CA NetMaster® File Transfer Management

Installation Guide

Release 12.1

CA Technologies Product References

This document references the following CA Technologies products:

- CA NetMaster® File Transfer Management (CA NetMaster FTM)
- CA NetMaster® Network Management for TCP/IP (CA NetMaster NM for TCP/IP)
- CA NetMaster® Network Management for SNA (CA NetMaster NM for SNA)
- CA NetMaster® Network Automation (CA NetMaster NA)
- CA SOLVE:FTS
- CA NetSpy™ Network Performance (CA NetSpy)
- CA SOLVE:Operations® Automation
- CA SOLVE:Access™ Session Management (CA SOLVE:Access)
- CA Network and Systems Management NetMaster® Option (CA NSM NetMaster Option)
- CA Network and Systems Management (Unicenter NSM)
- CA NetMaster® CONNECT:Direct Agents
- CA NetMaster® Socket Management for CICS (CA NetMaster SM for CICS)
- CA SOLVE:Central™ Service Desk for z/OS (CA SOLVE:Central), which includes CA SOLVE:Problem
- CA XCOM™ Data Transport®
- CA Common Services for z/OS
- CA Common Inventory Service
- CA Auditor for z/OS (CA Auditor)
- CA TCPaccess™ Communications Server for z/OS (CA TCPaccess CS)
- CA TCPaccess™ FTP Server
- CA ACF2™ for z/OS
- CA Top Secret® for z/OS

Contact CA Technologies

Contact CA Support

For your convenience, CA Technologies provides one site where you can access the information that you need for your Home Office, Small Business, and Enterprise CA Technologies products. At http://ca.com/support, you can access the following resources:

- Online and telephone contact information for technical assistance and customer services
- Information about user communities and forums
- Product and documentation downloads
- CA Support policies and guidelines
- Other helpful resources appropriate for your product

Providing Feedback About Product Documentation

If you have comments or questions about CA Technologies product documentation, you can send a message to techpubs@ca.com.

To provide feedback about CA Technologies product documentation, complete our short customer survey which is available on the CA Support website at http://ca.com/docs.

Contents

Chapter 1: Overview

This guide describes how to install and implement CA NetMaster FTM.

This section contains the following topics:

Audience

Readers of this book require knowledge in the following areas:

- Job control language (JCL)
- TSO/ISPF
- z/OS environment and installing software in this environment
- Your organization's IT environment, enterprise structure, and region structure

You work with the following personnel:

- Systems programmer for z/OS, VTAM, and TCP/IP definitions
- Security administrator, for library and started task access authority
- Storage Management Subsystem (SMS) or storage administrator, for direct access storage device (DASD) allocations

How the Installation Process Works

CA Technologies has standardized product installations across all mainframe products. Installation uses the following process:

- Acquisition—Transports the software to your z/OS system.
- Installation using SMP/E—Optionally creates a CSI environment and runs the RECEIVE, APPLY and ACCEPT steps. The software is untailored.
- Deployment—Copies the target libraries to another system or LPAR.
- Configuration—Creates customized load modules, bringing the software to an executable state.

CA MSM provides a web-based interface to make the standardized installation process easier. Using CA MSM, someone with limited knowledge of JCL and SMP/E can install a product.

Note: If you do not have CA MSM, you can download it from the Download Center at the CA Support Online website. Follow the installation instructions in the CA Mainframe Software Manager documentation bookshelf on the CA Mainframe Software Manager product page. The standardized installation process can also be completed manually.

To install your product, do the following tasks:

1. Prepare for the installation by confirming that your site meets all installation requirements.
2. Use one of the following methods to acquire the product:
   - Download the software from CSO using CA MSM (see page 26).
   - Download the software from CSO using Pax-Enhanced Electronic Software Delivery (ESD).
   - Order a tape.
3. Perform an SMP/E installation using one of the following methods:
   - If you used CA MSM to acquire the product, start the SMP/E step from the SMP/E Environments tab in CA MSM.
   - If you used ESD to acquire the product, you can install the product in the following ways:
     - Install the product manually.
     - Use the Insert New Product option in CA MSM to complete the SMP/E installation.
   - If you used a tape (see page 71), install the product manually.

   Note: If a CA Recommended Service (CA RS) package is published for your product, install it before continuing with deployment.
4. Deploy the target libraries using one of the following methods:
   - If you are using CA MSM, deployment is required; it is a prerequisite for configuration.
   - If you are using a manual process, deployment is an optional step.

   Note: Deployment is considered part of starting your product.
5. Configure your product using CA MSM or manually.

   Note: Configuration is considered part of starting your product.

Chapter 2: Preparing for Installation

This section contains the following topics:

Multiple Product Installation and Setup

You can install multiple products in the CA Mainframe Network Management family based on what you have purchased. You can also set up multiple products in one region.

Therefore, you can perform the steps in the *Installation Guides* for these products concurrently as you install and set them up.

Software Requirements

You must verify your system is set with the requirements described in this section.

Operating Environment

Ensure that you have the appropriate operating environment. Your system must have:

- A currently-supported version of z/OS.
- If you intend to implement Secure Sockets Layer (SSL) for the web interface:
  - SMP/E V3R5.0.
  - IBM's 31-bit SDK for z/OS, Java 2 Technology Edition for the libjvm.x side deck. IBM's 64-bit SDK is *not* supported.
- If you intend to use CA TCPaccess CS version 6.0, ensure you are using Service Pack 3 (SP3) or later. If SP3 is not applied, the Packet Analyzer feature, if used with FTP policies, does not analyze or report on the packets that flow through a CA TCPaccess CS stack.

WebCenter Requirements

WebCenter users require the following *minimum* levels of third-party products that are installed on their PCs:

- Internet Explorer: 8.0 *or* Firefox: 13.0
- Java Runtime Environment (JRE): 7

  Note: If you are using a 64-bit browser, review the JRE support and minimum system requirements for 64-bit browsers on the Sun Java website.

Additional Product Requirements

Ensure that you have these recommended levels of products:

- CA TCPaccess FTP Server: 2.0 or later
- CA XCOM Data Transport for Windows Family Professional: 3.0, maintenance level 3.00.0105d
- CA XCOM Data Transport for z/OS: 3.0, 3.1, 11.0, or 11.5
  - With 3.0, use the following maintenance level:

    Generation level 0109 - SP3
    PTF QO05474
    PTF QO05475
    PTF QO05476
  - With 11.0, use maintenance level PTF QO71170.
- CONNECT:Direct for OS/390:
  - 4.4 with maintenance level PUT4401
  - 4.5 with maintenance level PUT4501
  - 4.6 with maintenance level PUT4601
  - 4.7 with maintenance level PUT4701
- CONNECT:Direct for UNIX: 3.4
- CONNECT:Direct for Windows NT: 1.3, 3.3, 4.0, 4.1, or 4.2
- CONNECT:Mailbox: 3.1, with maintenance level CUM 3107, F18254, and F18361
- CA SOLVE:FTS: r11 or later

Migration Mode

If you intend to use migration mode (see page 22) to link an Release 12.1 product region to a multisystem network at the following releases, ensure that you have applied the following APARs:

- r11.6: NY810AS (SP1)
- r11.5: RO12222 and NZ39503 (prerequisite fix NY710AS (SP1))
- r11.0: NZ39505 (prerequisite fixes NY604AS (SP2) and NZ29512)

CA Common Services Requirements

Your system must have a currently supported version of CA Common Services for z/OS. The CA Common Services load libraries must be accessible to the product address space and the SOLVE SSI address space through the JCL STEPLIB or system LNKLST.

Note: The latest version of CA Common Services for z/OS is included in your package.

The following CA Common Services are used with CA NetMaster FTM:

CA LMP of the CAIRIM Common Service

Authorizes your product features. CA LMP provides a standardized and automated approach to the tracking of licensed software. The service uses common real-time enforcement software to validate the configuration. CA LMP reports on activities related to the license, usage, and financials of CA Technologies products.

CAICCI Common Service

Provides cross-system communication. This service is required, for example, for communication with Unicenter Service Desk.

CAISDI/soap

Is the z/OS Simple Object Access Protocol (SOAP) client that communicates with Unicenter Service Desk. The component manages the communication using TCP/IP to Unicenter Service Desk and provides the basic mechanisms that allow CA Technologies products to open Unicenter Service Desk tickets. This component is required for all Unicenter Service Desk integration.

Note: If other CA Technologies products are installed at your site, some of these services are already installed.

Security Requirements

When you prepare your z/OS task for startup, the following authorities are required on your system:

- If you plan to use ESD to download the product, you require access to UNIX System Services (USS).
- You have READ authority to data sets with a prefix of CAI.*.
- You have UPDATE authority to the following data sets or libraries:
  - Started task PROCLIB that stores the run-time JCL job, for example, SYS1.PROCLIB
  - SYS1.PARMLIB
  - SYS1.VTAMLST or the library that stores VTAM application definitions and VTAM initialization parameters
  - SYS1.VTAMLIB for terminal mode table definitions
  - Master catalog, a requirement if you intend to define alias entries for data set prefixes
- You have authority to update the following initialization parameter data set members if necessary:
  - SYS1.PARMLIB(IEFSSN*xx*) to add subsystem IDs
  - SYS1.PARMLIB(IEAAPF*xx*) to APF-authorize your load libraries
  - SYS1.PARMLIB(CONSOL*xx*) if your system does not use extended MCS consoles
  - SYS1.PARMLIB(LPALST*xx*) if you want to use the SOLVE SSI task as the PPI provider
  - SYS1.PARMLIB(PROG*xx*) if you want CA Auditor for z/OS or CA Common Inventory Service to know of your products for your auditors
- Ensure that the following conditions are met:
  - The user IDs associated with your started tasks have access to the run-time data sets created by the installation and setup processes (UPDATE authority required).
  - The user ID associated with the product region started task is authorized to issue system commands.
  - The user IDs associated with the product and SOLVE SSI region must have authority to use UNIX System Services (see page 181).

Storage Requirements

CA NetMaster FTM has the following 3390 DASD space requirements:

- If you are using CA MSM or ESD, the following z/OS UNIX file system space is required for the downloaded and unpacked files: 174 MB.
- For installation and setup, the following spaces are required:
  - Installation = 1253 cylinders
  - IBM System Modification Program Extended (SMP/E) libraries = 1467 cylinders
  - Setup = 1498 cylinders
  - Setup temporary work area = 1400 cylinders

How CA LMP Statements Are Coded

Before starting this product, you must code CA LMP statements for product license authorization.

To code CA LMP statements, do the following:

1. Install CAIRIM.
2. Activate LMP.
3. Add your product license codes to the LMP statements.
4. Place the LMP statements in the KEYS member of the PPOPTION data set.

Note: The KEYS member of the PPOPTION data set is specified in the CAS9 JCL procedure. For more information, see the *CA Common Services Administration Guide*.

KEYS Member—Add Execution Key

You must add the CA LMP execution key, provided on your product key certificate, to the CAIRIM parameters to ensure proper initialization. To define a CA LMP execution key to the CAIRIM parameters, modify the KEYS member in CAI.PPOPTION (CA Common Services for z/OS r11) or CAI.CAIOPTN (CA Common Services for z/OS r12).

This sample parameter structure for KEYS member has the following format:

```
PROD(pp) DATE(ddmmmyy) CPU(tttt-mmmm/ssssss)
LMPCODE(kkkkkkkkkkkkkkkk)
```

Parameter definitions are as follows:

PROD(*pp*)

Specifies the two-character product code. This code agrees with the product code already in use by the CAIRIM initialization parameters for any earlier releases of this product (if applicable).

X3 is the value for your product.

DATE(*ddmmmyy*)

Specifies the CA LMP licensing agreement expiration date, for example, 13MAR12.

CPU(*tttt-mmmm/ssssss*)

tttt

Specifies the CPU type on which CA LMP is to run, for example, 3090.

-mmmm

Specifies the CPU model on which CA LMP is to run, for example, 600.

Note: If the CPU type and or model require fewer than four characters, blank spaces are inserted for the unused characters.

/ssssss

Specifies the serial number of the CPU on which CA LMP is to run.

LMPCODE(*kkkkkkkkkkkkkkkk*)

Specifies the execution key (*kkkkkkkkkkkkkkkk*) needed to run CA LMP. The key certificate shipped with each CA LMP software solution provides this CA LMP execution key.

Example: Add CA LMP Execution Key

This example shows a control statement for the CA LMP execution software parameter.

```
PROD(X3) DATE(27JUN12) CPU(3090-600/370623)
LMPCODE(52H2K06130Z7RZD6)
```

In this example, with your product running on the specified CPU, the CA LMP licensing agreement will expire on June 27, 2012. The product code and execution key values are different when you install your product at your site.

Note: For a full description of the procedure for defining the CA LMP execution key to the CAIRIM parameters and further details about the features and associated utilities of CAIRIM, see the *CA Common Services for z/OS Administrator Guide*.

CA LMP Key Certificate

Examine the CA License Managed Program (CA LMP) key certificate. Your certificate contains the following information:

Product Name

Defines the trademarked or registered name of your product as licensed for the designated site and CPUs.

Product Code

Defines a two-character code that corresponds to the product.

Supplement

Defines the reference number of your license for a particular facility and has the following format:

nnnnnn-nnn

This format differs slightly inside and outside North America and, in some cases, the reference number may not be provided at all.

CPU ID

Defines the code that identifies the specific CPU for which installation of this product is valid.

Execution Key

Defines an encrypted code required by CA LMP for installing your product. During installation, it is referred to as the LMP code.

Expiration Date

Defines the date your license expires and has the following format:

ddmmmyy

Example: 21Mar12

Technical Contact

Defines the name of the designated technical contact at your site who is responsible for the installation and maintenance of your product. CA addresses all CA LMP correspondence to this person.

MIS Director

Defines the name of the Director of MIS or the person who performs such a function at your site. If the title but not the name of the individual is indicated on the certificate, supply the actual name when correcting and verifying the certificate.

CPU Location

Defines the address of the building in which the CPU is installed.

Worksheets

The preparation worksheets (see page 163) help you gather the required information before you install and configure (or set up) the product.

The post-installation worksheet (see page 178) lets you record the names of the data sets created by the installation and configuration process for future reference.

Migration Preparation

Some migration tasks require actions on the region that you are migrating from. If you are planning to reuse resources for your new product region, such as access control block (ACB) name and started task name, make sure that you perform these tasks before you shut down your existing region for the last time.

More information:

Performing Initial Migration (see page 129)
Completing Migration (see page 149)

Parameter Group Values

If you do not use a region initialization (INI) file and want to migrate your previous parameter group values to your new product region, record these values now. You use them to customize the product region.

How to Migrate Your Initialization File

If you have an existing region INI file from r11 onwards, you can migrate the file for use in this release.

Important! Review and update the file to ensure that names such as ACBs, data sets, and interfaces are suitable for the new region.

The process of migrating your INI file consists of the following steps:

1. If you have not already generated your INI file, generate the INI file in the previous region.
2. Configure the file by updating the data set names used, and checking the ACB and various interface names. Alternatively, you can delete the configuration section for a whole parameter group to let the defaults for the new region be used.

   Note: During region initialization, the INI file is applied by passing all parameter values to the INI file procedure and letting the procedure overwrite the values as needed. If you do not want to overwrite the settings for a parameter group or individual parameter, comment out or delete the statements in the INI file that contains the group or parameter. Setting the value of a parameter to null sets the parameter value to null, which may not be what you wanted.
3. Start the new region using the INI file by editing your RUNSYSIN.

   After you start the region, you can check it and regenerate the INI if necessary.

   Important! Generation of the INI file replaces custom code, such as code that includes MVS system symbols, with the actual values. If you regenerate the file, reapply the custom code.

Note: For more information about setting up the initialization file, see the *Administration Guide*.

Knowledge Base

If you want to migrate your knowledge base, consider the following:

- To keep a copy of an old distributed ResourceView template (for example, you might have modified it), copy this template to a new template image version above 0009. You can copy a template image from the Template System Image List panel (/RADMIN.T.I).
- To keep a copy of an old distributed EventView rule set (for example, you might have modified it), make a copy of this rule set under a different name. (If the rule set is associated with a system image, update the association accordingly.) You can copy a rule set from the Ruleset List panel (/EADMIN.R.R).

Multisystem Considerations

You cannot link and synchronize a new region with a region running an earlier release of the product.

How Migration Mode Works

You can use migration mode to assist in the migration of an existing multisystem network.

Migration mode gives the new product region the same level of visibility as normal synchronization, but a slightly reduced command capability. The main difference between migration mode and normal synchronization is that the databases are not synchronized, and single point database maintenance is not possible in migration mode.

Migration mode works as follows:

1. You unlink an existing region from the multisystem network.
2. You migrate this region to the latest release.
3. You link the newly-migrated region back into the multisystem network.
4. After the new region is linked back, you can monitor all resources for all linked regions from the new region.
5. When the next region is unlinked and migrated to the latest release, it can be linked and synchronized in the standard way to the first migrated region.

Each region can be migrated as required without losing the benefits of multisystem monitoring.

More information:

Software Requirements (see page 13)

How to Prepare for Multisystem Network Migration

If you are upgrading multiple synchronized regions to this release, perform the following steps to plan for it.

1. Ensure that your existing multisystem network has at least two focal regions. If you have only one focal region, unlink a subordinate region and relink it as a focal region.
2. Choose a focal region and unlink it from the multisystem network.
3. Upgrade the focal region, and perform migration tasks.
4. After you have completed all of the steps in this guide, link your new focal region in migration mode (see page 157) to an existing focal region.
5. Select the next product region to upgrade and unlink it.
6. Upgrade this product region and then synchronize it to the focal region that you upgraded in Step 3.
7. Continue until all regions are upgraded.

Notes:

- You only perform knowledge base migration for the first region because the focal knowledge base contains details of all linked regions.
- You only link the first new focal region in migration mode.

Chapter 3: Installing Your Product Using CA MSM

Use the procedures in this section to manage your product using CA MSM. Managing includes acquiring, installing, maintaining, and deploying products, setting system registries, and managing your CSIs. These procedures assume that you have already installed and configured CA MSM.

Note: If you do not have CA MSM, you can download it from the Download Center at the CA Support Online website. Follow the installation instructions in the CA Mainframe Software Manager documentation bookshelf on the CA Mainframe Software Manager product page.

When you have completed the procedures in this section, go to Configuring Your Product.

This section contains the following topics:

Important! During installation, use the CAIT76 target zone and the CAID76 distribution zone. The setup process requires that these zone names be used.

These topics provide information to get you started managing your product using CA MSM. You can use the online help included in CA MSM to get additional information.

Before using these topics, you must already have CA MSM installed at your site. If you do not have CA MSM installed, you can download it from the Download Center at the CA Support Online website, which also contains links to the complete documentation for CA MSM.

How to Use CA MSM: Scenarios

Imagine that your organization has started using CA MSM to simplify the installation of CA Technologies products and unify their management. You have also licensed a new CA Technologies product. In addition, you have a number of existing SMP/E environments from previously installed CA Technologies products.

You can use the following scenarios to guide you through the process:

1. Acquire the new product (see page 26).
2. Install the new product (see page 27).
3. Maintain products already installed in your environment (see page 29).
4. Set up the CA MSM system registry (see page 30).
5. Deploy the product to your target systems (see page 32).
6. Configure the deployed product to your target systems (see page 33).

How to Acquire a Product

The *Product Acquisition Service (PAS)* facilitates the acquisition of mainframe products and the service for those products, such as program temporary fixes (PTFs). The PAS retrieves information about products to which your site is entitled. Then it records these entitlements in a software inventory that is maintained on your driving system.

You can use the PAS component of CA MSM to acquire a CA Technologies product.

You perform the following high-level tasks to acquire a product using CA MSM:

1. Set up a CA Support Online account.

   To use CA MSM to acquire or download a product, you must have a CA Support Online account. If you do not have an account, you can create one on the CA Support Online website.

2. Determine the CA MSM URL for your site.

   To access CA MSM (see page 34), you require its URL. You can get the URL from your site CA MSM administrator and log in using your z/OS credentials. When you log in for the first time, you are prompted to create a CA MSM account with your credentials for the CA Support Online website. This account enables you to download product packages.

3. Log in to CA MSM and go to the Software Catalog page to locate the product that you want to manage.

   After you log in to CA MSM, you can see the products to which your organization is entitled on the Software Catalog tab.

   If you cannot find the product that you want to acquire, update the catalog. CA MSM refreshes the catalog through the CA Support Online website using the site IDs associated with your credentials for the CA Support Online website.

4. Download the product installation packages.

   After you find your product in the catalog, you can download the product installation packages.

   CA MSM downloads (acquires) the packages (including any maintenance packages) from the CA FTP site.

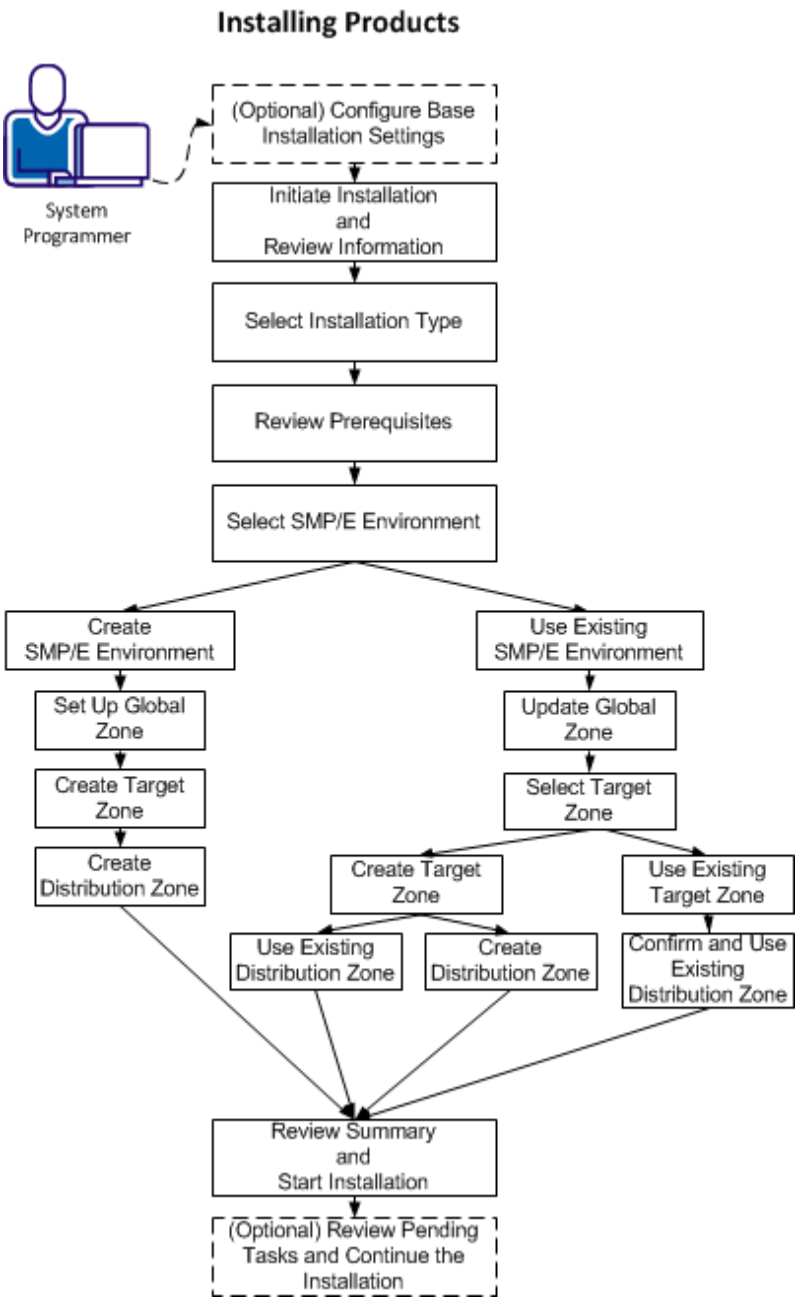
After the acquisition process completes, the product is ready for you to install or maintain.

How to Install a Product

The *Software Installation Service (SIS)* facilitates the installation and maintenance of mainframe products in the software inventory of the driving system. This facilitation includes browsing downloaded software packages, managing SMP/E consolidated software inventories on the driving system, and automating installation tasks.

You can use the SIS component of CA MSM to install a CA Technologies product.

You perform the following high-level tasks to install a product using CA MSM:



1. (Optional) Configure base installation settings.
2. Initiate product installation and review product information.
3. Select an installation type.
4. Review installation prerequisites if any are presented.

5. Take *one* of the following steps to select an SMP/E environment:
   - Create an SMP/E environment:
     a. Set up the global zone.
     b. Create a target zone.
     c. Create a distribution zone.
   - Use an existing SMP/E environment from your working set:
     a. Update the global zone.
     b. Set up the target zone: Either create a target zone or use an existing target zone.
     c. Set up the distribution zone: Either create a distribution zone or use an existing distribution zone.

     Note: If you install a product or its components into an existing target or distribution zone, older versions are deleted from the zone and associated data sets. We recommend that you use new target and distribution zones for this installation so that you can apply maintenance to your current version, if necessary.
6. Review the installation summary and start the installation.
7. (Optional) Review pending tasks for the SMP/E environment where you are installing your product. Continue the installation, if applicable.

After the installation process completes, check for and install available product maintenance. The product is ready for you to deploy. Sometimes there are other steps to perform manually outside of CA MSM before beginning the deployment process.

More information:

How to Maintain Existing Products (see page 29)

How to Maintain Existing Products

You can migrate existing SMP/E environments into CA MSM to maintain all your installed products in a unified way from a single web-based interface.

You can use CA MSM to maintain a CA Technologies product.

You perform the following high-level tasks to maintain a product using CA MSM:

1. Migrate the SMP/E environment to CA MSM to maintain an existing SMP/E environment in CA MSM.

   During the migration, CA MSM stores information about the SMP/E environment in the database.

2. Download the latest maintenance for the installed product releases from the Software Catalog tab.

   If you cannot find the required release, you can perform the following steps to download the maintenance:

   a. Add the release to the catalog manually.

   b. Update the release.

3. Apply the maintenance.

Note: You can also install maintenance to a particular SMP/E environment from the SMP/E Environments tab.

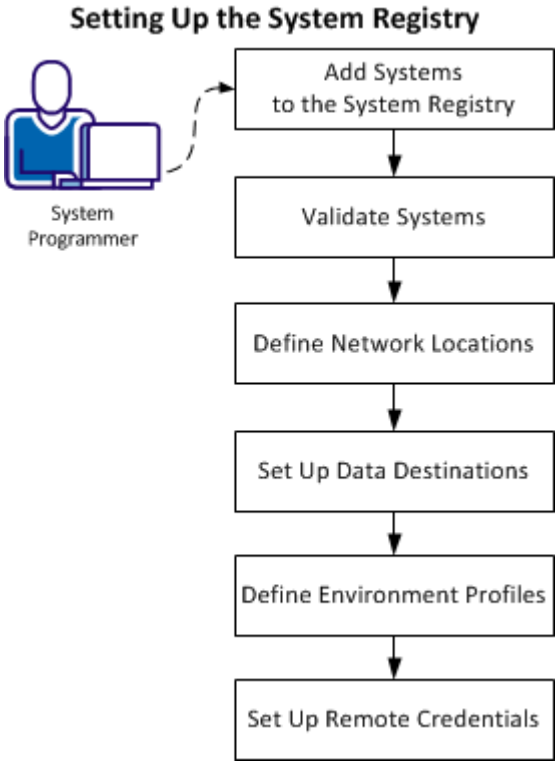
After the maintenance process completes, the product is ready for you to deploy. Sometimes there are other steps to perform manually outside of CA MSM before beginning the deployment process.

How to Set Up the System Registry

The *system registry* is a repository of variable data that all CA MSM managed products share. The system registry repository contains information about the systems that have been defined to CA MSM and selected as a target for deployments and configurations. You can create non-sysplex, sysplex, shared DASD cluster, and staging systems. You can maintain, validate, view, and delete a registered system and you can investigate a failed validation.

For each system that you register, there is one entry. Each entry consists of three categories of information: general, network locations, and data destinations.

You perform the following tasks to set up the system registry in CA MSM:



1. Add systems to the system registry.
2. Validate systems.
3. Define network locations.
4. Set up data destinations.
5. Define environment profiles.
6. Set up remote credentials.

Add and then validate each nonstaging system in the enterprise that you are deploying to, to the CA MSM system registry. You can only send a deployment to a validated system.

This process applies to each nonstaging system in your enterprise. For example, if you have five systems at your enterprise, then perform this process five times.

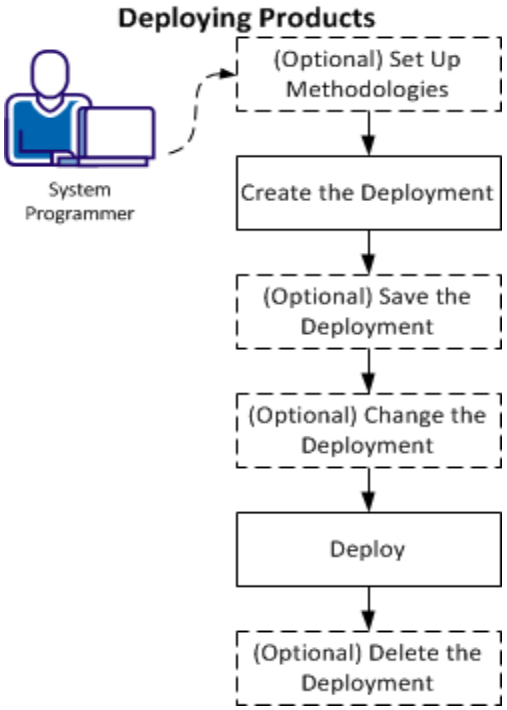
Note: After a system is validated, there is no need to validate it again. However, you can revalidate a system any time.

How to Deploy a Product

The *Software Deployment Service (SDS)* facilitates the mainframe product deployment from the software inventory of the driving system to the target system. This facilitation includes deploying installed products that are policy-driven with a set of appropriate transport mechanisms across a known topology.

You can use the SDS component of CA MSM to deploy a CA Technologies product that you have already acquired and installed.

You perform the following high-level tasks to deploy your products using CA MSM:



1. (Optional) Set up methodologies.

   Note: You can also set up methodologies when creating a deployment.

2. Create the deployment.
3. (Optional) Save the deployment for editing and deploying later.
4. (Optional) Change the deployment: Add and edit systems, products, custom data sets, and methodologies.

5. Deploy:
    a. Take a snapshot.
    b. Transmit to target.
    c. Deploy (unpack) to mainframe environment.
6. (Optional) Delete the deployment.

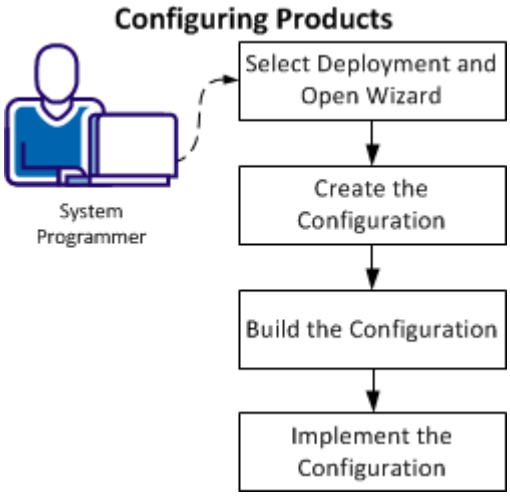
After the deployment process completes, the product is ready for you to configure. Sometimes there are other steps to perform manually outside of CA MSM before beginning the configuration process.

How to Configure a Product

The *Software Configuration Service (SCS)* facilitates the mainframe product configuration from the software inventory of the driving system to targeted z/OS operating systems.

You can use the SCS component of CA MSM to configure a CA Technologies product that you have already acquired, installed, and deployed.

You perform the following high-level tasks to configure your products using CA MSM:



1. From the Deployments tab, select a configurable deployment, select the associated product, and click Create Configuration to open the Configuration wizard.
2. Create the configuration by completing all the steps in the wizard:
   a. Define a configuration name and select a target system.
   b. Select configuration functions and options.
   c. Define system preferences.
   d. Create target settings.
   e. Select and edit resources.
3. Build the configuration. The last step of the Configuration wizard lets you build the configuration. If needed, you can edit the configuration and can build the configuration again.
4. Implement the configuration. The implementation process in CA MSM guides you and provides detailed instructions to start, stop, and manage the steps of the implementation process.

After the configuration process completes, the product is ready for you to use. Sometimes there are other steps to perform manually outside of CA MSM.

Note: You cannot use CA MSM to configure a product to a staging system.

Access CA MSM Using the Web-Based Interface

You access CA MSM using the web-based interface.

You need the URL of CA MSM from the CA MSM administrator.

Follow these steps:

1. Start your web browser, and enter the access URL.

   The login page appears.

   Note: If the Notice and Consent Banner appears, read and confirm the provided information.
2. Enter your z/OS login user name and password.

   The initial page appears. If you log in for the first time, you are prompted to define your account on the CA Support Online website.

   Note: For more information about the interface, click the online help link at the top right corner of the page.
3. Click New.

   You are prompted for the credentials to use on the CA Support Online website.

4. Specify the credentials, click OK, and then click Next.

   You are prompted to review your user settings.

   Note: These settings are available on the User Settings page.

5. Change the settings or keep the defaults, and then click Finish.

   A dialog opens, which shows the progress of the configuration task. You can click Show Results to view the details of the actions in a finished task.

Important! If your site uses proxies, review your proxy credentials on the User Settings, Software Acquisition page.

Chapter 4: Installing Your Product from Pax-Enhanced ESD

This section contains the following topics:

How to Install a Product Using Pax-Enhanced ESD

This section describes the Pax-Enhanced ESD process. We recommend that you read this overview and follow the entire procedure the first time you complete a Pax-Enhanced ESD installation. For experienced UNIX users, the *Pax-Enhanced ESD Quick Reference Guide* has sufficient information for subsequent installations.

Important! Downloading pax files for the SMP/E installation as part of the Pax-Enhanced ESD process requires write authority to the UNIX System Services (USS) directories used for the ESD process.

If you prefer not to involve all CA Technologies product installers with z/OS UNIX System Services, assign a group familiar with USS to perform Steps 1 through 4 and provide the list of the unpacked MVS data sets to the product installer. USS is not required for the actual SMP/E RECEIVE of the product or for any of the remaining installation steps.

To install files using Pax-Enhanced ESD, use the following process:

1. Allocate and mount the file system. This process requires a USS directory to receive the pax file and to perform the unpack steps. We recommend that you allocate and mount a file system dedicated to Pax-Enhanced ESD and create the directory in this file system. Ensure that all users who will be working with pax files have write authority to the directory.

2. Copy the product pax files into your USS directory. To download files, choose one of the following options:

   - Download a zip file from CA Support Online to your PC, unzip the file, and then upload the product pax files to your USS file system.
   - FTP the pax files from CA Support Online directly to your USS directory.

   Note: Perform Steps 3 through 6 for each pax file that you upload to your USS directory.

3. Create a product directory from the pax file. Set the current working directory to the directory containing the pax file, and create a new directory in your USS directory by entering the following command:

   `pax -rvf pax-filename`

4. Use the SMP/E GIMUNZIP utility to create z/OS installation data sets. The file UNZIPJCL in the directory created by the pax command in Step 3 contains a sample job to GIMUNZIP the installation package. Edit and submit the UNZIPJCL job.

5. Proceed with product installation. Consult product-specific documentation, including AREADME files and installation notes to complete the product installation.

6. (Optional) Clean up the USS directory. Delete the pax file, the directory created by the pax command, all of the files in it, and the SMP/E RELFILEs, SMPMCS, and HOLDDATA data sets.

More Information:

USS Environment Setup (see page 42)
Allocate and Mount a File System (see page 43)
Copy the Product Pax Files into Your USS Directory (see page 46)
Create a Product Directory from the Pax File (see page 51)
Copy Installation Files to z/OS Data Sets (see page 52)

How the Pax-Enhanced ESD Download Works

Important! To download pax files for the SMP/E installation as part of the Pax-Enhanced ESD process, you must have write authority to the UNIX System Services (USS) directories used for the ESD process and available USS file space before you start the procedures in this guide.

Use the following process to download files using Pax-Enhanced ESD:

1. Log in to https://support.ca.com/, and click Download Center.

   The CA Support Online web page appears.

2. Under Download Center, select Products from the first drop-down list, and specify the product, release, and genlevel (if applicable), and click Go.

   The CA Product Download window appears.

3. Download an entire CA Technologies product software package or individual pax files to your PC or mainframe. If you download a zip file, you must unzip it before continuing.

   For both options, The ESD Product Download Window (see page 39) topic explains how the download interface works.

   Note: For traditional installation downloads, see the *Traditional ESD User Guide*. Go to https://support.ca.com/, log in, and click Download Center. A link to the guide appears under the Download Help heading.

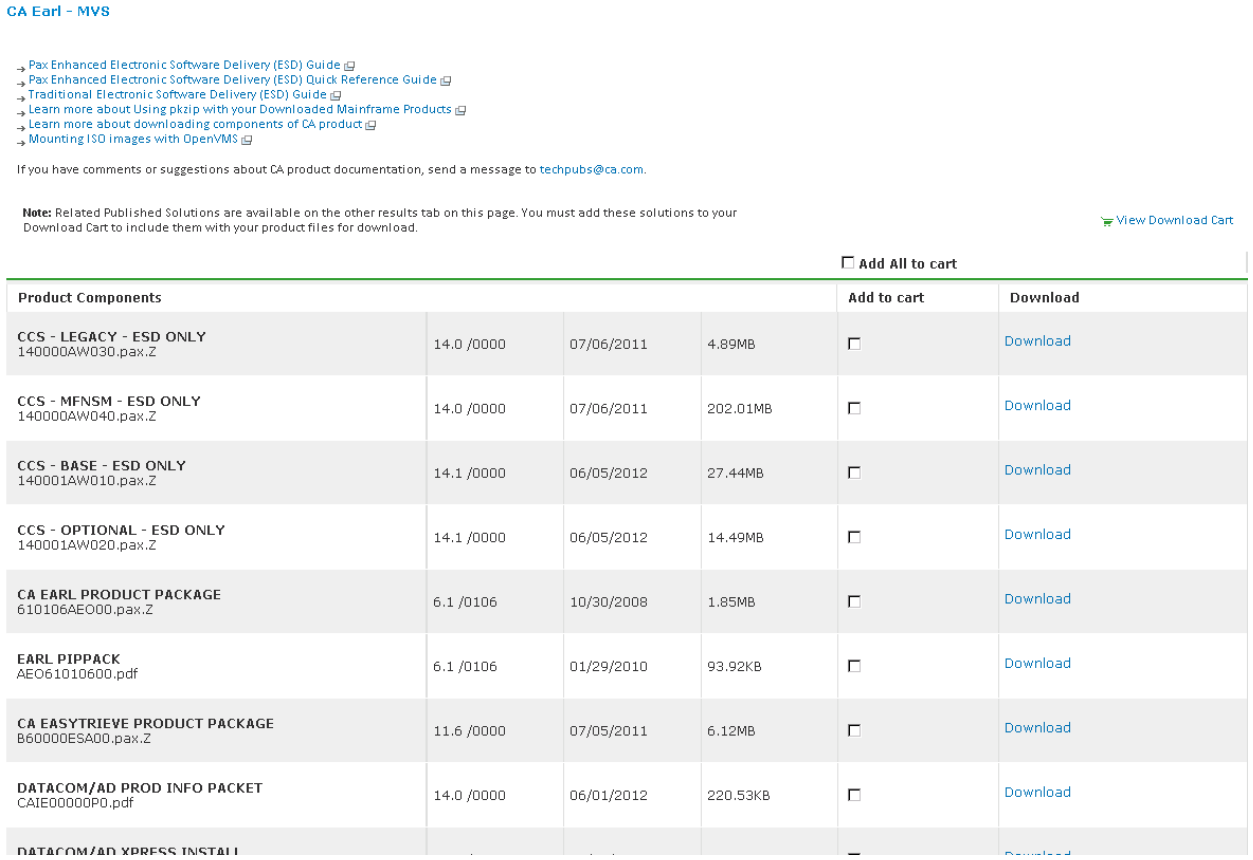
4. Perform the steps to install the product based on the product-specific steps.

   The product is installed on the mainframe.

ESD Product Download Window

You can download CA Technologies product ESD packages multiple ways. Your choices depend on the size of the individual files and the number of files that you want to download. You can download the complete product with all components, or you can select individual pax and documentation files for your product or component.

The following illustration shows sample product files. The illustration lists all components of the product. You can use the Download Cart by selecting one or more components that you need, or selecting the check box for Add All to cart. If you prefer to immediately download a component, click the Download link.



CA Earl - MVS

- Pax Enhanced Electronic Software Delivery (ESD) Guide
- Pax Enhanced Electronic Software Delivery (ESD) Quick Reference Guide
- Traditional Electronic Software Delivery (ESD) Guide
- Learn more about Using pkzip with your Downloaded Mainframe Products
- Learn more about downloading components of CA product
- Mounting ISO images with OpenVMS

If you have comments or suggestions about CA product documentation, send a message to techpubs@ca.com.

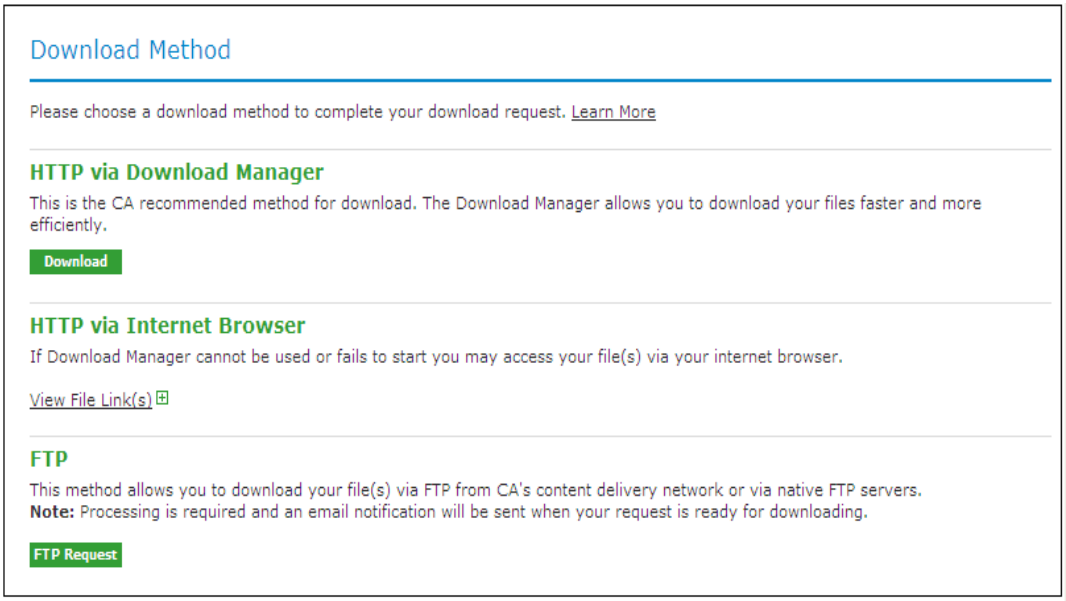
Note: Related Published Solutions are available on the other results tab on this page. You must add these solutions to your Download Cart to include them with your product files for download.

View Download Cart

Add All to cart

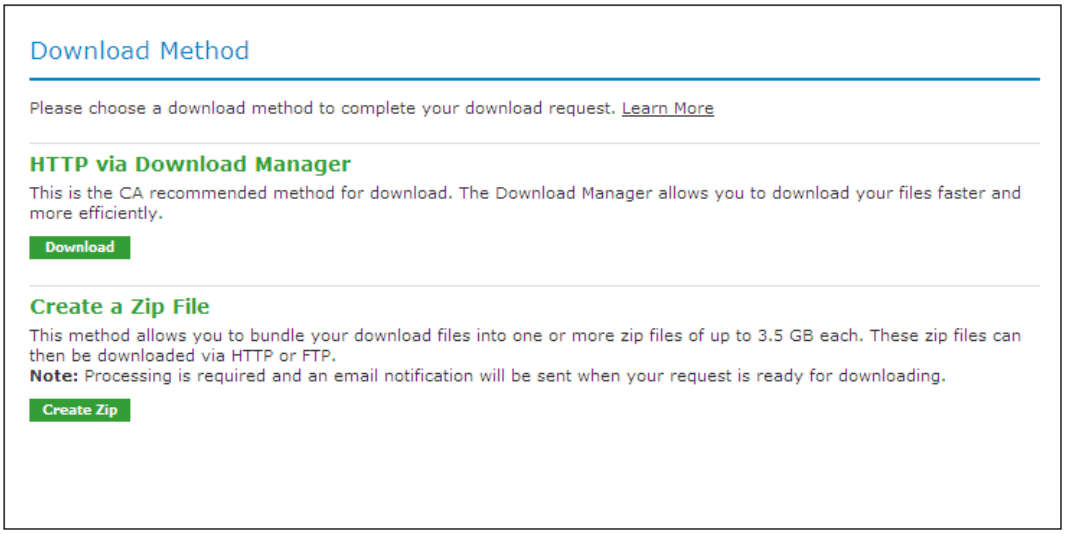
Product Components				Add to cart	Download
CCS - LEGACY - ESD ONLY 140000AW030.pax.Z	14.0 /0000	07/06/2011	4.89MB	☐	Download
CCS - MFNSM - ESD ONLY 140000AW040.pax.Z	14.0 /0000	07/06/2011	202.01MB	☐	Download
CCS - BASE - ESD ONLY 140001AW010.pax.Z	14.1 /0000	06/05/2012	27.44MB	☐	Download
CCS - OPTIONAL - ESD ONLY 140001AW020.pax.Z	14.1 /0000	06/05/2012	14.49MB	☐	Download
CA EARL PRODUCT PACKAGE 610106AEO00.pax.Z	6.1 /0106	10/30/2008	1.85MB	☐	Download
EARL PIPPACK AEO61010600.pdf	6.1 /0106	01/29/2010	93.92KB	☐	Download
CA EASYTRIEVE PRODUCT PACKAGE B60000ESA00.pax.Z	11.6 /0000	07/05/2011	6.12MB	☐	Download
DATACOM/AD PROD INFO PACKET CAIE00000P0.pdf	14.0 /0000	06/01/2012	220.53KB	☐	Download
DATACOM/AD XPRESS INSTALL				☐	

Clicking the link for an individual component takes you to the Download Method page.



Depending on the size and quantity of ordered product files, the Download Method screen could also have these options:

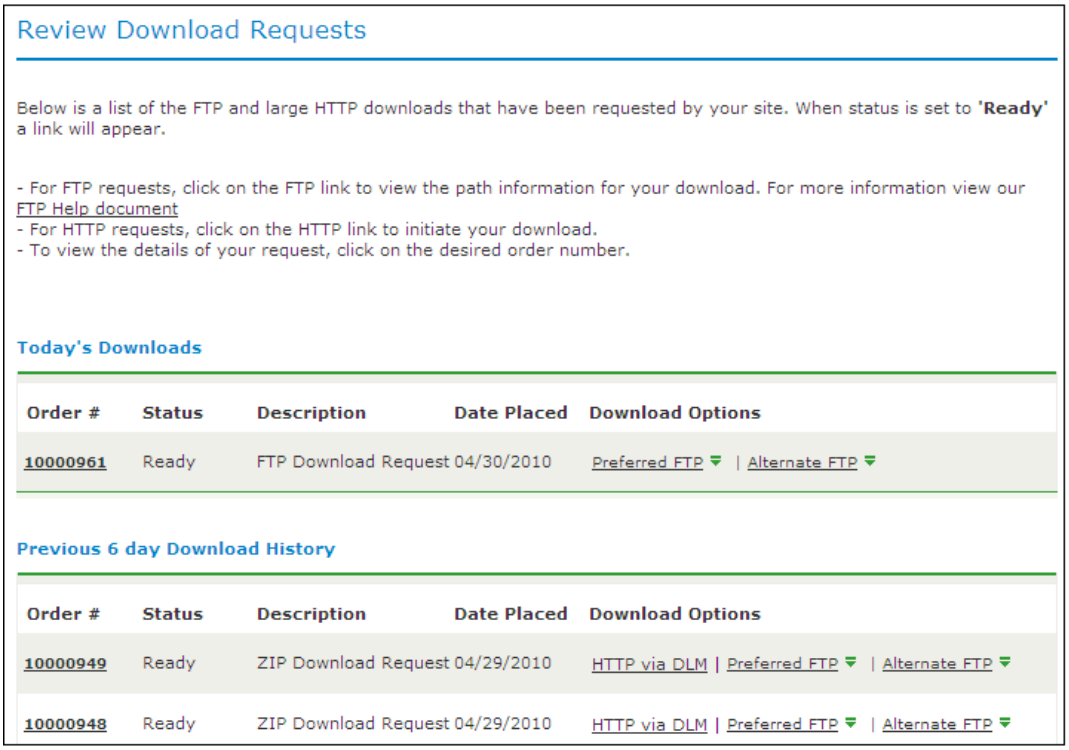
Note: For mainframe downloads using this HTTP method, click the Learn More link.



The HTTP method lets you start downloading immediately. The FTP method takes you to the Review Orders page that displays your order, first in a Pending status changing to Ready when your order has been processed.

Preferred FTP uses the new content delivery network (CDN). Alternate FTP uses the CA Technologies New York-based FTP servers.

The Create a Zip File option first creates the zip, and when ready, offers the options that the Zip Download Request examples show in the next illustration.



Review Download Requests

Below is a list of the FTP and large HTTP downloads that have been requested by your site. When status is set to **'Ready'** a link will appear.

- For FTP requests, click on the FTP link to view the path information for your download. For more information view our FTP Help document
- For HTTP requests, click on the HTTP link to initiate your download.
- To view the details of your request, click on the desired order number.

Today's Downloads

Order #	Status	Description	Date Placed	Download Options
10000961	Ready	FTP Download Request	04/30/2010	Preferred FTP | Alternate FTP

Previous 6 day Download History

Order #	Status	Description	Date Placed	Download Options
10000949	Ready	ZIP Download Request	04/29/2010	HTTP via DLM | Preferred FTP | Alternate FTP
10000948	Ready	ZIP Download Request	04/29/2010	HTTP via DLM | Preferred FTP | Alternate FTP

USS Environment Setup

You need a UNIX System Services (USS) directory and a file system with adequate space to perform the following tasks:

- Receive product pax files from CA Support Online.
- Perform utility functions to unpack the pax file into MVS data sets that you can use to complete the product installation.

We recommend that you allocate and mount a file system dedicated to Pax-Enhanced ESD. The amount of space that you need for the file system depends on the following variables:

- The size of the pax files that you intend to download.
- Whether you plan to keep the pax files after unpacking them. We do not recommend this practice.

We recommend that you use one directory for downloading and unpacking pax files. Reusing the same directory minimizes USS setup. You need to complete the USS setup only one time. You reuse the same directory for subsequent downloads. Alternatively, you can create a new directory for each pax download.

Important! Downloading pax files for the SMP/E installation as part of the Pax-Enhanced ESD process requires write authority to the UNIX System Services (USS) directories used for the ESD process. In the file system that contains the ESD directories, you also need free space approximately 3.5 times the pax file size to download the pax file and unpack its contents. For example, to download and unpack a 14 MB pax file, you need approximately 49 MB of free space in the file system hosting your ESD directory.

Allocate and Mount a File System

You can use the zSeries File System (zFS) or hierarchical file system (HFS) for ESD downloads.

This procedure describes how to perform the following tasks:

- Allocate a zFS or an HFS.
- Create a mount point in an existing maintenance USS directory of your choice.
- Mount the file system on the newly created mount point.

  Note: You must have SUPERUSER authority to do this.
- Optionally, permit write access to anyone in the same group as the person who created the directory.

  Important! USS commands are case-sensitive.

Follow these steps:

1. Allocate the file system by customizing one of the following samples to your site requirements:

   - On a zFS, use the following sample:

```
//DEFINE   EXEC PGM=IDCAMS
//SYSPRINT DD   SYSOUT=*
//SYSUDUMP DD   SYSOUT=*
//AMSDUMP  DD   SYSOUT=*
//SYSIN    DD *
  DEFINE CLUSTER ( +
  NAME(your_zFS_data_set_name) +
  STORAGECLASS(class) +
  LINEAR +
  CYL(primary secondary) +
  SHAREOPTIONS(3,3) +
  )
/*
//FORMAT   EXEC PGM=IOEAGFMT,REGION=0M,
// PARM=('-aggregate your_zFS_data_set_name -compat')
//SYSPRINT DD   SYSOUT=*
//SYSUDUMP DD   SYSOUT=*
//STDOUT   DD   SYSOUT=*
//STDERR   DD   SYSOUT=*
//CEEDUMP  DD   SYSOUT=*
//*
```

   - On an HFS, use the following sample:

```
//ALCHFS EXEC PGM=IEFBR14
//CAESD  DD   DSN=yourHFS_data_set_name,
//            DISP=(NEW,CATLG,DELETE),UNIT=3390,
//            DSNTYPE=HFS,SPACE=(CYL,(primary,secondary,1))
```

   The file system is allocated.

   Note: Ensure that the zFS or HFS data set name that you use conforms to your data set naming conventions for USS file systems. If the allocation of the file system data set fails, it is because of environmental settings not allowing for the allocation. On an HFS, try using the ISPF 3.2 Data Set Utility to allocate your HFS data set.

2. Create a mount point for the file system. This example shows how to create a /CA/CAESD directory in an existing directory, /u/maint. From the TSO OMVS shell, enter the following commands:

   ```
   cd /u/maint/
   mkdir CA
   cd CA
   mkdir CAESD
   ```

   Note: This document refers to this structure as *yourUSSESDdirectory*.

   The mount point is created.

3. Mount the file system by customizing one of the following samples to your site requirements:

   - On a zFS, use the following sample:

     ```
     MOUNT FILESYSTEM('your_zFS_data_set_name')
           MOUNTPOINT('yourUSSESDdirectory')
           TYPE(ZFS)  MODE(RDWR)
           PARM(AGGRGROW)
     ```

   - On an HFS, use the following sample:

     ```
     MOUNT FILESYSTEM('your_HFS_data_set_name')
           MOUNTPOINT('yourUSSESDdirectory')
           TYPE(HFS)  MODE(RDWR)
     ```

   The file system is mounted.

4. (Optional) Set security permissions for the directory. You can use the chmod command to let other users access the ESD directory and its files. For example, to allow write access to the ESD directory for other users in your USS group, from the TSO OMVS shell, enter the following command:

   ```
   chmod -R 775 /yourUSSESDdirectory/
   ```

   Write access is granted.

   Note: For more information about the chmod command, see the IBM *z/OS UNIX System Services User Guide* (SA22-7802).

Copy the Product Pax Files into Your USS Directory

To begin the CA Technologies product installation procedure, copy the product pax file into the USS directory that you set up. Use one of the following methods:

- Download the product pax files directly from the CA Support Online FTP server to your z/OS system.
- Download the product pax file from the CA Support Online FTP server to your computer, and upload it to your z/OS system.
- Download the product file from CA Support Online to your computer. If your download included a zip file, unzip the file, and upload the unzipped pax files to your z/OS system.

This section includes a sample batch job to download a product pax file from the CA Support Online FTP server directly to a USS directory on your z/OS system and sample commands to upload a pax file from your computer to a USS directory on your z/OS system.

Important! The FTP procedures vary due to local firewall and other security settings. Consult your local network administrators to determine the appropriate FTP procedure to use at your site.

Ensure that sufficient free space is available in the USS file system that you are using for Pax-Enhanced ESD to hold the product pax file. If you do not have sufficient free space, error messages similar to the following appear:

```
EZA1490I Error writing to data set
EZA2606W File I/O error 133
```

When the download finishes, the pax file size in your USS directory matches the value in the Size column for the corresponding pax file on the CA Technologies Products Download window.

More Information:

How the Pax-Enhanced ESD Download Works (see page 39)
ESD Product Download Window (see page 39)

Download Using Batch JCL

Use this process to download a pax file from the CA Support Product Downloads window by running batch JCL on the mainframe. Use the sample JCL attached to the PDF file as CAtoMainframe.txt to perform the download.

Important! To simplify the Pax-Enhanced ESD process, the PDF version of this guide includes a sample JCL job that you can copy directly to the mainframe. To access this job, click the paper clip icon at the left of the PDF reader. A window displaying attachments opens. Double-click the file to view the sample JCL.

Note: We recommend that you follow the preferred method as described on CA Support Online. This procedure is our preferred download method; however, we do include the procedure to download to the mainframe through a PC in the next section.

Follow these steps:

1. Supply a valid JOB statement.
2. Replace *yourTCPIP.PROFILE.dataset* with the name of the TCP/IP profile data set for your system. Consult your local network administrators, if necessary.

   The job points to your profile.
3. Replace *YourEmailAddress* with your email address.

   The job points to your email address.
4. Replace *yourUSSESDdirectory* with the name of the USS directory that you use for ESD downloads.

   The job points to your USS directory.
5. Locate the product component to download on the CA Support Product Download window.

   You have identified the product component to download.
6. Click Download for the applicable file.

   Note: For multiple downloads, add files to a cart.

   The Download Method window opens.
7. Click FTP Request.

   The Review Download Requests window displays any files that you have requested to download.

   Note: We send you an email when the file is ready to download or a link appears in this window when the file is available.

8. Select one of the following methods:

   Preferred FTP

   Uses CA Technologies worldwide content delivery network (CDN). If you cannot download using this method, review the security restrictions for servers that company employees can download from that are outside your corporate network.

   Host Name: ftp://ftpdownloads.ca.com

   Alternate FTP

   Uses the original download servers that are based on Long Island, New York.

   Host Name: ftp://scftpd.ca.com for product files and download cart files and ftp://ftp.ca.com for individual solution files.

   Both methods display the host, user name, password, and FTP location, which you then can copy into the sample JCL.

   Note: The following links provide details regarding FTP: the FTP Help document link in the Review Download Requests window and the Learn More link available in the Download Methods window.

9. Submit the job.

   Important! If your FTP commands are incorrect, it is possible for this job to fail and still return a zero condition code. Read the messages in the job DDNAME SYSPRINT to verify the FTP succeeded.

   After you run the JCL job, the pax file resides in the mainframe USS directory that you supplied.

Example: CAtoMainframe.txt, JCL

The following text appears in the attached CAtoMainframe.txt JCL file:

```
//GETPAX   JOB (ACCOUNTNO),'FTP GET ESD PACKAGE',
//          MSGCLASS=X,CLASS=A,NOTIFY=&SYSUID
//*********************************************************************
//* This sample job can be used to download a pax file directly from  *
//* CA Support Online to a USS directory on your z/OS system.         *
//*                                                                   *
//* When editing the JCL ensure that you do not have sequence numbers *
//* turned on.                                                        *
//*                                                                   *
//* This job must be customized as follows:                           *
//* 1. Supply a valid JOB statement.                                  *
//* 2. The SYSTCPD and SYSFTPD JCL DD's statements in this JCL maybe  *
//*    optional at your site. Remove the statements that are not      *
//*    required. For the required statements, update the data set     *
//*    names with the correct site specific data set names.           *
//* 3. Replace "Host" based on the type of download method.           *
//* 4. Replace "YourEmailAddress" with your email address.            *
//* 5. Replace "yourUSSESDdirectory" with the name of the USS         *
//*    directory used on your system for ESD downloads.               *
//* 6. Replace "FTP Location" with the complete path                  *
//*    and name of the pax file obtained from the FTP location        *
//*    of the product download page.                                  *
//*********************************************************************
//GETPAX   EXEC PGM=FTP,PARM='(EXIT',REGION=0M
//SYSTCPD  DD   DSN=yourTCPIP.PROFILE.dataset,DISP=SHR
//SYSFTPD  DD   DSN=yourFTP.DATA.dataset,DISP=SHR
//SYSPRINT DD   SYSOUT=*
//OUTPUT   DD   SYSOUT=*
//INPUT    DD   *
Host
anonymous YourEmailAddress
lcd yourUSSESDdirectory
binary
get FTP location
quit
```

Download Files to Mainframe through a PC

If you download pax or zip files from CA Support Online to your PC, use this procedure to upload the pax file from your PC to your z/OS USS directory.

Follow these steps:

1. Follow the procedures in How the Pax-Enhanced ESD Download Works to download the product pax or zip file to your PC. If you download a zip file, first unzip the file to use the product pax files.

   The pax or zip file resides on your PC.

2. Open a Windows command prompt.

   The command prompt appears.

3. Customize and enter the FTP commands with the following changes:

   a. Replace *mainframe* with the z/OS system's IP address or DNS name.

   b. Replace *userid* with your z/OS user ID.

   c. Replace *password* with your z/OS password.

   d. Replace *C:\PC\folder\for\thePAXfile* with the location of the pax file on your PC.

   e. Replace *yourUSSESDdirectory* with the name of the USS directory that you use for ESD downloads.

   f. Replace *paxfile.pax.Z* with the name of the pax file to upload.

   The pax file is transferred to the mainframe.

Example: FTP Commands

This list is a sample of FTP commands to upload the pax file from your PC to your USS Pax-Enhanced ESD directory:

```
ftp mainframe
userid
password
bin
lcd C:\PC\folder\for\thePAXfile
cd /yourUSSESDdirectory/
put paxfile.pax.Z
quit
exit
```

Create a Product Directory from the Pax File

Use the sample job attached to the PDF file as Unpackage.txt to extract the product pax file into a product installation directory.

Important! To simplify the Pax-Enhanced ESD process, the PDF version of this guide includes a sample JCL job that you can copy directly to the mainframe. To access this job, click the paper clip icon at the left of the PDF reader. A window displaying attachments opens. Double-click the file to view the sample JCL.

Follow these steps:

1. Supply a valid JOB statement.
2. Replace *yourUSSESDdirectory* with the name of the USS directory that you use for ESD downloads.

   The job points to your specific directory.
3. Replace *paxfile.pax.Z* with the name of the pax file.

   The job points to your specific pax file.
4. Submit the job.

   The job runs and creates the product directory.

Note: If the PARM= statement exceeds 71 characters, uncomment and use the second form of UNPAXDIR instead. This sample job uses an X in column 72 to continue the PARM= parameters to a second line.

Sample Job to Execute the Pax Command (Unpackage.txt)

The following text appears in the attached Unpackage.txt JCL file:

```
//ESDUNPAX JOB (ACCOUNTNO),'UNPAX ESD PACKAGE ',
// MSGCLASS=X,CLASS=A,NOTIFY=&SYSUID
//*********************************************************************
//* This sample job can be used to invoke the pax command to create   *
//* the product-specific installation directory.                      *
//*                                                                   *
//* This job must be customized as follows:                           *
//* 1. Supply a valid JOB statement.                                  *
//* 2. Replace "yourUSSESDdirectory" with the name of the USS         *
//*    directory used on your system for ESD downloads.               *
//* 3. Replace "paxfile.pax.Z" with the name of the pax file.         *
//* NOTE: If you continue the PARM= statement on a second line, make  *
//*       sure the 'X' continuation character is in column 72.        *
//*********************************************************************
//UNPAXDIR EXEC PGM=BPXBATCH,
// PARM='sh cd /yourUSSESDdirectory/; pax -rvf paxfile.pax.Z'
//*UNPAXDIR EXEC PGM=BPXBATCH,
//* PARM='sh cd /yourUSSESDdirectory/; pax                            X
//*            -rvf paxfile.pax.Z'
//STDOUT DD SYSOUT=*
//STDERR DD SYSOUT=*
```

Copy Installation Files to z/OS Data Sets

Use this procedure to invoke the SMP/E GIMUNZIP utility to create MVS data sets from the files in the product-specific directory.

Follow these steps:

1. Locate and read the product readme file or installation notes, if applicable, which resides in the product-specific directory that the pax command created. This file contains the product-specific details you require to complete the installation procedure.

   You have identified the product-specific installation details.

2. Use ISPF EDIT or TSO ISHELL to edit the UNZIPJCL sample job. You can perform this step in one of the following ways:

   - Use ISPF EDIT. Specify the full path name of the UNZIPJCL file.
   - Use TSO ISHELL. Navigate to the UNZIPJCL file and use the E line command to edit the file.

   The job is edited.

3. Change the SMPDIR DD PATH to the product-specific directory created by the pax command.

   Your view is of the product-specific directory.

4. If ICSF is not active, perform the following steps:

   a. Change the SMPJHOME DD PATH to your Java runtime directory. This directory varies from system to system.

   b. Perform one of the following steps:

      - Change the SMPCPATH DD PATH to your SMP/E Java application classes directory, typically /usr/lpp/smp/classes/.
      - Change HASH=YES to HASH=NO on the GIMUNZIP parameter.

   One of the following occurs: ICSF is active or you are using Java.

5. Change all occurrences of y*ourHLQ* to the high-level qualifier (HLQ) for z/OS data sets used by the installation process. We suggest that you use a unique HLQ for each expanded pax file to identify uniquely the package. Do *not* use the same value for y*ourHLQ* as you use for the SMP/E RELFILEs.

   All occurrences of y*ourHLQ* are set to your high-level qualifier for z/OS data sets.

6. Submit the UNZIPJCL job.

   The UNZIPJCL job completes with a zero return code. Messages GIM69158I and GIM48101I in the output and IKJ56228I in the JES log are acceptable.

   GIMUNZIP creates z/OS data sets with the high-level qualifier you specified in the UNZIPJCL job. You use these data sets to perform the product installation. The pax file and product-specific directory are no longer needed.

   Note: For more information, see the IBM reference guide, *SMP/E for z/OS Reference (SA22-7772)*.

Unload the Install Utility

The installation utility software lets you generate and run the JCL required to install your product. The installation utility software is delivered electronically with ESD.

The installation software unloads into the *dsnpref*.CAI.NMC1.CC2DJCL data set; *dsnpref* is a prefix you specify for your product data sets.

After you unzip the data sets, do *one* of the following:

- Rename *dsnpref*.CAI.NMC1.CC2DJCL to *dsnpref*.NMC1.CC2DJCL
- Copy the members in *dsnpref*.CAI.NMC1.CC2DJCL into *dsnpref*.NMC1.CC2DJCL

Additional Features

The Install Utility provides an option to install the following additional features:

- SSL support
- ReportCenter

Install, set up, and customize your product region completely before installing ReportCenter.

Note: For information about installing these features, see the *ReportCenter Guide*.

Installation JCL

The installation process creates the *dsnpref*.NMC1.INSTDB database to store details of each installation that you perform. If you are also installing other products in the CA Mainframe Network Management family of products, this database manages those installations. These details include the products you install and the installation values that you specify.

Note: During this task, the INSTALLATION JCL Library Creation panel lets you specify your installation JCL library. The default library name is *dsnpref*.NMC1.INSTALL.JCL, where *dsnpref* is the same data set prefix you used for the *dsnpref*.NMC1.CC2DJCL data set.

If your installation JCL library exists, do *one* of the following:

- Specify a new data set name at that panel.
- Delete the existing library by issuing a TSO DELETE command.

Note: If you leave the Install Utility at any stage, you can return to it from the ISPF/PDF TSO Command Shell prompt. Execute the following command:

```
EXEC 'dsnpref.NMC1.CC2DJCL(INSTALL)'
```

Generate the Installation JCL

During the installation process, you provide the site-specific installation information that you previously collected (see page 163). This information is used to generate the installation JCL.

Follow these steps:

1. At the ISPF/PDF TSO Command Shell prompt, execute the following command:

   `EXEC 'dsnpref.NMC1.CC2DJCL(INSTALL)'`

   The Install Utility panel appears.

   Note: On each of the Install Utility panels, you can use the following keys:

   - Enter to proceed to the next panel
   - F1 to display online help
   - F3 to return to the previous panel
   - F4 to exit and return to the main menu

2. Press Enter.

   The Install Utility Primary Menu panel appears.

3. Enter **1** (Set Installation Parameters).

   The Software Delivery Method panel appears.

4. Complete each of the panels as they open. Press Enter at the completion of each panel.

   You must complete all five parameter panels before you can install the product. You can take the default options or specify site-specific values.

   Note: For information about the fields, press F1 (Help).

5. Enter **2** (Install Products).

   The INSTALLATION Primary Menu panel appears.

6. Enter **1** (Select Products to Install).

   The INSTALLATION Product Selection panel appears with previously installed products unavailable.

7. Enter **S** next to the product name and press Enter.

   The INSTALLATION Product Confirmation panel appears, confirming your selections.

   If you have already installed another product in the product family, the INSTALLATION Components Already Installed panel appears, confirming your selections.

   Note: You can enter S next to multiple products to install multiple products at one time. You must be licensed for any products you install.

8. Press Enter to confirm your selection, and complete each of the INSTALLATION panels as they open.

   You must complete all the panels before you can set up your regions. You can take the default options or specify site-specific values.

9. Record the data set name into which the JCL was generated in your post-installation worksheet (see page 178).

   You can submit the jobs from the panel or directly from this data set after exiting the panel.

10. Submit and run the following installation jobs in sequence. Do not proceed with any job until the previous job has completed successfully.

    I01ALLOC

    Allocates the data sets.

    The I01ALLOC member allocates CC2DLOAD as a load library of the PDS type. Do not change it to a PDS/E type because the type is not supported.

    I02INSMP

    Initializes the SMP/E data sets.

    I03RCSMP

    Performs an SMP/E RECEIVE.

    I04AKSMP

    Performs an SMP/E APPLY CHECK. This job is listed only if maintenance exists for previously installed products.

    I05RSSMP

    Performs an SMP/E RESTORE. This job is listed only if maintenance exists for previously installed products.

    I06APSMP

    Performs an SMP/E APPLY.

    I07ACSMP

    Performs an SMP/E ACCEPT.

11. If you selected SSL Support as an additional feature to install, the following jobs are also generated. Submit and run them in sequence as for the previous jobs.

    - I21ALLME
    - I22INIME
    - I23RECME
    - I26APPME
    - I27ACCME

    Notes:

    - If you installed and set up your regions without SSL support, and then later install SSL support, add the installed *dsnpref*.NMC1.CC2DPLD data set to the region's STEPLIB or in the system LNKLST.
    - You must have SMP/E V3R5.0 to implement SSL.

12. Press F3.

    You are returned to the Primary Menu panel.

Clean Up the USS Directory

Important! This procedure is optional. Do not use this procedure until you complete the entire installation process.

To free file system disk space for subsequent downloads after downloading and processing the pax files for your CA Technologies product, we recommend removing the files from your USS directory and deleting unnecessary MVS data sets. You can delete the following items:

- Pax file
- Product-specific directory created by the pax command and all of the files in it
- SMP/E RELFILEs, SMPMCS, and HOLDDATA MVS data sets

  These data sets have the HLQ that you assigned in the UNZIPJCL job.

Note: Retain non-SMP/E installation data sets such as *yourHLQ*.INSTALL.NOTES for future reference.

Follow these steps:

1. Navigate to your Pax-Enhanced ESD USS directory.

   Your view is of the applicable USS directory.

2. Delete the pax file by entering the following command:

   `rm paxfile`

   paxfile

   Specifies the name of the CA Technologies pax file that you downloaded.

   The pax file is deleted.

3. Delete the product-specific directory by entering the following command:

   `rm -r product-specific-directory`

   product-specific-directory

   Specifies the product-specific directory created by the pax command.

   The product-specific directory is deleted.

Note: You can also use TSO ISHELL to navigate to the pax file and product-specific directory, and delete them using the D line command.

Maintenance

Maintenance includes program temporary fixes (PTFs) that supersede all authorized program analysis reports (APARs) that were created up to that time. Details of the superseded APARs are available as comments within the PTFs.

Product Maintenance

Important! The *dsnpref*.NMC1.CC2DLINK data set must be in your system LNKLST before you start maintenance. You can also create a STEPLIB to the data set name (DSN) in your TSOPROC (that is, allocate it to ISPLLIB). If you installed the product using CA MSM, you must use CA MSM to apply maintenance.

Product maintenance is provided as system modification program (SMP) fixes. The fixes consist of PTFs applied using the IBM System Modification Program Extended (SMP/E) tool.

Note: If an installed SMP fix contains maintenance for the VSAM data sets, you must update those data sets for each region you have set up.

RAMDB maintenance is provided as SMP/E PTFs. However, this is only the delivery and recordkeeping methodology. You must apply the maintenance using $RMDB04D.

Apply Maintenance

This section describes how to apply individual SMP fixes using the Install Utility.

Note: Individual SMP fixes are only available from the CA Technical Support site (see page 4).

When you receive SMP fixes, unload them into one of the following:

- A sequential data set
- A member of a partitioned data set

Multiple SMP fixes can be appended into a single data set or member.

Follow these steps:

1. Access the ISPF/PDF Primary Menu.
2. Select the COMMAND option.

   The ISPF Command Shell panel appears.
3. At the command prompt, enter the following command:

   `EXEC 'dsnpref.NMC1.CC2DJCL(INSTALL)'`
4. At the Install Utility title panel, press Enter.

   The Install Utility Primary Menu panel appears.
5. At the Install Utility Primary Menu panel, enter **8** (Maintain Products).

   The MAINTENANCE Primary Menu panel appears.
6. Enter **3** (Apply individual SMP fixes from a DASD data set).

   The MAINTENANCE DASD Fixes Dataset Name panel appears.
7. Enter the data set name that contains the SMP fixes to be applied and press Enter.
8. Complete the fields on the following MAINTENANCE panels as they open.

9. At the MAINTENANCE JCL Library Creation panel, review your fix JCL library.

   The default library name is:

   dsnpref.NMC1.FIX.DASD.JCL

   dsnpref

   The same data set prefix you used for the *dsnpref*.NMC1.CC2DJCL data set.

   Note: Each time you apply maintenance, use a new output data set. A new data set ensures that the only jobs in your maintenance JCL library are the jobs required for the maintenance you are installing now. To use a new data set:

   - Delete the library by issuing a TSO DELETE command and the library name, at the command prompt.
   - Specify a new data set name.

10. Press Enter to proceed with the generation of the maintenance JCL.

    When the JCL generation is complete, a list of generated jobs and a description of what each member does appears.

11. Note the name of the data set into which the JCL was generated.

12. Submit and run the following jobs in sequence. Do not proceed with any job until the previous job has completed successfully.

    Each job must complete with return code 0 unless otherwise indicated.

    Important! If there is maintenance for additional features, the SMP/E apply job must be run on a system that has the z/OS UNIX file system used during installation and mounted for read/write access.

    F11RCSMP

    SMP/E receives maintenance and lists existing HOLDDATA and SOURCEIDs that are already applied. If a job step returns condition code 04, there is no HOLDDATA present.

    Review the information. For any held APARs that you want to apply, add the correct BYPASS HOLD*x* operands to the corresponding APPLY control statement for those APARs. Add the operands by manually editing the F12APSMP job that contains the SMP control statements.

    Note: For information about the BYPASS HOLD*x* operands, see IBM's *SMP/E Commands* guide.

    F12APSMP

    SMP/E applies maintenance.

13. Press F3.

    The Install Utility Primary Menu panel appears.

    If the fix contains maintenance for VSAM data sets (as indicated by HOLDDATA), continue with the procedure to update the VSAM data sets for the regions you have set up. Otherwise, you have finished applying the fix.

HOLDDATA

When you apply maintenance, you typically encounter SMP/E HOLDDATA. We use HOLDDATA to notify your SMP/E system of SYSMODs that have errors or special conditions. We support system and external HOLDDATA.

System HOLDDATA

System HOLDDATA indicates data that is an in-stream part of the SYSMOD, informing you of special conditions. The following reasons are used with SYSTEM HOLDDATA for CA NetMaster FTM:

ACTION

Indicates that you must perform special processing before or after you apply this SYSMOD.

AO

Affects automated operations. It changes either the message identifier or the displacement of a field inside the message.

DB2BIND

Indicates that DBRMs have changed and packages need to be rebound.

DDDEF

Indicates that data sets and DDDEFs are being added or modified.

DELETE

Deletes the SYSMOD load module. You cannot reverse this type of SYSMOD with the SMP/E RESTORE command.

DEP

Indicates a dependency for this SYSMOD that you must externally verify.

DOC

Indicates a documentation change with this SYSMOD.

DYNACT

Describes the steps to dynamically activate this fix without performing an IPL.

ENH

Introduces a small programming enhancement. The hold contains the instructions to implement the enhancement. If no action is needed to implement the enhancement, give a summary of the enhancement.

EXIT

Indicates that changes delivered by this SYSMOD require reassembly of user exits.

EXRF

Indicates that the SYSMOD must be installed in both the Active and Alternate Extended Recovery Facility Systems.

MULTSYS

Apply this SYSMOD to multiple systems for either pre-conditioning, coexistence, or exploitation.

RESTART

Indicates that after applying this SYSMOD, the site must perform a special restart as opposed to a routine restart.

SYSMOD

Indicates that some or all of the elements delivered by this SYSMOD are to be downloaded to a workstation.

Code a bypass operand on your APPLY command to install SYSMODs that have internal holds. Code the bypass operand only after you have performed the required action, or if you are performing the action after the APPLY, if that is appropriate.

External HOLDDATA

External HOLDDATA is not part of the PTF. It resides in a separate file. It is commonly used for SYSMODs that have been distributed and later are discovered to cause problems.

Download the external HOLDDATA from CA Support to a DASD file, and allocate the file to the SMPHOLD DD statement. To take care of the external HOLDDATA, receive it into your SMP/E environment. SMP/E receives the HOLDDATA from CA-supplied jobs.

If a SYSMOD has an unresolved hold error, SMP/E does not install it unless you add a bypass to your APPLY command. You can bypass an error hold in situations that are not applicable to you. Error holds that are not applicable to you can include a problem that happens only with a hardware device that you do not have or in a product feature that you do not use.

When CA publishes a SYSMOD that resolves the hold, the resolving SYSMOD supersedes the hold error. This action lets you apply the original SYSMOD in conjunction with the fixing SYSMOD.

A special HOLDDATA class called ERREL exists. We have determined that the problem fixed by the SYSMOD is more important than the one that it causes. We recommend that you apply these SYSMODs.

The only manual task is running a REPORT ERRSYSMODS. This report identifies the following:

- Any held SYSMODs already applied to your system.
- Any resolving SYSMODs that are in RECEIVE status.

SMP/E identifies the SYSMOD to apply to correct the situation.

Update VSAM Data Sets

If an installed SMP fix contains maintenance for the VSAM data sets, maintenance option V of the Install Utility becomes available. To complete maintenance, select the option to update the data sets for the regions you have set up.

Follow these steps:

1. Access the ISPF/PDF Primary Menu, and select the COMMAND option.

   The ISPF Command Shell panel appears.

2. At the command prompt, execute the following command:

   `EXEC 'dsnpref.NMC1.CC2DJCL(INSTALL)'`

   The Install Utility title panel appears.

3. Press Enter.

   The Install Utility Primary Menu panel appears.

4. Enter **8** (Maintain Products).

   The MAINTENANCE Primary Menu panel appears.

5. Enter **V** (Update MODS, PANELS, OSCNTL and NETINFO data sets with installed maintenance).

   The MAINTENANCE Shared Region Data Sets panel appears.

6. Review the information, and press Enter.

7. At the MAINTENANCE JOBCARD Information panel, specify your JOBCARD details and press Enter.

8. At the MAINTENANCE JCL Library Creation panel, review your fix JCL library. The default library name is:

   dsnpref.NMC1.FIX.VSAMUPD.JCL

   dsnpref

   The same data set prefix used for the *dsnpref*.NMC1.CC2DJCL data set.

   Note: Each time you apply maintenance, use a new output data set. The new data set helps ensure that the only jobs in your maintenance JCL library are the jobs required for the maintenance you are installing. To use a new data set, take *one* of the following actions:

   - Delete the library by issuing a TSO DELETE command and the library name, at the command prompt.
   - Specify a new data set name.

9. Press Enter to proceed with the generation of the maintenance JCL.
10. Submit and run the job F21RFRSH to update the VSAM data sets.

    Note: The utility also generates the following jobs: F22DUMP and F23REST. If a shared DASD is not available, the jobs help you deploy those updates to a target system. The F22DUMP job creates backup data set that include the updated VSAM data sets, which you deploy to the target system. This backup data set is *dsnpref*.DFDSS.SHARED. The F23REST job, when submitted on the target system, restores the updated VSAM data sets from the backup data sets.

11. Press F3.

    The Install Utility Primary Menu panel appears.

12. Press F4 to exit the Install Utility Primary Menu panel and return to the ISPF Command Shell panel, or continue with the other options.

Individual RAMDB Maintenance

Note: Individual RAMDB maintenance is also available from the CA Technical Support site (see page 4).

This section describes how to apply maintenance to the RAMDB and details the command syntax of the $RMDB04D maintenance utility. You apply this maintenance in an active region.

Important! The RAMDB data set must not be updated with individual replacement records using the IDCAMS REPRO command.

You use $RMDB04D OPT=APPLY (see page 66) to apply maintenance. When applying maintenance, you can use the DIFF operand to display details of what differences are being added, replaced, or deleted by the maintenance.

Create Backup RAMDB

As a safety precaution, create a backup of your RAMDB (herein referred to RAMDBd) before applying maintenance.

Follow these steps:

1. Allocate RAMDBd in the same way that RAMDB was allocated.

   The cluster definition is in *dsnpref*.NMC1.*rname*.JCL(S01LCALC).

2. Stop the product region.

3. Copy the data from RAMDB to RAMDBd using IDCAMS REPRO command.

   Note: For information, see the example in *dsnpref*.NMC1.*rname*.JCL(S04LDVSM).

4. Restart the product region.

Apply Maintenance to RAMDB

You can apply maintenance directly to your RAMDB. The maintenance can then propagate to all connected regions, if any. If necessary, you can restore the maintenance using your RAMDBd as input (if the maintenance has not yet been applied to RAMDBd).

Follow these steps:

1. Log on to your product region and enter CMD.

   The command entry panel appears.

2. Apply-check the RAMDB fix by entering the following command:

   ```
   $RMDB04D OPT=APPLY FIX=fix-name CHECK=YES
   ```

   fix_name

   Is RAM@UPDT for published solutions or TZ*ddddd* for test fixes.

   When the APPLY CHECK finishes, a report appears. The report shows whether an APPLY of the fix will be successful, and also exactly what changes will result from the APPLY.

   Note: Perform this step for the following reasons:

   - To see what happens if a fix is applied to a RAMDB
   - To see whether a fix has been applied to a RAMDB

3. Apply the RAMDB fix by entering the following command:

   ```
   $RMDB04D OPT=APPLY FIX=fix_name
   ```

Note: If a RAMDB fix does not apply correctly or if you want to restore a fix, restore the RAMDB maintenance (see page 66).

Restore RAMDB Maintenance

Note: This step is optional.

The RESTORE option can be used to remove an applied fix from the RAMDB by using RAMDBd as input. The fix is effectively reversed, that is, any added objects are deleted and any deleted or replaced objects are copied from RAMDBd back to the RAMDB.

To restore the fix, enter the following command:

```
$RMDB04D OPT=RESTORE FIX=fix_name DDBDSN=?RAMDBd-dataset-name DDB=?RAMDBd
```

?RAMDBd

Specifies the ddname for the backup RAMDB.

?RAMDBd-dataset-name

Specifies the full data set name of the backup RAMDB.

RAMDB Maintenance Utility Syntax

This section describes the syntax of the RAMDB maintenance utility.

$RMDB04D OPT=APPLY

Use this procedure to apply a fix to a RAMDB or check a fix against a RAMDB.

This procedure has the following format:

```
$RMDB04D OPT=APPLY
         FIX=fix-number
        [DDNAME=ddname | DATASET=dataset-name]
        [CHECK={NO | YES]
        [DIFF={YES | NO}]
        [FORCE={NO | YES}]
        [CONFIRM={YES | NO}]
        [DB=file-id [DBDSN=db-dataset-name]]
```

OPT=APPLY

Specifies that a fix is being applied to a RAMDB.

FIX=*fix-number*

Specifies the fix number. This number is used as the member name of the input partitioned data set.

[DDNAME=*ddname* | DATASET=*dataset-name*]

Specifies the DDNAME parameter if the data set containing the fix is already allocated to the system, or the DATASET parameter if the data set containing the fix is to be allocated and freed after the fix has been retrieved. These two parameters are mutually exclusive and, therefore, you cannot specify both of them. If neither is specified, the COMMANDS DD concatenation in the region is used.

[CHECK={NO | YES}]

Specifies whether the fix is checked. If you specify YES, the fix is checked only for compatibility with the database and is not applied to the database. The check phase is always performed regardless of the value specified. However, this parameter determines whether the check phase is the only phase to be performed.

[DIFF={YES | NO}]

Specifies whether differences are displayed. If you specify YES (the default), the differences between the target objects and the new objects contained in the fix are displayed for each updated object. This applies to any SET (update) and CREATE (add) actions in the fix member where the target objects already exist.

[FORCE={NO | YES}]

Specifies whether the fix is applied regardless of the success or failure of the check phase. However, if CHECK=YES is specified, the FORCE parameter has no effect.

[CONFIRM={YES | NO}]

Specifies whether the fix is retrieved and the syntax checked before being presented as a panel for browsing. The panel enables you to view the fix and confirm the application. After you confirm, the fix is applied, and the message log displays another panel for browsing. If you specify NO, the fix is applied without presenting any confirmation panel and the message log is written to the terminal rather than being displayed as a panel.

The message log is always written to the activity log regardless of the options specified.

[DB=*file-id* [DBDSN=db-*dataset-name*]]

Specifies the DB parameter to apply the fix to a database other than the currently allocated RAMDB. This parameter specifies the file ID of the target database. If you also specify the DBDSN parameter, the specified data set is allocated a ddname that is the same as the specified file ID, and is opened and started. The database is not freed after the fix is applied. If the database is already allocated, the specified data set name is verified as allocated to the ddname (that is the same as the specified file ID) and opened to the same file ID.

$RMDB04D OPT=RESTORE

Use this procedure to reverse the effect of a fix.

This procedure has the following format:

```
$RMDB04D OPT=RESTORE
         FIX=fix-number
        [DDNAME=ddname | DATASET=dataset-name]
        [CONFIRM={YES | NO}]
        [TDB=target-file-id [TDBDSN=target-dataset-name]]
        [DDB=source-file-id [DDBDSN=source-dataset-name]]
```

OPT=RESTORE

Specifies that a fix, which has been applied to the target RAMDB, is being reversed.

FIX= *fix-number*

Specifies the fix number to back out of the RAMDB. This number is used as the member name of the fix data set and is verified against the contents of the member for the correct fix.

[DDNAME=*ddname* | DATASET=*dataset-name*]

Specifies the DDNAME parameter if the data set containing the fix is already allocated to the system, or the DATASET parameter if the data set containing the fix is to be allocated and freed after the fix has been retrieved. These two parameters are mutually exclusive and, therefore, you cannot specify both of them. If neither is specified, the COMMANDS DD concatenation in the region is used.

[CONFIRM={YES | NO}]

Specifies whether the fix is retrieved and the syntax checked before being presented as a panel for browsing. The panel lets you view the fix and confirm the restoration process. After you confirm, the fix is removed and the original data restored. The message log is presented as another panel for browsing. If you specify NO, the restoration process proceeds without presenting any confirmation panel, and the message log is written to the terminal rather than being displayed as a panel.

The message log is always written to the activity log regardless of the options specified.

[TDB=*target-file-id* [TDBDSN=*target-dataset-name*]]

Reverses a fix in a database other than the currently allocated RAMDB. This parameter specifies the file ID of the target database. If you also specify the TDBDSN parameter, the specified data set is allocated a ddname that is the same as the specified file ID, and is opened and started. The database is not freed after the restoration process. If the database is already allocated, the specified data set name is verified as allocated to the ddname (that is the same as the specified file ID) and opened to the same file ID.

DDB=*source-file-id* [DDBDSN=*source-dataset-name*]

Specifies the file ID of the source database.

Note: Restoration requires the specification of the distribution (source) database through the DDB parameter.

The source database must be a copy of the original database. If you also specify the DDBDSN parameter, the specified data set is allocated a ddname that is the same as the specified file ID, and is opened and started. The database is not freed after the restoration process. If the database is already allocated, the specified data set name is verified as allocated to the ddname (that is the same as the specified file ID) and opened to the same file ID.

Chapter 5: Installing Your Product from Tape

This section contains the following topics:

Unload the Install Utility

The installation utility software lets you generate and run the JCL required to install your product. The installation utility software is delivered on tape.

The installation software unloads into the *dsnpref*.NMC1.CC2DJCL data set; *dsnpref* is a prefix you specify for your product data sets.

To unload the install utility, do *one* of the following:

- If *dsnpref*.NMC1.CC2DJCL does not exist and you are installing from tape, unload into a new data set from tape (see page 71).
- If *dsnpref*.NMC1.CC2DJCL exists from a previous installation and you are installing from tape at the current release level, unload into an existing data set from tape (see page 73).

Additional Features

The Install Utility provides an option to install the following additional features:

- SSL support
- ReportCenter

Install, set up, and customize your product region completely before installing ReportCenter.

Note: For information about installing these features, see the *ReportCenter Guide*.

Unload into a New Data Set from Tape

If *dsnpref*.NMC1.CC2DJCL does not exist and you are installing from tape, you must unload the installation software from tape on to your DASD and into a new data set.

Follow these steps:

1. Create an unload job by copying the following JCL:

```
//jobname  JOB .............
//STEP1   EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=CAI.SAMPJCL,
//             DISP=OLD,UNIT=?device-in,VOL=SER=?tapeser,
//             LABEL=(1,SL,EXPDT=98000)
//SYSUT2   DD  DSN=?dsnpref.NMC1.CC2DJCL,
//             DISP=(NEW,CATLG,DELETE),
//             UNIT=?device-out,VOL=SER=?volser,
//             SPACE=(CYL,(10,1,140)),
//             DCB=(RECFM=FB,LRECL=80,BLKSIZE=0)
//SYSIN    DD  DUMMY
```

   Important! The SYSUT2 data set name must end with NMC1.CC2DJCL.

2. Replace the statements prefixed with a question mark (?) with your own values as follows:

   ?device-in

   Specifies the tape drive unit to mount the tape.

   ?tapeser

   Specifies the tape volume serial number in the form C2D76*x*. The value for this release is C2D760.

   ?dsnpref

   Specifies the data set prefix that will be used for the installation, maintenance, and Install Utility data sets. Do not include the name of your planned product region in the prefix; *?dsnpref* can be up to 29 characters long. If the data set high level qualifiers you are using do not exist, define an alias entry in the master catalog.

   ?device-out

   Specifies the type of the DASD device where you want to place the installation software.

   ?volser

   Specifies the volume serial number of the DASD.

   If allocation is controlled by SMS, replace UNIT= and VOL=SER= with STORCLAS=*?storclass*.

3. Submit and run the job.

4. Check that the job successfully completed.

Unload into an Existing Data Set from Tape

If *dsnpref*.NMC1.CC2DJCL exists from a previous installation at the current release level, unload the installation software from tape into the existing data set.

Follow these steps:

1. Create an unload job by copying the following JCL:

```
//jobname  JOB .............
//STEP1   EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=CAI.SAMPJCL,
//             DISP=OLD,UNIT=?device-in,VOL=SER=?tapeser,
//             LABEL=(1,SL,EXPDT=98000)
//SYSUT2   DD  DSN=?dsnpref.NMC1.CC2DJCL,
//             DISP=OLD
//SYSIN    DD  *
  COPY I=((SYSUT1,R)),O=SYSUT2
  COPY I=((SYSUT2,R)),O=SYSUT2
/*
```

2. Replace the statements prefixed with a question mark (?) with your own values as follows:

   ?device-in

   Specifies the tape drive unit to mount the tape.

   ?tapeser

   Specifies the tape volume serial number in the form C2D76*x*. The value for this release is C2D760.

   ?dsnpref

   Specifies the data set prefix in the previous installation.

3. Submit and run the job.
4. Verify that the job successfully completed.

Installation JCL

The installation process creates the *dsnpref*.NMC1.INSTDB database to store details of each installation that you perform. If you are also installing other products in the CA Mainframe Network Management family of products, this database manages those installations. These details include the products you install and the installation values that you specify.

Note: During this task, the INSTALLATION JCL Library Creation panel lets you specify your installation JCL library. The default library name is *dsnpref*.NMC1.INSTALL.JCL, where *dsnpref* is the same data set prefix you used for the *dsnpref*.NMC1.CC2DJCL data set.

If your installation JCL library exists, do *one* of the following:

- Specify a new data set name at that panel.
- Delete the existing library by issuing a TSO DELETE command.

Note: If you leave the Install Utility at any stage, you can return to it from the ISPF/PDF TSO Command Shell prompt. Execute the following command:

```
EXEC 'dsnpref.NMC1.CC2DJCL(INSTALL)'
```

Generate the Installation JCL

During the installation process, you provide the site-specific installation information that you previously collected (see page 163). This information is used to generate the installation JCL.

Follow these steps:

1. At the ISPF/PDF TSO Command Shell prompt, execute the following command:

   ```
   EXEC 'dsnpref.NMC1.CC2DJCL(INSTALL)'
   ```

   The Install Utility panel appears.

   Note: On each of the Install Utility panels, you can use the following keys:

   - Enter to proceed to the next panel
   - F1 to display online help
   - F3 to return to the previous panel
   - F4 to exit and return to the main menu

2. Press Enter.

   The Install Utility Primary Menu panel appears.

3. Enter **1** (Set Installation Parameters).

   The Software Delivery Method panel appears.

4. Complete each of the panels as they open. Press Enter at the completion of each panel.

   You must complete all five parameter panels before you can install the product. You can take the default options or specify site-specific values.

   Note: For information about the fields, press F1 (Help).

5. Enter **2** (Install Products).

   The INSTALLATION Primary Menu panel appears.

6. Enter **1** (Select Products to Install).

   The INSTALLATION Product Selection panel appears with previously installed products unavailable.

7. Enter **S** next to the product name and press Enter.

   The INSTALLATION Product Confirmation panel appears, confirming your selections.

   If you have already installed another product in the product family, the INSTALLATION Components Already Installed panel appears, confirming your selections.

   Note: You can enter S next to multiple products to install multiple products at one time. You must be licensed for any products you install.

8. Press Enter to confirm your selection, and complete each of the INSTALLATION panels as they open.

   You must complete all the panels before you can set up your regions. You can take the default options or specify site-specific values.

9. Record the data set name into which the JCL was generated in your post-installation worksheet (see page 178).

   You can submit the jobs from the panel or directly from this data set after exiting the panel.

10. Submit and run the following installation jobs in sequence. Do not proceed with any job until the previous job has completed successfully.

    I01ALLOC

    Allocates the data sets.

    The I01ALLOC member allocates CC2DLOAD as a load library of the PDS type. Do not change it to a PDS/E type because the type is not supported.

    I02INSMP

    Initializes the SMP/E data sets.

    I03RCSMP

    Performs an SMP/E RECEIVE.

    I04AKSMP

    Performs an SMP/E APPLY CHECK. This job is listed only if maintenance exists for previously installed products.

    I05RSSMP

    Performs an SMP/E RESTORE. This job is listed only if maintenance exists for previously installed products.

    I06APSMP

    Performs an SMP/E APPLY.

    I07ACSMP

    Performs an SMP/E ACCEPT.

11. If you selected SSL Support as an additional feature to install, the following jobs are also generated. Submit and run them in sequence as for the previous jobs.

    - I21ALLME
    - I22INIME
    - I23RECME
    - I26APPME
    - I27ACCME

    Notes:

    - If you installed and set up your regions without SSL support, and then later install SSL support, add the installed *dsnpref*.NMC1.CC2DPLD data set to the region's STEPLIB or in the system LNKLST.
    - You must have SMP/E V3R5.0 to implement SSL.

12. Press F3.

    You are returned to the Primary Menu panel.

Maintenance

Maintenance includes program temporary fixes (PTFs) that supersede all authorized program analysis reports (APARs) that were created up to that time. Details of the superseded APARs are available as comments within the PTFs.

Product Maintenance

Important! The *dsnpref*.NMC1.CC2DLINK data set must be in your system LNKLST before you start maintenance. You can also create a STEPLIB to the data set name (DSN) in your TSOPROC (that is, allocate it to ISPLLIB). If you installed the product using CA MSM, you must use CA MSM to apply maintenance.

Product maintenance is provided as system modification program (SMP) fixes. The fixes consist of PTFs applied using the IBM System Modification Program Extended (SMP/E) tool.

Note: If an installed SMP fix contains maintenance for the VSAM data sets, you must update those data sets for each region you have set up.

RAMDB maintenance is provided as SMP/E PTFs. However, this is only the delivery and recordkeeping methodology. You must apply the maintenance using $RMDB04D.

Apply Maintenance

This section describes how to apply individual SMP fixes using the Install Utility.

Note: Individual SMP fixes are only available from the CA Technical Support site (see page 4).

When you receive SMP fixes, unload them into one of the following:

- A sequential data set
- A member of a partitioned data set

Multiple SMP fixes can be appended into a single data set or member.

Follow these steps:

1. Access the ISPF/PDF Primary Menu.
2. Select the COMMAND option.

   The ISPF Command Shell panel appears.
3. At the command prompt, enter the following command:

   `EXEC '`*`dsnpref`*`.NMC1.CC2DJCL(INSTALL)'`
4. At the Install Utility title panel, press Enter.

   The Install Utility Primary Menu panel appears.
5. At the Install Utility Primary Menu panel, enter **8** (Maintain Products).

   The MAINTENANCE Primary Menu panel appears.
6. Enter **3** (Apply individual SMP fixes from a DASD data set).

   The MAINTENANCE DASD Fixes Dataset Name panel appears.
7. Enter the data set name that contains the SMP fixes to be applied and press Enter.
8. Complete the fields on the following MAINTENANCE panels as they open.
9. At the MAINTENANCE JCL Library Creation panel, review your fix JCL library.

   The default library name is:

   `dsnpref``.NMC1.FIX.DASD.JCL`

   dsnpref

   The same data set prefix you used for the *dsnpref*.NMC1.CC2DJCL data set.

   Note: Each time you apply maintenance, use a new output data set. A new data set ensures that the only jobs in your maintenance JCL library are the jobs required for the maintenance you are installing now. To use a new data set:

   - Delete the library by issuing a TSO DELETE command and the library name, at the command prompt.
   - Specify a new data set name.
10. Press Enter to proceed with the generation of the maintenance JCL.

    When the JCL generation is complete, a list of generated jobs and a description of what each member does appears.
11. Note the name of the data set into which the JCL was generated.

12. Submit and run the following jobs in sequence. Do not proceed with any job until the previous job has completed successfully.

    Each job must complete with return code 0 unless otherwise indicated.

    Important! If there is maintenance for additional features, the SMP/E apply job must be run on a system that has the z/OS UNIX file system used during installation and mounted for read/write access.

    F11RCSMP

    SMP/E receives maintenance and lists existing HOLDDATA and SOURCEIDs that are already applied. If a job step returns condition code 04, there is no HOLDDATA present.

    Review the information. For any held APARs that you want to apply, add the correct BYPASS HOLD*x* operands to the corresponding APPLY control statement for those APARs. Add the operands by manually editing the F12APSMP job that contains the SMP control statements.

    Note: For information about the BYPASS HOLD*x* operands, see IBM's *SMP/E Commands* guide.

    F12APSMP

    SMP/E applies maintenance.

13. Press F3.

    The Install Utility Primary Menu panel appears.

    If the fix contains maintenance for VSAM data sets (as indicated by HOLDDATA), continue with the procedure to update the VSAM data sets for the regions you have set up. Otherwise, you have finished applying the fix.

HOLDDATA

When you apply maintenance, you typically encounter SMP/E HOLDDATA. We use HOLDDATA to notify your SMP/E system of SYSMODs that have errors or special conditions. We support system and external HOLDDATA.

System HOLDDATA

System HOLDDATA indicates data that is an in-stream part of the SYSMOD, informing you of special conditions. The following reasons are used with SYSTEM HOLDDATA for CA NetMaster FTM:

ACTION

Indicates that you must perform special processing before or after you apply this SYSMOD.

AO

Affects automated operations. It changes either the message identifier or the displacement of a field inside the message.

DB2BIND

Indicates that DBRMs have changed and packages need to be rebound.

DDDEF

Indicates that data sets and DDDEFs are being added or modified.

DELETE

Deletes the SYSMOD load module. You cannot reverse this type of SYSMOD with the SMP/E RESTORE command.

DEP

Indicates a dependency for this SYSMOD that you must externally verify.

DOC

Indicates a documentation change with this SYSMOD.

DYNACT

Describes the steps to dynamically activate this fix without performing an IPL.

ENH

Introduces a small programming enhancement. The hold contains the instructions to implement the enhancement. If no action is needed to implement the enhancement, give a summary of the enhancement.

EXIT

Indicates that changes delivered by this SYSMOD require reassembly of user exits.

EXRF

Indicates that the SYSMOD must be installed in both the Active and Alternate Extended Recovery Facility Systems.

MULTSYS

Apply this SYSMOD to multiple systems for either pre-conditioning, coexistence, or exploitation.

RESTART

Indicates that after applying this SYSMOD, the site must perform a special restart as opposed to a routine restart.

SYSMOD

Indicates that some or all of the elements delivered by this SYSMOD are to be downloaded to a workstation.

Code a bypass operand on your APPLY command to install SYSMODs that have internal holds. Code the bypass operand only after you have performed the required action, or if you are performing the action after the APPLY, if that is appropriate.

External HOLDDATA

External HOLDDATA is not part of the PTF. It resides in a separate file. It is commonly used for SYSMODs that have been distributed and later are discovered to cause problems.

Download the external HOLDDATA from CA Support to a DASD file, and allocate the file to the SMPHOLD DD statement. To take care of the external HOLDDATA, receive it into your SMP/E environment. SMP/E receives the HOLDDATA from CA-supplied jobs.

If a SYSMOD has an unresolved hold error, SMP/E does not install it unless you add a bypass to your APPLY command. You can bypass an error hold in situations that are not applicable to you. Error holds that are not applicable to you can include a problem that happens only with a hardware device that you do not have or in a product feature that you do not use.

When CA publishes a SYSMOD that resolves the hold, the resolving SYSMOD supersedes the hold error. This action lets you apply the original SYSMOD in conjunction with the fixing SYSMOD.

A special HOLDDATA class called ERREL exists. We have determined that the problem fixed by the SYSMOD is more important than the one that it causes. We recommend that you apply these SYSMODs.

The only manual task is running a REPORT ERRSYSMODS. This report identifies the following:

- Any held SYSMODs already applied to your system.
- Any resolving SYSMODs that are in RECEIVE status.

SMP/E identifies the SYSMOD to apply to correct the situation.

Update VSAM Data Sets

If an installed SMP fix contains maintenance for the VSAM data sets, maintenance option V of the Install Utility becomes available. To complete maintenance, select the option to update the data sets for the regions you have set up.

Follow these steps:

1. Access the ISPF/PDF Primary Menu, and select the COMMAND option.

   The ISPF Command Shell panel appears.

2. At the command prompt, execute the following command:

   `EXEC 'dsnpref.NMC1.CC2DJCL(INSTALL)'`

   The Install Utility title panel appears.

3. Press Enter.

   The Install Utility Primary Menu panel appears.

4. Enter **8** (Maintain Products).

   The MAINTENANCE Primary Menu panel appears.

5. Enter **V** (Update MODS, PANELS, OSCNTL and NETINFO data sets with installed maintenance).

   The MAINTENANCE Shared Region Data Sets panel appears.

6. Review the information, and press Enter.

7. At the MAINTENANCE JOBCARD Information panel, specify your JOBCARD details and press Enter.

8. At the MAINTENANCE JCL Library Creation panel, review your fix JCL library. The default library name is:

   dsnpref.NMC1.FIX.VSAMUPD.JCL

   dsnpref

   The same data set prefix used for the *dsnpref*.NMC1.CC2DJCL data set.

   Note: Each time you apply maintenance, use a new output data set. The new data set helps ensure that the only jobs in your maintenance JCL library are the jobs required for the maintenance you are installing. To use a new data set, take *one* of the following actions:

   - Delete the library by issuing a TSO DELETE command and the library name, at the command prompt.
   - Specify a new data set name.

9. Press Enter to proceed with the generation of the maintenance JCL.

10. Submit and run the job F21RFRSH to update the VSAM data sets.

    Note: The utility also generates the following jobs: F22DUMP and F23REST. If a shared DASD is not available, the jobs help you deploy those updates to a target system. The F22DUMP job creates backup data set that include the updated VSAM data sets, which you deploy to the target system. This backup data set is *dsnpref*.DFDSS.SHARED. The F23REST job, when submitted on the target system, restores the updated VSAM data sets from the backup data sets.

11. Press F3.

    The Install Utility Primary Menu panel appears.

12. Press F4 to exit the Install Utility Primary Menu panel and return to the ISPF Command Shell panel, or continue with the other options.

Individual RAMDB Maintenance

Note: Individual RAMDB maintenance is also available from the CA Technical Support site (see page 4).

This section describes how to apply maintenance to the RAMDB and details the command syntax of the $RMDB04D maintenance utility. You apply this maintenance in an active region.

Important! The RAMDB data set must not be updated with individual replacement records using the IDCAMS REPRO command.

You use $RMDB04D OPT=APPLY (see page 66) to apply maintenance. When applying maintenance, you can use the DIFF operand to display details of what differences are being added, replaced, or deleted by the maintenance.

Create Backup RAMDB

As a safety precaution, create a backup of your RAMDB (herein referred to RAMDBd) before applying maintenance.

Follow these steps:

1. Allocate RAMDBd in the same way that RAMDB was allocated.

   The cluster definition is in *dsnpref*.NMC1.*rname*.JCL(S01LCALC).

2. Stop the product region.

3. Copy the data from RAMDB to RAMDBd using IDCAMS REPRO command.

   Note: For information, see the example in *dsnpref*.NMC1.*rname*.JCL(S04LDVSM).

4. Restart the product region.

Apply Maintenance to RAMDB

You can apply maintenance directly to your RAMDB. The maintenance can then propagate to all connected regions, if any. If necessary, you can restore the maintenance using your RAMDBd as input (if the maintenance has not yet been applied to RAMDBd).

Follow these steps:

1. Log on to your product region and enter CMD.

   The command entry panel appears.

2. Apply-check the RAMDB fix by entering the following command:

   ```
   $RMDB04D OPT=APPLY FIX=fix-name CHECK=YES
   ```

   fix_name

   Is RAM@UPDT for published solutions or TZ*ddddd* for test fixes.

   When the APPLY CHECK finishes, a report appears. The report shows whether an APPLY of the fix will be successful, and also exactly what changes will result from the APPLY.

   Note: Perform this step for the following reasons:

   - To see what happens if a fix is applied to a RAMDB
   - To see whether a fix has been applied to a RAMDB

3. Apply the RAMDB fix by entering the following command:

   ```
   $RMDB04D OPT=APPLY FIX=fix_name
   ```

Note: If a RAMDB fix does not apply correctly or if you want to restore a fix, restore the RAMDB maintenance (see page 66).

Restore RAMDB Maintenance

Note: This step is optional.

The RESTORE option can be used to remove an applied fix from the RAMDB by using RAMDBd as input. The fix is effectively reversed, that is, any added objects are deleted and any deleted or replaced objects are copied from RAMDBd back to the RAMDB.

To restore the fix, enter the following command:

```
$RMDB04D OPT=RESTORE FIX=fix_name DDBDSN=?RAMDBd-dataset-name DDB=?RAMDBd
```

?RAMDBd

Specifies the ddname for the backup RAMDB.

?RAMDBd-dataset-name

Specifies the full data set name of the backup RAMDB.

RAMDB Maintenance Utility Syntax

This section describes the syntax of the RAMDB maintenance utility.

$RMDB04D OPT=APPLY

Use this procedure to apply a fix to a RAMDB or check a fix against a RAMDB.

This procedure has the following format:

```
$RMDB04D OPT=APPLY
          FIX=fix-number
         [DDNAME=ddname | DATASET=dataset-name]
         [CHECK={NO | YES]
         [DIFF={YES | NO}]
         [FORCE={NO | YES}]
         [CONFIRM={YES | NO}]
         [DB=file-id [DBDSN=db-dataset-name]]
```

OPT=APPLY

Specifies that a fix is being applied to a RAMDB.

FIX=*fix-number*

Specifies the fix number. This number is used as the member name of the input partitioned data set.

[DDNAME=*ddname* | DATASET=*dataset-name*]

Specifies the DDNAME parameter if the data set containing the fix is already allocated to the system, or the DATASET parameter if the data set containing the fix is to be allocated and freed after the fix has been retrieved. These two parameters are mutually exclusive and, therefore, you cannot specify both of them. If neither is specified, the COMMANDS DD concatenation in the region is used.

[CHECK={NO | YES}]

Specifies whether the fix is checked. If you specify YES, the fix is checked only for compatibility with the database and is not applied to the database. The check phase is always performed regardless of the value specified. However, this parameter determines whether the check phase is the only phase to be performed.

[DIFF={YES | NO}]

Specifies whether differences are displayed. If you specify YES (the default), the differences between the target objects and the new objects contained in the fix are displayed for each updated object. This applies to any SET (update) and CREATE (add) actions in the fix member where the target objects already exist.

[FORCE={NO | YES}]

Specifies whether the fix is applied regardless of the success or failure of the check phase. However, if CHECK=YES is specified, the FORCE parameter has no effect.

[CONFIRM={YES | NO}]

Specifies whether the fix is retrieved and the syntax checked before being presented as a panel for browsing. The panel enables you to view the fix and confirm the application. After you confirm, the fix is applied, and the message log displays another panel for browsing. If you specify NO, the fix is applied without presenting any confirmation panel and the message log is written to the terminal rather than being displayed as a panel.

The message log is always written to the activity log regardless of the options specified.

[DB=*file-id* [DBDSN=db-*dataset-name*]]

Specifies the DB parameter to apply the fix to a database other than the currently allocated RAMDB. This parameter specifies the file ID of the target database. If you also specify the DBDSN parameter, the specified data set is allocated a ddname that is the same as the specified file ID, and is opened and started. The database is not freed after the fix is applied. If the database is already allocated, the specified data set name is verified as allocated to the ddname (that is the same as the specified file ID) and opened to the same file ID.

$RMDB04D OPT=RESTORE

Use this procedure to reverse the effect of a fix.

This procedure has the following format:

```
$RMDB04D OPT=RESTORE
         FIX=fix-number
        [DDNAME=ddname | DATASET=dataset-name]
        [CONFIRM={YES | NO}]
        [TDB=target-file-id [TDBDSN=target-dataset-name]]
        [DDB=source-file-id [DDBDSN=source-dataset-name]]
```

OPT=RESTORE

Specifies that a fix, which has been applied to the target RAMDB, is being reversed.

FIX= *fix-number*

Specifies the fix number to back out of the RAMDB. This number is used as the member name of the fix data set and is verified against the contents of the member for the correct fix.

[DDNAME=*ddname* | DATASET=*dataset-name*]

Specifies the DDNAME parameter if the data set containing the fix is already allocated to the system, or the DATASET parameter if the data set containing the fix is to be allocated and freed after the fix has been retrieved. These two parameters are mutually exclusive and, therefore, you cannot specify both of them. If neither is specified, the COMMANDS DD concatenation in the region is used.

[CONFIRM={YES | NO}]

Specifies whether the fix is retrieved and the syntax checked before being presented as a panel for browsing. The panel lets you view the fix and confirm the restoration process. After you confirm, the fix is removed and the original data restored. The message log is presented as another panel for browsing. If you specify NO, the restoration process proceeds without presenting any confirmation panel, and the message log is written to the terminal rather than being displayed as a panel.

The message log is always written to the activity log regardless of the options specified.

[TDB=*target-file-id* [TDBDSN=*target-dataset-name*]]

Reverses a fix in a database other than the currently allocated RAMDB. This parameter specifies the file ID of the target database. If you also specify the TDBDSN parameter, the specified data set is allocated a ddname that is the same as the specified file ID, and is opened and started. The database is not freed after the restoration process. If the database is already allocated, the specified data set name is verified as allocated to the ddname (that is the same as the specified file ID) and opened to the same file ID.

DDB=*source-file-id* [DDBDSN=*source-dataset-name*]

Specifies the file ID of the source database.

Note: Restoration requires the specification of the distribution (source) database through the DDB parameter.

The source database must be a copy of the original database. If you also specify the DDBDSN parameter, the specified data set is allocated a ddname that is the same as the specified file ID, and is opened and started. The database is not freed after the restoration process. If the database is already allocated, the specified data set name is verified as allocated to the ddname (that is the same as the specified file ID) and opened to the same file ID.

Chapter 6: Configuring Your Product

The topics in this section describe the manual tasks you perform if you are not configuring your product using CA MSM.

You use the Install Utility to set up the regions required by this product.

Important! You must put the *dsnpref*.NMC1.CC2DLINK data set in your system LNKLST before you start setting up regions. You can also create a STEPLIB to the data set name (DSN) in your TSOPROC (that is, allocate it to ISPLLIB).

This section contains the following topics:

How Region Setup Works

You can have more than one region on a system. Each region runs as a started task.

The Install Utility uses the site-specific information you collected during preinstallation (see page 163) to generate the jobs that build the regions. If you need additional regions, you can reuse the Install Utility to create them.

Important! After you have run a setup job, you cannot alter the results using the setup software. You can use the setup software to create a region, or you can manually customize the JCL for the existing region.

Region Contents

Your product is comprised of the following regions:

SOLVE Subsystem Interface (SOLVE SSI) Region

Provides communication between the product region and other software on a system. One SOLVE SSI can serve multiple product regions.

Product Region

Specifies where you log in and use your product. You can have more than one product region on a system.

NMFTP Monitor Region

Specifies that the NMFTP Monitor provides communication between the product region and the SMFAPI on a system. One NMFTP Monitor can serve multiple product regions.

SOLVE SSI as Common Component

The SOLVE SSI is a common component for multiple CA product families and can serve multiple product regions on a system. The following methods are available:

- One shared SSI to serve all product families.
- A separate SSI for each product family (CA Mainframe Network Management, CA SOLVE:Operations Automation, and CA SOLVE:Access).
- A mix of the first two methods, for example, CA SOLVE:Access has its own SSI and CA Mainframe Network Management and CA SOLVE:Operations Automation share an SSI.

Note: If you have already installed another Mainframe Network Management product and set up a SOLVE SSI, you do not need to set up another SOLVE SSI. You must, however, ensure that the SOLVE SSI parameters suit your product and site requirements.

Specify the SOLVE SSI Region

Use this procedure to provide communication between the product region and other software on a system.

Follow these steps:

1. At the ISPF/PDF TSO Command Shell prompt, execute the following command:

   `EXEC 'dsnpref.NMC1.CC2DJCL(INSTALL)'`

   The Install Utility panel appears.

   Note: On each of the Install Utility panels, you can use the following keys:

   - Enter to proceed to the next panel
   - F1 to display the online help
   - F3 to return to the previous panel
   - F4 to exit and return to the main menu

2. Press Enter.

   The Install Utility Primary Menu panel appears.

3. (Optional) If you have installed the product using CA MSM, perform the following steps:

   a. Enter **1**.

      The Software Delivery Method panel appears.

   b. Complete the panel:

      - Enter **S** next to CA MSM.
      - Specify the name of the CSI data set used during product installation in the SMP/E CSI Used field.

   c. Press Enter.

4. Enter **4**.

   A panel appears listing several approaches to implement your SOLVE SSI environment.

   Note: For more information, press F1 (Help).

5. Press Enter.

   The SETUP SOLVE SSI Primary Menu panel appears.

6. Enter **1** (Add a Region).

   The SETUP Specify SOLVE SSI Name panel appears.

7. Enter the name (*ssiname*) and description of the SOLVE Subsystem Interface region you are setting up.

   The setup software uses the name to generate the started task JCL. For example, if the name is SOLVESSI, your started task JCL is named SOLVESSI.

8. Complete each of the SETUP panels as they appear. Accept the default values, or specify site-specific values.

   Note: Install Utility lets you configure a SOLVE SSI to work with other products, enabling the SSI to be shared.

   The Install Utility generates a series of setup jobs into the *dsnpref*.NMC1.*ssiname*.JCL library.

9. Record the name of the data set into which the JCL was generated in your post-installation worksheet (see page 178).

   Note: If you are setting up a new SSI, continue with these steps. Otherwise, skip the remaining steps in this procedure, verify that the required SSI parameters are present in your existing shared SSI, and update them as necessary.

10. Submit and run the following:

    S01SSIAL

    Allocates the SOLVE SSI data sets if the value in the Enable the Packet Analyzer field on the SETUP Region Parameters panel is set to YES.

    S02SSILD

    Copies the PDS members to *dsnpref*.NMC1.SSIPARM.

    S03MIGRT

    Copies data from earlier releases.

    This job is only generated if the value in the Enable the Packet Analyzer field on the SETUP Region Parameters panel is set to YES.

11. Press F3.

    The Install Utility Primary Menu panel appears.

Specify the Product Region

The Install Utility lets you set up a region with the products you installed. If you need additional product regions, you can reuse the Install Utility to create them.

Follow these steps:

1. At the ISPF/PDF TSO Command Shell prompt, execute the following command:

   `EXEC 'dsnpref.NMC1.CC2DJCL(INSTALL)'`

   The Install Utility panel appears.

   Note: On each of the Install Utility panels, you can use the following keys:

   - Enter to proceed to the next panel
   - F1 to display online help
   - F3 to return to the previous panel
   - F4 to exit and return to the main menu

2. Press Enter.

   The Install Utility Primary Menu panel appears.

3. Enter **5** (Setup a NetMaster/SOLVE Product Region).

   The SETUP Product Region Primary Menu panel appears.

4. Enter **1** (Add a Region).

   The SETUP Specify Product Region Name panel appears.

   Note: If you want to add this product to an existing region, enter **4** (Add Products and Additional Features to a Region) and select the appropriate region.

5. Enter the name (*rname*) and description of the region you are setting up.

   The Install Utility uses the name that you entered to generate local data set names and the started task JCL. For example, if you enter REGION01 as the region name, your started task JCL is REGION01 and a local region file, such as the Virtual File System (VFS), is *dsnpref*.REGION01.VFS.

   The SETUP Product Selection panel appears.

6. Enter **S** next to the products you are licensed to include in the region.

7. Complete each of the SETUP panels as they open. Accept the default values, or specify site-specific values.

   Note: For information about the fields, press F1 (Help).

   Note: On the SETUP Region Information panel, ensure that the value of the Subsystem Interface Identifier matches the value of the SOLVE SSI you intend to use.

   The setup software generates a series of setup jobs in the *dsnpref*.NMC1.*rname*.JCL library.

8. Record the name of the data set into which the JCL was generated in your post-installation worksheet (see page 178).

9. Submit and run the following jobs in sequence. Do not proceed with any job until the previous job has completed successfully.

   S01LCALC

   Allocates the region-specific (local) data sets. If you are upgrading and have increased the size of a particular file, modify the JCL to increase the space allocation as required.

   S02SHALC

   Allocates the shared run-time data sets.

   S03LDVIP

   Populates the MODS, PANELS, and OSCNTL files.

   S04LDVSM

   Populates the other VSAM files.

   S05LDPDS

   Copies some PDS members to *dsnpref.rname*.TESTEXEC or *dsnpref.*PARMLIB for use by the product region. If this product is being added to an existing region, the RUNSYSIN and IIAPARMS are overwritten.

   When the region starts for the first time, the values in IIAPARMS set up certain parameter group values. On subsequent startups, the region uses the parameter group values. The IIAPARMS values are then only used if INIRESET=YES is specified or if the VFS data set is reset.

   Note: The member names for IIAPARMS and SXPARMS include the domain ID, so they appear as IIA*dmid* and SXP*dmid*.

   S06MIGRT

   Copies site-specific VSAM data from an earlier release.

   Note: The utility also generates the following jobs for deploying the configuration files for your region to a target system when a shared DASD is not available: S10DUMP and S11REST. The S10DUMP job creates a backup data set that includes the configuration files for the region, which you deploy to the target system. The S11REST job, when submitted on the target system, restores the configuration files from the backup data set. In addition to deploying the configuration files, also deploy the target libraries. CA MSM can facilitate this deployment.

   Note: After your product is installed, it monitors the size of your VSAM data sets. For more information about tuning VSAM data sets, see the *Reference Guide*.

10. Press F3.

    The Install Utility Primary Menu panel appears.

Specify the NMFTP Monitor Region

Note: The NMFTP Monitor is only required if you need to monitor FTP events using an IBM TCP/IP stack.

One NMFTP Monitor (NMFTPMON) can serve multiple product regions on a system.

To specify an NMFTP Monitor region

1. At the Install Utility Primary Menu panel, enter **6**.

   The SETUP NMFTP Monitor Primary Menu panel appears.

2. Enter 1 (Add a Region).

   The SETUP Specify NMFTP Monitor Name panel appears.

3. Enter the name (*nmftname*) and description of the NMFTP Monitor region you are setting up. The initial value is NMFTPMON.

   The setup software uses the name to generate the started task JCL. For example, if the name is NMFTPSSI, your started task JCL will be called NMFTPSSI.

4. Complete each of the SETUP panels as they appear. You can accept the default values or specify site-specific values. For information about the fields, press F1 (Help).

5. The setup software generates a series of setup jobs into the *dsnpref.NMC1.nmftname*.JCL library.

6. Record the name of the data set into which the JCL was generated in your Installation Values worksheet (see Post-Implementation Record Keeping on page 82).

7. Submit and run the following:

   - S01LCALC
   - S02LDPDS

   The PDS members are copied to *dsnpref*.NMC1.SSIPARM.

8. Press F3.

   The Install Utility Primary Menu panel appears.

Note: If the required NMFTP Monitor address space is not available, no NMFT normalized File Transfer Events are generated.

Chapter 7: Creating VTAM Definitions and Tables

The topics in this section describe the manual tasks you perform if you are not configuring your product using CA MSM.

You create VTAM definitions and tables to set up your VTAM major node.

This section contains the following topics:

Create VTAM Definitions and Tables

The Create VTAM Definitions and Tables facility builds the VTAM major node, which contains application definition statements for all ACBs required by your product regions. Perform this task initially when all product regions have been set up. If changes are made to any regions or if additional regions are added later, perform the task again.

Note: You use the major node that you create in this procedure to activate your VTAM applications (see page 128).

Follow these steps:

1. At the ISPF/PDF TSO Command Shell prompt, execute the following command:

   `EXEC 'dsnpref.NMC1.CC2DJCL(INSTALL)'`

   The Install Utility Primary Menu panel appears.

2. Enter **7** (Create VTAM Definitions and Tables).

   The VTAM Primary Menu panel appears.

3. Enter **1** (Create VTAM Definitions and Tables).

   The VTAM Data Sets panel appears.

4. Enter the VTAM major node name (*vtamname*) and data set names of the requested IBM data sets.

   The VTAM NetMaster/SOLVE ACBs panel appears and displays the prefix for External Interface Package (EIP) ACBs and the names of all product regions and the ACBs associated with them.

   Note: If >>> appears, you can use F10 (right) to display all ACBs.

5. Enter the prefix for EIP ACBs.

6. Complete each of the remaining panels as they appear. Accept the default values, or specify site-specific values.

   Note: For information about the fields, press F1 (Help).

   The Install Utility generates a series of jobs in the *dsnpref*.NMC1.VTAM.JCL library.

7. Record the name of the data set into which the JCL was generated in your post-installation worksheet (see page 178).

8. Submit and run the following jobs in sequence:

   V01LDVTM

   Copies major node into SYS1.VTAMLST.

   V02ASMOD

   Assembles VTAM MODE table.

   This job is required only if you want to provide users with access to external applications. Your product uses VTAM mode tables that are assembled and linked into a load library available to VTAM, and the tables lets users access external applications.

   Each job should return condition code 0 unless otherwise indicated.

9. Press F3.

   The Install Utility Primary Menu panel appears.

10. Enter **X**.

    The Install Utility closes.

Note: Press F1 (Help) for information about any panel.

Chapter 8: Preparing the IBM Communications Server

These topics describe how to prepare IBM Communications Server to communicate with this product.

If you do not use IBM Communications Server, skip to Preparing CA TCPaccess CS (see page 107).

Define UNIX Authorization for Your Started Task User IDs

The product region requires access to sockets interfaces and therefore requires UNIX System Services authorization provided by an OMVS segment security definition.

For the UNIX functions, the SOLVE SSI region requires UNIX System Services authorization provided by an OMVS segment security definition.

Set UNIX System Services authorization (see page 181) for the following:

- The product region's started task user ID
- The SOLVE SSI region's started task user ID
- NMFTP Monitor region (if defined)

User Functionality Authorization

Note: If you are using CA ACF2 for z/OS, you do not need to perform this task unless it is set up to protect operator commands.

Your product uses z/OS operator VARY commands to drop connections. The user ID associated with your product region must be authorized by your security system to issue these commands.

The OPERCMDS resource to be accessed with UPDATE access level is MVS.VARY.TCPIP.DROP OPERCMDS.

Authorize individual users to the OPERCMDS resources if you:

- Plan to configure your system to use SAF user security
- Are using a partial security exit that returns a SAF UTOKEN, for example NMSAFPX

Example: Authorization in a CA ACF2 System that Protects Operator Commands

```
$KEY(MVS) TYPE(OPR)
VARY.TCPIP.- UID(uid_string) SERVICE(UPDATE) ALLOW
```

Example: Authorization in a CA Top Secret System

```
TSS PER(XXXXXX) OPERCMD(MVS.VARY.) ACCESS(UPDATE)
```

Example: Authorization in a RACF System

```
PE MVS.VARY.TCPIP.* CLASS(OPERCMDS) ID(uuuuuuu) ACCESS(UPDATE)
```

Set Up the SNMP Agent

Note: Do not perform this task if OSNMPD is already configured.

To set up the SNMP agent

1. Configure the SNMP agent (OSNMPD) by following the instructions in the IBM *Communications Server IP Configuration Guide*.
2. Locate the PW.SRC data set in the OSNMPD started task JCL. This data set can be:
   - A z/OS data set, for example:

     ```
     //SYSPWSRC DD DISP=SHR,DSN=TCPIP.DATA(PWSRC)
     ```

   - A z/OS UNIX file, for example:

     ```
     /etc/pw.src
     ```

3. In the PW.SRC data set, configure a community name for use by the local host IP address.

   Important! Community names are case sensitive. The default community name is public in lowercase.

   For example, with multiple IP addresses, if the Communications Server has the IP addresses 192.168.8.1 and 192.168.1.2, your PW.SRC data set could contain something like the following:

   ```
   public 192.168.0.0 255.255.0.0
   ```

   With a single IP address, if Communications Server has the IP address 192.168.0.1, your PW.SRC data set could contain something like the following:

   ```
   public 192.168.0.1 255.255.255.255
   ```

   It is not necessary to activate the SNMP Query Engine (SNMPQE) because the functions it performs are done internally by your product.

4. Locate the PROFILE data set.
5. Set up the TCP/IP subagent in the PROFILE data set by following the instructions in the IBM *Communications Server IP Configuration Guide*, for example:

   ```
   SACONFIG COMMUNITY public AGENT 161 ENABLED
   ```

6. Activate the SNMP agent (OSNMPD) by following the instructions in the *IBM Communications Server IP Configuration Guide*.

Generate SMF Records for FTP Event Flow

Note: Perform this task only if you want to monitor FTP events.

The Communications Server must be set up to generate the SMF records required for FTP events.

The SMF records are intercepted by the NMFTP Monitor region and are used by the product region to enable the following:

- File Transfer events monitoring
- Event history reporting

To ensure SMF records are generated

1. Add the following line to the PROFILE.TCPIP configuration member to enable the SMF API:

   ```
   NETMONITOR SMFSERVICE
   ```

2. Restart the TCP/IP started task.

Note: Alternatively, you can issue this change in an OBEYFILE.

Generate FTP Post-Processing Transfer Failures Event Flow

Note: Perform this task only if you want to monitor FTP events.

You can use this procedure to monitor all FTP failures.

To generate transfer failures *without* existing user exit

1. Receive and apply the *dsnpref*.NMC1.CC2DSAMP(FTPOSTPR) SMP/E USERMOD.

   The FTPOSTPR exit is created.

2. Do *one* of the following:

   - APF-authorize the *dsnpref*.NMC1.CC2DLOAD library, and include it as a STEPLIB for your FTP server started task (typically named FTPD).
   - Copy FTPOSTPR from the *dsnpref*.NMC1.CC2DLOAD library into an existing APF-authorized library that also is included as a STEPLIB to your FTP server job.
   - Copy to a link library known to the linklist.

3. If you are using RACF and program control is active, use the following commands to add FTPOSTPR to program control:

   ```
   RDEFINE PROGRAM FTPOSTPR ADDMEM('library'//NOPADCHK) UACC(READ)
   SETROPTS WHEN(PROGRAM) REFRESH
   ```

   library

   Identifies the library that contains FTPOSTPR.

To generate transfer failures *with* existing user exit

1. Modify your existing FTP post-transfer processing user exit (FTPOSTPR) by inserting the following code fragment immediately before exiting:

```
*------------(NetMaster For File Transfer Management )----------------
*
*       .-------------------------------------------------------------.
*       | Call the CA NMFT FTP Post-Transfer Processing module        |
*       '-------------------------------------------------------------'
         L     R15,=V(NM000FPX)
         O     R15,=X'80000000'
         BASSM R14,R15                 Call NM000FPX
         L     R14,=A(NEXT0000+X'80000000')
         BSM   0,R14                   Ensure in 31-BIT if required
         SPACE 2
NEXT0000 DS    0H
```

   These lines are added in the module entry section, and register 1 must point to the parameter list passed to FTPOSTPR.

2. Modify your existing FTP post-transfer processing user exit (FTPOSTPR) link-edit deck by inserting the following:

```
//AC2DLOAD DD DISP=SHR,DSN=dsnpref.NMC1.AC2DLOAD
//SYSLIN   DD    *
   …
   INCLUDE AC2DLOAD (NM000FPX)
   INCLUDE AC2DLOAD (NM000Y51)
   ORDER             NM000FPX
   ORDER             FPXDATA
   ORDER             NM000Y51
   ENTRY    FTPOSTPR
   MODE     AMODE(31)
   MODE     RMODE(ANY)
   NAME     FTPOSTPR(R)
```

3. Submit the modified job to assemble and link edit the exit.

4. Ensure that the user exit load module is in a cataloged data set and placed in an APF authorized library that the FTP server accesses using STEPLIB, linklist, or LPA.

Note: The existing FTP Control Customizer parameter group option Enable FTP Event Receiver (for non-TCPaccess FTP server), also controls the FTP Post Processing User Exit event delivery.

NMFTP Monitor Access to NMI API SMF Records

Note: Perform this task only if you want to monitor FTP events.

You can use one of the following methods to grant the NMFTP Monitor region access to Network Management Interface (NMI) API SMF records:

- SERVAUTH
- Access to BPX.SUPERUSER

SERVAUTH

If you want to ensure the highest level of security, define the SERVAUTH profile name EZB.NETMGMT.*sysname*.*tcpname*.SYSTCPSM and grant the NMFTP Monitor user ID READ access to this profile name.

Important! After the SERVAUTH facility has been defined to your security system, TCP/IP resource protection will be enabled. This affects the ability of users to access TCP/IP resources other than just SYSTCPSM. For example, it may restrict the ability to open sockets, bind to non-ephemeral ports, use Netstat, and use certain network resources. Before using this method, see IBM's *Communications Server IP Configuration Guide* for more information about TCP/IP resource protection.

Important! If your security setup does not distinguish between a resource profile not defined and a user not permitted to that resource, you may need to define profiles for resources other than just SYSTCPSM whenever the SERVAUTH class is active. See IBM's *Communications Server IP Configuration Guide* for more information.

Note: We recommend that you use this method.

Example: CA ACF2 System

```
SET RESOURCE(SERVAUTH)
COMPILE *
$KEY(EZB) TYPE(SERVAUTH)
NETMGMT.SYSA.TCPIPA.SYSTCPSM UID(USER1) SERVICE(READ) ALLOW
STORE
```

Note: Instead of using TSO, you can use the ACFBATCH utility in JCL. If you do this, omit the [ACF] and [END] lines.

Example: CA Top Secret System

```
TSS ADD SERVAUTH(EZB.NETMGMT.SYSA.TCPIPA.SYSTCPSM)
TSS PER(nmuser) SERVAUTH(EZB.NETMGMT.SYSA.TCPIPA.SYSTCPSM)
  ACCESS(READ)
```

Example: RACF System

```
RDEFINE SERVAUTH EZB.NETMGMT.SYSA.TCPIPA.SYSTCPSM UACC(NONE)
SETR RACLIST(SERVAUTH) REFRESH
PE EZB.NETMGMT.SYSA.TCPIPA.SYSTCPSM CLASS(SERVAUTH) ID(nmuser)
  ACCESS(READ)
```

BPX.SUPERUSER

If you are less concerned with security, grant the NMFTP Monitor user ID READ access to the BPX.SUPERUSER facility.

Example: CA ACF2 System

```
SET RESOURCE(FAC)
COMPILE *
$KEY(BPX) TYPE(FAC)
SUPERUSER UID(USER1) SERVICE(READ) ALLOW
STORE
```

Note: Instead of using TSO, you can use the ACFBATCH utility in JCL. If you do this, omit the [ACF] and [END] lines.

Example: CA Top Secret System

```
TSS PER(nmuser) IBMFAC(BPX.SUPERUSER) ACCESS(READ)
```

Example: RACF System

```
PE BPX.SUPERUSER CLASS(FACILITY) ID(nmuser) ACCESS(READ)
```

Chapter 9: Preparing CA TCPaccess CS

This chapter describes how to prepare CA TCPaccess CS to communicate with your product.

If you do not use CA TCPaccess CS, skip to the next chapter.

This section contains the following topics:

Generate SMF Records for FTP Event Flow

You must implement the software for the product region to generate SMF Records for the FTP event flow.

To generate SMF Records for the FTP event flow

1. Check the IJTCFG*xx* configuration member to ensure that all of the subtypes that you require will be generated.

   The SMF TYPE parameter identifies whether or not SMF records are created.

   Note: If your SMF statement does not specify SUBTYPE or has SUBTYPE(ALL), you can skip this step.

   The SMF statement includes a SUBTYPE parameter. This allows specific subtypes to be selected or suppressed. Do the following:

   - If the parameter is set to ALL, leave it as it is.
   - If the parameter is set to NONE, set it to ALL or a list of the subtypes that you require.
   - If the parameter is set to a list of subtypes, set it to ALL or a list of the subtypes that you require.

   This product uses SUBTYPE 20, FTP data set transfer completion (RETR, STOR, and APPE).

2. Copy the NMDSPAXS load module supplied in *dsnpref*.NMC1.CC2DLOAD to a library accessible to CA TCPaccess CS, for example a library in the CA TCPaccess CS started task STEPLIB.

3. Define NMDSPAXS as a CA TCPaccess CS exit by adding the following statement to IJTCFG*xx* member:

   ```
   EXIT PROGRAM (NMDSPAXS)
   ```

   Note: Insert the NMDSPAXS definition in the first position of the exit list. This ensures that the exit is always called.

Set Up DNR Members

You must ensure that your CA TCPaccess CS Domain Name Resolver (DNR) members can translate the CA TCPaccess CS subsystem name into an IP address and a fully-qualified host name.

To set up DNR members

1. Enable translation from subsystem name to fully-qualified domain name.

   For example, if your CA TCPaccess CS subsystem name is ACSS and its fully-qualified domain name is MVS.SITE1.COM, enter a line like the following into your DNRALC*xx* member:

   ```
   ACSS MVS.SITE1.COM.
   ```

   Specify the domain name (rather than an IP address) and end it with a period (.).

2. Enable local translation of the fully qualified host name to an IP address.

   For example, if the IP address of MVS.SITE1.COM. is 172.24.123.112, enter a line like the following into your DNRHST*xx* member:

   ```
   MVS.SITE1.COM. 172.24.123.112
   ```

3. Ensure that the HOSTTABLE statement in the DNRCFG*xx* member points to the correct DNRHST*xx* member.

4. Restart DNR. You do not need to restart CA TCPaccess CS to introduce changes to the DNR tables. For example:

   ```
   F stackname,STOP DNR TASK(n)
   F stackname,START DNR CNFG(xx)
   ```

   TASK(*n*) is the DNR task number used by the site.

Enable Access to SNMP Data

Your product accesses information about CA TCPaccess CS by using SNMP.

To enable these functions, you must activate the SNMP Agent by updating the SNMCFG*xx* member in the CA TCPaccess CS PARM data set. Make sure that you have a community value statement, which includes the community name. The default community name is *public* in lower case. You do not need to restart CA TCPaccess CS.

To activate SNMP, issue **/F** *stackname*,**START SNM CNFG(***xx***)**.

Make sure you update the START*xx* member to include the following:

```
'START SNM CNFG(xx)
```

Restart CA TCPaccess

If you have made changes to your IJTCFG*xx* configuration member, you need to restart the server.

To restart the server

1. Restart the server to bring the changes into effect.
2. Check the job log and the SYSLOG for the presence of the following messages:

   ```
   T00EX004I NMDSPAXS: N6XA01 Activity log message interface initialized
   T00EX004I NMDSPAXS: N6XA02 Receiver ID $IPXssid will monitor messages from
   TCPaccess
   T00EX004I NMDSPAXS: N6XA03 NetMaster AXS exit EP:exit_entry_point
   Compiled:compilation_timestamp
   ```

   ssid is the SSID of the server job.

   These messages are logged during initialization. Their presence indicates that the interface has been set up correctly.

Chapter 10: Setting Up File Transfer Resources

This chapter describes how to define and implement your File Transfer resources.

Customize Managed CA XCOM Regions

You can use this procedure to customize a CA XCOM Data Transport region to work with this product.

To customize a managed CA XCOM Data Transport region

1. Ensure that the values of the following parameters in the CA XCOM Data Transport Default Options Table are set as follows:
   - NETMAST=YES
   - RECVRID=*xcom-event-receiver-id*

     The value of the RECVRID parameter must match the CA XCOM Data Transport event receiver ID specified in the XCAPI parameter group of CA NetMaster FTM. If the parameter is not specified, it assumes the value $RFFTEVR.
   - ERRINTV=*error-retry-interval*

     Use a low value for the ERRINTV parameter to ensure that accurate transfer request status is displayed on the monitors. You can either use the default parameter or use a lower value.
2. Reassemble and link the Default Options Table.

   Note: This step only applies if you make changes to the default parameters.

   The remaining steps are required only if one of the following applies:
   - You have not already applied the CA XCOM Data Transport user modification (USERMOD) for CA NetMaster support (as part of previous installation of CA NetMaster FTM).
   - You are upgrading CA XCOM Data Transport to r11.

3. (This step is for r11.0 and below only.) Copy one of the following job members, depending on your version of CA XCOM Data Transport:

   - If you are managing an Advantage CA XCOM Data Transport 3.1 region (or a previous release), copy the *dsnpref*.NMC1.CC17SAMP(XCUSRMOD) job member to the *dsnpref*.NMC1.*rname*.JCL data set.

     The job applies user modification (USERMOD) to include the exit in the CA XCOM Data Transport region.

   - If you are managing a CA XCOM Data Transport r11 region, copy the *dsnpref*.NMC1.CC17SAMP(XCUSRM11) job member to the *dsnpref*.NMC1.*rname*.JCL data set.

     The job applies user modification (USERMOD) to include the exit in the CA XCOM Data Transport r11 region.

4. (This step is for r11.0 and below only.) Review the comments in the copy, and update the variables that start with a question mark (?).
5. (This step is for r11.0 and below only.) Submit the customized job.
6. Restart the CA XCOM Data Transport region.

How CA SOLVE:FTS Regions Work

If you are using CA SOLVE:FTS and want to customize a CA SOLVE:FTS region to work with this product, perform the procedures in this section.

This product can manage CA SOLVE:FTS in the same region using the FTSMGR FTSSELF template. Links are only required to manage remote regions.

Define the Link to the Product Region

The CA NetMaster FTM and CA SOLVE:FTS regions communicate with an INMC link.

To define a link to the product region

1. Log on to the CA SOLVE:FTS region, and select Operator Console Services.
2. Enter the following DEFLINK command to enable the dynamic creation of an INMC link:

   `DEFLINK LUNAME=`*acb-name* `LINK=`*link-name*

   acb-name

   Specifies the ACB name of the product region to which the CA SOLVE:FTS region is to establish a link.

   link-name

   Specifies a name that identifies the link.

3. Enter SHOW LINK=DYNAMIC to check that the allowed number of dynamic links will not be exceeded.
4. Issue the following command:

   SYSPARMS DYNLMAX=*number*

   number

   Sets the number of allowed dynamic links.

   The number of dynamic links is increased.
5. Ensure that the DEFLINK and the SYSPARMS commands are included in the NMREADY procedure for the CA SOLVE:FTS region to enable the automatic execution of the commands during region startup.

Install the CA SOLVE:FTS Message Handler

Note: If the release of the CA SOLVE:FTS region is at least r11.5, there is no need to install the $RFAGENT message handler in it because extra data is provided on $$FTS events.

The CA SOLVE:FTS message handler, $RFAGENT, processes CA SOLVE:FTS events before they are sent to the CA NetMaster FTM region. If your CA SOLVE:FTS region is the same as your CA NetMaster FTM region, $RFAGENT is already available, so you do not need to copy it.

To install the handler, copy *dsnpref*.NMC1.CC17EXEC($RFAGENT) to the NCL procedures library (normally *dsnpref.rname*.TESTEXEC) in the CA SOLVE:FTS region.

Important! The $RFAGENT message handler must be present in each pre-r11.5 CA SOLVE:FTS region that you want to monitor.

How Managed CONNECT:Direct Regions Work

You can use the procedures in this section to implement the flow of CONNECT:Direct events.

Implement Statistics Exits in the Managed CONNECT:Direct Regions

Note: The File Transfer statistics exit in each managed CONNECT:Direct region must be current for the version of CA NetMaster FTM you are running.

Follow these steps:

1. Include the supplied APF-authorized CC2DLOAD library in the STEPLIB DD statements of the CONNECT:Direct startup JCL procedure. (The library is set up as *dsnpref*.NMC1.CC2DLOAD.)
2. Depending on your current CONNECT:Direct setup, update the following statement in the *dsnpref*.NMC1.CC17SAMP(NMCDSTEX) statistics exit as required:

   ```
   $RFCDSTX
   AMODE=31,USREXIT=NONE,EPSRCVR=$RFFTEVR,
   EXCLUDE=NONE
   ```

   Important! If modifications are required, copy the distributed member to the TESTEXEC data set for the region for modification.

   a. If you are already using a CONNECT:Direct statistics exit, specify the load module name of your exit in the USREXIT parameter.

   b. If you are excluding records from the CONNECT:Direct statistics file, copy the list of excluded record types to the EXCLUDE parameter. Remove STAT.EXCLUDE from the CONNECT:Direct initialization parameter.

   c. Ensure that the value of the EPSRCVR parameter matches the CONNECT:Direct event receiver ID specified in the CDAPI parameter group of CA NetMaster FTM. Multiple CONNECT:Direct regions can use the EPSRCVR ID concurrently.

   Note: The NMCDSTEX member also contains comments that provide additional background information.

3. If you updated the NMCDSTEX statistics exit in TESTEXEC, perform the following steps:

   a. Copy the ASMCDSTX job from the *dsnpref*.NMC1.CC17SAMP library to the *dsnpref.*NMC1.*rname*.JCL library.

   b. Customize the ASMCDSTX job in the *dsnpref.*NMC1.*rname*.JCL library, following the instructions in the file.

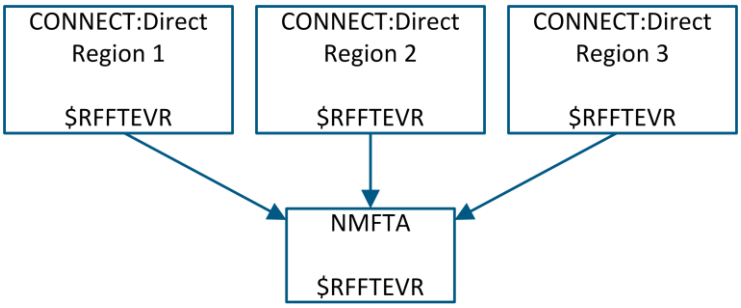
   c. Submit the customized job to assemble and link edit the exit.

4. Change the value of the CONNECT:Direct initialization parameter, STATISTICS.EXIT, to NMCDSTEX.

   NMCDSTEX is the default statistics exit name. If you assemble and link edit the exit manually, the statistics exit name you specify must match the exit name specified in the ASMCDSTX job.

Example: One Region

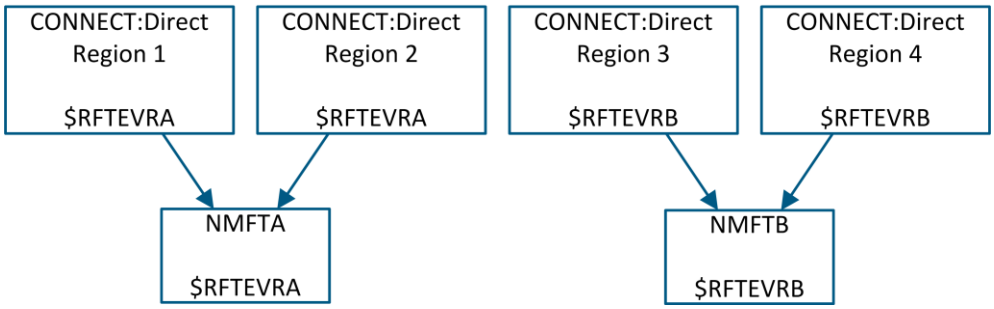
In this example, there is only one product region (NMFTA) within one LPAR. The event receiver ID in the CDAPI parameter group of NMFTA is configured with a value ($RFFTEVR). Usually, all the CONNECT:Direct regions in the LPAR are configured with the same event receiver ID in their statistics exits so that region NMFTA can monitor them.



Example: Multiple Regions

This example has two product regions (NMFTA and NMFTB) within one LPAR. The event receiver ID in the CDAPI parameter group of NMFTA is configured with $RFTEVRA and NMFTB is configured with $RFTEVRB.

The event receiver ID in the statistics exits of individual CONNECT:Direct regions determines the scope of monitoring for each FT region. In this example, NMFTA monitors CONNECT:Direct Region 1 and CONNECT:Direct Region 2 while NMFTB monitors CONNECT:Direct Region 3 and CONNECT:Direct Region 4.



Customize CONNECT:Direct Initialization Parameters

Your product region uses the CONNECT:Direct interface program DMCHLAPI to interface with a CONNECT:Direct region and must sign on to that region. Because CONNECT:Direct places limits on the number of batch users that can be signed on concurrently, you should increase this limit to let the extra users sign on.

To customize each managed CONNECT:Direct region

1. Increase the value of the MAXBATCH or the MAXUSERS initialization parameter as follows:
   - If the current value of MAXBATCH is zero, add 1 to the value of MAXUSERS.
   - If the current value of MAXBATCH is *not* zero, add 1 to the value of MAXBATCH.
2. Ensure that MCS.SIGNON is specified in the initialization parameters.
3. Ensure that the CONNECT:Direct startup JCL procedure and the STATISTICS.EXIT initialization parameter are updated.
4. Restart the CONNECT:Direct region.

Define the Region as CONNECT:Direct User

You can use this procedure to enable the product region to execute commands in the managed CONNECT:Direct regions.

To define the region as a CONNECT:Direct user

1. Define this product as a user in each of the CONNECT:Direct regions.
2. Ensure that the defined user is authorized for the following functions:
   - Change, delete, flush, select, and suspend processes
   - Selecting the network map
   - Other functions that you want to be able to perform from the region

For example, with CONNECT:Direct for MVS or CONNECT:Direct for OS/390, you can use the following suggestion when specifying the authority of a user:

```
CHANGE=Y
DELPR=Y
FLUSH=Y
SELNET=Y
SELPR=Y
SELSTAT=Y
SUBMITTER.CMDS=(Y Y Y Y Y)
```

Note: For more information about how to specify the authority of a CONNECT:Direct user, see the *CONNECT:Direct for MVS Installation and Administration Guide* or the *CONNECT:Direct for OS/390 Installation and Administration Guide*.

Customize Managed CONNECT:Mailbox Regions

You can use this procedure to implement the flow of CONNECT:Mailbox events.

To customize a managed CONNECT:Mailbox region

1. Include the supplied APF-authorized CC2DLOAD library in the STEPLIB DD statements of the CONNECT:Mailbox startup JCL procedure. (The library is set up as *dsnpref*.NMC1.CC2DLOAD.)
2. Update the following statements in the *dsnpref*.NMC1.CC17SAMP(NMCMLGEX) log exit:
   - USREXIT=*userexit*—if you are using an existing log exit.
   - EPSRCVR=*newid*—if the default EPS receiver ID is not suitable. Ensure that the value of the EPSRCVR parameter matches the CONNECT:Mailbox event receiver ID specified in the CMAPI parameter group of CA NetMaster FTM.

   Important! If modifications are required, copy the distributed member to the TESTEXEC data set for the region for modification.
3. If you updated the copy of NMCMLGEX in TESTEXEC, do the following steps:
   a. Copy the ASMCMLGX job from the *dsnpref*.NMC1.CC17SAMP library to the *dsnpref.*NMC1.*rname*.JCL library.
   b. Customize the ASMCMLGX job in the *dsnpref.*NMC1.*rname*.JCL library, following the instructions provided by the comments in the file.
   c. Submit the customized job to assemble and link edit the exit.
4. Specify the following OPTIONS definitions in the CONNECT:Mailbox ODF file:

   ```
   MODIFY=RESP
   XLOG=NMCLGEX
   ```

   NMCMLGEX is the default log exit. If you assemble and link edit the exit manually, the log exit name you specify in the ODF file must match the exit name specified in the ASMCMLGX job.

How to Set Up SAF Access for TCPAccess Policy Rule Sets

Note: This section applies only if you use CA TCPaccess FTP Server.

To maintain policy rule sets, the user ID attempting to update the rule set must be associated with a new SAF facility, $SOLVE.FTP.CONTROL, that must be defined to your security system.

The user's access to this facility determines the user's access to policy rule sets as follows:

- Read access allows the user to view policy rule sets.
- Update access allows the user to both view and maintain policy rule sets.

The following sequence of events illustrates how the facility and a user ID are associated:

1. You define user FTPUSER to your security system.
2. You define a SAF facility to your security system.
3. You associate user FTPUSER to the SAF facility and give the user update access.
4. When FTPUSER user accesses the FTP policy rule set list panel a SAF call is made to ensure that FTPUSER has access to the $SOLVE.FTP.CONTROL facility and then to determine the authority of the user. In this example, the user has update authority.

How to Define $SOLVE.FTP.CONTROL to Your Security System

The steps to define $SOLVE.FTP.CONTROL depend on your security system. They are described in the sections that follow.

Define $SOLVE.FTP.CONTROL to CA ACF2

To define $SOLVE.FTP.CONTROL to CA ACF2 for z/OS, compile the following rule to authorize users to maintain policy rules:

```
ACF
COMP *
$KEY($SOLVE.FTP.CONTROL) TYPE(FAC)
 UID(uid_string) SERVICE(UPDATE) ALLOW

STORE
END
```

Note: Rule lines after the $KEY line must be in column 2. If you compile this rule in TSO, you must enter a blank line after the last rule line entry and before the STORE command.

Define $SOLVE.FTP.CONTROL to CA Top Secret

Use this procedure to define $SOLVE.FTP.CONTROL to CA Top Secret for z/OS.

To define $SOLVE.FTP.CONTROL to CA Top Secret for z/OS

1. To define ownership of the SAF facility, enter the following command:

   ```
   TSS ADD(department-id) IBMFAC($SOLVE.FTP.CONTROL)
   ```

2. To allow access to policy maintenance functions, enter the following command:

   ```
   TSS PER(userid) IBMFAC($SOLVE.FTP.CONTROL)
   ACC(WRITE)
   ```

Define $SOLVE.FTP.CONTROL to RACF

Define $SOLVE.FTP.CONTROL to RACF by issuing the following command:

```
RDEFINE FACILITY $SOLVE.FTP.CONTROL  UACC(NONE)
PE $SOLVE.FTP.CONTROL CLASS(FACILITY) ID(userid or group)
ACCESS(UPDATE)
SETROPTS GENERIC(FACILITY) REFRESH
```

Chapter 11: Preparing to Start Your Product

Before CA NetMaster FTM can be started and used, preparation tasks are required.

This section contains the following topics:

The Install Utility places RUNSYSIN (for the product region) in a default data set. If you move this member to a more secure data set, you must update the started task JCL to point to the new data set.

Started Task JCL Setup

The Install Utility places the following SYSIN and parameter members into default data sets:

- SSIPARMS and SSISYSIN—for SOLVE SSI
- RUNSYSIN—for the product region
- FTPPARMS and FTPSYSIN—for NMFTP Monitor

If you move these members into a more secure data set, update the started task JCL and SYSIN members to point to the new data set.

TESTEXEC Data Set

The install utility populates the TESTEXEC data set based on the values entered during the installation and setup process.

Review the members in TESTEXEC to:

- Ensure that they meet your site-specific requirements
- Reapply any previous customization that is still required

Review the following members in *dsnpref.rname.*TESTEXEC:

NMREADY

Is the NCL procedure that is executed as part of system initialization after the VTAM ACBs have been opened successfully.

NMINIT

Is the NCL procedure that is executed as part of system initialization before the VTAM ACBs are opened.

Do not:

- Code any SYSPARMS commands in the NMINIT or NMREADY procedures.
- Activate or modify links, or use commands such as DEFLINK, DEFTRANS, and ISR in NMINIT or NMREADY. In a multisystem network, the region uses link definitions during initialization. Defining DEFLINK, DEFTRANS, and ISR in these procedures can interfere with region linkage.

Started Task Product Region Parameter Member

The Install Utility generates the RUNSYSIN member using the values that are entered during the installation and setup process.

RUNSYSIN specifies the product region parameters.

Review RUNSYSIN to:

- Ensure that it meets your site-specific requirements
- Reapply any previous customization that is still required

If you have set SUBS=YES in the member, you can update the RUNSYSIN started task members to use z/OS static system symbols. System symbols assist in the planning of future deployment.

Review the following parameters in *dsnpref.rname*.TESTEXEC(RUNSYSIN):

PPREF='XOPT=SDUMP'

Specifies that ABEND dumps are written to the SYS1.DUMP data set.

If you do not want SYS1.DUMP data sets for dumps, remove the parameter and add the SYSMDUMP DD statement to the generated task in *dsnpref*.NMC1.*rname*.JCL(*rname*).

PPREF='INIFILE=????????'

Specifies the INI file that is used for parameter customizations.

To use a migrated INI file, uncomment the parameter and replace the question marks with the name of the INI file.

SOLVE SSI Started Task Parameter Member

The Install Utility generates the SSIPARM data set based on the values entered during the installation and setup process.

SSIPARM specifies the SOLVE SSI started task parameters.

Review the data set to:

- Ensure that the members meet your site-specific requirements
- Reapply any previous customization that is still required

Review the following members in *dsnpref*.NMC1.SSIPARM:

SSISYSIN

(Optional) (If you are using an existing shared SOLVE SSI region, you do not have to review this member.)

If SUBS=YES is set, you can update the SSISYSIN started task member to use z/OS static system symbols. System symbols assist in the planning of future deployment.

SSIPARMS

(Optional) (If you are using an existing shared SOLVE SSI region, you do not have to review this member.)

This member is present only if you created it when you specified the SOLVE SSI region.

Parameters can be shared with any other products using this SOLVE SSI. Review these parameters, and ensure that they are set correctly for the products (these parameters can be in SSISYSIN or SSIPARMS).

Note: For more information about sharing a SOLVE SSI, see the *SOLVE Subsystem Interface Guide*.

Review and Copy the Product Region Started Task

The Install Utility generates a product region started task that you must review to ensure that it meets your site-specific requirements; if necessary, reapply any previous customization that is still required.

Use this procedure to review, update, and copy the started task to a procedure library.

Note: To assist you in the planning of future deployment, you can update the product region started task to use z/OS static system symbols.

Follow these steps:

1. Review and update the DD statements in the product region started task member *dsnpref*.NMC1.*rname*.JCL(*rname*) for your site-specific requirements.
2. In CONNECT:Direct for OS/390, ensure that the started task can access the CONNECT:Direct load library (for example, by having the library in the link list or by a STEPLIB DD statement in the started task member).
3. Copy the reviewed member to SYS*x*.PROCLIB.

Review and Copy the SOLVE SSI Started Task

The Install Utility generates a SOLVE SSI started task that you must review to ensure that it meets your site-specific requirements; if necessary, reapply any previous customization that is still required.

Note: If you are using an existing shared SOLVE SSI region, skip this procedure.

Use this procedure to review, update, and copy the SOLVE SSI started task to a procedure library.

Note: To assist you in the planning of future deployment, you can update the SOLVE SSI started task to use z/OS static system symbols.

Follow these steps:

1. Review and update the DD statements in the SOLVE SSI started task member *dsnpref.*NMC1.*ssiname*.JCL(*ssiname*) for your site-specific requirements.
2. Copy the reviewed member to SYS*x*.PROCLIB.

Review and Copy the NMFTP Monitor Started Task

Note: You do not need to perform this task if you did not specify the NMFTP Monitor (see page 95).

To assist you in planning future deployment, you can update the NMFTP Monitor started task to use MVS static system symbols.

To review and copy the NMFTP Monitor started task

1. In the NMFTP Monitor started task member *dsnpref.NMC1.nmftname.JCL(nmftname)*, review and update the DD statements for your site-specific requirements.
2. Copy the reviewed member to *SYSx*.PROCLIB.

Subsystem Identifier Setup

The setup of your product environment usually requires the following subsystem identifier (SSID) values that were defined during the setup process (see page 89):

- An SSID value for the subsystem identifier for the SOLVE SSI—The SOLVE SSI started task automatically identifies this SSID value to the system.
- An SSID value to enable the use of z/OS commands and messages—This SSID is named the AOM subsystem interface ID (AOM SSID). The product region started task automatically identifies this SSID value to the system.
- An SSID value for the subsystem identifier for the NMFTP Monitor—The NMFTP Monitor started task automatically identifies this SSID value to the system.

If you want the SSID values to be set permanently and available at system IPL time, you can set them in the SYS1.PARMLIB(IEFSSN*xx*) member. If you use this member, ensure that you add the AOM SSID for the region first (after JES) in the list of subsystem names, because the first region listed in the SYS1.PARMLIB(IEFSSN*xx*) member controls the processing of messages by the subsystem interface.

Load Libraries

Most products have their own load library but also require the load libraries of supporting services. The following load libraries must be APF-authorized:

- CC2DLOAD
- CC2DPLD (If SSL is installed)

Authorization of the Load Libraries

To APF-authorize your load libraries, add the run-time load libraries to the SYS1.PARMLIB(IEAAPF*xx*) APF list.

To dynamically APF-authorize the load libraries, issue the following z/OS command:

```
SETPROG APF,ADD,DSNAME=?loadlib,VOLUME=?volser
```

?*loadlib*

Specifies the name of the load library.

?*volser*

Specifies its volume serial number.

To dynamically APF-authorize load libraries controlled by SMS, issue the following z/OS command:

```
SETPROG APF,ADD,DSNAME=?loadlib,SMS
```

Assign Consoles

Your product needs a pool of consoles (either JES or extended MCS consoles) to issue system commands. As delivered, this product uses extended MCS consoles that are dynamically defined.

To use JES consoles instead of the default MCS consoles, define at least six consoles that are *not* used by other products.

Follow these steps:

1. Open the SYS1.PARMLIB(CONSOL*xx*) member.
2. Add the following statement for each console you want to define:

   ```
   CONSOLE DEVNUM(SUBSYSTEM)...
   ```

An IPL is required to activate the updated CONSOL*xx* member. To start using JES consoles, you must also update the $RM CONSOLES Customizer parameter group (see page 137).

Activate VTAM Applications

You must activate VTAM applications for your regions. The Create VTAM Definitions and Tables facility builds a VTAM major node that contains APPL definitions for all product regions. The member V01LDVTM copies *vtamname* to SYS1.VTAMLST, which is the VTAM library that contains all the major node and application definitions used by your product.

Follow these steps:

1. Add *vtamname* to the startup list in SYS1.VTAMLST(ATCCON*xx*).
2. Activate the VTAM major node by entering the following VTAM command:

   ```
   V NET,ACT,ID=vtamname
   ```

3. Check that all of the applications are defined to VTAM after the activation. To do this, display the major node by entering the following VTAM command:

   ```
   D NET,ID=vtamname,E
   ```

Enable Auditing by CA Auditor

If your auditors require CA Auditor or CA Common Inventory Service to know of this product running on your system, put a load module in your system LNKLST.

To define the load module to the system LNKLST, include the library *dsnpref*.NMC1.CC2DLINK in the system LNKLST SYS1.PARMLIB(PROG*xx*), for example:

```
LNKLST ADD NAME(LNKLST00) DSNAME(dsnpref.NMC1.CC2DLINK)
```

Note: Common load modules are used for all CA Mainframe Network Management products. You only need to include one copy of this *dsnpref*.NMC1.CC2DLINK library in the system LNKLST.

Chapter 12: Performing Initial Migration

When you specify your regions, the Install Utility migrates some of your data from the earlier release. You perform some additional migration tasks before you start your product region.

This section contains the following topics:

NPF and SAF Security Members (see page 129)

More information:

Migration Preparation (see page 20)

NPF and SAF Security Members

The Install Utility generates Network Partitioning Facility (NPF) and System Authorization Facility (SAF) security members. If you have previously customized any of these security members, update the regenerated members with your changes.

Chapter 13: Starting Up

This section contains the following topics:

Note: If you want to run other products in the CA Mainframe Network Management family in this region, before proceeding, complete the tasks described in the *Installation Guide* for the other products.

Start the SOLVE SSI Region

You perform this procedure only if you use a new SOLVE SSI region.

Notes:

- If you are using an existing shared SOLVE SSI region and did not make any changes when specifying the SOLVE SSI region (see page 91), skip this procedure.
- If you are using an existing shared SOLVE SSI region and have made changes, skip this procedure and proceed to restarting the SOLVE SSI region (see page 132).

To start the SOLVE SSI region, issue the following command from the MVS console:

```
S ssiname,REUSASID=YES
```

ssiname is the name you specified for the SOLVE SSI during the setup process.

Note: If you use cross memory services but do *not* specify REUSASID=YES, and SOLVE SSI terminates, the address space ID is not available until after the next IPL.

To stop the SOLVE SSI started task, issue the following command from the MVS console:

```
P ssiname
```

Restart the SOLVE SSI Region

You perform this procedure only if you are using an existing shared SOLVE SSI region and made changes when specifying the SOLVE SSI region (see page 91).

Follow these steps:

1. Stop the SOLVE SSI started task, issue the following command from the MVS console:

   P *ssiname*

2. Start the SOLVE SSI region, issue the following command from the MVS console:

   S *ssiname*,REUSASID=YES

   Note: If you use cross memory services but do *not* specify REUSASID=YES, and SOLVE SSI terminates, the address space ID is not available until after the next IPL.

Start the Product Region

To start the product region, issue the following command:

S *rname*,REUSASID=YES

rname is the name you specified for the region during the setup process.

Note: If you use cross memory services but do *not* specify REUSASID=YES, and the region terminates, the address space ID is not available until after the next IPL.

Note: To stop the started task, issue the following command from the MVS console: P *rname*.

Start the NMFTP Monitor Region

To start the NMFTP Monitor, issue the following command from the MVS console:

S *nmftname*

nmftname is the name you specified for the NMFTP Monitor during the setup process.

Note: To stop the NMFTP Monitor started task, issue the following command from the MVS console:

F *nmftname*,FSTOP

Perform the Initial Logon

Note: If your region is using an existing UAMS data set, you will already have an administrator user ID available for the region. You can use that ID to log on to the region.

Follow these steps:

1. Log on to the product region. You can use the VTAM logon command:

   `LOGON APPLID(priacbnm)`

   priacbnm is the name of the primary VTAM ACB application nominated in the *PPREF='PRI=priacbnm*' command in *dsnpref.rname*.TESTEXEC(RUNSYSIN).

   The region logon panel appears.

2. Enter the user ID **INSTALL** and password **99999999,** and press Enter.

   The UAMS : Primary Menu appears.

   The INSTALL 99999999 is a special user ID and password combination that can be used once only, and is accepted if the USERID data set is empty. The only functions that the INSTALL user ID can perform are those associated with user ID maintenance.

Add the Initial Administrator User ID

The only functions that the INSTALL user ID can perform are those functions associated with user ID maintenance. Therefore, you must add an initial administrator user ID.

Note: If you are using a full security exit, user authorities are not specified through UAMS. Specify these authorities as structured fields in your security exit. For more information, see the *Security Guide*.

To define an initial user with full authority to UAMS

1. At the UAMS : Primary Menu, type the initial administrator user ID in the User field, **USER** in the Definition Type field, and select the **A – Add User Definition** option.

   The UAMS : User Details panel appears.

2. Type the initial password and user details for this initial user ID.

   Important! The user must change the password again at first logon.

3. Go to the UAMS definition panels and ensure that you give full authority to this initial user to perform future administration tasks. Set the following minimum values:

   User Authorities panel, page 2

   Authority Level: 255

   APPC Access Key: ALL

   APPC Access Lock: ALL

   Access Authorities panel, page 3

   Set all fields to Y.

   Network Management Details panel, page 7

   Set fields that correspond to the features your site has configured to Y or the maximum authority.

   AOM MVS Details panel, page 11

   Console Authority: M

   Print Services Manager Details panel, page 12

   For all fields, set the maximum authority (1 through 4).

   Report Writer Details panel, page 13

   For all fields, set the maximum authority (1 through 4).

4. Press F3.

   The user definition is saved.

Perform Subsequent Logon

You are now ready to log on to your product and begin using it as an authorized user.

Follow these steps:

1. Press F3 to log off the product region.
2. Log on using your new initial administrator user ID and password.
3. If necessary, change your password by typing **U.P**, confirm your change, and press F3 (File) to save the change.

   Notes:

   - If you set SEC=PARTSAF or SEC=NMSAF in the RUNSYSIN member, you are not required to change your password.
   - (Optional) To enable users to logon to the product from TSO, add the:
     - *dsprefix*.NMC1.CC2DLMD0 data set to LNKLST or STEPLIB concatenation for the appropriate TSO procedure
     - *dsprefix*.NMC1.CC2DSAMP data set to the SYSHELP concatenation for the appropriate TSO procedure

Chapter 14: Customizing Your Product

Note: After completing customization, you can use product system variables and z/OS static system symbols to help you plan future deployment to multiple regions. You generate an initialization (INI) file where you can use these variables and symbols. For information about setting up the INI file, see the *Administration Guide*.

This section contains the following topics:

Initial Customization Requirements

You must set various parameters for your site-specific requirements. Use Customizer to review and update the parameter groups in your product region.

Note: Customizer is used to set the majority of your region parameters. If you need to permanently change any SYSPARMS values that are not handled by Customizer, contact Technical Support (see page 4).

Important! Setting certain SYSPARMS to values other than the defaults can render certain product features inoperable.

Customization can only be performed by a user with UAMS maintenance authority (see page 133). That user's UAMS definition should have an APPC Access Key and Lock value of ALL.

Customizer Setup Types

From the Customizer : System Parameters panel, you can select the following options:

Fast Setup

Customizes the required parameter groups and quickly implements your region. It provides default values wherever possible, but lets you review all the required parameter groups to ensure that they match your installation standards. You can customize other parameters at a later time.

Note: You must review all the parameter groups in this option for the region to become operational.

Custom Setup

Customizes the required parameter groups and additional file and data set names, to bring the system operation closer to your installation standards. This option quickly implements your region and still lets you perform some extra customization. It provides some default values, lets you specify names for certain files and data sets, and lets you review the required parameter groups (which are highlighted).

Complete Setup

Customizes all initialization and customization parameters.

Customize Parameter Values

You can use the provided default values or customize the parameter values to suit the requirements of your site.

Note: All parameters have default values.

Follow these steps:

1. Enter **U** next to the parameter group that you want to review, and make the necessary changes for your site.
2. Press F6 (Action) to apply the change immediately. You can view the results by pressing F5 (ILog).

   Note: The F6 option is not available for some parameters.
3. Press F3 (File) to save your changes and indicate that you have reviewed the group.

The value you assign to a parameter is associated with one or more actions, such as setting SYSPARMS or allocating data sets. You can action some parameter groups as soon as you enter appropriate values on the parameter panel. However, when you change the value of some parameters, for example, MODS file names, these parameter values can only be applied by restarting the product region.

Note: If you change a parameter, perform an action, and then cancel that action, the new value will be in effect for that action; but when you restart, the value will return to the last saved value. In addition, you can change a value and save it without applying it to have it take effect on the next startup.

Interrupted Customization

If you exit the customization process before reviewing all required parameter groups, you are presented with a confirmation panel. You can log off and continue with the customization later. Alternatively, another authorized user can log on and complete the customization process. Users cannot access the region until all the required parameter groups have been reviewed.

Update and Review the Fast Setup Customization Parameters

To begin the process of updating and reviewing the Fast Setup Customization parameters, select the Fast Setup Customization Parameters option. The Customizer : Fast Setup panel appears.

Implement Operating System Identifiers Parameters

Use this procedure to implement the operating system identifiers.

Follow these steps:

1. Enter **U** next to the Operating System Identifiers parameter group.

   The OPSYSIDS - Operating System Identifiers panel appears.

   Complete the fields on this panel. If the system uses the JES3 job entry subsystem, ensure that information about the job entry subsystem is updated.

   Note: Press F1 (Help) for more information.

2. Press F6 (Action) to action the entries.
3. Press F3 (File) to save your settings.

   The Customizer : Fast Setup panel appears with the Reviewed column marked Yes for the parameter group.

Implement File Transfer Mechanism Parameters

If you are licensed for CONNECT:Direct or CONNECT:Mailbox, the fast setup displays the following interface parameters:

- CDAPI—CONNECT:Direct
- CMAPI—CONNECT:Mailbox

To implement the file transfer mechanism parameters

1. Enter **U** beside the required parameter group (either CDAPI or CMAPI). The selected panel appears.
2. Complete the fields on this panel. Press F1 (Help) for more information.
3. Press F6 (Action) to action the entries.
4. Press F3 (File) to save your settings.

   The Customizer : Fast Setup panel appears with the Reviewed column marked Yes for each updated field.
5. Repeat these steps for the other parameter group.

Implement the TCP/IP Sockets Interface Parameters

Use this procedure to enable TCP/IP support.

Access to sockets interfaces requires UNIX System Services authorization (see page 181) provided by an OMVS segment security definition.

To implement the TCP/IP sockets interface parameters

1. Enter **U** next to the TCP/IP Sockets Interface parameter group.

   The first SOCKETS - TCP/IP Sockets Interface panel appears.

2. Tab to the TCP/IP Software Type input field, and enter the required value.

   Only one type of TCP/IP software can be configured as the sockets interface in each region.

3. Complete the remaining fields on the first panel.

   Note: For more information, press F1 (Help).

   The Inbound Connections Port field contains a default port number. If another region on this system is already using that number, tab to the field and change it.

   Important! The port number must be unique on a system.

4. Press F8.

   The second panel for this parameter group appears.

5. Complete the fields on the panel.

   Specify the details of the TCP/IP software as follows:

   - If you are using the IBM Communications Server, enter your TCPIP.DATA data set name in the TCPIP.DATA DSN field and review the Domain Name Resolution fields.
   - If you are using CA TCPaccess CS, tab to the CA TCPaccess CS SSID field and enter the required SSID. If you are unsure of the CA TCPaccess CS subsystem ID, access the CA TCPaccess CS startup procedure and check the value of the SSN parameter.

6. Press F6 (Action) to set the specified values and start the interface.

7. Press F3 (File) to save your settings.

   The Customizer : Complete Setup panel appears with the TCP/IP Sockets Interface Reviewed field marked as YES.

8. Press F3 (Exit).

   The Customizer : System Parameters panel appears.

Implement the WebCenter Parameters

Use this procedure to implement access to the WebCenter interface.

To implement the WebCenter parameters

1. Enter **U** next to the WebCenter Web Interface parameter group.

   The WEBCENTER - WebCenter Web Interface panel appears.

2. Tab to the Web Interface Port input field, and enter a unique value.

3. Complete the fields on the panel.

   Note: For more information, press F1 (Help).

4. To use SSL to encrypt WebCenter traffic, press F11.

   The panel that sets SSL parameters appears.

5. When you have completed all the fields, press F6 (Action) to set the specified values.

   If you specified a WebCenter port number, note the generated WebCenter Access URL because you use this URL to access your product region using WebCenter.

6. Press F3 (File) to save your settings.

   The Customizer : Fast Setup panel appears with the Reviewed column marked Yes for the WebCenter web interface parameters.

7. Press F3 (Exit).

   You are returned to the Customizer : System Parameters panel, and the WebCenter parameters are implemented.

Web Browser Settings

If you are using WebCenter, instruct all users to take the following actions:

- Clear the cache of their web browser to prevent them from getting a mix of old and new web files.
- Disable pop-up blocker, or define WebCenter as an allowed website.

Additional Parameter Groups

Depending on which product features you want to implement, you may want to review other parameter groups and add any values that you saved from your old product region.

You can review these parameter groups now or later, as follows:

- **Now**—Select the Complete Setup Customization Parameters option to list all parameter groups and review the relevant groups. When you complete the review, exit the list and the Customizer : System Parameters panel.
- **Later**—Exit the Customizer : System Parameters panel. (When you are ready to review these parameter groups, enter **/PARMS** to list the groups.)

Note: If you are using other file transfer products, you can review these parameter groups now using the Complete Setup Customization Parameters option, or review them later.

Implement Additional File Transfer Mechanism Parameters

If you are using CA XCOM Data Transport or a file transfer application that interfaces with CA NetMaster FTM through the generic event API, you will need to review and update the appropriate parameter group:

- CA XCOM Data Transport interface parameters—XCAPI
- Generic API interface parameters—GEAPI

  Note: You must reassemble your NMFT Generic Support API code if you use an IPv6 address as the source or target node address.

To implement additional file transfer mechanism parameters

1. Enter **U** beside the required parameter group.

   The selected panel appears.
2. Complete the fields on this panel. Press F1 (Help) for more information.
3. Press F6 (Action) to action the entries.
4. Press F3 (File) to save your settings.

   The Customizer : Fast Setup panel appears with each updated field marked as YES.
5. Repeat these steps for the other parameter group.

Note: To set up a generic file transfer product to work with this product, see the *Administration Guide*.

Customize Region for FTP Events

Use this procedure to enable the flow of FTP events to and the receipt of the events in your region.

To customize your region for FTP events

1. Access the FTPCNTL parameter group.
2. To monitor the IBM FTP Server and CA TCPaccess FTP Server, do the following:
   a. Ensure that you have prepared your TCP/IP interface for the IBM Communications Server or the CA TCPaccess CS (see page 107).

      The FTP event flow to the region is enabled.

   b. In the For Non TCPaccess FTP Server section of the FTPCNTL parameter group, set the following:
      - Enable FTP Event Receiver = YES.
      - FTP Transfer ID = FTPXFER.
3. To monitor the CA TCPaccess FTP Server, in the For TCPaccess FTP Server section of the parameter group, set the following:
   - Enable FTP Event Receiver = YES.
   - Event Receiver ID = $RFFTEVR.
   - Enable SSI Policy Monitoring = YES.
   - If you intend to use ReportCenter, set FTP Transfer ID to match the name of the FTP managed source.
4. Press F6 (Action).

   Your changes are implemented.

Define File Transfer Resources to Your Region

This task partially builds your file transfer management environment.

If you are using this product for the first time, you should use the File Transfer Assisted Resource Definition Facility. The facility also provides default parameter values that determine how and when automation will operate.

To define file transfer resources

1. At the AutoAssist Setup panel, enter **S** beside the File Transfer Assisted Resource Definition option.

   The Assisted Resource Definition panel appears. (If you are using a model 2 terminal, press F8 to scroll forward to select the option.)

2. Define the file transfer resources.

   Note: For more information about how to define resources, see the *Administration Guide*.

Define the Region as a CA SOLVE:FTS User

You can enable the product region to execute commands in the managed CA SOLVE:FTS regions.

To define a region as a CA SOLVE:FTS user

1. Define its BSYS background user in each of the CA SOLVE:FTS regions by copying its user ID definition, *xxxx*BSYS.
2. In the product region, enter CMD at a command prompt to access the Command Entry panel.
3. Enter SHOW USERS to list the users who are currently logged on to the region and find the ID of the BSYS background user.

Initialization Failures

Fatal errors occur (for example, you are unable to log on) if either or both of the following are unavailable:

- Panel libraries
- MODS control files

Resolve Initialization Failures

If you log on to a region where the initialization of a parameter group has failed, Customizer displays the System Initialization In Progress dialog. This dialog indicates progress and assists you with identifying and rectifying any problems by displaying the current initialization status and whether actions associated with parameter groups have failed.

Follow these steps:

1. Enter **S** next to List Only Failed Parameters.
2. Enter **L** next to a failed parameter group to view its log and look for error messages.
3. Use the message online help and the full activity log to determine the cause of the failure.
4. Make the necessary changes to the parameter group and press F6.

   The parameter group changes are applied.
5. Press F3 to save the changes.

Parameter Group Actions

You can apply the following actions to listed parameter groups:

- **S** or **B** (Browse) to browse parameter group details.
- **H** (Help) to view the online help for a parameter group.
- **U** (Update) to update parameter group details.
- **AC** (Action) to action a parameter group.
- **L** (Log) to view the associated initialization and customization log.
- **I** (Ignore) to tell the system to ignore a failed parameter group and proceed to run dependent parameter groups. This action is not available when initializing for the first time.

  Important! Ignoring parameter groups is not recommended. Consider carefully before applying this action.
- **SD** (Set Default) to reset the parameter group values to the default values.

Note: Press F1 (Help) for more information.

An action can only be performed against an already completed parameter group or a failed parameter group.

When you correct an error by updating an incorrect parameter group record, you must action that parameter group before processing can continue (unless you apply the Ignore action). To action the parameter group, do *one* of the following:

- Press F6 (Action) when you finish updating the parameter group.
- Apply **AC** (Action) to the listed parameter group.

Perform Additional Customization

You have now completed the initial customization tasks for your product.

The *Administration Guide* describes other ways that you can customize your product.

Chapter 15: Completing Migration

The process to complete the migration includes tasks that you perform after you start your new product region.

This section contains the following topics:

Note: If you are migrating from a version earlier than r11, contact Technical Support (see page 4).

Knowledge Base Migration

The knowledge base is where you store your resource definitions. System images, in which you define the resources a region manages, are part of the knowledge base.

Note: For more information about the knowledge base, see the *Reference Guide*.

As part of region setup, a knowledge base is created, comprising the following data sets:

- RAMDB
- ICOPANL

Migrate any existing data that you want to keep to this knowledge base.

Important! The IDCAMS REPRO command must never be used to manage the definitions in the knowledge base.

Note: In r11.5, Graphical Monitor support was added to this product. If you are migrating from a prior release, and have created your own resource groups, ensure that they do not use the following names:

- ASMON
- CIP
- CIPRT
- CSM

- EE
- FT
- IPNDE
- NCPMN
- OSA
- ROUTR
- STACK
- TCPIP
- VIPA

Migrate Your Existing Knowledge Base

If you are migrating multiple synchronized regions, you only perform this task for the first focal region. You do not have to perform this task when migrating subsequent regions because when you link the regions, the knowledge base is synchronized.

Important! Keep the old knowledge base until your new product regions are performing correctly.

Follow these steps:

1. Shut down the region using your existing knowledge base.
2. From the new product region, enter **/RAMUTIL.M**.

   The RAMDB Migration Utility panel appears.
3. Perform the following steps:
   a. Specify the data set name for your existing RAMDB in the Old RAMDB Data Set Name field.

      The data set name is *dsnpref.rname*.RAMDB.

   b. Specify **NO** in the Selective Migration field to migrate all definitions.

      The utility migrates only customized definitions from the old knowledge base to the knowledge base in the new product region. Definitions that are not migrated are listed for further action.

   c. Press F6 (Action) to display the Migration Statistics panel.

4. After migration has completed, perform the following steps:

   a. Look for the components that have a non-zero value in the Not Copied column. (The utility does not copy a component if the component exists in the new knowledge base.)

      You might have customized some of these components and want to copy them.

   b. Enter **R** next to the components that you want to copy, and copy the records.

      The copying options depend on whether a component contains multiple objects (see page 151), such as a system image, or is the object itself (see page 152), such as a user profile definition.

5. After you have copied the components, exit the migration utility.

Note: If you do not want to move directly from your established regions to the new product regions, you can run the two releases in parallel.

How to Copy Multi-Object Components

Important! The products use template images $TEMPLAT 0001 through 0009 for the distribution of new and updated template definitions. Do not overwrite or replace them in the knowledge base.

If a component contains multiple objects, you operate on the component as a whole. You can perform the following actions:

- Merge the component in the old knowledge base into the component in this knowledge base. Only objects that do not exist in this knowledge base are migrated. Existing objects are unchanged.
- Overwrite the existing objects in this knowledge base with the objects in the old knowledge base. This operation does not affect any objects that are not in the old knowledge base.
- Replace the component in this knowledge base with the component in the old knowledge base.

Note: To migrate specific objects, see the activity log and use the RMMUAD05 messages to determine which objects have not been copied. You can then delete the appropriate objects and redo the migration by merging (to list only the RMMUAD05 messages in the log, enter **TEXT RMMUAD05**).

How to Copy Single-Object Components

For a component that is the object, do *one* of the following:

- Rename the component to create a copy of the component in this knowledge base using a different name.
- Overwrite the existing component in this knowledge base with the component in the old knowledge base.

Apply Updated Templates

After you have migrated your knowledge base, review the distributed templates.

Note: For information about changes to the distributed knowledge base, see the *Release Notes*.

Follow these steps:

1. Review the new templates to determine whether they are suitable for your requirements.
2. Enter **/RADMIN.T**.

   The Template Definition menu appears.
3. Select the appropriate option to list the definitions you want to review.
4. If you use any template image except the default (as specified in the OPSYSIDS parameter group), copy the required definitions to your working template images.

   Important! When you copy definitions from the distributed template images to your working template images, you can replace your working definition with a distributed definition of the same name. If you want to retain your working definition, make a copy of the definition beforehand.

   If you want to copy all the new definitions, perform the following steps:

   a. Copy the template image (enter **/RADMIN.T.I**).

   b. Enter **C** next to the distributed image to merge the distributed template image with the target image.

   c. Specify **YES** in the Enter 'YES' to OVERLAY Like-named Components field.

   If you want to copy changed definitions, copy them one by one.
5. If you want to apply a new template to all the resource definitions (in one or more system images) that use it, use the **AP** (Apply Template) action code. Specify **RESET** and **REPLACE** to ensure that the template is applied in full. If you want to retain an old definition, make a copy of the definition before you apply the template.

Managed CONNECT:Direct Region

Note: This section does not apply if you are migrating from r11.5, r11.6, or r11.7.

To enable monitoring of the CONNECT:Direct statistic exit, reapply the CDMGR template to each of your managed CONNECT:Direct region CDMGR resources.

If you have a customized copy of the $RFXPRMS NCL procedure (that is, if you do not use a CONNECT:Direct MCS user ID), you must also reapply your customized definitions.

Important! If modifications are required, copy the distributed member to the TESTEXEC data set for the region for modification.

Note: For more information, see the *Administration Guide*.

MODS Migration

Note: If you have not created your own MODS file, or individual MODS entities, do not perform this step.

MODS File

The format of the MODS file is unchanged. If you have a MODS file containing only user-defined MODS entities that you want to keep, copy the entire file to the file for the new region using the IDCAMS REPRO command.

Note: The MODSFILES parameter group in Customizer controls the allocation of MODS data sets. For more information, enter **/PARMS** on any panel, select $NM MODSFILES, and press F1 (Help).

Copy MODS Definitions

The following entities are stored in the MODS file:

- Application definitions
- Command definitions
- Criteria definitions
- Help definitions
- List definitions
- Menu definitions
- Message definitions
- Print Services definitions
- Report definitions
- Table definitions

Note: Help alias entities are no longer supported. If you have installation-defined help aliases, convert them to a help page, and code the .cp macro to copy the original member. For more information about help macros, see the *Managed Object Development Services Guide*.

To copy MODS entities from your previous MODS file to your current one

Important! Copy only installation-defined entities. Do not copy distributed entities.

1. Enter **/MODSADE** from any panel.

   The MODS : Entity Administration Menu appears.

2. Type **C** at the prompt, specify the information to copy your entities from the MODSUSR data set used by the old region to the MODSUSR data set used by this region, and press Enter.

   The MODS : Entity List panel appears.

3. Select the entities that you want to copy, and press Enter.

Panel Migration

Note: If you have not created your own panel file, or individual panel entities, do not perform this step.

Installation-Defined Panel Library

The format of the panel library is unchanged. If you have a panel library that contains only user-defined panel definitions that you want to keep, copy the entire file to the file for the new region. Use the IDCAMS REPRO command to copy the file.

Note: The allocation of panel data sets is controlled by the PANELLIBS parameter group in Customizer. For more information, enter **/PARMS** on any panel, select $NM PANELLIBS, and press F1 (Help).

Notes:

- You do not need to migrate installation-defined icon panels in the ICOPANL file. These panels are recreated during the knowledge base migration.
- The PANELLIBS parameter group in Customizer controls the allocation of panels data sets. For more information, enter **/PARMS** from any panel, select $NM PANELLIBS, and press F1 (Help).

Individual Panels

If you have installation-defined panel definitions in the same panel library as distributed panel definitions, you can copy the individual panel definitions to a panel library for the new region.

Important! Only copy installation-defined panel definitions. Do not copy distributed panel definitions.

Copy Panel Definitions

You must copy the required panel definitions to the panel library in your new product region.

Follow these steps:

1. Define a temporary panel library for your old panels using the following steps:
   a. Enter **/MODSAD.P**.

      The MODS : Panel Library Maintenance Menu appears.

   b. Select **L - Library Definitions**.

      The MODS : Library Definition Menu appears.

   c. Select **A - Allocate, Open, and Define Library**, and specify a library name (for example, OLDPANLS) and the data set name where your old panels are located. Optionally, specify a description.

      A temporary panels library is defined.

   d. Press F3 (Exit) to return to the MODS : Panel Library Maintenance Menu.
2. Copy the panels using the following steps:
   a. Select **C - Copy Panel(s)**, and specify the From library as the library name you just defined (for example OLDPANLS) and the To library as the target panels library name.

      If you leave the Panel Name field empty, the MODS : Panel Copy List appears, showing the panels in the From library.

   b. Use the **C** (Copy) or **R** (Replace) action against the panels you want to copy.

      Note: For more information, press F1 (Help).

   c. When all requested panels have been copied, press F3 (Exit) to return to the MODS : Panel Library Maintenance Menu.
3. Delete the temporary panel library definition using the following steps:
   a. Select **L - Library Definitions**.

      The MODS : Library Definition Menu appears.

   b. Select **U - Remove Library Definition, Close and Unallocate**, and specify the library name (for example OLDPANLS).

      The temporary panels library definition is removed.

Note: For more information about the MODS Panel Library Maintenance facility, see the *Managed Object Development Services Guide*.

OSCNTL File Migration

The format of the OSCNTL file is unchanged. If your existing OSCNTL file contains installation-defined ASN.1 maps, recompile them in the new product region.

Add the data set containing the map source to the COMMANDS concatenation in your new region. To compile a map, use the Compile Map option of Mapping Services. To access the Mapping Services Primary Menu, enter **/MAPMENU** from any panel.

Note: For more information about Mapping Services, see the *Managed Object Development Services Guide*.

Region Links to a Multisystem Network

If the region you are migrating is to be synchronized with other regions (see page 22), review the sections that follow.

Important! Unlink your existing region from the multisystem network before upgrading it. Then, relink the upgraded region to the multisystem network.

Important Considerations Prior to Linking

Consider the following before linking:

- The first region linked in migration mode must be used to perform all monitoring, command, and control functions across the entire multisystem environment.
- Migration mode does not support database synchronization between the old and new product regions. We recommend that you do not perform database maintenance while operating in migration mode.
- If database maintenance is unavoidable, make changes in an old region, and again in a new region so that all linked regions have the changes propagated to them.

Link in Migration Mode

You can link your first migrated product region to your existing product regions in migration mode.

Migration mode lets you migrate your existing product regions in an orderly fashion while maintaining visibility and control of your entire multisystem environment.

Notes:

- Apply the relevant maintenance to your product region, including checking software requirements (see page 13) and multisystem network migration (see page 23).
- If you have specified the NMSUP parameter in the RUNSYSIN member for your existing product region, specify this parameter in the RUNSYSIN member for your new product region. The NMSUP parameter can be used to decrease the number of unique background user IDs that must be defined if you are using an external security package.

  Note: For more information, see the *Security Guide*.

Follow these steps:

1. Enter **=/MADMIN.MM** in the new product region.
2. Specify the name of an existing focal region in your multisystem network.
3. Press F6 (Action).

Migrate Subsequent Regions

When a subsequent product region is migrated to the new release, you can use this procedure to link it to the first migrated product region.

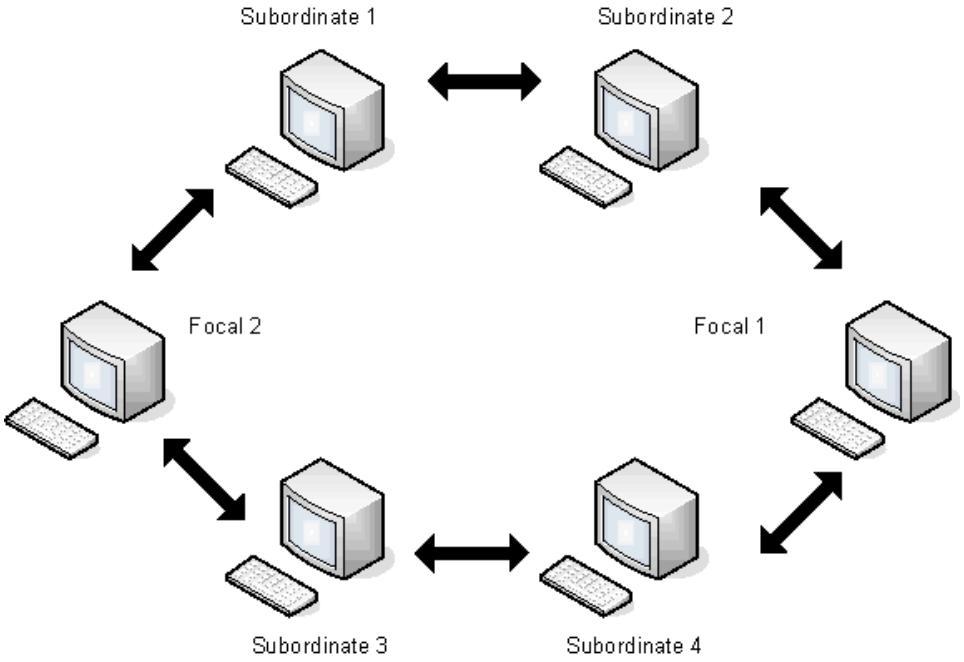
Follow these steps:

1. Enter **=/MADMIN.SD**.
2. Specify the first Release 12.1 product region as the remote region.
3. Specify the role for this region (focal or subordinate).
4. Press F6 (Action).
5. Repeat these steps for all of the remaining subordinate and focal regions. Migrate is the focal region that you first linked using migration mode last.

   This migration sequence retains the visibility to the multisystem network throughout the migration process.

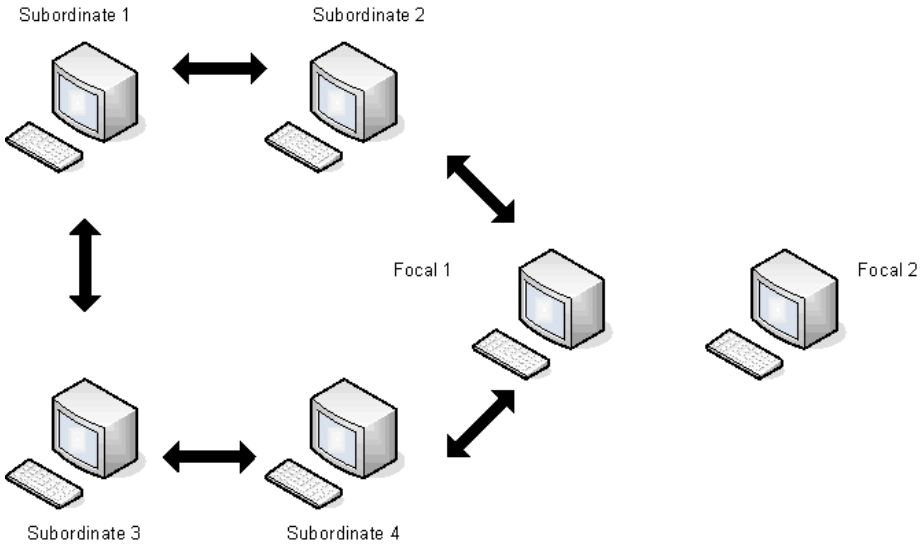
A Multisystem Network Migration Example

The following diagram shows a multisystem network with two focal regions and four subordinate regions:



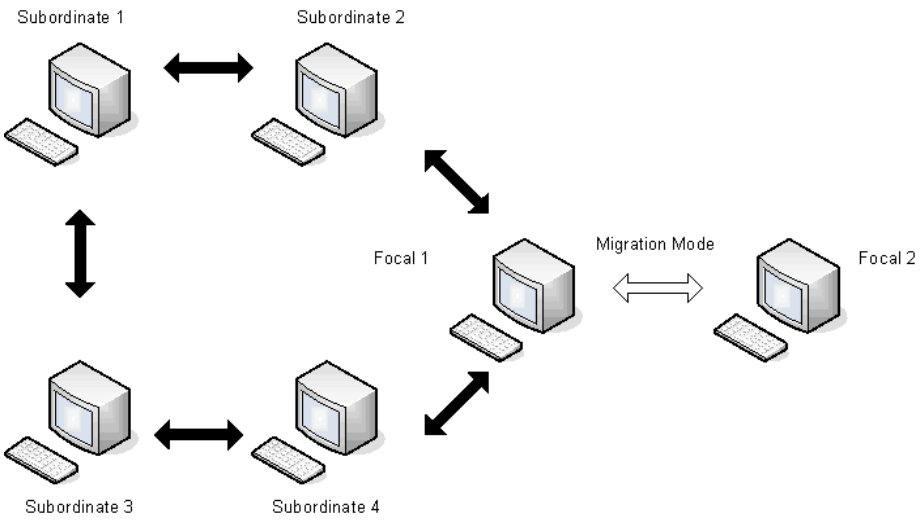
To migrate a multisystem network

1. Unlink Focal 2 from the existing multisystem network, as shown in the following diagram:

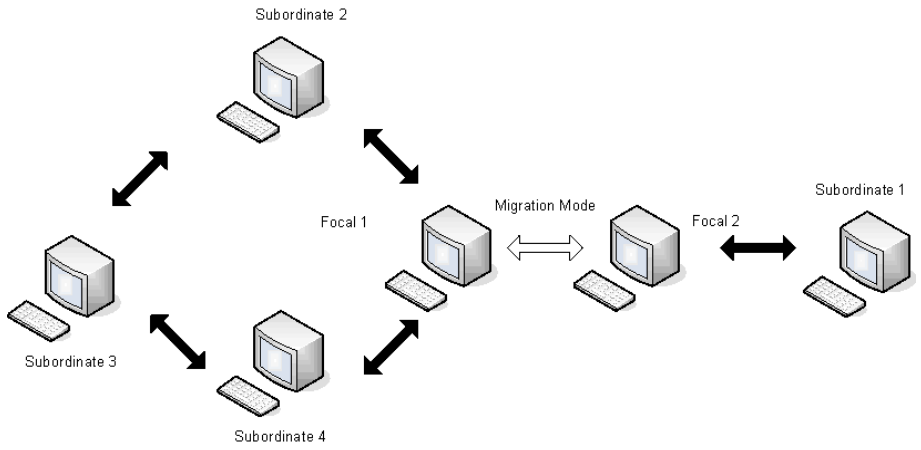


2. Upgrade Focal 2 to Release 12.1.

3. Link Focal 2 to Focal 1 in migration mode, as shown in the following diagram:



4. Unlink Subordinate 1 from the multisystem network and upgrade it to Release 12.1.
5. Link and synchronize Subordinate 1 to Focal 2, as shown in the following diagram:



6. Repeat Steps 4 and 5 for Subordinates 2-4 and Focal 1.

Scenario: Run Your Old Region in Parallel with the New Region

If your existing region uses global mode AUTOMATED to perform desired state management, you can ease your new product regions into production as described in this section.

If you do not want to move directly from your existing regions to the new regions, you can do the following:

1. Create an equivalent region for each of your existing regions, so that you have a mirrored pair on each system.
2. Initially, have the existing region performing automation, and the new region running in the global mode of MANUAL (that is, merely monitoring) but using the same data.
3. Gradually, reverse the global mode of operation between the mirrored pairs until the new regions are performing automation.

This suggested scenario provides you with a hot backup, letting you instantly swap from a new region to the established region if you experience any problems. You can then correct the problem before swapping back to try the new region again.

Appendix A: Worksheets

This section contains the following topics:

Preparation Worksheets

During the installation and setup process, you enter values that are used to do the following:

- Allocate data sets.
- Set initial parameters.
- Prepare for the use of your product.

You can print out the worksheets in this section to record the values needed for your site when installing the product.

Note: For information about data sets, see the *Reference Guide*.

Installation

This worksheet helps you gather information required for installation.

Job Information

Gather the following job information:

Batch job class

Record the value that your site uses here:

Class = _____

Default: A

Batch job class for tape mounts

(Tape only) Record the value that your site uses here:

Class = _____

Instructions to operator

Record any instructions here:

_____

_____

_____

Tape Unloading

If you are installing from tape, gather the following information related to tape unloading:

Tape unit

Record the value that your site uses for UNIT=*?device_in* here:

UNIT = _____

Example: CART

Tape volume serial number

Record the value that your site uses for VOL=SER=*?tapeser* here:

VOL=SER = _____

Example: C2D760

Tape expiry date

Record the values that your site uses here:

Expiry Date = _____

Example: 98000

Gather the following information related to the DASD to which the software is unloaded:

Data set prefix

Do not include the name of your planned product region.

Limits: Maximum 29 characters

Record the value that your site uses here:

?dsnpref = _____

DASD unit

Record the value that your site uses here:

?device_out = _____

DASD volume serial number

Record the value that your site uses here:

?volser = _____

Unload DASD

Gather the following information related to the DASD to which the software is unloaded:

Data set prefix

Do not include the name of your planned product region.

Limits: Maximum 29 characters

Record the value that your site uses here:

?dsnpref = _____

DASD unit

Record the value that your site uses here:

?device_out = _____

DASD volume serial number

Record the value that your site uses here:

?volser = _____

Installation Parameters

Gather the following information related to installation parameters:

Allocation Parameters

Use these prefixes for high-level qualifiers for the different data set groups.

Record the values that your site uses here:

SMP/E Target

Data Set Prefix = _____

Management class = _____

Storage class = _____

Volume serial number = _____

Unit = _____

SMP/E Distribution

Data Set Prefix = _____

Management class = _____

Storage class = _____

Volume serial number = _____

Unit = _____

SMP/E Libraries

Data Set Prefix = _____

Management class = _____

Storage class = _____

Volume serial number = _____

Unit = _____

SMP/E CSI

Data Set Prefix = _____

Management class = _____

Storage class = _____

Volume serial number = _____

SMPTLIB

Data Set Prefix = _____

Volume serial number = _____

Unit = _____

Language Environment Parameters

Record these language environment values:

Language Environment link-edit input 2

Record the value that your site uses here:

SCEEBND2 = _____

Default: CEE.SCEEBND2

Language Environment link-edit input

Record the value that your site uses here:

SCEELIB = _____

Default: CEE.SCEELIB

Language Environment library

Record the value that your site uses here:

SCEELKED = _____

Default: CEE.SCEELKED

System Programmer C routines

Record the value that your site uses here:

SCEESPC = _____

Default: CEE.SCEESPC

IBM macros

Record the value that your site uses here:

MODGEN = _____

Default: SYS1.MODGEN

Data set that contains the GIMZPOOL member

Record the value that your site uses here:

_____

Default: SYS1.MACLIB

Region Setup

This worksheet helps you gather information required for region setup.

SOLVE Subsystem Interface Region

Gather the following information related to the SOLVE Subsystem Interface region:

Name of the SOLVE SSI started task (*ssiname*)

Record the value that your site uses here:

_____

Default: SOLVESSI

Name of the SOLVE SSI SYSIN member

This member contains control statements for starting the SOLVE SSI.

Record the value that your site uses here:

SYSIN = _____

Default: SSISYSIN

Name of the optional SOLVE SSI parameter member

This member contains startup parameters for the SOLVE SSI. If omitted, startup parameters are included in the SOLVE SSI SYSIN member previously described.

Record the value that your site uses here:

PARAMETER = _____

Subsystem ID for a SOLVE SSI started task

Record the value that your site uses here:

SSID = _____

Default: SOLV

Prefix for SOLVE SSI data sets

Record the value that your site uses here:

_____

Default: *dsnpref*

Product Region

Gather the following information about the product region:

Product region started task name (*rname*)

Record the value that your site uses here:

_____

Default: NM

Product region SYSIN member name

Record the value that your site uses here:

SYSIN = _____

Default: RUNSYSIN

Primary VTAM ACB name for the product region

Record the value that your site uses here:

PRI = _____

Default: NM

Mixed case passwords

Specifies whether case is preserved (YES) or forced to uppercase (NO):

___

Default: NO

Security exit setting (NO|PARTSAF|NMSAF|NMSAFF|*lmname*)

Record the value that your site uses here:

SEC = _____

Default: NO

Note: For more information about setting your security exit, see the *Security Guide*.

SYSOUT

Specifies SYSOUT subparameters. You can specify a class, a writer, and a form.

_____

Default: *

Prefix for VSAM data sets local to the product region

Record the value that your site uses here:

_____

Default: *dsnpref.rname*

Prefix for sequential data sets local to the product region

Record the value that your site uses here:

_____

Default: *dsnpref.rname*

Prefix for TESTEXEC

Record the value that your site uses here:

_____

Default: *dsnpref.rname*

Prefix for UAMS or full name of existing UAMS

Record the value that your site uses here:

_____

Default: *dsnpref*

Prefix for shareable VSAM data sets

Record the value that your site uses here:

_____

Default: *dsnpref*.NMC1

Prefix for shareable PARMLIB data sets

Record the value that your site uses here:

_____

Default: *dsnpref*.NMC1.PARMLIB

AOM subsystem interface ID

Record the value that your site uses here:

AOMSSID = _____

Default: Domain ID of the region

Note: Verify that this value does not conflict with other subsystems. The AOM subsystem interface enables system message flow to the region.

AOM message suppression character

Record the value that your site uses here:

_____

Default: /

AOM SSI command prefix string

Record the value that your site uses here:

_____

Default: d*omain_id>*

Note: If you use a command string prefix for other tasks, verify that this value is not in conflict with them.

External application ACB pool names

Full-screen terminal prefix

Record the value that your site uses here:

_____

Default: NMMAF

LU1 terminal prefix

Record the value that your site uses here:

_____

Default: NMMAV

NMFTP Monitor

Gather the following NMFTP Monitor information:

Name of the NMFTP Monitor started task(*nmftname*)

Record the value that your site uses here:

_____

Default: NMFTPMON

Name of the NMFTP Monitor SYSIN member

Record the value that your site uses here:

SYSIN = _____

Default: FTPSYSIN

Name of the NMFTP Monitor parameter member

This member contains startup parameters for the NMFTP monitor. If omitted, startup parameters are included in the NMFTP Monitor SYSIN member previously described.

Record the value that your site uses here:

PARAMETER = _____

Subsystem ID for an NMFTP Monitor started task

Record the value that your site uses here:

SSID = _____

Default: NFTP

Prefix for NMFTP Monitor data sets

Record the value that your site uses here:

_____

Default: *dsnpref*

VTAM Definitions

Gather the following information related to VTAM definitions:

VTAM major node name

Record the value that your site uses here:

_____

Default: VTAMAPPL

System macro library

Record the value that your site uses here:

_____

Default: SYS1.MACLIB

VTAM network definitions library

Record the value that your site uses here:

_____

Default: SYS1.VTAMLST

VTAM macro library

Record the value that your site uses here:

_____

Default: SYS1.SISTMAC1

VTAM load library

Record the value that your site uses here:

_____

Default: SYS1.VTAMLIB

(Optional) External Interface Package (EIP) ACB Prefix

Record the value that your site uses here:

_____

Default: NMTSO

TCP/IP Setup

Gather the TCP/IP setup information in the following worksheet:

Name and release of the TCP/IP software

Record the value that your site uses here:

_____

IBM Communications Server

Gather the following information related to the IBM Communications Server:

Started task user ID for product region

Record the value that your site uses here:

_____

Started task user ID for SOLVE SSI

Record the value that your site uses here:

_____

Started task user ID for NMFTP Monitor region

Record the value that your site uses here:

_____

PW.SRC data set name

Record the value that your site uses here:

_____

Default: /etc/pw.src

Stack IP address

Record the value that your site uses here:

_____

PROFILE.TCPIP data set name

Record the value that your site uses here:

_____

TCPIP.DATA data set name

Record the value that your site uses here:

_____

Name of the FTP startup JCL procedure

Record the value that your site uses here:

_____

CA TCPaccess CS

Gather the following information related to the CA TCPaccess CS:

IJTCFG*xx* member

Record the value that your site uses here:

_____

DNRALC*xx* member

Record the value that your site uses here:

_____

DNRHST*xx* member

Record the value that your site uses here:

_____

DNRCFG*xx* member

Record the value that your site uses here:

_____

SNMCFG*xx* member

Record the value that your site uses here:

_____

CA TCPaccess CS subsystem ID

Record the value that your site uses here:

_____

Default: ACSS

CA TCPaccess CS Job Name

Record the value that your site uses here:

_____

PARM data set name

Record the value that your site uses here:

_____

File Transfer Setup

Gather the File Transfer setup information in the following worksheet:

CA XCOM

Name of the CA XCOM Data Transport startup JCL procedure

Record the value that your site uses here:

_____

Name of the Default Options Table

Record the value that your site uses here:

_____

CONNECT:Direct

CONNECT:Direct for OS/390 user ID and password for the region

Record the value that your site uses here:

_____

Concatenation of CONNECT:Direct PROCESS files

Record the value that your site uses here:

_____

Name of the CONNECT:Direct startup JCL procedure

Record the value that your site uses here:

_____

CONNECT:Direct for OS/390 initialization parameter

STATISTICS.EXIT

Record the value that your site uses here:

_____

Name of user exit, if you are using an existing exit

Record the value that your site uses here:

_____

CONNECT:Mailbox

Name of the CONNECT:Mailbox VSAM administration file

Record the value that your site uses here:

_____

Name of the CONNECT:Mailbox startup JCL procedure

Record the value that your site uses here:

_____

CONNECT:Mailbox for MVS initialization parameters

Name of user exit, if you are using an existing exit

Record the value that your site uses here:

_____

Name of the ODF file

Record the value that your site uses here:

_____

FTP

SAF qualifier for access control

Record the value that your site uses here:

_____

Startup Tasks

This worksheet helps you gather information related to the startup tasks.

Initial administrator user ID

Record the value that your site uses here:

_____

Initial administrator password

Record the value that your site uses here:

_____

Port number for inbound connections (if you intend to use TCP/IP as a transport method for INMC links)

Record the value that your site uses here:

_____

Default: 2636

Port number for WebCenter

Record the value that your site uses here:

_____

Default: NONE

Post-installation Worksheet

After you have completed the installation and setup processes, you can record the data set names generated by the Install Utility for future reference.

You can print out the following worksheet now, and record this information as you progress through this guide.

Installation data set

Record the value generated by the Install Utility here:

_____

Default: *dsnpref*.NMC1.CC2DJCL

Installation JCL data set

Record the value generated by the Install Utility here:

_____

Default: *dsnpref*.NMC1.INSTALL.JCL

SOLVE SSI setup JCL data set

Record the value generated by the Install Utility here:

_____

Default: *dsnpref*.NMC1.*ssiname*.JCL

Product region setup JCL data set

Record the value generated by the Install Utility here:

_____

Default: *dsnpref*.NMC1.*rname*.JCL

NMFTP Monitor region setup JCL data set

Record the value generated by the Install Utility here:

_____

Default: *dsnpref*.NMC1.*nmftname*

More information:

Specify the NMFTP Monitor Region (see page 95)

VTAM JCL data set

Record the value generated by the Install Utility here:

_____

Default: *dsnpref*.NMC1.VTAM.JCL

Appendix B: Defining UNIX System Services Authorization

This section contains the following topics:

USS Authorization Requirements

To complete this task you must have the following:

- Administrative access to your security package
- OMVS shell write privileges

To authorize a user, you can use one of the following:

- Default OMVS segment
- Specific OMVS segment

More information:

Define UNIX Authorization for Your Started Task User IDs (see page 99)

Set Up OMVS Segment

Use this procedure to set up an OMVS segment.

Follow these steps:

1. Assign an OMVS UID number to each user ID. If your security administrator does *not* have a policy for assigning OMVS UID numbers, use a unique number.

   Note: For more information about OMVS UID numbers, see the IBM *UNIX System Services Planning* guide.

2. Define the OMVS segment for the user. For a user ID *uuuuuuu* and UID number *nnn*, enter the following commands:

   - For CA ACF2 for z/OS systems, enter the following commands:

     ```
     SET PROFILE(USER) DIV(OMVS)
     INSERT uuuuuuu UID(nnn) HOME(/) PROGRAM(/bin/sh)
     ```

   - For CA Top Secret for z/OS systems, enter the following commands:

     ```
     TSS ADD(uuuuuuu) HOME(/) OMVSPGM(/bin/sh) UID(nnn)
     GROUP(OMVSGRP)
     ```

   - For RACF systems, enter the following command:

     ```
     ALU uuuuuuu OMVS(UID(nnn) HOME(/) PROGRAM(/bin/sh))
     ```

   Note: The OMVS segment must contain a home directory (HOME) and a login shell (PROGRAM or OMVSPGM).

3. Complete this process for each user ID that you want to authorize. To confirm the contents of the OMVS segment, enter the following commands:

   - For CA ACF2 for z/OS systems, enter the following commands:

     ```
     SET PROFILE(USER) DIV(OMVS)
     LIST uuuuuu
     ```

   - For CA Top Secret for z/OS systems, enter the following command:

     ```
     TSS LIS(uuuuuu) DATA(ALL)
     ```

   - For RACF systems, enter the following command:

     ```
     LISTUSER uuuuuu OMVS NORACF
     ```

4. Assign a home directory to each user ID, and ensure that it exists and that the UID has at least READ access to it.

   You can use the UNIX root directory (/) as shown in Step 2, or you can use a customized home directory name.

   For example, to set up a directory named /u/name for UID*nnn*, issue the following commands in the OMVS UNIX shell:

   ```
   mkdir /u/name
   chown nnn /u/name
   chmod 777 /u/name
   ```

5. Confirm the owner and access to the directory by using the following command:

   ```
   ls -ld /u/name
   ```

   The following result appears:

   ```
   drwxrwxrwx   2 user  group  8192 Sep  31 14:58 /u/name
   ```

Appendix C: Tape Format

The following topics provide information about the function modification identifiers (FMIDs) and details about the format of the tapes that you receive to install your product.

Note: The tapes contain all files for all products in the CA Mainframe Network Management family of products. Only some of the files apply to your product, and therefore, only the files necessary to install your product are unloaded.

This section contains the following topics:

FMID Descriptions

This product has the following FMIDs, which are codes that identify the release levels of a product:

CC11C10

Is the FMID for TCP/IP Services.

CC17C10

Is the FMID for File Transfer Services.

CC18C10

Is the FMID for SNA Automation Services.

CC2AC10

Is the FMID for SNA Services.

CC2D76E

Is the FMID for PDSE Services (ME).

CC2D76H

Is the FMID for Health Checker (HC).

CC2D76R

Is the FMID for ReportCenter.

CC2D760

Is the FMID for Management Services (MS).

CDEMC10

Is the FMID for FTS Services.

Format of Cartridge VOLSER C2D760

This table lists the file sequence numbers, data set names, and data set contents for the first tape.

Files	DSN	Contents
1	CAI.SAMPJCL	Installation and maintenance JCL members
2	CAI.SMPMCS	Modification control statements (MCSs) containing functions and all published SYSMODs for those functions
3	CAI.CC2D76H.F1	++DATA for CC2D76H (RECFM=FB)
4	CAI.CC2D76H.F2	++EXEC for CC2D76H
5	CAI.CC2D76H.F3	++MSG for CC2D76H
6	CAI.CC2D76H.F4	++PNL for CC2D76H
7	CAI.CC2D76H.F5	++SAMP for CC2D76H
8	CAI.CC2D76H.F6	++SKL for CC2D76H
9	CAI.CC2D76H.F7	++SKL for CC2D76H
10	CAI.CC2D76H.F8	NCAL-linked MODS for CC2D76H
11	CAI.CC2D760.F1	++CLIST for CC2D760
12	CAI.CC2D760.F2	++DATA for CC2D760 (RECFM=VB)
13	CAI.CC2D760.F3	++MAC for CC2D760 (Assembler)
14	CAI.CC2D760.F4	++MAC for CC2D760 (Assembler)
15	CAI.CC2D760.F5	++MAC for CC2D760
16	CAI.CC2D760.F6	++MAC for CC2D760 (OML)
17	CAI.CC2D760.F7	++MAC for CC2D760 (REXX)
18	CAI.CC2D760.F8	NCAL-linked MODS for CC2D760
19	CAI.CC2D760.F9	NCAL-linked MODS for CC2D760
20	CAI.CC2D760.F10	++PROGRAM for CC2D760
21	CAI.CC2D760.F11	++SAMP for CC2D760

Files	DSN	Contents
22	CAI.CC2D760.F12	++SAMP for CC2D760
23	CAI.CC2D760.F13	++SAMP for CC2D760
24	CAI.CC2D760.F14	++SAMP for CC2D760
25	CAI.CC2D760.F15	++SAMP for CC2D760
26	CAI.CC2D760.F16	++SRC for CC2D760
27	CAI.CC11C10.F1	++DATA for CC11C10 (RECFM=VB)
28	CAI.CC11C10.F2	++MAC for CC11C10
29	CAI.CC11C10.F3	++MAC for CC11C10 (OML)
30	CAI.CC11C10.F4	XML data for CA MSM
31	CAI.CC17C10.F1	++DATA for CC17C10 (RECFM=VB)
32	CAI.CC17C10.F2	++MAC for CC17C10
33	CAI.CC17C10.F3	++MAC for CC17C10 (Assembler)
34	CAI.CC17C10.F4	++MAC for CC17C10 (OML)
35	CAI.CC17C10.F5	XML data for CA MSM
36	CAI.CC17C10.F6	++SAMP for CC17C10
37	CAI.CC17C10.F7	++SAMP for CC17C10
38	CAI.CC17C10.F7	++SAMP for CC17C10
39	CAI.CC18C10.F1	++DATA for CC18C10 (RECFM=FB)
40	CAI.CC18C10.F2	++DATA for CC18C10 (RECFM=VB)
41	CAI.CC18C10.F3	++MAC for CC18C10
42	CAI.CC18C10.F4	++MAC for CC18C10 (OML)
43	CAI.CC18C10.F5	XML data for CA MSM
44	CAI.CC2AC10.F1	++DATA for CC2AC10 (RECFM=VB)
45	CAI.CC2AC10.F2	++MAC for CC2AC10
46	CAI.CC2AC10.F3	++MAC for CC2AC10 (OML)
47	CAI.CC2AC10.F4	XML data for CA MSM
48	CAI.CC2AC10.F5	++SAMP for CC2AC10
49	CAI.CDEMC10.F1	++CLIST for CDEMC10
50	CAI.CDEMC10.F2	++DATA for CDEMC10 (RECFM=VB)
51	CAI.CDEMC10.F3	++MAC for CDEMC10

Files	DSN	Contents
52	CAI.CDEMC10.F4	++MAC for CDEMC10 (OML)
53	CAI.CDEMC10.F5	++MSG for CDEMC10
54	CAI.CDEMC10.F6	++PAN for CDEMC10
55	CAI.CDEMC10.F7	XML data for CA MSM
56	CAI.CC2D76E.F1	NCAL-linked MODS for CC2D76E
57	CAI.CC2D76R.F1	++HFS for CC2D76R
58	CAI.CC2D76R.F2	++SHELLSCR for CC2D76R

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