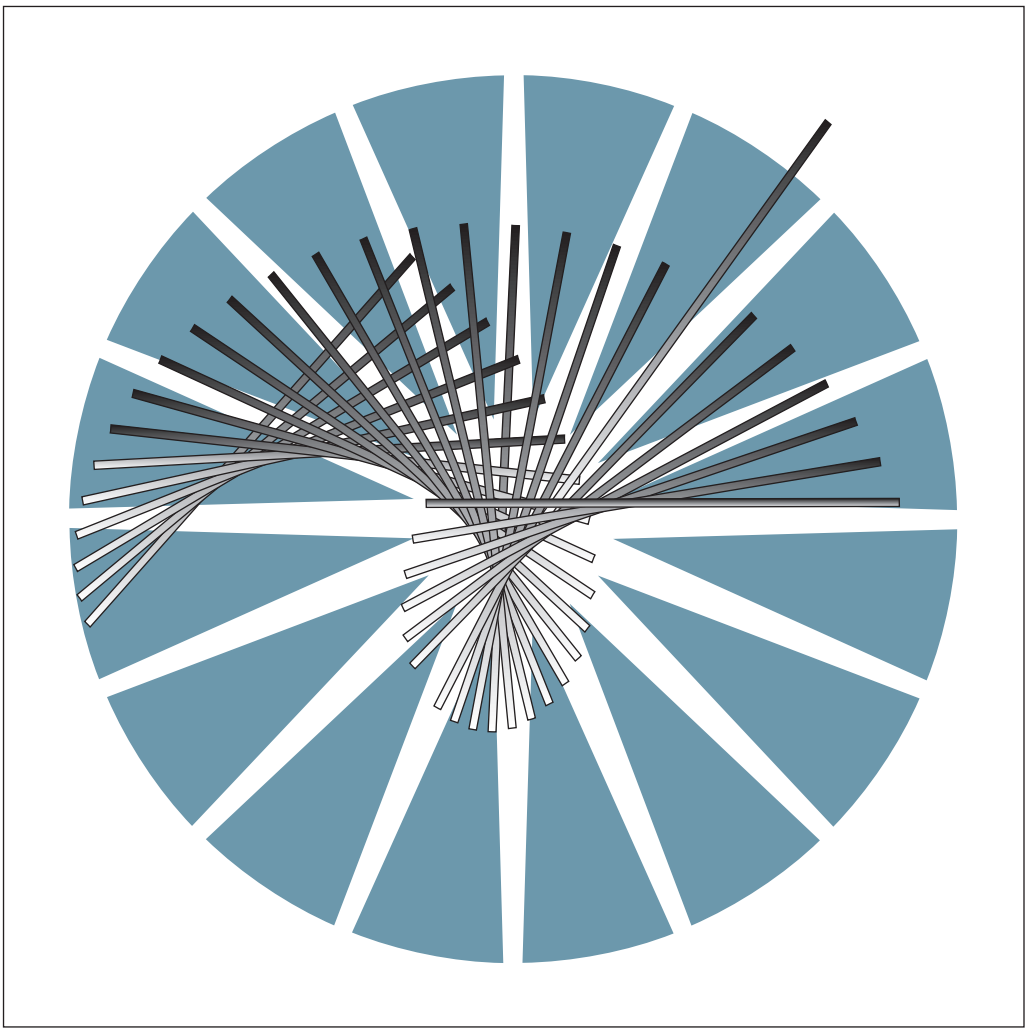
3746 Nways Multiprotocol Controller
Models 900 and 950
Multiaccess Enclosure (MAE)

MAE Migration Guide: Feature Code 3000 to Feature Code 3001



SA33-0475-01

3746 Nways Multiprotocol Controller
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MAE Migration Guide: Feature Code 3000 to Feature Code 3001

SA33-0475-01

Note!

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

Second Edition (July 1998)

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About this Guide

This guide describes the procedures for migrating MAE configuration parameters to the service processor, after it has been upgraded to microcode level F12430. These procedures are part of the process in upgrading the Multiaccess Enclosure (MAE) feature code 3000 to MAE feature code 3001. However, any hardware or microcode installation is performed by an IBM service representative, and is not described in this guide.

Note: This guide is intended for existing MAE feature code 3000 installations. If you are installing an MAE for the first time, you do not need this guide.

Conventions Used in This Guide

Throughout this guide, the term:

3746 Refers to IBM 3746 Nways Multiprotocol Controller Models 900 and 950.

MAE Refers to the Multiaccess Enclosure.

CCM Refers to the Controller Configuration and Management program.

IP Refers to Internet Protocol.

APPN/HPR Refers to Advanced Peer-to-Peer Networking/High Performance Routing

Who Should Read This Guide

This guide is intended for:

- Customer Engineers
- Network architects
- Network planners
- Network operators.

How This Guide Is Organized

This guide is organized into the following chapters:

- Chapter 1, “Overview of MAE Migration” on page 1-1.
- Chapter 2, “Recording MAE Configuration Parameters” on page 2-1.
- Chapter 3, “Migration Path Via a Standalone Workstation” on page 3-1.
- Chapter 4, “Migration Path Via an Upgraded Service Processor” on page 4-1.

An index follows at the end of the book.

Where to Find More Information

You can find more information on CCM, the MAE, and the service processor in the following publications:

- *Overview*, GA33-0180.
- *CCM: Users Guide*, SH11-3081.
- *Basic Operations Guide*, SA33-0177.
- *Planning Guide*, GA33-0457.

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Chapter 1. Overview of MAE Migration

The procedures in this guide are intended to help you in upgrading Multiaccess Enclosure (MAE) feature code 3000 to MAE feature code 3001.

There are two basic steps for achieving this upgrade:

- Migrating existing 3746 and MAE configurations to the new CCM of the upgraded service processor. This is described in detail in this guide. The procedures in the following chapters are designed specifically for you, and do not require the supervision of an IBM service representative.
- Installing both the hardware connection between the MAE and the 3746, and the new level of microcode F12430 (or later). This the responsibility of an IBM service representative, and is not described in this guide.

Upgrading MAE Feature Code 3000 to Feature Code 3001

Upgrading your MAE feature code 3000 to feature code 3001 provides the following:

- A hardware connection between the MAE and the 3746 switch for IP traffic. This increases the potential traffic throughput over five-fold.
- A microcode upgrade from microcode level F12380x[1] to F12430. This establishes a single IP control point for the 3746 and the MAE.

Prerequisites for Upgrading MAE FC 3000 to MAE FC 3001

To upgrade the microcode level from FC 3000 to FC 3001, you must have service processor feature code 5052 (type 7585, with a 2 GB hard disk drive, CD-ROM drive, and 96 MB memory expansion). Service processor feature code 5021 (type 9585 or 3172) cannot be used for this microcode upgrade.

MAE Hardware Connection

The MAE with direct attachment to the 3746 controller switch, feature code 3001, includes a switch adapter card installed into the MAE and a switch interface extension installed into a 3746 processor slot. For IP traffic, this direct attachment frees the token-ring connection required for traffic routed between the MAE and the 3746. Depending on the packet size and number of processors, the IP throughput between the MAE and the other enclosures of the 3746 is increased over five-fold, compared to dual token-ring connections.

Service Processor Microcode Upgrade

In the current level of microcode (D46130x or F12380x) on your service processor, CCM runs and maintains the configurations for the 3746. At the same time, the MAE Configuration Program runs and maintains the configurations for the MAE. With the new level of microcode (F12430) on your service processor, CCM runs and maintains configurations for both the 3746 and the MAE.

[1] Or earlier microcode versions, including D46130x.

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Single IP Control Point

Upgrading the MAE feature code 3000 to feature code 3001 and installing microcode level F12430 on your service processor establishes a single IP control point for the 3746 processors and the MAE. A single IP control point allows you to configure both the 3746 processors and the interfaces of the MAE, primarily through CCM.

Preparing for MAE Migration

Before upgrading the microcode on your service processor and installing the hardware connection between the MAE and the 3746, both CCM and MAE configurations must be saved to diskette.

Warning!

Make sure that you create backup diskettes of configuration files. Installing new microcode reformats the hard disk of the service processor. Check with your IBM service representative that all your configuration files have been saved before new microcode is installed.

Importing Existing Configurations into the New Version of CCM

After the F12430 microcode has been installed on the service processor, your existing configurations must be imported into CCM and saved.

Important!

The 3746 configuration parameters will be automatically read by the new CCM. However, although all of the 3746 APPN/HPR configuration parameters will be migrated, some MAE IP configuration parameters will be lost. For more information, see “IP Parameters for MAE IP Addresses Lost” on page 2-50.

This guide includes two possible migration paths for importing your existing configurations into the new version of CCM, and for recovering your MAE IP configuration parameters. The two migration paths are as follows:

- Via a standalone workstation
- Via an upgraded service processor.

Two MAE Migration Paths

As stated previously, there are two possible migration paths, via a standalone workstation, or via an upgraded service processor. You can choose the path that better suits your needs and the resources that you have available.

For an overview of the two alternative migration paths, see Figure 1-1 on page 1-4 (migration via a standalone workstation), and Figure 1-2 on page 1-5 (migration via an upgraded service processor).

Migration Path Via a Standalone Workstation

The steps to this migration path are as follows:

1. Before migration of the MAE, open the MAE Configuration Program (feature code 3000) and record MAE IP configuration parameters in the worksheets provided in this book (see Chapter 2, “Recording MAE Configuration Parameters” on page 2-1).
2. Export your existing CCM configurations to diskette.
3. Export your existing MAE configurations to diskette.
4. Install the new version of CCM and the MAE Configuration Program (feature code 3000) on a standalone workstation. Both programs are available on the CD-ROM that comes with this guide.
5. Import your existing CCM and MAE configurations from diskette.
6. Open your existing CCM configurations, and wherever needed, manually re-enter the MAE IP configuration parameters from the worksheets.

   Note: You can also run the MAE Configuration Program on your workstation and use it to update the configuration parameters directly in CCM.

7. Save the configurations in CCM.
8. Export the new CCM configurations to diskette.
9. On the upgraded service processor, open the new version of CCM and import the new CCM configurations from diskette.
10. Save the new configurations in CCM.

Advantages: Using this migration path reduces the down-time of network operations during the installation of the MAE hardware connection and the new microcode.

For an overview of this migration path, see Figure 1-1 on page 1-4.

To follow this migration path, see Chapter 3, “Migration Path Via a Standalone Workstation” on page 3-1.

Migration Path Via an Upgraded Service Processor

The steps to this migration path are as follows:

1. Open the MAE Configuration Program (feature code 3000) and record the MAE IP configuration parameters in the worksheets provided in this book (see Chapter 2, “Recording MAE Configuration Parameters” on page 2-1).
2. Export your existing MAE configurations to diskette.
3. After the microcode upgrade has been completed, open the new version of CCM and import the MAE configurations from diskette.
4. Manually re-enter the MAE IP configuration parameters as needed from the worksheets.
5. Save the new configuration(s) in CCM.

Advantages: This migration path does not require the additional resource of a standalone workstation, or repeated installations of the new CCM.

For an overview of this migration path, see Figure 1-2 on page 1-5.

To follow this migration path, see Chapter 4, “Migration Path Via an Upgraded Service Processor” on page 4-1.

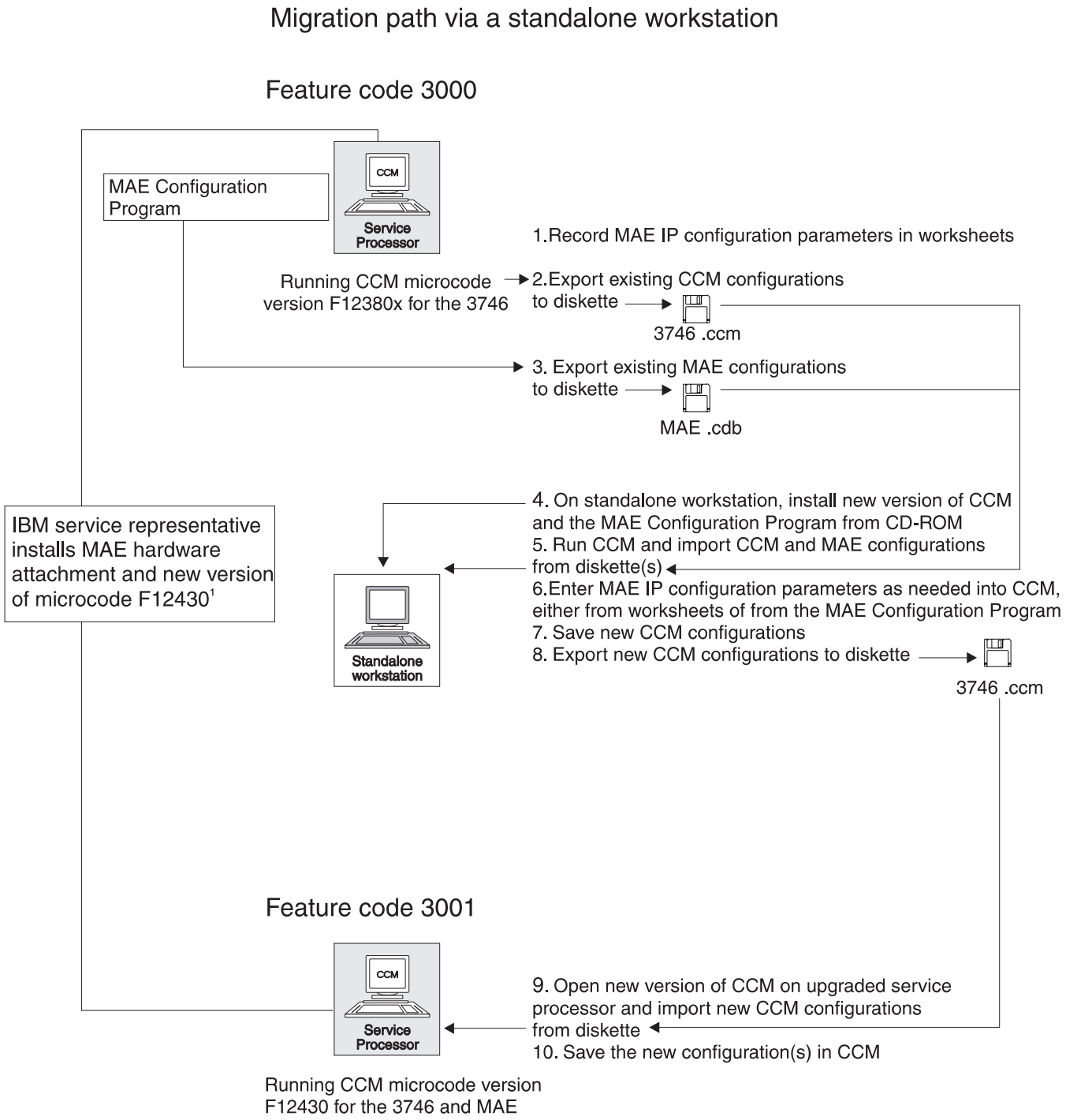

Figure 1-1. Migration Path Via Standalone Workstation

[1]Installing the hardware for the MAE connection to the 3746 switch is described in *Multiaccess Enclosure Installation and Maintenance*, SY33-2124.

Migration path via an upgraded service processor

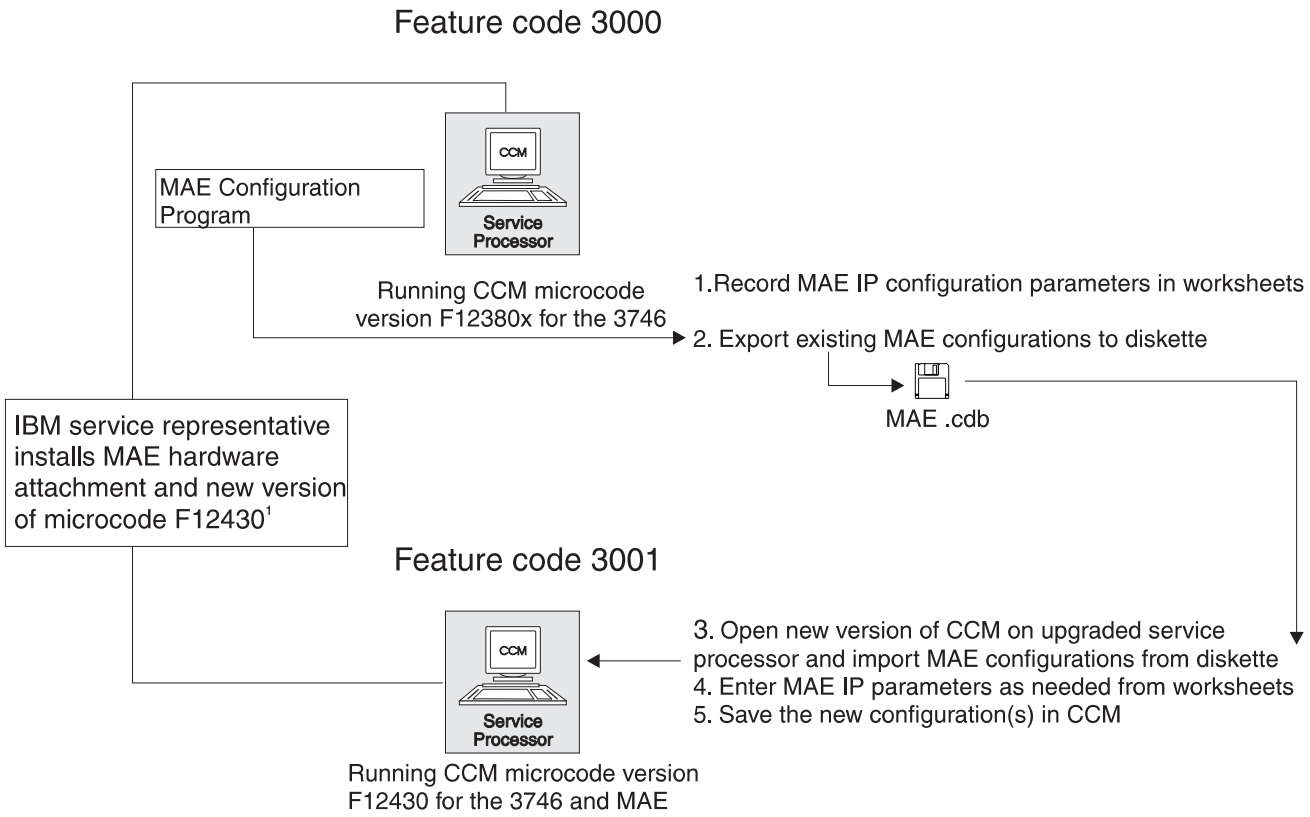

Figure 1-2. Migration Path Via an Upgraded Service Processor

[1]Installing the hardware for the MAE connection to the 3746 switch is described in *Multiaccess Enclosure Installation and Maintenance*, SY33-2124.

Preparation Time and Installation Time

You should allow time for recording any MAE IP configuration parameters in the worksheets and saving configuration files on diskette. Make sure that the worksheets are filled in and configuration files have been saved on diskette before new microcode is installed onto your service processor.

Configuration Parameters Migration

Migrating the MAE configuration parameters to the upgraded service processor involves the following steps:

- Recording MAE IP parameters on the worksheets in this guide.
- Saving 3746 configurations to diskette (this is required only if your migration path is via a standalone workstation).
- Saving MAE configurations to diskette.

Procedure Time

- Recording configuration parameters into the worksheets provided depends on the size and complexity of your network. You must record the MAE IP configuration parameters before the new hardware and microcode is installed.
- Saving configuration parameters to diskette takes about ten minutes.

For recording MAE configuration parameters, see Chapter 2, “Recording MAE Configuration Parameters” on page 2-1. Please take a minute to review the worksheets contained in this chapter.

Hardware Connection and Microcode Upgrade

Installing the new MAE hardware connection and upgrading your current level of microcode to F12430 is performed by an IBM service representative. Microcode and hardware installation includes the following:

- Level of microcode upgrade to F12430.
- LIC install of the Network Node Processor (NNP).
- MAE direct hardware connection install to the 3746 switch.
- IML for 3746 and the MAE.

Procedure Time

- Micro-code installation takes a minimum of one hour and fifteen minutes.
- Installing the MAE hardware attachment takes approximately ten minutes.
- To re-IML the 3746 and the MAE takes between ten to twenty minutes (maximum).

  Note: The new CCM configurations must be activated before the IML.

If you want more information on this procedure, see *Multiaccess Enclosure Installation and Maintenance*, SY33-2124.

Importing and Saving Configurations Procedure

Importing and saving configurations includes the following:

- Importing 3746 configurations from diskette (required only for migration via standalone workstation).
- Importing MAE configurations from diskette.
- Saving new CCM configurations on upgraded service processor.

Procedure Time

- Importing configuration parameters and saving new configurations takes approximately thirty minutes.

MAE Migration Checklist

Before proceeding with the MAE migration, coordinate with your IBM service representative to establish the following:

- 3746 and MAE configurations are saved to diskette (with backup copies).
- MAE IP configuration parameters are recorded in the worksheets as needed.
- Time is scheduled for microcode and hardware installation.

Please check one of the preparation lists below depending on your migration path (for more information, see “Two MAE Migration Paths” on page 1-2).

MAE Migration Checklist Via Upgraded Service Processor

For a migration path via an upgraded service processor, you will need the following:

- *MAE Migration Guide*, SA33-0475 (this guide), and CD-ROM P/N 26L0246.
- Blank diskettes for saving configuration files, 1.44 MB, double-density (other types of diskette will not work with the service processor).

MAE Migration Checklist Via Standalone Workstation

For a migration path via a standalone workstation, you will need the following:

- *MAE Migration Guide*, SA33-0475 (this guide), and CD-ROM P/N 26L0246.
- Blank diskettes for saving configuration files, 1.44 MB, double-density (other types of diskette will not work with the service processor).
- A Pentium standalone workstation, running OS/2 Warp 3 (minimum), with VGA (for CCM) or SVGA (for CCM and the MAE Configuration Program).

Go to Chapter 2, “Recording MAE Configuration Parameters” on page 2-1.

Chapter 2. Recording MAE Configuration Parameters

This chapter provides a set of worksheets for recording MAE IP parameters from the MAE Configuration Program (feature code 3000). You can use these worksheets to re-enter the configuration parameters as you need, once the new hardware connection has been installed between the 3746 and the MAE, and the level of microcode has been upgraded.

Important!

Only some of the MAE IP parameters are affected by the microcode upgrade. You will not need to record the parameters for APPN/HPR, or other parameters different from IP.

During migration, some configuration parameters will be lost, some will be replaced by the new version of CCM, and some will be lost completely[1]. For the purpose of this guide, the configuration parameters are divided into different groups, according to protocols. For example, OSPF parameters form one group, BGP parameters form another group, and so on.

Configuration Parameter Worksheets

Each set of MAE IP configuration parameters that are affected by the microcode upgrade has a corresponding worksheet. Each worksheet is divided into two columns (see for example “General MAE IP Parameters Replaced by 3746 Parameters After Migration” on page 2-4). Below both columns is a table which lists the configuration parameter fields in the MAE Configuration Program, and their equivalent fields in the new version of CCM. The left column above the table with the header **MAE Configuration Program** shows the steps that you make to display the parameter fields in the program. The right column with the header **CCM** shows the steps that you make to display the screens in the new version of CCM.

Careful!

The parameter fields listed in the left column under **MAE Configuration Program** are not shown in the order displayed on the screen. The parameter fields listed in the right column under **CCM** are shown in the order displayed on the screen.

[1] Specifically, RIP V2 parameters that the new level of microcode does not support yet. You can record these if you want for the next code upgrade.

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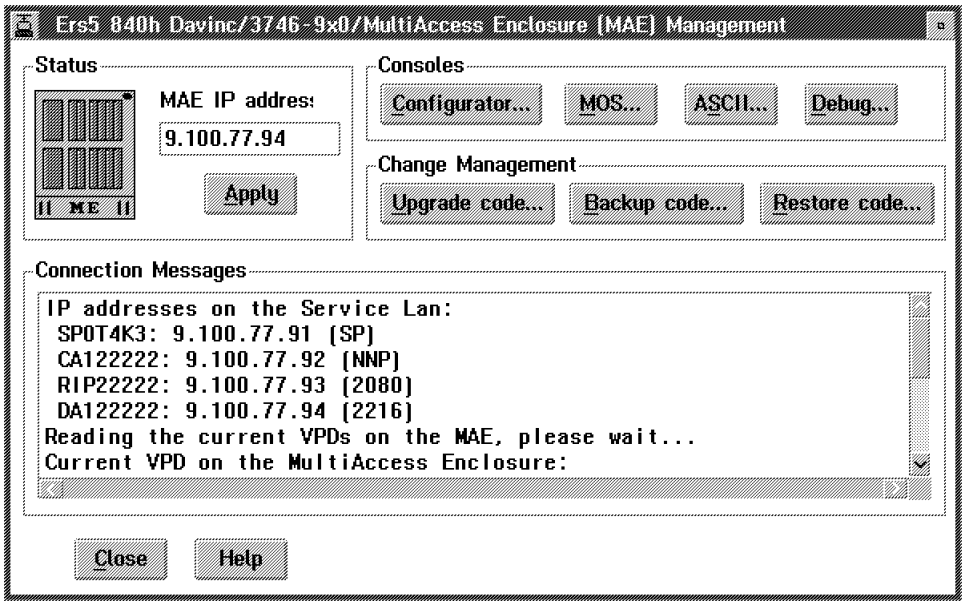
Getting Started

Step 1. On your service processor in **MOSS-E View**, open the 3746 menu.

Step 2. Click **Multiaccess Enclosure (MAE) Management**.

Step 3. Double-click **Manage Multiaccess Enclosure**.



Step 4. In the **Multiaccess Enclosure (MAE) Management** window, click the **Configurator** button.

Step 5. The MAE Configuration Program opens.

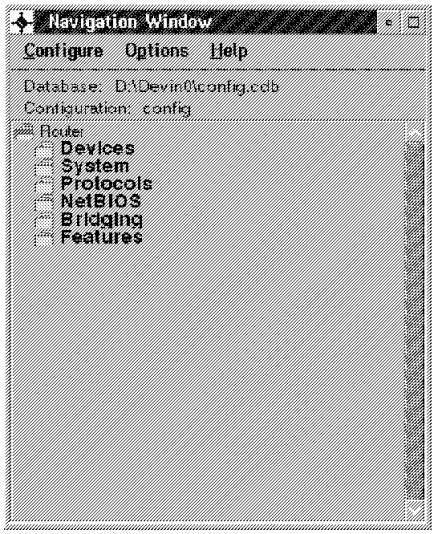


Figure 2-1. Navigation window of the MAE Configuration Program

Step 6. Follow the steps described in each worksheet to display the configuration parameters, for example, “MAE Configuration Program” on page 2-5.

Step 7. Enter the parameter values on the screen into the **Parameter** column of the worksheet.

General MAE IP Parameters Replaced by 3746 Parameters After Migration

Some MAE IP parameters that you have already configured in the MAE Configuration Program will be replaced by the default parameters in the new version of CCM. The parameters affected are as follows:

- "IP PPP NCP Default Parameters" on page 2-6.
- "IP Bootp Forwarding Address Parameters" on page 2-7.
- "OSPF General/Multicast Parameters" on page 2-8.
- "OSPF Imported/Default Route Parameters" on page 2-9.
- "RIP General Parameters" on page 2-11.
- "BGP General Parameters" on page 2-12.
- "SNMP Parameters" on page 2-13.

General IP Parameters

There are nine general MAE IP to re-enter (if needed) after microcode upgrade.

Before Code Upgrade

1. Follow the steps in the **MAE Configuration Program** column on the left.
2. Write the parameter(s) on the screen in the **Parameter** column.

After Microcode Upgrade

1. After the code upgrade has been completed, open the new version of CCM.
2. Enter the parameters that you have recorded. Use the **Entered** √ column for each parameter that you enter.

MAE Configuration Program

1 **Navigation** window ▼

2 **Router** folder ▼

3 **Protocols** folder ▼

4 **IP** folder ▼

5 Select **General**

CCM

1 **Configuration** menu ▼

2 **IP** menu ▼

3 Select **General...**

Table 2-1. General MAE IP Parameters

MAE Configuration Program	Parameter	Entered √	CCM
Enable directed-broadcast			Enable forwarding of directed broadcast
Enable per-packet-multipath			Enable per packet multipath (for OSPF only)
Forward source-routed packets			Enable source-routing
Same Subnet			Enable same subnet
Routing table size			Routing table entries in the NN
Cache size			Number of destination addresses in the cache per processor
Reassembly buffer size			Reassembly buffer size
Locally originated IP packet time-to-live			IP default TTL value
Router ID			Router ID (optional)

Note:

1. In the new version of CCM, the maximum amount of routing table entries is 768. Make sure you allow for this in the new version of CCM with the number that you have in this field.

IP PPP NCP Default Parameters

There are four IP PPP NCP default parameters to re-enter (if needed) after microcode upgrade.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Devices** folder ▼
4. **Adapters** folder ▼
5. Select **Interfaces** ▼
6. In the **Configuration** window, select a PPP interface ▼
7. Click **Configure** ▼
8. Select the **LCP** tab

CCM

1. **Configuration** menu ▼
2. **IP** menu ▼
3. Select **PPP NCP Defaults...**

Table 2-2. IP PPP NCP Parameters

MAE Configuration Program	Parameter	Entered √	CCM
Retry timer			Retry timer
Config tries			Config tries
NAK tries			NAK tries
Terminate tries			Terminate tries

IP Bootp Forwarding Address Parameters

There are three IP bootp forwarding address parameters to re-enter (if needed) after microcode upgrade.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** ▼
4. **IP** folder ▼
5. **Bootp/DHCP Forwarding** folder ▼
6. Select **General**

CCM

1. **Configuration** menu ▼
2. **IP** menu ▼
3. Select **Bootp forwarding...**

Table 2-3. Bootp Forwarding Address Parameters

MAE Configuration Program	Parameter	Entered √	CCM
Enable bootp/DHCP forwarding			Enable bootp forwarding
Maximum hops			Maximum hops
Minimum seconds before forwarding			Minimum time before forwarding

OSPF General/Multicast Parameters

There are five OSPF general/multicast parameters to re-enter (if needed) after microcode upgrade.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocol** folder ▼
4. **IP** folder ▼
5. **OSPF** folder ▼
6. Select **General**

CCM

1. **Configuration** menu ▼
2. **OSPF** menu ▼
3. Select **General/multicast...**

Table 2-4. OSPF General/Multicasts Parameters

MAE Configuration Program	Parameter	Entered √	CCM
Enabled			Enable OSPF
Number of external routes			Number of AS external routes
Number of OSPF routers			Number of OSPF routers

Also in Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocol** folder ▼
4. **IP** folder ▼
5. **OSPF** folder ▼
6. Select **Multicast Forwarding**

CCM

1. **Configuration** menu ▼
2. **OSPF** menu ▼
3. Select **General/multicast...**

Table 2-5. Other General/Multicasts Parameters

MAE Configuration Program	Parameter	Entered √	CCM
Multicasting Forwarding			Enable intra-area multicasting
Inter-Area Multicasting Enable			Enable inter-area multicasting

OSPF Imported/Default Route Parameters

There are fifteen OSPF imported/default route parameters to re-enter (if needed) after microcode upgrade.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocol** folder ▼
4. **IP** folder ▼
5. **OSPF** folder ▼
6. Select **AS Boundary Routing**

CCM

1. **Configuration** menu ▼
2. **OSPF** menu ▼
3. Select **Imported/default routes...**

Table 2-6. OSPF Imported/Default Route Parameters

MAE Configuration Program	Parameter	Entered √	CCM
AS boundary enabled			Enable routes import
Import static routes enabled			Import static routes
Import direct routes enabled			Import direct routes
Import RIP routes enabled			Import RIP routes
Import subnet routes enabled			Import subnet routes
Import BGP routes enabled			Import BGP routes
BGP auto-tag generation enabled			Enable BGP auto-tag generation
Always originate			Always originate default route
Originate if BGP routes available			Originate default route if BGP routes available
From AS number			From AS number
To network number			To network IP address
Originate in OSPF as type			Originate AS type
Default route cost			Default route cost
Forwarding address			Forwarding network IP address

Also in Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocol** folder ▼
4. **IP** folder ▼
5. **OSPF** folder ▼
6. Select **Protocol Comparison**

CCM

1. **Configuration** menu ▼
2. **OSPF** menu ▼
3. Select **Imported/default routes...**

Table 2-7. Other OSPF Imported/Default Route Parameters

MAE Configuration Program	Parameter	Entered √	CCM
Compare static routes to OSPF externals			Compare RIP/static routes to OSPF routes

RIP General Parameters

There are seven RIP general parameters to re-enter (if needed) after microcode upgrade.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocol** folder ▼
4. **IP** folder ▼
5. **RIP** folder ▼
6. Select **General**

CCM

1. **Configuration** menu ▼
2. **RIP** menu ▼
3. Select **General...**

Table 2-8. RIP General Parameters

MAE Configuration Program	Parameter	Entered √	CCM
Enabled			Enable RIP

Also in Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocol** folder ▼
4. **IP** folder ▼
5. **RIP** folder ▼
6. Select **Originate RIP Default**

Also in CCM

1. **Configuration** menu ▼
2. **RIP** menu ▼
3. Select **General...**

Table 2-9. Other RIP General Parameters

MAE Configuration Program	Parameter	Entered √	CCM
Always originate default route			Always originate default route
Originate default route if BGP routes available			Originate default route if BGP routes available
From AS number			From AS number
To network number			To network number
Originate default route if OSPF routes available			Originate default route if OSPF routes available
Originate default cost (1-16)			Default route cost

BGP General Parameters

There are three BGP general parameters to re-enter (if needed) after microcode upgrade.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocol** folder ▼
4. **IP** folder ▼
5. **BGP4** folder ▼
6. Select **General**

CCM

1. **Configuration** menu ▼
2. **BGP** menu ▼
3. Select **General/excluded AS...**

Table 2-10. BGP General Parameters

MAE Configuration Program	Parameter	Entered √	CCM
Enable BGP4			Enable BGP
Autonomous system (AS) number			AS number
TCP-segment size			TCP segment size

SNMP Parameters

There are four SNMP to re-enter (if needed) after microcode upgrade.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **System** folder ▼
4. **SNMP Config** folder ▼
5. **Communities** folder ▼
6. Select **General**

CCM

1. **Configuration** menu ▼
2. Select **SNMP...**

Table 2-11. SNMP Parameters

MAE Configuration Program	Parameter	Entered √	CCM
Name			Access type
Access type			Community name

Use the following table if you have additional SNMP parameters:

MAE Configuration Program	Parameter	Entered √	CCM
Name			Access type
Access type			Community name

Name			Access type
Access type			Community name

Name			Access type
Access type			Community name

Name			Access type
Access type			Community name

Name			Access type
Access type			Community name

Also in Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **System** folder ▼
4. **SNMP Config** folder ▼
5. **Communities** folder ▼
6. Select **Details** ▼
7. **Configuration** window ▼
8. **Addresses** button

Also in CCM

1. **Configuration** menu ▼
2. Select **SNMP...**

Table 2-12. More SNMP Parameters

MAE Configuration Program	Parameter	Entered √	CCM
IP address			UDP transport: Network IP address
IP mask			UDP transport: Network mask

Use the following table if you have additional SNMP Parameters:

MAE Configuration Program	Parameter	Entered √	CCM
IP address			UDP transport: Network IP address
IP mask			UDP transport: Network mask

IP address			UDP transport: Network IP address
IP mask			UDP transport: Network mask

IP address			UDP transport: Network IP address
IP mask			UDP transport: Network mask

IP address			UDP transport: Network IP address
IP mask			UDP transport: Network mask

General MAE IP Parameters Lost After Migration

Some MAE IP parameters that you have already configured in the Configuration Program are lost after the new microcode is installed. The parameters affected are as follows:

- "IP Static Route Parameters" on page 2-16.
- "IP Access Control Parameters" on page 2-18.
- "IP Filter Parameters" on page 2-20.
- "IP Bootp Server Address Parameters" on page 2-21.
- "OSPF Virtual Link Parameters" on page 2-22.
- "OSPF Area Parameters" on page 2-24.
- "OSPF Multicast Group Address Parameters" on page 2-25.
- "RIP Route Acceptance Parameters" on page 2-26.
- "BGP Excluded AS Parameters" on page 2-27.
- "BGP Receive Policy Parameters" on page 2-28.
- "BGP Send Policy Parameters" on page 2-30.
- "BGP Originate Policy Parameters" on page 2-32.
- "BGP Neighbor Parameters" on page 2-34.
- "BGP Aggregate Route Parameters" on page 2-36.

IP Static Route Parameters

There are up to ten parameters lost during migration for each IP static route.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. Select **Static Routes**

CCM

1. **Configuration** menu ▼
2. **IP** menu ▼
3. Select **Static Routes...**

Table 2-13. IP Static Routes List Parameters Lost

MAE Configuration Program	Parameter	Entered √	CCM
Destination network			Destination network
Destination mask			Destination mask
Next hop address 1			Next hop address 1
Cost 1			Cost 1
Next hop address 2			Next hop address 2
Cost 2			Cost 2
Next hop address 3			Next hop address 3
Cost 3			Cost 3
Next hop address 4			Next hop address 4
Cost 4			Cost 4

Use the following table if you have additional IP static routes parameters:

MAE Configuration Program	Parameter	Entered √	CCM
Destination network			Destination network
Destination mask			Destination mask
Next hop address 1			Next hop address 1
Cost 1			Cost 1
Next hop address 2			Next hop address 2
Cost 2			Cost 2
Next hop address 3			Next hop address 3
Cost 3			Cost 3
Next hop address 4			Next hop address 4
Cost 4			Cost 4

Destination network			Destination network
Destination mask			Destination mask
Next hop address 1			Next hop address 1
Cost 1			Cost 1
Next hop address 2			Next hop address 2
Cost 2			Cost 2
Next hop address 3			Next hop address 3
Cost 3			Cost 3
Next hop address 4			Next hop address 4
Cost 4			Cost 4

Destination network			Destination network
Destination mask			Destination mask
Next hop address 1			Next hop address 1
Cost 1			Cost 1
Next hop address 2			Next hop address 2
Cost 2			Cost 2
Next hop address 3			Next hop address 3
Cost 3			Cost 3
Next hop address 4			Next hop address 4
Cost 4			Cost 4

IP Access Control Parameters

There are nine parameters lost during migration for each IP access control.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **Access Control** folder ▼
6. Select **Global**

CCM

1. **Configuration** menu ▼
2. **IP** menu ▼
3. Select **Access Control**

Table 2-14. IP Access Controls List Parameters Lost

MAE Configuration Program	Parameter	Entered √	CCM
Access control			Access control type
Source IP address			Source Network IP address
Source mask address			Source mask address
Destination IP address			Destination network IP address
Destination mask address			Destination mask address
Protocol number from			Protocol number from
Protocol number to			Protocol number to
Port number from			Port number from
Port number to			Port number to

Use the following table if you have additional IP access controls list parameters:

MAE Configuration Program	Parameter	Entered √	CCM
Access control			Access control type
Source IP address			Source Network IP address
Source mask address			Source mask address
Destination IP address			Destination network IP address
Destination mask address			Destination mask address
Protocol number from			Protocol number from
Protocol number to			Protocol number to
Port number from			Port number from
Port number to			Port number to

Access control			Access control type
Source IP address			Source Network IP address
Source mask address			Source mask address
Destination IP address			Destination network IP address
Destination mask address			Destination mask address
Protocol number from			Protocol number from
Protocol number to			Protocol number to
Port number from			Port number from
Port number to			Port number to

Access control			Access control type
Source IP address			Source Network IP address
Source mask address			Source mask address
Destination IP address			Destination network IP address
Destination mask address			Destination mask address
Protocol number from			Protocol number from
Protocol number to			Protocol number to
Port number from			Port number from
Port number to			Port number to

IP Filter Parameters

There are two parameters lost during migration for each IP filter.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. Select **Filters**

CCM

1. **Configuration** menu ▼
2. **IP** menu ▼
3. Select **Filters...**

Table 2-15. IP Filters List Parameters Lost

MAE Configuration Program	Parameter	Entered √	CCM
IP Address			IP address
Subnet Mask			Subnet mask

Use the following table if you have additional IP filters list parameters:

MAE Configuration Program	Parameter	Entered √	CCM
IP Address			IP address
Subnet Mask			Subnet mask

IP Address			IP address
Subnet Mask			Subnet mask

IP Address			IP address
Subnet Mask			Subnet mask

IP Address			IP address
Subnet Mask			Subnet mask

IP Address			IP address
Subnet Mask			Subnet mask

IP Bootp Server Address Parameters

One parameter is lost during migration for each IP bootp server.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **Bootp/DHCP Forwarding** folder ▼
6. Select **Addresses**

CCM

1. **Configuration** menu ▼
2. **OSPF** menu ▼
3. Select **Bootp Forwarding**

Table 2-16. OSPF General/Multicasts IP Bootp Server Address Parameters Lost

MAE Configuration Program	Parameter	Entered √	CCM
Bootp/DHCP server address			Bootp server address

Use the following table if you have additional IP Bootp server address parameters:

MAE Configuration Program	Parameter	Entered √	CCM
Bootp/DHCP server address			Bootp server address
Bootp/DHCP server address			Bootp server address
Bootp/DHCP server address			Bootp server address
Bootp/DHCP server address			Bootp server address
Bootp/DHCP server address			Bootp server address
Bootp/DHCP server address			Bootp server address
Bootp/DHCP server address			Bootp server address
Bootp/DHCP server address			Bootp server address
Bootp/DHCP server address			Bootp server address
Bootp/DHCP server address			Bootp server address
Bootp/DHCP server address			Bootp server address
Bootp/DHCP server address			Bootp server address
Bootp/DHCP server address			Bootp server address
Bootp/DHCP server address			Bootp server address
Bootp/DHCP server address			Bootp server address
Bootp/DHCP server address			Bootp server address

OSPF Virtual Link Parameters

There are seven parameters lost during migration for each OSPF virtual link.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **OSPF** folder ▼
6. Select **Virtual Links**

CCM

1. **Configuration** menu ▼
2. **OSPF** menu ▼
3. Select **Virtual links**

Table 2-17. OSPF Virtual Link Parameters Lost

MAE Configuration Program	Parameter	Entered √	CCM
Endpoint Router ID			Router ID (neighbor IP address)
Retransmit interval			Retransmit interval
Transmit delay			Transmit delay
Dead router interval			Dead interval
Hello interval			Hello interval
Authen. key			Authentication key
Link's transit area			Link's transit area

Use the following table if you have additional OSPF virtual link parameters:

MAE Configuration Program	Parameter	Entered √	CCM
Endpoint Router ID			Router ID (neighbor IP address)
Retransmit interval			Retransmit interval
Transmit delay			Transmit delay
Dead router interval			Dead interval
Hello interval			Hello interval
Authen. key			Authentication key
Link's transit area			Link's transit area

Endpoint Router ID			Router ID (neighbor IP address)
Retransmit interval			Retransmit interval
Transmit delay			Transmit delay
Dead router interval			Dead interval
Hello interval			Hello interval
Authen. key			Authentication key
Link's transit area			Link's transit area

Endpoint Router ID			Router ID (neighbor IP address)
Retransmit interval			Retransmit interval
Transmit delay			Transmit delay
Dead router interval			Dead interval
Hello interval			Hello interval
Authen. key			Authentication key
Link's transit area			Link's transit area

Endpoint Router ID			Router ID (neighbor IP address)
Retransmit interval			Retransmit interval
Transmit delay			Transmit delay
Dead router interval			Dead interval
Hello interval			Hello interval
Authen. key			Authentication key
Link's transit area			Link's transit area

OSPF Area Parameters

There are four parameters lost during migration for each OSPF area.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **OSPF** folder ▼
6. **Area Configuration** folder ▼
7. Select **General**

CCM

1. **Configuration** menu ▼
2. **OSPF** menu ▼
3. Select **Areas**

Table 2-18. OSPF Area Parameters Lost

MAE Configuration Program	Parameter	Entered √	CCM
Area number			Area number
Is this a stub area?[2]			Stub area
Stub default cost			Default cost
Import summaries			Import summaries

Use the following table if you have additional OSPF area parameters:

MAE Configuration Program	Parameter	Entered √	CCM
Area number			Area number
Is this a stub area?[2]			Stub area
Stub default cost			Default cost
Import summaries			Import summaries

Area number			Area number
Is this a stub area?[2]			Stub area
Stub default cost			Default cost
Import summaries			Import summaries

[2] If this field is checked, the rest of the fields in this column display.

OSPF Multicast Group Address Parameters

One parameter is lost during migration for each OSPF multicast group address.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **OSPF** folder ▼
6. Select **Group Addresses**

CCM

1. **Configuration** menu ▼
2. **OSPF** menu ▼
3. Select **General/multicast...**

Table 2-19. OSPF Multicast Group Address Parameter Lost

MAE Configuration Program	Parameter	Entered √	CCM
Group address			Group address

Use the following table if you have additional OSPF multicast address parameters:

MAE Configuration Program	Parameter	Entered √	CCM
Group address			Group address
Group address			Group address
Group address			Group address
Group address			Group address
Group address			Group address
Group address			Group address
Group address			Group address
Group address			Group address
Group address			Group address
Group address			Group address
Group address			Group address
Group address			Group address
Group address			Group address
Group address			Group address
Group address			Group address
Group address			Group address

RIP Route Acceptance Parameters

One parameter is lost during migration for each RIP route acceptance address.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **RIP** folder ▼
6. Select **RIP Route Acceptance**

CCM

1. **Configuration** menu ▼
2. **RIP** menu ▼
3. Select **General...**

Table 2-20. RIP Route Acceptance Parameters Lost

MAE Configuration Program	Parameter	Entered √	CCM
Network address			Network address

Use the following table if you have additional RIP route acceptance parameters:

MAE Configuration Program	Parameter	Entered √	CCM
Network address			Network address
Network address			Network address
Network address			Network address
Network address			Network address
Network address			Network address
Network address			Network address
Network address			Network address
Network address			Network address
Network address			Network address
Network address			Network address
Network address			Network address
Network address			Network address
Network address			Network address
Network address			Network address
Network address			Network address
Network address			Network address
Network address			Network address

BGP Excluded AS Parameters

One parameter is lost during migration for each BGP excluded AS.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **BGP4** folder ▼
6. Select **Exclude AS Numbers**

CCM

1. **Configuration** menu ▼
2. Select **SNMP...** ▼
3. **BGP** menu ▼
4. Select **General/excluded AS...**

Table 2-21. BGP Excluded AS Parameters Lost

MAE Configuration Program	Parameter	Entered √	CCM
AS number to exclude			AS no. to exclude

Use the following table if you have additional BGP excluded AS parameters:

MAE Configuration Program	Parameter	Entered √	CCM
AS number to exclude			AS no. to exclude
AS number to exclude			AS no. to exclude
AS number to exclude			AS no. to exclude
AS number to exclude			AS no. to exclude
AS number to exclude			AS no. to exclude
AS number to exclude			AS no. to exclude
AS number to exclude			AS no. to exclude
AS number to exclude			AS no. to exclude
AS number to exclude			AS no. to exclude
AS number to exclude			AS no. to exclude
AS number to exclude			AS no. to exclude
AS number to exclude			AS no. to exclude
AS number to exclude			AS no. to exclude
AS number to exclude			AS no. to exclude
AS number to exclude			AS no. to exclude
AS number to exclude			AS no. to exclude
AS number to exclude			AS no. to exclude
AS number to exclude			AS no. to exclude
AS number to exclude			AS no. to exclude

BGP Receive Policy Parameters

There are seven parameters lost during migration for each BGP receive policy.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **BGP4** folder ▼
6. Select **Receive Policies**

CCM

1. **Configuration** menu ▼
2. **BPG** menu ▼
3. Select **Receive policies**

Table 2-22. BGP Receive Policy Parameters Lost

MAE Configuration Program	Parameter	Entered √	CCM
Type			Policy type
Address match			Address match
Network prefix			Network IP address
Network mask			Network mask
IGP-metric			IGP metric
Originating AS number			Originating AS number
Adjacent AS number			Adjacent AS number

Use the following table if you have additional BGP receive policy parameters:

MAE Configuration Program	Parameter	Entered √	CCM
Type			Policy type
Address match			Address match
Network prefix			Network IP address
Network mask			Network mask
IGP-metric			IGP metric
Originating AS number			Originating AS number
Adjacent AS number			Adjacent AS number

Type			Policy type
Address match			Address match
Network prefix			Network IP address
Network mask			Network mask
IGP-metric			IGP metric
Originating AS number			Originating AS number
Adjacent AS number			Adjacent AS number

Type			Policy type
Address match			Address match
Network prefix			Network IP address
Network mask			Network mask
IGP-metric			IGP metric
Originating AS number			Originating AS number
Adjacent AS number			Adjacent AS number

Type			Policy type
Address match			Address match
Network prefix			Network IP address
Network mask			Network mask
IGP-metric			IGP metric
Originating AS number			Originating AS number
Adjacent AS number			Adjacent AS number

BGP Send Policy Parameters

There are seven parameters lost during migration for each BGP send policy.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **BGP4** folder ▼
6. Select **Send Policies**

CCM

1. **Configuration** menu ▼
2. **BPG** menu ▼
3. Select **Send policies**

Table 2-23. BGP Send Policy Parameters Lost

MAE Configuration Program	Parameter	Entered √	CCM
Type			Policy type
Address match			Address match
Network prefix			Network IP address
Network mask			Network mask
Tag			Tag
Adjacent AS number			Adjacent AS number

Use the following table if you have additional BGP send policy parameters:

MAE Configuration Program	Parameter	Entered √	CCM
Type			Policy type
Address match			Address match
Network prefix			Network IP address
Network mask			Network mask
Tag			Tag
Adjacent AS number			Adjacent AS number

Type			Policy type
Address match			Address match
Network prefix			Network IP address
Network mask			Network mask
Tag			Tag
Adjacent AS number			Adjacent AS number

Type			Policy type
Address match			Address match
Network prefix			Network IP address
Network mask			Network mask
Tag			Tag
Adjacent AS number			Adjacent AS number

Type			Policy type
Address match			Address match
Network prefix			Network IP address
Network mask			Network mask
Tag			Tag
Adjacent AS number			Adjacent AS number

Type			Policy type
Address match			Address match
Network prefix			Network IP address
Network mask			Network mask
Tag			Tag
Adjacent AS number			Adjacent AS number

BGP Originate Policy Parameters

There are five parameters lost during migration for each BGP originate policy.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **BGP4** folder ▼
6. Select **Originate Policies**

CCM

1. **Configuration** menu ▼
2. **BPG** menu ▼
3. Select **Originate policies**

Table 2-24. BGP Originate Policy Parameters Lost

MAE Configuration Program	Parameter	Entered √	CCM
Type			Policy type
Address match			Address match
Network prefix			Network IP address
Network mask			Network mask
Tag			Tag

Use the following table if you have additional BGP originate policy parameters:

MAE Configuration Program	Parameter	Entered √	CCM
Type			Policy type
Address match			Address match
Network prefix			Network IP address
Network mask			Network mask
Tag			Tag

Type			Policy type
Address match			Address match
Network prefix			Network IP address
Network mask			Network mask
Tag			Tag

Type			Policy type
Address match			Address match
Network prefix			Network IP address
Network mask			Network mask
Tag			Tag

Type			Policy type
Address match			Address match
Network prefix			Network IP address
Network mask			Network mask
Tag			Tag

Type			Policy type
Address match			Address match
Network prefix			Network IP address
Network mask			Network mask
Tag			Tag

Type			Policy type
Address match			Address match
Network prefix			Network IP address
Network mask			Network mask
Tag			Tag

BGP Neighbor Parameters

There are seven parameters lost during migration for each BGP neighbor.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **BGP4** folder ▼
6. Select **Neighbors**

CCM

1. **Configuration** menu ▼
2. **BGP** menu ▼
3. Select **Neighbors...**

Table 2-25. BGP Neighbor Parameters Lost

MAE Configuration Program	Parameter	Entered √	CCM
Neighbor Address			IP address
Enable neighbor			Enable neighbor
Neighbor AS number			AS number
Initialization timer			Initialization timer
Connect retry timer			Connect retry timer
Hold timer			Hold timer
Neighbor TCP-segment size			TCP segment size

Use the following table if you have additional BGP neighbor parameters:

MAE Configuration Program	Parameter	Entered √	CCM
Neighbor Address			IP address
Enable neighbor			Enable neighbor
Neighbor AS number			AS number
Initialization timer			Initialization timer
Connect retry timer			Connect retry timer
Hold timer			Hold timer
Neighbor TCP-segment size			TCP segment size

Neighbor Address			IP address
Enable neighbor			Enable neighbor
Neighbor AS number			AS number
Initialization timer			Initialization timer
Connect retry timer			Connect retry timer
Hold timer			Hold timer
Neighbor TCP-segment size			TCP segment size

Neighbor Address			IP address
Enable neighbor			Enable neighbor
Neighbor AS number			AS number
Initialization timer			Initialization timer
Connect retry timer			Connect retry timer
Hold timer			Hold timer
Neighbor TCP-segment size			TCP segment size

Neighbor Address			IP address
Enable neighbor			Enable neighbor
Neighbor AS number			AS number
Initialization timer			Initialization timer
Connect retry timer			Connect retry timer
Hold timer			Hold timer
Neighbor TCP-segment size			TCP segment size

BGP Aggregate Route Parameters

There are two parameters lost during migration for each BGP aggregate route.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **BGP4** folder ▼
6. Select **Aggregate Routes**

CCM

1. **Configuration** menu ▼
2. **BGP** menu ▼
3. Select **Aggregate routes**

Table 2-26. BGP Aggregate Route Parameter Lost

MAE Configuration Program	Parameter	Entered √	CCM
Network prefix			Network IP address
Network mask			Network mask

Use the following table if you have additional BGP aggregate route parameters:

MAE Configuration Program	Parameter	Entered √	CCM
Network prefix			Network IP address
Network mask			Network mask
Network prefix			Network IP address
Network mask			Network mask
Network prefix			Network IP address
Network mask			Network mask
Network prefix			Network IP address
Network mask			Network mask
Network prefix			Network IP address
Network mask			Network mask
Network prefix			Network IP address
Network mask			Network mask
Network prefix			Network IP address
Network mask			Network mask
Network prefix			Network IP address
Network mask			Network mask

Specific IP Parameters for Each MAE IP Address Lost After Migration

All MAE IP station address parameters defined in the MAE Configuration Program are lost after the microcode upgrade and must be re-entered (if needed) in the new version of CCM. The parameters affected are as follows:

- "OSPF Parameters."
- "OSPF Neighbor Parameters" on page 2-45.
- "RIP Parameters" on page 2-46.

OSPF Parameters

There are six OSPF parameters lost for each defined IP address.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **OSPF** folder ▼
6. Select **Interfaces** ▼
7. Click **Configure** for each IP address ▼
8. Select **Subnet** tab

CCM

1. **Configuration** menu ▼
2. **OSPF** menu ▼
3. Select **Parameters per IP address...**
4. Select an **IP address** ▼
5. Click **Add OSPF** ▼
6. Click **OSPF parameters**

Table 2-27. OSPF Parameters Lost Per IP Address

MAE Configuration Program	Parameter	Entered √	CCM
Subnet advertisement (PPP only)			Subnet advertisement

Also in Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **OSPF** folder ▼
6. Select **Interfaces** ▼
7. Click **Configure** for each IP address ▼
8. Select **General** tab

Also in CCM

1. **Configuration** menu ▼
2. **OSPF** menu ▼
3. Select **Parameters per IP address...**
4. Select an **IP address** ▼
5. Click **Add OSPF** ▼
6. Click **OSPF parameters**

Table 2-28. Other OSPF Parameters Lost Per IP Address

MAE Configuration Program	Parameter	Entered √	CCM
Area number			Area number
Authentication key			Authentication key
Cost			Cost (TOS 0)
Priority			Priority

Use the following table if you have additional OSPF parameters:

MAE Configuration Program	Parameter	Entered √	CCM
Area number			Area number
Authentication key			Authentication key
Cost			Cost (TOS 0)
Priority			Priority

Area number			Area number
Authentication key			Authentication key
Cost			Cost (TOS 0)
Priority			Priority

Area number			Area number
Authentication key			Authentication key
Cost			Cost (TOS 0)
Priority			Priority

Area number			Area number
Authentication key			Authentication key
Cost			Cost (TOS 0)
Priority			Priority

Area number			Area number
Authentication key			Authentication key
Cost			Cost (TOS 0)
Priority			Priority

Area number			Area number
Authentication key			Authentication key
Cost			Cost (TOS 0)
Priority			Priority

Area number			Area number
Authentication key			Authentication key
Cost			Cost (TOS 0)
Priority			Priority

Also in Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **OSPF** folder ▼
6. Select **Interfaces** ▼
7. Click **Configure** for each IP address ▼
8. Select **Timers** tab

Also in CCM

1. **Configuration** menu ▼
2. **OSPF** menu ▼
3. Select **Parameters per IP address...**
4. Select an **IP address** ▼
5. Click **Add OSPF** ▼
6. Click **OSPF parameters**

Table 2-29. Other OSPF Parameters Lost Per IP Address

MAE Configuration Program	Parameter	Entered √	CCM
Retrans interval			Retransmit interval
Transmission delay			Transmit delay
Dead router interval			Dead router
Hello interval			Hello interval

Use the following table if you have additional OSPF parameters:

MAE Configuration Program	Parameter	Entered √	CCM
Retrans interval			Retransmit interval
Transmission delay			Transmit delay
Dead router interval			Dead router
Hello interval			Hello interval

Retrans interval			Retransmit interval
Transmission delay			Transmit delay
Dead router interval			Dead router
Hello interval			Hello interval

Retrans interval			Retransmit interval
Transmission delay			Transmit delay
Dead router interval			Dead router
Hello interval			Hello interval

Retrans interval			Retransmit interval
Transmission delay			Transmit delay
Dead router interval			Dead router
Hello interval			Hello interval

Retrans interval			Retransmit interval
Transmission delay			Transmit delay
Dead router interval			Dead router
Hello interval			Hello interval

Retrans interval			Retransmit interval
Transmission delay			Transmit delay
Dead router interval			Dead router
Hello interval			Hello interval

Retrans interval			Retransmit interval
Transmission delay			Transmit delay
Dead router interval			Dead router
Hello interval			Hello interval

Also in Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **OSPF** folder ▼
6. Select **Interfaces** ▼
7. Select an **IP address** ▼
8. Click **Configure** ▼
9. Select **Multicast Ext.** tab

Also in CCM

1. **Configuration** menu ▼
2. **OSPF** menu ▼
3. Select **Parameters per IP address...**
4. Select an **IP address** ▼
5. Click **Add OSPF** ▼
6. Click **OSPF parameters**

Table 2-30. Other OSPF Parameters Lost Per IP Address

MAE Configuration Program	Parameter	Entered √	CCM
Multicast enabled			Enable multicast
Forward/rcv as unicasts?			Forward/receive as unicasts
IGMP polling interval			IGMP polling interval
IGMP timeout			IGMP timeout

Use the following table if you have additional OSPF parameters:

MAE Configuration Program	Parameter	Entered √	CCM
Multicast enabled			Enable multicast
Forward/rcv as unicasts?			Forward/receive as unicasts
IGMP polling interval			IGMP polling interval
IGMP timeout			IGMP timeout

Multicast enabled			Enable multicast
Forward/rcv as unicasts?			Forward/receive as unicasts
IGMP polling interval			IGMP polling interval
IGMP timeout			IGMP timeout

Multicast enabled			Enable multicast
Forward/rcv as unicasts?			Forward/receive as unicasts
IGMP polling interval			IGMP polling interval
IGMP timeout			IGMP timeout

Multicast enabled			Enable multicast
Forward/rcv as unicasts?			Forward/receive as unicasts
IGMP polling interval			IGMP polling interval
IGMP timeout			IGMP timeout

Multicast enabled			Enable multicast
Forward/rcv as unicasts?			Forward/receive as unicasts
IGMP polling interval			IGMP polling interval
IGMP timeout			IGMP timeout

Multicast enabled			Enable multicast
Forward/rcv as unicasts?			Forward/receive as unicasts
IGMP polling interval			IGMP polling interval
IGMP timeout			IGMP timeout

Multicast enabled			Enable multicast
Forward/rcv as unicasts?			Forward/receive as unicasts
IGMP polling interval			IGMP polling interval
IGMP timeout			IGMP timeout

Multicast enabled			Enable multicast
Forward/rcv as unicasts?			Forward/receive as unicasts
IGMP polling interval			IGMP polling interval
IGMP timeout			IGMP timeout

Also in Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **OSPF** folder ▼
6. Select **Interfaces** ▼
7. Click **Configure** for each IP address ▼
8. Select **Non-Broadcast** tab

Also in CCM

1. **Configuration** menu ▼
2. **OSPF** menu ▼
3. Select **Parameters per IP address...**
4. Select an **IP address** ▼
5. Click **Add OSPF** ▼
6. Click **OSPF parameters**

Table 2-31. Other OSPF Parameters Lost Per IP Address

MAE Configuration Program	Parameter	Entered √	CCM
Non-broadcast			Non-broadcast
Polling interval			Polling interval

Use the following table if you have additional OSPF parameters:

Table 2-32. Other OSPF Parameters Lost Per IP Address

MAE Configuration Program	Parameter	Entered √	CCM
Non-broadcast			Non-broadcast
Polling interval			Polling interval

Non-broadcast			Non-broadcast
Polling interval			Polling interval

Non-broadcast			Non-broadcast
Polling interval			Polling interval

Non-broadcast			Non-broadcast
Polling interval			Polling interval

Non-broadcast			Non-broadcast
Polling interval			Polling interval

OSPF Neighbor Parameters

There are two OSPF neighbor parameters lost for each defined IP address.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **OSPF** folder ▼
6. Select **Interfaces** ▼
7. **Configuration** window ▼
8. Click **Configure** for each IP address ▼
9. Select **Neighbors** tab

CCM

1. **Configuration** menu ▼
2. **OSPF** menu ▼
3. Select **Parameters per IP address...** ▼
4. Select an **IP address** ▼
5. Click **OSPF neighbors (N)**

Table 2-33. OSPF Neighbor Parameters Per IP Address Lost

MAE Configuration Program	Parameter	Entered √	CCM
Neighbor IP address			Neighbor IP address
Designated router			Designated router eligible (E)

Use the following table if you have additional OSPF neighbor parameters:

MAE Configuration Program	Parameter	Entered √	CCM
Neighbor IP address			Neighbor IP address
Designated router			Designated router eligible (E)

Neighbor IP address			Neighbor IP address
Designated router			Designated router eligible (E)

Neighbor IP address			Neighbor IP address
Designated router			Designated router eligible (E)

Neighbor IP address			Neighbor IP address
Designated router			Designated router eligible (E)

Neighbor IP address			Neighbor IP address
Designated router			Designated router eligible (E)

RIP Parameters

There are 14 RIP parameters lost for each defined IP address.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **RIP** folder ▼
6. Select **Interfaces** ▼
7. **Configuration** window ▼
8. Click **Configure** for each IP address ▼
9. Select **General** tab

CCM

1. **Configuration** menu ▼
2. **RIP** menu ▼
3. Select **Parameters per IP address...** ▼
4. Select an **IP address** ▼
5. Click **Add RIP** ▼
6. Click **RIP parameters...**

Table 2-34. RIP Parameters Lost Per IP address

MAE Configuration Program	Parameter	Entered √	CCM
Broadcast address style			Broadcast address style
Address fill pattern			Address fill pattern
Interface tag (AS number)			Interface tag (AS number)

Use the following table if you have additional RIP parameters:

MAE Configuration Program	Parameter	Entered √	CCM
Broadcast address style			Broadcast address style
Address fill pattern			Address fill pattern
Interface tag (AS number)			Interface tag (AS number)

Broadcast address style			Broadcast address style
Address fill pattern			Address fill pattern
Interface tag (AS number)			Interface tag (AS number)

Broadcast address style			Broadcast address style
Address fill pattern			Address fill pattern
Interface tag (AS number)			Interface tag (AS number)

Broadcast address style			Broadcast address style
Address fill pattern			Address fill pattern
Interface tag (AS number)			Interface tag (AS number)

Broadcast address style			Broadcast address style
Address fill pattern			Address fill pattern
Interface tag (AS number)			Interface tag (AS number)

Broadcast address style			Broadcast address style
Address fill pattern			Address fill pattern
Interface tag (AS number)			Interface tag (AS number)

Broadcast address style			Broadcast address style
Address fill pattern			Address fill pattern
Interface tag (AS number)			Interface tag (AS number)

Broadcast address style			Broadcast address style
Address fill pattern			Address fill pattern
Interface tag (AS number)			Interface tag (AS number)

Broadcast address style			Broadcast address style
Address fill pattern			Address fill pattern
Interface tag (AS number)			Interface tag (AS number)

Broadcast address style			Broadcast address style
Address fill pattern			Address fill pattern
Interface tag (AS number)			Interface tag (AS number)

Also in Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **RIP** folder ▼
6. Select **Interfaces** ▼
7. **Configuration** window ▼
8. Click **Configure** for each IP address ▼
9. Select **Flags** tab

Also in CCM

1. **Configuration** menu ▼
2. **RIP** menu ▼
3. Select **Parameters per IP address...** ▼
4. Select an **IP address** ▼
5. Click **Add RIP** ▼
6. Click **RIP parameters...**

Table 2-35. Other RIP Parameters Lost Per IP Address

MAE Configuration Program	Parameter	Entered √	CCM
Send net routes			Send net routes
Send host routes			Send host routes
Send static routes			Send static routes
Send default routes			Send default routes
Receive RIP			Receive RIP routes
Receive dynamic nets			Receive net routes
Receive dynamic hosts			Receive host routes
Override static routes			Override static routes
Override default			Override default routes

Use the following table if you have additional RIP parameters:

MAE Configuration Program	Parameter	Entered √	CCM
Send net routes			Send net routes
Send host routes			Send host routes
Send static routes			Send static routes
Send default routes			Send default routes
Receive RIP			Receive RIP routes
Receive dynamic nets			Receive net routes
Receive dynamic hosts			Receive host routes
Override static routes			Override static routes
Override default			Override default routes

Send net routes			Send net routes
Send host routes			Send host routes
Send static routes			Send static routes
Send default routes			Send default routes
Receive RIP			Receive RIP routes
Receive dynamic nets			Receive net routes
Receive dynamic hosts			Receive host routes
Override static routes			Override static routes
Override default			Override default routes

Send net routes			Send net routes
Send host routes			Send host routes
Send static routes			Send static routes
Send default routes			Send default routes
Receive RIP			Receive RIP routes
Receive dynamic nets			Receive net routes
Receive dynamic hosts			Receive host routes
Override static routes			Override static routes
Override default			Override default routes

IP Parameters for MAE IP Addresses Lost

All RIP V2 IP station parameters in the MAE Configuration Program are lost after microcode upgrade and cannot be used in the new version of CCM. However, you can save them on diskette for future releases of the MAE.

RIP V2 Parameters Lost During Migration

There are six RIP V2 parameters lost for each defined IP address.

MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **RIP** folder ▼
6. Select **Interfaces** ▼
7. Click **Configure** for each IP address ▼
8. Select **Metric** tab

Table 2-36. RIP V2 Parameters Lost Per IP Address

MAE Configuration Program	Parameter
RIP in metric	
RIP out metric	

Also in MAE Configuration Program

1. **Navigation** window ▼
2. **Router** folder ▼
3. **Protocols** folder ▼
4. **IP** folder ▼
5. **RIP** folder ▼
6. Select **Interfaces** ▼
7. Click **Configure** for each IP address ▼
8. Select **RIP V2** tab

Table 2-37. Other RIP V2 Parameters Lost Per IP Address

MAE Configuration Program	Parameter
Enable RIP V2	
Enable RIP 1 routes	
Enable authentication	
Authentication key	

After you have finished entering the MAE IP parameters that you need, close the **Multiaccess Enclosure (MAE) Management** window.

Migration Path Via a Standalone Workstation

If your migration path is via a standalone workstation, see Chapter 3, “Migration Path Via a Standalone Workstation” on page 3-1.

Migration Path Via an Upgraded Service Processor

If your migration path is via an upgraded service processor, see Chapter 4, “Migration Path Via an Upgraded Service Processor” on page 4-1.

Chapter 3. Migration Path Via a Standalone Workstation

This chapters describes a migration path via a standalone workstation with the following steps:

- Import your existing CCM and MAE configuration files.
- Merge the configurations in the new version of CCM.
- Export the new CCM configurations to diskette.

Prerequisites

The prerequisites for this migration path are as follows:

- OS/2 standalone workstation[1] with a CD-ROM drive.
- The CD-ROM P/N 26L0246 that comes with this guide, containing the new version of CCM and the current version of the MAE Configuration Program.
- Blank 1.44 MB, double-density diskette(s).

The steps to this procedure are as follows:

1. Export existing CCM configurations to diskette.
2. Export existing MAE configurations to diskette.
3. Install new version of CCM from CD-ROM on standalone workstation.
4. Install MAE Configuration Program from CD-ROM on standalone workstation.
5. Run CCM, and import 3746 and MAE configurations from diskette.
6. Enter the MAE IP configuration parameters as needed into CCM, either from the MAE Configuration Program or from the worksheets.
7. Save new configurations in CCM
8. Export configurations to diskette.
9. Open CCM on the upgraded service processor and import CCM configurations from diskette.
10. Save new configuration(s) in CCM.

3746 and MAE Configurations

The CCM configuration files (.ccm) and the MAE configuration files (.cdb) need to be saved and exported to diskette before the MAE hardware connection and microcode upgrade installation can begin.

Important!

It is strongly recommended that you make backup copies of your configuration files on diskette.

Configuration Diskettes

For saving your configuration files, you must use 1.44 MB, high-density diskettes. Other types of diskette will not work with the service processor.

[1] A Pentium is recommended, with VGA to run the new version of CCM, and SVGA for the MAE Configuration Program.

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Exporting 3746 Configurations to Diskette

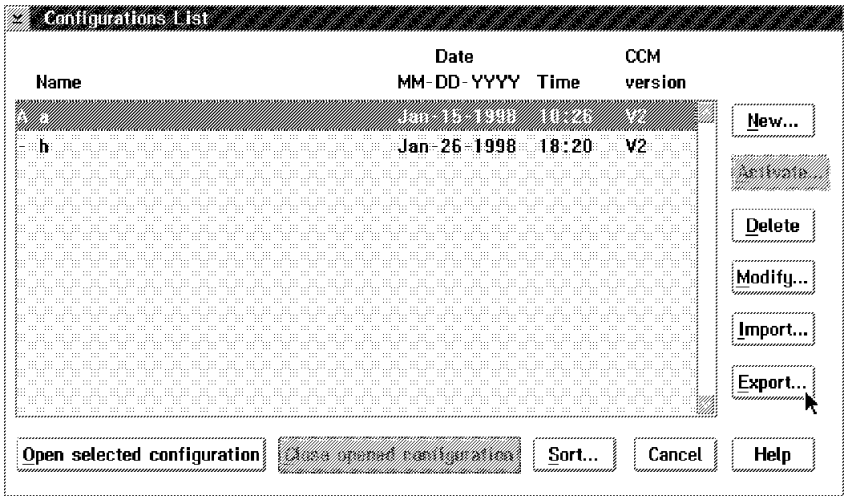
Step 1. Open the 3746 menu in MOSS-E View.

Step 2. Click **Network Node (NNP) Management**.

Step 3. Double-click **CCM - Controller Configuration and Management**.

Step 4. From the **File** menu, select **Open**.

Step 5. In the **Configurations List** window, select a 3746 configuration and click **Export**.



Step 6. At the prompt, insert a diskette into the service processor floppy disk drive and click **OK**.

Step 7. A message indicates that the configuration has been exported successfully. Click **OK**.

Step 8. Click **Cancel** and close CCM.

Step 9. Label the diskette with the CCM configuration file name.

Step 10. Go to “Exporting MAE Configurations to Diskette.”

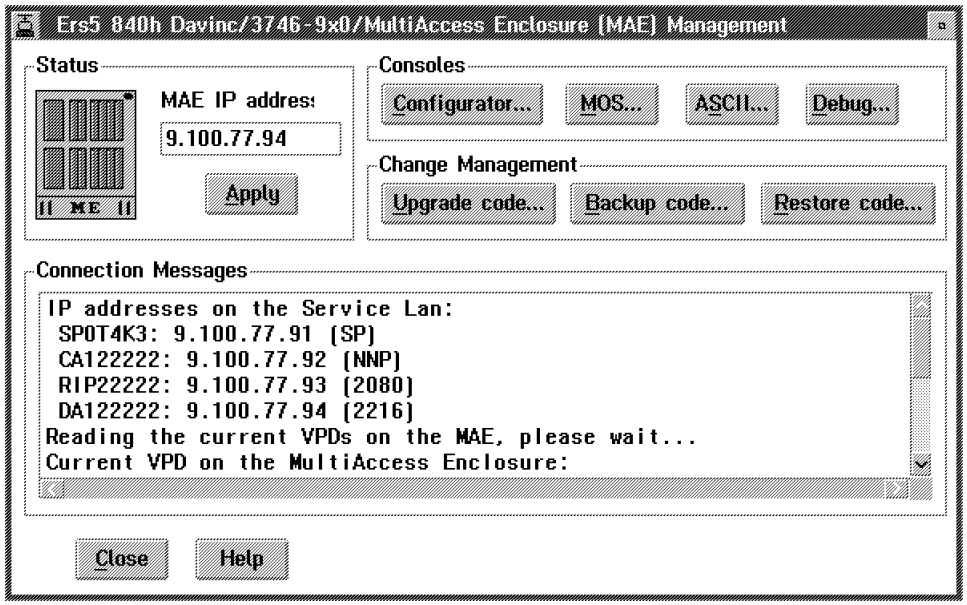
Exporting MAE Configurations to Diskette

Step 1. Insert a diskette into the service processor floppy disk drive.

Step 2. On your service processor in **MOSS-E View**, open the 3746 menu.

Step 3. Click **Multiaccess Enclosure (MAE) Management**.

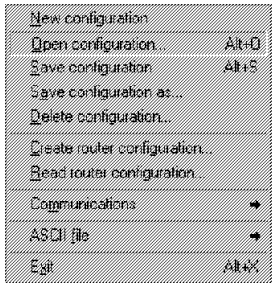
Step 4. Double-click **Manage Multiaccess Enclosure**.



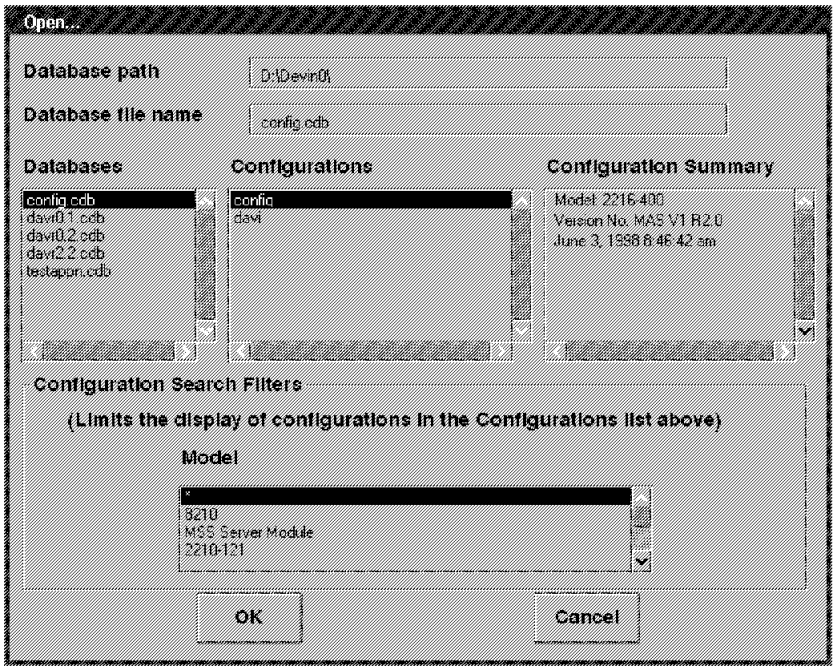
Step 5. In the **Multiaccess Enclosure (MAE) Management** window, click the **Configurator** button.

Step 6. The MAE Configuration Program opens.

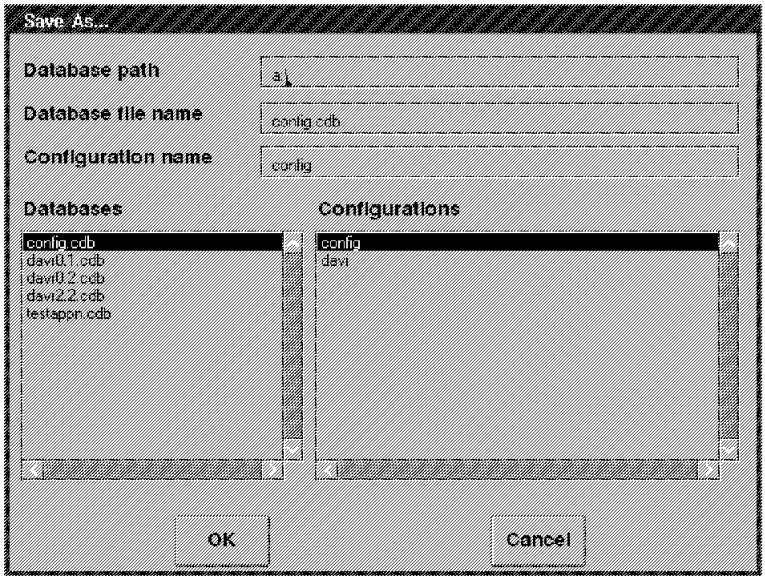
Step 7. From the **Configure** menu, select **Open configuration**.



Step 8. Select the drive letter of the floppy disk drive in the **Database path** field, the name of the database file in the **Database file name** field, and the configuration name in the **Configurations** field, and click **OK**.



Step 9. When the configuration opens, click **Save configuration as** from the **Configure** menu.



Step 10. In the **Database path** field, change the drive letter to the diskette drive. Then click **OK**. This will take a few minutes.

Step 11. Close the MAE Configuration Program.

Step 12. Label the diskette with the name of the MAE configuration file.

Step 13. Go to “Installing the New Version of CCM” on page 3-5.

Installing the New Version of CCM

Step 1. Put the CD (P/N 26L0246) containing the new CCM and the MAE Configuration Program into the CD-ROM drive.

Step 2. Open an OS/2 window and change the directory to the drive letter of the CD-ROM.

Step 3. Type `cd ccm` and press Enter.

Step 4. Type `ccminst`.

Step 5. Follow the prompts. A message displays as program files are loaded onto your hard disk.

Step 6. The CCM/IP icon appears on your desktop.

Step 7. Go to "Installing the MAE Configuration Program."

Installing the MAE Configuration Program

Step 1. Open an OS/2 window.

Step 2. Create a directory for the MAE Configuration Program on your hard disk.

Step 3. Change the directory to the new MAE directory.

Step 4. Type `xcopy <>:\mae` (where <> is the drive letter of the CD-ROM), and press Enter. The program files are loaded from the CD-ROM to your new directory.

Step 5. Type `mae` to start the Configuration Program.

Note: Use this command in OS/2 each time you run the MAE Configuration Program.

Step 6. Go to "Importing 3746 Configurations from Diskette."

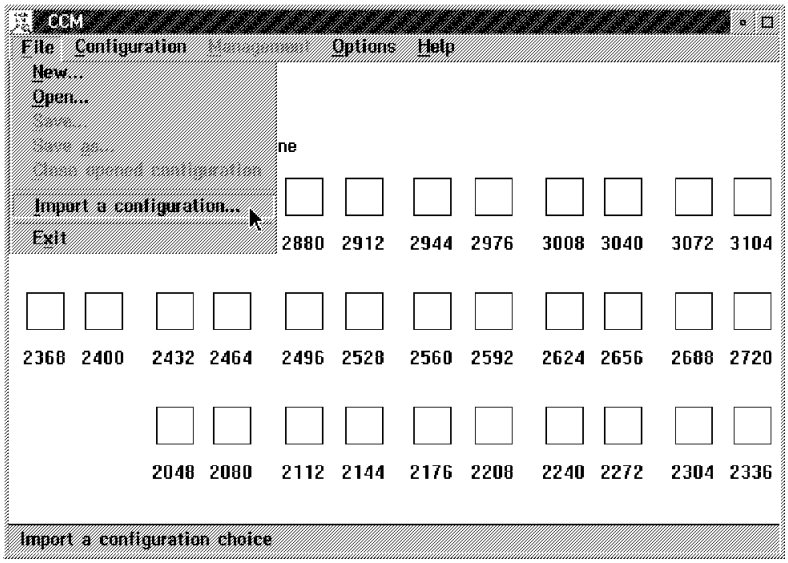
Importing 3746 Configurations from Diskette

Step 1. Insert the diskette labelled with the name of your current CCM configuration file (.ccm) into the floppy disk drive.

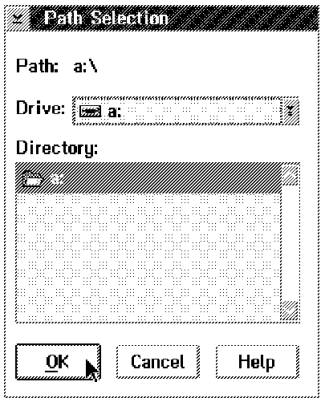
Step 2. Double-click the **CCM/IP** icon on your desk-top.

Step 3. Double-click **CCM**.

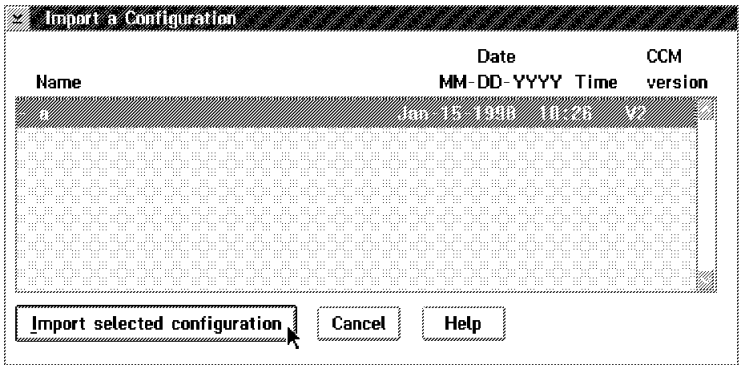
Step 4. From the **File** menu, click **Import a configuration**.



Step 5. In the **Path Selection** window, select the drive letter of the diskette and click **OK**.



Step 6. Select a configuration and click **Import selected configuration**. A message displays saying that the configuration has been imported successfully.

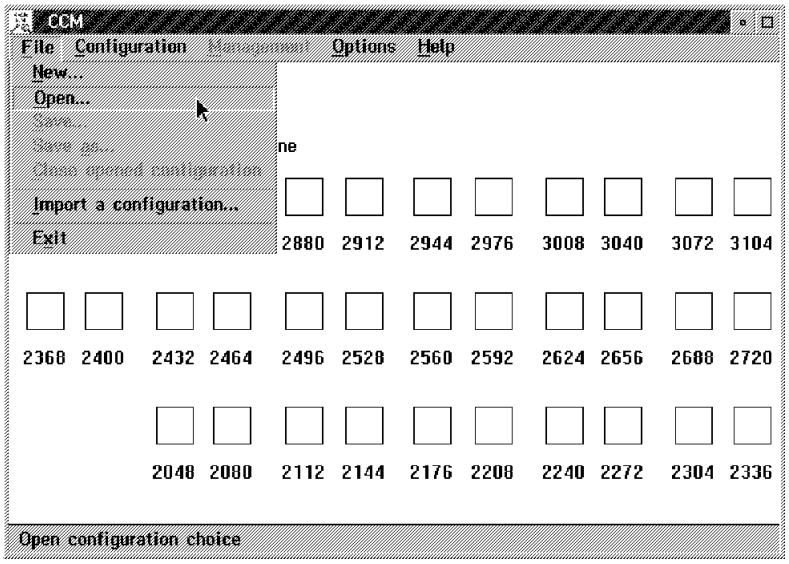


Step 7. Go to “Importing MAE Configurations from Diskette” on page 3-7.

Importing MAE Configurations from Diskette

Step 1. Insert the diskette labelled with the name of your current MAE configuration file (.cdb) into the floppy disk drive.

Step 2. Open CCM, and from the **File** menu, click **Open**.

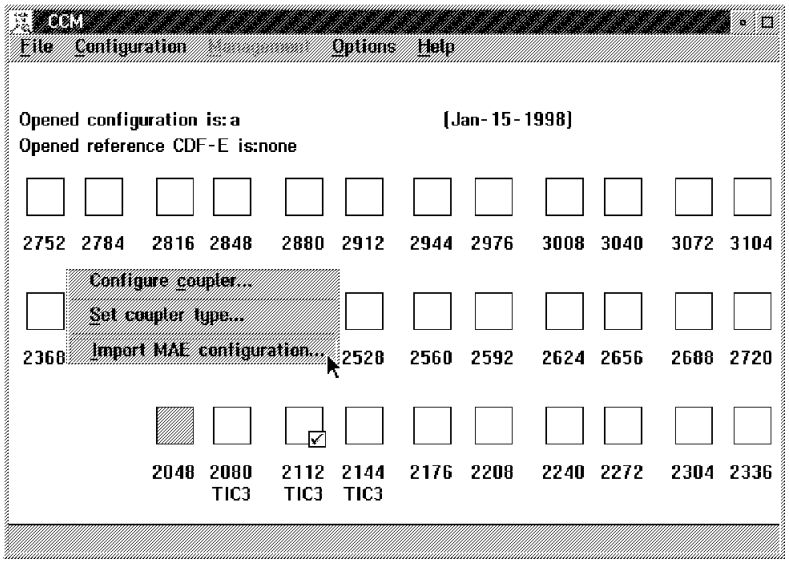


Step 3. Select a configuration and click **Open selected configuration**.

Step 4. When the configuration opens in the CCM window, select the coupler link between the 3746 and the MAE, and click the right mouse button to display the coupler menu.

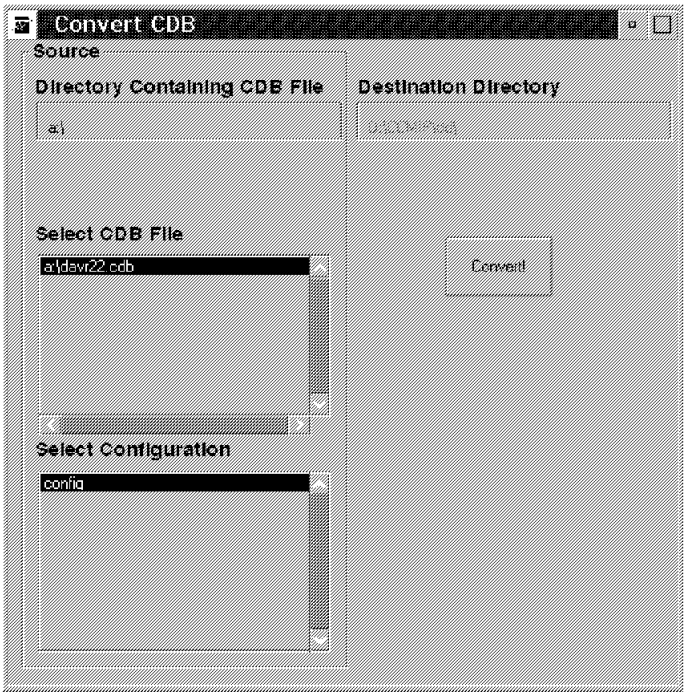
Coupler Number

This number is the same as the slot number in the controller.



Step 5. Click **Import MAE configuration**.

Step 6. After a few moments, a grey box appears on the screen. Click once with the mouse to display the **Convert CDB** window.



Step 7. In the **Convert CDB** window, select the drive letter of the MAE configuration file (.cdb) on diskette in the **Directory Containing CDB File** field and press Enter.

This displays the MAE .cdb file list on diskette.

Step 8. Select a .cdb file, select a configuration and click **Convert!**.

The import of the MAE configuration file takes a few minutes.

Step 9. In CCM, the coupler appears with a check mark, indicating that the MAE configuration files have been imported successfully.

Step 10. From the **File** menu, click **Save** and click **Yes**.

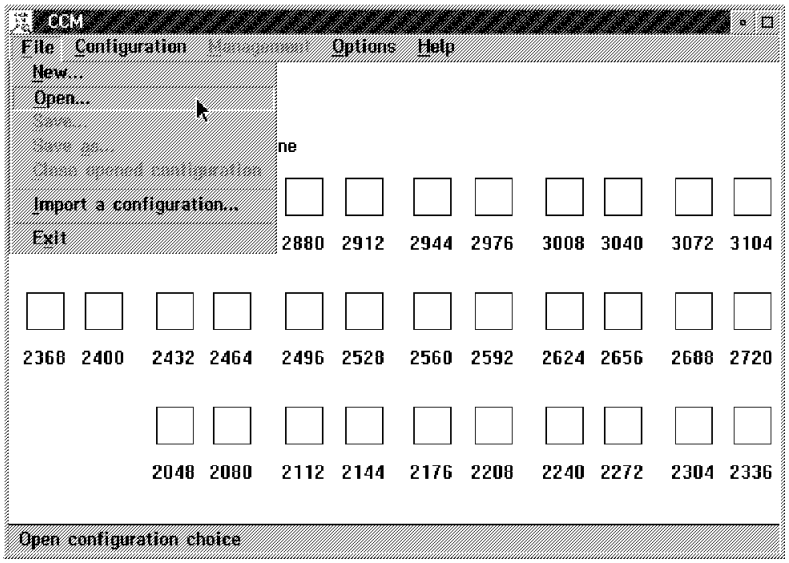
Step 11. A message displays, indicating that the new configuration is being saved. This takes a few minutes.

Step 12. Go to “Updating MAE Configuration Parameters in New Version of CCM.”

Updating MAE Configuration Parameters in New Version of CCM

Your 3746 configurations are now merged with your MAE configurations. However, you still need to enter any MAE IP parameters that were made in the worksheets.

Step 1. Open CCM, and from the **File** menu, click **Open**.



Step 2. Select a configuration and click **Open selected configuration**.

Step 3. When the configuration opens, use the worksheets, and following the steps in the **CCM** column, enter the MAE IP parameters that you have recorded.

Note: You can also run the MAE Configuration Program and use it to update the configuration parameters in CCM.

Step 4. After you have finished making entries from the worksheets, save the configuration.

Step 5. Go to “Exporting New CCM Configurations to Diskette.”

Exporting New CCM Configurations to Diskette

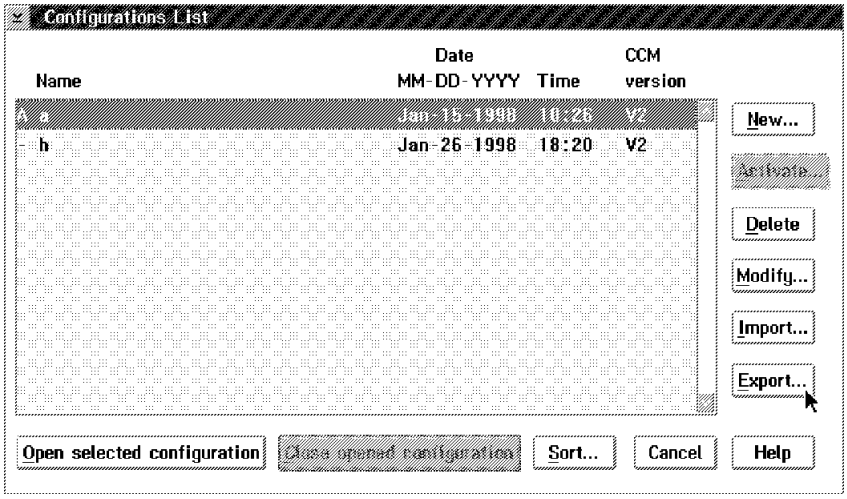
Step 1. Insert a diskette into the floppy disk drive.

Step 2. Double-click the **CCM/IP** icon on your desk-top.

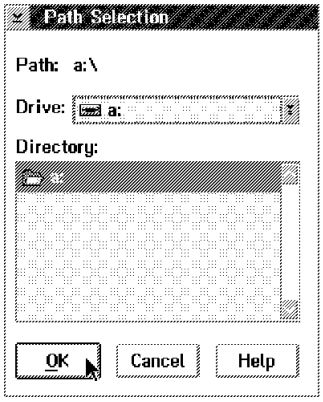
Step 3. Double-click **CCM**.

Step 4. From the **File** menu, select **Open**.

Step 5. In the **Configurations List** window, select the new configuration and click **Export**.



Step 6. In the **Path Selection** window, select the diskette drive and click **OK**.



Step 7. Click **Cancel** and close CCM.

Step 8. Label the diskette with the new CCM configuration file name.

Step 9. Go to “Importing CCM Configurations Created on a Standalone Workstation.”

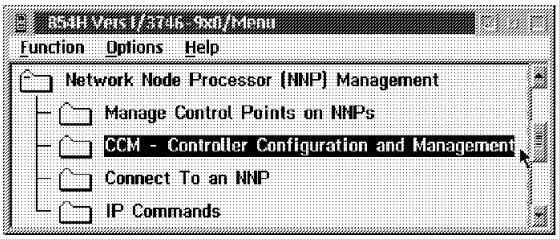
Importing CCM Configurations Created on a Standalone Workstation

It is assumed that the MAE hardware connection to the 3746 has been successfully installed, and that the microcode on the service processor has been upgraded to level F12430.

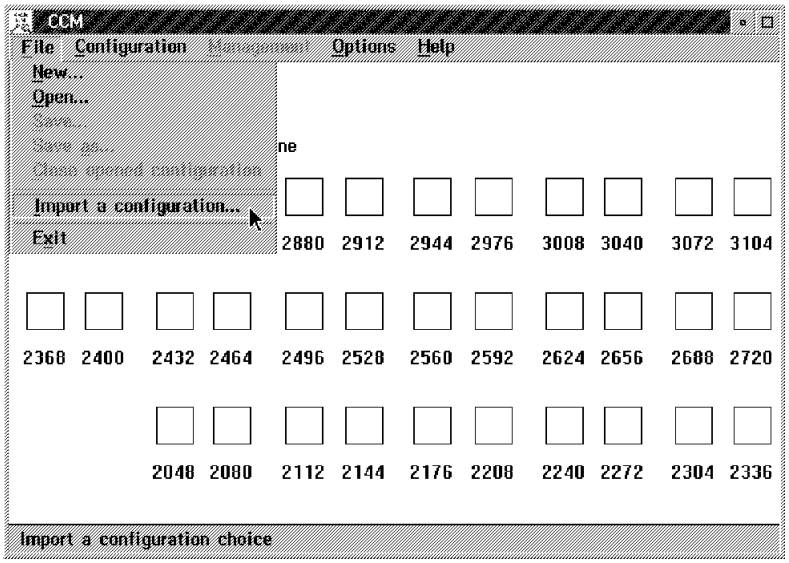
Step 1. On the upgraded service processor, open the 3746 menu.

Step 2. Click **Network Node (NNP) Management**.

Step 3. Double-click **CCM - Controller Configuration and Management**. This opens the new version of CCM.



Step 4. Click **Import a configuration** from the **File** menu.



Step 5. At the prompt, insert the diskette with the new CCM configuration into the service processor disk drive and click **OK**.

Step 6. A message displays when the import has successfully completed.

Removing Token-ring Connections

Although this is not mandatory, you might want to remove the token-ring connection (feature code 5713 or feature code 9713) between the 3746 and the MAE. To remove the token-ring connection:

- Modify the token-ring definition of your configuration in CCM.
- Contact your IBM service representative, who will use the appropriate *Installation Instructions* for physically removing the token-ring connector and cable.

Chapter 4. Migration Path Via an Upgraded Service Processor

This chapter describes the migration path via an upgraded service processor with the following steps:

- Saving your existing MAE configurations onto diskette.
- Importing your MAE configurations from diskette into the new version of CCM on an upgraded service processor.

Prerequisites

The prerequisites for this migration path are as follows:

- The CD-ROM (P/N 26L0246) that comes with this guide, containing the new version of CCM and the current version of the MAE Configuration Program.
- Blank 1.44 MB, double-density diskette(s).

The steps to this procedure are as follows:

1. Record MAE IP configuration parameters in worksheets.
2. Export existing MAE configurations to diskette.
3. Open new version of CCM on upgraded service processor and import MAE configurations from diskette.
4. Enter MAE IP parameters as needed from worksheets or MAE Configuration Program.
5. Save new configuration(s) in CCM.

MAE Configurations

The MAE configuration files (.cdb) need to be saved and exported to diskette before the MAE hardware connection and microcode upgrade installation can begin.

Important!

It is strongly recommended that you make backup copies of your configuration files on diskette.

Configuration Diskettes

For saving your configuration files, you must use 1.44 MB, high-density diskettes. Other types of diskette will not work with the service processor.

Exporting MAE Configurations to Diskette

Step 1. Insert a diskette into the service processor floppy disk drive.

Step 2. On your service processor in **MOSS-E View**, open the 3746 menu.

Step 3. Click **Multiaccess Enclosure (MAE) Management**.

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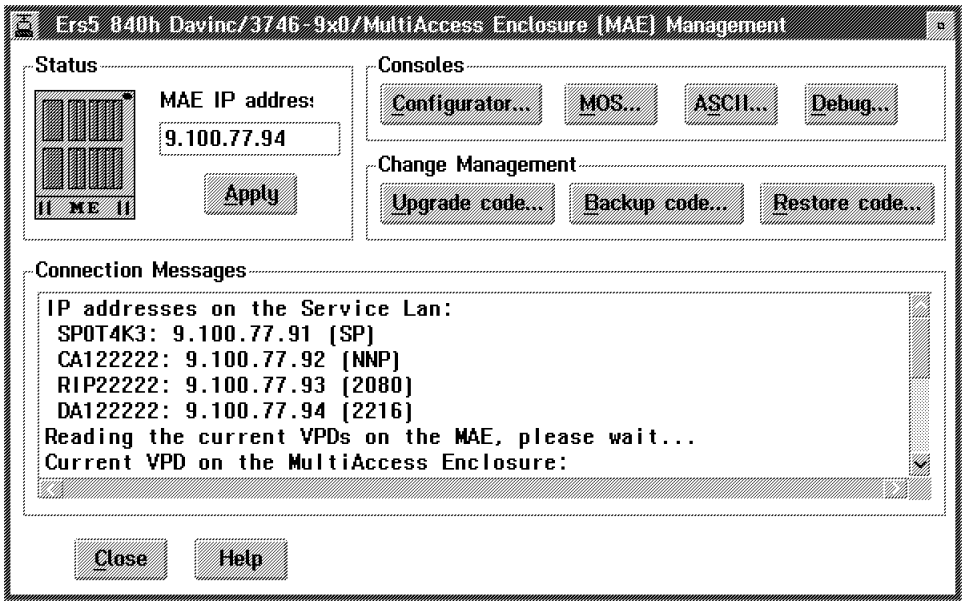
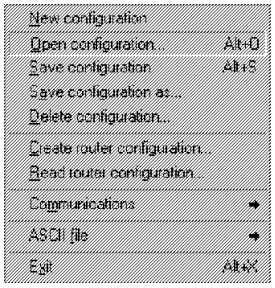
Step 4. Double-click **Manage Multiaccess Enclosure**.



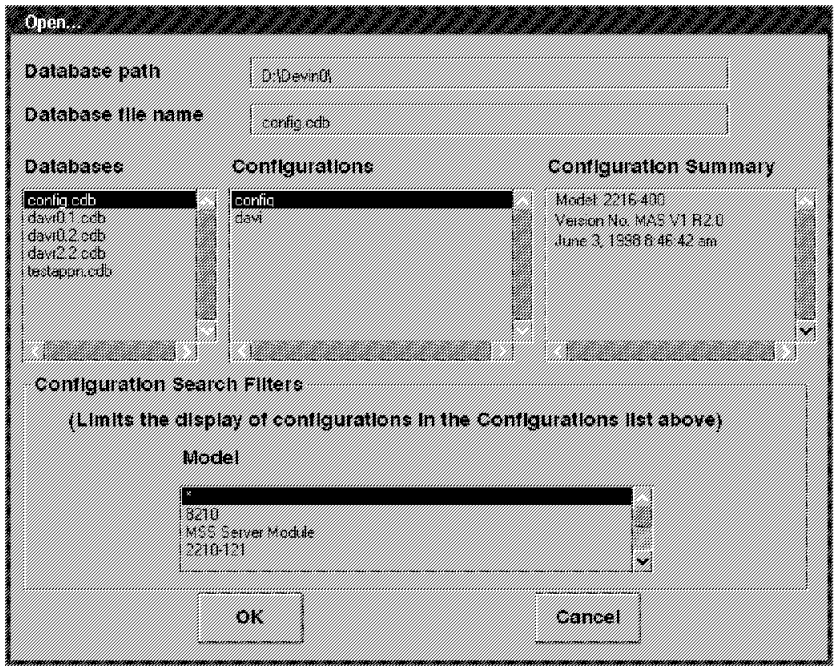
Step 5. In the **Multiaccess Enclosure (MAE) Management** window, click the **Configurator** button.

Step 6. The MAE Configuration Program opens.

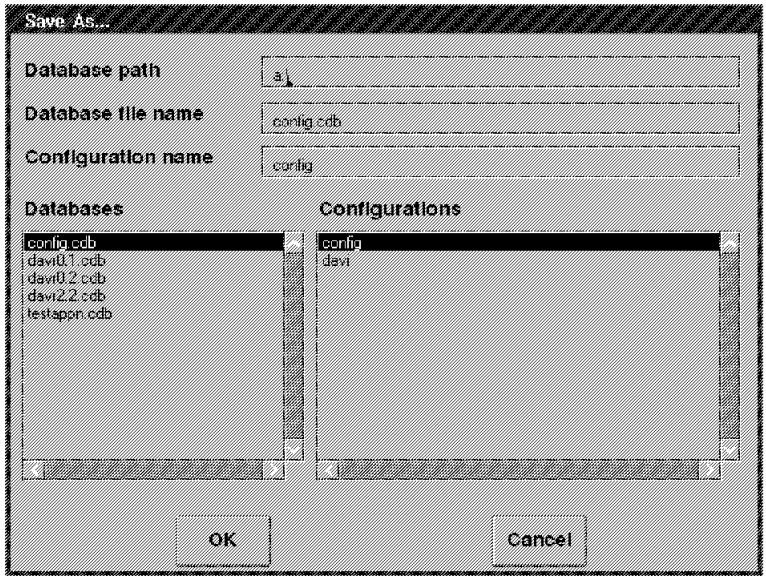
Step 7. From the **Configure** menu, select **Open configuration**.



Step 8. Select the drive letter of the floppy disk drive in the **Database path** field, the name of the database file in the **Database file name** field, and the configuration name in the **Configurations** field, and click **OK**.



Step 9. When the configuration opens, click **Save configuration as** from the **Configure** menu.



Step 10. In the **Database path** field, change the drive letter to the diskette drive. Then click **OK**. This will take a few minutes.

Step 11. Close the MAE **Configuration Program**.

Step 12. Label the diskette with the name of the MAE configuration file.

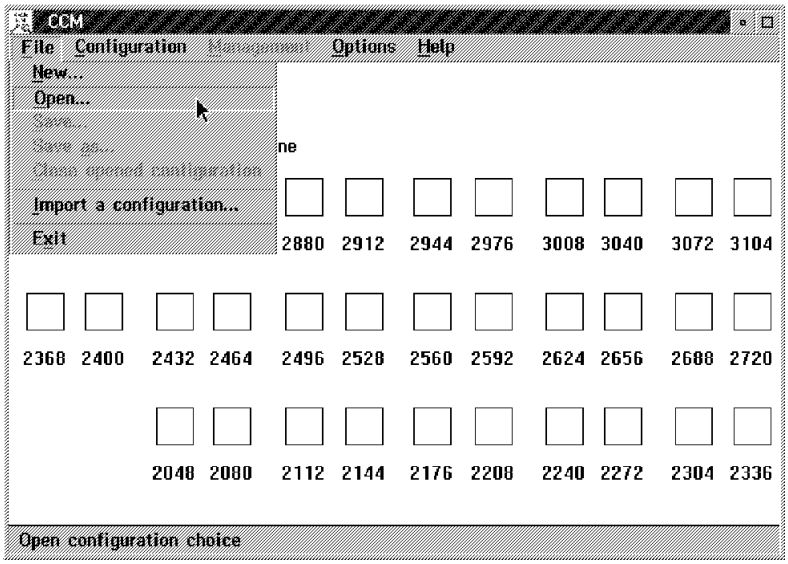
Step 13. Go to “Importing Existing Feature Code 3000 MAE Configurations” on page 4-4.

Importing Existing Feature Code 3000 MAE Configurations

It is assumed that the MAE hardware connection to the 3746 has been successfully installed, and that the microcode on the service processor has been upgraded to level F12430.

Step 1. Insert the diskette labelled with the name of your existing feature code 3000 MAE configuration file (.cdb) into the floppy disk drive.

Step 2. Open CCM, and from the **File** menu, click **Open**.

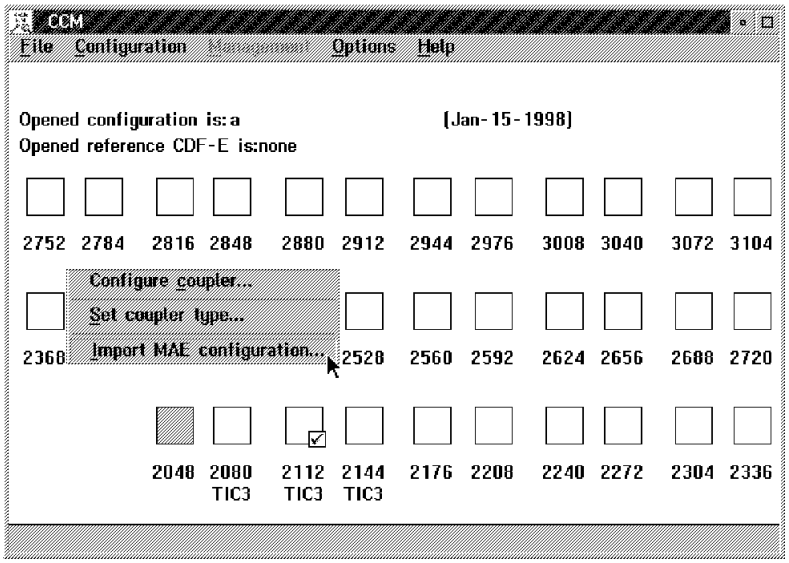


Step 3. Select a configuration and click **Open selected configuration**.

Step 4. When the configuration opens in the CCM window, select the coupler link between the 3746 and the MAE, and click the right mouse button to display the coupler menu.

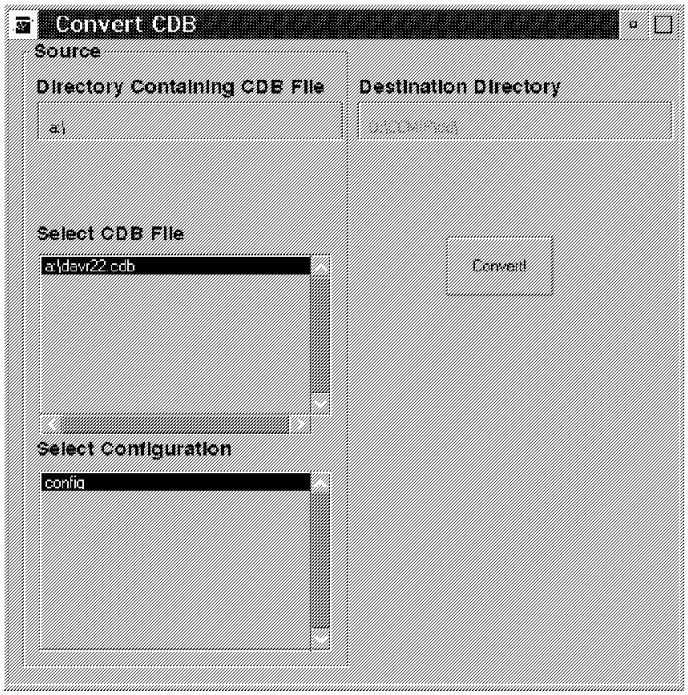
Coupler Number

This number is the same as the slot number in the controller.



Step 5. Click **Import MAE configuration**.

Step 6. After a few moments, a grey box appears on the screen. Click once with the mouse to display the **Convert CDB** window.



Step 7. In the **Convert CDB** window, select the drive letter of the MAE configuration file (.cdb) on diskette in the **Directory Containing CDB File** field and press Enter.

This displays the MAE .cdb file list on diskette.

Step 8. Select a .cdb file, select a configuration, and click **Convert!**.

The import of the MAE configuration file takes a few minutes.

Step 9. In CCM, the coupler appears with a check mark, indicating that the MAE configuration files have been imported successfully.

Step 10. From the **File** menu, click **Save** and click **Yes**.

Step 11. A message displays, indicating that the new configuration is being saved. This takes a few minutes.

Step 12. When the new configuration is saved, open the **MOSS-E View**. The **MAE Link** icon appears green.

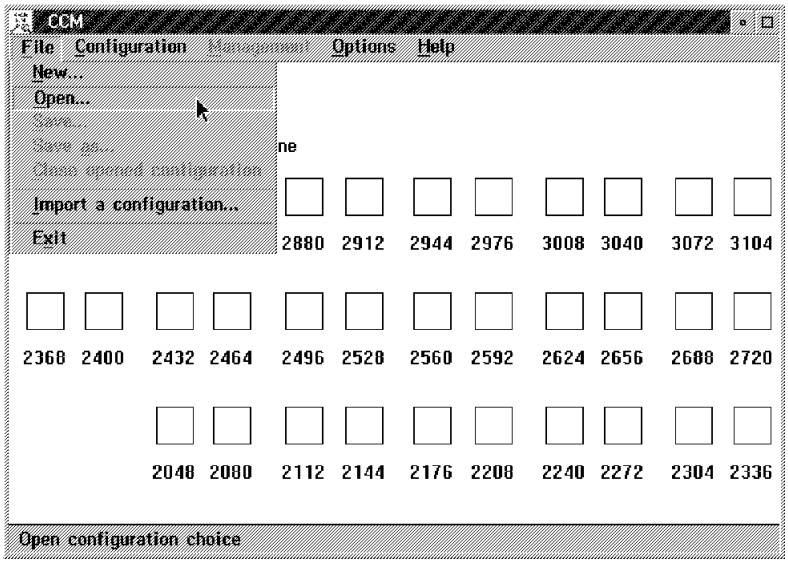
Step 13. Save your configuration.

Step 14. Go to "Updating MAE Configuration Parameters in an Upgraded Service Processor."

Updating MAE Configuration Parameters in an Upgraded Service Processor

Your 3746 configurations are now merged with your MAE configurations. However, you still need to enter any MAE IP parameters that were made in the worksheets.

Step 1. Open CCM, and from the **File** menu, click **Open**.



Step 2. Select a configuration and click **Open selected configuration**.

Step 3. When the configuration opens, use the worksheets, and following the steps in the **CCM** column, enter the MAE IP parameters that you have recorded.

Step 4. After you have finished making entries from the worksheets, save the configuration in CCM.

Removing Token-ring Connections

Although this is not mandatory, you might want to remove the token-ring connection (feature code 5713 or feature code 9713) between the 3746 and the MAE. To remove the token-ring connection:

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- Contact your IBM service representative, who will use the appropriate *Installation Instructions* for physically removing the token-ring connector and cable.

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3746 Nways Multiprotocol Controller
Models 900 and 950
Multiaccess Enclosure (MAE)
MAE Migration Guide:
Feature Code 3000
to Feature Code 3001

Publication No. SA33-0475-01

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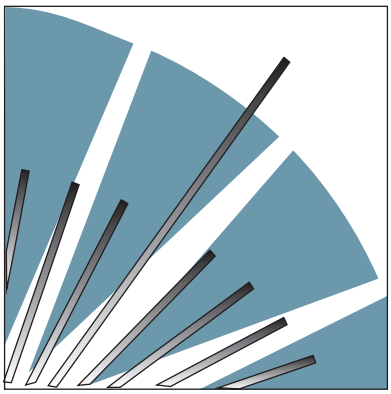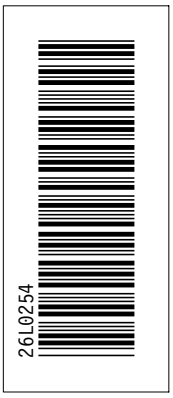
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