displays. Press **Enter** to validate.
10. Press the ↑ key until 'U3' displays.
11. Press the → key until 'Autobaud' displays. Press **Enter** to validate.
12. Press the ↑ key until 'U4' displays.
13. Press the → key until 'CCITT' displays. Press **Enter** to validate.
14. Press the ↑ key until 'U5' displays.
15. Press the → 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.
19. Press the → key until 'Auto Reliable/V42/MNP' displays. Press **Enter** to validate.
20. Press the ↑ key until 'U8' displays.
21. Press the → key until 'Xon/Xoff passed' displays. Press **Enter** to validate.
22. Press the ↑ key until 'U9' displays.
23. Press the → key until 'Xon/Xoff' displays. Press **Enter** to validate.
24. Press the ↑ key until 'U10' displays.
25. Press the → key until 'C108/2' displays. Press **Enter** to validate.
26. Press the ↑ key until 'U11' displays.
27. Press the → key until 'C106 Always follow C105' displays. Press **Enter** to validate.
28. Press the ↑ key until 'U12' displays.

29. Press the → 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 → 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 ↓ key until the 'CONFIG' message displays at the top of the panel.
2. Press the → key until the 'Store User Conf' message displays at the bottom of the panel.
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 ↓ key until 'Store phone number' displays at the top of the panel.
2. Press the → key to select the first location number.
3. Press **Enter**.

4. 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 ↓ key until the 'CONFIG' message displays at the top of the panel.
2. Press the → key until the 'Sel Factory' message displays at the bottom of the panel.
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 panel.
7. Press the → key until '9600bps V32' displays. Press **Enter** to validate.
8. Press the ↑ key until 'U7' displays.
9. Press the → key until 'Xon/Xoff Passed' displays. Press **Enter** to validate.
10. Press the ↑ key until 'U8' displays.
11. Press the → key until 'Xon / Xoff' displays. Press **Enter** to validate.
12. Press the ↑ key until 'U10' displays.
13. Press the → 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 → 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 B-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 B-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 B-7 below.

### ***Saving the Modem Configuration***

1. Press the ↓ key until the 'CONFIG' message displays at the top of the panel.
2. Press the → key until the 'Store User Conf.' message displays at the bottom of the panel.
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 ↓ key until 'Store phone number' display at the top of the panel.
2. Press the → key to select the first location number.
3. Press **Enter**.
4. 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 **Models 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:

U			U	U			U
	D	D			D	D	
1	2	3	4	5	6	7	8

	U	U	U	U	U	U	U
D							
1	2	3	4	5	6	7	8

2. Set all the front panel switches to OUT.

## **IBM 7855 Modem**

See “Setting the 7857 Modem Connected to COM1 (ASYN)” on page B-5.

## **IBM 7857 Modem**

See “Modems for 3745 Models 130 to 160” on page B-1.

## Appendix C. 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 C-1 below).

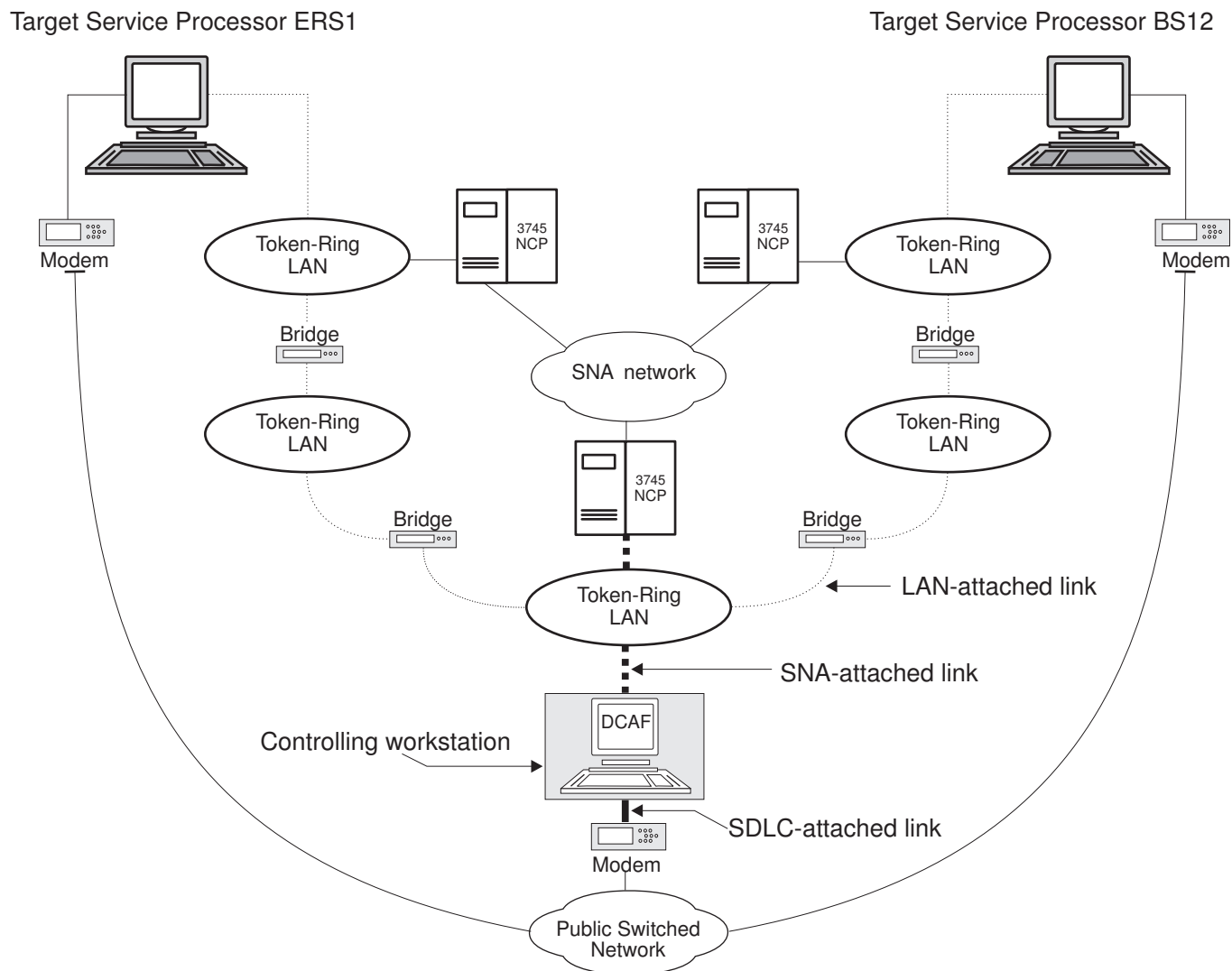


Figure C-1. A Two-Target Configuration

The example in Figure C-1 on page C-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
CRPLBUF=(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'B0',
      SECPROT = X'B0',
      COMPROT = X'50B1',
      SSNDPAC = X'08',
      SRCVPAC = X'08',
      RUSIZES = X'8787',
      PSNDPAC = X'08',
      PSERVIC = X'0602000000000000000000002F00'
```



## Switched Major Nodes

```

*****
*
*   MAJNODE FOR CONNECTION :   CONTROLLING   <==>   NETVIEW V2R3
*
*
*
*****
DCAFCTRL  VBUILD  TYPE=SWNET,MAXGRP=1,MAXNO=1
-----*
CPCTRL    PU      ADDR=04,PUTYPE=2,NETID=SYSTST 1,CPNAME=CPCTRL 2,      X
              MAXPATH=8,MAXDATA=265,MAXOUT=1,                          X
              DISCNT=NO
CTRL1     LU      LOCADDR=0,MODETAB=SOCMOTAB

*****
*
*   MAJNODE FOR CONNECTION :   MOSS-E ERS1   <==>   NETVIEW V2R3
*
*
*
*****
NTVERS1   VBUILD  TYPE=SWNET,MAXGRP=1,MAXNO=1
-----*
CPERS1    PU      ADDR=04,PUTYPE=2,NETID=SYSTST 10,CPNAME=CPERS1 23,      X
              MAXPATH=8,MAXDATA=265,MAXOUT=1,                          X
              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
-----*
CPBS12    PU      ADDR=04,PUTYPE=2,NETID=SYSTST 10,CPNAME=CPBS12 22,      X
              MAXPATH=8,MAXDATA=265,MAXOUT=1,                          X
              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 the next step.

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

The 'Add a workstation' dialog box is shown with the 'General' tab selected. The 'Workstation name' field contains 'ERS1SNA'. The 'Protocol' section has radio buttons for APPC, APPN, Asynchronous, IPX/SPX, NetBIOS, and TCP/IP, with APPC selected. The 'Connection' section has radio buttons for Target and Gateway, with Target selected. Below the Connection section, there are checkboxes for 'Administrator' and 'L&M Directory', both of which are checked. The 'Security' section has radio buttons for 'Yes' and 'No', with 'No' selected. At the bottom of the dialog are 'Undo' and 'Help' buttons. Below the dialog box are 'Save', 'Cancel', and 'Help' buttons.

**Step 6.** Enter ERS1SNA in the **Workstation name** field and click **Protocol**.

The 'Add a workstation' dialog box is shown with the 'Protocol' tab selected. The 'Workstation name' field contains 'ERS1SNA'. The 'Local LU alias' field contains 'CTRL1'. The 'Partner LU alias' field contains 'ERS1SNA'. The 'Mode name' field contains 'DCAFMODE'. The 'Use CP name' checkbox is checked. At the bottom of the dialog are 'Undo' and 'Help' buttons. Below the dialog box are 'Save', 'Cancel', and 'Help' buttons.

- 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 D. Bibliography

### Customer Documentation for the IBM 3745 (Models 210, 310, 410, 610, 21A, 31A, 41A, and 61A), and 3746 (Model 900)

Table D-1 (Page 1 of 6). Customer Documentation for the 3745 Models x10 and x1A, and 3746 Model 900

This customer documentation has the following formats:



#### Finding Information

##### **3745 Models A and 3746 Books**

Starting with engineering change (EC) F12380, all of the books in the 3745 Models A and 3746 library are available on the CD-ROM that contains the Licensed Internal Code (LIC) for this EC.



SA33-0172

**IBM 3745 Communication Controller  
Models 210 to 61A  
IBM 3746 Expansion Unit Model 900  
Customer Master Index<sup>1</sup>**

Provides references for finding information in the customer documentation library.

#### Evaluating and Configuring



GA33-0092

**IBM 3745 Communication Controller  
Models 210, 310, 410, and 610  
Introduction**

Gives an introduction about the IBM Models 210 to 610 capabilities.

For Models A refer to the *Overview*, GA33-0180.

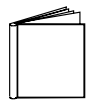


GA33-0180

**IBM 3745 Communication Controller Models A and 170<sup>2</sup>  
IBM 3746 Nways Multiprotocol Controller  
Models 900 and 950  
Overview**

Gives an overview of connectivity capabilities within SNA, APPN, and IP networking.

Table D-1 (Page 2 of 6). Customer Documentation for the 3745 Models x10 and x1A, and 3746 Model 900



GA27-4234

**IBM 3745 Communication Controller Models A<sup>2</sup>**  
**IBM 3746 Nways Multiprotocol Controller**  
**Models 900 and 950**

**Planning Series:**  
**Overview, Installation, and Integration**

Provides information for:

- Overall 3746 planning
- Installation and upgrade scenarios
- Controller and service processor network integration
- Related MOSS-E and CCM worksheets for these tasks.



GA27-4235

**IBM 3745 Communication Controller Models A<sup>2</sup>**  
**IBM 3746 Nways Multiprotocol Controller**  
**Models 900 and 950**

**Planning Series:**  
**Serial Line Adapters**

Provides information for:

- Serial line adapter descriptions
- Serial line adapter line weights and connectivity
- Types of SDLC support
- Configuring X.25 lines
- Performance tuning for frame-relay, PPP, X.25, and NCP lines.
- ISDN adapter description and configuration.



GA27-4236

**IBM 3745 Communication Controller Models A<sup>2</sup>**  
**IBM 3746 Nways Multiprotocol Controller**  
**Models 900 and 950**

**Planning Series:**  
**Token-Ring and Ethernet**

Provides information for:

- Token-ring adapter description and configuration
- Ethernet adapter description and configuration.



GA27-4237

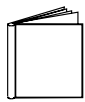
**IBM 3745 Communication Controller Models A<sup>2</sup>**  
**IBM 3746 Nways Multiprotocol Controller**  
**Models 900 and 950**

**Planning Series:**  
**ESCON Channels**

Provides information for:

- ESCON adapter descriptions
- ESCON configuration and tuning information
- ESCON configuration examples.

Table D-1 (Page 3 of 6). Customer Documentation for the 3745 Models x10 and x1A, and 3746 Model 900



GA27-4238

**IBM 3745 Communication Controller Models A<sup>2</sup>**  
**IBM 3746 Nways Multiprotocol Controller**  
**Models 900 and 950**

**Planning Series:**  
**Physical Planning**

Provides information for:

- 3746 and MAE physical planning details
- 3746 and MAE cable information
- Explanation of installation sheets
- 3746 plugging sheets.



GA27-4239

**IBM 3745 Communication Controller Models A<sup>2</sup>**  
**IBM 3746 Nways Multiprotocol Controller**  
**Models 900 and 950**

**Planning Series:**  
**Management Planning**

Provides information for:

- Overview for 3746
- 3746 APPN/HPR, IP router, and X.25
- NetView Performance Monitor (NPM), remote consoles, and RSF
- MAE APPN/HPR management.



GA27-4240

**IBM 3745 Communication Controller Models A<sup>2</sup>**  
**IBM 3746 Nways Multiprotocol Controller**  
**Models 900 and 950**

**Planning Series:**  
**Multiaccess Enclosure Planning**

Provides information for:

- MAE adapters details
- MAE ESCON planning and configuration
- ATM and ISDN support.



GA27-4241

**IBM 3745 Communication Controller Models A<sup>2</sup>**  
**IBM 3746 Nways Multiprotocol Controller**  
**Models 900 and 950**

**Planning Series:**  
**Protocols Description**

Provides information for:

- Overview and details about APPN/HPR and IP.

Table D-1 (Page 4 of 6). Customer Documentation for the 3745 Models x10 and x1A, and 3746 Model 900

	On-line information	<p><b>IBM 3745 Communication Controller Models A<sup>2</sup></b>  <b>IBM 3746 Nways Multiprotocol Controller Models 900 and 950</b></p> <p><b>Planning Series:</b>  <b>Controller Configuration and Management Worksheets</b></p> <p>Provides planning worksheets for ESCON, Multiaccess Enclosure, serial line, and token-ring definitions.</p>
<b>Preparing Your Site</b>		
	GC22-7064	<p><b>IBM System/360, System/370, 4300 Processor</b></p> <p><b>Input/Output Equipment Installation Manual-Physical Planning</b>  (Including Technical News Letter GN22-5490)</p> <p>Provides information for physical installation of the 3745 Models 130 to 610.</p> <p>For 3745 Models A and 3746 Model 900, refer to the <i>Planning Guide</i>, GA33-0457.</p>
	GA33-0127	<p><b>IBM 3745 Communication Controller Models 210, 310, 410, and 610</b></p> <p><b>Preparing for Connection</b></p> <p>Helps for preparing the 3745 Models 210 to 610 cable installation.</p> <p>For 3745 Models A refer to the <i>Connection and Integration Guide</i>, SA33-0129.</p>
<b>Preparing for Operation</b>		
	GA33-0400	<p><b>IBM 3745 Communication Controller All Models<sup>3</sup></b>  <b>IBM 3746 Nways Multiprotocol Controller Models 900 and 950</b></p> <p><b>Safety Information<sup>1</sup></b></p> <p>Provides general safety guidelines.</p>
	SA33-0129	<p><b>IBM 3745 Communication Controller All Models<sup>3</sup></b>  <b>IBM 3746 Nways Multiprotocol Controller Model 900</b></p> <p><b>Connection and Integration Guide<sup>1</sup></b></p> <p>Contains information for connecting hardware and integrating network of the 3745 and 3746-900 after installation.</p>
	SA33-0416	<p><b>Line Interface Coupler Type 5 and Type 6</b>  <b>Portable Keypad Display</b></p> <p><b>Migration and Integration Guide</b></p> <p>Contains information for moving and testing LIC types 5 and 6.</p>



Table D-1 (Page 5 of 6). Customer Documentation for the 3745 Models x10 and x1A, and 3746 Model 900

	SA33-0158	<b>IBM 3745 Communication Controller All Models<sup>3</sup></b> <b>IBM 3746 Nways Multiprotocol Controller Model 900</b> <b>Console Setup Guide<sup>&amp;1</sup></b>
Provides information for:		
<ul style="list-style-type: none"> <li>• Installing local, alternate, or remote consoles for 3745 Models 130 to 610</li> <li>• Configuring user workstations to remotely control the service processor for 3745 Models A and 3746 Model 900 using: <ul style="list-style-type: none"> <li>– DCAF program</li> <li>– Telnet Client program.</li> </ul> </li> </ul>		
<b>Customizing Your Control Program</b>		
	SA33-0178	<b>Guide to Timed IPL and Rename Load Module</b>
Provides VTAM procedures for:		
<ul style="list-style-type: none"> <li>• Scheduling an automatic reload of the 3745</li> <li>• Getting 3745 load module changes transparent to the operations staff.</li> </ul>		
<b>Operating and Testing</b>		
	SA33-0098	<b>IBM 3745 Communication Controller All Models<sup>4</sup></b> <b>Basic Operations Guide<sup>&amp;1</sup></b>
Provides instructions for daily routine operations on the 3745 Models 130 to 610.		
	SA33-0177	<b>IBM 3745 Communication Controller Models A<sup>2</sup></b> <b>IBM 3746 Nways Multiprotocol Controller Model 900</b> <b>Basic Operations Guide<sup>&amp;1</sup></b>
Provides instructions for daily routine operations on the 3745 Models 17A to 61A, and 3746 Model 900 operating as an SNA node (using NCP), APPN/HPR Network Node, and IP Router.		
	SA33-0097	<b>IBM 3745 Communication Controller All Models<sup>3</sup></b> <b>Advanced Operations Guide<sup>&amp;1</sup></b>
Provides instructions for advanced operations and testing, using the 3745 MOSS console.		
	On-line Information	<b>Controller Configuration and Management Application</b>
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 configuration parameters through its on-line help.		

Table D-1 (Page 6 of 6). Customer Documentation for the 3745 Models x10 and x1A, and 3746 Model 900

	SH11-3081	<p><b>IBM 3746 Nways Multiprotocol Controller Models 900 and 950</b></p> <p><b>Controller Configuration and Management: User's Guide<sup>5</sup></b></p> <p>Explains how to use CCM and gives examples of the configuration process.</p>
	GA33-0479	<p><b>IBM 3745 Communication Controller Models A</b>  <b>IBM 3746 Nways Multiprotocol Controller Models 900 and 950</b></p> <p><b>NetView Console</b>  <b>APPN Command Reference Guide</b></p> <p>Explains how to use the RUN COMMAND from the NetView S/390 Program and gives examples.</p>
<b>Managing Problems</b>		
	SA33-0096	<p><b>IBM 3745 Communication Controller All Models<sup>3</sup></b></p> <p><b>Problem Determination Guide<sup>1</sup></b></p> <p>A guide to perform problem determination on the 3745 Models 130 to 61A.</p>
	On-line Information	<p><b>Problem Analysis Guide</b></p> <p>An on-line guide to analyze alarms, events, and control panel codes on:</p> <ul style="list-style-type: none"> <li>• IBM 3745 Communication Controller Models A<sup>2</sup></li> <li>• IBM 3746 Nways Multiprotocol Controller Models 900 and 950.</li> </ul>
	SA33-0175	<p><b>IBM 3745 Communication Controller Models A<sup>2</sup></b>  <b>IBM 3746 Expansion Unit Model 900</b>  <b>IBM 3746 Nways Multiprotocol Controller Model 950</b></p> <p><b>Alert Reference Guide</b></p> <p>Provides information about events or errors reported by alerts for:</p> <ul style="list-style-type: none"> <li>• IBM 3745 Communication Controller Models A<sup>2</sup></li> <li>• IBM 3746 Nways Multiprotocol Controller Models 900 and 950.</li> </ul>
<p><sup>1</sup> Documentation shipped with the 3745.  <sup>2</sup> 3745 Models 17A to 61A.  <sup>3</sup> 3745 Models 130 to 61A.  <sup>4</sup> Except 3745 Models A.  <sup>5</sup> Documentation shipped with the 3746-900.</p>		

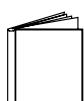
## Additional Customer Documentation for the IBM 3745 Models 130, 150, 160, 170, and 17A

Table D-2. Additional Customer Documentation for the 3745 Models 1x0 and 17A

This customer documentation has the following format:



### Finding Information



SA33-0142

**IBM 3745 Communication Controller  
Models 130, 150, 160, 170, and 17A  
IBM 3746 Expansion Unit Model 900**

#### **Customer Master Index<sup>1</sup>**

Provides references for finding information in the customer documentation library.

### Evaluating and Configuring



GA33-0138

**IBM 3745 Communication Controller  
Models 130, 150, and 170**

#### **Introduction**

Gives an introduction about the IBM Models 130 to 170 capabilities, including Model 160.

For Model 17A refer to the *Overview*, GA33-0180.

### Preparing Your Site



GA33-0140

**IBM 3745 Communication Controller  
Models 130, 150, 160, and 170**

#### **Preparing for Connection**

Helps for preparing the 3745 Models 130 to 170 cable installation.

For 3745 Model 17A refer to the *Connection and Integration Guide*, SA33-0129.

<sup>1</sup> Documentation shipped with the 3745.



---

## List of Abbreviations

<b>ac</b>	alternating current	<b>IP</b>	internet protocol
<b>ACF</b>	Advanced Communications Function	<b>IPL</b>	initial program load
<b>APPC</b>	advanced program-to-program communication	<b>ISDN</b>	integrated services digital network
<b>APPN</b>	advanced peer-to-peer networking	<b>ITU-T</b>	International Telecommunications Union-Telecommunications (Formerly: CCITT)
<b>AUI</b>	attachment unit interface	<b>LAN</b>	local area network
<b>BAN</b>	boundary access node	<b>LAPS</b>	LAN adapter and protocol support
<b>BNN</b>	boundary network node	<b>LIC</b>	line interface coupler
<b>bps</b>	bits per second	<b>LU</b>	logical unit
<b>Bps</b>	bytes per second	<b>m</b>	meter; 1.09 yards; 3.28 feet; 39.37 inches
<b>BSC</b>	binary synchronous communication	<b>MAC</b>	medium access control
<b>CCM</b>	Controller Configuration and Management	<b>MAE</b>	multiaccess enclosure
<b>CCITT</b>	Comité Consultatif International Télégraphique et Téléphonique  The International Telegraph and Telephone Consultative Committee  (Now: ITU-T)	<b>MAU</b>	multistation access unit
<b>CM</b>	Communications Manager	<b>Mbps</b>	megabits per second; 1 048 476 bits per second
<b>CP</b>	control point	<b>MCA</b>	MOSS console adapter
<b>CSD</b>	corrective service diskette	<b>MOSS</b>	Maintenance and Operator Subsystem
<b>DCAF</b>	distributed console access facility	<b>MOSS-E</b>	Maintenance and Operator Subsystem-Extended
<b>DLC</b>	data link control	<b>MPA</b>	multi-protocol adapter
<b>DNNP</b>	dual network node processor	<b>MPTS</b>	Multiple Protocol Transport Services
<b>DTE</b>	data terminal equipment	<b>NCP</b>	network control program
<b>EC</b>	engineering change	<b>NDF</b>	network definition file
<b>ECL</b>	error checking link	<b>NN</b>	network node
<b>EIA</b>	Electronic Industries Association	<b>NNP</b>	network node processor
<b>ES</b>	extended services	<b>NPM</b>	NetView Performance Monitor
<b>ESCON</b>	Enterprise System Connection	<b>NZRI</b>	non-return-to-zero inverted
<b>FCC</b>	Federal Communications Commission	<b>NTS</b>	Network Transport Services
<b>HPR</b>	High Performance Routing	<b>OS</b>	operating system
<b>IBM</b>	International Business Machines Corporation	<b>PE</b>	product engineer
<b>IDF</b>	internet protocol definition file	<b>PLU</b>	partner logical unit
<b>IML</b>	initial microcode load	<b>PPP</b>	point-to-point protocol
		<b>PRPQ</b>	programming request for price quotation

<b>PS</b>	personal system	<b>TCP/IP</b>	transmission control protocol/internet protocol
<b>PU</b>	physical unit	<b>TIC</b>	token-ring interface coupler
<b>RAM</b>	random access memory	<b>TP</b>	transaction program
<b>RETAIN</b>	Remote Technical Assistance Information Network	<b>URL</b>	uniform resource locator
<b>RSF</b>	remote support facility	<b>VCCI</b>	Japanese Voluntary Control Council for Interference
<b>RTS</b>	ready to send	<b>VGA</b>	video graphics adapter
<b>SAP</b>	service access point	<b>VTAM</b>	virtual telecommunications access method
<b>SDLC</b>	synchronous data link control	<b>WAN</b>	wide area network
<b>SNA</b>	systems network architecture		
<b>SPAU</b>	service processor access unit		

---

# 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.

**addressing.** Where a controlling workstation with access to DTEs sharing transmission lines, selects a DTE 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.

**communication controller.** A device that directs the transmission of data over the data links of a network; its operation can be controlled by a program in the processor connected to the controller is connected, or controlled by a program 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, allowing a workstation to connect to a host computer and use the host resources and resources of other personal computers attached to the workstation, either directly or through the host.

**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 of switches and indicators for the operator and service personnel.

**control point (CP).** A collection of tasks which provide the directory and route selection functions for APPN. An end node control point provides the configuration, session, and management services in conjunction with the control point of the serving network node. A network node control point provides session and routing services.

**control program.** A program designed to schedule and supervise the execution of programs for the controller.

**Customer engineer.** See: *IBM service representative*.

**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.

## **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.

**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*.

**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.

**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.

**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.

**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.

**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).

**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 V.35.** ITU-T recommendations on transmission interfaces.



---

# Index

## Numerics

### 3151

- in 3101 emulation mode A-3
- in native mode A-2

### 3153 in 3151 emulation mode A-5

### 3161 A-6

### 3163 A-6

### 7427 A-17

## A

### access

- from DCAF remote workstation 3-1

### adapters

- for 3745 consoles A-17

### alternate console (3745) A-16

### APPC LAN-attached DCAF workstation 1-3, 8-1

### APPN-attached DCAF workstation 1-2, 5-1

### attached DCAF workstation

- via APPN backbone 1-2, 5-1
- via LAN (APPC-type) 1-3, 8-1
- via modem 1-2, 4-1
- via SNA backbone 1-2, 6-1
- via TCP/IP 1-2, 7-1

### attached Telnet workstation

- via TCP/IP 9-1

## C

### cable

- 3745 alternate console A-16
- 3745 local console A-16
- adapters for 3745 consoles A-17
- to modem for 3745 remote console A-19

### changes since last edition xvii

### closing

- DCAF remote session 3-2
- Telnet remote session 9-2

### configuration 4-4

- DLC for DCAF 2-2
- modem B-7

### configuration file I7857ASY 4-11

### configuring workstation modems 4-4

### console

- 3151 A-2
- 3153 A-5

### console (continued)

- 3161 A-6
- 3163 A-6
- attachment
  - alternate A-16
  - local A-16
  - remote A-19
  - RSF A-19
  - through 7427 A-17

### DCAF

- attachment 1-1
- IBM PS/2 A-6
- Java Console
  - attachment 1-1
- Telnet attachment 9-1

### CS/2 and CM/2

- customizing 2-2
- program support 2-1

### customer

- Telnet consoles 9-1

### customizing

- CS/2 on a DCAF remote workstation 2-2

### customizing DCAF for a modem

## D

### DCAF 4-21

- APPC LAN-attached workstation 8-1
- APPN-attached workstation 5-1
- closing a remote session 3-2
- hardware requirements and recommendations 1-5
- hot keys 1-3
- installing 2-1
- Modem-attached workstation 4-1
- program support 2-1
- programming requirements 1-4
- remote logon password 1-3
- security level 1-4
- service processor security 1-3
- SNA-attached workstation 6-1
- starting a remote session 3-1
- target service processor
  - NCP definitions 6-12
  - VTAM major node definitions 6-14
- TCP/IP-attached workstation 7-1

## **definitions**

- NCP for DCAF 6-11
- VTAM
  - logmode table 6-13
  - major node for remote workstation 6-14
  - major node for target service processor 6-14
  - start 6-13

## **determining the OS/2 code level 2-1**

## **DLC configuration for service processor 2-2**

## **H**

### **hardware**

- recommendations for DCAF 1-5
- recommendations for Telnet 9-2
- requirements for DCAF 1-5
- requirements for Telnet 9-2

### **hot keys 1-3**

## **I**

### **IBM 5858 modem B-7**

### **IBM 7855 modem setting B-3**

### **IBM 7857 modem setting B-4**

### **IBM 7858 modem setting B-6**

### **IBM PS/2 as 3745 console A-6**

### **installing**

- APPN-attached DCAF remote workstation 5-4
- DCAF
- SNA-attached DCAF remote workstation 6-4
- TCP/IP
  - attached DCAF remote workstation 7-3
  - attached Telnet workstation 9-1

## **J**

### **Java Console**

- program support 2-1

### **Java Console workstation**

- installation 2-1

## **L**

### **local console connection (3745) A-16**

### **locating**

- 3745 console connectors A-15

### **logmode table, VTAM 6-13**

### **logon**

## **M**

### **major node definitions**

- DCAF remote workstation 6-14
- DCAF target service processor 6-14

### **minimum**

- DCAF workstation configuration 1-4
- Telnet workstation configuration 9-2

### **modem**

- 5858 setting B-7
- 7855 setting B-3
- 7857 setting B-4
- 7858 setting B-6

### **modem configuration types for CS/2**

### **modem-attached DCAF workstation 1-2, 4-1**

### **modems**

## **N**

### **NCP definitions**

- DCAF remote workstation 6-11
- DCAF target service processor 6-12

## **P**

### **password**

- DCAF remote logon 1-3
- Telnet remote logon 9-2

### **procedure 2 4-6**

### **procedure 4 4-11**

### **procedure 6 4-16**

### **procedure for service processor 3172 4-6, 4-11, 4-16**

### **procedure for service processor 6275 4-6, 4-11**

### **procedure for service processor 7585 4-6, 4-11, 4-16**

### **procedures for configuring CS/2 4-4**

### **program support**

- installing a remote workstation 2-1

### **programming**

- requirements for DCAF 1-4
- requirements for Telnet 9-2

## **R**

### **recommendations**

- for remote DCAF workstations 1-5
- for remote Telnet workstations 9-2

### **regaining control of the service processor 1-4**

## **remote access 10-1**

DCAF 1-1

Java Console 1-1, 10-1

## **remote console**

3745 connection A-19

## **remote DCAF workstation**

APPC LAN-attached 1-3, 8-1

APPN-attached 1-2, 5-1

installation 2-1

modem-attached 1-2, 4-1

NCP definitions 6-11

remote access 3-1

SNA-attached 1-2, 6-1

TCP/IP LAN-attached 1-2

two-target configuration example C-1

VTAM major node definitions 6-14

## **remote Telnet workstation**

TCP/IP-attached 9-1

## **RSF**

3745 modem cable A-19

3745 modems B-7

# **S**

## **saving operations**

modem configuration B-5, B-7

## **service processor**

DCAF DLC configuration 2-2

regaining control 1-4

remote DCAF access 3-1

**service processor 3172 4-6, 4-11, 4-16**

**service processor 6275 4-6, 4-11, 4-16**

**service processor 7585 4-6, 4-11, 4-16**

## **setting**

3745 alternate console A-1

3745 local console A-1

3745 remote console A-1

5858 modem configuration B-7

7855 modem configuration B-3

other IBM modems B-1

**SNA-attached DCAF workstation 1-2, 6-1**

**start definitions, VTAM 6-13**

## **starting**

DCAF remote session 3-1

Telnet remote session 9-2

# **T**

## **TCP/IP**

attached DCAF workstation 1-2, 7-1

attached Telnet workstation 9-1

## **TCP/IP (continued)**

program support 2-1

## **Telnet**

customer console 9-1

hardware requirements and

recommendations 9-2

installing a remote workstation 9-1

programming requirements 9-2

remote logon password 9-2

starting a remote session 9-2

TCP/IP-attached workstation 9-1

## **testing connection**

from 3745 alternate console A-13

from 3745 local console A-13

from 3745 remote console A-13

**two-target DCAF configuration example C-1**

# **V**

## **VTAM**

logmode table 6-13

major node for DCAF remote workstation 6-14

major node for DCAF target service

processor 6-14

start definitions 6-13

# **W**

## **workstation (DCAF)**

APPC LAN-attached 1-3, 8-1

APPN-attached 1-2, 5-1

minimum configuration 1-4

modem-attached 1-2, 4-1

NCP definitions 6-11

SNA-attached 1-2, 6-1

TCP/IP LAN-attached 1-2

two-target configuration example C-1

VTAM major node definitions 6-14

## **workstation (Telnet)**

TCP/IP-attached 9-1



---

# Tell Us What You Think!

**3745 Communication Controller All Models**  
**3746 Nways Multiprotocol Controller Model 900**  
**Console Setup Guide**

**Publication No. SA33-0158-12**

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

Overall, how satisfied are you with the information in this book?	Satisfied	Dissatisfied
	<input type="checkbox"/>	<input type="checkbox"/>

How satisfied are you that the information in this book is:	Satisfied	Dissatisfied
Accurate	<input type="checkbox"/>	<input type="checkbox"/>
Complete	<input type="checkbox"/>	<input type="checkbox"/>
Easy to find	<input type="checkbox"/>	<input type="checkbox"/>
Easy to understand	<input type="checkbox"/>	<input type="checkbox"/>
Well organized	<input type="checkbox"/>	<input type="checkbox"/>
Applicable to your task	<input type="checkbox"/>	<input type="checkbox"/>

Specific comments or problems:

---

---

---

Please tell us how we can improve this book:

---

---

---

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

\_\_\_\_\_  
Name

\_\_\_\_\_  
Address

\_\_\_\_\_  
Company or Organization

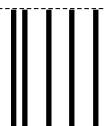
\_\_\_\_\_  
Phone No.



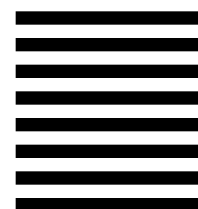
Fold and Tape

Please do not staple

Fold and Tape



NO POSTAGE  
NECESSARY  
IF MAILED IN THE  
UNITED STATES



## BUSINESS REPLY MAIL

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

POSTAGE WILL BE PAID BY ADDRESSEE

Design & Information Development  
IBM Corporation  
Software Reengineering  
Department G71A/ Bldg 503  
P.O. Box 12195  
Research Triangle Park, NC 27709-9990



Fold and Tape

Please do not staple

Fold and Tape







Part Number: 34F1251



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

SA33-0158-12



34F1251

