CA Cloud Storage for System z

z/OS Installation Guide

Release 1.1.00

CA Technologies Product References

The CA Cloud Storage for System z guides refer to the following CA products and components:

- CA 1® Tape Management (CA 1)
- CA Allocate™ DASD Space and Placement (CA Allocate)
- CA Earl® (CA Earl)
- CA Chorus Software Manager™ (CA CSM)
- CA MIM™ Resource Sharing (CA MIM)
- CA Tape Encryption
- CA TLMS® Tape Management (CA TLMS)
- CA Vtape™ Virtual Tape System (CA Vtape)

Contact CA Technologies

Contact CA Support

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

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

Providing Feedback About Product Documentation

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

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

Contents

Chapter 1: About this Guide

This guide provides system programmers and storage administrators the information to install CA Vtape as part of CA Cloud Storage for System z.

This section contains the following topics:

Audience

The users of this guide should be experienced mainframe technicians with knowledge of your mainframe tape system, tape-related software, and security setups.

Conventions Used in this Guide

The following conventions are used throughout this guide to document features, functions, and other aspects of the system:

- Variable text is entered in italics. This is most commonly used for dataset names and console commands.

  For example, VVE_SCRATCH=*volser* where *volser* is the Virtual Volume VOLSER.

- Commands are entered in uppercase and lower-case. The uppercase portion of the command is the abbreviated form of the command or the minimum number of characters that must be entered for the product to recognize the command. The lower-case portion is provided for clarity.

Chapter 2: Installing CA Cloud Storage for System z

This section contains the following topics:

Determine Installation Process for Your Environment

CA Cloud Storage for System z lets you use cloud storage for your z/OS mainframe virtual tape volumes. A private cloud is under your control to configure any way that you want. You can use any combination of both public and private cloud storage.

CA Cloud Storage for System z includes:

- CA Vtape on z/OS
- An application server that runs on Linux on System z

CA Vtape on z/OS uses its patented zIIP enabled Virtual I/O engine to off-load tape data in real time to Linux on System z over a Channel-to-Channel (CTC) adapter. The Linux Server does I/O to files that represent the z/OS virtual volumes as standard Linux files. These files are intended to be on CIFS shares-NFS mount points (CIFS and NFS are collectively referred to as mount points).

Virtual Volumes are directed to a mount point by volume serial range. You have the flexibility to use one or more mount points by assigning volume serial ranges to those mount points. CA Vtape on z/OS is able to assign virtual volume serial ranges through its data set and data class policy-based filters. You decide what z/OS applications and workloads get assigned to which mount point.

The mount point storage is accessed at local disk speed. You can map each mount point to a different gateway appliance. These appliances provide features such as data compression, data deduplication, data encryption, and data replication. Deciding what features to exploit is up to you.

CA Cloud Storage for System z provides two installation paths:

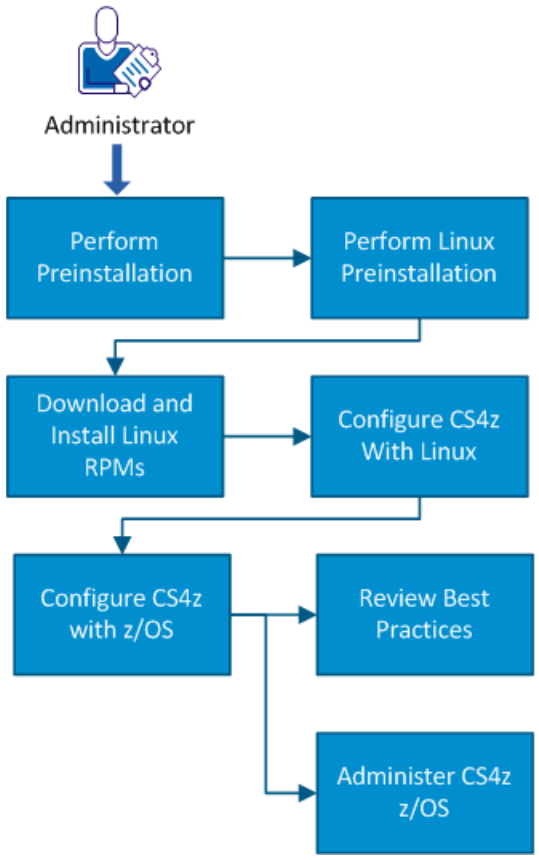
- If you have an existing CA Vtape installation, see How to Install and Configure CA Cloud Storage for System z with Existing CA Vtape Installation (see page 12).
- If you do not have an existing CA Vtape installation, see How to Install and Configure CA Cloud Storage for System z and New CA Vtape Installation (see page 14).

How to Install and Configure CA Cloud Storage for System z with Existing CA Vtape Installation

If you already have a fully-licensed CA Vtape installation in your environment, you configure CS4z with the existing CA Vtape installation.

Use the following scenario to guide you through the process:

How to Install and Configure CA Cloud Storage for System z (CS4z) with an Existing vTape Installation



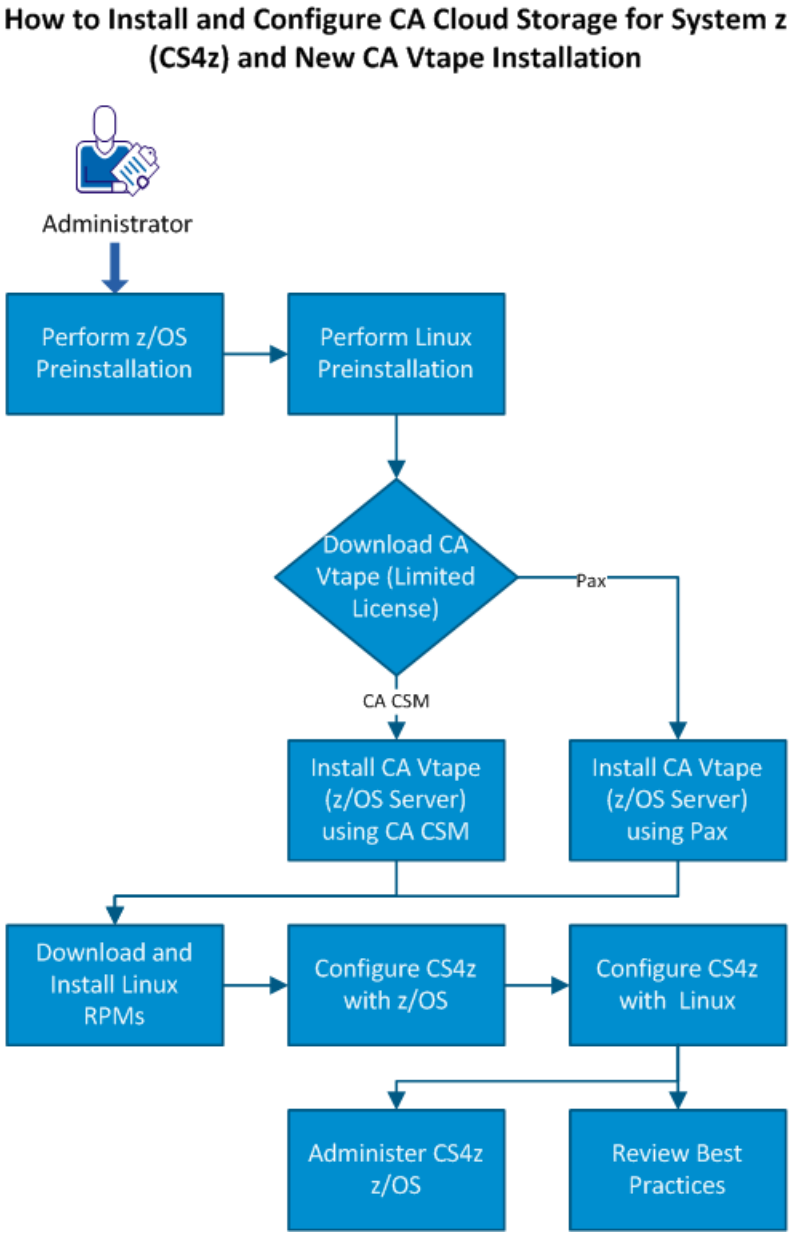
Follow these steps:

1. Perform the z/OS preinstallation. (see page 17)
2. Perform the Linux preinstallation. Follow the *Linux Installation and Configuration Guide* chapter "Performing a Linux Preinstallation."
3. Download and install Linux RPMs from CA Support. Follow the *Linux Installation and Configuration Guide* topic "How to Install CA Cloud Storage for System z on Linux."
4. Configure CA Cloud Storage for System z with Linux. Follow the *Linux Installation and Configuration Guide* chapter "Configuring CA Cloud Storage for System z on Linux."
5. Configure CA Cloud Storage for System z with z/OS. Follow the *z/OS Configuration Guide*, starting with the chapter "Setting up the System, Tape Management, and Third-Party Products" through the chapter "Product Verification."
6. Continue reading CA Cloud Storage for System z documentation:
   - *Best Practices*
   - *Administration Guide*

How to Install and Configure CA Cloud Storage for System z and New CA Vtape Installation

If you do not have a fully-licensed CA Vtape installation in your environment, you can download and install the Limited-Use CA Vtape License. Then you can configure CA Cloud Storage for System z with the CA Vtape installation.

Use the following scenario to guide you through the process:



Follow these steps:

1. Perform the z/OS preinstallation. (see page 17)
2. Perform the Linux preinstallation. Follow the *Linux Installation and Configuration Guide* chapter "Performing a Linux Preinstallation."
3. Download and install CA Vtape (see page 21).
4. Download and install Linux RPMs from CA Support. Follow the *Linux Installation and Configuration Guide* topic "Install CA Cloud Storage for System z."
5. Configure CA Cloud Storage for System z with z/OS. Follow the *z/OS Configuration Guide*, starting with the chapter "Setting up the System, Tape Management, and Third-Party Products" through the chapter "Product Verification."
6. Configure CA Cloud Storage for System z with Linux. Follow the *Linux Installation and Configuration Guide* chapter "Configuring CA Cloud Storage for System z."
7. Continue reading CA Cloud Storage for System z documentation:
   - *Best Practices*
   - *Administration Guide*

Chapter 3: Performing a z/OS Preinstallation

This section contains the following topics:

How to Perform a z/OS Preinstallation

Before you install CA Cloud Storage for System z, review the preinstallation information and download CA Cloud Storage for System z from CA Support.

1. Review the *Release Notes* provided on the bookshelf to verify the system and hardware requirements, version support, and known issues.
2. Review the CA Vtape Limited-Use License Requirement (see page 17).
3. Review the CA Cloud Storage for System z security requirements (see page 17).

Limited-Use CA Vtape License Requirement

New and existing CA Vtape customers require the Limited-Use CA Vtape License to implement CA Cloud Storage for System z.

Security Requirements

The CA Vtape default started task names are SVTS and SVTSAS. Define these names or your customized names as Started Tasks to the security system. The minimum authority that is required is to create, read, write, update, and delete CA Vtape data sets. These data sets are allocated with the DSN prefix you select for CA Vtape use during the configuration and customization process. The default DSN prefix is CAVTAPE1.

System Logger

Define a DASDONLY log stream for each CA Vtape Subsystem to hold internal logger data. An overview of the security requirements for setting up an IBM system logger log stream follows.

You must be authorized to use IXCMIAPU before setting up policies for your installation with the IXCMIAPU Administrative Data Utility program.

To define the CA Vtape Log Stream for each system, customize and run the IBM IXCMIAPU utility . Sample JCL is in member IXCMIAPU of the CA Vtape CCUUJCL data set.

Set the IXCMIAPU HLQ parameter to the CA Vtape DSN prefix. If a different HLQ value is selected for the Log Stream, the CA Vtape security profile must be given CREATE access authority to the new HLQ. If the System Logger was never customized in your system, other security-related steps can be required.

For more information about these steps and requirements, see the IBM *z/OS MVS Assembler Services Guide* http://www-947.ibm.com/support/entry/portal/support. The following list is a brief summary of these steps:

- IBM recommends that you assign the System Logger address space (IXGLOGR) privileged security status. This avoids having to give the logger-specific access rights to each Log Stream defined in the system.
- The LOGR policy information describes the characteristics of each log stream and coupling facility structure that system logger uses when there are active connections to the log stream.
- The CFRM policy contains the definition of all coupling facility structures that the system logger uses, if applicable.
- The users of the IXCMIAPU utility require authorization to the resources accessed by the utility. Define the appropriate authorizations before users try to add, update, delete, or extract a report from the LOGR policy.
- The LOGR couple data set must be activated and available before you add log streams and structure definitions to it.

Issuing IBM Console Commands

CA Vtape issues START, STOP, MODIFY, ROUTE, SETIOS, VARY, and UNLOAD commands to its sub-address spaces and Virtual Devices. If the security system restricts the use of these MVS console commands, give the CA Vtape started tasks access to the resource or pseudo-data set name that controls the command usage.

Dynamic APF Authorization

CA Vtape may need UPDATE access to the FACILITY class CSVAPF depending on whether this facility is secured at your site and the CA Vtape Split Maintenance-Level Protection setting. The Tasklib attribute (in the Startup Options Section of the CA Vtape parmlib) controls the Split Maintenance-Level Protection feature.

If set to Automatic, CA Vtape dynamically allocates a loadlib data set with a name using the CA Vtape DSN prefix and dynamically APF authorizes the data set.

If set to a data set name, CA Vtape uses that data set as the loadlib. If this data set has not already been APF authorized, CA Vtape dynamically APF authorizes it.

Read-Only Access to Virtual Volumes (IEC.TAPERING)

If the installed security software is set up to do volume-level checking, you may need to code the IBM IEC.TAPERING facility profile. Update the profile to allow those individuals with read-only access to certain data sets to read the data sets after they are written to Virtual Volumes. The operating system automatically prevents an individual with read-only access to a 3480 or 3490 tape data set from mounting the tape when that data set was created by someone with alter access and the write ring is installed. The write ring is always considered installed for Virtual Volumes.

Allowing read access to the IEC.TAPERING facility does not override the existing data set level security. The security software stops any attempt by someone with read-only access to open the data set for output processing.

For information about the IEC.TAPERING facility, see the IBM *SecureWay Security Server RACF* Security *Administrator's Guide*.

Access to the CA 1 Tape Management Catalog (TMC)

If CA 1 is installed with the YSVC option set to YES in the TMOOPT*xx* member of the CA 1 CTAPOPTN data set, the CA Vtape started tasks (default names SVTS and SVTSAS) may need READ and UPDATE access to the YSVCUNCD resource. The access is required when the CA Vtape TapeManagementSystem attribute in the Dynamic Options Section of the CA Vtape parmlib is set to CA1 or AUTOMATIC.

With the interface active, CA Vtape tries to update the TMC ACTVOL field with the stacking location of a Virtual Volume. If the appropriate security access is not provided, these updates fail with various error messages like the following:

```
IEFTMS70 9YY-112 OPCODE=24,UPDATE ACCESS TO THE TMC NOT AUTHORIZED
```

Note: For more information, see the section CA 1 SVC Call Processing (YSVC) in the chapter "CA 1 Passwords and Security" in the *CA 1 Tape Management Programming Guide*.

IEFUSI Exit

CA Vtape uses dataspaces that contain control and logging information. Use the IBM IEFUSI Exit to restrict the dataspace usage. Check with your system programmers to determine if you need to modify the exit to allow CA Vtape to create and use dataspaces.

Bypass Label Processing

Use the EXTRACT utility to read a CA Vtape stacked tape (when CA Vtape is not active) and create an application readable tape. The utility does a standard open on the output tape and then changes to Bypass Label Processing (BLP). If BLP processing is restricted, a user with permission to perform BLP processing must submit the EXTRACT job.

For more information about the EXTRACT utility, see the section "Extract a Virtual Volume" in the *Administration Guide*.

OMVS Segment

Assign the SVTS and SVTSAS started tasks an OMVS segment in your security system. This allows CA Vtape to use TCP/IP under UNIX System Services. To determine the appropriate method to define and assign an OMVS segment, consult your security product documentation.

CA Graphical Management Interface (CA GMI)

The CA GMI security requirements are documented in the *CA Vtape CA GMI Guide*.

Chapter 4: Downloading and Installing CA Vtape Limited-Use License

This section contains the following topics:

CA Vtape Configuration

You can customize the CA Vtape system after deployment. However, you can overlay modifications that are made to the target libraries with subsequent deployments. Because many of the target libraries are modified during configuration, move the libraries into 'runtime' libraries so that Deployment after maintenance updates do not overlay your changes.

Additionally, the CA Vtape SMP/E CSI is not deployed to the remote system. If the deployment feature is implemented in your shop, then apply ongoing maintenance to the local system and redeploy to the remote sites. Although you can modify CA Vtape outside of SMP/E on a remote system, SMP/E USERMODS are only possible before deployment.

To deploy without overlay risk, either perform all configurations at the local site or backup any modified target libraries to runtime libraries at your remote sites.

Determine Installation Method

You install CA Vtape and upgrade to the latest PTFs.

You acquire and install CA Vtape using one of the following methods:

- CA CSM (see page 23) to install VTAPE:PER DEVICE PRODUCT TAPE from CA Support.

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

- Pax-Enhanced Electronic Software Delivery (ESD) (see page 133) to install VTAPE:PER DEVICE PRODUCT TAPE from CA Support.

Review the methods and decide which method is appropriate for your environment.

Chapter 5: Installing Your Product Using CA CSM

Use the procedures in this section to manage your product using CA CSM. 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 CSM.

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

When you have completed the procedures in this section, go to Configuring Your Product (see page 21).

This section contains the following topics:

CA CSM Documentation

This chapter includes the required procedures to install your product using CA CSM. If you want to learn more about the full functionality of CA CSM, see the CA CSM bookshelf on the CA CSM product page on https://support.ca.com/.

Note: To ensure you have the latest version of these procedures, go to the CA CSM product page on the CA Support Online website. Click the Bookshelves link and select the bookshelf that corresponds to the version of CA CSM that you are using.

Getting Started Using CA CSM

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

How to Use CA CSM

In the scenarios that follow, imagine that your organization recently deployed CA CSM to simplify the installation of CA Technologies products and unify their management. You have also licensed a new CA Technologies product. In addition, you have a number of existing CSIs from previously installed products.

- The first scenario shows how you can use CA CSM to acquire the product.
- The second scenario shows how you can use CA CSM to install the product.
- The third scenario shows how you can use CA CSM to maintain products that are already installed in your environment.
- The fourth scenario shows how you can use CA CSM to deploy the product to your target systems.

How to Acquire a Product

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

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

Follow these steps:

1. Set up a CA Support Online account.

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

2. Determine the CA CSM URL for your site.

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

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

   After you log in to CA CSM, 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 34). CA CSM refreshes the catalog through the CA Support Online website using the site IDs associated with your credentials for the CA Support Online website.

4. Download the product installation packages (see page 35).

   After you find your product in the catalog, you can download the product installation packages (see page 35).

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

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

How to Deploy a Product

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

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

Follow these steps:

1. Set up the system registry:
   a. Determine the systems you have at your enterprise.
   b. Set up remote credentials (see page 83) for those systems.
   c. Set up the target systems (Non-Sysplex (see page 61), Sysplex or Monoplex (see page 62), Shared DASD Cluster (see page 63), and Staging (see page 64)), and validate them.
   d. Add FTP (see page 73) information, including data destination information, to each system registry entry.
2. Set up methodologies (see page 111).
3. Create the deployment, which includes completing each step in the New Deployment wizard.

   After creating the deployment, you can save it and change it later by adding and editing systems (see page 128), products (see page 102), custom data sets (see page 104), and methodologies (see page 111), or you can deploy directly from the wizard.

Note: If you must deploy other products to the previously defined systems using the same methodologies, you must create a separate deployment.

4. Deploy the product, which includes taking a snapshot, transmitting to target, and deploying (unpacking) to your mainframe environment.

After the deployment process completes, the product is ready for you to configure. You may have to perform other steps manually outside of CA CSM before beginning the configuration process.

System Registration

You must add and then validate each system in the enterprise that you are deploying to the CA CSM system registry. You can only send a deployment to a validated system. This process is called registering your system and applies to each system in your enterprise. For example, if you have five systems at your enterprise, you must perform this procedure five times.

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

The system registration process contains the following high-level steps:

1. Set up your remote credentials.

   This is where you provide a user ID and password to the remote target system where 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. Set up your system registry.

   The CA CSM system registry is a CA CSM database, where CA CSM 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 CSM-defined constructs used to facilitate the deployment process. The two real system types are Non-Sysplex System and Sysplex Systems. The two CA CSM-defined system types are Shared DASD Clusters and Staging Systems.

   Non-Sysplex Systems

   Specifies 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 that 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

   Specifies a *Sysplex* (SYStem comPLEX), which is the IBM mainframe system complex that 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 *Monoplex 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 system type can help you if you have Monoplexes with the same Sysplex name (for example: LOCAL). Instead of showing multiple LOCAL Sysplex entries that would need to be expanded to select the correct Monoplex system, the CA CSM System Registry shows the actual Monoplex System name at the top-level Sysplex Name.

   Shared DASD Clusters

   Specifies a *Shared DASD Clusters* system, which defines a set of systems that share DASD and it can be composed of Sysplex systems, Non-Sysplex systems, or both. A Staging system cannot be part of a Shared DASD Cluster.

Staging Systems

Specifies a *Staging system*, which is an SDS term that defines a virtual system. A Staging system deploys the deployment to the computer where the CA CSM driving system is located. To use a Staging system, the CA CSM driving system must be registered in the CA CSM 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. Define the FTP location information for every system.

   FTP locations 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.

   To define the FTP location, provide the following:

   URI

   Specifies the host system name.

   Port Number

   Specifies the port number.

   Default: 21.

   Directory Path

   Specifies the landing directory, which is the location that the data is temporarily placed in during a deployment.

4. Define a data destination for every system.

   The data destination is how you tell CA CSM which technique to use to transport the deployment data to the remote system. The following choices are available:

   FTP

   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.

   Shared DASD

   When you specify shared DASD, CA CSM 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 CSM.

   Even though the DASD is shared, the remote system may not be able to find the deployment data in the USS file system. Therefore, CA CSM temporarily unmounts the file system from the CA CSM driving system and mounts it in read-only mode on the remote system.

   For CA CSM 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 CSM 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 CSM adds a volume= parameter to the GIMUNZIP instructions on the remote system. The list of zFS VOLSERs is needed only if both of the following occur:

   - The software you are deploying contains USS parts.
   - You select a container copy option during the deployment process.

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

5. Register each system by validating that it exists.

   Note: 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 list 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 CSM 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 deploy your products.

Deploying Products

After you install software using CA CSM, 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.

You must complete the following steps in the Deployment wizard before you deploy:

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. Deployment names are 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.

CSI Selection

Select a CSI. A CSI is created for the installed product as part of the installation process.

Product Selection

Displays the products that are installed in the CSI you selected.

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 115) and must be available to CA CSM. 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 115) 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 105).

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 create a methodology (see page 112), specify the following:

Data set name mask

Lets you choose symbolic variables that get resolved during deployment.

Disposition of the target data sets

If you select Create, ensure that the target data sets do not exist, otherwise, the deployment fails.

If you select *Create or Replace* and the target data sets do not exist, they will be created. If the target data sets exist, *Create or Replace* indicates that data in the existing data set, file, or directory will be replaced, as follows:

Partitioned data set

Create or Replace indicates that existing members in a partitioned data set will be replaced by members with the same name from the source file. Any currently existing member that is not in the source file will remain in the PDS. Any member from the source that does not already exist in the target PDS will be added to the target PDS.

The amount of free space in the PDS should be sufficient to hold the additional content, because no automatic compress is performed.

Directory in a UNIX file system

Create or Replace indicates files in a directory will be replaced by files with same name from the source. Any currently existing directory in a UNIX file system that is not in the source will remain in the UNIX file system.

Sequential data set or a file in the UNIX file system

Create or Replace indicates the existing data set or file and its attributes will be replaced with the data from the source file.

For a VSAM data set (cluster)

Create or Replace indicates that an existing VSAM cluster should be populated with the data from the source file. The existing VSAM cluster must be of the same type as the source cluster (ESDS, KSDS, LDS, or RRDS). In addition, the existing VSAM cluster must have characteristics that are compatible with the source cluster (such as, record size, key size, and key offset). Replace does not verify the compatibility of these characteristics!

Note: You can replace the contents of an existing cluster using the IDCAMS ALTER command to alter the cluster to a reusable state. You must do this before the data from the VSAM source is copied into the cluster using an IDCAMS REPRO command. The REPRO command will use both the REPLACE and REUSE operands, and after you use it, the cluster is altered back to a non-reusable state if that was its state to begin with.

System Selection

Select the system for this deployment.

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.

Deploy

Deploy combines the snapshot, transmit, and deploy action into one action. Deploy enables you to copy your CA CSM-installed software onto systems across your enterprise. For example, you 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.

Summary

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

Confirm

Confirms that the deployment is complete. A deployment is not completed until it is confirmed. After it is confirmed, the deployment moves to the Confirmed deployment list.

How to Maintain Existing Products

If you have existing CSIs, you can bring those CSIs into CA CSM so that you can maintain all your installed products in a unified way from a single web-based interface.

You can use the PAS and SIS to maintain a CA Technologies product.

Follow these steps:

1. Migrate the CSI to CA CSM to maintain an existing CSI in CA CSM.
2. During the migration, CA CSM stores information about the CSI in the database.
3. Download the latest maintenance (see page 47) 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 48).
4. Apply the maintenance (see page 51).

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

After the maintenance process completes, the product is ready for you to deploy. You may have to perform other steps manually outside of CA CSM before beginning the deployment process.

Access CA CSM Using the Web-Based Interface

You access CA CSM using the web-based interface. Obtain the URL of CA CSM from the CA CSM administrator.

Follow these steps:

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

   The login page appears.

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

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

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

3. Click New.

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

   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 into the CA Support Online website and clicking My Account. If you do not have the correct setting, you are not able to use CA CSM 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 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 CSM to acquire products.

Update Software Catalog

Initially, the CA CSM 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 credentials on the CA Support Online website.

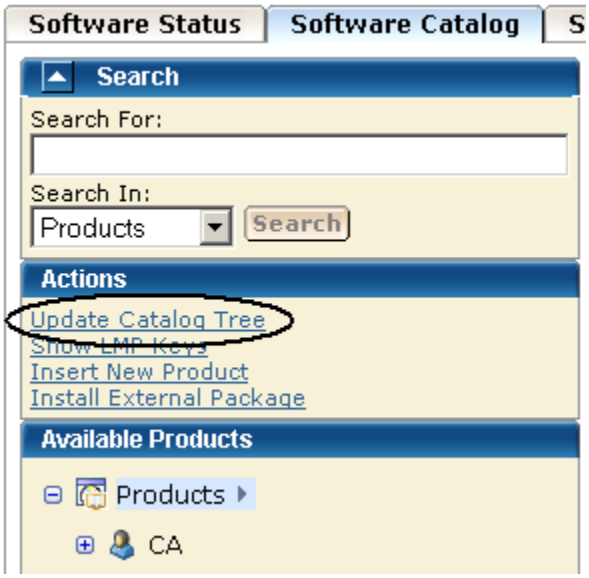
If you update the catalog tree and some changes are missing, check your user settings on the CA Support Online website.

Follow these steps:

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 that shows the progress of the task opens. When the task completes, you can click Show Results on the Progress tab to close this dialog. The task output browser opens and you can view the action details. Click Close to close the task output browser.

   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.

Download Product Installation Package

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

Follow these steps:

1. Verify that your CA CSM login user name is associated with a registered user of the CA Support Online website on the Software Acquisition Settings page.

   CA CSM uses the credentials to access the CA Support Online website.

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

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

   A dialog that shows the progress of the task opens. When the task completes, you can click Show Results on the Progress tab to close this dialog. The task output browser opens and you can view the action details. Click Close to close the task output browser.

   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.

   The product packages are downloaded.

Note: You can expand the tree in the right panel by selecting the Products link from the catalog tree. Then, click the vendor link in the right panel. If you select and download multiple products using this method and one of the products cannot be downloaded, the remaining products are not downloaded either. Remove the checks from the products that were processed and repeat the update catalog request.

Migrate Installation Packages Downloaded External to CA CSM

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

Migrating these packages to CA CSM provides a complete view of all your product releases. After a package is migrated, you can use CA CSM to install the product (see page 39).

Follow these steps:

1. Click the Software Catalog tab, and click Insert New Product.

   Note: A product not acquired from the CA Support Online website does not appear in Software Catalog until you perform this step.

   An entry is added for the product.

2. Select the product gen level (for example, SP0 or 0110) for which the package applies.

   The packages for the gen level are listed.

3. Click the Add External Package button.

   You are prompted to enter a path for the package.

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

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

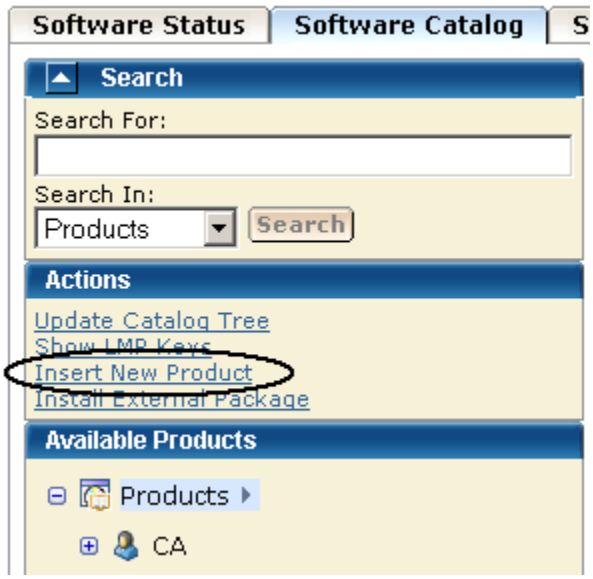
   Note: To see the added package, refresh the page.

Add a Product

Sometimes, a product is not currently available from the CA Support Online website. 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 CSM using the Insert New Product action.

Follow these steps:

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: To add several packages from the same location, use masking (see page 38).

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

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

Masking for External Packages

Masking lets you add more than one package (see page 37) (or set of maintenance files (see page 49)) from the same location using 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 data set name qualifier or any number of characters within a member name or file system name.

  ******

  Match on any number of characters including any number of qualifiers 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. Verify what files you want to add.

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 that are 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*)
```

Installing Products

This section includes information about how to use CA CSM 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.

Note: If your site uses only one file system (for example, only zFS or only HFS), you can configure CA CSM to use this file system for all installed products regardless of the file system that the product metadata specifies. The settings are available on the System Settings, Software Installation page. The file system type that you specify will override the file system type that the product uses.

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

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

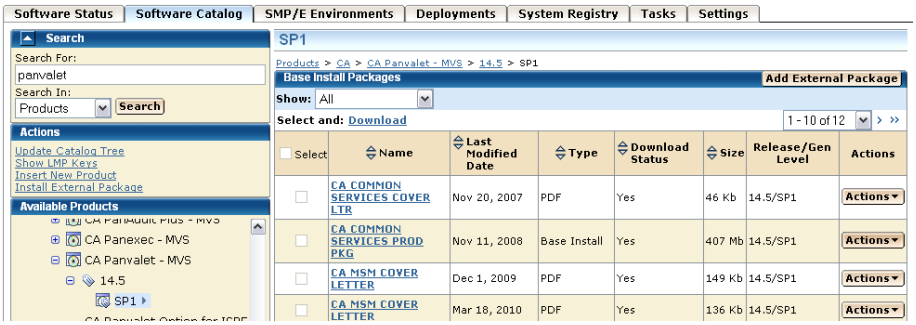
During installation, you select the CSI where the product is to be installed, and specify its zones. You can either specify target and distribution zones to be in the existing CSI data sets, or create new data sets for each zone.

Note: While working with a particular SMP/E environment, the SMP/E environment is locked and other CA CSM users cannot perform any action against it. When the task finishes, logging out from CA CSM, or a CA CSM session is inactive for more than 10 minutes, the lock releases.

Follow these steps:

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 CSM, 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 CSM, locate the product package that you want to install, click the Actions drop-down list to the right of the package, and select Install.

     or

   - If the package was acquired external to CA CSM, 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 appears, 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 click 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 42).

   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 for extra parameters.
   - If you select an SMP/E environment being used in CA CSM by another user, a notification message appears. You are prevented from performing any actions on the SMP/E environment. You can either wait until the notification message disappears and the SMP/E environment becomes available, or click Cancel to select another SMP/E environment.

   After you select a CSI or specify a new CSI, 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 you select or specify a target zone, 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 that shows the progress of the task opens. When the task completes, you can click Show Results on the Progress tab to close this dialog. The task output browser opens and you can view the action details. Click Close to close the task output browser.

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.

Create a CSI

You can create a CSI while you are installing a product (see page 39). During the process, you are asked to specify the following:

- Data set allocation parameters, which you can then customize for each data set
- Parameters for DDDEF allocation

You can specify data set allocation parameters collectively for all SMP/E data sets, target libraries, and distribution libraries that will be allocated during product installation. You can allocate data sets using one of the following methods:

- Allocate data sets using SMS parameters.
- Allocate cataloged data sets using UNIT and optionally VOLSER.
- Allocate uncataloged data sets using UNIT and VOLSER.

If you allocate uncataloged data sets, you must specify a VOLSER. Based on the value that you enter, CA CSM performs the following validations to help ensure integrity of the installation:

- The value of VOLSER must specify a mounted volume.
- You must have ALTER permissions for the data sets with the entered high-level qualifier (HLQ) on the volume defined by VOLSER.
- To test allocation, CA CSM temporarily allocates one of the uncataloged data sets that should be allocated during the installation.

  1. The data set is allocated with one track for both primary and secondary space.
  2. CA CSM verifies that the data set has been allocated on the specified volume.
  3. The data set is deleted.

  If the data set allocation fails or the data set cannot be found on the specified volume, you cannot proceed with the product installation wizard.

Follow these steps:

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

   You are prompted to define a CSI.

2. Specify the following, and click Next:

   Name

   Defines the name for the environment represented by the CSI.

   Data Set Name Prefix

   Defines the prefix for the name of the CSI VSAM data set.

   Catalog

   Defines the name of the SMP/E CSI catalog.

   Cross-Region

   Identifies the cross-region sharing option for SMP/E data sets.

   Cross-System

   Identifies the cross-system sharing option for SMP/E data sets.

High-Level Qualifier

Specifies the high-level qualifier (HLQ) for all SMP/E data sets that will be allocated during installation. The low-level qualifier (LLQ) is implied by the metadata and cannot be changed.

DSN Type

Specifies the DSN type for allocating SMP/E data sets.

SMS Parameters / Data Set Parameters

Specify if this CSI should use SMS or data set parameters, and complete the applicable fields.

Storage Class (SMS Parameters only)

Defines the SMS storage class for SMP/E data sets.

Management Class (SMS Parameters only)

Defines the management class for SMP/E data sets.

Data Class (SMS Parameters only)

Defines the data class for SMP/E data sets.

VOLSER (Data Set Parameters only)

Defines the volume serial number on which to place data sets.

Note: This field is mandatory if you set Catalog to No.

Unit (Data Set Parameters only)

Defines the type of the DASD on which to place data sets.

Catalog (Data Set Parameters only)

Specifies if you want SMP/E data set to be cataloged.

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.

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

3. 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.

4. Review the data set names. Click the Override link to change the high-level qualifier of the data set name and the allocation parameters, and then click Next.

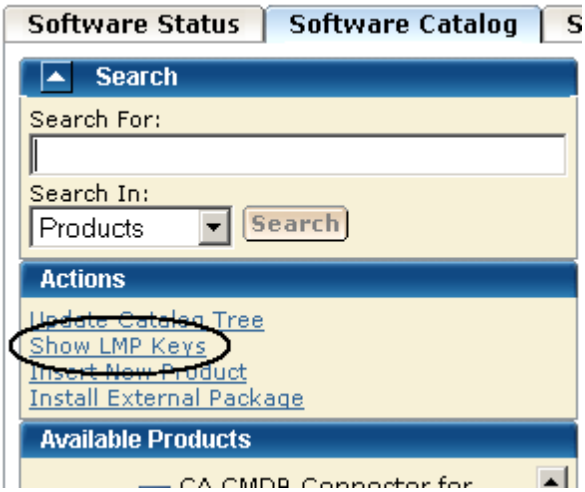
   You are prompted to specify any additional parameters. A new CSI is specified.

Download LMP Keys

When you install a CA Technologies product on z/OS systems, you must license the product on each system that uses the product. You do this by entering CA Common Services for z/OS CA License Management Program (LMP) statements. 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.

Follow these steps:

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 CSM 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 the following download methods:

   - Download Product Maintenance Packages (see page 47)
   - Download Product Maintenance Packages for Old Product Releases and Service Packs (see page 48)
   - Manage Maintenance Downloaded External to CA CSM (see page 49)

   Contact your system administrator, if necessary.

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

   Note: This section also describes how 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.

Follow these steps:

1. Verify that your CA CSM login user name is associated with a registered user of the CA Support Online website on the Software Acquisition Settings page.

   CA CSM uses the credentials to access the CA Support Online website.

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 that shows the progress of the task opens. When the task completes, you can click Show Results on the Progress tab to close this dialog. The task output browser opens and you can view the action details. Click Close to close the task output browser.

   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.

   The maintenance packages are downloaded.

More information:

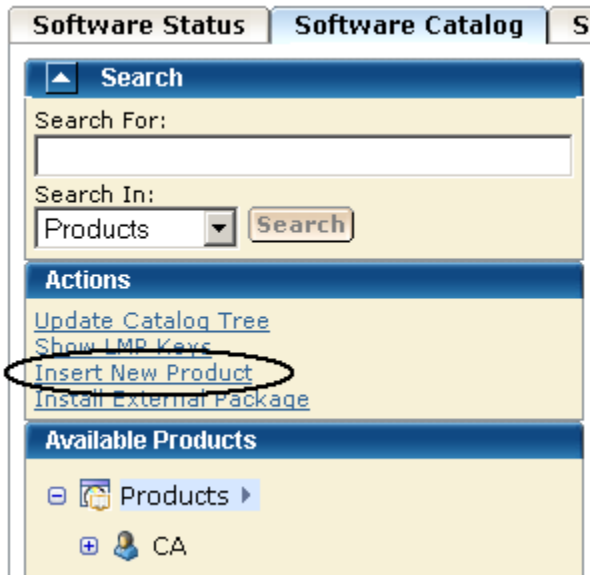
Download Maintenance Packages for Old Product Releases and Service Packs (see page 48)

Download Maintenance Packages for Old Product Releases and Service Packs

CA CSM 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.

Follow these steps:

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 on the CA Support Online website.

   The product release is added to the software catalog.

3. From 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 that shows the progress of the task opens. When the task completes, you can click Show Results on the Progress tab to close this dialog. The task output browser opens and you can view the action details. Click Close to close the task output browser.

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.

Manage Maintenance Downloaded External to CA CSM

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

Adding these maintenance packages to CA CSM provides you with a complete view of all the maintenance for a product release. After a package is migrated, you can use CA CSM to apply the maintenance (see page 51).

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 that comprises several single maintenance packages (nested packages). When you add an aggregated package, CA CSM 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 CSM 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.

Follow these steps:

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: To add several packages from the same location, use masking (see page 38).

4. Click OK.

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

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

More information:

Manage Maintenance (see page 51)

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.

Follow these steps:

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 working with a particular SMP/E environment, the SMP/E environment is locked and other CA CSM users cannot perform any action against it. When the task finishes, logging out from CA CSM, or a CA CSM session is inactive for more than 10 minutes, the lock releases.

The following installation modes are available:

Receive and Apply

Receives the maintenance and applies it to the selected SMP/E environment.

Receive and Apply Check

Receives the maintenance and checks if the maintenance can be applied to the selected SMP/E environment.

Receive, Apply Check, and Apply

Receives the maintenance, checks if the maintenance can be applied to the selected SMP/E environment, and applies it if it can be applied.

Receive Only

Receives the maintenance.

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.

Follow these steps:

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

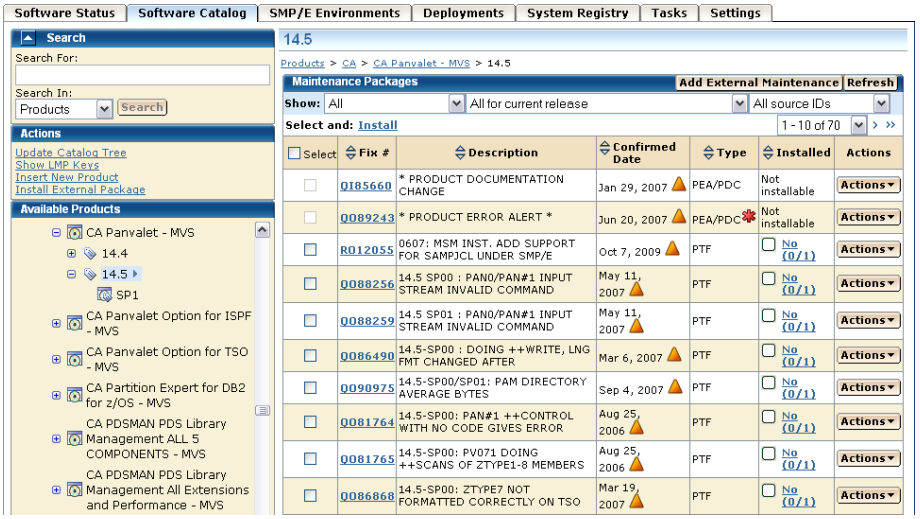
   Maintenance information appears at the right for the releases you have.

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.

5. Review the information on this dialog, and click Close to return to the Maintenance Packages section.

6. 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.

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

   The packages to install are listed.

8. 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.

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

10. 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 an SMP/E environment being used in CA CSM by another user, a notification message appears. You are prevented from performing any actions on the SMP/E environment. You can either wait until the notification message disappears and the SMP/E environment becomes available, or click Cancel to select another SMP/E environment.

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

    - If prerequisites exist and are available, review them and click Next. CA CSM 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 154) entries exist, review and select them, and click Next.

    SMP/E work DDDEFs of SMPWRK*x* and SYSUT*x*, with their allocation parameters, are listed.

    Note: For more information about SMPWRK*x* and SYSUT*x* data sets, see the *IBM SMP/E for z/OS Reference*.

12. Review the allocation parameters of work DDDEFs, and edit them if necessary to verify, that sufficient space is allocated for them during the maintenance installation:

    Note: Changes in the allocation parameters apply to the current maintenance installation only.

    a. Click Override for a DDDEF to edit its allocation parameters.

       A pop-up window opens.

    b. Make the necessary changes, and click OK to confirm.

       The pop-up window closes, and the DDDEF entry is selected in the list indicating that the allocation parameters have been overridden.

    Note: To update allocation parameters for all DDDEFs automatically, click Retrieve DDDEF. CA CSM provides values for all DDDEFs based on the total size of the selected maintenance packages that you want to install. All DDDEF entries are selected in the list indicating that the allocation parameters have been overridden.

    - If you want to cancel a parameter update for any DDDEF, clear its check box.
    - If you want to edit the allocation parameters for a particular DDDEF after you automatically updated them using the Retrieve DDDEF button, click Override. Make the necessary changes and click OK to confirm, and return to the wizard.

13. (Optional) Review SMP/E work DDDEF and their allocation parameters for the selected SMP/E zones, and click Close to return to the wizard.

    Note: The allocation parameters can differ from the allocation parameters that you obtained using the Retrieve DDDEF button.

14. Click Next.

    A summary of the task appears.

15. Review the summary, and click Install.

    A dialog that shows the progress of the task opens. When the task completes, you can click Show Results on the Progress tab to close this dialog. The task output browser opens and you can view the action details. Click Close to close the task output browser.

    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.

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

More information:

Download Product Maintenance Packages (see page 47)
Download Maintenance Packages for Old Product Releases and Service Packs (see page 48)

View Installation Status of Maintenance Package

You can view installation status details of each maintenance package, including a list of SMP/E environments where the package is installed. You can also see the SMP/E environment data sets, and the installation status of the package for each SMP/E environment zone. For example, a maintenance package can be received in the global zone, but applied in a target zone, and accepted in a distribution zone.

Note: The installation status is not available for aggregated maintenance packages, for packages that are uninstallable, and for packages that do not have available SMP/E environments for installation.

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 an SMP/E environment zone, the Install action is available.

Follow these steps:

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 SMP/E environments with package status per zone appears.

   Note: Click the Actions drop-down list to start the installation wizard for packages that are not yet installed in at least one SMP/E environment zone, or the accept wizard for packages that are not accepted in at least one SMP/E environment zone. Click Install to More Environments to install the maintenance package in one or more SMP/E environments available for the package.

USERMODs

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

You can create a USERMOD manually, or we 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 49).

GROUPEXTEND Mode

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

Sometimes before you install a maintenance package, you install other maintenance packages first (SYSMODs).

If a SYSMOD - prerequisite for the required maintenance package, has not been applied or cannot be processed, you can install the maintenance package in GROUPEXTEND mode. (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.) The SMP/E environment where the product is installed automatically includes a superseding SYSMOD.

Note: When applying maintenance in GROUPEXTEND mode, the SMP/E environment *must* receive all SYSMODs that are included in the GROUPEXTEND option.

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

Apply Check

Checks if the maintenance can be applied to the selected SMP/E environment in GROUPEXTEND mode.

Apply

Applies the maintenance to the selected SMP/E environment in GROUPEXTEND mode.

Apply Check and Apply

Checks if the maintenance can be applied to the selected SMP/E environment in GROUPEXTEND mode. Then applies it if possible.

For the GROUPEXTEND option, CA CSM does not automatically receive and display maintenance or HOLDDATA prerequisites that must 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.

You can also use the following similar installation modes to accept maintenance in GROUPEXTEND mode:

- Accept Check
- Accept
- Accept Check and Accept

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. Review if there are missing (not received) SYSMODs or HOLDDATA that must be resolved or bypassed.
   - If the task succeeds, review SMPRPT in the task output. Review 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 corresponds to the SMP/E version that you use.

You can run the maintenance in Apply mode in the same CA CSM session after Apply check mode is completed. The values that you entered for Apply check mode are then prepopulated on the wizard dialogs.

Manage Maintenance in GROUPEXTEND Mode

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

Note: While working with a particular SMP/E environment, the SMP/E environment is locked and other CA CSM users cannot perform any action against it. When the task finishes, logging out from CA CSM, or a CA CSM session is inactive for more than 10 minutes, the lock releases.

Follow these steps:

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

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

   Note: If you select an SMP/E environment being used in CA CSM by another user, a notification message appears. You are prevented from performing any actions on the SMP/E environment. You can either wait until the notification message disappears and the SMP/E environment becomes available, or click Cancel to select another SMP/E environment.

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 that 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 that you want to apply are listed.

   Note: Click a link in the Status column for a maintenance package, if available, to review a list of zones. The zones indicate, 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 CSM does not automatically receive and display maintenance or HOLDDATA prerequisites that must be bypassed when applying the maintenance. Apply check mode lets you review 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 that is displayed 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 the ones that 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 you want to exclude in the Excluded SYSMODs field. You can enter several SYSMODs, separate them 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, separate them by a comma.

9. Click Next.

   A summary of the task appears.

10. Review the summary, and click Apply GROUPEXTEND.

    A dialog that shows the progress of the task opens. When the task completes, you can click Show Results on the Progress tab to close this dialog. The task output browser opens and you can view the action details. Click Close to close the task output browser.

    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.

    - If you run the maintenance installation in Apply check mode and the task succeeds, review SMPRPT in the task output. Review 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. Review if there are missing (not received) SYSMODs or HOLDDATA that must be resolved or bypassed.

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

Note: You cannot accept USERMODs in GROUPEXTEND mode. Providing you have not enabled NOUSERMODS option, you can install USERMODs that are prerequisites for the maintenance package being installed.

Back Out Maintenance

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

Note: While working with a particular SMP/E environment, the SMP/E environment is locked and other CA CSM users cannot perform any action against it. When the task finishes, logging out from CA CSM, or a CA CSM session is inactive for more than 10 minutes, the lock releases.

Follow these steps:

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

   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: You can back out maintenance from all the products in the environment. 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 that you want to back out, and click the Restore link.

   The maintenance wizard opens to the Introduction step.

   Note: If you select an SMP/E environment being used in CA CSM by another user, a notification message appears. You are prevented from performing any actions on the SMP/E environment. You can either wait until the notification message disappears and the SMP/E environment becomes available, or click Cancel to select another SMP/E environment.

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 Next.

   Note: To review and adjust a list of zones from where you want to restore the maintenance, click Select Zones. Click OK to confirm the selection and return to the wizard.

   The Prerequisite tab of the wizard appears.

7. Review the prerequisites if they exist, and click Next. CA CSM restores these prerequisites as part of the maintenance backout process.

   A summary of the task appears.

8. Review the summary, and click Restore.

   A dialog that shows the progress of the task opens. When the task completes, you can click Show Results on the Progress tab to close this dialog. The task output browser opens and you can view the action details. Click Close to close the task output browser.

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.

Setting System Registry

This section includes information about how to use CA CSM to set the system registry. The *system registry* contains information about the systems that have been defined to CA CSM and can be selected as a target for deployments. You can create Non-Sysplex, Sysplex, Shared DASD Cluster, and Staging systems as well as maintain, validate, view, and delete a registered system, and investigate a failed validation.

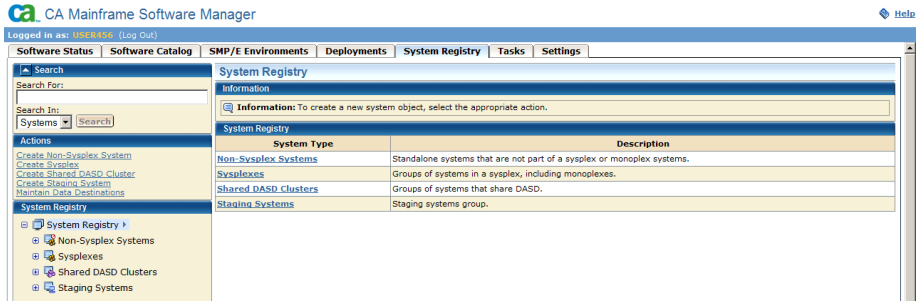
View a System Registry

You can view a system registry by using the CA CSM.

Follow these steps:

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

   Information about the systems that you selected appears on the right side.

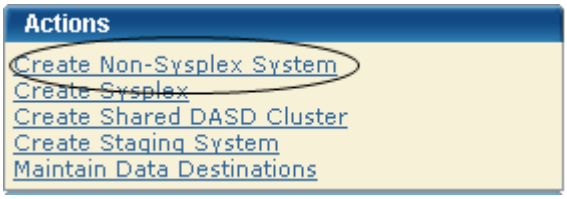


Create a Non-sysplex System

You can create a non-sysplex system registry.

Follow these steps:

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



   The New Non-Sysplex System dialog appears.

   Note: The asterisk indicates that the field is mandatory.

2. Enter the following information, and click Save:

   Name

   Enter the non-sysplex system name.

   Limits: Eight characters

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

   Description

   Enter the description.

   Limits: 255 characters

   CCI System ID

   (Optional) Enter the CAICCI system ID.

   Limits: Eight characters

   Note: The *CAICCI system ID* is a unique name for a system that is part of a CAICCI network. If you do not specify one, CA CSM obtains it using a validate action.

   The non-sysplex system is saved, and its name appears in the non-sysplex system list on the left.

   Note: To withdraw this create request, click Cancel.

3. Detail the nonstaging system.

Important! z/OS systems running under VM are treated as being in BASIC mode and not LPAR mode. As a result, the LPAR number is null in the z/OS control block. When the LPAR number is null, the system validation output shows the following message:

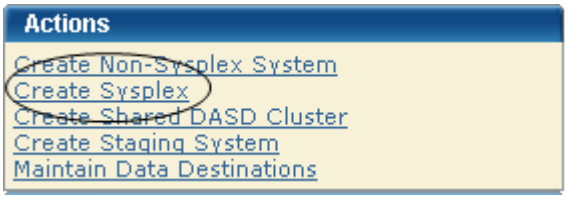
```
Property Name: z/OS LPAR Name, Value: ** Not Applicable **.
```

Create a Sysplex or Monoplex

If you have monoplexes with the same sysplex name, you can create a sysplex or monoplex system registry. Monoplexes are stored in the sysplex registry tree but with the name of the sysplex system and not the monoplex sysplex name. For example, you have a system XX16 defined as a monoplex, with a sysplex name of LOCAL. The system registry displays the system as a sysplex, with the name LOCAL. This sysplex contains one system: XX16.

Follow these steps:

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



   The New Sysplex dialog appears.

   Note: The asterisk indicates that the field is mandatory.

2. Enter the following and click Save.

   Name

   Enter the sysplex system name.

   Limits: Eight characters

   Description

   Enter the description.

   Limits: 255 characters

   Sysplex and non-sysplex system can have the same name. Use the Description field to differentiate these systems.

   The sysplex system is saved, and its name appears in the sysplex list on the right.

   Note: Click Cancel to withdraw this create request.

   Important! z/OS systems running under VM are treated as being in BASIC mode and not LPAR mode. As a result, the LPAR number is null in the z/OS control block. In this case, the system validation output includes the following message:

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

3. Right-click the newly added sysplex and select Create Sysplex System to add a system to a sysplex. Repeat this process for each system belonging to this sysplex.

4. Enter the following data items for each system:

   Name

   Enter the sysplex system name.

   Limits: Eight characters

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

   Description

   Enter the description.

   Limits: 255 characters

   CCI System ID

   (Optional) Enter the CAICCI system ID.

   Limits: Eight characters

   Note: The *CAICCI system ID* is a unique name for a system that is part of a CAICCI network. If you do not specify one, CA CSM obtains it using a validate action.

   The non-sysplex system is saved, and its name appears in the non-sysplex system list on the left.

   Note: To withdraw this create request, click Cancel.

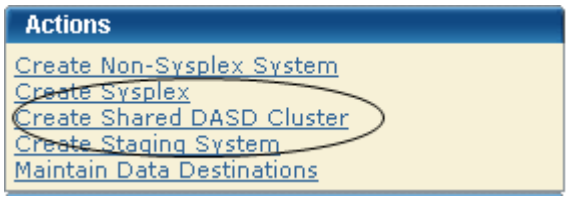
5. Detail the nonstaging system.

Create a Shared DASD Cluster

You can create a shared DASD cluster.

Follow these steps:

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



   The New Shared DASD Cluster dialog appears.

   Note: The asterisk indicates that the field is mandatory.

2. Enter the following information, and click Save:

   Name

   Enter the shared DASD cluster name.

   Limits: Eight 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 shared DASD cluster can have the same name as a non-sysplex, sysplex, or staging system.

   Description

   Enter the description.

   Limits: 255 characters

   The shared DASD cluster is saved, and its name appears in the Shared DASD Clusters section on the right.

   Note: Click Cancel to withdraw this create request.

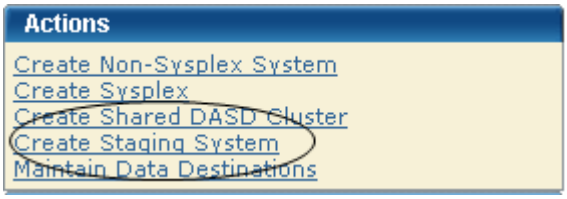
3. Right-click the newly added DASD cluster name and select Add System or Sysplex to this Shared DASD Cluster. Select the systems or sysplexes that you want to add to the DASD cluster.

Create a Staging System

You can create a staging system.

Follow these steps:

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



   The New Staging System dialog appears.

   Note: The asterisk indicates that the field is mandatory.

2. Enter the following information, and click Save:

   Name

   Enter the staging system name.

   Limits: Eight 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 can have the same name as a non-sysplex, sysplex, or a shared DASD cluster.

   Description

   Enter the description.

   Limits: 255 characters

   The staging system is saved, and it appears in the Staging System Registry on the right.

   Note: Click Cancel to withdraw this create request.

Authorization

CA CSM supports the following authorization modes for the system registry.

Edit Mode

Lets you update and change system registry information.

Note: After the information is changed, you must click Save to save the information or Cancel to cancel the changed information.

View Mode

Lets you view system registry information.

Note: You cannot edit information in this mode.

Change a System Registry

You can change the system registry if you 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 CSM System Registry shows the actual Monoplex System name at the top level Sysplex Name.

Follow these steps:

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

   Information about the systems that you selected appears on the right side.

2. Select the system to change.

   Detailed information about the system appears on the right side.

3. Update the following information as needed. The information that you update is dependent on whether you are changing a Non-Sysplex System (see page 61), Sysplex (see page 62), Shared DASD Cluster (see page 63), or Staging System (see page 64).

4. Depending on the type of system, do one of the following:

   - For Shared DASD or sysplex system only, select the contact system (see page 71), which is the system where the Shared DASD or FTP is located. The FTP location should be set to the contact system URI. The contact system is used for remote credentials.

     For example, if the 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, because you set the Contact System to CO11 but you are contacting to XX61, a spawn will be started on CO11 but CA CSM will look for the output on XX61 because that is where the FTP location was set.

     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.

     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.

   - For Staging systems, enter the GIMUNZIP volume and/or zFS candidate volumes (see page 72).

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

5. Select one of the following actions from the Actions drop-down 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 step shows how the validation failed. You can investigate the failed validation (see page 69).

   Validation Rules

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

   Note: A Staging system is not validated.

   When a system is validated, the status appears in the Status field.

The following are the system validation results:

Validated

Indicates that the system is available, status is updated as valid, and system registry is updated with results from validation.

Validation in Progress

Indicates that the system status is updated to in progress.

Validation Error

Indicates that the system status is updated to error, and you can investigate the failed validation (see page 69).

Not Validated

Indicates that this system has not been validated yet.

Not Accessible

Indicates that the she system has not been validated because it is no longer available or was not found in the CCI Network.

Validation Conflict

Indicates that the system has been contacted but the information entered then different then the information retrieved.

Error Details

When there is a validation conflict, the Error details button appears. Click this button to find the reason for this conflict. You can investigate the failed validation (see page 69).

Note: The error reason resides in local memory. If the message *Please validate the system again* 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. You can investigate the failed validation (see page 69).

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.

Failed Validations

Use the following procedures in this section to investigate a failed validation, make corrections, and revalidate:

- Investigate a Failed Validation using the Tasks Page (see page 69)
- Investigate a Failed Validation Immediately After a Validation (see page 70)
- Download a Message Log (see page 70)
- Save a Message Log as a Data Set (see page 71)
- View Complete Message Log (see page 71)

Note: The CA CSM screen samples in these topics use a non-sysplex system as an example. The method also works for a sysplex or a shared DASD cluster.

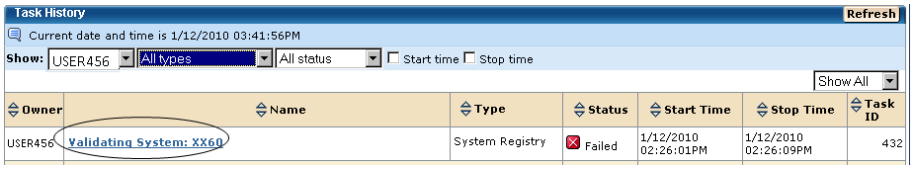
Investigate a Failed Validation Using Task Output Browser

You can investigate a failed validation, make corrections, and validate it again.

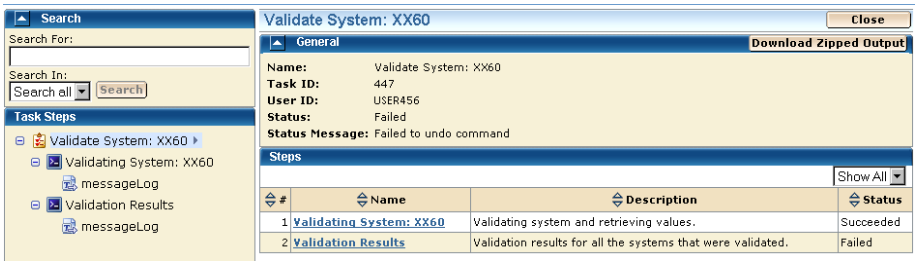
Follow these steps:

1. On the System Registry tab, in the column on the left, find the system with a validation status error and make a note of it.
2. Click the Tasks tab and then click Task History.
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 link in the Name column.



The Validate System Task Output Browser appears.



5. Click the Validation Results link to view the results.

6. Click the messages log to review the details for each error.

   Note: You can analyze the error results and can determine the steps that are required to troubleshoot them.

7. Correct the issue and validate again.

Investigate a Failed Validation After Validation

You can investigate a failed validation, make corrections, and validate it again.

Follow these steps:

1. On the System Registry tab, in the column on the left, find the system with a validation status error, and make a note of it.
2. Click Details to see the error details.
3. If the error message prompts you to revalidate the system, click Validate.
4. Click the Progress tab.
5. Click Show Results to view the results.

   The validation results appear.

6. Click the messages logs to review the details for each error.

   Note: You can analyze the error results and can determine the steps that are required to troubleshoot them.

7. Correct the issue and validate again.

Download a Message Log

You can save the message log in the following ways:

- To download a zipped file of all the text messages for this validation, click the Deployment Name on the top left tree. Click the Download Zipped Output button on the General menu bar. Save this file.
- To download as TXT, click the Deployment Name or the Deployment Results on the left tree. Click the Action button on the Message Log bar and click the Download as TXT. Save this file.
- To download as ZIP, click the Deployment Name or the Deployment Results on the left tree. Click the Action button on the Message Log bar and click the Download as ZIP. Save this file.

Save a Message Log as a Data Set

You can save a message log as a data set.

Follow these steps:

1. Click the Deployment Name or the Deployment Results on the left tree. Click the Action button on the Message Log bar, and click the Save as Data Set.

   The Save Output as Data Set dialog appears.

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

   Note: The asterisk indicates that the field is mandatory.

2. Enter the following information and click OK:

   Data Set Name

   Enter a data set name. CA CSM generates a value.

   VOLSER

   For non-SMS data, enter the Volser.

   Example:

   Volser: SYSP01 and SYSP02

   Storage Class

   For SMS Allocation data, enter the Storage Class.

   The message log is saved as a data set.

View Complete Message Log

To view the complete message log for a failed validation, click Show All.

Note: To close the message log, click Close.

Contact System

The *contact system* defines which system the deployment is unpackaged on. That is, which system CAICCI is spawned to run the unpackaging.

When deploying to a shared DASD cluster, sysplex, or both, the deployment is sent to only one system in that configuration, where it is unpackaged. The expectation is that all other systems within that configuration have access to the unpackaged deployment.

For a shared DASD cluster or sysplex, the URI must be the URI of the Contact System. Also, set up Remote Credentials for the contact system, because they are used to retrieve the deployment results.

zFS Candidate Volumes

You can use a *zFS candidate volume* when your environmental setup dictates that zFS container data sets are directed to the specified volume.

When your environmental setup dictates that zFS container data sets are directed to specified zFS candidate volumes, use one or more of the candidate volumes. CA CSM uses the candidate volumes in the IDCAMS statement to create the zFS container VSAM data set.

The zFS candidate volumes are only required if the following statements are true:

- Your deployment has USS parts.
- You are doing a container copy.
- You selected zFS as the container type.
- The remote system requires it.

  Note: Remote system requirement is customer defined.

To allocate and maintain your disk, the following products are recommended:

CA Allocate

CA Allocate is a powerful and flexible allocation management system that lets the Storage Administrator control the allocation of all z/OS data sets.

CA Disk Backup and Restore

CA Disk is a flexible, full-featured hierarchal storage management system.

You can also use the following standard IBM techniques:

- Allocation exits
- ACS routines

If you do not implement any of these options, z/OS needs a candidate list of volumes for placing the zFS archive.

Maintain a System Registry using the List Option

Follow these steps:

1. Click the System Registry tab.

   The System Registry window appears.

2. In the System Registry panel on the right, click the System Type link, and then click the system name.

   The detailed system entry information appears.

Delete a System Registry

Follow these steps:

1. Click the System Registry tab and on the right, in the System Registry panel, select Non-Sysplex Systems, Sysplexes, Shared DASD Clusters, or Staging Systems.

   The system list appears.

2. Select each system registry that you want to delete, click Delete, and then click OK to confirm.

   The system is deleted.

FTP Locations

The FTP (see page 73) Locations lists the current FTP locations for this system. You can add (see page 73), edit (see page 75), set default (see page 76), or remove (see page 76) FTP (see page 73) locations.

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.

Deployment FTP Locations

File Transfer Protocol (FTP) is a protocol for transfer of files from one computer to another over the network.

Define an FTP location for every system if you deploy to specified systems within a sysplex. They are used to retrieve the deployment results on the target system regardless of whether the deployment was transmitted through FTP or using shared DASD. They are also used when you are moving your deployments through FTP. You 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 FTP (see page 73) locations.

Follow these steps:

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

   Information about the systems that you selected appears on the right side.

2. Select the system you want to create FTP locations for.

   Detailed information about the system appears on the right side.

3. Click the FTP Locations tab.

   The FTP Locations window appears.

4. Click Add.

   The New FTP Location dialog appears.

   Note: The asterisk indicates that the field is mandatory.

5. Enter the following information, and click Save:

   URI

   Enter the URI.

   Limits: Maximum length is 255.

   Port

   Enter the Port.

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

   Default: 21

   Directory Path

   Enter the Directory Path.

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

   The new FTP location appears on the list.

   Note: Click Cancel to withdraw this create request.

More information:

Edit FTP Locations (see page 75)
Delete FTP Locations (see page 76)
Set FTP Location Default (see page 76)

Edit FTP Locations

You can edit FTP (see page 73) locations.

Note: The asterisk indicates that the field is mandatory.

Follow these steps:

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

   Information about the systems that you selected appears on the right side.

2. Select the system you want to change FTP locations for.

   Detailed information about the system appears on the right side.

3. Click the FTP Location tab.

   The FTP Locations window appears.

4. Select the FTP location, click the Actions drop-down list, and select Edit.

   The Edit FTP Location dialog appears.

5. Update the following and click Save:

   URI

   Enter the URI.

   Limits: Maximum length is 255.

   Port

   Enter the Port.

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

   Default: 21

   Directory Path

   Enter the Directory Path.

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

   Your changes are saved.

   Note: Click Cancel to close this dialog without saving your changes.

Set FTP Location Default

You can set an FTP (see page 73) location default.

Follow these steps:

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

   Information about the systems that you selected appears on the right side.

2. Select the system you want to set the FTP location default to.

   Detailed information about the system appears on the right side.

3. Click the FTP Locations tab.

   The FTP Locations window appears.

4. Select the FTP location you want to set as the default, and then select Default from the Actions drop-down list.

   Default appears in the Default column, and this location becomes the default FTP location.

   Note: The Default action is not available if only one FTP location is defined.

Delete FTP Locations

You can delete FTP (see page 73) locations.

Follow these steps:

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

   Information about the systems that you selected appears on the right side.

2. Select the system you want to delete FTP locations from.

   Detailed information about the system appears on the right side.

3. Click the FTP Locations tab.

   The FTP Locations window appears.

4. Click the Select box for each FTP location you want to delete, click Remove, and then click OK to confirm.

   The FTP location is deleted from this system.

Data Destinations

The Data Destinations page lists the current data destinations for this system. The following choices are available:

FTP

When FTP is selected as the transport mechanism, the deployment data is shipped to the target system through FTP. The data is temporarily placed on the target system at the landing directory that the FTP Location information section of the system registry specifies.

Shared DASD

When you specify shared DASD, CA CSM 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 copy the data. All of the deployment data is kept in the USS file systems that CA CSM manages.

Even though the DASD is shared, it is possible that the remote system does not find the deployment data in the USS file system. Therefore, CA CSM temporarily unmounts the file system from the CA CSM driving system and mounts it in read-only mode on the remote system.

For CA CSM to determine where to mount the file system on the remote system, specify a mount point location in the data destination. In addition, you can provide allocation information for the creation of the deployment file system. The file system is created on the shared DASD, on the CA CSM driving system.

Data destinations are assigned to non-sysplex and sysplex systems, and shared DASD clusters. Data destinations are named objects, and can be assigned to multiple entities in the system registry. Data destinations can have their own independent maintenance dialogs.

The deployment process on the remote system uses the remote allocation information and lets you control, where the deployed software is placed. By specifying the GIMUNZIP VOLSER, CA CSM adds a volume= parameter to the GIMUNZIP instructions on the remote system. The list of zFS VOLSERs is needed only if both of the following situations occur:

- The software that you are deploying contains USS parts.
- You select a container copy option during the deployment process.

Note: The FTP and data destinations at the system level are not used when the sysplex is a monoplex. The only FTP locations and data destinations that are referenced are defined at the sysplex level.

Create Data Destinations

You can create data destinations that define the method that CA CSM uses to transfer the deployment data to the target systems.

Follow these steps:

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

   The Maintains Data Destinations dialog appears.

2. Click Create.

   The New Data Destination dialog appears.

   Note: The asterisk indicates that the field is mandatory.

3. Enter the following information, and click Save:

   Name

   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.

   Description

   Enter the description.

   Limits: Maximum 255 characters.

   Transmission Method

   Select the transmission method.

   Default: Shared DASD.

   Mount Point

   (Shared DASD only) Enter the mount point directory path, which 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, and 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.

Storage Class

(Shared DASD only) Enter the Storage Class.

Limits: Maximum 8 characters

Example: SYSPRG

VOLSER

(Shared DASD only) Enter the Volser.

Limits: Maximum 6 characters

Example: SYSP01 and SYSP02

GIMUNZIP Volume

Enter the GIMUNZIP volume.

Limits: Maximum 6 characters

zFS Candidate Volumes

Enter zFS Candidate volumes (see page 72).

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.

The new data destination appears on the Data Destination list.

Note: Click Cancel to withdraw this create request.

Add a Data Destination

You can add current data destinations to an existing system.

Follow these steps:

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

   Information about the systems related to the type you selected appears on the right side.

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

   Detailed information about the system appears on the right side.

3. Click the Data Destination tab.

   The Data Destination window appears.

4. Click Add.

   The Pick Data Destination dialog appears.

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

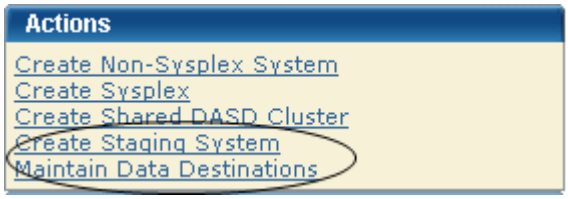
   The data destinations are added to the system.

Maintain Data Destinations

You can maintain, delete (see page 82), or create (see page 78) data destinations.

Follow these steps:

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



   The Maintains Data Destinations dialog appears.

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

2. Select Edit from the Actions drop-down list for the data destination you want to change.

   The Edit Data Destinations dialog appears.

   Note: The asterisk indicates that the field is mandatory.

3. Update the following and click Save:

   Name

   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.

   Description

   Enter the description.

   Limits: Maximum 255 characters.

   Transmission Method

   Select the transmission method.

   Default: Shared DASD.

Mount Point

(Shared DASD only) Enter the mount point directory path, which 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, as well as 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.

Storage Class

(Shared DASD only) Enter the Storage Class.

Limits: Maximum 8 characters

Example: SYSPRG

VOLSER

(Shared DASD only) Enter the Volser.

Limits: Maximum 6 characters

Example: SYSP01 and SYSP02

GIMUNZIP Volume

Enter the GIMUNZIP volume.

Limits: Maximum 6 characters

zFS Candidate Volumes

Enter zFS Candidate volumes (see page 72).

Limits: Maximum 6 characters

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

The updated data destination appears on the list of data destinations.

Note: Click Cancel to withdraw this change request.

Set a Default Data Destination

You can set a default for a current data destination.

Follow these steps:

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

   Information about the systems you selected appears on the right side.

2. Select the system link to which you want to set the data destination default.

   Detailed information about the system appears on the right side.

3. Click the Data Destination tab.

   The Data Destination window appears.

4. Select the data destination that you want as the default.

5. In the Action field, 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 selection field indicates that the data destination is assigned and it cannot be deleted. The field can be edited.

Follow these steps:

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

   Information about the systems that you selected appears on the right side.

2. Select the system where you want to delete a data destination.

   Detailed information about the system appears on the right side.

3. Click the Data Destination tab.

   The Data Destination window appears.

4. Click the Select field for each data destination you want to remove, click Remove, and then click OK to confirm.

   The data destination is deleted from this system.

Remote Credentials

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

Important! Remote Credentials are validated during the deployment process when deploying to a nonstaging system. The user is responsible for having the correct owner, remote user ID, remote system name, password, and authenticated authorization before creating a new remote credential.

You can add (see page 83), edit (see page 84), or delete (see page 85) remote credentials.

Add Remote Credentials

Follow these steps:

1. Click the Settings tab, and select Remote Credentials from the tree on the left side.

   Detailed information appears on the right side.

2. In the Remote Credentials Accounts panel, click New.

   The New Remote Credential dialog appears.

3. Enter the following, and click OK:

   Note: The asterisk indicates that the field is mandatory.

   Remote User ID

   Enter a correct remote user ID.

   Limits: 64 characters

   Remote System Name

   Enter a remote system name.

   Limits: Eight characters

   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 these remote credentials only.

   Password

   Enter a correct password.

   Limits: 2 to 63 characters

   Note: The password is case-sensitive. Verify that your password follows the correct case-sensitive rules for your remote system.

Confirm Password

Enter the correct confirm password.

Limits: 2 to 63 characters

Note: The password is case-sensitive. Verify that your password follows the correct case-sensitive rules for your remote system.

The remote credential entry appears on the Remote Credentials list.

4. Click Apply.

   Your changes are applied.

Edit Remote Credentials

You can edit remote credentials.

Important! Remote Credentials are validated during the deployment process when deploying to a nonstaging system. The user is responsible for having the correct owner, remote user ID, remote system name, password, and authenticated authorization before creating a new remote credential.

Follow these steps:

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

   Detailed information appears on the right side.

2. In the Actions drop-down list, click Edit for the remote credential you want to edit.

   The Edit Remote Credential window appears.

3. Update the following and click OK:

   Note: The asterisk indicates that the field is mandatory.

   Remote User ID

   Enter a correct remote user ID.

   Limits: Maximum 64 characters.

   Remote System Name

   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.

Password

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.

Confirm Password

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.

The remote credential entry appears on Remote Credentials list.

4. Click Apply

   Your changes are applied.

Delete Remote Credentials

You can delete remote credentials.

Follow these steps:

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

   Detailed information appears on the right side.

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.

   The remote credential is deleted.

Deploying Products

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

A *deployment* is a CA CSM object that you create to deploy libraries and data sets using a process that copies target libraries defined to SMP/E and user data sets across both shared DASD and networked environments.

Deployment Status

Deployments exist in different statuses. Actions move deployments from one status to another. You can use the following available actions for each of the following deployment statuses.

Under Construction

The user is constructing the deployment.

Available Actions: All but Confirm

Snapshot in Progress

Snapshot is in Progress

Available Actions: Reset Status

Snapshot in Error

Snapshot failed

Available Actions: All but Confirm

Snapshot Completed

Snapshot Succeeded

Available Actions: Delete, Preview, Transmit, Deploy

Note: At this point, no editing, adding, or removing of products or systems is allowed.

Transmitting

The deployment archives are being transmitted using the FTP procedure.

Available Actions: Reset Status

Transmission Error

Transmission Failed

Available Actions: Delete, Preview, Transmit, Deploy

Transmitted

The deployment archives have been transmitted.

Available Actions: Delete, Preview, Deploy

Deploying

The deployment archives are being deployed.

Available Actions: Reset Status

Deploying Error

Deployment failed

Available Actions: Delete, Preview, Deploy

Deployed

The target libraries were deployed.

Available Actions: Delete, Summary, Confirm

Complete

The deployment is complete.

Available Actions: Delete, Summary

Creating Deployments

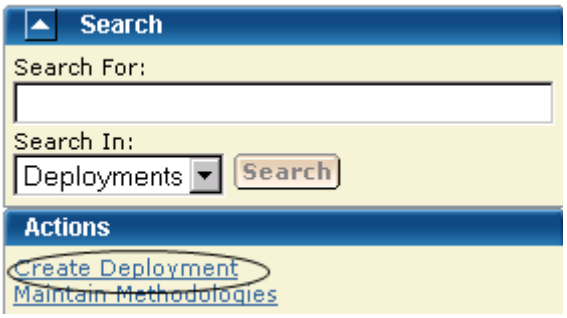
The deployment creation process consists of the following steps:

1. Initiate deployment creation (see page 88).
2. Define a name and description (see page 88).
3. Select an SMP/E environment (see page 89).
4. Select a product (see page 89).
5. Select a custom data set (see page 90).
6. Select a methodology (see page 90).
7. Select a system (see page 92).
8. Preview and save (see page 92).

Initiate Deployment Creation

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

To initiate deployment creation, click the Deployments tab, and then in the Actions section, click the Create Deployment link.



The New Deployment wizard opens to the Introduction step.

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 93) until a successful snapshot has been created.

Define Name and Description

When you create a deployment, you begin by defining the name and description so that it will be known and accessible within CA CSM.

Note: The asterisk indicates that the field is mandatory.

Follow these steps:

1. On the Introduction step, 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 step 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 93) until a successful snapshot has been created.

Select a CSI

After you define the name and description, you select a CSI for the deployment.

Follow these steps:

1. On the CSI Selection step, in CSIs to Deploy, click the CSI you want to select.

   The CSI selections listed are preselected from the SMP/E Environments page.

2. Click Next.

   The Product Selection step 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 93) until a successful snapshot has been created.

Select a Product

After you select a CSI for the deployment, you select a product for the deployment.

Follow these steps:

1. On the Product Selection step, select a product from the list.

   Note: If you cannot select the product or product feature from the list, it is for one of the following reasons:

   - The product or feature is not deployable for the selected CSI.
   - The product feature is part of a product that you must select first.

   If a feature is mandatory for the selected product, the corresponding check box is also selected and disabled, and you cannot deselect the feature from the list.

2. If there is a  text icon in the Text column, click it to read the instructions supplied by CA Support for product, data set, and other necessary information.

3. Click the check box *I have read the associated text*, and click Next. The Next button is disabled until you click the check box.

   Note: If there are no products displayed, the appropriate PTF that enables your products' deployment through metadata has not been installed.

   The Custom Data Sets step 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 93) until a successful snapshot has been created.

Select a Custom Data Set

A *custom data set* is a data set that contains either a z/OS data set or USS path.

Follow these steps:

1. On the Custom Data Sets step, select a custom data set from the list and click Select.

   Note: To add a new custom data set, click Add Data Set and enter the custom data set information (see page 105).

2. Click Next.

   The Methodology Selection step 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 93) until a successful snapshot has been created.

More information:

Add a Custom Data Set (see page 105)

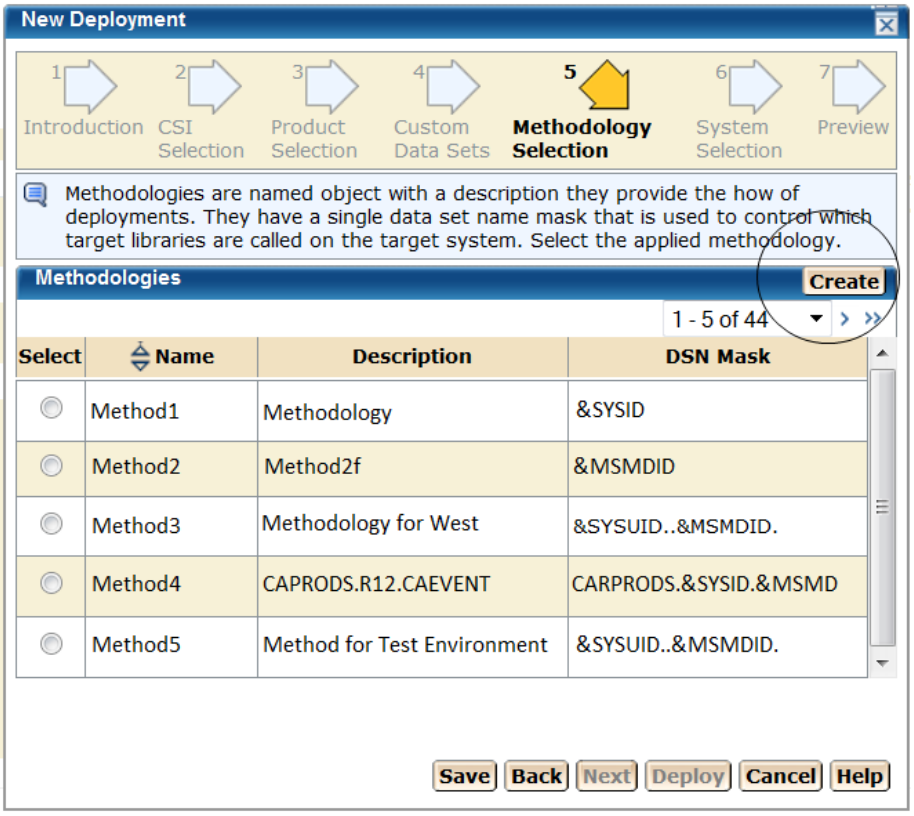
Select a Methodology

After you select a custom data set, you select a methodology, which lets you provide a single data set name mask that is used to control the target library names on the target system.

Follow these steps:

1. On the Methodology Selection step, select a Methodology from the list.

2. (Optional) Click the Create button and enter the new methodology information (see page 112).



3. Click Next.

   The System Selection step 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 93) until a successful snapshot has been created.

More information:

Create a Methodology (see page 112)

Select a System

After you select a methodology, you select a system.

Follow these steps:

1. On the System Selection step, select the systems to be deployed.

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

   Sysplex systems are denoted by *sysplex system*:*system name*. For example, PLEX1:CO11, where PLEX1 is the sysplex system, and CO11 is the system name.

2. Click Next.

   The Preview step 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 93) until a successful snapshot has been created.

Preview and Save the Deployment

After you select a system, you are ready to preview the deployment, and then save or deploy it.

- To save the deployment, click Save.
- To set up the deployment, click Deploy.

Note: Click Cancel to exit the wizard without saving.

The Preview identifies the deployment and describes the products, systems, means of transport, and target libraries (including source, target, and resolution), as well as the SMP/E environment and snapshot information.

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

Note: ??? in the Preview indicates that CA CSM has yet to assign this value.

View a Deployment

To view a deployment, click the Deployments tab, and select the current or completed deployment from the tree on the left side. The detailed deployment information appears on the right side.

Change Deployments

You can change 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.

Follow these steps:

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 change.

   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 (see page 86).
4. To change a methodology, select a methodology from the drop-down list and click Edit.

   The Edit Methodology window (see page 125) appears. The Deployment ID is the value of the MSMID variable.

   Note: You can perform the following actions:

   - You can select (see page 102), add (see page 103), or remove (see page 103) a product.
   - You can select (see page 129), add (see page 129), or remove (see page 130) a system.
   - You can select (see page 104), add (see page 105), or remove (see page 111) a custom data set.
5. Click Save on the Deployment Details window.

6. Click Actions drop-down list 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 CSM, 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 CSM 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 100)

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 include 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 (see page 98)

You can reset a deployment status when the deployment has a status of *snapshot in progress*, *transmitting*, or *deploying*. See reset status (see page 98) for a list of deleted files.

7. Click Save on the Deployment Details window.

   You changes are saved.

Deployment Maintenance

You can maintain a deployment in the following ways:

- Adding
  - System (see page 129)
  - Product (see page 103)
  - Custom data sets (see page 105)
- Delete
  - Deployment
- Removing
  - System (see page 130)
  - Product (see page 103)
  - Custom data sets (see page 111)
- Editing
  - Maintain deployments (see page 93)
  - Edit a custom data set (see page 108)
  - Edit a methodology (see page 125)
- Viewing
  - System (see page 129)
  - Product (see page 102)
  - Custom data sets (see page 104)

Failed Deployments

When a deployment fails, you investigate, correct, and deploy again. Use the following procedures in this section:

- Investigate a Failed Deployment Using the Tasks Page (see page 96)
- Download a Message Log (see page 70)
- Save a Message Log as a Data Set (see page 71)
- View Complete Message Log (see page 71)

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.

More information:

Download a Message Log (see page 70)
Save a Message Log as a Data Set (see page 71)
View Complete Message Log (see page 71)

Investigate a Failed Deployment

When a deployment fails, you investigate, correct, and deploy again.

Follow these steps:

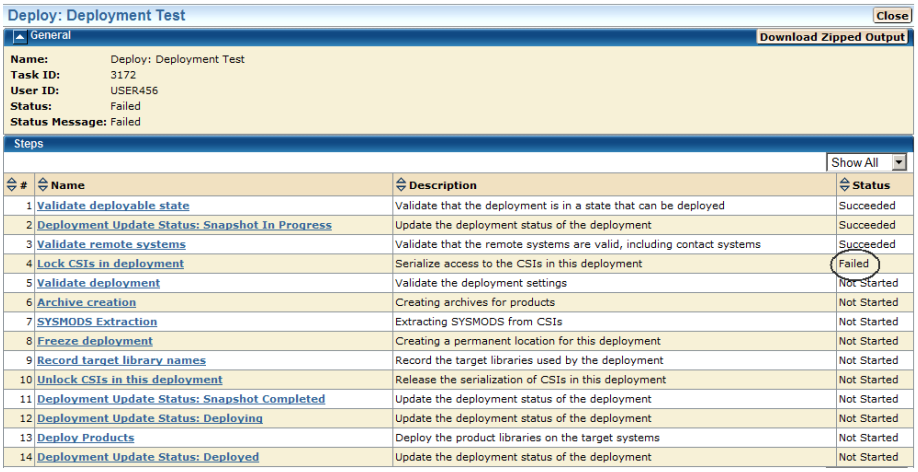
1. On the Deployments Page, in the left hand column, find the deployment with an error and note its name.
2. Click the Tasks tab and then click Task History.

   Note: Click Refresh on the right hand side of the Task History bar to refresh the Task History display.
3. At the Show bar, select All tasks, or select My tasks to only see the tasks assigned to you.

   Note: You can refine the task list further by selecting task and status types from the drop-down lists, and then sort by Task ID.

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

   The Task Output Browser appears.



#	Name	Description	Status
1	Validate deployable state	Validate that the deployment is in a state that can be deployed	Succeeded
2	Deployment Update Status: Snapshot In Progress	Update the deployment status of the deployment	Succeeded
3	Validate remote systems	Validate that the remote systems are valid, including contact systems	Succeeded
4	Lock CSIs in deployment	Serialize access to the CSIs in this deployment	Failed
5	Validate deployment	Validate the deployment settings	Not Started
6	Archive creation	Creating archives for products	Not Started
7	SYSMODS Extraction	Extracting SYSMODS from CSIs	Not Started
8	Freeze deployment	Creating a permanent location for this deployment	Not Started
9	Record target library names	Record the target libraries used by the deployment	Not Started
10	Unlock CSIs in this deployment	Release the serialization of CSIs in this deployment	Not Started
11	Deployment Update Status: Snapshot Completed	Update the deployment status of the deployment	Not Started
12	Deployment Update Status: Deploying	Update the deployment status of the deployment	Not Started
13	Deploy Products	Deploy the product libraries on the target systems	Not Started
14	Deployment Update Status: Deployed	Update the deployment status of the deployment	Not Started

5. Click the link in the Name column to view the results, and click on the messages logs to review the details for each error.

   Note: You can analyze the error results and determine the steps required to troubleshoot them.

6. Correct the issue and deploy again.

More information:

Download a Message Log (see page 70)
Save a Message Log as a Data Set (see page 71)
View Complete Message Log (see page 71)

Download a Message Log

You can save the message log in the following ways:

- To download a zipped file of all the text messages for this validation, click the Deployment Name on the top left tree. Click the Download Zipped Output button on the General menu bar. Save this file.
- To download as TXT, click the Deployment Name or the Deployment Results on the left tree. Click the Action button on the Message Log bar and click the Download as TXT. Save this file.
- To download as ZIP, click the Deployment Name or the Deployment Results on the left tree. Click the Action button on the Message Log bar and click the Download as ZIP. Save this file.

Save a Message Log as a Data Set

You can save a message log as a data set.

Follow these steps:

1. Click the Deployment Name or the Deployment Results on the left tree. Click the Action button on the Message Log bar, and click the Save as Data Set.

   The Save Output as Data Set dialog appears.

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

   Note: The asterisk indicates that the field is mandatory.

2. Enter the following information and click OK:

   Data Set Name

   Enter a data set name. CA CSM generates a value.

   VOLSER

   For non-SMS data, enter the Volser.

   Example:

   Volser: SYSP01 and SYSP02

   Storage Class

   For SMS Allocation data, enter the Storage Class.

   The message log is saved as a data set.

View Complete Message Log

To view the complete message log for a failed validation, click Show All.

Note: To close the message log, click Close.

Reset Deployment Status

You can reset a deployment status when the deployment has a status of *snapshot in progress*, *transmitting*, or *deploying*. The message log explains if any containers, folders, and files were deleted during reset.
You can also investigate a failed deployment (see page 69) to see additional details in the message log.
The following statuses may be reset.

Snapshot in progress

Snapshot in progress is reset to *snapshot in error.*

Transmitting

Transmitting is reset to *transmit in error*.

Deploying

Deploying is reset to *deploy in error*.

The following artifacts are reset by status.

Snapshot in Progress

Archive located at Application Root/sdsroot/Dnnnn, where nnnn = Deployment ID automatic number. Application Root is defined in settings under mount point management,

Temp files located at Application Root/sdsroot/Deployment_nnnn, where nnnn = Deployment ID automatic number.

Transmit in Progress

Nothing is reset.

Deploy in Progress

Nothing is reset.

Delete a Deployment

You can delete deployments.

Note: You cannot delete deployments that are currently being deployed.

A deployment deletion must be confirmed before a deletion starts.

Note: If system information was changed, not all files may be deleted. In this case, you many need to delete these files manually. For example, if an FTP transmission was changed to a Shared DASD Cluster or if the remote credentials are incorrect or changed.

The message log explains which containers, folders, and files were deleted during processing and which ones were not deleted. See how to investigate a failed deployment (see page 69) for details on finding the message log.

Note: Target libraries are never deleted.

The following artifacts are deleted by status:

Under Construction

All applicable database records

Snapshot in Error

All applicable database records

Snapshot Completed

Archive located at Application Root/sdsroot/D*nnnn* where *nnnn* = Deployment ID automatic number. Application Root is defined in settings under mount point management.

All applicable database records.

Transmit in Error

Same as Snapshot Completed, plus attempts to delete any transmitted snapshots on target systems.

Transmitted

Same as Transmit in Error.

Deploy in Error

Same as Transmitted.

Deployed

Same as Snapshot Completed.

Complete

Same as Snapshot Completed.

Follow these steps:

1. Click the Deployments tab.

   The Deployment window appears.

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

   The detailed deployment information appears.

3. Click the deployment name link, and from the Actions drop-down list, select Delete, and then click OK to confirm.

   The deployment is deleted.

Confirm a Deployment

You can use this procedure to confirm that the deployment is complete.

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

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

Follow these steps:

1. Click the Deployments tab.

   The Deployment page appears.

2. Click Confirm.

   The Confirmation dialog appears.

3. Review the confirmation.

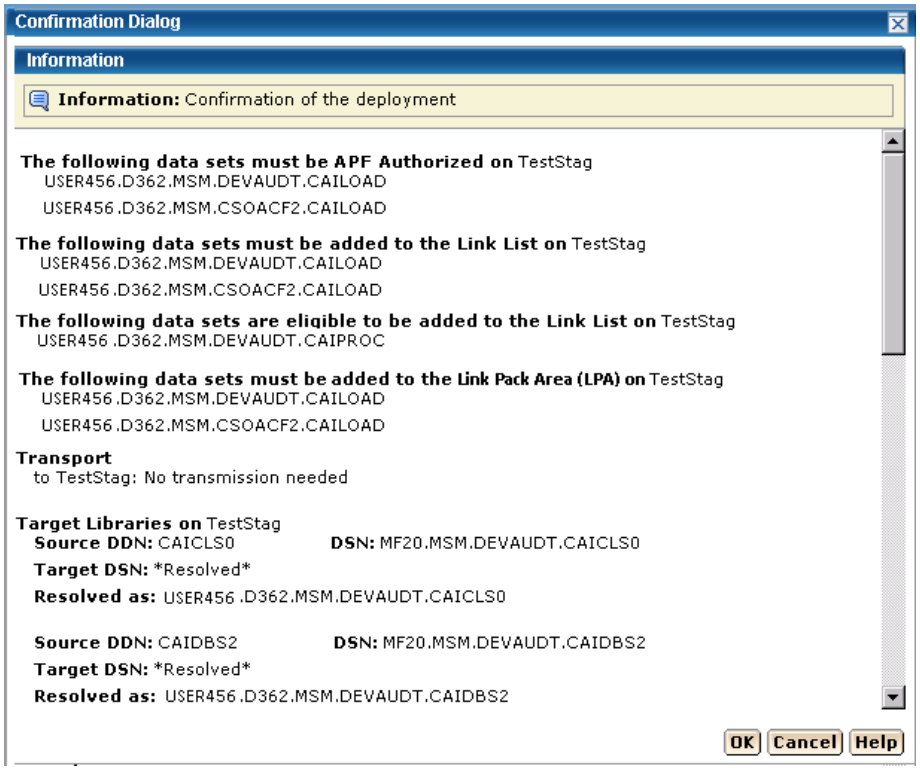
4. Click OK when the deployment is correct.

   Note: Click Cancel to exit this procedure without confirming.

   The Deployment Summary window may contain 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

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



Products

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

View the Product List

You can view a product.

Follow these steps:

1. Click the Deployments tab.
2. Select the current deployment from the tree on the left side.

   The detailed deployment information appears on the right side.

Add a Product

You can add a product to a deployment.

Follow these steps:

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 105).
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.

Follow these steps:

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 105), edit (see page 108), and remove (see page 111) custom data sets from a deployment.

A *custom data set* is a data set that contains either a z/OS data set or USS path.

- 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 115) and must be available to CA CSM. 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 115)), and a type of copy. The type of copy can be either a container copy or a file-by-file copy.

View Custom Data Sets

You can view custom data sets.

Follow these steps:

1. Click the Deployments tab, and select the current deployment from the tree on the left side.

   The detailed deployment information appears on the right side.

   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.

Add a Custom Data Set

You can add custom data sets to a deployment.

Follow these steps:

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 dialog appears.

   Note: The asterisk indicates that the field is mandatory.

5. Select a Product from the drop-down list.

   Note: When there are instructions, they are required and 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 CSM to include in the deployment when it is deployed on the target systems.

8. Enter the data set name mask, click the file icon, and select a symbolic name (see page 115).

   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 115). 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 is 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 helps ensure uniqueness of the final data set name. Verify that the mask that you entered does not exceed 35 characters when it is translated.

The mask consists of one or more qualifiers that are separated by periods. The maximum number of characters is 64, including the periods. While you are entering the mask, CA CSM validates the mask by replacing symbolics with the minimum possible values first, and then with the maximum values. If the validation with the minimum possible values fails, an error message appears at the top of the dialog, and you cannot proceed. If the validation with the maximum values fails, a warning message appears, and you can proceed.

When the mask is translated, it has a maximum length of 44 characters including the periods and the low-level qualifier from the source data set. The low-level qualifier from the source data set has a maximum length of nine characters including a period.

-

Two consecutive periods are required to separate the two masks.

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 115). The remote path is the path where the files are to be copied to.

    Limit: Maximum 255 characters.
12. Select the Type of Copy:

    - If you select Container Copy, proceed to step 14.
    - If you select File-by-file Copy, proceed to step 15, and ensure that the USS path exists on all of the remote systems of this deployment, and that there is sufficient space to hold these target libraries.

    Default: Container 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 115).

    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, it has a maximum length of 44 characters, including the periods.

Note: For Container Copy, the following occurs during the deployment process:

a. A file system of the requested type is created.

b. The size of the file system is 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 is used to calculate the secondary allocation.

c. All of the directories in the mount point are dynamically created.

d. The file system is 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 is 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 list.

16. Enter the Mount Point and/or click the file icon and select a symbolic name (see page 115).

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 nodes in the USS file system can be mount points, 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.

Follow these steps:

1. Click the Deployments tab.

   The Deployments page 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 the Actions drop-down list and click Edit.

   The Edit Custom Data Sets dialog appears.

   Note: The asterisk indicates that the field is mandatory.

5. Select a Product from the drop-down list.

   Note: When there are instructions, they are required and 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 CSM to include in the deployment when it is deployed on the target systems.

8. Enter the data set name mask, click the file icon, and select a symbolic name (see page 115).

   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 115). 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 is 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 helps ensure uniqueness of the final data set name. Verify that the mask that you entered does not exceed 35 characters when it is translated.

The mask consists of one or more qualifiers that are separated by periods. The maximum number of characters is 64, including the periods. While you are entering the mask, CA CSM validates the mask by replacing symbolics with the minimum possible values first, and then with the maximum values. If the validation with the minimum possible values fails, an error message appears at the top of the dialog, and you cannot proceed. If the validation with the maximum values fails, a warning message appears, and you can proceed.

When the mask is translated, it has a maximum length of 44 characters including the periods and the low-level qualifier from the source data set. The low-level qualifier from the source data set has a maximum length of nine characters including a period.

-

Two consecutive periods are required to separate the two masks.

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 115). The remote path is the path were the files are to be copied to.

    Limit: Maximum 255 characters.
12. Select the Type of Copy:
    - If you select Container Copy, proceed to step 14.
    - If you select File-by-file Copy, proceed to step 15, and ensure that the USS path exists on all of the remote systems of this deployment, and that there is 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 115).

    Limit: Maximum 64 characters.

    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.

For container copy the following occurs during the deployment process:

a. A file system of the requested type is created

b. The size of the file system is 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 is 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 list.
16. Enter the Mount Point and/or click the file icon and select a symbolic name (see page 115).

    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 nodes in the USS file system can be mount points, 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 changed.

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.

Follow these steps:

1. Click the Deployments tab.

   The Deployment page 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 112), maintain, edit (see page 125), and delete (see page 127) methodologies from a deployment.

A methodology has the following attributes:

- A single data set name mask that is used to control what target libraries are to be called on the target systems and where these deployment will go.

  z/OS data sets

  z/OS data sets use a data set name mask. The data set name mask is a valid data set name comprised of constants and symbolic qualifiers (see page 115).

  The minimum methodology data consists of a data set mask and a target action. The symbolics in the data set mask are either symbolics defined by CA CSM or z/OS system symbolics.

- Deployment Style information is used to *create only* or *create and replace* a methodology.

  Create Only

  Use C*reate Only* when you are creating a new methodology that does not have any target libraries already associated with a deployment.

  Create or Replace

  Use *Create or Replace* to:

  - Create new data sets and/or files in a UNIX directory.
  - Replace existing sequential data sets or files in a UNIX directory.
  - For partitioned data sets, replace existing members, add new member without deletion of members that are not replaced.

  Note: Using *Create or Replace* would not cause the deployment to fail due to data set name conflicts.

Create a Methodology

You can create a methodology.

Note: The asterisk indicates that the field is mandatory.

Follow these steps:

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

   The Create a New Methodology dialog 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, click the file icon, and select a symbolic name (see page 115).

   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 115). 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 is 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 helps ensure uniqueness of the final data set name. Verify that the mask that you entered does not exceed 35 characters when it is translated.

   The mask consists of one or more qualifiers that are separated by periods. The maximum number of characters is 64, including the periods. While you are entering the mask, CA CSM validates the mask by replacing symbolics with the minimum possible values first, and then with the maximum values. If the validation with the minimum possible values fails, an error message appears at the top of the dialog, and you cannot proceed. If the validation with the maximum values fails, a warning message appears, and you can proceed.

   When the mask is translated, it has a maximum length of 44 characters including the periods and the low-level qualifier from the source data set. The low-level qualifier from the source data set has a maximum length of nine characters including a period.

   ■

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.

Create or Replace

Creates new data sets if they do not already exist, or replaces existing data sets.

Partitioned data set

Replaces existing members in a partitioned data set with members that have the same name as the source file. Any currently existing member that is not in the source file will remain in the PDS. Any member from the source that does not already exist in the target PDS will be added to the target PDS.

The amount of free space in the PDS will need to be sufficient to hold the additional content, since no automatic compress will be done.

Directory in a UNIX file system

Replaces files in a directory with files with the same name as the source. Any currently existing directory in a UNIX file system that is not in the source will remain in the UNIX file system.

Sequential data set or a file in the UNIX file system

Replaces the existing data set or file and its attributes with the data from the source file.

For a VSAM data set (cluster)

Populates an existing VSAM cluster with the data from the source file.

Note: The existing VSAM cluster must be of the same type as the source cluster (ESDS, KSDS, LDS, or RRDS), and it must have characteristics that are compatible with the source cluster (such as, record size, key size, and key offset). Replace does not verify the compatibility of these characteristics.

To replace the contents of an existing cluster, the cluster is altered to a reusable state by using an IDCAMS ALTER command, if necessary, before the data from the VSAM source is copied into the cluster by using an IDCAMS REPRO command. The REPRO command will use both the REPLACE and REUSE operands. Following the REPRO operation, the cluster is altered back to a non-reusable state if that was its state to begin with.

6. Click Save.

   The methodology is saved.

   Note: Click Cancel to close this dialog without saving.

Symbolic Qualifiers

The data set name mask and the directory path contain the following symbolic qualifiers:

Data Set Name Mask

This 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

This 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 CSM 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 CSM 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 data set name segment.

Example: Assume MSMDID is 255.

SYSWORK.D&MSMDID..DATASET

Note: The double periods are necessary because the first period is part of the symbolic name, and therefore does not appear in the translated value.

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

Numeric Values

Some CA CSM 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 z/OS 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 CSM 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

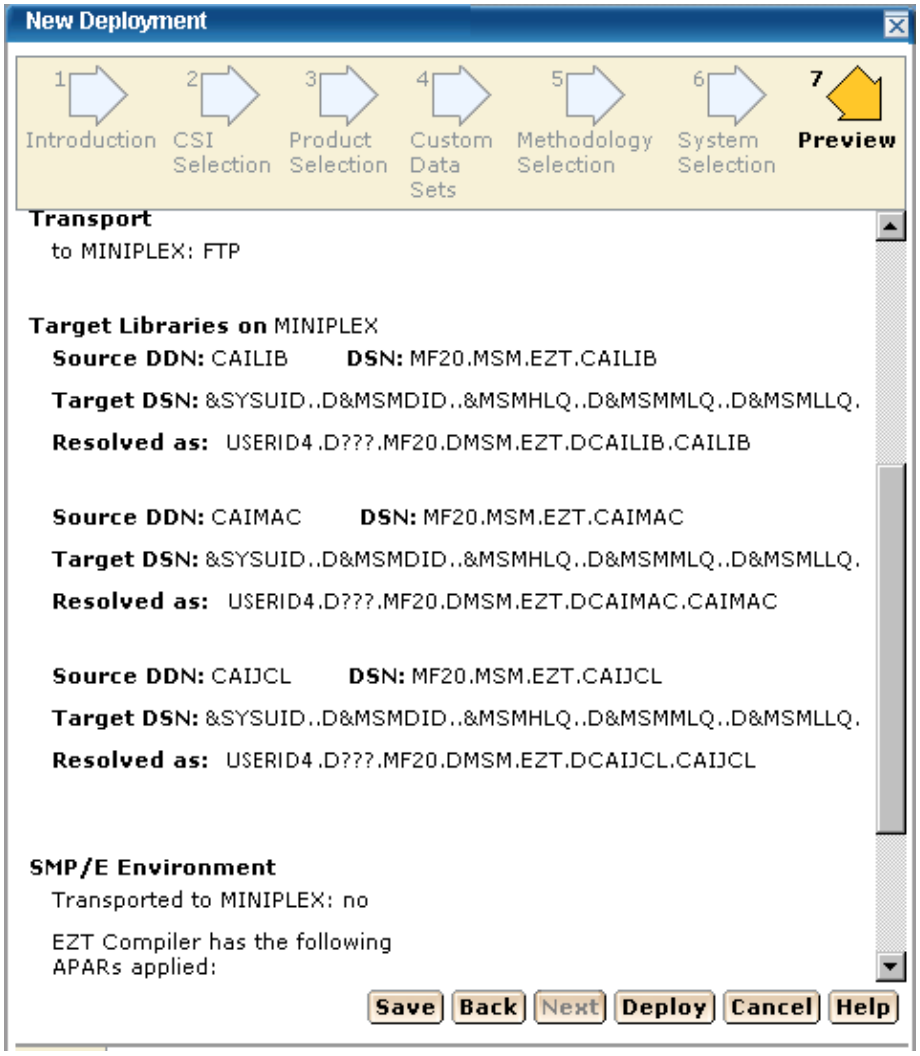
Symbolic substitution works in the same logical way for directory paths. However, directory paths do not typically have periods in them, so you will typically not see the double dots in directory paths.

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 CA CSM deployment ID.

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

MSMMPN

This is the CA CSM Mount Point Name. The value is entered into the mount point name field when adding a custom data set (see page 105) 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 CA CSM 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, 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 second to last period and before the last period in a fully qualified data set name. The secondary 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 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

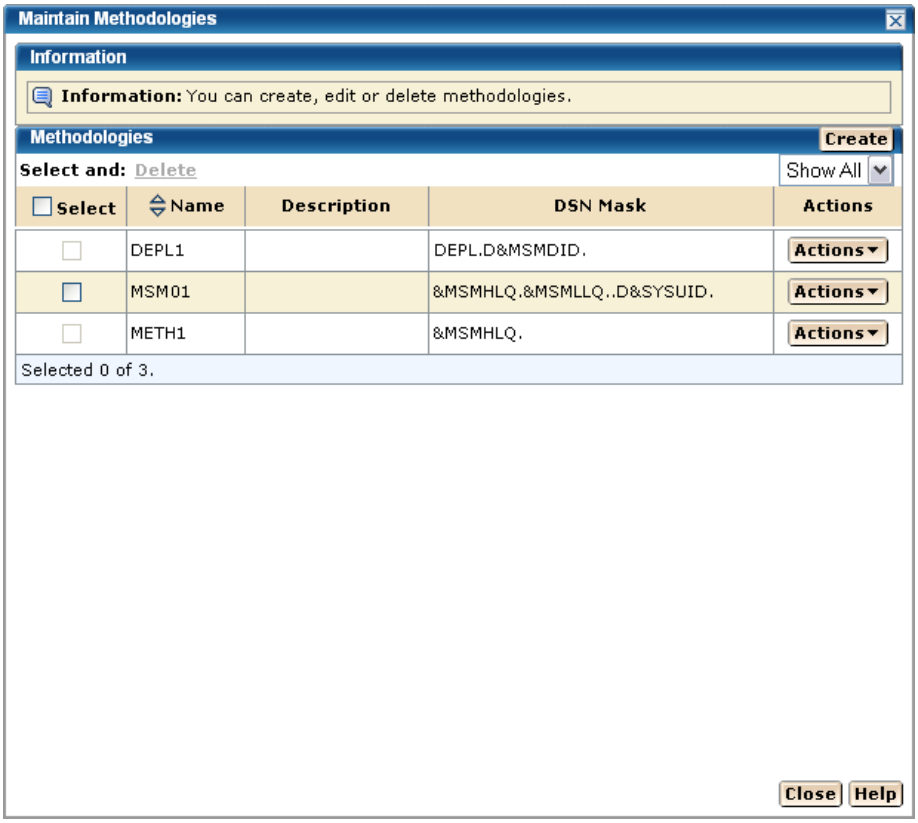
Maintain Methodologies

You can edit, replace, or remove (see page 127) methodologies.

Follow these steps:

1. Click the Deployments tab, and in the Actions section click the Maintain Methodologies link. The Maintain Methodologies select window appears.

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



2. Select a methodology. Select Edit from Actions list.

   The Methodology window appears for editing (see page 125).

More information:

Delete Methodologies (see page 127)
Edit a Methodology (see page 125)

Edit a Methodology

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

Follow these steps:

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

   The Edit Methodologies dialog 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, click the file icon, and select a symbolic name (see page 115).

   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 115).

   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 is 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 helps ensure uniqueness of the final data set name. Verify that the mask that you entered does not exceed 35 characters when it is translated.

The mask consists of one or more qualifiers that are separated by periods. The maximum number of characters is 64, including the periods. While you are entering the mask, CA CSM validates the mask by replacing symbolics with the minimum possible values first, and then with the maximum values. If the validation with the minimum possible values fails, an error message appears at the top of the dialog, and you cannot proceed. If the validation with the maximum values fails, a warning message appears, and you can proceed.

When the mask is translated, it has a maximum length of 44 characters including the periods and the low-level qualifier from the source data set. The low-level qualifier from the source data set has a maximum length of nine characters including a period.

-

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.

Create or Replace

If you select *Create or Replace* and the target data sets do not exist, they will be created. If the target data sets exist, *Create or Replace* indicates that data in the existing data set, file or directory will be replaced.

Partitioned data set

Create or Replace indicates that existing members in a partitioned data set will be replaced by members with the same name from the source file. Any currently existing member that is not in the source file will remain in the PDS. Any member from the source that does not already exist in the target PDS will be added to the target PDS.

The amount of free space in the PDS will need to be sufficient to hold the additional content, since no automatic compress will be done.

Directory in a UNIX file system

Create or Replace indicates files in a directory will be replace by files with same name from the source. Any currently existing directory in a UNIX file system that is not in the source will remain in the UNIX file system.

Sequential data set or a file in the UNIX file system

Create or Replace indicates the existing data set or file and its attributes will be replaced with the data from the source file.

For a VSAM data set (cluster)

Create or Replace indicates that an existing VSAM cluster should be populated with the data from the source file.

Note: The existing VSAM cluster must be of the same type as the source cluster (ESDS, KSDS, LDS, or RRDS), and it must have characteristics that are compatible with the source cluster (such as, record size, key size, and key offset). Replace does not verify the compatibility of these characteristics!

To replace the contents of an existing cluster, the cluster is altered to a reusable state by using an IDCAMS ALTER command, if necessary, before the data from the VSAM source is copied into the cluster by using an IDCAMS REPRO command. The REPRO command will use both the REPLACE and REUSE operands. Following the REPRO operation, the cluster is altered back to a non-reusable state if that was its state to begin with.

7. Click Save.

   Your changes are saved.

   Note: Click Cancel to close this dialog without saving your changes.

More information:

Symbolic Qualifiers (see page 115)

Delete Methodologies

Follow these steps:

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.

Target System Types

There are two types of *target systems*.

Test Environment

Test Environment target systems isolate untested deployment changes and outright experimentation from the production environment or repository. This environment is used a temporary work area where deployments can be tested, modified, overwritten, or deleted.

Production

Production target systems contain current working product deployments. When activating products in a production target system care must be taken, CA CSM recommends using the following procedure.

1. Copy the product to that target system with the data set names set to private. This allows only those assigned to this area to test these deployed products. The purpose of this first stage is to test or verify that the product is working.
2. Use intermediate test phases for products as they move through various levels of testing. For example you may want to let the application development group as a whole use the product in its test mode prior to moving to production.
3. Move the deployed products to production.

View a System List

You can view a system list.

Follow these steps:

1. Click the Deployments tab, and select the current deployment from the tree on the left side.

   The detailed deployment information appears on the right side.

   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.

Add a System

You can add a system to a deployment.

Follow these steps:

1. Click the Deployments tab.

   The Deployment page 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 and click OK.

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

   The Preview window appears, and the system is added.

   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.

Remove a System

You can remove a system from a deployment.

Follow these steps:

1. Click the Deployments tab.

   The Deployment page 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 system 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

The Action button is available after a successful deployment.

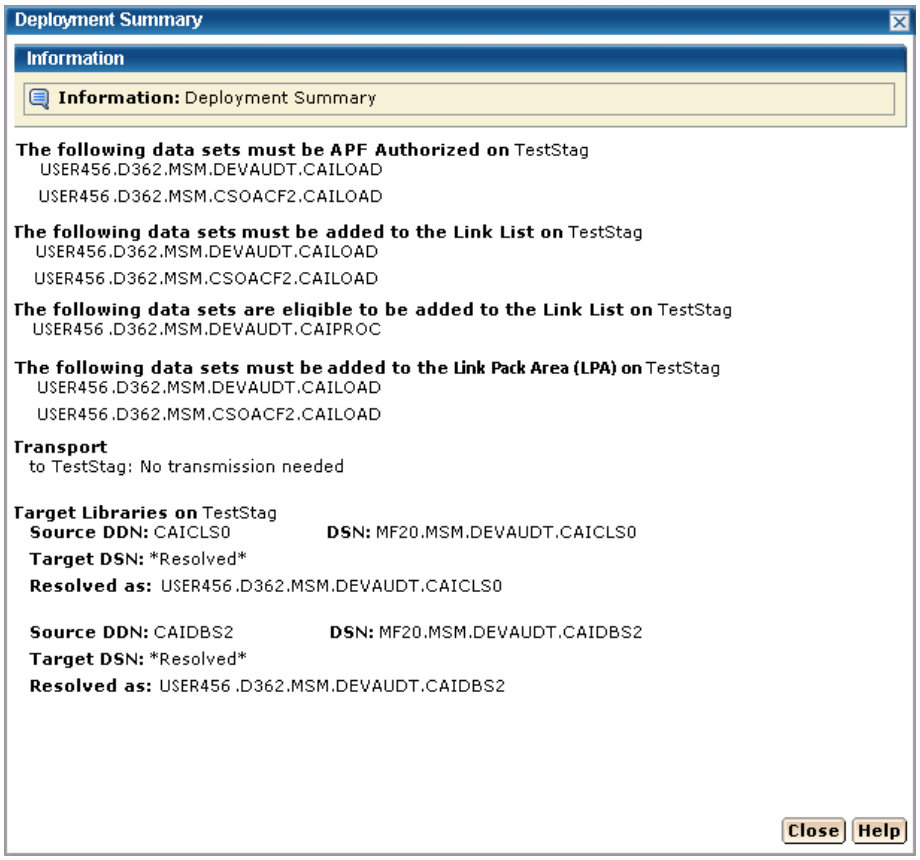
Important! Data sets may need to be APF-authorized and added to the Link List and Link Pack Area. These data sets are identified in this dialog.

The Deployment Summary window may contain the following:

- Deployment 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

The following 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 (see page 21).

Chapter 6: Installing Your Product from Pax-Enhanced ESD

This section contains the following topics:

How to Install a Product Using Pax-Enhanced ESD

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

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

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

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

1. Allocate and mount the file system. This process requires a USS directory to receive the pax file and to perform the unpack steps. We recommend that you allocate and mount a file system that is 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 directory in your USS directory by entering the following command:

   pax `-rvf` *pax-filename*

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

5. Receive the SMP/E package. Use the data sets that GIMUNZIP created 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 that the pax command created, all of the files in it, and the SMP/E RELFILEs, SMPMCS, and HOLDDATA data sets.

How the Pax-Enhanced ESD Download Works

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

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

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

   The CA Support Online web page appears.

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

   The CA Product Download window appears.

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

   For both options, The ESD Product Download Window (see page 135) topic explains how the download interface works.

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

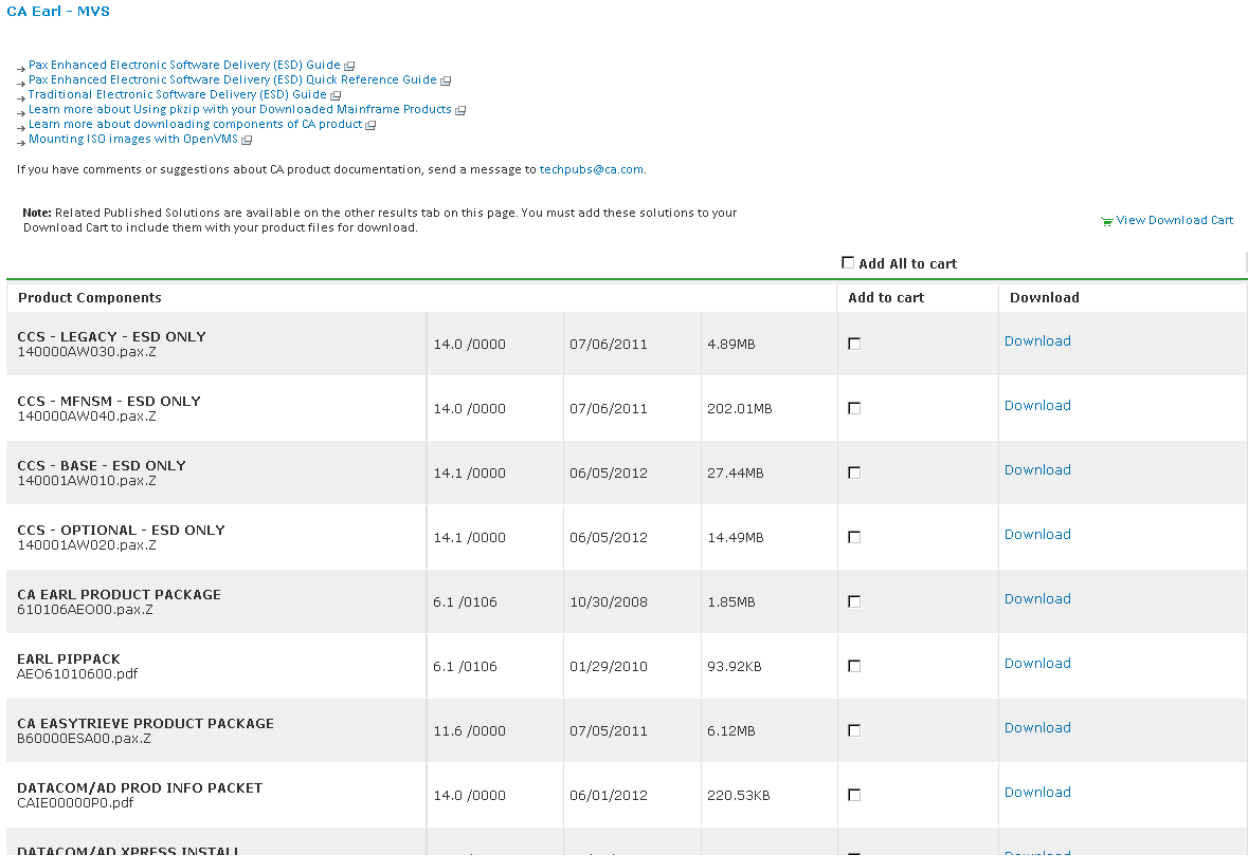
4. Perform the steps to install the product based on the product-specific steps.

   The product is installed on the mainframe.

ESD Product Download Window

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

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



CA Earl - MVS

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

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

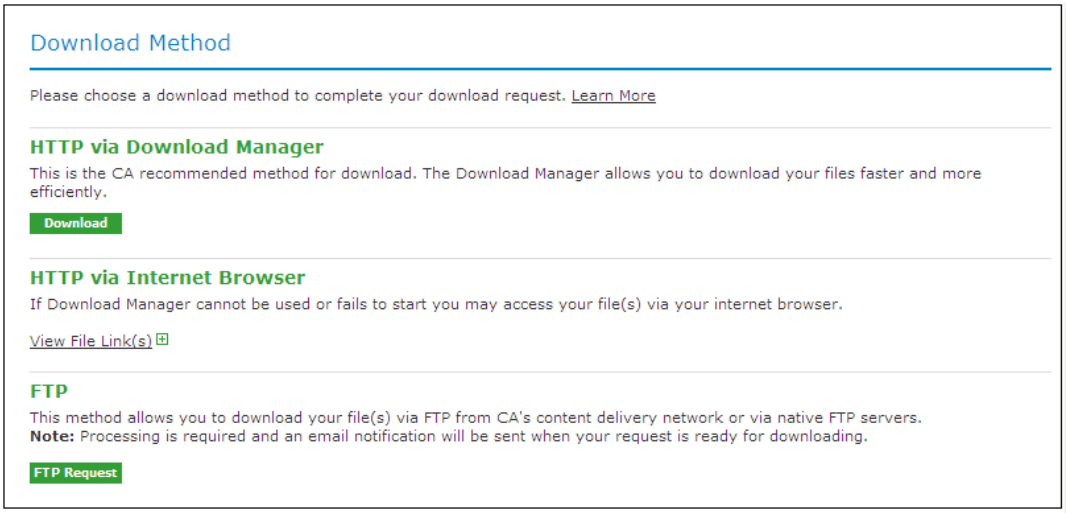
Note: Related Published Solutions are available on the other results tab on this page. You must add these solutions to your Download Cart to include them with your product files for download.

View Download Cart

Add All to cart

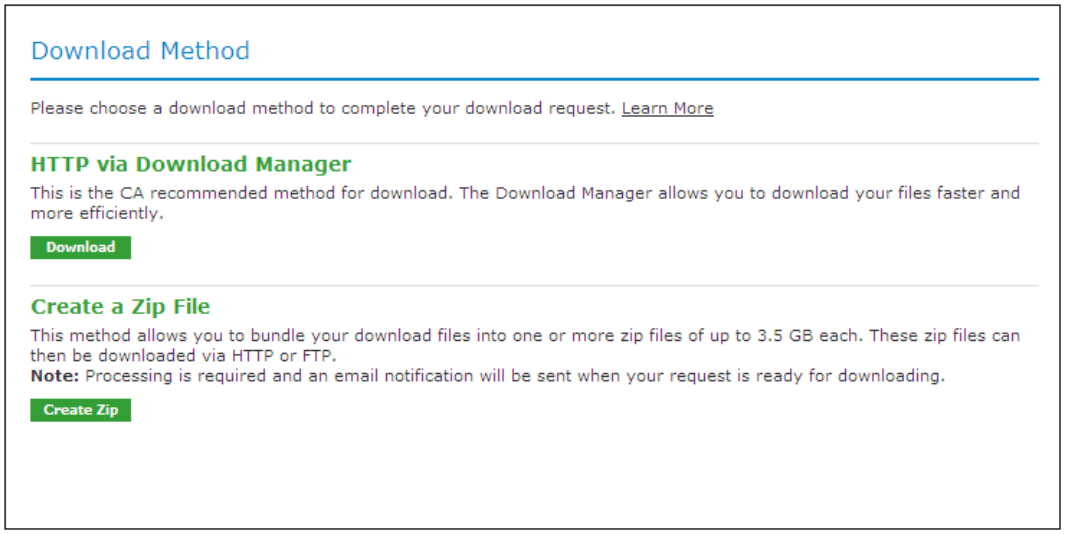
Product Components				Add to cart	Download
CCS - LEGACY - ESD ONLY 140000AW030.pax.Z	14.0 /0000	07/06/2011	4.89MB	☐	Download
CCS - MFNSM - ESD ONLY 140000AW040.pax.Z	14.0 /0000	07/06/2011	202.01MB	☐	Download
CCS - BASE - ESD ONLY 140001AW010.pax.Z	14.1 /0000	06/05/2012	27.44MB	☐	Download
CCS - OPTIONAL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

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



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

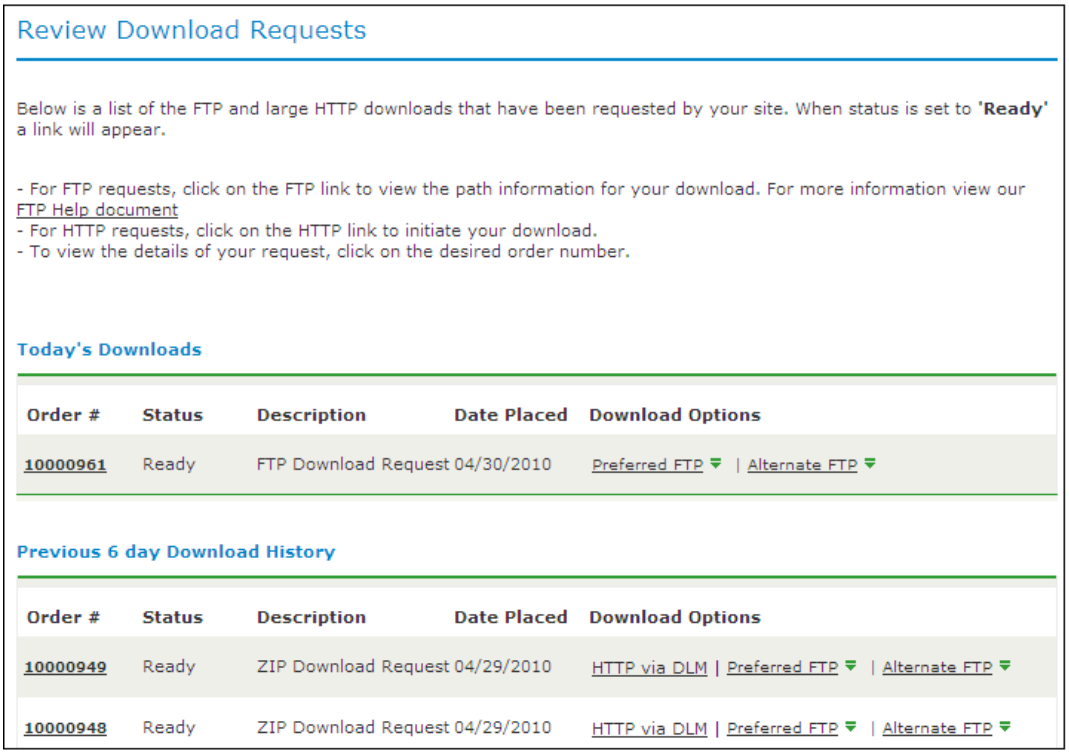
Note: For mainframe downloads using this HTTP method, click the Learn More link.



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

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

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



Review Download Requests

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

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

Today's Downloads

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

Previous 6 day Download History

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

USS Environment Setup

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

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

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

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

We recommend that you use one directory for downloading and unpacking pax files. Reusing the same directory minimizes USS setup. You need to complete the USS setup only one time. You reuse the same directory for subsequent downloads. Alternatively, you can create a 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 that are used for the ESD process. The USS file system that is used for Pax-Enhanced ESD must have sufficient free space to hold the directory that the pax command created, and its contents. You need approximately 3.5 times the pax file size in free space to download the pax file and unpack its contents. For example, to download and unpack a 14 MB pax file, you need approximately 49 MB of free space in the file system hosting your ESD directory.

Allocate and Mount a File System

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

This procedure describes how to perform the following tasks:

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

  Note: You must have either SUPERUSER authority, or the required SAF profile setting to allow you to issue the USS mount command for the file system.
- Optionally, permit write access to anyone in the same group as the person who created the directory.

  Important! USS commands are case-sensitive.

Follow these steps:

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

   - On a zFS, use the following sample:

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

   - On an HFS, use the following sample:

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

   The file system is allocated.

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

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

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

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

   The mount point is created.

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

   - On a zFS, use the following sample:

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

   - On an HFS, use the following sample:

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

   The file system is mounted.

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

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

   Write access is granted.

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

Copy the Product Pax Files into Your USS Directory

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

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

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

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

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

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

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

More Information:

How the Pax-Enhanced ESD Download Works (see page 134)
ESD Product Download Window (see page 135)

Download Using Batch JCL

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

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

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

Follow these steps:

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

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

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

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

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

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

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

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

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

8. Select one of the following methods:

   Preferred FTP

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

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

   Alternate FTP

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

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

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

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

9. Submit the job.

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

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

Example: CAtoMainframe.txt, JCL

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

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

Download Files to Mainframe through a PC

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

Follow these steps:

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

   The pax or zip file resides on your PC.

2. Open a Windows command prompt.

   The command prompt appears.

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

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

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

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

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

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

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

   The pax file is transferred to the mainframe.

Example: FTP Commands

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

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

Create a Product Directory from the Pax File

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

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

Follow these steps:

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

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

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

   The job runs and creates the product directory.

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

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

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

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

Copy Installation Files to z/OS Data Sets

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

Follow these steps:

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

   You have identified the product-specific installation details.

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

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

   The job is edited.

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

   Your view is of the product-specific directory.

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

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

      Note: The default Java location is the following:

      `/usr/lpp/java/Java_version`

   b. Perform one of the following steps:

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

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

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

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

6. Submit the UNZIPJCL job.

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

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

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

Receive the SMP/E Package

If you are installing the package into a new SMP/E environment, see the product documentation and the sample jobs included with the product to set up an SMP/E environment before you proceed. The sample jobs can be found in *yourHLQ*.SAMPJCL.

Complete the SMP/E RECEIVE using files on DASD that the UNZIPJCL job created. Consult the product sample JCL library that contains a sample job that is customized to receive the product from DASD. Specifically, you specify the following values:

- DASD data set names for SMPPTFIN and SMPHOLD (if applicable)
- The HLQ that you used in the UNZIPJCL job on the RFPREFIX parameter on the RECEIVE command

How to Install Products Using Native SMP/E JCL

The following steps describe the process to install products using native SMP/E JCL:

1. Allocate product data sets and SMP/E data sets.
2. Create SMP/E CSI.
3. Receive base functions.
4. Apply base functions.
5. Accept base functions.
6. Configure the product according to your site requirements.

Prepare the SMP/E Environment for Pax Installation

The members that are used in this procedure prepare the data sets, initialize the zones, and create the DDDEFs for CA Vtape.

Follow these steps:

1. Customize the macro SVTSEDIT with your site-specific information and then copy the macro to your SYSPROC location. Replace the rightmost parameters for each ISREDIT CHANGE command. Each time that you edit an installation member, type SVTSEDIT on the command line, and press Enter to replace the defaults with your specifications.

   The macro is ready to customize the *yourHLQ*.SAMPJCL members.

   Consider the following:

   - Set the DASD HLQ to the same value specified for *yourHLQ* for the unzip to DASD ESD JCL.
   - The following steps include instructions to execute the SVTSEDIT macro each time you open a new SAMPJCL member. To edit all SAMPJCL members simultaneously, read and follow the instructions in the SVTEDALL member.

2. Open the SAMPJCL member SVT1ALL in an edit session and execute the SVTSEDIT macro from the command line.

   SVT1ALL is customized.

3. Submit SVT1ALL.

   This job produces the following results:

   - The target and distribution data sets for CA Vtape are created.
   - Unique SMPLTS, SMPMTS, SMPSCDS, and SMPSTS data sets for this target zone are created.

4. Open the SAMPJCL member SVT2CSI in an edit session and execute the SVTSEDIT macro from the command line.

   SVT2CSI is customized.

5. Submit SVT2CSI.

   This job produces the following results:

   - The CSI data set is defined.
   - The SMPPTS and SMPLOG data sets are allocated.
   - The global, target, and distribution zones are initialized.
   - The DDDEF entries for your product are created.
   - The DDDEFs for the required SMP/E data sets are created.

Run the Installation Jobs for a Pax Installation

Submit and run these SAMPJCL members in sequence. Do not proceed with any job until the previous job has completed successfully.

Follow these steps:

1. Open the SAMPJCL member SVT3RECD in an edit session and execute the SVTSEDIT macro from the command line.

   SVT3RECD is customized.

2. Submit the *yourhlq*.SAMPJCL member SVT3RECD.

   CA Vtape is received and now resides in the global zone.

3. Open the SAMPJCL member SVT4APP in an edit session and execute the SVTSEDIT macro from the command line.

   SVT4APP is customized.

4. Submit the *yourhlq*.SAMPJCL member SVT4APP.

   CA Vtape is applied and now resides in the target libraries.

5. Open the SAMPJCL member SVT5ACC in an edit session and execute the SVTSEDIT macro from the command line.

   SVT5ACC is customized.

6. Submit the *yourhlq*.SAMPJCL member SVT5ACC.

   CA Vtape is accepted and now resides in the distribution libraries.

Clean Up the USS Directory

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

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

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

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

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

Follow these steps:

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

   Your view is of the applicable USS directory.
2. Delete the pax file by entering the following command:

   `rm paxfile`

   paxfile

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

   The pax file is deleted.
3. Delete the product-specific directory by entering the following command:

   `rm -r product-specific_directory`

   product-specific_directory

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

   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.

VT_Cloud--Apply Maintenance Common For Pax

CA Support may have maintenance and HOLDDATA that have been published since the installation data was created.

Follow these steps:

1. Check CA Support and download any PTFs and HOLDDATA published since this release was created.
2. Transfer the downloaded files to two separate FB 80 sequential data sets. Use one data set to contain the PTFs and the other to contain the HOLDDATA.

   The PTFs and HOLDDATA become accessible to the *yourhlq*.SAMPJCL maintenance members.
3. The SVTSEDIT macro was customized in the installation steps. Verify that you still have the values from the base install.
4. Open the SAMPJCL member SVT6RECP in an edit session and execute the SVTSEDIT macro from the command line.

   SVT6RECP is customized with your jobcard, CSI location, and zone names.
5. Customize the SVT6RECP SMPPTFIN and SMPHOLD DD statements to reference the FB 80 data sets for the PTFs and HOLDDATA.
6. Submit SVT6RECP.

   The PTFs and HOLDDATA are received.
7. Open the SAMPJCL member SVT7APYP in an edit session and execute the SVTSEDIT macro from the command line.

   SVT7APYP is customized.
8. Submit SVT7APYP.

   The PTFs are applied.
9. (Optional) Open the SAMPJCL member SVT8ACCP in an edit session and execute the SVTSEDIT macro from the command line.

   SVT8ACCP is customized.
10. (Optional) Submit *yourhlq*.SAMPJCL member SVT8ACCP.

    The PTF's are accepted.

    Note: You do not have to submit the job now. You can accept the PTFs according to your business policy.

HOLDDATA

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

System HOLDDATA

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

ACTION

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

AO

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

DDDEF

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

DELETE

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

DEP

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

DOC

Indicates a documentation change with this SYSMOD.

DYNACT

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

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.

ENH

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

EXIT

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

EXRF

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

IPL

Indicates that an IPL is required for this SYSMOD to take effect. This is used only when there is no alternative for dynamic activation.

MULTSYS

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

RESTART

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

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

External HOLDDATA

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

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

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

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

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

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

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

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