CA NetMaster® Network Management for SNA

Installation Guide

r12

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CA Product References

This document references the following CA products:

- CA NetMaster® Network Management for SNA (CA NetMaster NM for SNA)
- CA NetMaster® Network Automation (CA NetMaster NA)
- CA NetMaster® Network Management for TCP/IP (CA NetMaster NM for TCP/IP)
- CA NetMaster® File Transfer Management (CA NetMaster FTM)
- CA SOLVE:FTS
- CA NetSpy™ Network Performance (CA NetSpy)
- CA SOLVE:Operations® Automation (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® Socket Management for CICS (CA NetMaster SM for CICS)
- CA Common Services™ for z/OS (CA Common Services for z/OS)
- CA Common Inventory Service
- CA Auditor for z/OS (CA Auditor)
- CA ACF2™ for z/OS (CA ACF2 for z/OS)
- CA Top Secret® for z/OS (CA Top Secret for z/OS)
- CA SYSVIEW® Performance Management (CA SYSVIEW)

Contact CA

Contact Technical Support

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

- 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

Provide Feedback

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

If you would like to provide feedback about CA product documentation, complete our short customer survey, which is also available on the CA Support website, found at http://ca.com/docs.

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Chapter 1: Overview

This guide describes how to install and implement CA NetMaster NM for SNA.

This section contains the following topics:

Audience Qualifications (see page 11)
How the Installation Process Works (see page 12)
Remaining Documentation (see page 12)
CA Mainframe Network Management Family of Products (see page 13)

Audience Qualifications

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

The following steps describe the installation process:

1. Prepare for the installation by confirming that your site meets all installation requirements.
2. Acquire the product using one of the following methods:
   - CA MSM

     Note: If you do not have CA MSM, you can download it from the Download Center at CA Support Online. Follow the installation instructions in the *CA Mainframe Software Manager Product Guide*, available on the Documentation page of https://support.ca.com/.
   - Pax-Enhanced Electronic Software Delivery (ESD)
   - Tape
3. Install your product based on your acquisition method.
4. Apply maintenance, if applicable.
5. Start your product.
6. Deploy your product.
7. Configure the minimum settings for your product.

Remaining Documentation

The CA Technical Support site provides access to instructional documents that showcase your software and provide detailed explanations about its comprehensive, feature-rich components.

From the Documentation link, you can download the guides associated with your product individually or as a zip file. The zip file contains a bookshelf and index that let you access, search, and navigate the documentation.

More information:

Contact CA (see page iv)

CA Mainframe Network Management Family of Products

Your product is a member of the CA Mainframe Network Management family of products, which, collectively, are designed to address the management issues of mixed SNA and TCP/IP environments by providing monitoring, diagnostic, and performance management capabilities for mainframe-based TCP/IP and SNA networks.

The CA Mainframe Network Management family consists of the following products:

- CA NetMaster NM for TCP/IP provides mainframe-based TCP/IP network management.
- CA NetSpy is a network performance application for SNA networks.
- CA NetMaster NM for SNA provides mainframe-based SNA network management.
- CA NetMaster NA provides SNA resource automation.
- CA SOLVE:FTS provides a mainframe-to-mainframe file transmission service.
- CA NetMaster FTM provides management of file transfer activity, and the associated environment and infrastructure.
- CA NetMaster SM for CICS manages CICS socket-based connections by focusing on CICS usage, thereby providing an enhanced understanding of these connections to enable better diagnosis of CICS connection problems.
- CA NSM NetMaster Option manages mainframe network services from the CA NSM platform. Mainframe-based TCP/IP, SNA, and file transfer resources can be monitored and controlled using the standardized CA NSM presentations.

You can use your product in conjunction with any of these products, thereby letting you manage your networks with maximum efficiency and flexibility.

Chapter 2: Preparing for Installation

This chapter provides the following:

- An overview of the processes required to get started
- Instructions about how to prepare your system installation
- Advice about how to prepare for migration

This section contains the following topics:

Multiple Product Installation and Setup (see page 15)
Software Requirements (see page 15)
CA Common Services Requirements (see page 16)
Security Requirements (see page 17)
Storage Requirements (see page 18)
How CA LMP Statements Are Coded (see page 18)
Preparation Worksheets (see page 21)
Post-installation Worksheet (see page 30)
Migration Preparation (see page 31)

Multiple Product Installation and Setup

You can install multiple CA Mainframe Network Management products 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.

Note: You cannot set up multiple products with CA NetSpy.

Software Requirements

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

Software Requirements

Ensure that you have the appropriate operating environment. Your system must have a currently-supported version of z/OS.

Migration Mode

If you intend to use migration mode (see page 33) to link an r12 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 library must be accessible to your product's 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 NM for SNA:

- CAIRIM
- CA LMP
- CAISDI Service

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

Security Requirements

While you are preparing your product for startup, you need access to the following security-controlled data sets or libraries on your system:

1. Ensure that you have READ authority to data sets with a prefix of CAI.*. All tape data sets use this prefix.
2. Ensure that you have UPDATE authority to the following data sets or libraries:
   - Started task PROCLIB that stores the run-time JCL, 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
3. 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 have knowledge of your products for your auditors
4. 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.

Storage Requirements

CA NetMaster NM for SNA has the following 3390 DASD space requirements:

- If you are using ESD, the following spaces are required:
  - 340 MB of z/OS UNIX file system space for downloading files
  - 530 cylinders for the unpacked files
- For installation and setup, the following spaces are required:
  - Installation = 990 cylinders
  - IBM System Modification Program Extended (SMP/E) libraries = 280 cylinders
  - Region setup = 800 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 Administrator 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).

YX 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(YX) 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.

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

Gather the installation information in the following worksheet:

JOBCARD Information

Gather the following JOBCARD information:

Batch job class

Record the value that your site uses here:

Class = _____

Default: A

Batch job class for tape mounts

(Not required for ESD) Record the value that your site uses here:

Class = _____

Instructions to operator

Record any instructions here:

_____

_____

_____

Unload Tape

(Optional) If you are installing from tape, gather the following information related to tape unloading:

Tape unit

Record the value that your site uses here:

?device-in = _____

More information:

Tape Format (see page 253)

Unload DASD

Gather the following information related to unload DASD:

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:

Prefix used for ESD Unzipped Data Sets

(Optional) If your product or maintenance was delivered using ESD, record the data set prefix that your site uses here:

Data set prefix= _____

Tape information

(Optional) If you are installing from tape, record the values that your site uses here:

Unit = _____

Default: CART

Expiry Date = _____

Default: 98000

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 library

Record the value that your site uses here:

SCEELKED = _____

Default: CEE.SCEELKED

Language Environment link-edit input

Record the value that your site uses here:

SCEELIB = _____

Default: CEE.SCEELIB

Language Environment link-edit input 2

Record the value that your site uses here:

SCEEBND2 = _____

Default: CEE.SCEEBND2

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

Gather the region setup information in the following worksheet:

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 related to 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):

XOPT = ___

Default: NO

Security exit setting (NO|PARTSAF|NMSAF|*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*.

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*.NMC0

Prefix for shareable PARMLIB data sets

Record the value that your site uses here:

_____

Default: *dsnpref*.NMC0.PARMLIB

AOM subsystem interface ID

Record the value that your site uses here:

AOMSSID = _____

Default: *Domain ID*

Note: Ensure 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: *DomainId>*

Note: If you use a command string prefix for other tasks, ensure 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

(Optional) Primary Program Operator (PPO) ACB Name

Record the value that your site uses here:

_____

Default: NMPPO

(Optional) Communications Network Management (CNM) ACB Name

Record the value that your site uses here:

_____

Default: NMCNM

(Optional) Session Awareness (SAW) ACB Name

Record the value that your site uses here:

_____

Default: NMNTS

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

Startup Tasks

Gather information related to the startup tasks in the following worksheet:

Initial administrator user ID

Record the value that your site uses here:

_____

Initial administrator password

Record the value that your site uses here:

_____

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 the remaining chapters in this guide.

Installation data set

Record the value generated by the Install Utility here:

_____

Default: *dsnpref*.NMC0.CAIJCL

Installation JCL data set

Record the value generated by the Install Utility here:

_____

Default: *dsnpref*.NMC0.INSTALL.JCL

SOLVE SSI setup JCL data set

Record the value generated by the Install Utility here:

_____

Default: *dsnpref*.NMC0.*ssiname*.JCL

More information:

Specify the SOLVE SSI Region (see page 195)

Product region setup JCL data set

Record the value generated by the Install Utility here:

_____

Default: *dsnpref*.NMC0.*rname*.JCL

More information:

Specify the Product Region (see page 196)

VTAM JCL data set

Record the value generated by the Install Utility here:

_____

Default: *dsnpref*.NMC0.VTAM.JCL

More information:

Create VTAM Definitions and Tables (see page 199)

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 211)
Completing Migration (see page 233)

Parameter Group Values

If you do not use a region initialization (INI) file and want to migrate your previous parameter group values to your r12 product region, record these values now because you will need 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! You must 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, you need to 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, and you want to keep a copy of an old distributed template (for example, you might have modified it), copy this template to a new template image version above 0009.

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 15)

How to Prepare for Multisystem Network Migration

If you are upgrading multiple synchronized regions to r12, perform the following steps to plan for it.

1. Ensure 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 to r12 and perform migration tasks.
4. After you have completed all of the steps in the remaining chapters in this guide, link your new focal region in migration mode (see page 243) 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 need to perform knowledge base migration for the first region because the focal knowledge base contains details of all linked regions.
- You only need to 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 CA Support Online. Follow the installation instructions in the *CA Mainframe Software Manager Product Guide*, available on the Documentation page of https://support.ca.com/.

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

This section contains the following topics:

CA MSM Documentation (see page 35)
Getting Started Using CA MSM (see page 36)
Acquiring Products (see page 45)
Installing Products (see page 51)
Maintaining Products (see page 57)
Setting System Registry (see page 69)
Deploying Products (see page 97)

Important! During installation, use the CAIT66 target zone and the CAID66 distribution zone. The setup process requires that these zone names have been used.

Note: The following procedures are for CA MSM r3. If you are using CA MSM r2, see the ca *CA Mainframe Software Manager r2 Product Guide*.

CA MSM Documentation

This guide includes the required procedures to install your product. If you want to learn more about the full functionality of CA MSM, see the *CA Mainframe Software Manager Product Guide* in the Download Center on https://support.ca.com/.

Note: To ensure you have the latest version of these procedures, go to your product's documentation page on Customer Support Online and download the latest version of this guide.

Getting Started Using CA MSM

This section includes information about how to get started using CA MSM.

How to Use CA MSM: A Scenario

Your organization recently deployed CA MSM to simplify the installation of CA products and unify their management. The organization has also licensed a new CA product. In addition, you have a number of existing CSIs from previously installed products. The first scenario shows how you can use CA MSM to acquire and install the new product; The second scenario shows how you can use CA MSM to deploy the product to your target systems; and the third scenario shows how you can use CA MSM to maintain products already installed in your environment.

Acquire and Install a New Product

You want to use CA MSM to acquire and install the new CA product.

1. 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 through the CA Support website.
2. To access CA MSM (see page 44), you require its URL. You can get the URL from your site's 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 CA Support Online credentials. This account enables you to download product packages from CA.
3. 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 you want to acquire, update the catalog (see page 45). CA MSM refreshes the catalog through CA Support Online using the site IDs associated with your CA Support Online credentials.
4. After you find your product in the catalog, you can download the product installation packages (see page 46). CA MSM downloads (acquires) the packages (including any maintenance packages) from the CA FTP site.
5. After you acquire the product installation packages, you can find the packages at the product gen level you want. From there, you can install your product (see page 51). A wizard guides you through the installation process. A CSI is created for the installed product as part of the installation process. You also can install a product to an existing CSI.

Deploy a Product using the Wizard

CA MSM Deployment Services takes installed software in combination with other software and deploys it to systems in your enterprise. That is, deployments copy data on disk from one place to another. It takes the data (the "what") from here (the "source") and moves it to there ("the target"). The CA MSM Deployment Service is the means (the "way").

You can use the following steps to build you first deployment:

1. Find out what systems you have at your enterprise.
2. Add systems to system registry and validate them.
3. Create remote credentials (see page 95) for those systems in CA MSM.
4. Add FTP (see page 92) information along with data destination information to each system registry entry.
5. Create a methodology (see page 124).
6. Use the deployment wizard (see page 98) to build a deployment.
7. If you need to deploy other products to the systems defined above using the same methodologies, repeat step 6.

System Registration

Each system in the enterprise that you will be deploying products to will need to be added to the CA MSM system registry and then validated. A deployment can only be sent to a validated system. This procedure is called registering your system.

Note: You will need to perform this procedure for each system in your enterprise. For example, if you have five systems at your enterprise, you will need to perform this procedure five times.

Note: After a system is registered, it does not need to be registered again, but you can update the data in the different registration fields and re-register your system.

1. Remote Credentials

   Set up your remote credentials. This is the place you provide a user ID and password to the remote target system were the deployment will copy the installed software to. Remote credentials are validated during the deployment process. You will need the following information:

   - remote user ID
   - remote system name
   - password
   - authenticated authorization before creating a remote credential.

   Your system administrator can help you with setting up your remote credentials.

2. System Registry

   The CA MSM system registry is a CA MSM database, where CA MSM records information about your systems that you want to participate in the deployment process. There is one entry for each system that you register. Each entry consists of three categories of information: general, FTP locations, and data destinations.

   Each system registry entry is one of four different system types. Two reflect real systems, and two are CA MSM defined constructs used to facilitate the deployment process. The two real system types are Non-Sysplex System and Sysplex Systems. The two CA MSM defined system types are Shared DASD Clusters and Staging Systems.

   Non-Sysplex Systems

   The *Non-Sysplex* is a stand-alone z/OS system that is not part of a sysplex system.

   Note: During system validation, if it is found to be part of a Sysplex, you will be notified and then given the opportunity to have that system automatically be added to the Sysplex which it is a member of. This may cause the creation of a new Sysplex system. If you do not select the automatic movement to the proper Sysplex, this system will be validated and cannot be deployed.

   Sysplex or Monoplex Systems

   The *Sysplex* (SYStem comPLEX) is the IBM mainframe system complex which is a single logic system running on one or more physical systems. Each of the physical systems that make up a Sysplex, is often referred to as a "member" system.

   A M*onoplex system* is a sysplex system with only one system assigned.

   Note: Monoplexes are stored in the Sysplex registry tree but with the name of the Monoplex System and not the Monoplex Sysplex Name. For example, a system XX16 defined as a Monoplex, with a Sysplex name of LOCAL. It will be depicted in the System Registry as a Sysplex with the name of XX16. This sysplex will contain one system: XX16.

   This procedure was created to help customers that have Monoplexes with the same Sysplex name (for example: LOCAL). Instead of showing multiple LOCAL Sysplex entries which would need to be expanded to select the correct Monoplex system, the CA MSM System Registry shows the actual Monoplex System name at the top level Sysplex Name.

   Shared DASD Clusters

   A *Shared DASD Clusters* system is a CA MSM deployment services term. It is a set of systems that shared DASD and it can be composed of Sysplex and/or Non-Sysplex systems. A Staging System cannot be part of a Shared DASD Cluster.

Staging Systems

A *Staging system* is a CA MSM deployment services term. It is a virtual system. A Staging system deploys the deployment to the computer where the CA MSM driving system is located. To use a Staging system, the CA MSM driving system must be registered in the CA MSM System Registry.

Note: A Staging system can be useful in testing your deployments, and learning deployment in general. It can also be used if your target systems are outside a firewall. For example, deploy to a Staging system and then manually copy the deployment to tape.

3. FTP Location Information

   An FTP location must be defined for every system. They are used to retrieve the results of the deployment on the target system (regardless if the deployment was transmitted through FTP or using Shared DASD). They are also used if you are moving your deployments through FTP. You will need the URI (host system name), port number (default is 21), and the directory path, which is the landing directory. The landing directory is where the data is temporarily placed during a deployment.

4. Data Destinations

   A data destination must be defined for every system. The data destination is how you tell CA MSM which technique to use to transport the deployment data to the remote system. The two choices are FTP and Shared DASD. When FTP is selected as the transport mechanism, the deployment data is shipped to the target system through FTP. It is temporarily placed on the target system at the landing directory specified in the FTP Location information section of the system Registry.

   When shared DASD is specified, CA MSM uses a virtual transport technique. That is, it does not actually copy the data from one system to the other. Because the two systems share DASD, there is no need to do this. All of the deployment data is kept in USS file systems managed by CA MSM. The remote system, even though the DASD is shared, may not be able to find the deployment data in the USS file system. Therefore, CA MSM temporarily unmounts the file system from the CA MSM driving system and mounts it in read-only mode on the remote system. For CA MSM to determine where to mount the file system on the remote system, you must specify a mount point location in the data destination. In addition, you can provide allocation information for the creation of the deployment file system, so that when the file system is created on the CA MSM driving system, it will be on the DASD that is shared.

Data destinations are assigned to Non-Sysplex and Sysplex systems, and Shared DASD Clusters. Data destinations are named objects, and may be assigned to multiple entities in the system registry and have their own independent maintenance dialogs.

The remote allocation information is used by the deployment process on the remote system, letting you control where the deployed software is placed. By specifying the GIMUNZIP volser, CA MSM adds a "volume=" parameter to the GIMUNZIP instructions on the remote system. The list of zFs volsers is only needed if (1) the software you are deploying contains USS parts, and (2) you select a "container" copy option during the deployment process.

Note: Once you have created your systems, you will need to validate them.

5. Registered Systems

   You need to register each system by validating that it exists. You should validate your Non-Sysplex Systems first, and then your Sysplex or Shared Cluster Systems.

   You start the validation process when you select the Validate button in the Actions drop down for a Sysplex System, Non-Sysplex System, and Shared DASD Cluster on that system's System Registry Page. This starts a background process using the CCI validation services to validate this system.

   Note: Staging Systems are not validated. However, you will need to create and validate a system registry entry for the CA MSM driving system if you are going to utilize Staging systems.

   Note: If the validation is in error, review the message log, update your system registry entered information and validate again.

   You are now ready to set up your products to be deployed.

Deploying Products using the Wizard

After you install software using CA MSM, you still need to deploy it. You can use the deployment wizard to guide you through the deployment process. In the wizard, you can deploy one product at a time. You can also save a deployment at any step in the wizard, and then manually edit and deploy later.

Note: You must have at least one product, one system, and one methodology defined and selected to deploy.

The following tabs need to be completed in the deployment wizard before you can deploy.

1. Deployment Name and Description

   Enter the deployment name and description using the wizard. The name must be a meaningful deployment name.

   Note: Each deployment name must be unique and it is not case-sensitive. For example DEPL1 and depl1 are the same deployment name.

   We recommend that you enter an accurate and brief description of this deployment.

2. CSI Selection

   Select the CSI selection using the wizard. A CSI is created for the installed product as part of the installation process.

3. Product Selection

   Displays the products that are installed in the CSI that was selected from the previous step.

4. Custom Data Set

   Custom data sets let you add other data sets along with the deployment. They contain either a z/OS data set or USS paths.

   - For a z/OS data set, you need to provide a data set name that is the actual existing z/OS data set and a mask that names the data set on the target system. This mask may be set up using symbolic qualifiers (see page 127) and must be available to CA MSM. During the deployment process, the custom data set is accessed and copied to the target system the same way a target library is accessed and copied.
   - For USS paths you need to provide a local path, a remote path which may be set up using symbolic qualifiers (see page 127) and type of copy. Type of copy can be either a container copy or a file-by-file copy.

   You can add a custom data set (see page 115).

5. Methodology

   Methodology is the process by which data sets are named on the target system.

   A methodology provides the how of a deployment, that is, what you want to call your data sets. It is the named objects with a description that are assigned to an individual deployment.

   To add a methodology, you need to specify the following:

   - Data set name mask (which lets you choose symbolic variables that get resolved during deployment)
   - Disposition of the target data sets:
     - If you select Create, the target data sets cannot exist, and if they do, the deployment will fail.
     - If you select Create or Replace and the target data sets do not exist, they will be created. If they do exist, this new deployment will overwrite existing target data sets.

   You can create a methodology (see page 124).

6. System Selection

   Select the system for this deployment.

7. Preview

   Preview identifies the deployment by name and briefly states the products, systems, means of transport, target libraries including source, target and resolution, as well as SMP/E environment and snapshot information. It shows the translated symbolic qualifiers.

   Use this option to review your deployment before deploying.

8. Deploy

   Deploy combines the snapshot, transmit, and deploy action into one action. Deploy enables a customer to take their CA MSM installed software and copy it onto systems across their enterprise. For example, customers can send one or many products to one or many systems. Deploy can send the software by copying it to a shared DASD or through FTP.

9. Confirm

   Confirms that the deployment is complete. This is the final action by the user. A deployment is not completed until it is confirmed. After it is confirmed, the deployment moves to the Confirmed deployment list.

10. Summary

    After your products has successfully deployed, you can review your deployment summary and then confirm your deployment. You can also delete a completed deployment.

Maintaining Existing Products

You also have a number of existing CSIs. You can bring those CSIs into CA MSM so that you can maintain all your installed CA products in a unified way from a single web-based interface.

1. To maintain an existing CSI in CA MSM, you first migrate the CSI to CA MSM. During the migration, CA MSM stores information about the CSI in the database.
2. After the CSI is migrated, you can download the latest maintenance (see page 58) for the installed product releases from the Software Catalog tab. If you cannot find a release (for example, because the release is old), you can add the release to the catalog manually and then update the release to download the maintenance (see page 58).
3. After you download the latest maintenance, you can apply the maintenance (see page 61).

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

Access CA MSM Using the Web-Based Interface

You access CA MSM using the web-based interface. You must have at least *one* of the following web browsers: Microsoft Internet Explorer 6.0, 7.0, or 8.0, or Mozilla Firefox 3.5.

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

To access CA MSM using the web-based interface

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

   The login page appears.

   Note: If the Notice and Consent Banner appears, read the information provided, and click the link to confirm it.

2. Enter your z/OS login user name and password, and click the Log In button.

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

   Note: For more information about the interface, click the Help link at the top right corner of the page.

3. Click New.

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

   Important! The account to which the credentials apply *must* have the Product Display Options set to BRANDED PRODUCTS. You can view and update your account preferences by logging in to CA Support Online and clicking My Account. If you do not have the correct setting, you are not able to use CA MSM to download product information and packages.

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 that 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.

Acquiring Products

This section includes information about how to use CA MSM to acquire products.

Update Software Catalog

Initially, the CA MSM software catalog is empty. To see available products at your site, update the catalog. As new releases become available, update the catalog again to refresh the information. The available products are updated using the site ID associated with your CA Support Online credentials.

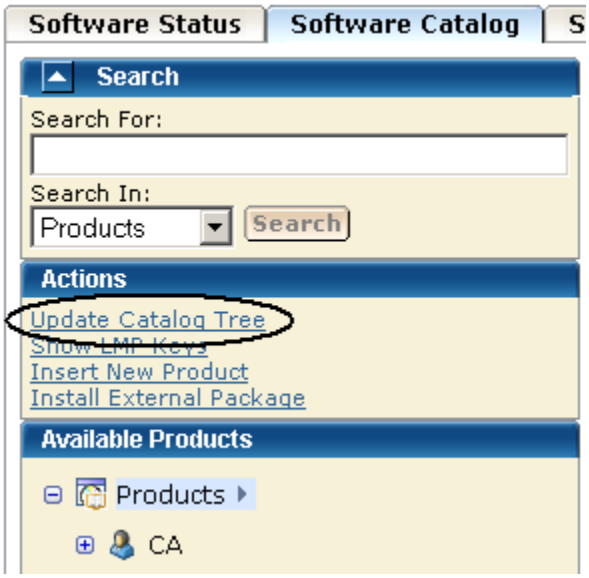
If you update the catalog tree and some changes are missing, check your CA Support Online user settings.

To update your software catalog

1. Click the Software Catalog tab.

   Note: The information on the Software Status tab for HIPERs and new maintenance is based on the current information in your software catalog. We recommend that you update the catalog on a daily or weekly basis to keep it current.

2. Click the Update Catalog Tree link in the Actions section at the left.



   You are prompted to confirm the update.

3. Click OK.

   A dialog opens that shows the progress of the task. When the task completes, you can click Show Results on the Progress tab to view the details of the actions. Click Close to return to the previous page.

   Note: While a task is in progress, you can perform other work. You can click Hide to exit the dialog and view the task status later at the Tasks tab.

Download Product Installation Package

You can download product packages through the Software Catalog tab. The Update Catalog action retrieves information about the products to which your site is entitled.

To download a product installation package

1. Verify that your CA MSM login user name is associated with a registered CA Support Online user for your site on the Software Acquisition Settings page.

   CA MSM uses the credentials to access CA Support Online.

2. Locate and select the product you want to download by using the Search For field or expanding the Available Products tree at the left.

   The product releases are listed.

   Note: If the product does not appear on the product tree, click the Update Catalog Tree link in the Actions section at the left. The available products are updated using the site ID associated with your CA Support Online credentials. If you update the catalog tree and some changes are missing, check your CA Support Online user settings.

3. Click Update Catalog Release in the Actions column in the right pane for the product release you want to download.

   A dialog opens that shows the progress of the task. When the task completes, you can click Show Results on the Progress tab to view the details of the actions. Click Close to return to the previous page.

   Note: While a task is in progress, you can perform other work. You can click Hide to exit the dialog and view the task status later at the Tasks tab.

   The product packages are downloaded.

Note: You can expand the tree in the right panel by selecting a product and clicking the vendor link in the right panel, but if you use this method and select multiple products, be aware that if one of the selected products cannot be downloaded, the remaining products will not be processed. If this happens, remove the checks from the ones that were processed and repeat the update catalog request.

Migrate Installation Packages Downloaded External to CA MSM

If you have acquired product pax files by means other than through CA MSM, you can add information about these product installation packages to CA MSM from the Software Catalog tab.

Migrating these packages to CA MSM enables you to have a complete view of all your product releases. After a package is migrated, you can use CA MSM to install the product (see page 51).

To migrate information about a product installation package downloaded by other means

1. Click the Software Catalog tab, and select the product gen level (for example, SP0 or 0110) for which the package applies.

   The packages for the gen level are listed.

   Note: A product not acquired from CA Support Online does not appear in Software Catalog. However, you can use the Insert New Product link to add an entry for the product. You can then select the entry.

2. Click the Add External Package button.

   You are prompted to enter a path for the package.

3. Specify the USS path to the package you want to migrate, and click OK.

   Information about the package is saved in the CA MSM database.

   Note: To see the added package, refresh the page.

Download Multiple Product Installation Packages

You can download multiple product packages at one time using the Software Catalog tab. The Update Catalog action retrieves information about the products to which your site is entitled.

To download multiple product installation packages

1. Verify that your CA MSM login user name is associated with a registered CA Support Online user for your site on the Software Acquisition Settings page.

   CA MSM uses the credentials to access CA Support Online.

2. Click the CA link to expand the tree.

   All mainframe CA products that your site is licensed to download appear in the right panel.

   Note: If the product does not appear on the product tree, click the Update Catalog Tree link in the Actions section at the left. The available products are updated using the site ID associated with your CA Support Online credentials. If you update the catalog tree and some changes are missing, check your CA Support Online user settings.

3. Click the check boxes in the Select column to select the products you want to download. You can navigate to subsequent pages to select additional products.

4. Click Update Catalog Products.

   A dialog opens that shows the progress of the task. When the task completes, you can click Show Results on the Progress tab to view the details of the actions. Click Close to return to the previous page.

   Note: While a task is in progress, you can perform other work. You can click Hide to exit the dialog and view the task status later at the Tasks tab.

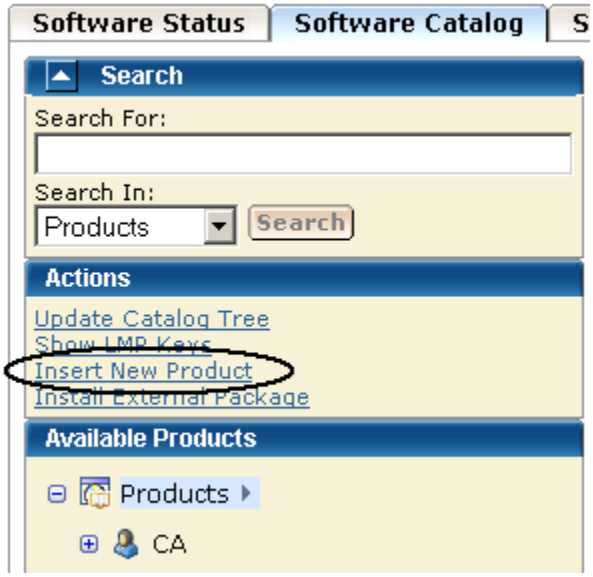
   The product packages are downloaded.

Add a Product

Sometimes, a product is not currently available from CA Support Online. For example, if you are testing a beta version of a product, the version is delivered to you by other means. You can add these types of product packages to CA MSM using the Insert New Product action.

To add a product package to CA MSM

1. Click the Software Catalog tab, and click the Insert New Product link in the Actions section at the left.



   You are prompted to supply information about the product.

2. Specify the name, release, and gen level of the product, and click OK.

   The product is added to the software catalog.

3. Click the gen level of the product you want to install on the product tree at the left.

   The Base Install Packages section appears at the right.

4. Click the Add External Package button.

   You are prompted to identify the package.

5. Specify the USS path to the package you want to add, and click OK.

   Note: If you need to add several packages from the same location, you can use masking (see page 50).

   Information about the package is saved in the CA MSM database.

   Note: To see the added package, refresh the page.

Masking for External Packages

Masking lets you to add more than one package (or set of maintenance files) from the same location based on a pattern (mask). You can use masking for components, maintenance in USS, and maintenance in data sets. You can use masking for files only, not for directories.

Masking: Use the asterisk symbol (*).

- For PDS and PDSE, you can mask members using asterisks.
- For sequential data sets, use the following characters:

  ?

  Match on a single character.

  *****

  Match on any number of characters within a qualifier of a data set name or any number of characters within a member name or file system name.

  ******

  Match on any number of characters including any number of .qualifier within a data set name.

You can use as many asterisks as you need in one mask. After you enter the mask, a list of files corresponding to the mask pattern appears.

Note: By default, all files in the list are selected. Make sure you review the list and check what files need to be added.

Example 1

The following example displays all PDF files that are located in the */a/update/packages* directory:

```
/a/update/packages/*.pdf
```

Example 2

The following example displays all files located in the /a/update/packages directory whose names contain *p0*:

```
/a/update/packages/*p0*
```

Example 3

The following example displays all sequential data sets whose name starts with *PUBLIC.DATA.PTFS.*:

```
PUBLIC.DATA.PTFS.**
```

Example 4

The following example displays all members in the PDS/PDSE data set PUBLIC.DATA.PTFLIB whose name starts with *RO*:

```
PUBLIC.DATA.PTFLIB(RO*)
```

Delete a Product

You can delete a product, product release, or product gen level from CA MSM if you do not need them anymore. You delete them using the Software Catalog tab.

To delete a product, product release, or product gen level

1. Click the Software Catalog tab, and find the product, product release or the product gen level that you want to delete from the tree at the left.
2. Right-click the product, product release or the product gen level and select the applicable action.

   You are prompted to confirm the action.
3. Click OK.

   A dialog opens showing the progress of the task. When the task completes, you can click Show Results on the Progress tab to view the details of the actions.

   Note: While a task is in progress, you can perform other work. You can click Hide to exit the dialog and view the task status later on the Tasks tab.

Installing Products

This section includes information about how to use CA MSM to install products.

Install a Product

You can install a downloaded product through the Software Catalog, Base Install Packages section. The process starts a wizard that guides you through the installation. At the end of the wizard, a task dynamically invokes the SMP/E and other utilities required to install the product.

Any USS file system created and mounted by CA MSM during a product installation is added in CA MSM as a managed product USS file system. CA MSM lets you enable and configure verification policy that should be applied to these file systems when starting CA MSM. For verification results, review CA MSM output.

These settings are available on the System Settings, Mount Point Management page.

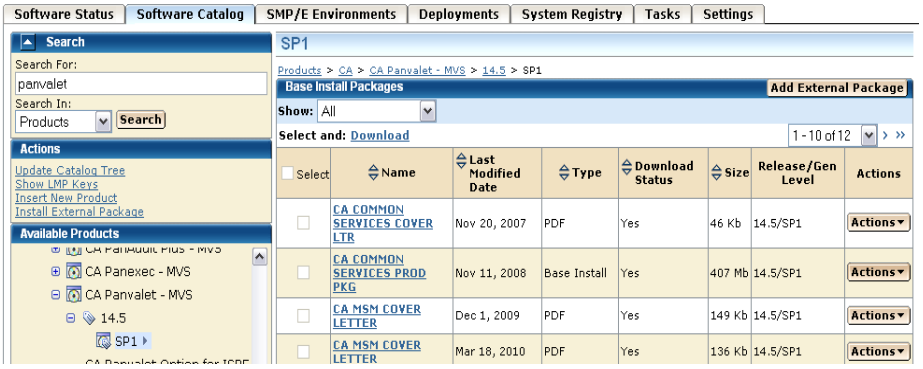
During installation, you select the CSI where the product is to be installed, and specify its zones. You can either specify target and distribution zones to be in the existing CSI data sets, or create new data sets for each zone.

Note: While you are working with a particular CSI, the CSI is locked and other CA MSM users cannot perform any action against it. The lock is released when the task is finished, you log out of CA MSM, or your CA MSM session has been inactive for more than ten minutes.

To install a product

1. Click the Software Catalog tab, and select the product gen level (for example, SP0 or 0110) you want to install on the product tree at the left.

   Information about the product appears in the Base Install Packages section at the right, for example:



   Note: If a product is acquired external to CA MSM, you can install the product using the Install External Package link. The process starts the wizard.

2. Do one of the following:

   - If the package was acquired using CA MSM, locate the product package that you want to install, click the Actions drop-down to the right of the package, and select Install.

     or

   - If the package was acquired external to CA MSM, click the Install External Packages link under the Actions section in the left pane, enter the location of the package, and click OK.

   The Introduction tab of the wizard appears.

   Note: An information text area can appear at the bottom of the wizard. The area provides information that helps you progress through the wizard. For example, if a field is highlighted (indicating an error), the information text area identifies the error.

3. Review the information about the installation, and click Next.

   Note: If the license agreement appears for the product that you are installing, scroll down to review it, and accept it.

   You are prompted to select the type of installation.

4. Click the type of installation, and then click Next.

   (Optional) If you select Custom Installation, you are prompted to select the features to install. Select the features, and click Next.

   A summary of the features to install is displayed, with any prerequisites.

5. Review the summary to check that any prerequisites are satisfied.

   - If no prerequisites exist, click Next.

     You are prompted for the CSI to use for this installation.

   - If prerequisites exist, and they are all satisfied, click Next.

     You are prompted to locate the installed prerequisites. If an installed prerequisite is in more than one CSI or zone, the CSI and Zone drop-down lists let you select the specific instance. After you make the selections, click Next.

     You are prompted for the CSI to use for this installation.

   - If prerequisites are not satisfied, click Cancel to exit the wizard. Install the prerequisites, and then install this product.

     Note: You can use the Custom installation to select only those features that have the required prerequisites. You can click Back to return to previous dialogs.

6. Select an existing CSI, or click the Create a New SMP/E CSI option button, and click Next.

   If you select Create a New SMP/E CSI, you are prompted to specify the CSI parameters (see page 55).

   If you select an existing CSI, the wizard guides you through the same steps. Allocation parameters that you specify for work DDDEFs are applied only to new DDDEFs that might be created during the installation. The existing DDDEFs if any remain intact.

   Note: Only CSIs for the SMP/E environments in your working set are listed. (You can configure your working set from the SMP/E Environments tab.)

   - If you select a CSI that has incomplete information, the wizard prompts you with extra parameters.
   - If you select a CSI that is being used in CA MSM by another user, a notification message appears, and you are prevented from performing any actions on the CSI. You can either wait until the notification message disappears and the CSI is available, or click Cancel to select another CSI.

   After a CSI is selected or a new CSI is specified, you are prompted for the target zone to use.

7. Select an existing zone, or click the Create a New SMP/E Target Zone option button. Click Next.

   Note: If you select Create a New SMP/E Target Zone, you perform additional steps similar to the steps for the Create a New SMP/E CSI option. The target zone parameters are pre-populated with the values that are entered for the CSI. You can change them.

   If you want the target zone to be created in a new data set, select the Create New CSI Data Set check box and fill in the appropriate fields.

   After a target zone is selected or specified, you are prompted for the distribution zone to use.

8. Select an existing zone, or click the Create a New SMP/E Distribution Zone option button. Click Next.

   Note: If you selected to use an existing target zone, the related distribution zone is automatically selected, and you cannot select other distribution zone. If you selected to create a new target zone, you create a new distribution zone, and you cannot select existing distribution zone.

   After a distribution zone is selected or specified, a summary of the installation task appears.

Note: If you select Create a New SMP/E Distribution Zone, you perform additional steps similar to the steps for the Create a New SMP/E CSI option. The distribution zone parameters are prepopulated with the values that are entered for the target zone. You can change them.

- If you want the distribution zone to be created in a new data set, select the Create New CSI Data Set check box and fill in the appropriate fields.
- If you want to use the same data set that you have already specified to be created for the target zone, the data set will be allocated using the parameters you have defined when specifying the target zone.

9. Review the summary, and click Install.

   A dialog opens that shows the progress of the task. When the task completes, you can click Show Results on the Progress tab to view the details of the actions. Click Close to return to the previous page.

Note: While a task is in progress, you can perform other work. You can click Hide to exit the dialog and view the task status later at the Tasks tab.

Create a CSI

You can create a CSI while you are installing a product (see page 51). During the process, you are asked to specify data set allocation parameters, which you can then customize for each data set, as well as parameters for DDDEF allocation.

To create a CSI

1. Click Create a New SMP/E CSI from the product installation wizard.

   You are prompted to define a CSI.

2. Specify a name for the environment represented by the CSI, and the following VSAM and data set allocation parameters. You can leave the other parameters at their defaults.

   - Specify the prefix for the name of the CSI VSAM data set.
   - Specify the prefix for the names of the SMP/E data sets.
   - Select whether to use SMS, and complete the appropriate fields.

   Note: An information text area can appear at the bottom of the wizard. The area provides information that helps you progress through the wizard. For example, if a field is highlighted (indicating an error), the information text area identifies the error.

3. Click Next.

   Work DDDEF allocation parameters and a list of the data sets to be created for the CSI appear.

4. Specify whether to use SMS or Unit parameters for allocating work DDDEFs for the CSI, and complete the appropriate fields.

   Note: The settings for allocating work DDDEFs are globally defined on the System Settings, Software Installation tab. You must have the appropriate access rights to be able to modify these settings.

5. Review the data set names. Click the Override link to change allocation parameters, and then click Next.

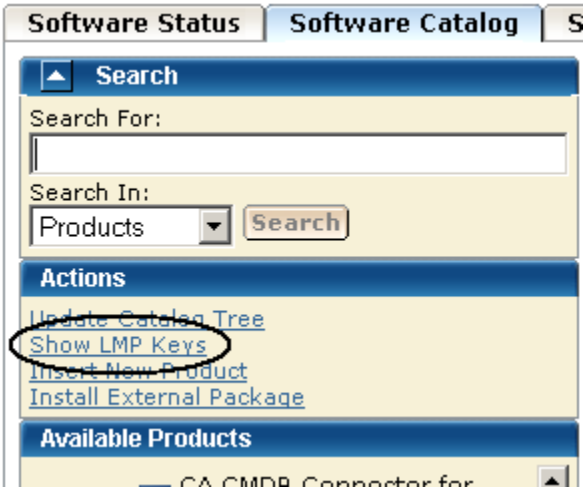
   You are prompted to specify any additional parameters. A new CSI is specified.

Download LMP Keys

When you install a CA product on z/OS systems, you enter CA Common Services for z/OS CA License Management Program (LMP) statements to license the product on each system that uses the product. You can download LMP keys through the Software Catalog tab so that the keys are available for you to enter manually. The Show LMP Keys action retrieves the keys for the products to which your site is entitled.

To retrieve and list the LMP keys for your products

1. Click the Software Catalog tab, and click the Show LMP Keys link in the Actions section at the left.



   A list of LMP keys retrieved for the indicated site ID appears.

2. Select the site ID for which you want to list the LMP keys from the Site IDs drop-down list.

   The list is refreshed for the selected site ID.

   If the list is empty or if you want to update the lists, proceed to the next step.

3. Click Update Keys.

   You are prompted to confirm the update.

4. Click OK.

   The LMP keys are retrieved. On completion of the retrieval process, the LMP keys are listed for the selected site.

Note: You can use the Refresh Site IDs button to refresh the information on the page.

Maintaining Products

This section includes information about how to use CA MSM to download and apply product maintenance packages.

How to Apply Maintenance Packages

Use this process to download and apply product maintenance packages.

1. Identify your download method. This section details the steps to use three download methods:

   - Download Product Maintenance Packages
   - Download Product Maintenance Packages for Old Product Releases and Service Packs
   - Manage Maintenance Downloaded External to CA MSM

   Contact your system administrator, if necessary.

2. Apply the product maintenance package. This section also details the role of USERMODs.

   Note: This section also details the procedure to back out maintenance that has been applied but not yet accepted.

Download Product Maintenance Packages

You can download maintenance packages for installed products through the Software Catalog tab.

To download product maintenance packages

1. Verify that your CA MSM login user name is associated with a registered CA Support Online user for your site on the Software Acquisition Settings page.

   CA MSM uses the credentials to access CA Support Online.

2. Click the name of the product for which you want to download maintenance on the product tree at the left.

   Maintenance information about the product appears in the Releases section at the right.

3. Click the Update Catalog Release button for the product release for which you want to download maintenance.

   A dialog opens that shows the progress of the task. When the task completes, you can click Show Results on the Progress tab to view the details of the actions. Click Close to return to the previous page.

   Note: While a task is in progress, you can perform other work. You can click Hide to exit the dialog and view the task status later at the Tasks tab.

   The maintenance packages are downloaded.

More information:

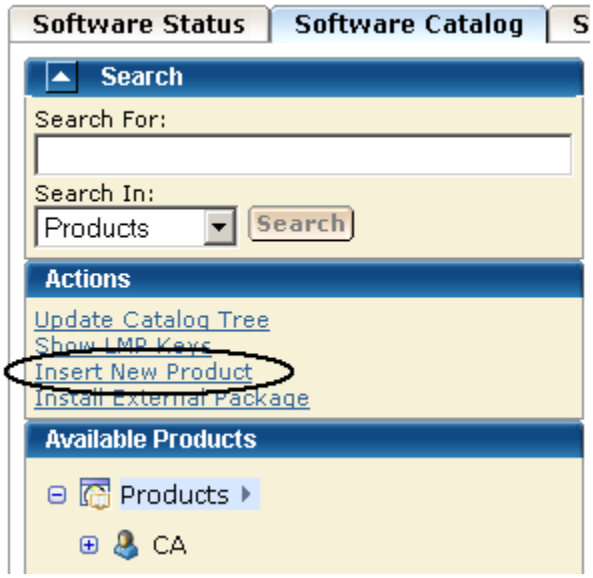
Download Maintenance Packages for Old Product Releases and Service Packs (see page 58)

Download Maintenance Packages for Old Product Releases and Service Packs

CA MSM does not retrieve information about old product releases and service packs. If you need maintenance from those releases and service packs, you must add them to the software catalog before you can download the maintenance.

To download maintenance packages for a product release not in the software catalog

1. Click the Software Catalog tab, and click the Insert New Product link in the Actions section at the left.



   You are prompted to supply information about the product release.

2. Specify the name, release, and gen level of the product, and click OK.

   Note: Use the same product name that appears on the product tree, and use the release and gen level values as they appear for Published Solutions at CA Support Online.

   The product release is added to the software catalog.

3. On the product tree at the left. click the name of the product for which you want to download maintenance.

   Maintenance information about the product appears in the Releases section at the right.

4. Click Update Catalog Release for the added product release.

   Maintenance packages are downloaded. A dialog opens that shows the progress of the task. When the task completes, you can click Show Results on the Progress tab to view the details of the actions. Click Close to return to the previous page.

Note: While a task is in progress, you can perform other work. You can click Hide to exit the dialog and view the task status later at the Tasks tab.

Manage Maintenance Downloaded External to CA MSM

Some maintenance packages, such as unpublished maintenance, APARs, and USERMODs, may be acquired externally to CA MSM. You can add information about these maintenance packages to CA MSM from the Software Catalog tab. The process starts a wizard that guides you through the migration.

Adding these maintenance packages to CA MSM provides you with a complete view of all the maintenance for a product release. After a package is migrated, you can use CA MSM to apply the maintenance (see page 61).

The maintenance package must be located in a z/OS data set or a USS directory. If you use a z/OS data set, it must have an LRECL of 80. If you place the maintenance in a USS directory, copy it in binary mode.

The maintenance is placed as either a single package or an aggregated package that is a single file comprised of multiple maintenance packages. An *aggregated package* is a file comprised of several single maintenance packages (nested packages). When you add an aggregated package, CA MSM inserts all nested packages that the aggregated package includes and the aggregated package itself. In the list of maintenance packages, the aggregated package is identified by the CUMULATIVE type.

When you insert an aggregated package, CA MSM assigns a fix number to it. The fix number is unique and contains eight characters, starting with AM (for Aggregated Maintenance) followed by a unique 6-digit number whose value increases by 1 with each added aggregated package.

Note: If the aggregated maintenance package has the same fix number as one of its nested packages, only the nested packages are added. The aggregated package itself will not be available in the list of maintenance packages.

To add a maintenance package acquired externally

1. Click the Software Catalog tab, and select the product release for which the maintenance applies.

   The maintenance packages for the release are listed.

2. Click the Add External Maintenance button.

   You are prompted to specify the package type and location.

3. Specify the package type and either the data set name or the USS path.

   Note: If you need to add several packages from the same location, you can use masking (see page 50).

4. Click OK.

   The maintenance package with the related information is saved in the CA MSM database.

   Note: To see the added package, refresh the page.

View Aggregated Package Details

You can view which nested packages are included in the aggregated package. The information includes the fix number, package type, and package description.

To view aggregated package details

1. Click the Software Catalog tab, and select the product release that has the aggregated package whose details you want to view.

   The maintenance packages for the release are listed.

2. Click the Fix # link for the aggregated package.

   The Maintenance Package Details dialog opens.

3. Click the Nested Packages tab.

   A list of nested packages contained in the aggregated package appears.

Manage Maintenance

After maintenance has been downloaded for a product, you can manage the maintenance in an existing SMP/E product installation environment.

Note: While you are working with a particular CSI, the CSI is locked and other CA MSM users cannot perform any action against it. The lock is released when the task is finished, you log out of CA MSM, or your CA MSM session has been inactive for more than ten minutes.

The following installation modes are available:

- Receive and apply
- Receive and apply check
- Receive, apply check, and apply
- Receive only

The process starts a wizard that guides you through the maintenance steps. At the end of the wizard, a task dynamically invokes the SMP/E and other utilities required to apply the maintenance.

Note: You can also manage maintenance to an SMP/E environment using the SMP/E Environments, Maintenance tab.

To manage maintenance for a product

1. Click the Software Catalog tab, and select the product from the tree at the left.

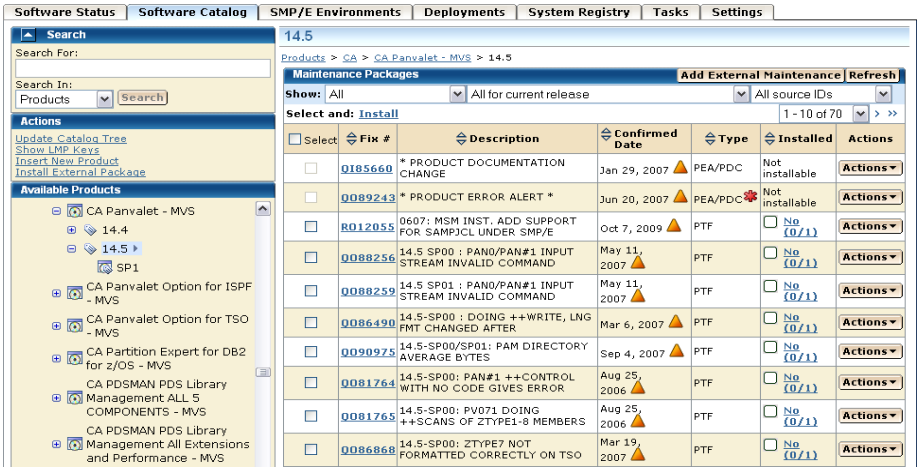
   Maintenance information appears at the right for the releases you have.

2. Click Update Catalog Release for the release on which you want to apply maintenance.

   The maintenance information is updated.

3. If the information indicates that maintenance is available, click the Release Name link.

   The maintenance packages are listed, for example:



   Red asterisks identify HIPER maintenance packages.

4. Click the Fix # link for each maintenance package you want to install.

   The Maintenance Package Details dialog appears, identifying any prerequisites.

   Click Close to return to the Maintenance Packages section after you review the information for a package.

5. Select the maintenance packages you want to install, and click the Install link.

   Note: The Installed column indicates whether a package is installed.

   The Introduction tab of the wizard appears.

6. Review the information about the maintenance, and click Next.

   The packages to install are listed.

7. Review and adjust the list selections as required, and click Next.

   The SMP/E environments that contain the product to maintain are listed. Only environments in your working set are listed.

8. Select the environments in which you want to install the packages.

9. Click Select Zones to review and adjust the zones where the maintenance will be installed, click OK to confirm the selection and return to the wizard, and click Next.

   Note: If you select a CSI that is being used in CA MSM by another user, a notification message appears, and you are prevented from performing any actions on the CSI. You can either wait until the notification message disappears and the CSI is available, or click Cancel to select another CSI.

10. Select the installation mode for the selected maintenance, and click Next.

    - If prerequisites exist and are available, review them and click Next. CA MSM installs these prerequisites as part of the process. If a prerequisite is *not* available, the wizard cannot continue. You must acquire the prerequisite and restart the process.
    - If HOLDDATA (see page 165) entries exist, review and select them, and click Next.

    A summary of the task appears.

11. Review the summary, and click Install.

    A dialog opens that shows the progress of the task. When the task completes, you can click Show Results on the Progress tab to view the details of the actions. Click Close to return to the previous page.

    Note: While a task is in progress, you can perform other work. You can click Hide to exit the dialog and view the task status later at the Tasks tab.

The task applies the maintenance. You can accept the maintenance (except USERMODs) using the SMP/E Environments, Maintenance tab. As a best practice, CA MSM prevents you from accepting USERMODs.

More information:

Download Product Maintenance Packages (see page 58)
Download Maintenance Packages for Old Product Releases and Service Packs (see page 58)

View Installation Status of Maintenance Package

You can view installation status details of each maintenance package, including a list of CSIs where the package is installed, the CSI data sets, and the installation status of the package for each CSI zone. For example, a maintenance package can be received in the global zone, applied in a target zone, and accepted in a distribution zone.

Note: The installation status is not available for aggregated maintenance packages as well as for those maintenance packages that are not installable or do not have available CSIs to be installed to.

Depending on the package status for each zone, you can see available actions for the package. For example, if the package is not received in a CSI zone, the Install action is available.

To view installation status of a maintenance package

1. Click the Software Catalog tab, and select the product release that has the maintenance package whose installation status you want to view.

   The maintenance packages for the release are listed.

2. Click the status link in the Installed column for the maintenance package.

   The Maintenance Package Details dialog opens to the Installation Status tab. A list of CSIs with package status per zone appears.

   Note: Click the Actions drop-down to start the Installation wizard (for packages that are not yet installed in at least one CSI zone) or the Accept wizard (for packages that are not accepted in at least one CSI zone). Click Install to More Environments to install the maintenance package in one or more CSIs available for the package.

USERMODs

A product USERMOD can be provided as a published maintenance package downloaded by CA MSM during the Update Catalog process. When CA MSM downloads a package that includes a ++USERMOD statement, it is loaded under the CA product with a USERMOD type. You can install these packages using CA MSM but cannot accept them because they are not intended to be permanent.

You can create a USERMOD manually, or CA can provide an unpublished maintenance package as a USERMOD. In this case, the USERMOD file, which contains the ++USERMOD statement and the body of the USERMOD, must be managed as an externally downloaded package (see page 60).

GROUPEXTEND Mode

CA MSM lets you to invoke the SMP/E utility with the GROUPEXTEND option enabled for managing (applying and accepting) maintenance.

Some maintenance packages require that, before you install them, you must install other maintenance packages (SYSMODs) first.

If a SYSMOD that is defined as a prerequisite for the product maintenance package that you want to install has not been applied or cannot be processed (for example, the SYSMOD is held for an error, a system, or a user reason ID; it is applied in error; it is not available), you can install the maintenance package in GROUPEXTEND mode, and the SMP/E environment where the product is installed automatically includes a superseding SYSMOD.

Note: For applying maintenance in GROUPEXTEND mode, the SMP/E environment *must* have all SYSMODs received to be included by the GROUPEXTEND option.

When you apply maintenance in GROUPEXTEND mode, the following installation modes are available:

- Apply check
- Apply
- Apply check and apply

For the GROUPEXTEND option, CA MSM does not automatically receive and display prerequisites for maintenance or HOLDDATA that needs to be bypassed when applying the maintenance. Apply check mode lets you check if any prerequisites or HOLDDATA exist and report them in the task output.

How Maintenance in GROUPEXTEND Mode Works

We recommend that you apply maintenance in GROUPEXTEND mode in the following sequence:

1. Receive all SYSMODs that you want to include by the GROUPEXTEND option.
2. Run the maintenance in Apply check mode.
   - If the task fails, review SMPOUT in the task output to check if there are missing (not received) SYSMODs or HOLDDATA that need to be resolved or bypassed.
   - If the task succeeds, review SMPRPT in the task output to check what SYSMODs were found and applied.

3. Run the maintenance in Apply mode, and specify SYSMODs that you want to exclude and HOLDDATA that you want to bypass, if any exist.

   The followings options are available for bypassing HOLDDATA:

   - HOLDSYSTEM
   - HOLDCLASS
   - HOLDERROR
   - HOLDUSER

   Note: For more information about the BYPASS options, see the *IBM SMP/E V3Rx.0 Commands*. *x* is the SMP/E release and needs to correspond to the version of SMP/E that you use.

   When you run the maintenance in Apply mode in the same CA MSM session after Apply check mode is completed, the values that you entered for Apply check mode are prepopulated on the wizard dialogs.

Manage Maintenance in GROUPEXTEND Mode

Note: While you are working with a particular CSI, the CSI is locked and other CA MSM users cannot perform any action against it. The lock is released when the task is finished, you log out of CA MSM, or your CA MSM session has been inactive for more than ten minutes.

To manage maintenance for a product in GROUPEXTEND mode

1. Click the SMP/E Environments tab, and select the SMP/E environment from the tree at the left.

   A list of products installed in the SMP/E environment appears.

   Note: If you select a CSI that is being used in CA MSM by another user, a notification message appears, and you are prevented from performing any actions on the CSI. You can either wait until the notification message disappears and the CSI is available, or click Cancel to select another CSI.

2. Click the Maintenance link.

   A list of maintenance packages for the products installed in the SMP/E environment appears.

3. Select the maintenance packages you want to apply in GROUPEXTEND mode, and click the Apply GROUPEXTEND link.

   The Introduction tab of the wizard appears.

4. Review the information about the maintenance, and click Next.

   The packages to be applied are listed.

   Note: If the Link status for a maintenance package is available, you can click it to review a list of zones where the maintenance package is already received, applied, or accepted. Click Close to return to the wizard.

5. Review the packages, and click Next.

   The Prerequisites tab of the wizard appears.

   Important! For the GROUPEXTEND option, CA MSM does not automatically receive and display prerequisites for maintenance or HOLDDATA to be bypassed when applying the maintenance. Apply check mode lets you check if any prerequisites or HOLDDATA exist and report them in the task output. We recommend that you run the maintenance in Apply check mode first.

6. Read the information on this tab, and click Next.

   Installation options appear.

7. Specify installation options as follows, and click Next:

   a. Select the installation mode for the selected maintenance.

   b. Review the GROUPEXTEND options and select those you want to apply to the maintenance:

      NOAPARS

      Excludes APARs that resolve error reason ID.

      NOUSERMODS

      Exclude USERMODs that resolve error user ID.

   c. (Optional) Enter SYSMODs that should be excluded in the Excluded SYSMODs field. You can enter several SYSMODs separated by a comma.

   The Bypass HOLDDATA tab of the wizard appears.

8. (Optional) Enter the BYPASS options for the HOLDDATA that you want to bypass during the maintenance installation. You can enter several BYPASS options separated by a comma.

9. Click Next.

   A summary of the task appears.

10. Review the summary, and click Apply GROUPEXTEND.

    A dialog opens that shows the progress of the task. When the task completes, you can click Show Results on the Progress tab to view the details of the actions. Click Close to return to the previous page.

    Note: While a task is in progress, you can perform other work. You can click Hide to exit the dialog and view the task status later at the Tasks tab.

    - If you run the maintenance installation in Apply check mode and the task succeeds, review SMPRPT in the task output to check what SYSMODs were found and applied.
    - If you run the maintenance installation in Apply check mode and the task fails, review SMPOUT in the task output to check if there are missing (not received) SYSMODs or HOLDDATA that need to be resolved or bypassed.

You can accept the maintenance (except USERMODs) in the GROUPEXTEND mode using the Maintenance tab. As a best practice, CA MSM prevents you from accepting USERMODs.

Note: Although you cannot accept USERMODs in GROUPEXTEND mode, you can install them if they are prerequisites for the maintenance package being installed, unless you have enabled the NOUSERMODS option.

Back Out Maintenance

You can back out applied (but not accepted) maintenance packages through the SMP/E Environments tab. The process starts a wizard that guides you through the backout.

Note: While you are working with a particular CSI, the CSI is locked and other CA MSM users cannot perform any action against it. The lock is released when the task is finished, you log out of CA MSM, or your CA MSM session has been inactive for more than ten minutes.

To back out a maintenance package from a product release

1. Click the SMP/E Environments tab, and select the SMP/E environment from which you want to back out maintenance on the tree at the left.

   Products installed in the environment are listed.

2. Select the product component from which you want to back out maintenance.

   The features in the component are listed.

   Note: If you want to back out maintenance from all the products in the environment, you can click the Maintenance tab to list all the maintenance packages for the environment.

3. Select the function from which you want to back out maintenance.

   The maintenance packages for the feature are listed.

   Note: You can use the Show drop-down list to show only applied packages.

4. Select the packages you want to back out, and click the Restore link.

   The Introduction tab of the wizard appears.

   Note: If you select a CSI that is being used in CA MSM by another user, a notification message appears, and you are prevented from performing any actions on the CSI. You can either wait until the notification message disappears and the CSI is available, or click Cancel to select another CSI.

5. Review the information about the backout, and click Next.

   The packages to back out are listed.

6. Review and adjust the list selections as required, and click Restore.

7. Click Select Zones to review and adjust a list of zones from where the maintenance will be restored, and click OK to confirm the selection and return to the wizard.

   Note: If prerequisites exist, review them and click Next. CA MSM will restore these prerequisites as part of the process.

   A dialog opens that shows the progress of the task. When the task completes, you can click Show Results on the Progress tab to view the details of the actions. Click Close to return to the previous page.

Note: While a task is in progress, you can perform other work. You can click Hide to exit the dialog and view the task status later at the Tasks tab.

Setting System Registry

This section includes information about how to use CA MSM to set the system registry. The system registry contains all systems that can be selected as a target for a deployment.

About System Registry

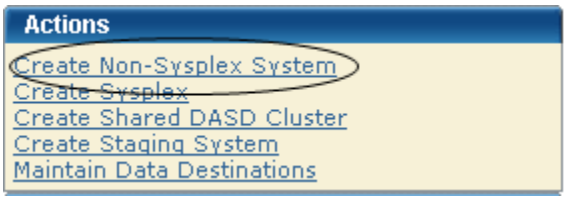
The system registry contains all systems that can be selected as a target for a deployment. You can create Non-SYSPLEX, SYSPLEX, Shared DASD Cluster, and Staging systems as well as maintain, validate, investigate a failed validation, view, and delete a system register.

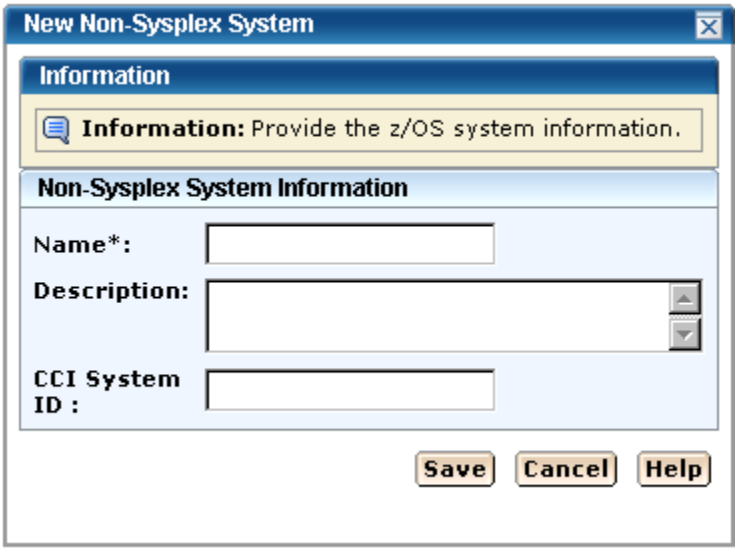
Create Non-Sysplex System

You can create a Non-Sysplex System Registry.

To create a Non-Sysplex system registry

1. Click the System Registry tab, and in the Actions section click the Create Non-Sysplex link. The New Non-Sysplex System window appears.





Note: The asterisk indicates that the field is mandatory.

2. Enter the Non-Sysplex System Name.

   Limits: Maximum 8 characters.

   Note: Sysplex and Non-Sysplex system can have the same name. Use the Description field to differentiate between these systems.

3. Enter the Description.

   Limits: Maximum 255 characters.

4. Enter the CCI System ID:

   Limits: Maximum 8 characters.

5. Click Save to save this new Non-Sysplex System.

   The New Non-Sysplex System name appears as the last entry in the Non-Sysplex Systems Registry List on the right.

   Note: Click Cancel to withdraw this create request.

Note: An MVS System running under VM, it is treated as being in basic mode and not LPAR mode. As result, the LPAR number is null in the MVS control block. When this is the case, the system validation output will show:

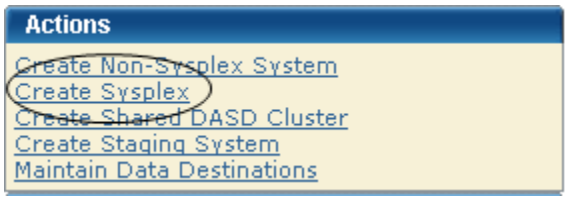
```
Property Name: z/OS LPAR Name, Value: ** Not Applicable **.
```

Create Sysplex or Monoplex

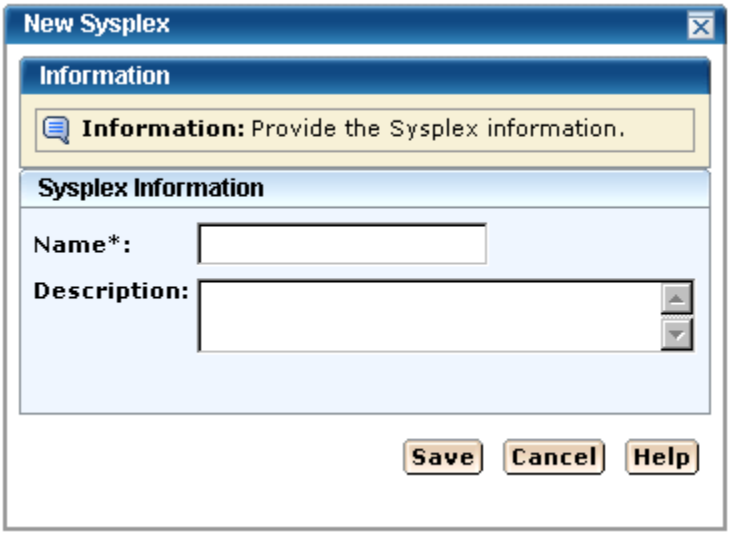
You can create a Sysplex (see page 72) or Monoplex system registry.

To create a Sysplex or Monoplex system registry

1. Click the System Registry tab, and in the Actions section click the Create Sysplex link.



The Sysplex System window appears.



Note: The asterisk indicates that the field is mandatory.

2. Enter the Sysplex System Name.

   Limits: Maximum 8 characters.

   Note: Sysplex and Non-Sysplex system can have the same name. Use the Description field to differentiate these systems.

   Note: Monoplexes are stored in the Sysplex registry tree but with the name of the Sysplex system and not the Monoplex Sysplex Name. For example, a system XX16 defined as a Monoplex, with a Sysplex name of LOCAL. It will be depicted in the System Registry as a Sysplex with the name of XX16. This Sysplex will contain one system: XX16.

This procedure was created to help customers that have Monoplexes with the same Sysplex name (for example: LOCAL). Instead of showing multiple LOCAL Sysplex entries which would need to be expanded to select the correct Monoplex system, the CA MSM System Registry shows the actual Monoplex system name at the top level Sysplex name.

The FTP and DATA Destinations at the system level are not used when the Sysplex is a Monoplex. The only FTP Location and Data Destinations that are referenced are those defined at the Sysplex Level.

3. Enter the Description.

   Limits: Maximum 255 characters.

4. Click Save to save this new Sysplex System.

   The New Sysplex System name appears as the last entry in the Sysplex Systems Registry List on the right.

   Note: Click Cancel to withdraw this create request.

Note: An MVS System running under VM, it is treated as being in basic mode and not LPAR mode. As result, the LPAR number is null in the MVS control block. When this is the case, the system validation output will show:

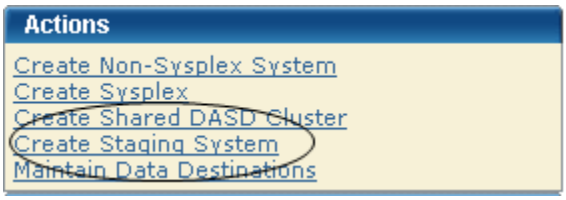
```
Property Name: z/OS LPAR Name, Value: ** Not Applicable **.
```

Create Staging System

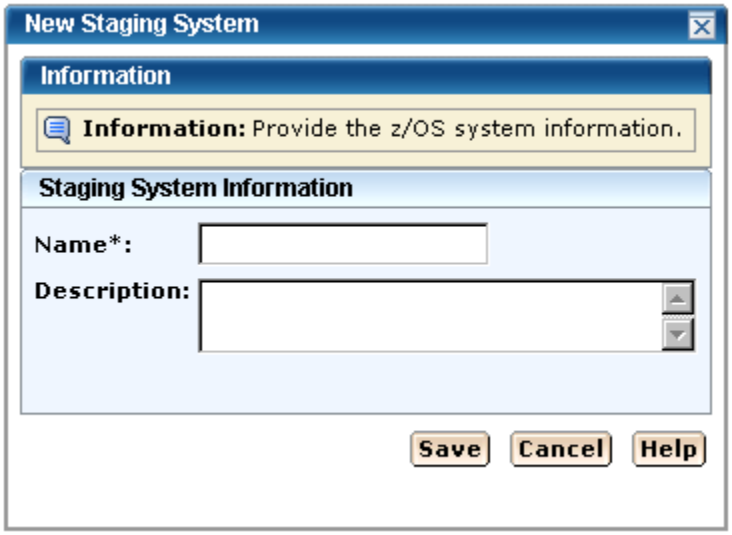
You can create a Staging System.

To create a Staging System

1. Click the System Registry tab, and in the Actions section click the Create Staging System link.



   The New Staging System window appears.



   Note: The asterisk indicates that the field is mandatory.

2. Enter the Staging System Name.

   Limits: Maximum 8 characters.

   Note: Each Staging System name must be unique and is not case-sensitive. For example STAGE1 and stage1 are the same Staging System name. A Staging System may have the same name as a Non-Sysplex, Sysplex, or Shared DASD Cluster.

3. Enter the Description.

   Limits: Maximum 255 characters.

4. Click Save to save this new Staging System.

   The New Staging System name appears as the last entry in the Staging Systems Registry on the right.

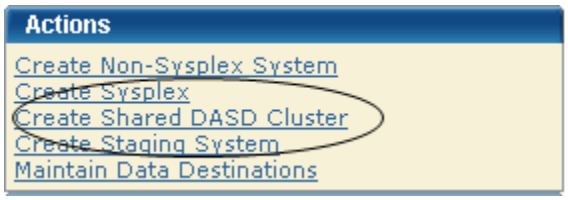
   Note: Click Cancel to withdraw this create request.

Create Shared DASD Cluster

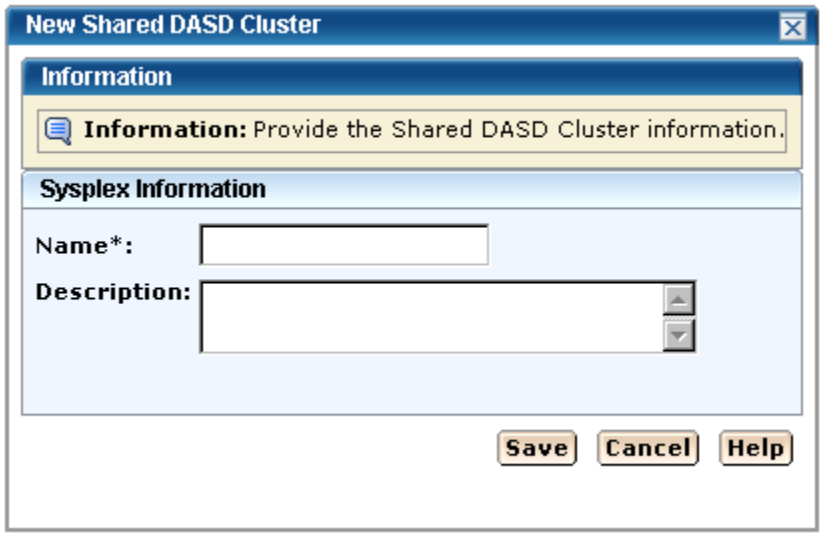
You can create a Shared DASD Cluster.

To create a Shared DASD Cluster

1. Click the System Registry tab, and in the Actions section click the Shared DASD Cluster link.



The New Shared DASD Cluster window appears.



Note: The asterisk indicates that the field is mandatory.

2. Enter the Shared DASD Cluster Name.

   Limits: Maximum 8 characters.

   Note: Each Shared DASD Cluster name must be unique and it is not case-sensitive. For example DASD1 and dasd1 are the same Shared DASD Cluster name. A Staging System may have the same name as a Non-Sysplex, Sysplex, or Shared DASD Cluster.

3. Enter the Description.

   Limits: Maximum 255 characters.

4. Click Save to save this new Shared DASD Cluster.

   The New Shared DASD Cluster name appears as the last entry in the Systems Registry Cluster List on the right.

   Note: Click Cancel to withdraw this create request.

Authorization

There are two authorization modes for the Systems Registry.

- Edit Mode - Allows you to update and change System Registry information.

  Note: Once the information is changed you must click save to save the information or cancel to cancel the changed information.

- View Mode - only allows you to see the screen.

Maintain a System Registry

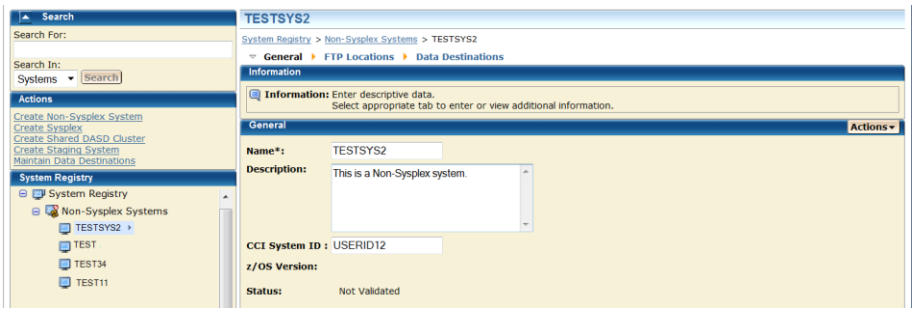
You can maintain the system registry.

To maintain a system registry

1. Click the System Registry tab, and select Non-Sysplex Systems, Sysplexes, Shared DASD Clusters, or Staging Systems from the tree at the left.

   The detailed information appears at the right.

2. Select the system to maintain.



3. Update the Name as needed.

   Limits: Maximum 8 characters.

4. Update the Comments as needed.

   Limits: Maximum 255 characters.

5. Update the CCI System ID:

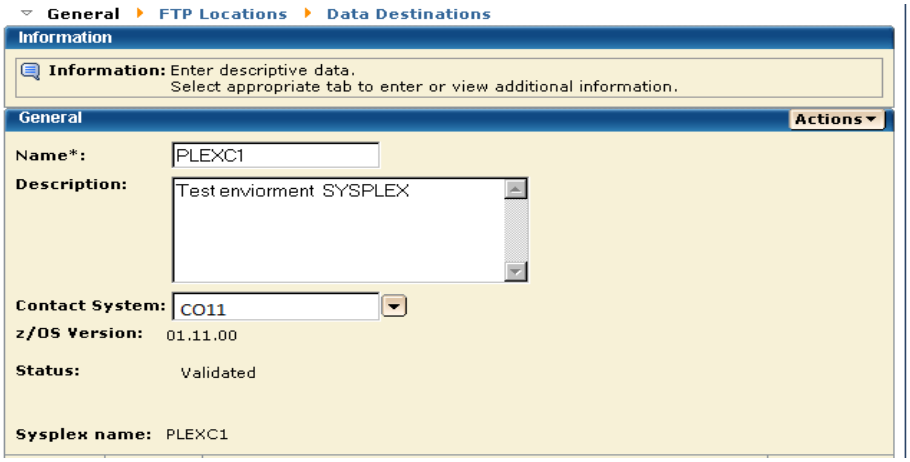
   Note: CA recommends that the CCI System ID is not updated.

   Limits: Maximum 8 characters.

6. For Shared DASD or SYSPLEX system only, select the Contact System. This is system where the Shared DASD location or FTP location. The FTP location should be set to the contact system URI. The contact system is used for remote credentials.

   For example, assume contact system is set to CO11, FTP location URI is set to XX61 and the remote credentials are set up for CO11.

   The deployment could fail because your remote credentials might not be the same on both systems (CO11 and XX61) and you set the Contact System to CO11, but you are contacting to XX61 and it will fail because spawn will be started on CO11 but we will look for the output on XX61 because that is where the FTP location was set.



   Note: z/OS Version is set by CA MSM.

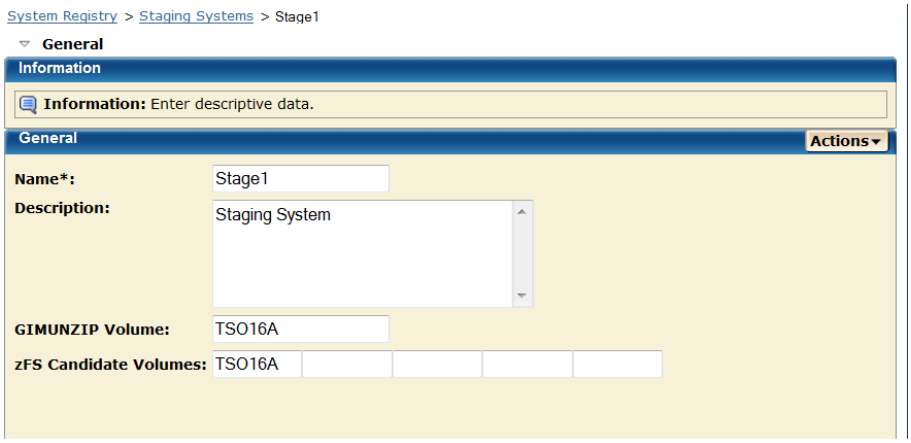
   Note: Monoplexes are stored in the Sysplex registry tree but with the name of the Monoplex System and not the Monoplex Sysplex Name. For example, a system XX16 defined as a Monoplex, with a sysplex name of LOCAL. It will be depicted in the System Registry as a Sysplex with the name of XX16. This sysplex will contain one system: XX16.

   This procedure was created to help customers that have Monoplexes with the same sysplex name (for example: LOCAL). Instead of showing multiple LOCAL sysplex entries which would need to be expanded to select the correct Monoplex system, the CA MSM System Registry shows the actual Monoplex System name at the top level Sysplex Name.

   The FTP and DATA Destinations at the system level are not used when the Sysplex is a Monoplex. The only FTP Location and Data Destinations that are referenced are those defined at the Sysplex Level.

7. For Staging systems, enter the GIMUNZIP volume and/or zFS candidate volumes.

   The zFS candidate volumes allow the specification of an optional list of VOLSERs used during the allocation of zFS container data sets for USS parts.



8. Select the Action from the Actions list in the General bar.

   Cancel

   Cancel this maintenance.

   Save

   Save the changes to this maintenance.

   Validate

   Validate authenticates this entry.

   Note: The validation process is done in steps; each system in this request is validated with the last step summarizing, verifying, and confirming the validation. If the validation fails this steps will show how the validation failed. See How to Investigate a Failed Validation (see page 79).

   Validation Rules

   - For a Non-Sysplex system that single system is validated and the last step summaries, verifies and confirms the validation.
   - For a Sysplex system each system within the Sysplex is validated as an individual step and the last step summarizing, verifying, and confirming the validation.
   - For Shared DASD Cluster each Non-Sysplex system is validated, each Sysplex system is validated as describe in the Sysplex Rule and the last step summarizing, verifying, and confirming the validation.

   Note: A Staging system is not validated.

   Note: When a system is validated status appears in the Status Field.

This table shows the system validation results and actions.

Result	Action
Validated	System is available, status is updated as valid, and system registry is updated with results from validation.
Validation in Progress	System status is updated to in progress.
Validation Error	System status is updated to error. See How to Investigate a Failed Validation (see page 79).
Not Validated	This system has not been validated yet.
Not Accessible	The system has not been validated because it is no longer available or was not found in the CCI Network.
Validation Conflict	System has been contacted but the information entered then different then the information retrieved.

Error details

When a validation is in error the Error details button appears. Click this button to find the reason for this conflict. See How to Investigate a Failed Validation (see page 79).

Note: The error reason is kept in local memory. If the "Please validate the system again." message appears, the local memory has been refreshed and the error has been lost. To find the conflict again validate this system again.

Conflict details

When a validation is in conflict, the Error details button appears. Click this button to find the reason for this conflict. See How to Investigate a Failed Validation (see page 79).

Note: The conflict reason is kept in local memory. If the "Please validate the system again." message appears, the local memory has been refreshed and the conflict has been lost. To find the conflict again, validate this system again.

How to Investigate a Failed Validation

When a validation fails it can be investigated, corrected, and validated again. The following procedures are defined:

- Investigate a validation using the Tasks Page.
- Investigate a validation immediately after a Validation
- Save a message log

Note: This procedures uses a Non-Sysplex system for an example, but the method also works for a Sysplex or a Shared DASD Cluster.

To investigate a failed validation using the Tasks Page

1. On the System Registry Page, in the left hand column find the system with a validation status error.

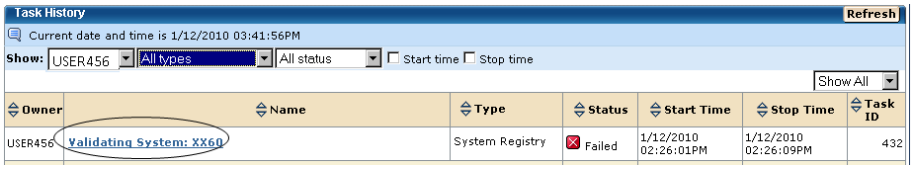
   Note: It is helpful to record the System Name that has failed the validation.

2. Click the Tasks Tab and then click the Task History link.

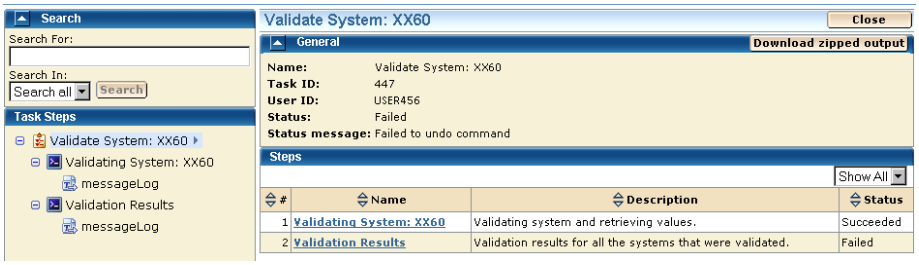
3. At the Show bar select All task, or My task to list the tasks by Owner.

   Note: You can refine the task list by entering USER ID, types, and status.

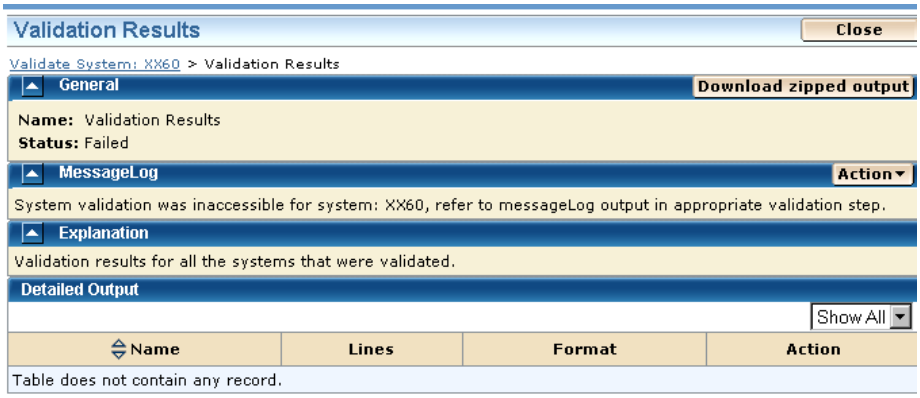
4. Find the Failed validation and click the Name Link.



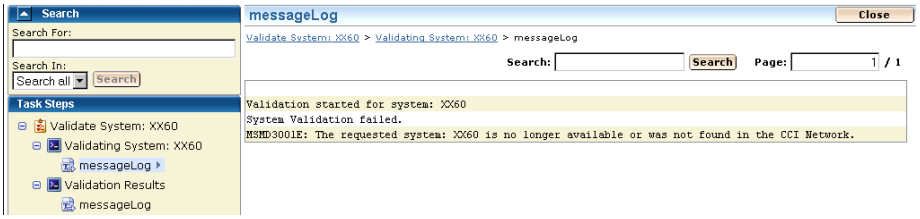
5. The Validate System window appears.



6. Click the Validation Results link to view the results and click on the messages logs to review the details for each error. To analyze the error results, see Troubleshooting. Correct the issue and validate again.



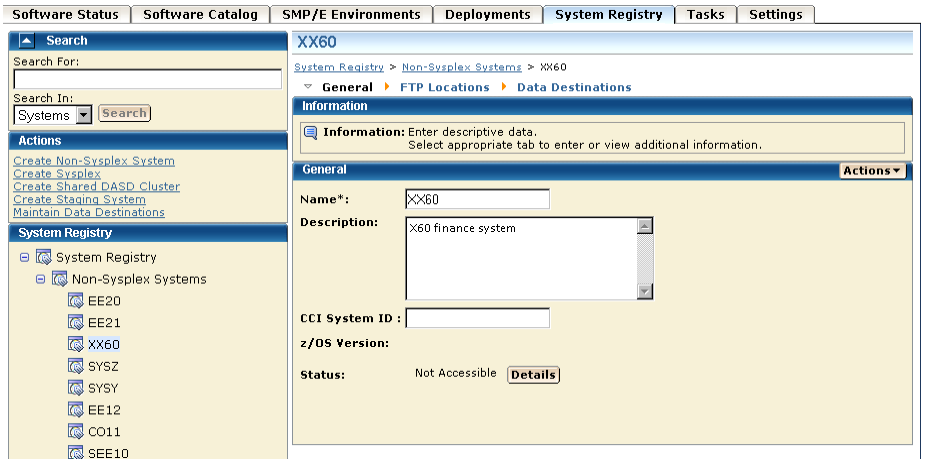
The Message Log.



To investigate a failed validation immediately after Validation

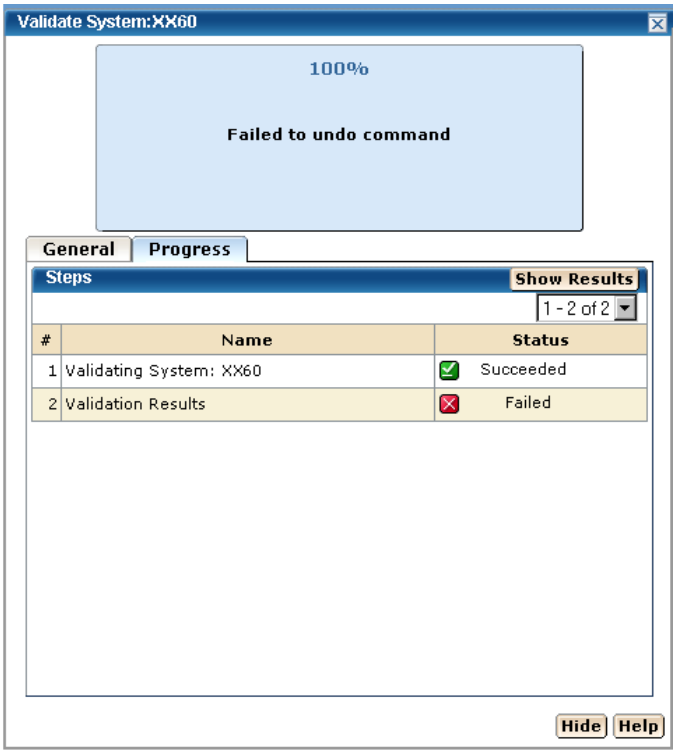
1. On the System Registry Page, in the left hand column find the system with a validation status error.

   Note: It is helpful to record the System Name that has failed the validation.



2. Click the Detail Button to see the Error details.
3. If the Message states "Please validate the system again", click the Validate button. The system validates again.

4. Click the Progress tab.



5. Go to step 5 in the "To investigate a failed validation using the Tasks Page".

Download Message Log

To download a zipped file of all the text messages for this validation

1. Click the Deployment Name on the top left tree and click Download zipped out button on the General menu bar. You will be requested to save this file.

To Download as TXT

1. Click the Deployment Name or the Deployment Results on the left tree, click the Action button on the MessageLog bar and click the Download as TXT. You will be requested to save this file.

To Download as ZIP

1. Click the Deployment Name or the Deployment Results on the left tree, click the Action button on the MessageLog bar and click the Download as ZIP. You will be requested to save this file.

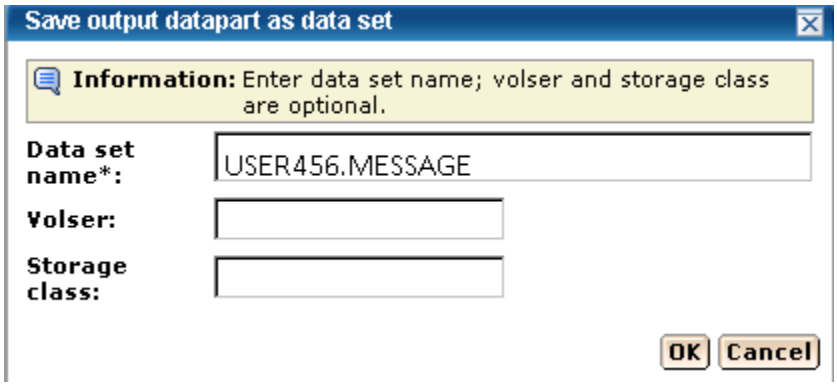
Save a Message Log as a Data Set

To save as a data set

1. Click the Deployment Name or the Deployment Results on the left tree, click the Action button on the MessageLog bar, and click the Save as data set.

   The Save output as a data set window appears.

   Note: This is information is sent to CA support to analyze the failed deployment.



   Note: The asterisk indicates that the field is mandatory.

2. The data set name has been entered by the system.

   For Non-SMS data, enter the Volser.

   Example:

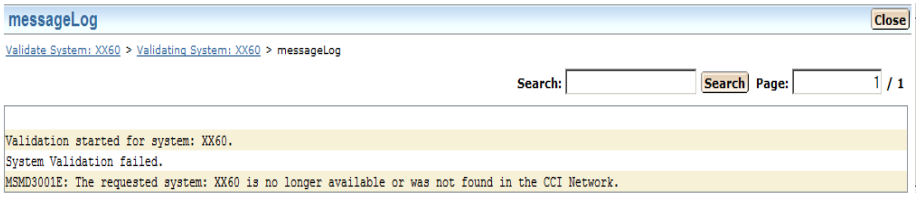
   Volsers: SYSP01 and SYSP02

3. For SMS Allocation data, enter the Storage Class.

To Show All

To Show all

1. Click the Show all button and the complete message log appears for this failed validation.



2. Click Close.

To Download as TXT

Save the file.

To Download as ZIP

Save the file.

Delete a System Registry

You can delete a system registry.

To delete a system registry

1. Click the System Registry tab.

   The System Registry window appears.

2. On the right, in the System Registry panel, select Non-Sysplex Systems, Sysplexes, Clusters, or Staging Systems link.

   The system list appears.

3. Click the Select box for each system registry you want to delete.
4. Click the Delete link and then click OK to the Delete confirmation window.

   The system is deleted.

Data Destinations

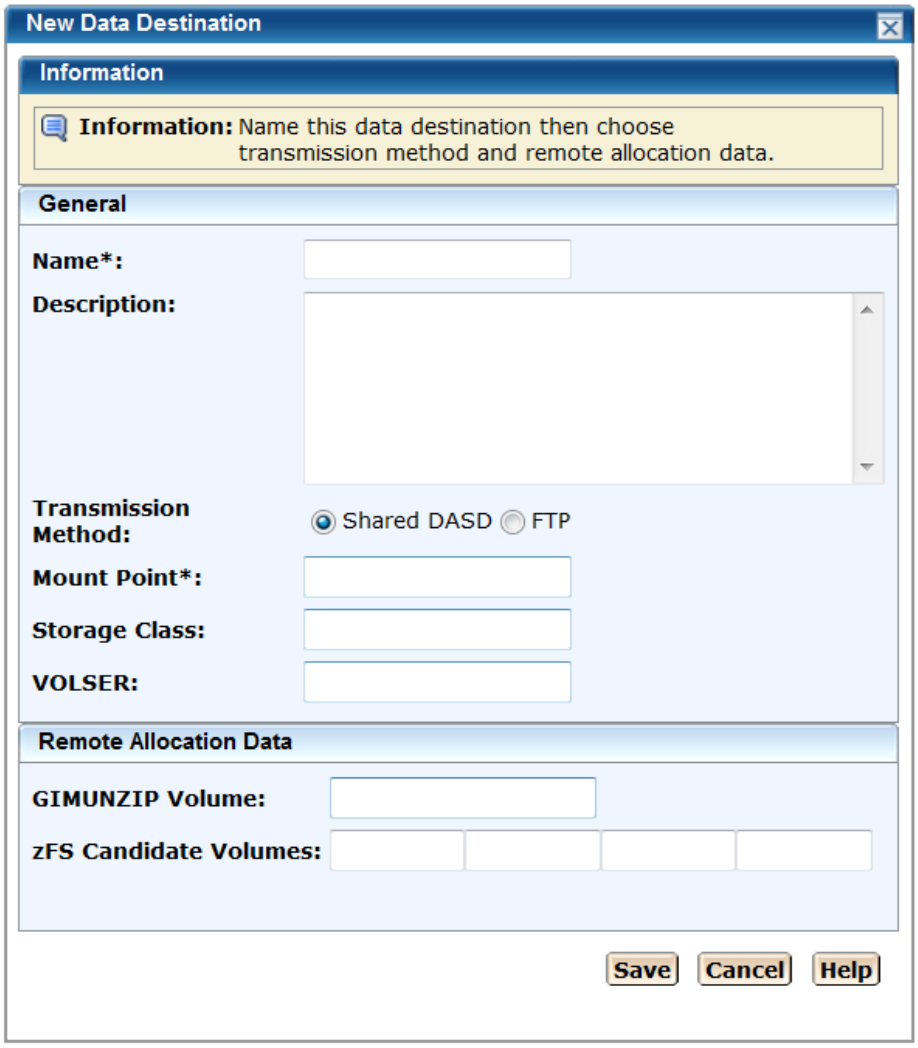
The Data Destinations page lists the current data destinations for this system.

Create Data Destinations

You can create data destinations.

To create a data destination

1. Click the System Registry tab, and in the Actions section click the Maintain Data destinations link. The Maintains Data Destinations window appears.
2. Click Create. The New Data Destination Window appears.



Note: The asterisk indicates that the field is mandatory.

3. Enter a meaningful Name.

   Limits: Maximum 64 characters.

   Note: Each data destination name must be a unique name and it is not case-sensitive. For example DATAD1 and datad1 are the same data destination name.

4. Enter the Description.

   Limits: Maximum 255 characters.

5. Select the transmission method either Shared DASD (step 6) or FTP (step 11).

   Default: Shared DASD.

6. For Shared DASD, enter the Mount point directory path

   Mount point is a directory path that must exist on the target system. The user that is doing the deployment must have write permission to this directory.

   The deployment user must have write permissions for the mount directory. The deployment user ID must have mount authorization on the target system.

   Note: A mount user must have UID(0) or at least have READ access to the SUPERUSER.FILESYS.MOUNT resource found in the UNIXPRIV class.

   Limits: Maximum 120 characters

   Note: SMS is not mutually exclusive with non-SMS. They can both be specified (usually one or the other is specified though). This is where you specify allocation parameters for the deployment on a target system.

7. Enter the Storage Class,

   Limits: Maximum 8 characters

   Example:

   Storage Class: SYSPRG

8. Enter the Volser.

   Limits: Maximum 6 characters

   Example:

   Volsers: SYSP01 and SYSP02

9. Enter the GIMUNZIP volume.

   Limits: Maximum 6 characters

10. Enter zFS Candidate volumes.

    Limits: Maximum 6 characters

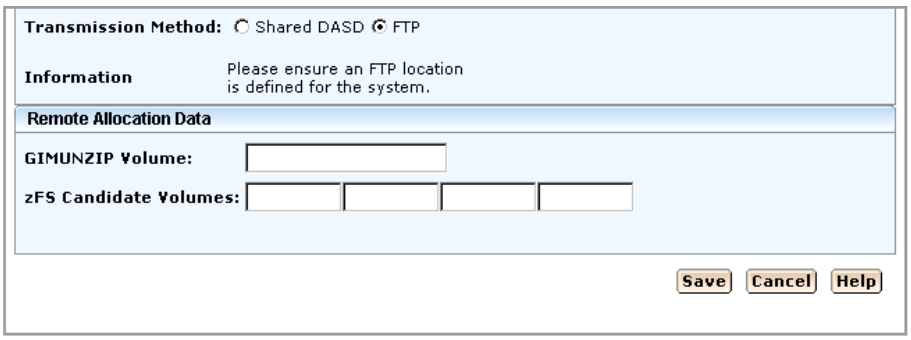
    The zFS candidate volumes allow the specification of an optional list of VOLSERs used during the allocation of zFS container data sets for USS parts.

11. Click Save. The new data destination appears as the last entry on the Pick data destination list.

    Note: Click Cancel to withdraw this create request.

12. For FTP, select FTP button.

    Note: The FTP indicator tells CA MSM that the transmission will be through FTP.



13. Enter the GIMUNZIP Volume.

    Limits: Maximum 6 characters

14. Enter the zFS Candidate Volumes.

    Limits: Maximum 6 characters

15. Click Save. The new data destination appears as the last entry on the Pick data destination list.

    Note: Click Cancel to withdraw this create request.

Add a Data Destination

You can add a current data destinations to an existing system.

To add a current data destination to an existing system

1. Click the System Registry tab, and select Non-Sysplex Systems, Sysplexes, or Clusters, from the tree at the left.

   The detailed information appears at the right.

2. Select the system you want to add data destinations.

3. Click the Data Destination tab.

   The Data Destination window appears.

4. Click Add.

   The Pick data destination window appears.

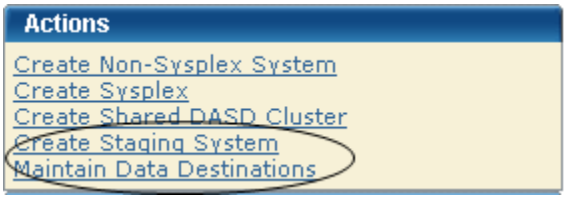
5. Select the data destinations you want to add and click Select.

Maintain Data Destinations

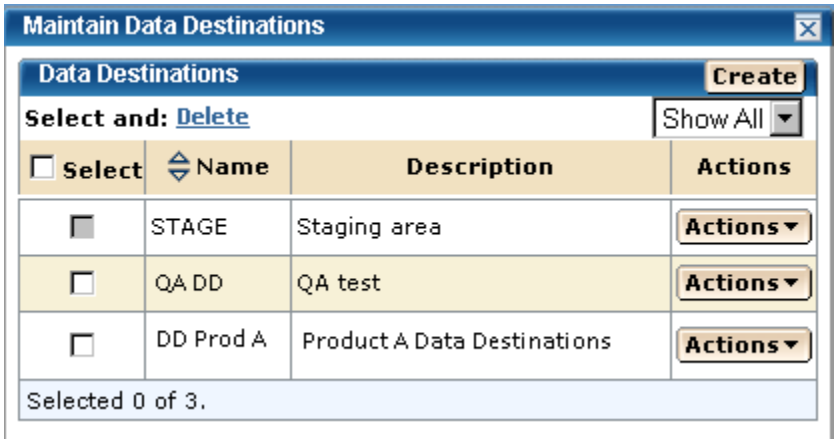
You can maintain, delete (see page 92), or create (see page 85) data destinations.

To maintain current data destinations

1. Click the System Registry tab, and in the Actions section click the Maintain Data destinations link.



   The Maintains Data Destinations window appears.

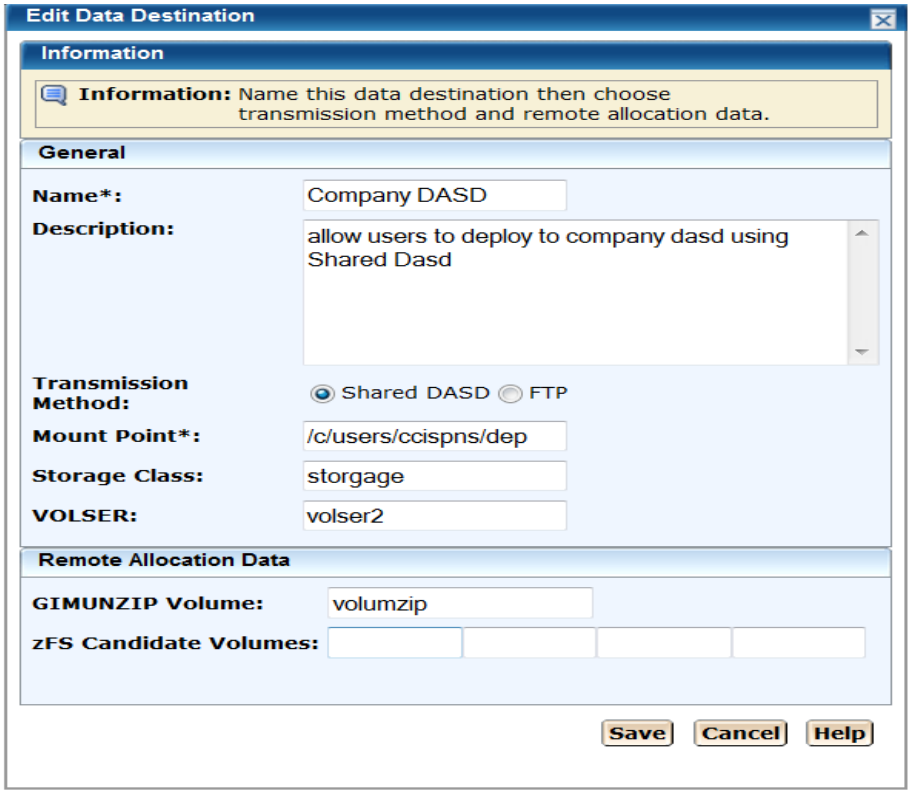


   Note: A grayed select box indicates that the data destinations is assigned and cannot be removed. It can be edited.

2. Select the data destinations and select Edit on the Actions drop down. The Edit Data Destinations window appears.

   Note: The asterisk indicates that the field is mandatory.

   Important! The only valid fields in the Data Destination windows are name, comments, Volsers, and the data destination is shared check box.



3. Enter a meaningful Name.

   Limits: Maximum 64 characters.

   Note: Each data destination name must be a unique name and it is not case-sensitive. For example DATAD1 and datad1 are the same data destination name.

4. Enter the Description.

   Limits: Maximum 255 characters.

5. Select the transmission method either Shared DASD (step 6) or FTP (step 11).

   Default: Shared DASD.

6. For Shared DASD, enter the Mount point directory path

   Mount point is a directory path that must exist on the target system. The user that is doing the deployment must have write permission to this directory.

   The deployment user must have write permissions for the mount directory. The deployment user ID must have mount authorization on the target system.

   Note: A mount user must have UID(0) or at least have READ access to the SUPERUSER.FILESYS.MOUNT resource found in the UNIXPRIV class.

   Limits: Maximum 120 characters

   Note: SMS is not mutually exclusive with non-SMS. They can both be specified (usually one or the other is specified though). This is where you specify allocation parameters for the deployment on a target system.

7. Enter the Storage Class, and the Volsers.

   Example:

   Storage Class: SYSPRG

   Volsers: SYSP01 and SYSP02

8. Enter the GIMUNZIP volume.

9. Enter zFS Candidate volumes.

   The zFS candidate volumes allow the specification of an optional list of VOLSERs used during the allocation of zFS container data sets for USS parts.

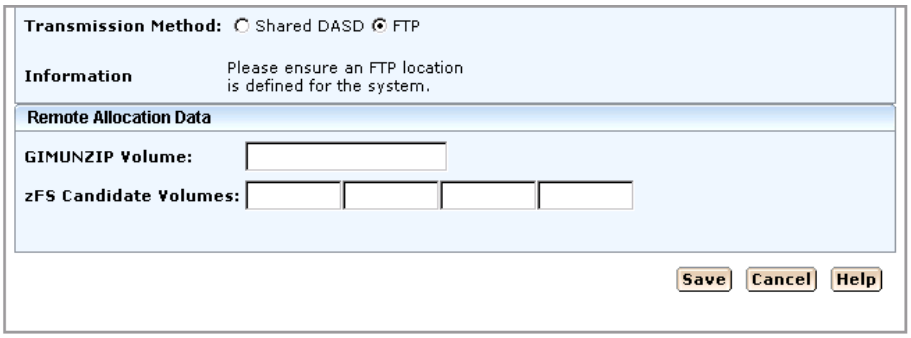
10. Click Save.

    The new data destination appears as the last entry on the Pick data destination list.

    Note: Click Cancel to withdraw this create request.

11. For FTP, select FTP button.

    Note: The FTP indicator tells CA MSM that the transmission will be through FTP.



12. Enter the GIMUNZIP Volume.
13. Enter the zFS Candidate Volumes.
14. Click Save.

    The new data destination appears as the last entry on the Pick data destination list.

    Note: Click Cancel to withdraw this create request.

Set a Default Data Destination

You can set a default for a current data destination.

To set a default for a current data destination

1. Click the System Registry tab, and select Non-Sysplex Systems, Sysplexes, or Shared DASD Cluster from the tree at the left.

   The detailed information appears at the right.

2. Click the data destination link.

   The data destination window appears.

3. Select the data destination to you want as a default.
4. In the Action box select Set as Default.

   The word Default appears in the Default column.

Delete Data Destinations

You can delete current data destinations that have *not* been assigned.

Important: A grayed select box indicates that the data destination is assigned and it cannot be deleted. It can be edited.

To delete a data destinations

1. Click the System Registry tab, and select Non-Sysplex Systems, Sysplexes, Shared DASD Clusters, or Staging Systems from the tree at the left.

   The detailed information appears at the right.
2. Select the system where you want to delete a data destination.
3. Click the Data Destination tab.

   The Data Destination window appears.
4. Click the Select box for each data destination you want to remove.
5. Click the Delete link and then click OK to the Delete confirmation window.

   The data destination is deleted.

FTP Locations

The FTP Locations lists the current FTP locations for this system.

An FTP location must be defined for every system. They are used to retrieve the results of the deployment on the target system regardless if the deployment was transmitted through FTP or using Shared DASD. They are also used if you are moving your deployments through FTP. You will need the URI (host system name), port number (default is 21), and the directory path, which is the landing directory. The landing directory is where the data is temporarily placed during a deployment.

Add FTP Locations

You can add, edit (see page 93), set default (see page 94), or remove (see page 94) FTP locations.

Note: The asterisk indicates that the field is mandatory.

To add FTP locations

1. Click the System Registry tab, and select Non-Sysplex Systems, Sysplexes, or Shared DASD Clusters from the tree at the left.

   The detailed information appears at the right.
2. Click the system name link you want to create FTP locations.

3. Click the FTP Locations tab.

   The FTP Locations window appears.

4. Click Add.

   The New FTP Location window appears.

5. Enter URI.

   Limits: Maximum length is 255.

6. Enter Port.

   Limits: Maximum Port number is 65535 and must be numeric.

   Default: 21

7. Enter Directory Path

   Limits: Most start with a root directory, that is /.

8. Click Save.

More Information:

Edit FTP Locations (see page 93)
Set FTP Location Default (see page 94)
Remove FTP Locations (see page 94)

Edit FTP Locations

You can edit FTP locations.

Note: The asterisk indicates that the field is mandatory.

To edit FTP locations

1. Click the System Registry tab, and select Non-Sysplex Systems, Sysplexes, Shared DASD Clusters, or Staging Systems from the tree at the left.
2. The detailed information appears at the right.
3. Click the system link where you want to create FTP locations.
4. Click the FTP Location tab. The FTP Locations window appears.
5. Select the FTP location and select Edit on the Actions drop down. The Edit FTP Location window appears.
6. Edit the URI.

   Limits: Maximum length is 255.

7. Edit the Port.

   Limits: Maximum Port number is 65535 and must be numeric.

   Default: 21

8. Edit the Directory Path

   Limits: Most start with a root directory, that is /.

9. Click Save.

Set FTP Location Default

You can set an FTP location default.

To set an FTP location default

1. Click the System Registry tab, and select Non-Sysplex Systems, Sysplexes, or Shared DASD Clusters from the tree at the left.

   The detailed information appears at the right.

2. Click the system link you want to set the FTP location default to.
3. Click the FTP Locations tab.

   The FTP Locations window appears.

4. Select the FTP locations and select Default on the Actions drop down.

   The word Default appears in the Default Column.

Remove FTP Locations

You can remove FTP locations.

To remove FTP locations

1. Click the System Registry tab, and select Non-Sysplex Systems, Sysplexes, or Shared DASD Clusters from the tree at the left. The detailed information appears at the right.
2. Select the system where you want to delete FTP locations.
3. Click the FTP Locations tab.

   The FTP Locations window appears.

4. Click the Select box for each FTP location you want to remove.
5. Click the Remove link and then click OK to the Remove FTP location confirmation window.

   The FTP location is removed.

Remote Credentials

The Remote Credentials page sets up remote credentials accounts by owner, remote user ID, and remote system name. You must use the Apply button to apply and save your changes.

Important! Remote Credentials are validated during the deployment process. It is the responsibility of the user to have the correct Owner, Remote User ID, Remote System Name, password, and authenticated authorization before creating a new remote credential.

You can add (see page 95), edit (see page 96), or delete (see page 97) remote credentials.

Add Remote Credentials

You can add remote credentials.

Important! Remote Credentials are validated during the deployment process. It is the responsibility of the user to have the correct Owner, Remote User ID, Remote System Name, password, and authenticated authorization before creating a new remote credential.

Note: The asterisk indicates that the field is mandatory.

To add remote credentials

1. Click the Setting tab, and select Remote Credentials from the tree at the left. The detailed information appears at the right.
2. In the Remote Credentials Account panel, click the New button. The New Remote Credential window appears.
3. Enter a correct Remote User ID.

   Limits: Maximum 64 characters.
4. Enter a correct Remote System Name.

   Limits: Maximum 8 characters.

   Example: RMinPlex

   Note: A remote credential default can be set up by creating a remote credential without the system name. This default would be for the user creating this remote credentials only.
5. Enter a correct password.

   Limits: Minimum 2 characters and Maximum 63 characters.

   Note: Password is case sensitive, make sure that your password follows the correct case sensitive rules for your remote system.

6. Enter the correct confirm password.

   Limits: Minimum 2 characters and Maximum 63 characters.

   Note: Password is case sensitive, make sure that your password follows the correct case sensitive rules for your remote system.

7. Click OK the remote credential entry appears on Remote Credentials Accounts List.
8. Click Apply to apply and save your changes.

Edit Remote Credentials

You can edit remote credentials.

Important! Remote Credentials are validated during the deployment process. It is the responsibility of the user to have the correct Owner, Remote User ID, Remote System Name, password, and authenticated authorization before creating a new remote credential.

Note: The asterisk indicates that the field is mandatory.

To edit remote credentials

1. Click the Setting tab, and select Remote Credentials from the tree at the left. The detailed information appears at the right.
2. In the Actions drop down list, click Edit for the remote credential you want to edit. The Edit Remote Credential window appears.
3. Enter a correct Remote User ID.

   Limits: Maximum 64 characters.

4. Enter a correct Remote System Name.

   Limits: Maximum 8 characters.

   Example: RMinPlex

   Note: A remote credential default can be set up by creating a remote credential without the system name. This default would be for the user creating this remote credentials only.

5. Enter a correct password.

   This must be entered each time a remote credential is edited.

   Limits: Minimum 2 characters and Maximum 63 characters.

   Note: Password is case sensitive, make sure that your password follows the correct case sensitive rules for your remote system.

6. Enter the correct confirm password.

   This must be entered each time a remote credential is edited.

   Limits: Minimum 2 characters and Maximum 63 characters.

   Note: Password is case sensitive, make sure that your password follows the correct case sensitive rules for your remote system.

7. Click OK.

   The remote credential entry appears on Remote Credentials Accounts List.

8. Click Apply to apply and save your changes.

Delete Remote Credentials

You can delete remote credentials.

To delete remote credentials

1. Click the Setting tab, and select Remote Credentials from the tree at the left.

   The detailed information appears at the right.

2. In the Actions drop down list, click Delete for the remote credential you want to delete.

   A Delete Confirmation window appears.

3. Click OK.

Deploying Products

This section includes information about how to use CA MSM to deploy products.

About Deployments

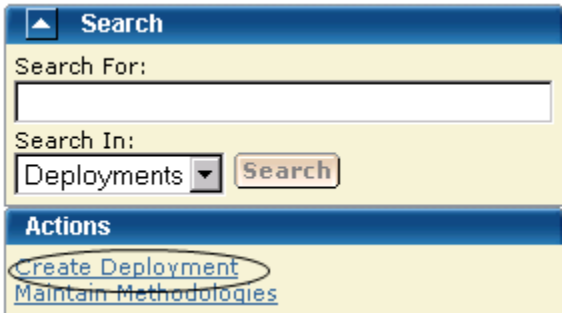
Deployments allow system objects to be deployed across the enterprise. These services enable deployment across both "Shared DASD" environments and networked environments. The objects to be deployed include target libraries defined to SMP/E and user-selected data sets.

Create a Deployment using the Product Wizard

You can create a new deployment by using the New Deployment wizard.

To create a deployment

1. Click the Deployments tab, and then in the Actions section, Create Deployment link.



   The Deployment of Products wizard appears.

Enter Name and Description

Note: The asterisk indicates that the field is mandatory.

Do the following

1. Enter a meaningful deployment name.

   Limits: Maximum 64 characters.

   Note: Each deployment name must be unique and it is not case-sensitive. For example, DEPL1 and depl1 are the same deployment name.

2. Enter the description of this deployment.

   Limits: Maximum 255 characters.

3. Click Next.

   The CSI Selection window appears.

Note: When creating a deployment, you can save this deployment at any step in this wizard. This "under construction" deployment is added to the current deployments list. You can maintain this deployment (see page 106) until a successful snapshot has been created.

CSI Selection

The CSI selections listed were preselected from the SMP/E Environments window. You can select a CSI.

To select a CSI

1. Select a CSI, and click Next.

   The Product Selection window appears.

Note: When creating a deployment, you can save this deployment at any step in this wizard. This "under construction" deployment is added to the current deployments list. You can maintain this deployment (see page 106) until a successful snapshot has been created.

Product Selection

To select a product

1. Select a product from the list.
2. If there is a text icon in Text column, click the text icon to read the instructions supplied by CA Support for product, data sets, and other necessary information.
3. Click the "I have read the associated text by selecting the text icon from the list about" box. This box appears only if there is a text icon.

   Note: You will not be able to click Next until you click this box.
4. Click Next.

   Note: If you do not see any products showing up to select that means the appropriate PTF which enables your products deployment through metadata has not been installed.

   Note: When creating a deployment, you can save this deployment at any step in this wizard. This "under construction" deployment is added to the current deployments list. You can maintain this deployment (see page 106) until a successful snapshot has been created.

   Custom Data Sets Selection window appears.

Custom Data Sets

A *custom data set* contains either an z/OS data set or USS parts paths.
For an z/OS data set you need to provide a data set name that is the actual existing z/OS data set and a mask that names the data set on the target system. This mask may be set up using symbolic qualifiers (see page 127) and must be available to CA MSM. During the deployment process, the custom data set is accessed and copied to the target system the same way a target library is accessed and copied.

For USS parts you need to provide a local path, a remote path which may be set up using symbolic qualifiers (see page 127) and type of copy. Type of copy can be either a container copy or a file-by-file copy.

To select a custom data set

1. Select a custom data set from the list. Click Select and then Next.

   Note: To add a new custom data set click the Add Data Set button and enter the custom data set information (see page 115).

   The Methodology Selection window appears.

More Information:

Add a Custom Data Set (see page 115)

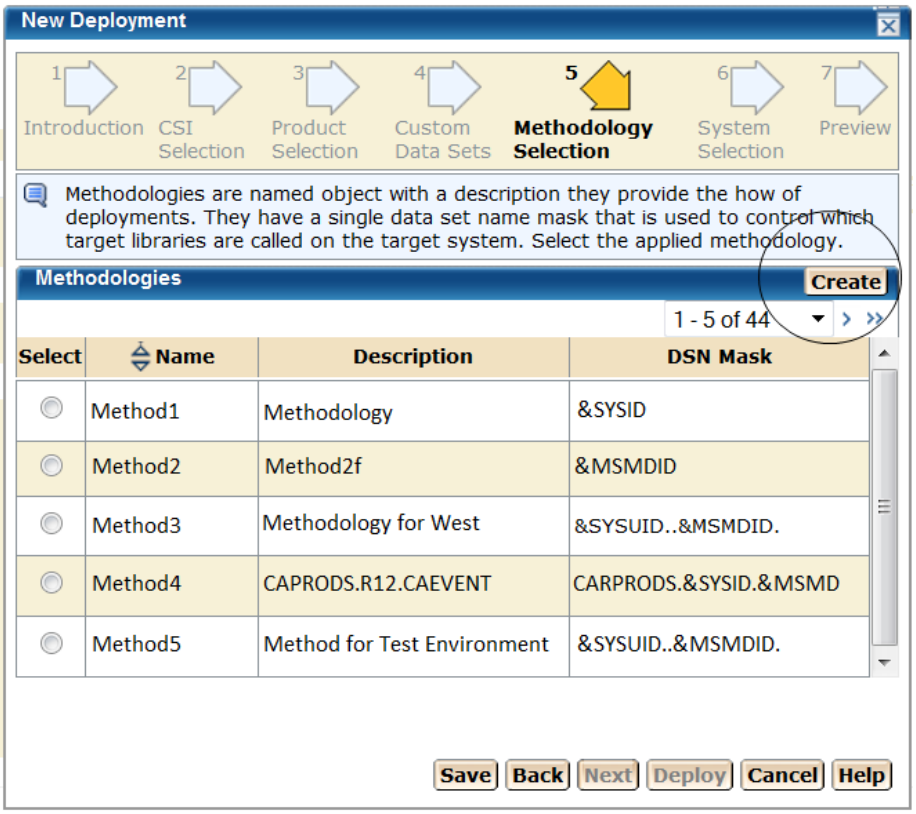
Methodology Selection

The methodology lets you provide a single data set name mask that is used to control the target library names on the target system.

To select a Methodology

1. Select a Methodology from the list and click Next.

   Note: To create a new methodology click the Create button and enter the new methodology information (see page 124).



   System Selection window appears.

Note: When creating a deployment, you can save this deployment at any step in this wizard. This "under construction" deployment is added to the current deployments list. You can maintain this deployment (see page 106) until a successful snapshot has been created.

More Information:

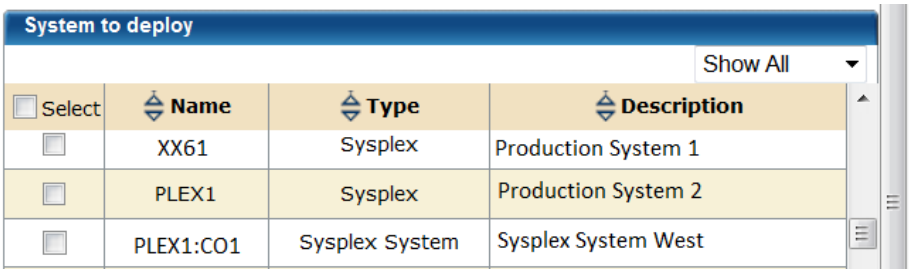
Create a Methodology (see page 124)

System Selection

1. Select the systems to be deployed

   Note: When two system have the same name use the description to differentiate between these systems.

   Note: Sysplex systems are denoted by Sysplex System:System Name. For example PLEX1:CO11 where PLEX1 is Sysplex name and CO11 is the system name.



2. Click Next.

   The Preview window appears.

Note: When creating a deployment, you can save this deployment at any step in this wizard. This "under construction" deployment is added to the current deployments list. You can maintain this deployment (see page 106) until a successful snapshot has been created.

Preview

1. Click Save to save the deployment

   or

2. Click Deploy to set up this deployment.

Note: Click Cancel to exit this procedure without saving.

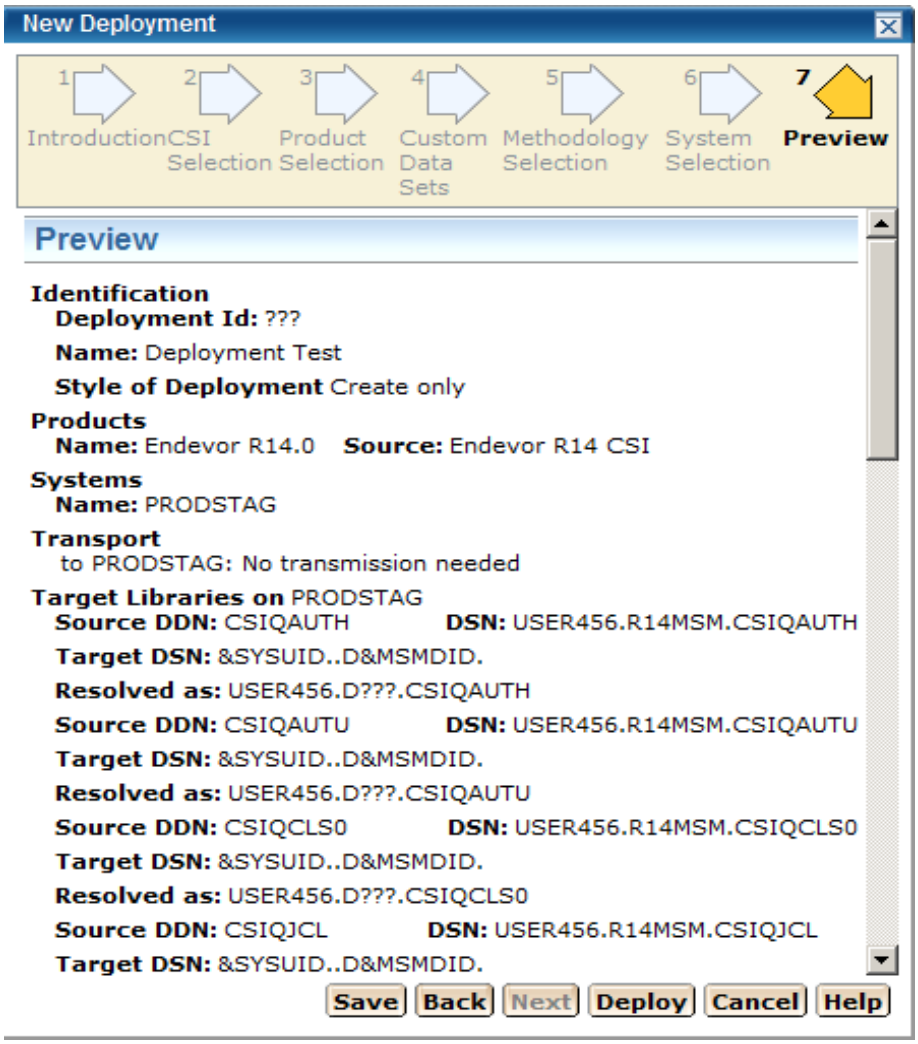
The Preview identifies the deployment by name and briefly states the products, systems, means of transport, target libraries including source, target and resolution, as well as SMP/E environment and snapshot information.

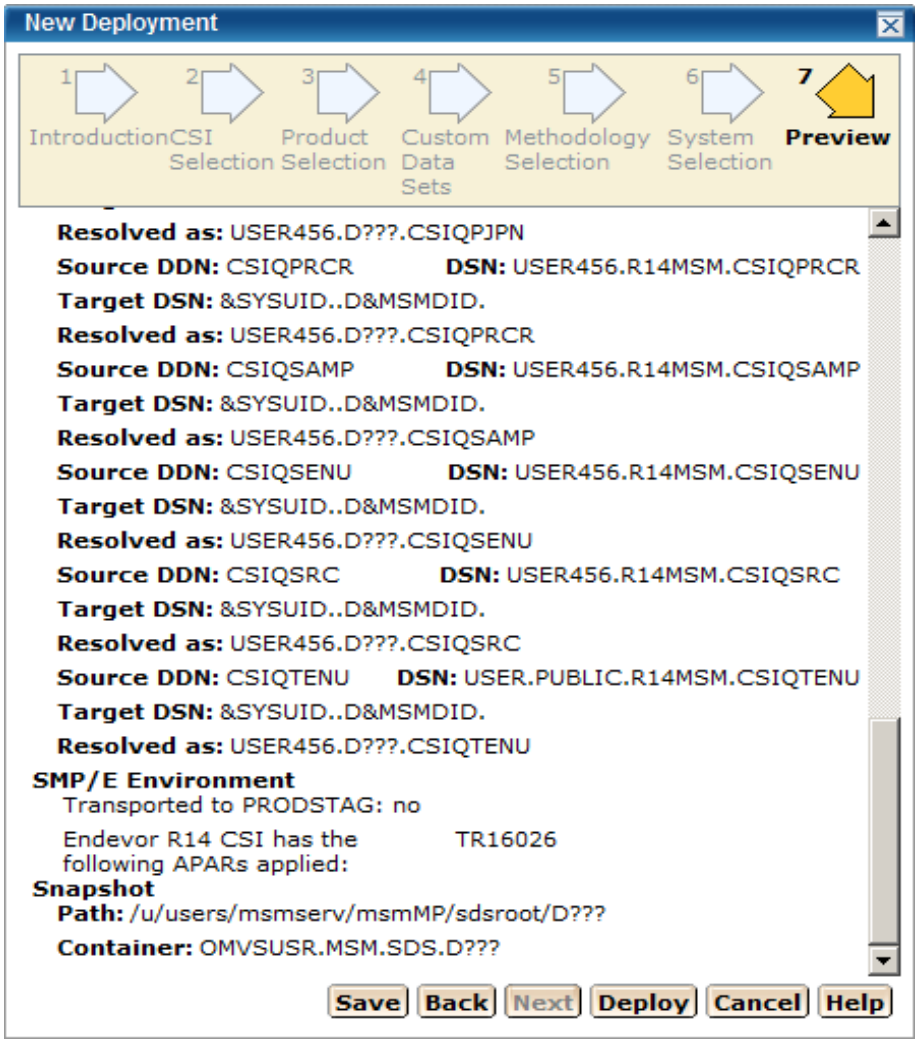
Important! Data sets may need to be APF Authorized and/or added to the Link List and/or Link Pack Area. These data sets are identified in this dialog.

Note: Any ??? in the Preview means that CA MSM has not assigned this value yet. For example, before a Product Deployment is deployed the MSMDID shows as ???. After deployment the Automatic ID is assigned by CA MSM and this is the MSMDID.

Deployment Preview Sample

This sample shows a deployment ready to be deployed.



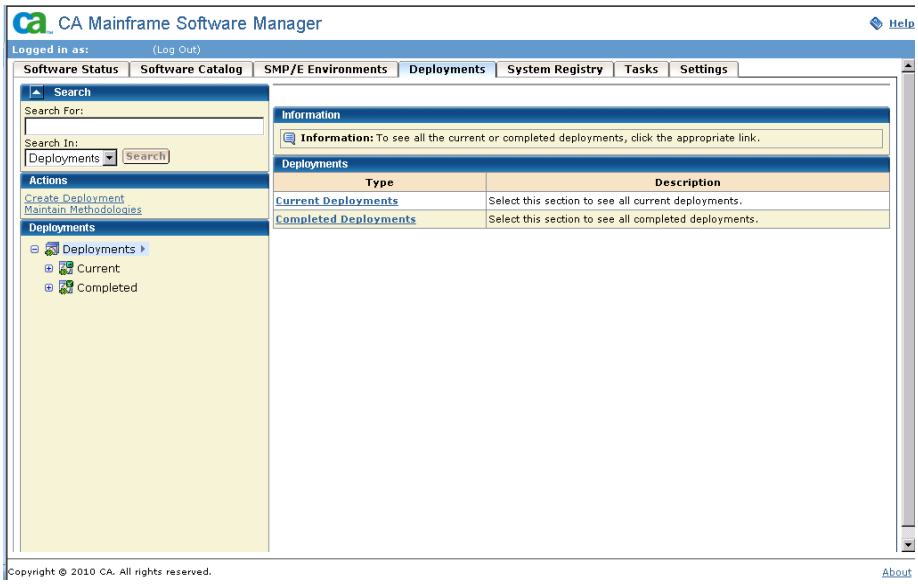

New Deployment
1 Introduction
2 CSI Selection
3 Product Selection
4 Custom Data Sets
5 Methodology Selection
6 System Selection
7 Preview
Resolved as: USER456.D???.CSIQPJPN
Source DDN: CSIQPRCR DSN: USER456.R14MSM.CSIQPRCR
Target DSN: &SYSUID..D&MSMDID.
Resolved as: USER456.D???.CSIQPRCR
Source DDN: CSIQSAMP DSN: USER456.R14MSM.CSIQSAMP
Target DSN: &SYSUID..D&MSMDID.
Resolved as: USER456.D???.CSIQSAMP
Source DDN: CSIQSENU DSN: USER456.R14MSM.CSIQSENU
Target DSN: &SYSUID..D&MSMDID.
Resolved as: USER456.D???.CSIQSENU
Source DDN: CSIQSRC DSN: USER456.R14MSM.CSIQSRC
Target DSN: &SYSUID..D&MSMDID.
Resolved as: USER456.D???.CSIQSRC
Source DDN: CSIQTENU DSN: USER.PUBLIC.R14MSM.CSIQTENU
Target DSN: &SYSUID..D&MSMDID.
Resolved as: USER456.D???.CSIQTENU
SMP/E Environment
Transported to PRODSTAG: no
Endevor R14 CSI has the following APARs applied: TR16026
Snapshot
Path: /u/users/msmserv/msmMP/sdsroot/D???
Container: OMVSUSR.MSM.SDS.D???
Save
Back
Next
Deploy
Cancel
Help

View a Deployment

You can view a deployment by using the CA MSM.

To view a deployment

1. Click the Deployments tab, and select the current or completed deployment from the tree at the left. The detailed deployment information appears at the right.



Maintain Deployments

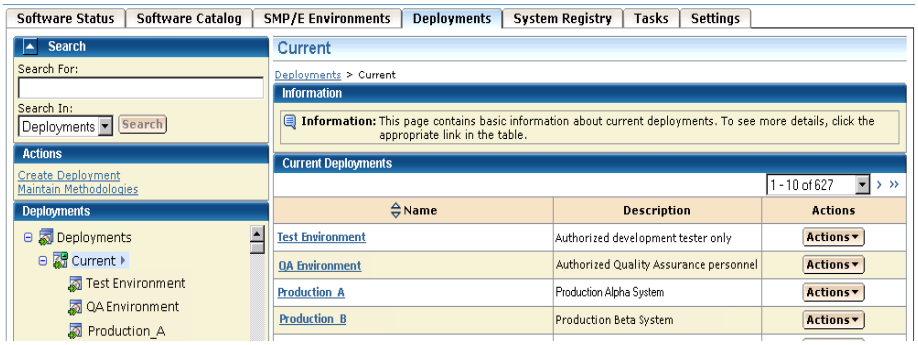
You can maintain deployments any time before you snapshot the deployment.

Important! Each deployment must have at least one product defined, at least one system defined, and a methodology defined.

To maintain deployments

1. Click the Deployments tab. The Deployment window appears.
2. On the right, in the Deployments panel click the current deployment link.

   The detailed deployment information appears.

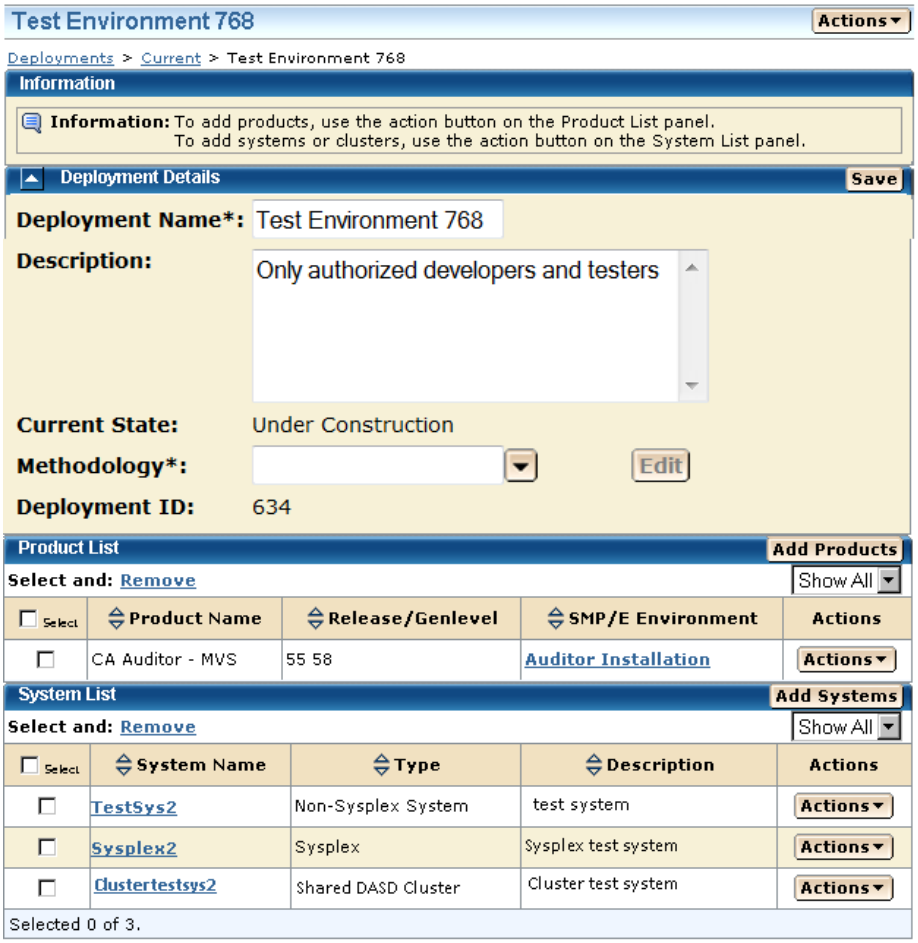


3. Click the Deployment Name link for the Deployment you want to maintain. This deployment's window appears

Change the information on this window as needed. Each deployment name must be unique and it is not case-sensitive. For example DEPL1 and depl1 are the same deployment name.

Note: The methodology provides the means for deployment. It is used to control the target library names on the target system.

There are actions that you can perform based on Deployment State.



4. To maintain a methodology, select a methodology from the drop down list. To edit the selected methodology click the edit button and the Edit Methodology window (see page 136) appears.

   Note: The Deployment ID is the value of the MSMID variable.

5. You can select, add (see page 114), or remove (see page 115) a product.
6. You can select, add (see page 139), or remove (see page 139) a system.
7. You can select, add (see page 115), or remove (see page 124) a custom data set.
8. Click Save on the Deployment Details window.

9. Click Actions button to do one of the following:

Preview (Summary)

Note: This action button changes to Summary after a successful deploy.

Generates a list of the following current information:

- Deployment's ID
- Name
- Products
- Systems
- Transport information
- Target libraries including: source, target, and resolved data set names.
- SMP/E environment
- Snapshot path and container

Snapshot

Takes a snapshot of the current deployment.

A *snapshot* of the set of target libraries is taken by CA MSM, by utilizing the IBM supplied utility GIMZIP to create a compressed archive of these libraries, along with a list of applied maintenance. The SMP/E environment is "locked" during this archive creation process to insure the integrity of the archived data.

Transmit

Transmit enables a customer to take their CA MSM installed software and copy it onto systems across the enterprise through FTP, in preparation for a subsequent deployment.

Deploy

Combines the snapshot, transmit, and deploy action into one action.

Confirm **(see page 112)**

Confirms that the deployment is complete. This is the final action by the user.

Note: A deployment is not completed until it is confirmed. Once it is confirmed the deployment moves to the Confirmed deployment list.

Delete

Deletes deployment and its associated containers, folders, and files. This does not including the deployed target libraries on the end systems. See delete a deployment for a list of deleted files.

Note: A deployment's deletion does not start until it is confirmed.

Reset Status

You can reset a deployment status when the deployment has a status of *snapshot in progress*, *transmitting*, or *deploying*. See reset status for a list of deleted files.

10. Click Save on the Deployment Details window.

More Information:

Edit a Methodology (see page 136)
Add a Product (see page 114)
Remove a Product (see page 115)
Add a System (see page 139)
Remove a System (see page 139)
Confirm a Deployment (see page 112)

How Investigate a Failed Deployment

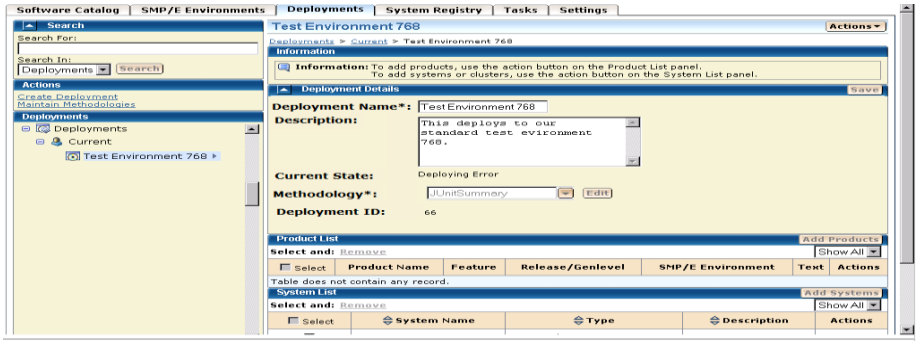
When a deployment fails it can be investigate, corrected, and deployed again. The following procedures are defined.

- Investigate a deployment using the Tasks Page.
- Save a message log

Note: A deployment is processed in steps and in order as listed in the Deployment window. Each step must pass successfully before the next step is started. If a step fails the deployment fails at that step and all steps after the failed step are not processed.

To investigate a failed deployment using the Tasks page

1. On the Deployments Page, in the left hand column find the deployment with an error and record the Deployment Name that failed.

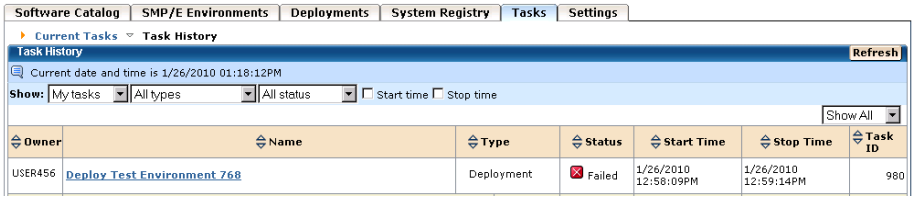


2. Click the Tasks Tab and then click the Task History link. Click Refresh button on the right hand side of the Task History Bar to refresh the Task History display.

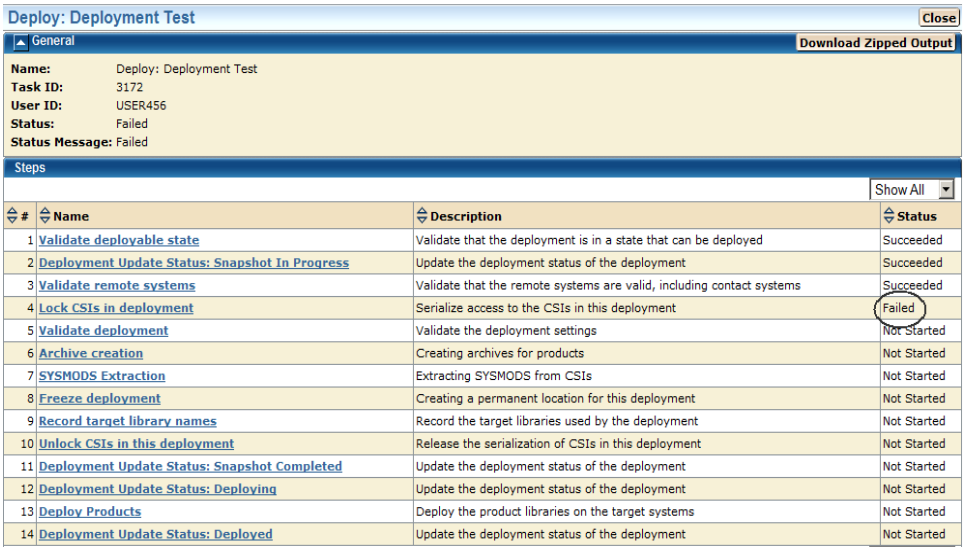
3. At the Show bar select All task, or My task to list the tasks by Owner.

   Note: You can refine the task list by entering USER ID, types, and status, and then sort by Task ID.

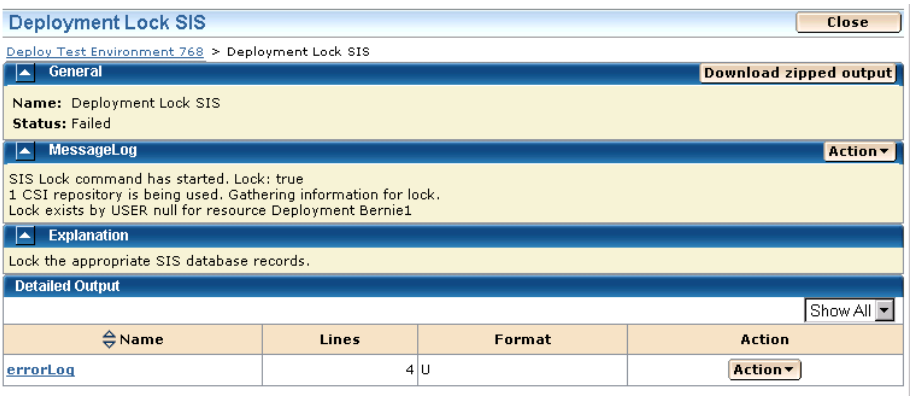
   Find the failed deployment step and click the link in the Name column.



4. The Task Manager window appears.



5. Click the link in the name column "step name" link, in this case Deployment Lock SIS to view the results, and click on the messages logs to review the details for each error. See Troubleshooting for analyzing the error results. Correct the issue and deploy again.



More Information:

Download Message Log (see page 82)
Save a Message Log as a Data Set (see page 83)
To Show All (see page 84)

Delete a Deployment

You can delete deployments.

To delete a deployment

1. Click the Deployments tab.

   The Deployment window appears.

2. On the right, in the Deployments panel click the current deployment link.

   The detailed deployment information appears.

3. Click the deployment name link.
4. Click the Actions drop down list and select delete.
5. Click OK to the Delete confirmation window.

   The deployment is deleted.

   See delete a deployment for a list of deleted files.

Delete a Completed Deployment

You can delete a completed deployment.

To delete a completed deployment

1. Click the Deployments tab. The Deployment window appears.
2. On the right, in the Deployments panel click the Completed Deployments link.

   A list of completed deployments appears.
3. Select the completed deployment you want to delete.
4. Click the Delete link and then OK to the Delete confirmation window.

   The completed deployment is deleted.

Confirm a Deployment

Confirms that the deployment is complete. This is the final action by the user.

Note: A deployment is not completed until it is confirmed. Once it is confirmed the deployment moves to the Completed deployment list.

Important! Data sets may need to be APF Authorized and/or added to the Link List and/or Link Pack Area. These data sets are identified in this dialog.

To confirm a deployment

1. Click Confirm and Confirmation Dialog window appears.

   Review the confirmation.

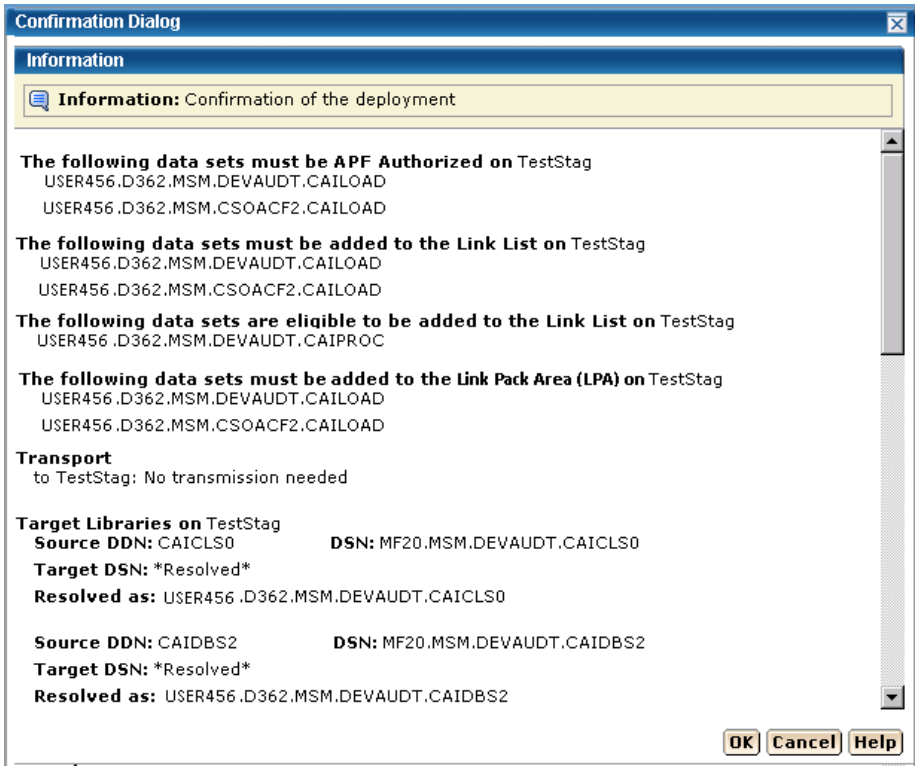
2. Click OK when the deployment is correct.

   Note: Click Cancel to exit this procedure without confirming.

   The Deployment Summary window contains none or any of the following:

   - Deployment's ID
   - Name
   - Products
   - Systems
   - Data Sets actions
   - Transport information
   - Target libraries including: source, target, and resolved data set names.
   - SMP/E environment
   - Snapshot path and container

This example shows the Data Sets actions, Transport, and Target libraries information.



Products

You can view, add, and remove products from a deployment.

Add a Product

You can add a product to a deployment.

To add a product to a deployment

1. Click the Deployments tab. The Deployments window appears.
2. On the right, in the Deployments panel click the Current Deployment link.

   A list of current deployments appears.
3. Click the deployment name link.
4. In the Product List panel click Add Products.

   The Add Products wizard appears.
5. Select a CSI and click Next.

   The Product Selection appears.
6. Select a Product.
7. If there is a text icon in Text column, click the text icon to read the instructions supplied by CA Support for product, data sets, and other necessary information.
8. Click the "I have read the associated text by selecting the text icon from the list about" box. This box appears only if there is a text icon.

   Note: You will not be able to click Next until you click this box.
9. Click Next.

   The Custom Data Set Selection appears
10. If needed, select or add a custom data set (see page 115).
11. Click Add Products.

    The Product is added.

Remove a Product

You can remove a product from a deployment.

Note: This product will no longer be associated with the current deployment.

To remove a product from a deployment

1. Click the Deployments tab. The Deployment window appears.
2. On the right, in the Deployments panel click the Current Deployment link.

   A list of current deployments appears.
3. Select the deployment that you want to remove the product from.
4. In the Product List panel, select a product to remove.
5. Click the Remove link.
6. Click OK to the Remove Products confirmation window.

   The product is removed.

Custom Data Sets

You can view, add (see page 115), edit (see page 120), and remove (see page 124) custom data sets from a deployment.

Add a Custom Data Set

You can add custom data sets to a deployment.

To add custom data sets to deployment

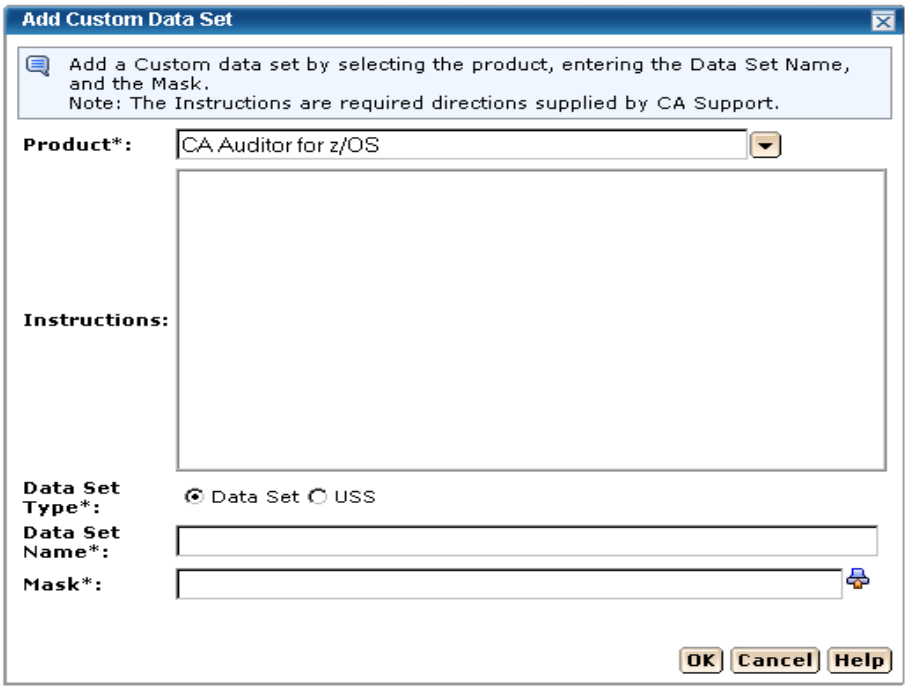
1. Click the Deployments tab.

   The Deployments window appears.
2. On the right, in the Deployments panel click the Current Deployment link.

   A list of current deployments appears.
3. Click the deployment name link.

4. In the Custom Data Sets List panel click Add Data Sets.

   The Add Custom Data Sets window appears.



   Note: The asterisk indicates that the field is mandatory.

5. Select a Product from the drop down list.

   Note: When there is information in the Instructions field they are required directions supplied by CA Support.

6. Select the Data Set Type either data set (step 7) or USS (step 10).

   Default: data set

7. For data set enter the Data Set Name.

   Limits: Maximum 44 characters.

   Note: This is the existing z/OS data set name that you want CA MSM to include in the deployment when it is deployed on the target systems.

8. Enter the Data Set Name Mask and/or click the file icon and select a symbolic name (see page 127).

   Mask

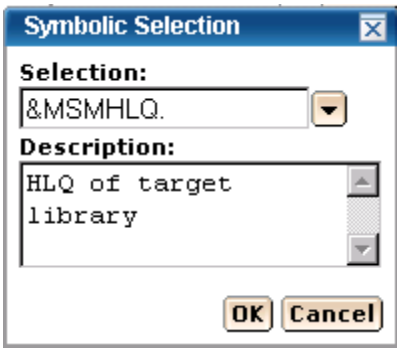
   This is the mask that will be used to name the data sets that are being deployed. They can contain symbolic qualifiers (see page 127). For example, if you enter CAPRODS.&SYSID, the &SYSID is replaced by its values, and if the SYSID that is being deployed to is XX16, the dsn mask will be CAPRODS.XX16

   Limits: Maximum 64 characters.

   Note: Each deployed target data set will be named using the resolved content of the Data Set Name Mask followed by the low level qualifier of the source data set. Appending the low level qualifier from the source data set insures uniqueness of the final data set name.

   Note: Two consecutive periods are required to separate the two masks.

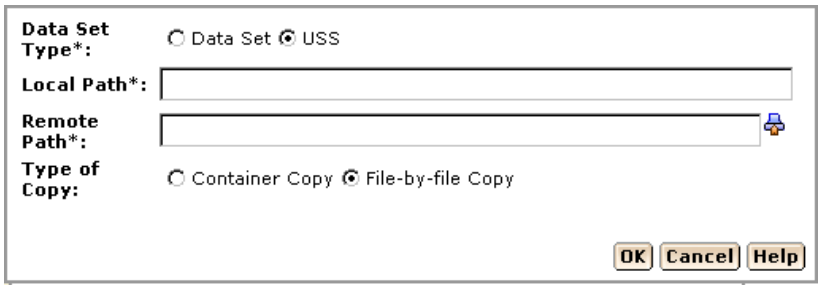
   Note: It consists of one or more qualifiers separated by periods, and has a maximum input length of 64 characters, including the periods. When it is translated is has a maximum length of 44 characters including the periods.



9. Enter the Mask and click OK.

10. For USS data set type enter the Local Path. The local path is the directory are where files are to be copied from.

    Limit: Maximum 255 characters.

    Note: The asterisk indicates that the field is mandatory.

11. Enter the Remote Path and/or click the file icon and select a symbolic name (see page 127). The remote path is the path were the files are to be copied to.

    Limit: Maximum 255 characters.

12. Select Type of Copy container copy (step 14) or File-by-file Copy (step 15).

    Note: For file-by-file copy the user must make sure the USS path exists on all of the remote systems of this deployment. And has sufficient space to hold these target libraries.

    Default: File-by-file Copy

13. Click OK.

14. For Container Copy enter the container name and/or click the file icon and select a symbolic name (see page 127).

    Limit: Maximum 64 characters.

    Note: It consists of one or more qualifiers separated by periods, and has a maximum input length of 64 characters, including the periods. When it is translated is has a maximum length of 44 characters including the periods.

    Note: For container copy the following will occur during the deployment process:

    a. A file system of the requested type will be created

    b. The size of the file system will be computed as follows:

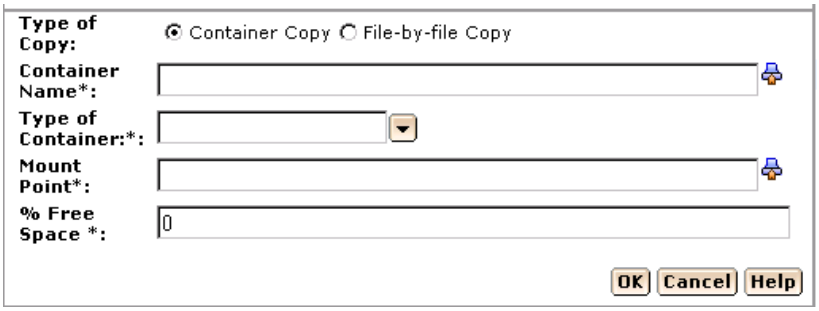
    - The size off all of the constituent files and directories in the local path are added up as bytes.
    - These bytes are converted to tracks and used as the primary allocation value
    - If there is a non-zero percent of free space entered, it will be used to calculate the secondary allocation.

c. All of the directories in the mount point will by dynamically created.

d. The file system will be mounted at the requested mount point

Note: The mount is not permanent. You will need to update your BPXPARMS to make this mount point permanent.

e. The content from the local path will copied into the newly created and mounted file system.



Note: The asterisk indicates that the field is mandatory.

15. Select the Type of Container from the drop down box. Either zFS or HFS.
16. Enter the Mount Point and/or click the file icon and select a symbolic name (see page 127).

    Limit: Maximum 255 characters.

    Note: The container is created and it is mounted at a position in the USS file system hierarchy. The place in the hierarchy where it is mounted is known as that containers mount point. Most any leaf in the USS file system can be a mount point, for any one container.

17. Enter the percentage of Free Space needed.

    The percentage of free space is the amount of space to leave in the file system, after the size has been computed. This is done by specifying secondary space on the allocation. For example, the computed space was determined to be 100 tracks. Then 35 would be 35% free space and the space allocations would be in tracks, 100 primary 35 secondary. While 125 would be 125% over and allocation would be in tracks, 100 primary 125 secondary.

    Limit: 0 to 1000.

18. Click OK.

    The custom data set is added.

Edit a Custom Data Set

You can edit a custom data set.

To edit a custom data set

1. Click the Deployments tab.

   The Deployments window appears.

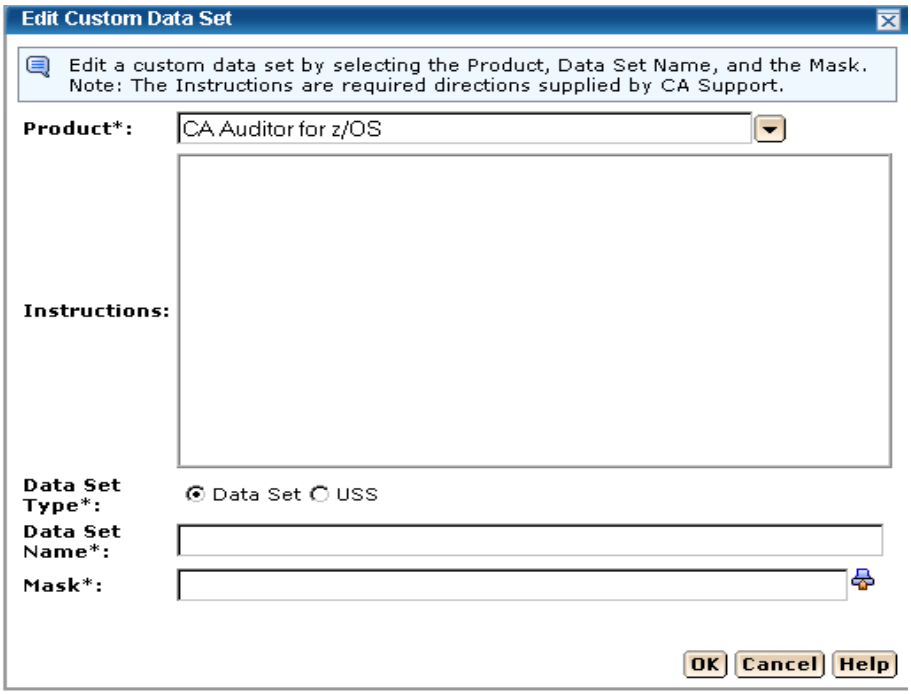
2. On the right, in the Deployments panel click the Current Deployment link.

   A list of current deployments appears.

3. Click the deployment name link.

4. In the Custom Data Sets List panel click Actions drop down list and click edit.

   The Add Custom Data Sets window appears.



   Note: The asterisk indicates that the field is mandatory.

5. Select a Product from the drop down list.

   Note: When there is information in the Instructions field they are required directions supplied by CA Support.

6. Select the Data Set Type either data set (step 7) or USS (step 10).

   Default: data set

7. For data set enter the Data Set Name.

   Limits: Maximum 44 characters.

   Note: This is the existing z/OS data set name that you want MSM to include in the deployment when it is deployed on the target systems.

8. Enter the Data Set Name Mask and/or click the file icon and select a symbolic name (see page 127).

   Mask

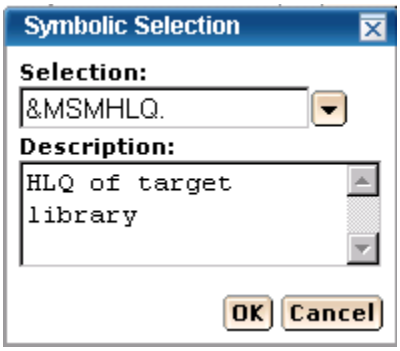
   This is the mask that will be used to name the data sets that are being deployed. They can contain symbolic qualifiers (see page 127). For example, if you enter CAPRODS.&SYSID, the &SYSID is replaced by its values, and if the SYSID that is being deployed to is XX16, the dsn mask will be CAPRODS.XX16

   Limits: Maximum 64 characters.

   Note: Each deployed target data set will be named using the resolved content of the Data Set Name Mask followed by the low level qualifier of the source data set. Appending the low level qualifier from the source data set insures uniqueness of the final data set name.

   Note: Two consecutive periods are required to separate the two masks.

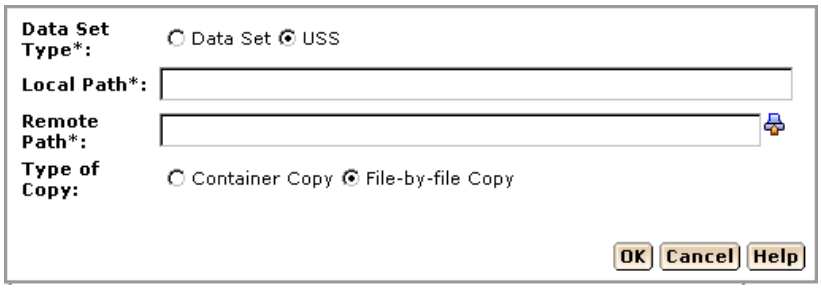
   Note: It consists of one or more qualifiers separated by periods, and has a maximum input length of 64 characters, including the periods. When it is translated is has a maximum length of 44 characters including the periods.



9. Enter the Mask and click OK.

10. For USS data set type, enter the Local Path. The local path is the directory where files are to be copied from.

    Limit: Maximum 255 characters.

    Note: The asterisk indicates that the field is mandatory.

11. Enter the Remote Path and/or click the file icon and select a symbolic name (see page 127). The remote path is the path were the files are to be copied to.

    Limit: Maximum 255 characters.

12. Select Type of Copy container copy (step 14) or File-by-file Copy (step 15).

    Note: For file-by-file copy the user must make sure the USS path exists on all of the remote systems of this deployment. And has sufficient space to hold these target libraries.

    Default: File-by-file Copy

13. Click OK.

14. For Container Copy enter the container name and/or click the file icon and select a symbolic name (see page 127).

    Limit: Maximum 64 characters.

    Note: It consists of one or more qualifiers separated by periods, and has a maximum input length of 64 characters, including the periods. When it is translated is has a maximum length of 44 characters including the periods.

    Note: For container copy the following will occur during the deployment process:

    a. A file system of the requested type will be created

    b. The size of the file system will be computed as follows:

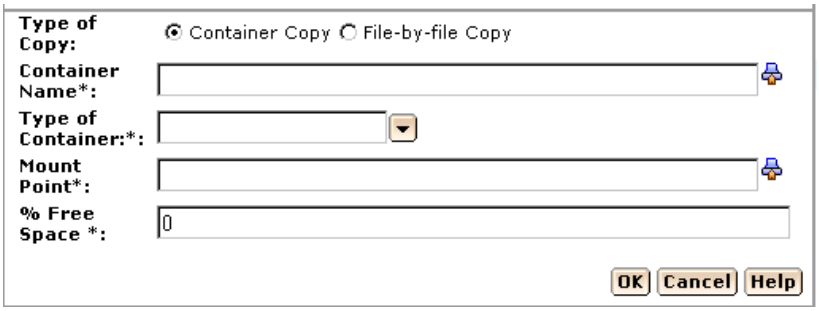
    - The size off all of the constituent files and directories in the local path are added up as bytes.
    - These bytes are converted to tracks and used as the primary allocation value
    - If there is a non-zero percent of free space entered, it will be used to calculate the secondary allocation.

c. All of the directories in the mount point will by dynamically created.

d. The file system will be mounted at the requested mount point

Note: The mount is not permanent. You will need to update your BPXPARMS to make this mount point permanent.

e. The content from the local path will copied into the newly created and mounted file system.



Note: The asterisk indicates that the field is mandatory.

15. Select the Type of Container from the drop down box. Either zFS or HFS.
16. Enter the Mount Point and/or click the file icon and select a symbolic name (see page 127).

    Limit: Maximum 255 characters.

    Note: The container is created and it is mounted at a position in the USS file system hierarchy. The place in the hierarchy where it is mounted is known as that containers mount point. Most any leaf in the USS file system can be a mount point, for any one container.

17. Enter the percentage of Free Space needed.

    The percentage of free space is the amount of space to leave in the file system, after the size has been computed. This is done by specifying secondary space on the allocation. For example, the computed space was determined to be 100 tracks. Then 35 would be 35% free space and the space allocations would be in tracks, 100 primary 35 secondary. While 125 would be 125% over and allocation would be in tracks, 100 primary 125 secondary.

    Limit: 0 to 1000.

18. Click OK.

    The custom data set is added.

Remove a Custom Data Set

You can remove a custom data set from a deployment.

Note: This data set will no longer be associated with the current deployment.

To remove a custom data set

1. Click the Deployments tab.

   The Deployment window appears.

2. On the right, in the Deployments panel click the Current Deployment link.

   A list of current deployments appears.

   Product Name Sort Arrows

   Click the up arrow to place the product names in alphabetic order or click the down arrow to place them in reverse alphabetic order.

3. Select the custom data set that you want to remove from this deployment.
4. Click the Remove link.
5. Click OK to the Remove Custom Data Set confirmation window.

   The custom data set is removed.

Methodologies

You can create (see page 124), maintain, edit (see page 136), and delete (see page 138) methodologies from a deployment.

Create a Methodology

You can create a methodology.

Note: The asterisk indicates that the field is mandatory.

To create a methodology

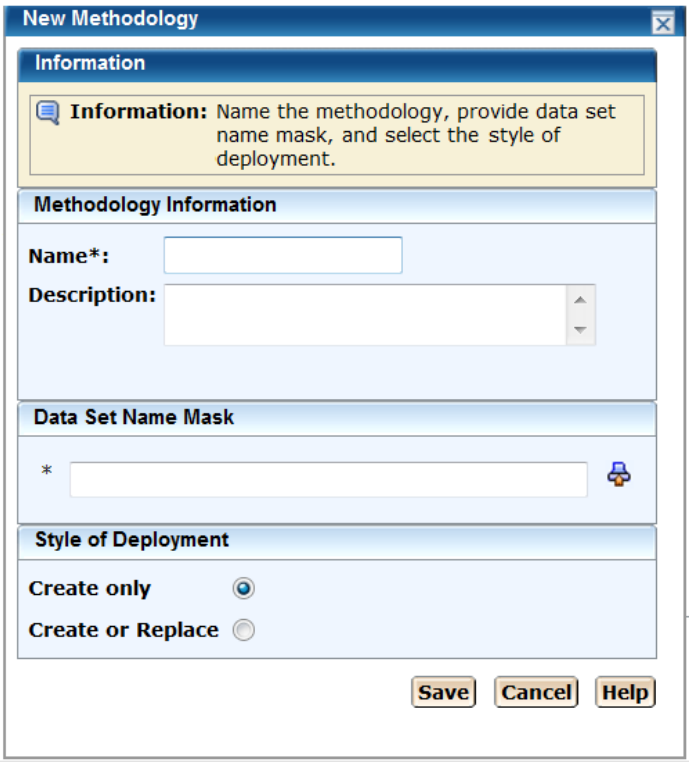
1. Click the Create button, in the Methodology Selection in the New Deployment wizard.

   The Create a New Methodology window appears.

2. Enter the methodology name.

   Limits: Maximum 64 characters.

   Note: Each methodology name must be unique and it is not case-sensitive. For example Meth1 and meth1 are the same methodology name.



3. Enter the description of this methodology.

   Limits: Maximum 255 characters.

4. Enter the data mask name and/or click the file icon and select a symbolic name (see page 127).

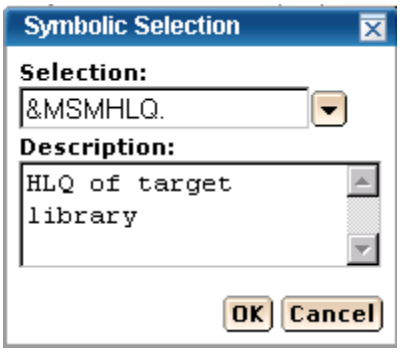
   Data Set Name Mask

   This is the mask that will be used to name the data sets that are deployed. They can contain symbolic qualifiers (see page 127). For example, assume you enter, CAPRODS.&SYSID. In this case, the &SYSID will be replaced by its values. If the SYSID that is being deployed to is X16, the dsn mask will be: CAPRODS.X16

   Limits: Maximum 64 characters.

   Note: Each deployed target data set will be named using the resolved content of the Data Set Name Mask followed by the low-level qualifier of the source data set. Appending the low-level qualifier from the source data set help ensures uniqueness of the final data set name.

   Note: It consists of one or more qualifiers separated by periods, and has a maximum input length of 64 characters, including the periods. When it is translated, it has a maximum length of 44 characters including the periods.



5. Select a style of Deployment.

   Create only

   Creates new data sets.

   Note: Prior to creating any data sets on the remote system, a check is made, to see if the data sets already exist. The deployment is not allowed to continue if this occurs.

   Replace or Create

   Creates new data sets and replaces an existing one with the same name.

   Note: Prior to creating any data sets on the remote system, a check is made, to see if the data sets already exist. If they do exist, the contents are replaced. If they do not exist, new data sets are created.

6. Click Save.

   Note: Click Cancel to exit this procedure without saving.

Symbolic Qualifiers

The symbolic qualifiers with description for the Data Set Name Mask and the Directory Path follow.

Data Set Name Mask

Data Set Name Mask is a unique name that identifies each data set. It consists of one or more qualifiers separated by periods, and has a maximum input length of 64 characters, including the periods. When the Data Set Name Mask is translated is has a maximum length of 44 characters including the periods.

Directory Path

Directory Path is a USS path name, it consists of one or more directory leaves separated by forward slashes, and has a maximum input length of 255 characters including slashes. When the Directory Path is translated it has a maximum length of 255 characters.

Symbolic Substitution

Symbolic substitution, or translation, is a process performed by CA MSM to resolve the mask values specified in the Data Set Name Mask and Directory Path, into real names based upon the contents of the symbolic variables at translation time. A CA MSM symbol is defined in the list of symbols. Each symbol begins with an ampersand (&) and ends with a period (.). For example, the symbol &LYYMMDD. would be completely replaced with its value at translation time, including the ampersand and trailing period. The trailing period is important and is considered part of the symbolic name.

Symbolic Variables

You can use symbolic variables in the construction of a data set name with the value of the symbolic variable to end a dataset name segment.

Example: Assume MSMDID is 255.

SYSWORK.D&MSMDID..DATASET

Note: The double dots are important, since the first dot is part of the symbolic name, it will not appear in the translated value.

The final data set name is SYSWORK.D255.DATASET.

Numeric Values

Some CA MSM symbolic names translate to numeric values. In the case where you want to use one of these symbolic variables in your data set name, you may have to precede it with a alpha constant. This is because MVS data set naming rules do not allow a data set name segment to start with a numeric.

If you wanted to use a date value in your translated data set name, you could use one of the CA MSM defined date symbolic qualifiers such as &LYYMMDD. You must be careful how you construct the data set mask value.

Example: Assume that you want to have a middle level qualifier to have a unique value based upon the date of April 1, 2010.

Mask = SYSWORK.D&LYYMMDD..DATASET, translates to SYSWORK.D100401.DATASET

An incorrect specification of the mask would be:

SYSWORK.&LYYMMDD..DATASET, translates to SYSWORK.100401.DATASET. Because the middle-level qualifier starts with a numeric it is an invalid data set name.

Directory Paths

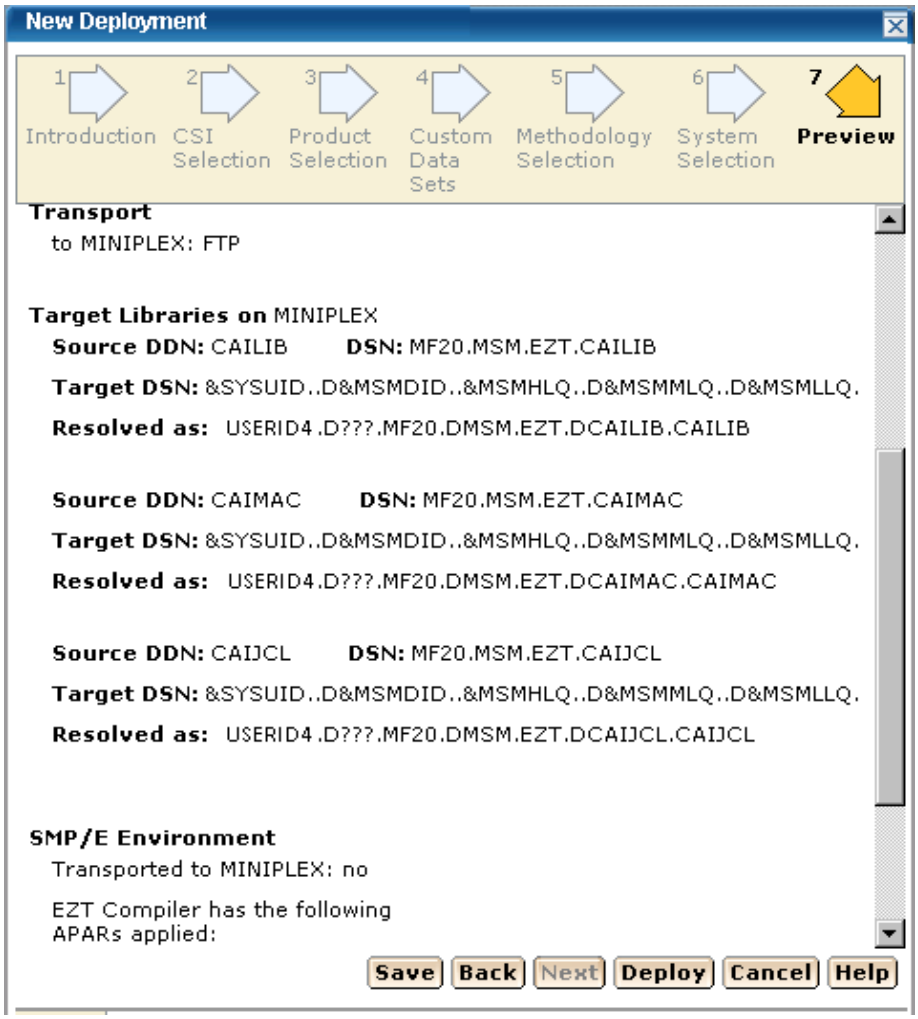
Symbolic substitution works in the same logical way for directory paths. However, directory paths do not typically have periods in them, so you will typically not see the double dots in directory paths.

Example: Assume the target system is SYSZ.

/u/usr/&MSMSYSNM./deployments translates to /u/usr/SYSZ/deployments.

Preview Example

Note: Before a Product Deployment is deployed the MSMDID shows as ???. After deployment the Automatic ID is assigned and this is the MSMDID.



Symbolic Qualifiers

ID and System Information

MSMDID

This is the MSM Deployment ID.

Limits: This is automatically assigned by MSM when the Deploy button is clicked or when a deployment is saved.

MSMMPN

This is the MSM Mount Point Name. The value is entered into the mount point name field when adding a custom data set (see page 115) with both the USS radio button and the Container copy radio button set. It is of primary value in remote path.

Note: The Mount Point Name field can contain symbols when it is translated first, the value of the MSMMPN. variable is resolved.

Example: Assume the value of MSMDID is 253 and the user entered the following information.

Mount point name: /u/users/deptest/R&MSMDID./leaf

Remote path: &MSMMPN.

The translated value of &MSMMPN is /u/users/deptest/R253/leaf

MSMSYSNM

This is the MSM system object name.

SYSCLONE

This is the shorthand name of the system.

Limits: Maximum 2 characters.

SYSNAME

This is the system name entered when a Non-Sysplex System, Sysplex, Shared DASD Cluster, or Staging System is created.

SYSPLEX

This is the system name entered when a Sysplex is created.

Note: This symbolic may not be used for a Non-SYSPLEX system.

SYSUID

The current user ID.

Target Libraries

MSMHLQ

MSMHLQ is the high-level qualifier for the target library.

Limits: It is the characters before the first period in a fully qualified data set name. The high-level qualifier can be from 1 to 8 characters.

Example: For the data set johnson.finance.division.script, the high-level qualifier is johnson.

MSMMLQ

MSMMLQ is the middle-level qualifier for the target library.

Limits: It is the characters after the first period and before the last period in a fully qualified data set name. The middle-level qualifier size can vary based on the number of qualifiers defined.

Example: For the data set johnson.finance.division.script, the middle-level qualifier is finance.division.

MSMLLQ

MSMLLQ is the low-level qualifier for the target library.

Limits: It is the characters after the last period in a fully qualified data set name. The low-level qualifier can be from 1 to 8 characters.

Example: For the data set johnson.finance.script, the low-level qualifier is script.

MSMSLQ

This is the secondary low-level qualifier for the target library and it is the "segment" of the data set name just before the low-level qualifier (MSMLLQ).

Limits: It is the characters after the last period in a fully qualified data set name. The low-level qualifier can be from 1 to 8 characters.

Example: For the data set johnson.finance.second.script, the low-level qualifier is second.

MSMPREF

This is the target library prefix. The target library prefix is the entire data set name to the left of the last the MSMLLQ.

Example: For the data set johnson.finance.division.script the prefix is johnson.finance.division

MSMDLIBN

The deployed library number is a unique number, for each deployed library, within a deployment.

Example: Assume 3 target libraries in a deployment.

```
DSN = USER456.LIBR473.CAIPROC
DSN = USER456.LIBR473.CAILOAD
DSN = USER456.LIBR473.CAIEXEC
```

Assume the methodology specified a mask of:

```
&SYSUID..D&MSMDID..LIB&MSMDLIBN
```

Assume USERID is USER789, and the deployment ID is 877, then the resolved DSNs would be,

```
Deployed library = USER789.D877.LIB1.CAIPROC
Deployed library = USER789.D877.LIB2.CAILOAD
Deployed library = USER789.D877.LIB3.CAIEXEC
```

Local Date and Time

LYYMMDD

This is the local two-digit year.

YY two-digit year

MM two-digit month (01=January)

DD two-digit day of month (01 through 31)

Example: 100311

LYR2

This is the local two-digit year.

LYR2 two-digit year

Example: 10

LYR4

This is the local four-digit year.

LYR4 four-digit year

Example: 2010

LMON

This is the local month.

LMON two-digit month (01=January)

Example: 03

LDAY

This is the local day of the month.

LDAY two-digit day of month (01 through 31)

Example: 11

LJDAY

This is the local Julian day.

LJDAY three-digit day (001 through 366)

Example: The Julian day for January 11th is 011.

LWDAY

This is the local day of the week.

LWDAY is three characters in length. The days are MON, TUE, WED, THR, FRI, SAT, and SUN.

Example: MON

LHHMMSS

This is the local time in hours, minutes, and seconds.

HH two digits of hour (00 through 23) (am/pm NOT allowed)

MM two digits of minute (00 through 59)

SS two digits of second (00 through 59)

Example: 165148

LHR

This is the local time in hours.

LHR two-digits of hour (00 through 23) (am/pm NOT allowed)

Example: 16

LMIN

This is the local time in minutes.

LMIN two-digits of minute (00 through 59)

Example: 51

LSEC

This is the local time in seconds.

LSEC two-digits of second (00 through 59)

Example: 48

UTC Date and Time

Coordinated Universal Time is abbreviated UTC.

YYMMDD

This is the UTC date.

YY two-digit year

MM two-digit month (01=January)

DD two-digit day of month (01 through 31)

Example: 100311

YR2

This is the UTC two digit year.

YR2 two-digit year

Example: 10

YR4

This is the UTC four digit year.

YR4 four-digit year

Example: 2010

MON

This is the UTC month.

MON two-digit month (01=January)

Example: 03

DAY

This is the UTC day of the month.

DAY two-digit day of month (01 through 31)

Example: 11

JDAY

This is the UTC Julian day.

JDAY three-digit day (001 through 366)

Example: The Julian day for January 11th is 011.

WDAY

This is the UTC day of the week.

WDAY is three characters in length. The days are MON, TUE, WED, THR, FRI, SAT, and SUN.

Example: MON

HHMMSS

This is the UTC time in hours, minutes, and seconds.

HH two-digits of hour (00 through 23) (am/pm NOT allowed)

MM two-digits of minute (00 through 59)

SS two-digits of second (00 through 59)

Example: 044811

HR

This is the UTC time in hours.

HR two digits of hour (00 through 23) (am/pm NOT allowed)

Example: 04

MIN

This is the UTC time in minutes.

MIN two-digits of minute (00 through 59)

Example: 48

SEC

This is the UTC time in seconds.

SEC two-digits of second (00 through 59)

Example: 11

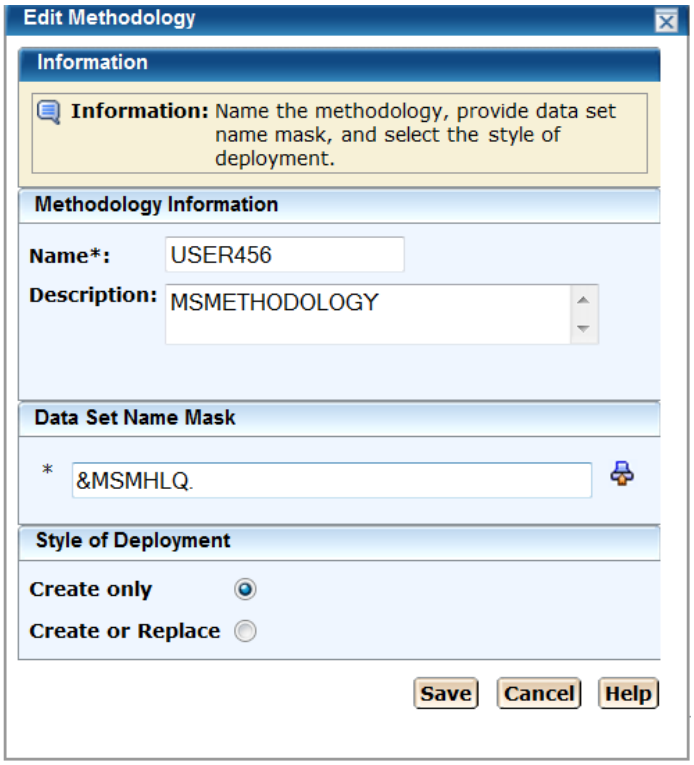
Edit a Methodology

You can edit a methodology by updating or modifying any of the fields on the Edit Methodology window.

To edit a methodology

1. Click the Deployments tab, and in the Actions section click the Maintain Methodologies link.
2. Select the methodology that you want to edit and click Edit.

   The Maintain Methodologies select window appears.



   Note: The asterisk indicates that the field is mandatory.

   As with Add a Methodology, all fields are available to be edited and the details for each field are listed.

3. Enter the Methodology Name.

   Limits: Maximum 64 characters.

   Note: Each methodology name must be unique and it is not case-sensitive. For example Meth1 and meth1 are the same methodology name..

4. Enter the Description of this Methodology.

   Limits: Maximum 255 characters.

5. Enter the Data Set Name Mask and/or click the file icon and select a symbolic name (see page 127).

   Data Set Name Mask

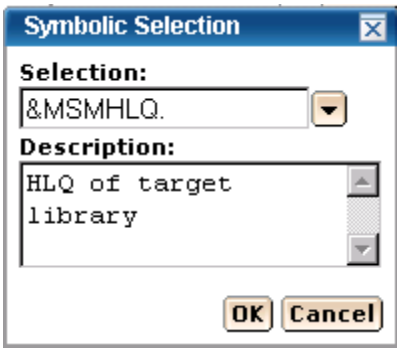
   This is the mask that will be used to name the data sets that are deployed. They can contain symbolic qualifiers (see page 127).

   Example: CAPRODS.&SYSID - in this case the &SYSID will be replaced by its values. If the SYSID that is being deployed to is XX16 the dsn mask will be: CAPRODS.XX16

   Limits: Maximum 64 characters.

   Note: Each deployed target data set will be named using the resolved content of the Data Set Name Mask followed by the low level qualifier of the source data set. Appending the low level qualifier from the source data set insures uniqueness of the final data set name.

   Note: It consists of one or more qualifiers separated by periods, and has a maximum input length of 64 characters, including the periods. When it is translated is has a maximum length of 44 characters including the periods.



6. Select a Style of Deployment.

   Create only

   Creates new data sets.

   Note: Prior to creating any data sets on the remote system, a check is made, to see if the data sets already exist. The deployment is not allowed to continue if this occurs.

   Replace or Create

   Creates new data sets and replaces an existing one with the same name.

   Note: Prior to creating any data sets on the remote system, a check is made, to see if the data sets already exist. If they do exist, the contents are replaced. If they do not exist, new data sets are created.

7. Click Save.

   Note: Click Cancel to exit without saving your changes.

More Information:

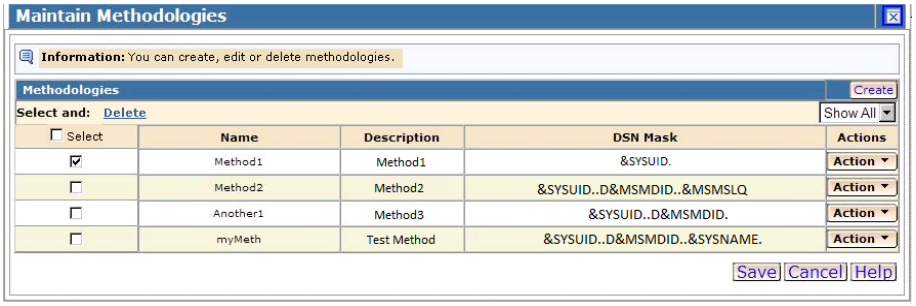
Symbolic Qualifiers (see page 127)

Delete Methodologies

To delete methodologies

1. Click the Deployments tab, and in the Actions section click the Maintain Methodologies link.

   The Maintain Methodologies select window appears.



2. Select the methodology that you want to delete.

   Note: A grayed select box indicates that the methodology is assigned and cannot be deleted. It can be edited.

3. Click Delete and then OK to the Delete Methodologies confirmation window.

   The methodology is deleted.

Systems

You can view, add, and remove systems from a deployment.

Add a System

You can add a system to a deployment.

To add a system

1. Click the Deployments tab. The Deployment window appears.
2. On the right, in the Deployments panel click the Current Deployment link.

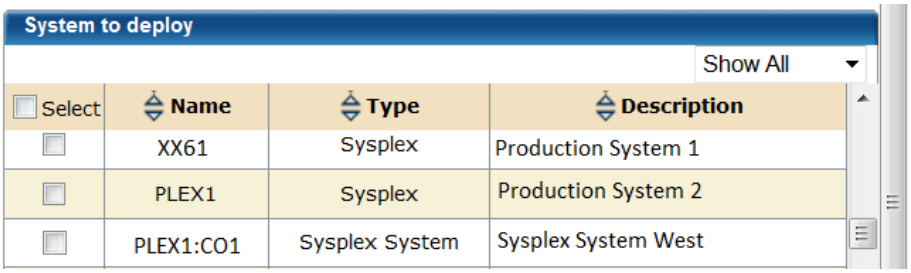
   A list of current deployments appears.
3. Click the deployment name link.
4. In the System List panel, click Add Systems.

   The Add Systems window appears.
5. Select a system to add.

   Note: When two systems have the same name use the description to differentiate between these systems.

   Note: Sysplex systems are denoted by Sysplex System:System Name. For example PLEX1:CO11 where PLEX1 is Sysplex name and CO11 is the system name.

   .



6. Click OK.

   The Preview window appears.

   The system is added.

Remove a System

You can remove a system from a deployment.

To remove a system

1. Click the Deployments tab.

   The Deployment window appears.
2. On the right, in the Deployments panel click the Current Deployment link.

   A list of current deployments appears.

3. Select the deployment that you wish to remove the product from.

   System Name Sort Arrows

   Click the up arrow to place the system names in alphabetic order or click the down arrow to place them in reverse alphabetic order.

   Type Sort Arrows

   Click the up arrow to place the types in alphabetic order or click the down arrow to place them in reverse alphabetic order.

   Description Sort Arrows

   Click the up arrow to place the descriptions in alphabetic order or click the down arrow to place them in reverse alphabetic order.

4. In the System List panel, select a system you want to remove.
5. Click Remove and then OK to the Remove Products confirmation window.

   The system is removed.

Deployment Summary

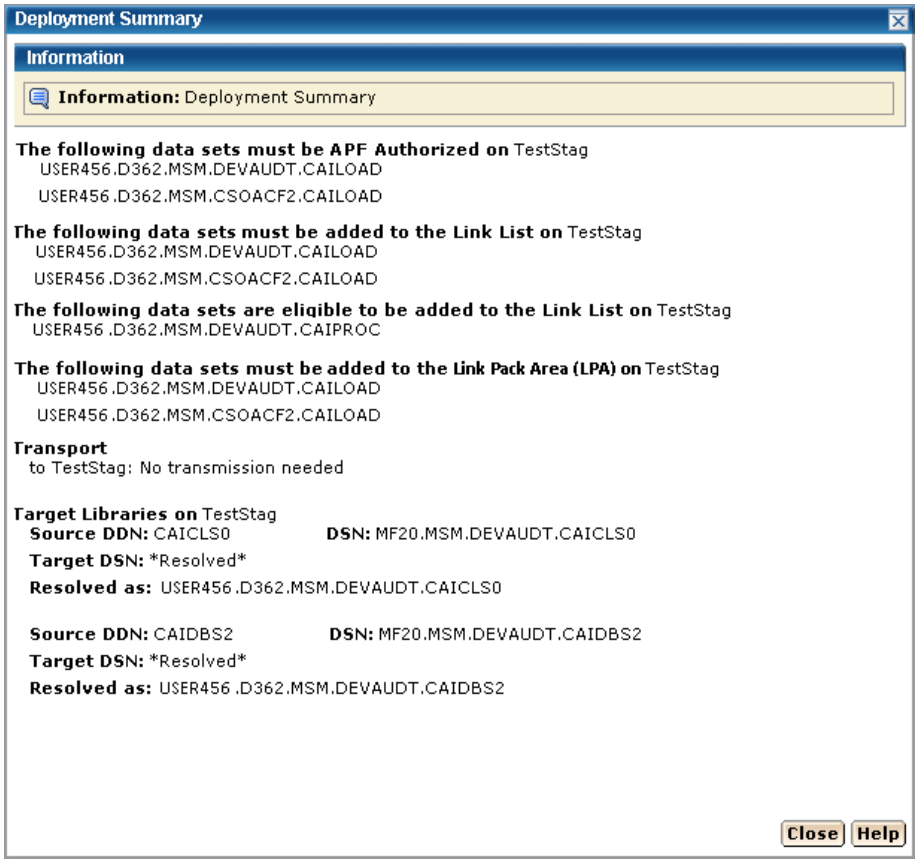
This Action button is available after a successful deployment.

Important! Data sets may need to be APF Authorized and/or added to the Link List and/or Link Pack Area. These data sets are identified in this dialog.

The Deployment Summary window contains none or any of the following:

- Deployment's ID
- Name
- Products
- Systems
- Data Sets actions
- Transport information
- Target libraries including: source, target, and resolved data set names.
- SMP/E environment
- Snapshot path and container

This example shows the Data Sets actions, Transport, and Target libraries information.



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

Chapter 4: Installing Your Product From Pax-Enhanced ESD

Use the procedures in this section to acquire and install your product using Pax-Enhanced Electronic Software Delivery (ESD).

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

This section contains the following topics:

How to Install a Product Using Pax-Enhanced ESD (see page 143)
Allocate and Mount a File System (see page 149)
Copy the Product Pax Files into Your USS Directory (see page 150)
Create a Product Directory from the Pax File (see page 155)
Copy Installation Files to z/OS Data Sets (see page 156)
Unload the Install Utility (see page 157)
Installation JCL (see page 158)
Clean Up the USS Directory (see page 161)
Maintenance (see page 162)

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. Experienced UNIX users may find the *Pax-Enhanced ESD Quick Reference Guide* or this overview sufficient 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.

Important! If you prefer not to involve all CA 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-file-name`
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. Receive the SMP/E package. For this step, use the data sets created by GIMUNZIP in Step 4. Perform a standard SMP/E RECEIVE using the SMPPTFIN and SMPHOLD (if applicable) DASD data sets. Also, specify the high-level qualifier for the RELFILEs on the RFPREFIX parameter of the RECEIVE command.
6. Proceed with product installation. Consult product-specific documentation, including AREADME files and installation notes to complete the product installation.
7. (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 148)
Allocate and Mount a File System (see page 149)
Copy the Product Pax Files into Your USS Directory (see page 150)
Create a Product Directory from the Pax File (see page 155)
Copy Installation Files to z/OS Data Sets (see page 156)

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. For additional ESD information, go to http://www.ca.com/mainframe. Under Events, we offer an ESD webcast to further explain the Pax-Enhanced ESD process.

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 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 145) 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.

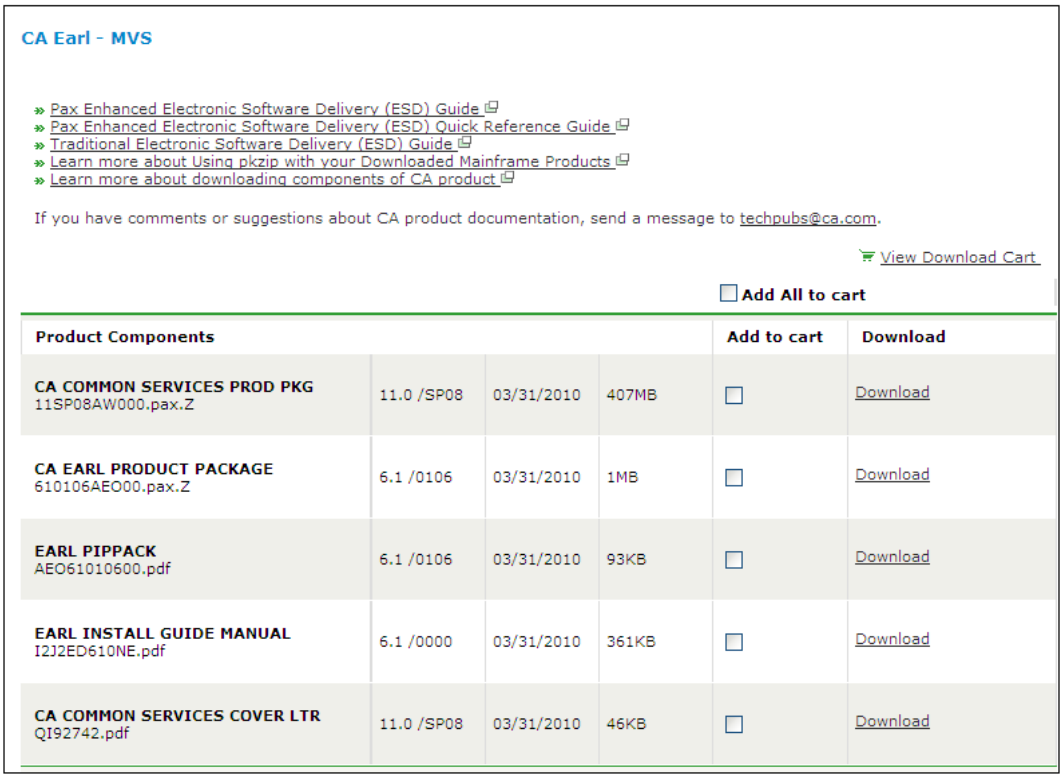
4. Perform the steps to install the product based on the product-specific steps.

   The product is installed on the mainframe.

ESD Product Download Window

CA product ESD packages can be downloaded multiple ways. Your choices depend on the size of the individual files and the number of files 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. It lists all components of the product. You can use the Download Cart by checking one or more components that you need or check the 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

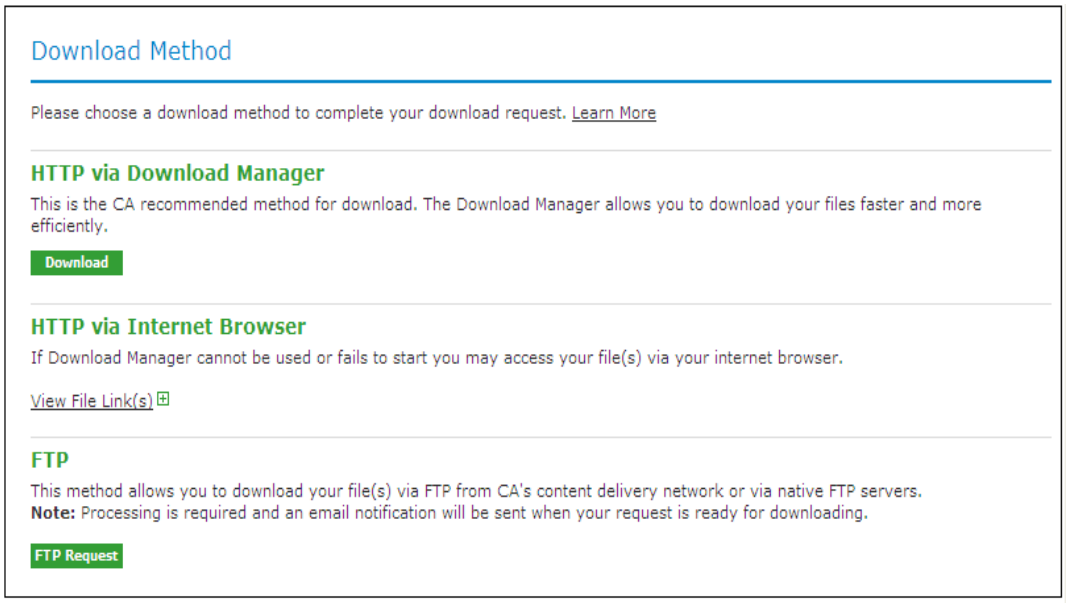
If you have comments or suggestions about CA product documentation, send a message to techpubs@ca.com.

View Download Cart

☐ Add All to cart

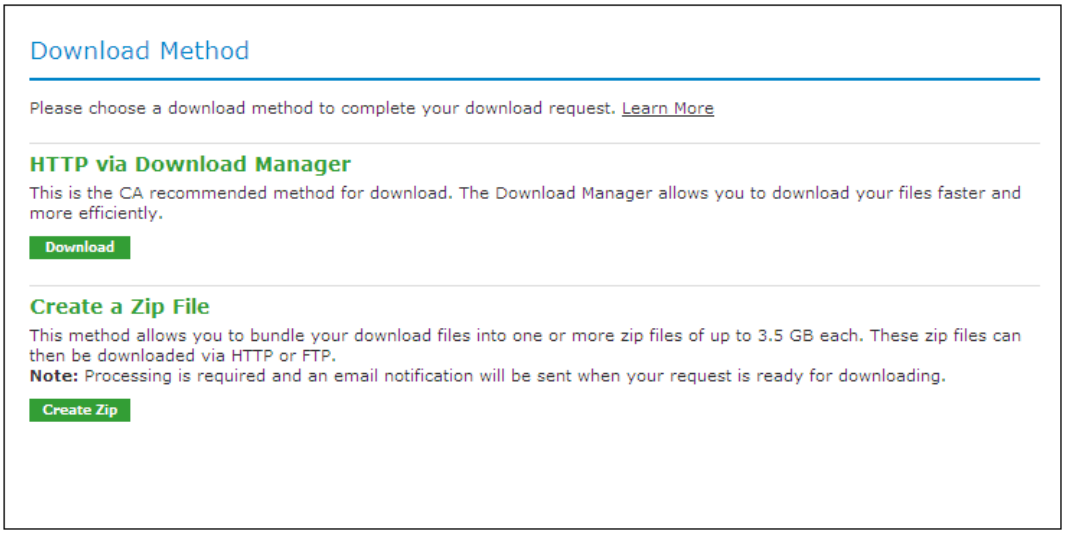
Product Components				Add to cart	Download
CA COMMON SERVICES PROD PKG 11SP08AW000.pax.Z	11.0 /SP08	03/31/2010	407MB	☐	Download
CA EARL PRODUCT PACKAGE 610106AEO00.pax.Z	6.1 /0106	03/31/2010	1MB	☐	Download
EARL PIPPACK AEO61010600.pdf	6.1 /0106	03/31/2010	93KB	☐	Download
EARL INSTALL GUIDE MANUAL I2J2ED610NE.pdf	6.1 /0000	03/31/2010	361KB	☐	Download
CA COMMON SERVICES COVER LTR QI92742.pdf	11.0 /SP08	03/31/2010	46KB	☐	Download

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



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

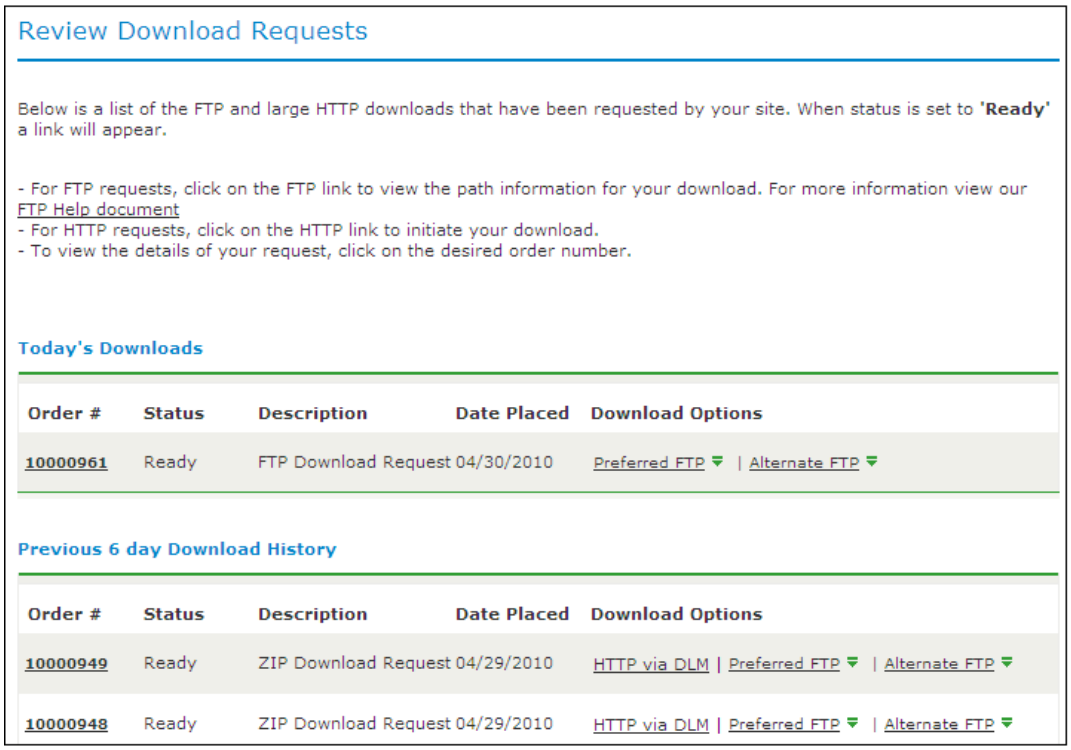
Note: For mainframe downloads using this HTTP method, click the Learn More link.



The HTTP methods let 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, New York-based FTP servers.

The Create a Zip File option first creates the zip and when ready, offers the options shown by the Zip Download Request examples in the next screen.



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 set up. 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 Pax-Enhanced ESD downloads.

This procedure details how to perform the following tasks:

- Allocate an HFS file system
- Create a new mount point in an existing maintenance directory
- Mount the file system on the newly created mount point
- Optionally permit write access to anyone in the same group as the person who created the directory

Important! USS commands are case-sensitive.

To allocate and mount the file system

1. Allocate the HFS. For example:

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

   The HFS is allocated.

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. For example, from TSO, enter the following command:

   ```
   MOUNT       FILESYSTEM('yourHFS dataset 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 *z/OS UNIX System Services User Guide (SA22-7802)*.

Copy the Product Pax Files into Your USS Directory

To begin the CA product installation procedure, copy the product's pax file into the USS directory 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 PC, and upload it to your z/OS system.
- Download the product file from CA Support Online to your PC. 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 PC to a USS directory on your z/OS system.

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

Important! Ensure that sufficient free space is available in the USS file system 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 should match the value in the Size column for the corresponding pax file on the CA Products Download window.

More Information:

How the Pax-Enhanced ESD Download Works (see page 145)
ESD Product Download Window (see page 145)

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 in the lower left corner of the PDF reader. This opens a window displaying attachments. 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.

To download files using batch JCL

1. Supply a valid JOB statement.
2. Replace *yourTCPIP.PROFILE.dataset* with the name of the TCPIP 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: You may also add files to a cart for multiple downloads.

   The Download Method window opens.

7. Click FTP Request.

   The Review Download Requests window opens and 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's world-wide content delivery network (CDN). If you are not able to download using the Preferred FTP method, your company may have security restrictions that require knowledge of and configuration for all servers that company employees can download from that are outside of 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: For details regarding FTP, see 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, this job may fail and still return a zero condition code. You must read the messages in the job DDNAME SYSPRINT to verify the FTP succeeded.

   After running the JCL, 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.         *
//*                                                                   *
//* This job must be customized as follows:                           *
//* 1. Supply a valid JOB statement.                                  *
//* 2. Replace "yourTCPIP.PROFILE.dataset" with the name if the TCPIP *
//*    profile data set for your system.                              *
//* 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,REGION=0K
//SYSTCPD  DD   DSN=yourTCPIP.PROFILE.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.

To upload files to the mainframe through a PC

1. Follow the procedures in How to Download Files Using ESD (see page 145) 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 sample a JCL job that you can copy directly to the mainframe. To access this job, click the paper clip icon in the lower left corner of the PDF reader. This opens a window displaying attachments. Double-click the file to view the sample JCL.

To create a product installation directory using the Unpackage.txt sample job

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: After making the changes noted in the job, 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.

Example 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.

To copy the Pax-Enhanced ESD installation files to z/OS data sets

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 product-specific details you need to complete the installation procedure.

   You have identified 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, usually /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 *YourHLQ* to the high-level qualifier for z/OS data sets used by the installation process. We suggest that you use a unique HLQ for each expanded pax file to uniquely identify the package. Do not use the same value for *yourHLQ* as you will use for the SMP/E RELFILEs.

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

6. Submit the UNZIPJCL job.

   The UNZIPJCL job should complete 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 at this point.

   Note: For more information, see the IBM Reference Manual, *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.NMC0.CAIJCL 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.NMC0.CAIJCL to *dsnpref.*NMC0.CAIJCL
- Copy the members in *dsnpref*.CAI.NMC0.CAIJCL into *dsnpref*.NMC0.CAIJCL

Installation JCL

The installation process creates the *dsnpref.*NMC0.INSTDB database to store details of each installation that you perform. If you are also installing other products in the 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*.NMC0.INSTALL.JCL, where *dsnpref* is the same data set prefix you used for the *dsnpref*.NMC0.CAIJCL 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.NMC0.CAIJCL(INSTALL)'
```

Generate the Installation JCL

During the installation process, you provide the site-specific installation information that you previously collected (see page 21). This information is used to generate the installation JCL.

To generate the installation JCL

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

   ```
   EXEC 'dsnpref.NMC0.CAIJCL(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 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. 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. For information about the fields, press F1 (Help).

9. Record the data set name into which the JCL was generated in your post-installation worksheet (see page 30). Jobs can be submitted 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. Each job should complete with return code 0 unless otherwise indicated.

    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. 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 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.

To delete the pax files and product-specific directories

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 Product 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*.NMC0.CAILINK data set must be in your system linklist 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 iv).

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.

To apply SMP fixes

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.NMC0.CAIJCL(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.NMC0.FIX.DASD.JCL

   dsnpref

   The same data set prefix you used for the *dsnpref*.NMC0.CAIJCL 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 should complete with return code 0 unless otherwise indicated.

    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.

14. If the installed SMP fix contains maintenance for the VSAM data sets, select maintenance option **V** (Update MODS, PANELS and OSCNTL data sets with installed maintenance).

    The VSAM data sets for the regions you set up are updated.

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

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 two types of HOLDDATA:

System HOLDDATA

Indicates data that is an in-stream part of the SYSMOD instructing you of special conditions. Examples of system HOLDDATA are as follows:

ACTION

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

DEP

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

DELETE

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

DOC

Indicates a documentation change with this SYSMOD.

EC

Indicates that this SYSMOD requires a hardware engineering change. An EC hold SYSMOD usually does not affect the product unless the EC is present on the hardware device.

Code a bypass operand on your APPLY command to install SYSMODs that have internal holds. Only code the bypass operand 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 Online to a DASD file, and allocate the file to the SMPHOLD DD statement. To take advantage of the external HOLDDATA, receive it into your SMP/E environment. If you use the jobs supplied by CA, SMP/E receives the HOLDDATA.

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 you issue the 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.

To reliably manage external HOLDDATA, allow SMP/E to manage it automatically. The only manual task is running a REPORT ERRSYSMODS. This report identifies any held SYSMODs already applied to your system. If the resolving SYSMOD is 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.

To update the VSAM data sets

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*`.NMC0.CAIJCL(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`.NMC0.FIX.VSAMUPD.JCL`

   dsnpref

   The same data set prefix used for the *dsnpref*.NMC0.CAIJCL data set.

   Note: Each time you apply maintenance, use a new output data set. The new data set ensures 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:

   - 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.

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 iv).

This section describes how to apply maintenance to the RAMDB and details the command syntax of the $RMDB04D maintenance utility.

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

When applying maintenance, you can display details of what differences are being added, replaced, or deleted by the maintenance (see page 170).

Create Backup RAMDB

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

To create the RAMDBd

1. Allocate RAMDBd in the same way that RAMDB was allocated. The cluster definition is in *dsnpref*.NMC0.*rname*.JCL(S01LCALC).
2. Stop the product region.
3. Copy the data from RAMDB to RAMDBd using IDCAMS REPRO command. See the example in *dsnpref*.NMC0.*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 (provided that the maintenance has not yet been applied to RAMDBd).

To apply maintenance directly to RAMDB

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 that 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 will happen 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 170).

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 contains descriptions of the RAMDB Maintenance Utility syntax.

$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 to be applied. 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, specifies the DATASET parameter if the data set containing the fix is to be allocated by this NCL procedure 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 actually 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. Specify the DATASET parameter if the data set is to be allocated by this NCL procedure 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 ddname of 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.

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

Chapter 5: Installing Your Product From Tape

This section contains the following topics:

Unload the Install Utility (see page 175)
Installation JCL (see page 178)
Maintenance (see page 180)

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*.NMC0.CAIJCL 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*.NMC0.CAIJCL does not exist and you are installing from tape, unload into a new data set from tape (see page 175).
- If *dsnpref*.NMC0.CAIJCL 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 177).

Unload into a New Data Set from Tape

If *dsnpref*.NMC0.CAIJCL 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.

To unload the software into a new data set

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.NMC0.CAIJCL,
//             DISP=(NEW,CATLG,DELETE),
//             UNIT=?device-out,VOL=SER=?volser,
//             SPACE=(CYL,(10,1,120)),
//             DCB=(RECFM=FB,LRECL=80,BLKSIZE=0)
//SYSIN    DD  DUMMY
```

   Important! The SYSUT2 data set name must end with NMC0.CAIJCL.

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 C2D66*x*. The value for this release is C2D66A.

   ?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*.NMC0.CAIJCL exists from a previous installation at the current release level and you are installing from tape, unload the installation software from tape into the existing data set.

To unload the software into an existing data set

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.NMC0.CAIJCL,
//             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 C2D66*x*. The value for this release is C2D66A.

   ?dsnpref

   Specifies the data set prefix in the previous installation.

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

Installation JCL

The installation process creates the *dsnpref.*NMC0.INSTDB database to store details of each installation that you perform. If you are also installing other products in the 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*.NMC0.INSTALL.JCL, where *dsnpref* is the same data set prefix you used for the *dsnpref*.NMC0.CAIJCL 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.NMC0.CAIJCL(INSTALL)'
```

Generate the Installation JCL

During the installation process, you provide the site-specific installation information that you previously collected (see page 21). This information is used to generate the installation JCL.

To generate the installation JCL

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

   ```
   EXEC 'dsnpref.NMC0.CAIJCL(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 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. 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. For information about the fields, press F1 (Help).

9. Record the data set name into which the JCL was generated in your post-installation worksheet (see page 30). Jobs can be submitted 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. Each job should complete with return code 0 unless otherwise indicated.

    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. 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*.NMC0.CAILINK data set must be in your system linklist 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 iv).

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.

To apply SMP fixes

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.NMC0.CAIJCL(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.NMC0.FIX.DASD.JCL

   dsnpref

   The same data set prefix you used for the *dsnpref*.NMC0.CAIJCL 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 should complete with return code 0 unless otherwise indicated.

    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.

14. If the installed SMP fix contains maintenance for the VSAM data sets, select maintenance option **V** (Update MODS, PANELS and OSCNTL data sets with installed maintenance).

    The VSAM data sets for the regions you set up are updated.

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

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 two types of HOLDDATA:

System HOLDDATA

Indicates data that is an in-stream part of the SYSMOD instructing you of special conditions. Examples of system HOLDDATA are as follows:

ACTION

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

DEP

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

DELETE

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

DOC

Indicates a documentation change with this SYSMOD.

EC

Indicates that this SYSMOD requires a hardware engineering change. An EC hold SYSMOD usually does not affect the product unless the EC is present on the hardware device.

Code a bypass operand on your APPLY command to install SYSMODs that have internal holds. Only code the bypass operand 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 Online to a DASD file, and allocate the file to the SMPHOLD DD statement. To take advantage of the external HOLDDATA, receive it into your SMP/E environment. If you use the jobs supplied by CA, SMP/E receives the HOLDDATA.

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 you issue the 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.

To reliably manage external HOLDDATA, allow SMP/E to manage it automatically. The only manual task is running a REPORT ERRSYSMODS. This report identifies any held SYSMODs already applied to your system. If the resolving SYSMOD is 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.

To update the VSAM data sets

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.NMC0.CAIJCL(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.NMC0.FIX.VSAMUPD.JCL

   dsnpref

   The same data set prefix used for the *dsnpref*.NMC0.CAIJCL data set.

   Note: Each time you apply maintenance, use a new output data set. The new data set ensures 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:

   - 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.

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 iv).

This section describes how to apply maintenance to the RAMDB and details the command syntax of the $RMDB04D maintenance utility.

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

When applying maintenance, you can display details of what differences are being added, replaced, or deleted by the maintenance (see page 170).

Create Backup RAMDB

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

To create the RAMDBd

1. Allocate RAMDBd in the same way that RAMDB was allocated. The cluster definition is in *dsnpref*.NMC0.*rname*.JCL(S01LCALC).
2. Stop the product region.
3. Copy the data from RAMDB to RAMDBd using IDCAMS REPRO command. See the example in *dsnpref*.NMC0.*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 (provided that the maintenance has not yet been applied to RAMDBd).

To apply maintenance directly to RAMDB

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 that 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 will happen 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 170).

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 contains descriptions of the RAMDB Maintenance Utility syntax.

$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 to be applied. 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, specifies the DATASET parameter if the data set containing the fix is to be allocated by this NCL procedure 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 actually 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. Specify the DATASET parameter if the data set is to be allocated by this NCL procedure 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 ddname of 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.

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

Chapter 6: Configuring Your Product

This chapter describes how to use the Install Utility to set up the regions required by this product.

Important! You must put the *dsnpref*.NMC0.CAILINK data set in your system linklist 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 (see page 193)
Region Contents (see page 194)
SOLVE SSI as Common Component (see page 194)
Specify the SOLVE SSI Region (see page 195)
Specify the Product Region (see page 196)

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 21) to generate the jobs that build the regions. If you need additional regions, you can reuse the Install Utility to create them.

Note: If you use CA MSM to deploy the software on different systems before you perform the setup, you must use the Install Utility on a target system to perform the setup on that system.

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 existing region's JCL.

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 sign on and use your product. You can have more than one product region on a system.

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.

To specify a SOLVE SSI region

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

   ```
   EXEC 'dsnpref.NMC0.CAIJCL(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 initial value is SOLVESSI.

   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. You can accept the default values or specify site-specific values. For information about the fields, press F1 (Help).

   The Install Utility generates a series of setup jobs into the *dsnpref*.NMC0.*ssiname*.JCL library.

9. Record the name of the data set into which the JCL was generated in your post-installation worksheet (see page 30).

   Note: If you want to set 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:

    S01LCALC

    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.

    S02LDPDS

    Copies the PDS members to *dsnpref*.NMC0.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.

To specify a product region

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

   ```
   EXEC 'dsnpref.NMC0.CAIJCL(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 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 initial value is NM.

   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. You can 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*.NMC0.*rname*.JCL library.

8. Record the name of the data set into which the JCL was generated in your post-installation worksheet (see page 30).

9. Submit and run the following jobs in sequence. Do not proceed with any job until the previous job has completed successfully. Each job should complete return code 0 unless otherwise indicated.

   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.

   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: 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.

Note: If you want to replicate this product region on another system, certain data sets are required. Copy the data sets listed in *dsnpref*.NMC0.*rname*.JCL(DSLIST) to your target system.

Chapter 7: Creating VTAM Definitions and Tables

This chapter describes how to set up your VTAM major node.

This section contains the following topics:

Create VTAM Definitions and Tables (see page 199)

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 208).

To create VTAM definitions and tables

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

   ```
   EXEC 'dsnpref.NMC0.CAIJCL(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. You can accept the default values or specify site-specific values. For information about the fields, press F1 (Help).

   The Install Utility generates a series of jobs in the *dsnpref*.NMC0.VTAM.JCL library.

7. Record the name of the data set into which the JCL was generated in your post-installation worksheet (see page 30).

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.

   V03CNMRT

   Assembles CNM Routing table.

   This job is only required if you intend to use the Network Error Warning System (NEWS). VTAM uses the CNM routing table to send CNM records across the CNM interface to NEWS and the Network Tracking System (NTS).

   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 to Start Your Product

This chapter describes the tasks needed before CA NetMaster NM for SNA can be started and used.

Note: The Install Utility places SYSIN members and parameter members in a default data set. If you move these members to a more secure data set, you must update the started task JCL to point to the new data set.

This section contains the following topics:

Started Task JCL Setup (see page 201)
Set Up the SOLVE PPI (see page 206)
Subsystem Identifier Setup (see page 207)
Load Libraries (see page 207)
Assign Consoles (see page 208)
Activate VTAM Applications (see page 208)
Enable Auditing by CA Auditor (see page 209)

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

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 based on the values 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. This assists in planning 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*.NMC0.*rname.*JCL(*rname*).

PPREF='INIFILE=????????'

Specifies the INI file 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 member based on the values entered during the installation and setup process.

SSIPARM specifies the SOLVE SSI started task parameters.

Review the SSIPARM member:

- Ensure that the member meets your site-specific requirements
- Reapply any previous customization that is still required

Review the following members in *dsnpref*.NMC0.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 planning 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 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 planning future deployment, you can update the SOLVE SSI started task to use z/OS static system symbols.

To review and copy the SOLVE SSI started task

1. In the SOLVE SSI started task member *dsnpref.*NMC0.*ssiname*.JCL(*ssiname*), review and update the DD statements for your site-specific requirements.
2. Copy the reviewed member to SYS*x.*PROCLIB.

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 planning future deployment, you can update the product region started task to use z/OS static system symbols.

To review and copy the product region started task

1. In the product region started task member *dsnpref.*NMC0.*rname*.JCL(*rname*), review and update the DD statements for your site-specific requirements.
2. Copy the reviewed member to SYS*x.*PROCLIB.

Set Up the SOLVE PPI

SOLVE SSI provides several functions including the SOLVE Program-to-Program Interface (SOLVE PPI).

Note: If you specified PPI=YES for the SOLVE SSI, you must set up the SOLVE PPI.

To use the SOLVE PPI, make the CNMNETM module available for execution using *one* of the following options:

- Add the *dsnpref*.NMC0.CAILPA library to the link list. The link list is defined in SYS1.PARMLIB(LNKLST*xx*).
- Copy CNMNETM, including the aliases CNMCNETV and CNMNETV, from the *dsnpref.*NMC0.CAILPA library to a data set in the link list. For a list of data sets in the link list, see SYS1.PARMLIB(LNKLST*xx*).

  If you are replacing NetView PPI with SOLVE PPI, remove the NetView CNMNETV module from the Pageable Link Pack Area (PLPA) data set.
- Use the VTAM First Failure Data Capture (FFDC) facility. To use this facility, perform the following steps:

  1. Ensure the relevant modules are in LPA.
  2. Copy CNMNETM, including the aliases CNMCNETV and CNMNETV, from the *dsnpref*.NMC0.CAILPA library to a PLPA data set. For a list of data sets in the LPA, see SYS1.PARMLIB(LPALST*xx*).
  3. Perform an IPL, specifying Clear Link Pack Area (CLPA).

Note: You can make the CNMNETM module available for dynamic execution using the SETPROG LNKLST command or the SETPROG LPA command. To make these modules available for dynamic execution, ask a z/OS systems programmer for assistance.

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 193):

- 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 called the AOM subsystem interface ID (AOM SSID). The product region 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 do this, 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

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.

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.

To assign consoles

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 221).

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.

To activate the VTAM applications

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 have knowledge of this product running on your system, you must put a load module in your system link list.

To define the load module to the system link list, include the library *dsnpref*.NMC0.CAILINK in the system link list SYS1.PARMLIB(PROG*xx*), for example:

```
LNKLST ADD NAME(LNKLST00) DSNAME(dsnpref.NMC0.CAILINK)
```

Note: Common load modules are used for all CA Mainframe Network Management products. You only need to include one copy of this *dsnpref*.NMC0.CAILINK library in the system link list.

Chapter 9: Performing Initial Migration

This chapter describes migration tasks to perform before you start your product region.

More information:

Migration Preparation (see page 31)

This section contains the following topics:

NPF and SAF Security Members (see page 211)
SYSPARMS Usage (see page 211)
SNA Initialization Procedure (see page 213)
$CACALL Changes (see page 213)

Note: If you are migrating from a version earlier than r11, contact Technical Support (see page iv).

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.

Note: For information about security members, see the *Security Guide*.

SYSPARMS Usage

Note: This section does not apply if you are migrating from r11.5, r11.6, or r11.7.

Consider the changes to the SYSPARMS command when you migrate your product.

New Commands that Replace SYSPARMS Operands

The following SYSPARMS operands were replaced. You need to search for usage in your NCL procedures, including NMINIT and NMREADY, and replace as described in the following table.

Old Command	New Command
SYSPARMS APPLSTAT=*xxxx* SHOW SYSPARMS APPLSTAT=*xxxx*	APPLSTAT APPL=*xxxx* SHOW APPLSTAT APPL=*xxxx*
SYSPARMS MAIFPREF=*xxxx* SHOW SYSPARMS=MAIFPREF	MAIFPREF POOL=*xxxx* SHOW MAIFPREF=*xxxx* **Note:** MAI-FS pool names are set using the EXTAPPLPOOLS Customizer parameter group.
SYSPARMS MAPLOAD=*xxxx* SYSPARMS MAPDEL=*xxxx* SYSPARMS MAPRESET=*xxxx*	LOAD MAP=*xxxx* UNLOAD MAP=*xxxx* This command is obsolete. Use LOAD MAP=*xxxx*.
SYSPARMS MODLOAD=*xxxx* SYSPARMS MODDEL=*xxxx*	LOAD MOD=*xxxx* UNLOAD MOD=*xxxx*
SYSPARMS PRELOAD=*xxxx* SYSPARMS UNLOAD=*xxxx*	LOAD PROC=*xxxx* UNLOAD PROC=*xxxx*

Note: You must make these changes in NCL procedures that use these commands either natively, or by way of &INTCMD.

Revised SHOW SYSPARMS Output

SHOW SYSPARMS output includes additional columns. Review any user NCL procedures that execute SHOW SYSPARMS using &INTCMD to take the additional columns into account.

Amended SYSPARMS Operand Processing

By default, when a SYSPARMS operand is set by a Customizer parameter group, it can only be updated subsequently using Customizer and cannot be set using OCS, Command Entry, or an NCL procedure.

If your site uses NCL procedures that execute SYSPARMS commands (either natively or using &INTCMD), note them, and after you initialize a region, you can use the SHOW SYSPARMS command to display all SYSPARMS operand origins. Locate the SYSPARMS you previously noted and, if they are set by Customizer, remove these SYSPARMS operands from the NCL procedures.

Note: For more information, see the online help for message N12810.

SNA Initialization Procedure

The CA NetMaster NM for SNA initialization procedure, $NSINIT, is used for site-specific definitions, for example, NTS DEFCLASS statements.

The format of the $NSINIT member is unchanged. If you have customized your $NSINIT procedure, review your previous file and apply your local modifications in the r12 region.

Important! If modifications are required, we recommend that you create an SMP/E ++USERMOD to record and control the changes, and then copy the member to TESTEXEC. Alternatively, you can copy the distributed member to the region's TESTEXEC data set for modification.

Note: This member is referenced in the SNAINIT - NetMaster for SNA Init Process parameter group.

$CACALL Changes

Note: This section does not apply if you are migrating from r11.5, r11.6, or r11.7.

The following functions were removed:

- ACTION=BUILD,CLASS=CFPATH
- MODE=BROWSE is not supported for ACTION=DISPLAY,CLASS=HELP

If you have any NCL procedures issuing $CACALL, ensure that these functions are not used.

Chapter 10: Starting Up

This chapter describes how to start up your regions and log on to your product for the first time.

This section contains the following topics:

Start the SOLVE SSI Region (see page 215)
Restart the SOLVE SSI Region (see page 216)
Start the Product Region (see page 216)
Perform the Initial Logon (see page 217)
Add the Initial Administrator User ID (see page 217)
Perform Subsequent Logon (see page 218)

Note: If you want to run other CA Mainframe Network Management products in this region, before proceeding, complete the tasks described in the *Installation Guide* for the other products.

Start the SOLVE SSI Region

You only need to perform this procedure 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 195), 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 216).

The SOLVE SSI region only needs to be started for the following reasons:

- Your NetMaster product regions will be linked in a multisystem network using EPS (End Point Services).
- The Alert Monitor will receive external alerts from CA OPS/MVS Event Management Automation.
- The NetMaster PPI (rather than the NetView PPI) is to forward generic alerts from a NetView region to your NetMaster product region.
- In-house development makes use of the NetMaster PPI.
- In-house development makes use of the DD SUBSYS facility.

To start the SOLVE SSI region, issue the following command from the MVS console:

```
S ssiname
```

ssiname is the name you specified for the SOLVE SSI during the setup process.

To stop the SOLVE SSI started task, issue the following command from the MVS console:

```
F ssiname,FSTOP
```

Note: If you are using cross-memory services and the SOLVE SSI is terminated, the address space ID is not available until after the next IPL.

Restart the SOLVE SSI Region

You only need to perform this procedure if you are using an existing shared SOLVE SSI region and made changes when specifying the SOLVE SSI region (see page 195).

To restart the SOLVE SSI region

1. Stop the SOLVE SSI started task, issue the following command from the MVS console:

   ```
   F ssiname,FSTOP
   ```

2. Start the SOLVE SSI region, issue the following command from the MVS console:

   ```
   S ssiname
   ```

Start the Product Region

To start the product region, issue the following command:

```
S rname
```

rname is the name you specified for the region during the setup process.

Note: To stop the started task, issue the following command from the MVS console:

```
F rname,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.

To perform the initial logon

1. Log on to the product region. You can use the VTAM logon command:

   `LOGON APPLID(`*priacbnm*`) or 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 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. You must 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.

To log on to your product

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*.NMC0.CC2DLMD0 data set to LINKLIST or STEPLIB concatenation for the appropriate TSO procedure
     - *dsprefix*.NMC0.CC2DSAMP data set to the SYSHELP concatenation for the appropriate TSO procedure

Chapter 11: Customizing Your Product

This chapter describes how to customize your product.

Note: After completing the steps in this chapter, you can use product system variables and z/OS static system symbols to assist you in planning future deployment when configuring multiple regions, but you must generate an initialization (INI) file. For information about setting up the INI file, see the *Administration Guide*.

This section contains the following topics:

Initial Customization Requirements (see page 221)
Additional Parameter Groups (see page 227)
Initialization Failures (see page 231)
Perform Additional Customization (see page 232)

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 iv).

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 217). 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 your site's needs.

Note: All parameters have default values.

To customize parameter values

1. Enter **U** beside 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 actioned 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 actioning 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 choose to 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 the PPO Message Interface

Use this procedure to implement the Primary Program Operator (PPO) message interface.

To implement the PPO message interface

1. Enter **U** beside the PPO Message Interface Details parameter group. The PPO - PPO Message Interface Details panel appears.
2. Verify the PPO ACB Name.
3. Press F6 (Action) to set the specified values and start the interface.
4. Press F3 (File) to save your settings.

   The Customizer : Fast Setup panel appears with the Reviewed column marked Yes for the PPO Message Interface Details.

Implement System Identification Parameters

Use this procedure to implement system identification parameters.

To implement system identification parameters

1. Enter **U** next to the System Identifications parameter group.

   The SYSTEMID - System Identifications panel appears. The parameter group has two panels.
2. Complete the fields on the panels. For information about the fields, press F1 (Help).
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 the system identification parameters.

Note: The system ID does not take effect until the next system initialization.

Implement the CNM Interface

To implement the CNM interface, you need to define the following:

- CNM ACB details
- CNM procedure and status
- CNM user exit and status

Note: Before performing this procedure, ensure that you have set up the CNM Routing Table (see page 201).

To define the CNM details

1. Enter **U** beside the CNM Interface Details parameter group. The CNM - CNM Interface Details panel appears.
2. Verify the CNM ACB Name.
3. Complete the remaining fields on the panel. For information on these fields, press F1 (Help).
4. Press F8 (Forward). The second panel for this parameter group appears.
5. Complete the CNM User Exit Details. For information on these fields, press F1 (Help).

   Note: This page allows you to specify a CNM user exit. If you are installing CA NetMaster NM for SNA for the first time, you must leave this blank and consider implementing a user exit later. See the *Administration Guide* for more information about the CNM user exit.
6. Press F6 (Action) to set the specified values and start the interface.
7. Press F3 (File) to save your settings.

   The Customizer : Fast Setup panel appears with the Reviewed column marked Yes for the CNM interface details.

Implement Operating System Identifiers Parameters

Use this procedure to implement the operating system identifiers.

To implement the operating system identifiers parameters

1. Enter **U** beside 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 operating system identifiers parameters.

Implement SAW

To implement session awareness (SAW), you must define the following:

- SAW ACB details
- SAW start options and status
- SAW user exit and status

Note: Before performing this procedure, ensure that you have set up the CNM Routing Table (see page 201).

To define the SAW details

1. Enter **U** beside the Session Awareness (SAW) Details parameter group. The SAW - Session Awareness (SAW) Details panel appears.
2. Verify the SAW ACB Name.
3. Complete the remaining fields on the panel. For information on these fields, press F1 (Help).
4. Press F8.

   The second panel for this parameter group appears.

5. Complete the NTS User Exit Details. For information on these fields, press F1 (Help).

   Note: This page allows you to specify an NTS user exit. If you are installing CA NetMaster NM for SNA for the first time, leave this blank and consider implementing a user exit later. See the *Administration Guide* for more information about the NTS user exit.

6. Press F6 (Action) to set the specified values and start session awareness.
7. Press F3 (File) to save your settings.

   The Customizer : Fast Setup panel appears with the Reviewed column marked Yes for the Session Awareness (SAW) Details.

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.)

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 249) provided by an OMVS segment security definition.

To implement the TCP/IP sockets interface parameters

1. Enter **U** beside 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. For information about the fields, 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. For information about the fields, press F1 (Help).

   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.

If you enabled TCP/IP support using CA TCPaccess CS, see the following section.

Ensure CA TCPaccess CS DNR Members Translate Subsystem Name

Use this procedure to 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 ensure that DNR members translate correctly

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.
   ```

   Note: 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 172.16.140.117, enter a line like the following into your DNRHST*xx* member:

   ```
   MVS.SITE1.COM. 172.16.140.117
   ```

Note: This DNR configuration is recommended in the *CA TCPaccess CS Customization Guide*, which contains further details about the DNR members of the CA TCPaccess CS PARM data set. You need to ensure that the HOSTTABLE statement in the DNRCFG*xx* member points to the correct DNRHST*xx* member. You do not need to restart CA TCPaccess CS to introduce changes to the DNR tables. You can restart DNR, for example:

```
F TCPICS,STOP DNR
F TCPICS,START DNR
```

Implement External Applications Access

Note: You only need to perform this task if you have installed CA NetSpy and you want the NetSpy option to appear on the primary menu of your product region.

To implement external application access

1. Enter **U** beside the $RM EXTAPPLS parameter group.

   The EXTAPPLS - External Applications Access panel appears.

2. Under NetSpy Application Specifications, enter the NetSpy ACB Name. For information about the remaining fields, press F1 (Help).
3. Press F6 (Action) to action the entries.
4. Press F3 (File) to save your settings.

   The Customizer : Complete Setup panel appears.

Implement Links to CA NetSpy Network Performance

Note: You only need to perform this task if you have installed CA NetSpy and you want NetSpy data to be available to your product region.

To implement links to NetSpy systems

1. Enter **U** beside the $ES NETSPYLINKS parameter group.

   The NETSPYLINKS - Links to NetSpy Applications panel appears.

2. Enter the NetSpy X-communication (NSYXNAME) ACB Name. This is used for the following:
   - NetSpy-to-NetSpy communication
   - NetSpy-to-NetMaster communication
3. For information about the remaining fields, press F1 (Help).
4. Press F6 (Action) to action the entries.
5. Press F3 (File) to save your settings.

   The Customizer : Complete Setup panel appears.

6. Press F3 (Exit).

   The Customizer : System Parameters panel appears.

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

Note: If the Panel libraries are missing, the system may display the N59005 message, which says that the $MHMENU panel is not found. To retry, press F3, or to log off, press F4.

A Customizer parameter group always produces initialization log messages. The messages are echoed to the activity log. If a parameter group fails to initialize and you cannot log on to the region to display error messages, use CA SYSVIEW, SDSF, or an equivalent utility to display the activity log SYSOUT DD, which is named LOG1 through to LOG9.

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.

To resolve initialization failures

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 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 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 indicate to the system that it should 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.

There are many other ways that you can customize your product, and they are described in the *Administration Guide*.

Chapter 12: Completing Migration

This chapter describes how to complete the migration process. It includes tasks that you perform after you start your r12 product region.

This section contains the following topics:

NetMaster : Primary Menu (see page 233)
Knowledge Base Migration (see page 234)
MODS Migration (see page 237)
Panel Migration (see page 238)
OSCNTL File Migration (see page 241)
PSM Default Values Migration (see page 241)
Migrate Baseline Data (see page 242)
Region Links to a Multisystem Network (see page 243)
Migrate NSCNTL File (see page 247)

Note: If you are migrating from a version earlier than r11, contact Technical Support (see page iv).

NetMaster : Primary Menu

The NetMaster : Primary Menu provides the expanded or collapsed menu options.

Each user can specify their own menu format and will be prompted until they have done so. To change the menu format, enter PROFILE in the Command field, as indicated by the prompt.

Knowledge Base Migration

The knowledge base is where you store your resource definitions. System images, in which you define resources that are to be managed by a region, are part of the knowledge base.

Note: For more information about the knowledge base, see the *Reference Guide*.

As part of region setup, an r12 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.

Migrate Your Existing Knowledge Base

If you are migrating multiple synchronized regions, you only need to 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 r12 product regions are performing correctly.

To migrate your existing knowledge base

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 r12 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 already exists in the new knowledge base.)

      You might have customized some of these components and want to copy them.

   b. Enter **R** beside the components that you want to copy, and copy the records.

      The copying options depend on whether a component contains multiple objects (see page 235), such as a system image, or is the object itself (see page 236), 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 r12 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 r12 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 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 r12 distributed templates.

Note: All templates were changed in r11, and some were changed in later releases. For more information about changes to the distributed knowledge base since r11.5, see *Reference Guide*.

To apply updated templates

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, ensure that you 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** beside 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, you need to 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, ensure that you make a copy of the definition before you apply the template.

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 r12 file using the IDCAMS REPRO command.

Note: The allocation of MODS data sets is controlled by the MODSFILES parameter group in Customizer. 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 Programmer and Administrator 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 r12 file using the IDCAMS REPRO command.

Notes:

- You do not need to migrate installation-defined icon panels in the ICOPANL file. These are recreated during the knowledge base migration.
- The allocation of panels data sets is controlled by the PANELLIBS parameter group in Customizer. 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 an r12 panel library.

Important! You should 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 r12 product region.

To copy panel definitions

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. Press F1 (Help) for additional information.

   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 Programming and Administrator Guide*.

OSCNTL File Migration

The format of the OSCNTL file is unchanged. If your installation's existing OSCNTL file contains installation-defined ASN.1 maps, you must recompile them in the r12 product region.

Ensure the data set containing the map source is added 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 Programming and Administration Guide*.

PSM Default Values Migration

Note: This section does not apply if you are migrating from r11.5, r11.6, or r11.7.

When PSM Printer or Form definitions are added, some fields are primed from defaults stored in a Defaults record. PSM Defaults are customized using the PSMDEFAULTS Customizer parameter group.

If you did not amend the default values, there is no migration action. However, if you changed these values, review them in the PSMDEFAULTS parameter group and update as required.

Defaults that were previously set using /PSMADMN.UD are now set in Customizer. If you have changed your defaults using /PSMADMN.UD in previous releases, update your changes in the PSMDEFAULTS parameter group.

Migrate Baseline Data

(Optional) Previous data on monitored resource attributes (baseline data) is stored in VFS. If you want to use this data, you must migrate the data to the MSDB VSAM file at your earliest convenience.

To migrate baseline data to MSDB

1. Ensure that the size of MSDB is at least as large as the size allocated to the existing VFS.

   Note: For the cluster definition of MSDB, see the NMC0.*rname*.JCL(S01LCALC) data set member. If you require a larger size, update the RECORDS parameter. The MSDB parameter group specifies this file.

2. Log on to your new region.
3. Enter CMD at the command prompt.

   A command entry panel appears.

4. Enter the following command:

   ```
   SUBMIT BSYS $CAPKCAL $DFDBPKG DFDBMIGRATE FDSN=vfs_data_set RESET=YES
   ```

   The migration starts as a background process, enabling you to perform other tasks. When the process completes, a DFDBPKG25 message is written to the activity log. The log also contains other messages that records the process. The MSDB file is cleared, and the data is migrated.

$CAPKCAL $DFDBPKG DFDBMIGRATE Procedure—Migrate Baseline Data

The $CAPKCAL $DFDBPKG DFDBMIGRATE procedure migrates baseline data from VFS to MSDB.

The procedure has the following format:

```
$CAPKCAL $DFDBPKG DFDBMIGRATE { FFID=vfs_file_id | FDSN=data_set_name }
                              [ TFID=MSDB | TDSN=data_set_name ]
                              [ RESET={ NO | YES } ]
                              [ FORCE={ NO | YES } ]
                              [ CLEANUP={ NO | YES } ]
```

FFID or FDSN

Specifies the file ID or data set name of the VFS that contains the data to be migrated.

TFID or TDSN

Specifies the file ID or data set name of the MSDB file to which data is to be migrated.

Default: TFID=MSDB

RESET

Specifies whether existing baseline data is deleted from the MSDB before migration.

Default: NO

FORCE

Specifies whether to migrate the data even when the MSDB contains baseline data. If data exists for an attribute in both the VFS and the MSDB, the data in the MSDB is overwritten. That is, any data collected for that attribute in the MSDB is lost.

Default: NO

CLEANUP

Specifies whether to delete the migrated baseline data from the VFS.

Default: NO

Region Links to a Multisystem Network

If the region you are migrating is to be synchronized with other regions (see page 32), review the sections that follow.

Important! You must ensure that you unlink your existing region from the multisystem network before upgrading it to r12 and relinking it 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, changes should be made 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

If this is the first product region to be migrated, you can link your new product regions 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:

- Ensure the relevant maintenance has been applied to your product region, including checking software requirements (see page 15) and multisystem network migration (see page 34).
- If you have specified the NMSUP parameter in your existing product region's RUNSYSIN member, ensure that you specify this parameter in your new product region's RUNSYSIN member. 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*.

To link in migration mode

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 r12, you can use this procedure to link it to the first r12 product region.

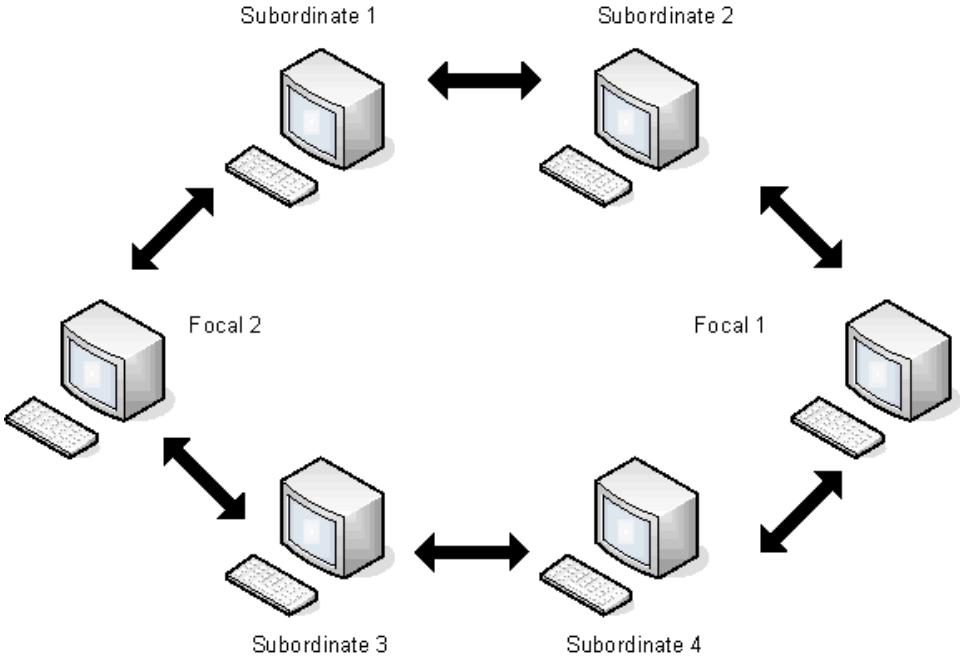
To migrate subsequent regions

1. Enter **=/MADMIN.SD**.
2. Specify the first r12 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.
6. Ensure that the final region you migrate is the focal region that you first linked using migration mode.

   This ensures that the visibility to the multisystem network is retained throughout the migration process.

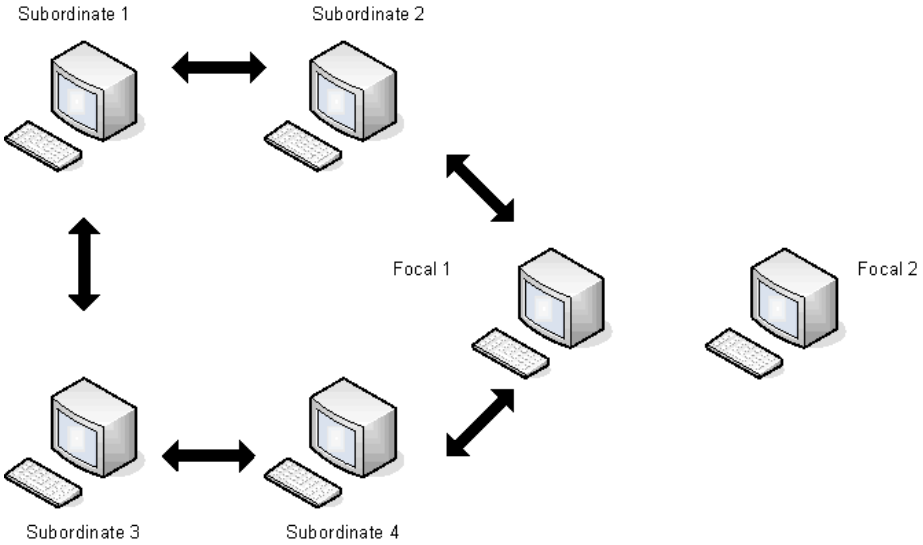
Migrate a Multisystem Network

The following diagram shows a multisystem network with two focal regions and four subordinate regions:

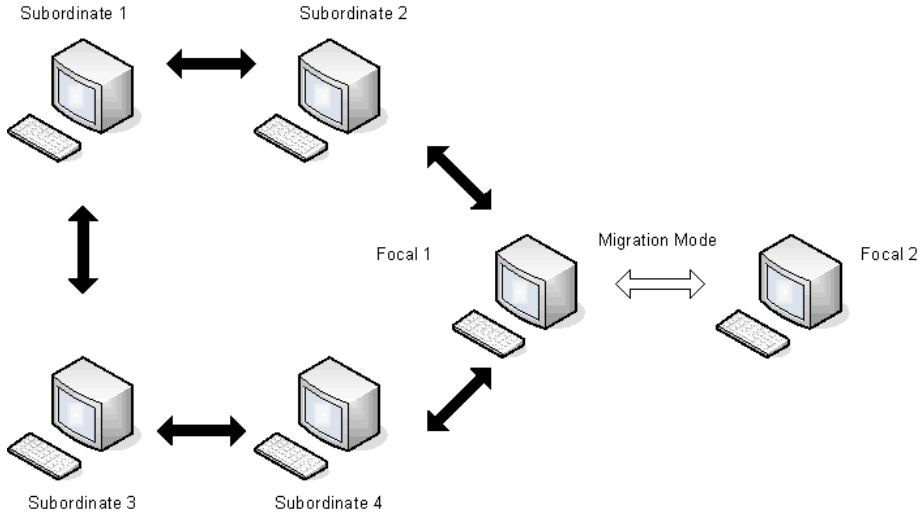


To migrate a multisystem network

1. Unlink Focal 2 from the existing multisystem network, as shown in the following diagram:

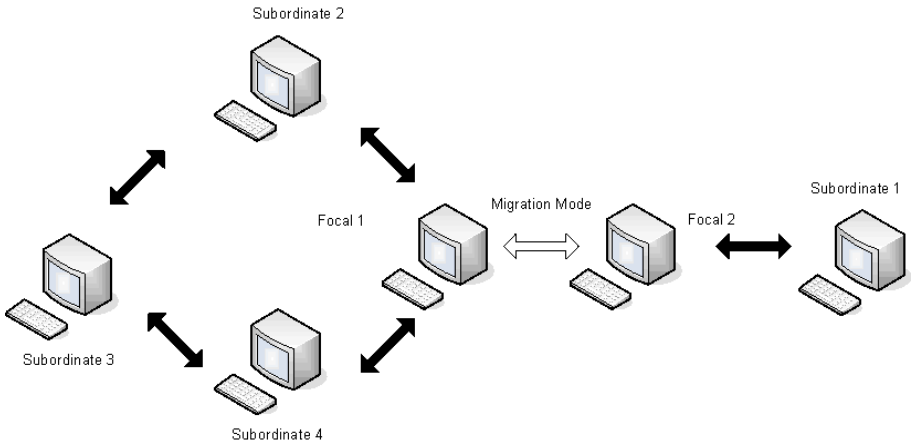


2. Upgrade Focal 2 to r12.
3. Link Focal 2 to Focal 1 in migration mode, as shown in the following diagram:



4. Unlink Subordinate 1 from the multisystem network and upgrade it to r12.

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.

Migrate NSCNTL File

If you have not made any changes to your back-level file, you can use the r12 NSCNTL file and omit this step. If you made changes to your file, you should execute the NSCNTL file migration utility to identify your changes.

To migrate your NSCNTL file using the $SNNSCNV utility procedure

1. Start the region, using the latest distributed NSCNTL file.
2. Enter **=O** at a command prompt. The Operator Console Services (OCS) panel appears.
3. Enter **$SNNSCNV DSN=***datasetname* at the ==> prompt. The procedure reads the old NSCNTL file, produces a report, and displays it.

   Note: *datasetname* is the DSN name of the back-level NSCNTL file.
4. Scroll through the migration report, reading the explanatory text and observing categories that are highlighted to indicate a change.

   Note: To print the migration report for easy reference, press F11 (Print).

5. To migrate your old NSCNTL file to the current release, press F6 (Migrate). The NSCNTL : Record Migration List panel appears.

   Note: F6 (Migrate) appears only if both of the following apply:

   - The target NSCNTL file, that is the file allocated to this region, with the current product release, has update access. The Migration Summary section of the report instructs you how to enable migration if the file is read-only.
   - There are records (SNAMS focal points and entry points or CNM code points) that qualify for migration.

   Note: If you have changed any of the following Cat 004 Process-ID definitions in your old NSCNTL file for CA NetMaster NA, these changes are no longer required:

   - AL0001, AL0002, AL0003, AL0010
   - EV0001, EV0002, EV0003, EV0004

6. Type **C** beside each record that you want to copy to your new NSCNTL file and press Enter. The migration utility updates the Status column to show the effect of this action. The new status shown for each record is as follows:

   - Copied—if the record did not already exist in the new file
   - Replaced—if the record already existed in the new file

   For further information, see the comments contained within the migration utility.

Appendix A: Defining UNIX System Services Authorization

This appendix describes how to authorize a user ID for UNIX System Services (USS).

This section contains the following topics:

USS Authorization Requirements (see page 249)
Set Up OMVS Segment (see page 249)

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

Set Up OMVS Segment

Use this procedure to set up an OMVS segment.

To set up an OMVS segment

1. Choose an OMVS UID number to associate with each user ID. Your security administrator may have a policy for assigning OMVS UID numbers. If not, use a unique number.

   Note: For more information about OMVS UID numbers, see IBM's *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 the following:

   - A home directory (HOME)
   - A login shell (PROGRAM or OMVSPGM)

3. Ensure that you have completed 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. Choose a home directory to associate with 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 called /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
   ```

6. If you have previously installed this product and have authorized the UNIX shell, remove the previous authorization by using the following command:

   ```
   extattr -a/bin/sh
   ```

Appendix B: Tape Format

This appendix provides 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 (see page 253)
Format of Cartridge VOLSER C2D66A (see page 254)
Format of Cartridge VOLSER C2D66B (see page 255)

FMID Descriptions

The sections in the remainder of this appendix reference the following FMIDs, which are codes that identify the release levels of a product:

CBT2C00

Is the FMID for NetSpy SNA Services.

CC11C00

Is the FMID for TCP/IP Services.

CC17C00

Is the FMID for File Transfer Services.

CC18C00

Is the FMID for SNA Automation Services.

CC2AC00

Is the FMID for SNA Services.

CC2D66E

Is the FMID for PDSE Services.

CC2D66H

This is the FMID for Health Checker.

CC2D66R

Is the FMID for ReportCenter.

CC2D66S

Is the FMID for WebCenter SDK.

CC2D660

Is the FMID for Management Services.

CDEMC00

Is the FMID for FTS Services.

Format of Cartridge VOLSER C2D66A

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.RESERVED.S002	Reserved for future use
3	CAI.HOLDDATA	SMP HOLDDATA
4–31	CAI.RESERVED.S004-S031	Reserved for future use
32	CAI.SMPMCS	Modification control statements (MCSs) containing functions and all published SYSMODs for those functions
33	CAI.CC2D66H.F1	JCLIN for CC2D66H
34	CAI.CC2D66H.F2	NCAL-linked MODS for CC2D66H
35	CAI.CC2D66H.F3	Installation and maintenance JCL members
36	CAI.CBT2C00.F1	JCLIN for CBT2C00
37	CAI.CBT2C00.F2	NCAL-linked MODS for CBT2C00
38	CAI.CBT2C00.F3	++MAC for CBT2C00 (RECFM=FB)
39	CAI.CBT2C00.F4	XML for CA MSM
40	CAI.CC11C00.F1	++MAC for CC11C00 (RECFM=FB)
41	CAI.CC11C00.F2	++DATA for CC11C00 (RECFM=VB)
42	CAI.CC11C00.F3	XML for CA MSM
43	CAI.CC17C00.F1	++MAC for CC17C00 (RECFM=FB)
44	CAI.CC17C00.F2	++DATA for CC17C00 (RECFM=VB)

45	CAI.CC17C00.F3	XML for CA MSM
46	CAI.CC2AC00.F1	++MAC for CC2AC00 (RECFM=FB)
47	CAI.CC2AC00.F2	++DATA for CC2AC00 (RECFM=VB)
48	CAI.CC2AC00.F3	XML for CA MSM
49	CAI.CC18C00.F1	++MAC for CC18C00 (RECFM=FB)
50	CAI.CC18C00.F2	++DATA for CC18C00 (RECFM=VB)
51	CAI.CC18C00.F3	XML for CA MSM
52	CAI.CDEMC00.F1	++MAC for CDEMC00 (RECFM=FB)
53	CAI.CDEMC00.F2	++DATA for CDEMC00 (RECFM=VB)
54	CAI.CDEMC00.F3	XML for CA MSM
55	CAI.CC2D66R.F1	++HFS for CC2D66R
56	CAI.CC2D66S.F1	++HFS for CC2D66S
57	CAI.CC2D66E.F1	JCLIN for CC2D66E
58	CAI.CC2D66E.F2	NCAL-linked MODS for CC2D66E

Format of Cartridge VOLSER C2D66B

This table lists the file sequence numbers, data set names, and data set contents for the second tape.

Files	DSN	Contents
1–2	CAI.RESERVED.S001-S002	Reserved for future use
3	CAI.HOLDDATA	SMP HOLDDATA
4–31	CAI.RESERVED.S004–S031	Reserved for future use
32	CAI.SMPMCS	Modification control statements (MCSs) containing functions and all published SYSMODs for those functions
38	CAI.CC2D660.F1	JCLIN for CC2D660
39	CAI.CC2D660.F2	NCAL-linked MODS for CC2D660
40	CAI.CC2D660.F3	++MAC for CC2D660 (RECFM=FB)
41	CAI.CC2D660.F4	++DATA for CC2D660 (RECFM=VB)

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