Rational® Developer for System z

IBM

Version 7.1.1

Application Deployment Manager Technology Preview System Programmer User's Guide

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Contents

About this book

As IBM's premier enterprise application-development environment, IBM Rational Developer for System z brings traditional development capabilities, the power of Java 2 Platform, Enterprise Edition (J2EE) and rapid application-development support to diverse enterprise application-development teams. With comprehensive development tools to help create, deploy and maintain traditional enterprise and composite applications, developers from different technical backgrounds can easily participate in on demand business projects together. As traditional programmers collaborate in the process of creating modern applications, their exposure to new technologies widens while they continue to use their existing skills.

Who should read this book

This User's Guide covers the customization, usage, and messages for Application Deployment Manager System Programmer Manifest Processing tool and the Application Deployment Manager System Programmer Administrative Utility. It is intended for z/OS system programmers who will perform processing of exported manifests containing CICS resource definitions, as well as providing default values for those definitions.

Conventions used in this book

The following typographical conventions are used in this book:

Table 1. Typographical conventions

Convention	Meaning
Monospace	Indicates text you must enter at a command prompt and values you must use literally, such as commands, functions, and resource definition attributes and their values. Monospace also indicates screen text and code examples.
Italics	Indicates variable values you must provide (for example, you supply the name of a file for file_name). Italics also indicates new terms, emphasis and the titles of books.
>	When used to describe a menu, shows a series of menu selections. For example, "Click **File > New**" means "From the File menu, click the New command."

Chapter 1. Overview of Application Deployment Manager

As Rational Developer for System z encompasses an increasing number of components including Enterprise Service Tools (EST), Integrated Development Environment for System z (IDE), Database Application Generator, BMS Map Designer, and MFS Map Designer. Each of these components produces or generates z/OS artifacts, and many of these newer components produce artifacts specifically for CICS. This increasingly robust mix of application development components for z/OS has resulted in a broad set of requirements for deploying all Rational Developer for System z artifacts to the z/OS platform.

The Application Deployment Manager provides a common deployment approach for all Rational Developer for System z components. In this context the term deploy is defined as a multi stage process that includes artifact transfer, build, and CICS resource definition. Application Deployment Manager addresses artifact transfer and CICS resource definition in the following ways:

- Application Deployment Manager uses RSE as the underlying transfer agent and prevents inadvertent overwrite of existing artifacts by providing warning pop-ups.
- CICS resources can be defined and installed by Application Deployment Manager.

Chapter 2. Overview of Application Deployment Manager technology preview enhancements

The Application Deployment Manager technology preview consists of new plug-ins applied to Rational Developer for System z v 7.1.1. The Application Deployment Manager technology preview provides an enhanced user interface (UI) for defining and editing CICS resource definitions, which are now stored in a manifest file. In addition the CICS TS Explorer is used to view installed CICS resources.

CICS TS Explorer

CICS TS Explorer provides an Eclipse based infrastructure to view and manage CICS resources and enables greater integration between CICS tools.

The CICS TS Explorer may be launched in its own perspective, or CICS TS Explorer views may be launched from within other perspectives (i.e. EST perspective). A tree view displays CICS region names. Individual resource views (i.e. transaction, program, file, etc.) are grouped together in tab groups.

The CICS TS Explorer is documented in the *Application Deployment Manager Technology Preview Application Developer User's Guide (SC23-7661-01)*.

Resource Definition editor

The Resource Definition editor has a completely new user interface that replaces the CICS Interactive (CRD editor) user interface in previous releases. Additionally, a manifest file is used to store CICS resource definitions for a project or sub-project. Single services generation and service flow projects components of the Enterprise Service Tools (EST) perspective create the manifest file during the project generation phase.

The Resource Definition editor is fully documented in the *Application Deployment Manager Technology Preview Application Developer User's Guide (SC23-7661-01)*.

The Resource Definition editor is used to:
- Add, edit, and remove CICS resources from a manifest.
- Install and enable CICS resources in a manifest, or export a manifest for later processing by a system programmer.
- Retrieve CICS resource attribute default values provided by a system programmer.
- Retrieve CICS resource attribute edit permissions controlled by a system programmer.

System Programmer tools

There are two new system programmer tools.

The Manifest Processing tool is provided as an Eclipse plug-in to the CICS TS Explorer and provides the following function:

- List manifests from a CICS test environment repository. These manifests must have previously been exported by a Rational Developer for System z application developer using the Resource Definition editor.
- Import manifests for processing from a CICS test environment repository.
- Update imported manifest resource definitions.
- Install imported manifest resource definitions.
- Export updated manifests back to the CICS test environment repository.

The system programmer administrative utility provides the following function:
- Provides the CICSPlex name for CICSPlex managed test environments.
- Provides the CICSPlex SM staging group name.
- Provides the manifest export rule setting.
- Provides CICS resource attribute defaults and display permissions.
- Provides the CICS VSAM file logical to physical binding used for VSAM file definitions.

Migration from CICS Interactive to Resource Definition editor

CICS Interactive function is being migrated to three new components.
- **Resource Definition editor** contains CICS resource definition function:
  - CICS resource definition (add, edit, delete) and install or export.
  - CICS resource attribute value default retrieval and attribute display permissions retrieval are performed automatically when a resource is added to the manifest.
  - New copy and pipeline scan requests are performed automatically by the Resource Definition editor when the **Install** button is clicked, or by right clicking the manifest file, selecting **Manage CICS Resource**, and selecting **Rescan** and **Newcopy**.
- **CICS TS Explorer contains**:
  - The CICS primary connection region connection definition view on the CICS Interactive systems/regions tab is now found in the CICS TS Explorer preference page. Creating a "Non CICSPlex SM" entry on this page also updates connection information required by list function (see below) remaining in CICS Interactive.
  - The following list displays are now individual tabular views in the new CICS TS Explorer:
    - DFHRPL list of concatenated load libraries
    - Pipeline names and pickup directories
    - Connections list of MRO connected regions
- **System programmer administrative utility** contains the following system programmer function:
  - Supply the CICSPlex name for CICSPlex managed test environments.
  - Supply CICS resource attribute defaults and display permissions.
  - Supply the CICS VSAM file logical to physical binding used for VSAM file definitions.

For the Application Deployment Manager technology preview the following function continues to be provided in CICS Interactive:
- WebService (WSDL) request
- URIMAP (EndPoint) request

- Uninstall resource request

Software prerequisite

There are two prerequisites for the Application Deployment Manager technology preview. One is for the Manifest Processing tool, and the other is for the Application Deployment Manager CICS Resource Definition server on z/OS.

The Application Deployment Manager technology preview Manifest Processing tool is installed as a plugin to CICS TS Explorer installed on an Eclipse Rich Client Platform (RCP). With this configuration the CICS TS Explorer must be obtained by participating in the CICS TS Explorer managed beta program. Contact your IBM client representative for details on this beta program.

The Application Deployment Manager CICS Resource Definition server requires CICS PTF UK34221 when installed in a CICS TS 3.1 environment.

Chapter 3. Installation and Customization

Workstation and z/OS customization are covered in this section under the following three topics:

- Installation and customization of the Application Deployment Manager Manifest Processing tool on the system programmer's workstation.
- Customization of the Application Deployment Manager CICS Resource Definition server in the CICS environment on the z/OS server.
- Customization of the system programmer administrative utility on the z/OS server.

Note: If the manifest export rule is set to "installOnly" by the system programmer administrative tool then the Manifest Processing tool is not used and does not need to be installed or customized.

Manifest Processing tool installation and customization

Installation and customization of the Manifest Processing tool is comprised of three tasks.

- The Eclipse Update Manager is used to install the Manifest Processing tool.
- Application Deployment Manager preferences are used to provide workstation system values
- CICS primary connection region definitions are used to define and provide connection information for target CICS test environment

Manifest Processing tool installation

The Eclipse Update Manager is used to install the Application Deployment Manager Manifest Processing tool as a plug-in to the CICS TS Explorer.

The following steps must be used for the install.

1. Download `ADMSPToolPreview.exe` from the Application Deployment Manager technology preview web site. It is a self-extracting executable.
2. Then run the executable to extract the files to a temporary location.
3. Start up the CICS Explorer RCP application.
4. Go to **Help** > **Software Updates** > **Find and Install**.
5. Select the radio button that says "**Search for new features to install**" and click **Next**.
6. On the "*Install*" panel, click **New Local Site**.
7. Browse to the `UpdateSite` folder in the directory where you extracted the executable file.
8. Give the site a name (or take the default) and click **OK**.
9. Click **Finish**. Update Manager will search for features and pop up a panel showing you what it found at the location you gave it.
10. Fully expand the feature list, select the *Application Deployment Manager Manifest Processing Tool* feature, and click **Next**.
11. Accept the license agreement and click **Next**.

12. If you want to install the tool to a non-default location, click **Change Location** and select a new directory. By default, the tool will be installed wherever the CICS Explorer RCP application is installed.

13. Click **Finish**.

14. You may get a warning stating the feature is not digitally signed. If so, just ignore it and click **Install**.

15. Click **Yes** when asked if you want to restart CICS Explorer to complete the install. The workbench will restart and the SP Tool is now installed.

Application Deployment Manager preferences

Use the Application Deployment Manager preferences window to do the following:

- Set the local name of the Systems registry file
- Set the Application Deployment Manager activity log file name
- Set the maximum activity log file size
- Set the maximum number of backup activity log files
- Cause events to be logged to the Eclipse console
- Cause events to be logged to the activity log file
- Set the activity log file level of event logging (none, fatal, error, warn, info, debug)
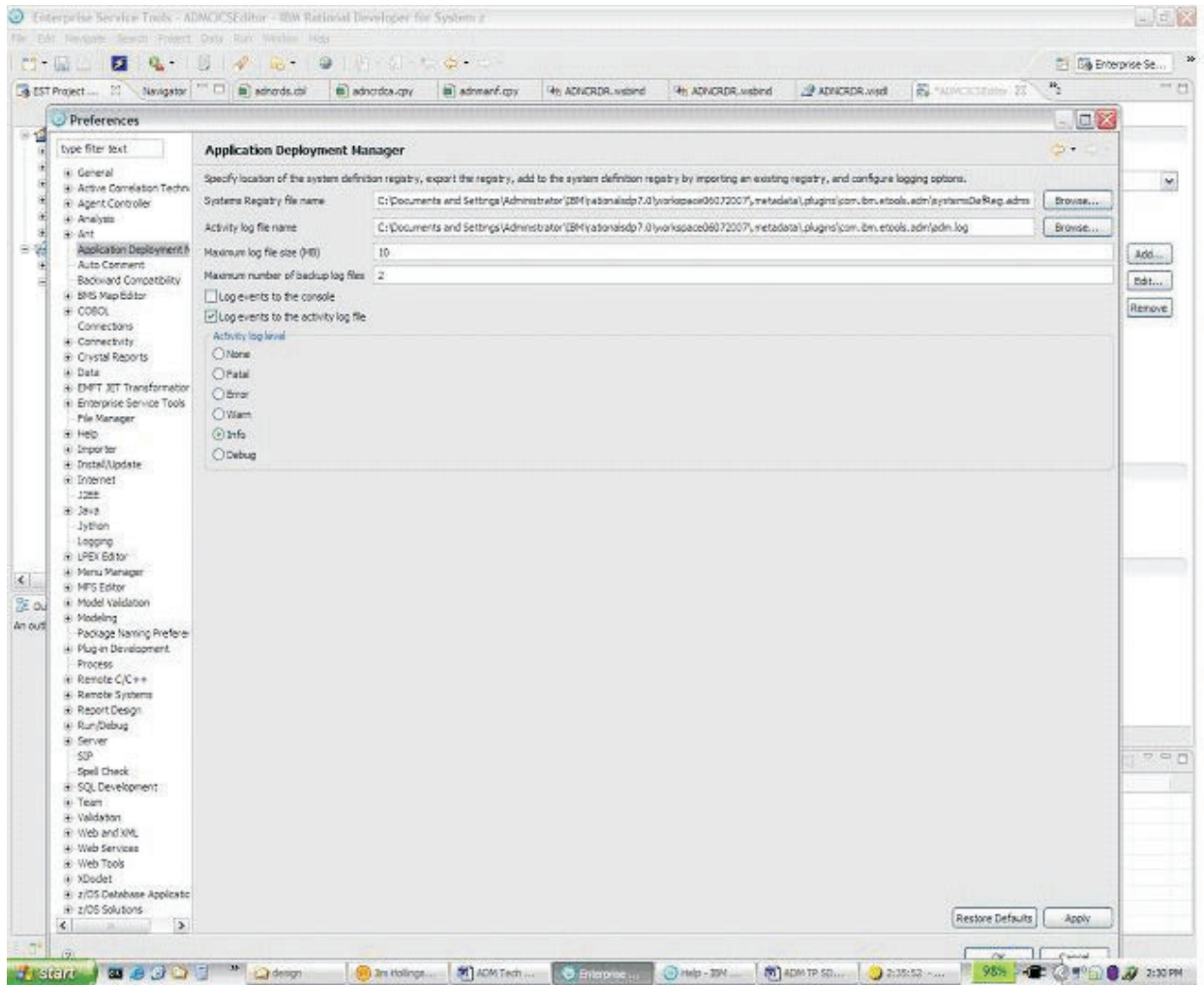
Figure 1. Application Deployment Manager Preferences

Defining CICS primary connection regions

A CICS test environment may consist of several Multi-Region Option (MRO) connected regions. Over time, unofficial designations have been used to categorize these regions. Typical designations are terminal owning region (TOR), Web owning region (WOR), application owning region (AOR), and data owning region (DOR). A Web owning regions is used to implement CICS Web services support, and the Application Deployment Manager CICS Resource Definition (CRD) server must run in this region. This region is known to Application Deployment Manager as the CICS primary connection region. The Application Deployment Manager CICS Resource Definition (CRD) client implements a Web service connection to the CICS primary connection region. CICS primary connection region definitions must be configured by opening the Rational Developer for System z preferences page and selecting Connections (**Window**->**Preferences**->**Connections**).

The required information on the Connections preference page includes:

• Connection

- Type - For the CRD server region this must be set to "Non CICSPlex SM".
  - Region name for the CRD server region
- Location
  - o Server address (IP address)
  - Port
- Authentication
  - User ID - CICS region user ID
  - Password (encrypted when saved)
  - Save password - check if you wish Rational Developer for System z to save your password
- CRD server
  - Default primary connection region - Customers may have multiple CICS test environments each consisting of several regions. Each CICS test environment requires a CICS primary connection definition. However, only one of these definitions should be checked as the default CICS primary connection region which will be used by the Resource Definition editor to retrieve resource attribute default values and as the default target region where resources will be installed. When switching development to a different CICS test environment the default should also be changed.

Note: The above describes the "Non CICSPlex SM" type required for the CRD server connection. This preference page is also used to define an additional connection to the CICSPlex SM CMAS when CICS resource definitions are managed by CICSPlex SM Business Application Services (BAS). In this case the type is set to "CICSPlex SM Data API".
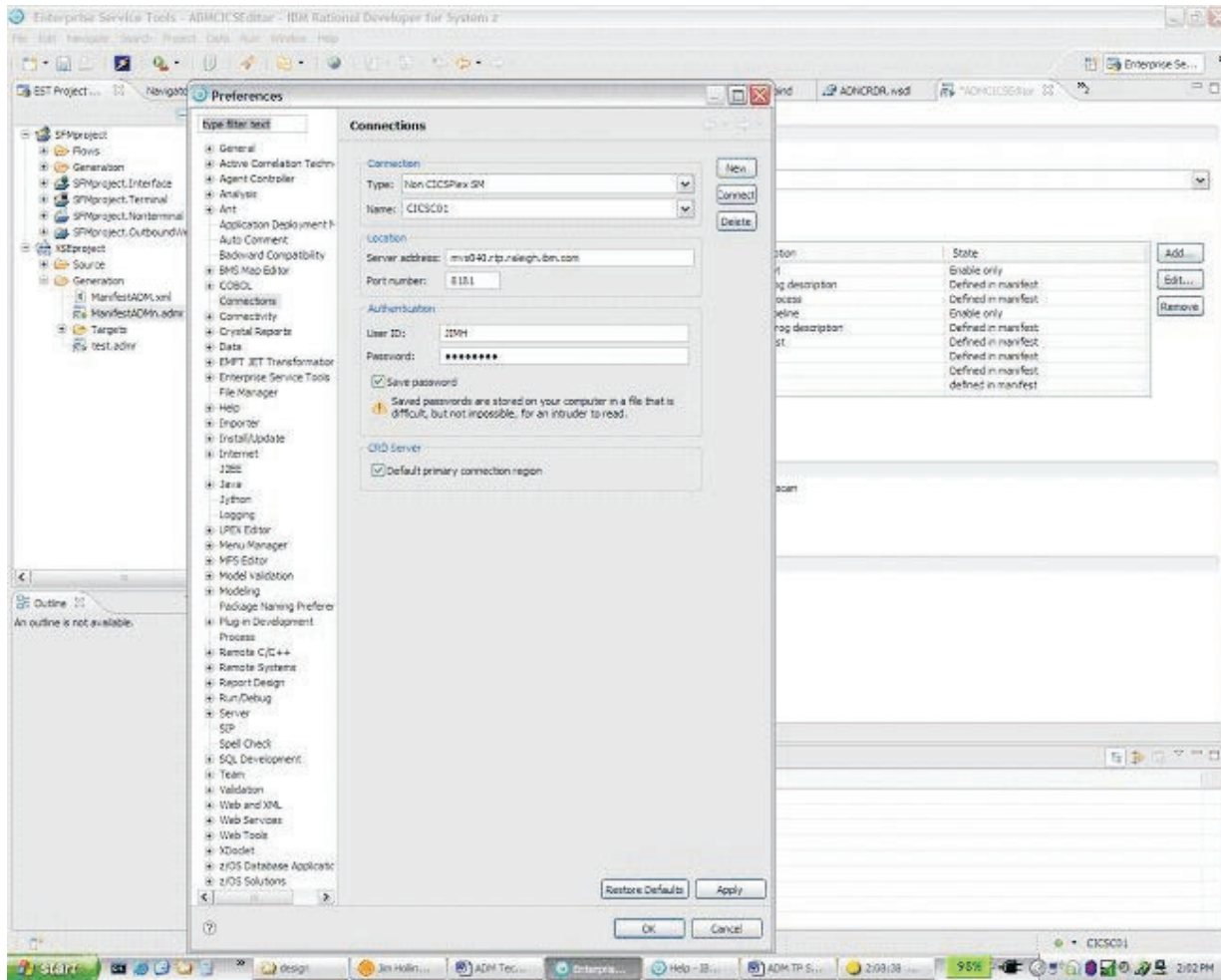
Figure 2. Defining CICS primary connection regions

CICS Resource Definition server customization on the z/OS server

The Application Deployment Manager provides a common deployment approach and deployment API for all Rational Developer for System z components. In addition, Application Deployment Manager provides a Resource Definition editor and (host based) CICS Resource Definition (CRD) server.

CRD server – base host installation steps

The Application Deployment Manager host component is made up of the CRD server, associated CICS resource definitions, Web service bind files, and a sample pipeline message handler. The Application Deployment Manager host component is installed together with the host components of Rational Developer for System z. However, certain customization are necessary. Base customization for the Application Deployment Manager host component is covered in *Rational Developer for System z Host Configuration Guide (SC23-7658), section "Customize Application Deployment Manager"*.

CICS resource install logging

Information about the created resource is logged to the CICS CSDL TD queue which typically points to the CICS MSGUSR DDname.

If CICSPlex SM Business Application Services is used to manage CICS resource definitions the CICSPlex SM EYUPARM BASLOGMSG must be set to (YES)

Security for CRD client API Web services

Some, or all, of these requests should be secured. At a minimum, the update CRD client API commands (update default Web service parameters, default descriptor parameters, and file name to data set name binding) should be secured to prevent all but CICS system programmers from issuing these commands used to set global resource defaults.

The CRD server repository file should be installed with resource-level security that requires update authority. An external security manager (for example, RACF(R)) should be used to define the CICS user IDs that have the proper level of update authorization.

When the SOAP message is received by CICS it is processed by a pipeline. A pipeline is a set of message handlers that are executed in sequence. CICS reads the pipeline configuration file to determine which message handlers should be invoked in the pipeline. A message handler is a program in which you can perform special processing of Web service requests and responses.

Application Deployment Manager provides a sample pipeline configuration file that specifies the invocation of a message handler and a SOAP header processing program. CPIH is the default transaction ID under which an application invoked by a pipeline will run. Typically, CPIH is set for a minimal level of authorization. ADNSMSGH is a sample message handler used to set a new CICS transaction ID as follows:

- ADMD for requests that set Web service and CICS resource defaults. Typically, this is intended for CICS systems programmers and should require a high level of authorization.
- ADMI for requests that define, install, or uninstall CICS resources. This might require a medium level of authorization.
- ADMR for all other requests that retrieve CICS environmental or resource information. This might require a minimal level of authorization.
- ADMS for requests from the Manifest Processing tool for resource install by a system programmer. This should have a high level of authorization intended for use by CICS system programmers.

When the transaction is attached, CICS resource security checking insures that the user ID is authorized to run the transaction ID.

Resource checking is controlled by the RESSEC option in the transaction that is running, the RESSEC system initialization parameter, and for the CRD server, the XPCT system initialization parameter.

Resource checking occurs only if the XPCT system initialization system initialization parameter has a value other than NO and either the RESSEC option in the TRANSACTION definition is YES or the RESSEC system initialization parameter is ALWAYS.

The ADNSMSGH message handler can be modified by the customer (COBOL source is provided). The compilation job must name the module ADNTMSGH in the link edit step. See *Rational Developer for System z Host Configuration Guide (SC23-7658)*, section *"Customize Application Deployment Manager"* for more details.

Application Deployment Manager technology preview – additional CRD server host installation steps

Updated and additional Application Deployment Manager program load and source modules are distributed with the Application Deployment Manager technology preview. Additional batch jobs are provided which install new CICS resource definitions and define and prime the new manifest repository VSAM file.

Before installing the Application Deployment Manager technology preview, if you are a previous user of the CRD server, it is recommended that you save the related customization as described in *"Backing up previously configured files"* in the *Rational Developer for System z Host Configuration Guide (SC23-7658)*.

Copy members
Copy the new and/or updated Application Deployment Manager technology preview members to be customized from the installation directory to a personal library and customize these copies to avoid overwriting them when applying maintenance:
- hlq.SFEKSAMP(ADNMVSAM)
- hlq.SFEKSAMP(ADNMPCSD)
- hlq.SFEKSAMP(ADNJSPAU)
- hlq.SFEKSAMP(ADNSMSGH) - optional

Note: If you customize the ADNTMSGH pipeline message handler, ensure that the customized ADNTMSGH load module is located before any reference to hlq.SFEKLOAD, otherwise the default ADNTMSGH load module will be used.

CICS primary connection region
The CRD server must be defined to the primary connection region. This is the region that will process Web Service requests from Rational Developer for System z.
- Place the Application Deployment Manager load modules hlq.SFEKLOAD(ADNCRDS) and hlq.SFEKLOAD(ADNCRDR) in the CICS RPL concatenation (DD statement DFHRPL) of the CICS primary connection region. It is recommended that you do this by adding the installation data set to the concatenation so that applied maintenance is automatically available to CICS.
- Customize and submit job ADNMPCSD to update the CICS System Definition (CSD) for the CICS primary connection region. Refer to the documentation within ADNMPCSD for customization instructions.
- Use the appropriate CEDA command to install the Application Deployment Manager group for this region, for example: CEDA INSTALL GROUP(ADNPCRGP).

System Programmer Administrative Utility
The ADNJSPAU job must be customized and run in order to provide CICS resource definition attribute default values. Refer to"Customization of the system programmer administrative utility on the z/OS server" on page 14 for detailed customization information.

Note: Before running the ADNJSPAU job, the manifest file must be closed in CICS. For example, after signing on to CICS, enter the following command: `CEMT S FILE(ADNMANF0) CLOSED`

Manifest repository

Customize and submit job ADNMVSAM to allocate and initialize the manifest repository VSAM file. Refer to the documentation within ADNMVSAM for customization instructions. A separate manifest repository must be created for each CICS primary connection region.

Note: This step is only required for customers that export manifests from Rational Developer for System z to be processed by the Manifest Processing tool

Customization of the system programmer administrative utility on the z/OS server

Traditionally, the role of defining resources to CICS has been the domain of the CICS system programmer. There has been a reluctance to allow the application developer to define CICS resources for the following reasons:

- Most CICS resource definitions have many parameters that because of their complexity, interrelationship with other resource definitions, and shop standards require CICS systems programming knowledge to define correctly. Incorrect definitions can cause unexpected results that might impact the entire CICS region.
- Most customer shops provide CICS development and test environments that must be available for shared use by multiple application groups and developers. Many customer shops have Service Level Agreements in place for these environments. Meeting these agreements requires strict control of the environments.

The Rational Developer for System z addresses these issues by allowing the CICS system programmers to control CICS resource definition defaults, and to control the display properties of a CICS resource definition parameter. For example, the CICS system programmer can supply certain CICS resource definition parameters that might not be updated by the application developer. Other CICS resource definition parameters may be updateable, with or without supplied defaults, or the CICS resource definition parameter can be hidden to avoid unnecessary complexity.

Once the application developer is satisfied with the CICS resource definitions they may be installed immediately in the running CICS test environment, or the definitions may be exported in a manifest for further editing and approval by a CICS system programmer. Exported manifests are processed by the Manifest Processing tool.

The system programmer administrative utility provides the following function:
- Provides the CICSPlex name for CICSPlex managed test environments
- Provides the CICSPlex SM staging group name
- Provides the manifest export rule setting
- Provides CICS resource attribute defaults and display permissions
- Provides the CICS VSAM file logical to physical binding used for VSAM file definitions

Input control statements are used to update the CRD server repository for a CICS test environment.

The following general syntax rules apply:

- An asterisk in position 1 indicates a comment line
- A DEFINE command must begin in position 1, followed by a single space, followed by the keyword CPSMNAME, STAGINGGROUPNAME, MANIFESTEXPORTRULE, DSBINDING, DB2TRAN, DOCTEMPLATE, FILE, MAPSET, PROCESSTYPE, PROGRAM, TDQUEUE, or TRANSACTION.
- A keyword value must immediately follow a keyword. No intervening spaces are permitted. The only exception is for display permission keywords UPDATE, PROTECT, and HIDDEN which have no values.
- Keyword values are enclosed within parenthesis
- A keyword and its value must be contained on a single line

The following sample definitions follow the structure of the DFHCSDUP commands as defined in the *CICS Resource Definition Guide (SC34-6430 for CICS TS 3.1 and SC34-6815 for CICS TS 3.2)*. The only difference is the insertion of the following display permission keywords used to group the attribute values into three permission sets.

- UPDATE - attributes following this keyword will be updateable by an application developer using Rational Developer for System z.
- PROTECT - attributes following this keyword will display, but be protected from update by an application developer using Rational Developer for System z.
- HIDDEN - attributes following this keyword will not display, and will be protected from update by an application developer using Rational Developer for System z.

```
*
* CICSPlex SM parameters
*
* If CICSPlex SM Business Application Services (BAS) are used to
* manage CICS resorece definitions, then uncomment the following
* statement and supply the CICSPlex SM name.
* Maximum length is 8 characters.
*
*DEFINE CPSMNAME(name)
*
* If CICSPlex SM Business Application Services (BAS) is used to
* manage CICS resorece definitions and if new resource definitions
* are initially to be associated with a staging group, then
* uncomment the following statement and supply the staging group name.
* Maximum length is 8 characters.
*
*DEFINE STAGINGGROUPNAME(ADMSTAGE)

*
* Manifest export rule
*
* This statement defines the rule for manifest export
* Valid values are:
*   installOnly - application developers can install CICS resource
*                 definitions, manifest export is not allowed
*   exportOnly  - application developers cannot install CICS resource
*                 definitions, manifest must be exported to be
*                 processed by a system programmer
*   both        - application developers can install CICS resource
*                 definitions, manifest can be exported for use by
*                 system programmer
*
```

```
DEFINE MANIFESTEXPORTRULE(installOnly)


*
*    CICS resource definition defaults
*


*
*    DB2TRAN default attributes
*
DEFINE DB2TRAN()
       UPDATE DESCRIPTION()
               ENTRY()
               TRANSID()


*
*    DOCTEMPLATE default attributes
*
DEFINE DOCTEMPLATE()
       UPDATE DESCRIPTION()
               TEMPLATENAME()
               FILE() TSQUEUE() TDQUEUE() PROGRAM() EXITPGM()
               DDNAME(DFHHTML) MEMBERNAME()
               HFSFILE()
               APPENDCRLF(YES) TYPE(EBCDIC)


*
*    File default attributes
*
DEFINE FILE()
       UPDATE  DESCRIPTION()
       PROTECT DSNAME() RLSACCESS(NO) LSRPOOLID(1) STRINGS(1)
               STATUS(ENABLED) OPENTIME(FIRSTREF)
               DISPOSITION(SHARE) DATABUFFERS(2) INDEXBUFFERS(1)
               TABLE(NO) MAXNUMRECS(NOLIMIT) RECORDFORMAT(V) ADD(NO)
               BROWSE(NO) DELETE(NO) READ(YES) UPDATE(NO)
               READINTEG(UNCOMMITTED) DSNSHARING(ALLREQS)
               UPDATEMODEL(LOCKING) LOAD(NO)
               JNLREAD(NONE) JOURNAL(NO)
               JNLSYNCREAD(NO) JNLUPDATE(NO)
               JNLADD(NONE) JNLSYNCWRITE(YES)
               RECOVERY(NONE) FWDRECOVLOG(NO)
               BACKUPTYPE(STATIC)
               PASSWORD() NSRGROUP()
               REMOTESYSTEM() REMOTENAME()
               RECORDSIZE() KEYLENGTH()
               CFDTPOOL() TABLENAME()


*
* Mapset default attributes
*
DEFINE MAPSET()
       UPDATE  DESCRIPTION()
       PROTECT RESIDENT(NO) STATUS(ENABLED)
               USAGE(NORMAL) USELPACOPY(NO)


*
* Processtype default attributes
*
DEFINE PROCESSTYPE()
       UPDATE  DESCRIPTION()
               FILE()
       PROTECT STATUS(ENABLED)
               AUDITLOG() AUDITLEVEL(OFF)


*
* Program default attributes
*
```

```
DEFINE PROGRAM()
      UPDATE  DESCRIPTION()
              CEDF(YES) LANGUAGE(LE370)
      PROTECT API(CICSAPI) CONCURRENCY(QUASIRENT)
              DATALOCATION(ANY) DYNAMIC(NO)
              EXECKEY(USER) EXECUTIONSET(FULLAPI)
              RELOAD(NO) RESIDENT(NO)
              REMOTESYSTEM() REMOTENAME() TRANSID()
              STATUS(ENABLED) USAGE(NORMAL) USELPACOPY(NO)
      HIDDEN JVM(NO) JVMCLASS() JVMPROFILE(DFHJVMPR)


*
* TDQueue default attributes
*
DEFINE TDQUEUE()
      UPDATE  DESCRIPTION()
              TYPE(INTRA)
      PROTECT WAIT(YES) WAITACTION(REJECT)
              REMOTENAME() REMOTESYSTEM() REMOTELENGTH(1)
* Extra partition parameters
              DATABUFFERS(1) DDNAME() DSNAME()
              SYSOUTCLASS() ERROROPTION(IGNORE)
              OPENTIME(INITIAL) REWIND(LEAVE) TYPEFILE(INPUT)
              RECORDSIZE() BLOCKSIZE(0) RECORDFORMAT(UNDEFINED)
              BLOCKFORMAT() PRINTCONTROL() DISPOSITION(SHR)
* Intra partition parameters
              ATIFACILITY(TERMINAL) RECOVSTATUS(NO)
              FACILITYID() TRANSID() TRIGERRLEVEL(1)
              USERID()
* Indirect parameters
              INDIRECTNAME()



*
* Transaction default attributes
*
DEFINE TRANSACTION()
      UPDATE  DESCRIPTION()
              PROGRAM()
              TWASIZE(0)
      PROTECT PARTITIONSET() PROFILE(DFHCICST)
              DYNAMIC(NO) ROUTABLE(NO)
              ISOLATE(YES) STATUS(ENABLED)
              RUNAWAY(SYSTEM) STORAGECLEAR(NO)
              SHUTDOWN(DISABLED)
              TASKDATAKEY(USER) TASKDATALOC(ANY)
              BREXIT() PRIORITY(1) TRANCLASS(DFHTCL00)
              DTIMOUT(NO) RESTART(NO) SPURGE(NO) TPURGE(NO)
              DUMP(YES) TRACE(YES) CONFDATA(NO)
              OTSTIMEOUT(NO) WAIT(YES) WAITTIME(00,00,00)
              ACTION(BACKOUT) INDOUBT(BACKOUT)
              RESSEC(NO) CMDSEC(NO)
              REMOTESYSTEM() REMOTENAME() TRPROF()
              LOCALQ(NO) ALIAS() TASKREQ()
              XTRANID() TPNAME() XTPNAME()



*
* Optional file name to VSAM dataset name bindings
*
* Dataset binding statements may be provided that are used at the
* time of CICS resource definition to provide the physical
* dataset name for the matching file name in the definition.
* DSBINDING maximum length is 8 characters. This is the file name.
```

```
* DSNAME maximum length is 44 characters.
*
*DEFINE DSBINDING() DSNAME()
*DEFINE DSBINDING() DSNAME()
```

Chapter 4. Manifest Processing tool

Customer policy may require a system programmer to install CICS resource definitions. If this is the case then a Rational Developer for system z application developer can define and export CICS resource definitions for the system programmer to install. The system programmer uses the Manifest Processing tool for this purpose.

The Rational Developer for System z Manifest Processing tool is provided as an Eclipse plug-in to the CICS TS Explorer and provides the following function:

- List manifests from a CICS test environment repository. These manifests must have previously been exported by a Rational Developer for System z application developer using the Resource Definition editor.
- Import manifests for processing from a CICS test environment repository
- Update imported manifest resource definitions
- Install imported manifest resource definitions
- Export updated manifests back to the CICS test environment repository

Supported environments

The Manifest Processing tool supports definition of CICS resources in CICS TS 3.1 and 3.2 systems, with or without CPSM.

When CPSM is not installed, the CRD server uses the CICS CREATE SPI command to define and install (and enable) CICS resources. In this case, the CSD is not updated. Therefore, CEDA cannot be used to view the resource definitions. However, CEMT INQUIRE can be used, although it does not display all definition parameters.

CICS resources installed using the CICS CREATE SPI command do NOT survive a CICS cold start. Normally, CICS is warm-started. If CICS is cold started these resources will have to be redefined and installed.

When CPSM is installed, the CPSM Business Application Services (BAS) interface is used to define and install CICS resources. In this case, the CSD is not updated. Therefore, CEDA cannot be used to view the resource definitions. However, both the CEMT INQUIRE and the CPSM BAS interface can be used to view CICS resources. The CPSM BAS interface will list all definition parameters.

CICS resources installed using CPSM BAS update the CPSM repository and do survive a CICS cold start.

CICS resource definition language restrictions

CICS resource names and other alphanumeric resource attributes are usually limited to the characters that are common in all variants of EBCDIC. This does not include bi-directional or DBCS characters. See the *CICS TS Resource Definition Guide (SC34-6430)* for precise information about the valid characters for each resource type and attribute.

CICS region deployment scope

The manifest Processing tool uses a Web service to connect to a CICS TS 3.1 or 3.2 region running the CRD server. CICS resources may be installed in the CRD server region and in other regions according to the following scenarios.

- **CPSM not installed** - The CICS TS 3.1 or 3.2 region running the CRD server has MRO connections to other CICS regions. CICS resources may be installed in these regions using the agent functions of the CRD server. The CRD server program must be installed in the remote regions where it acts as an agent.

- **CPSM installed** - The CICS TS 3.1 or 3.2 region running the CRD server is managed by CICSPlex SM (CPSM). CICS resources may be installed in other CICS regions that are also managed by CPSM. The CPSM BAS interface is used for this purpose.

Manifest Processing tool - supported CICS resource definitions

The following CICS resource definitions are supported by the Manifest Processing tool:

- DB2TRAN
- DOCTEMPLATE
- FILE
- MAPSET
- PROCESSTYPE (intended for use by SFM to enable and disable microflows)
- PROGRAM
- TDQUEUE
- TRANSACTION

Using the Manifest Processing tool

The CICS system programmer uses the Manifest Processing tool to edit and install resources from a manifest, exported from Rational Developer for System z. The Manifest Processing tool is launched by right clicking on the CICS primary connection name in the CICS TS Explorer tree view.

Figure 3 on page 21 shows the Manifest Processing tool main window.
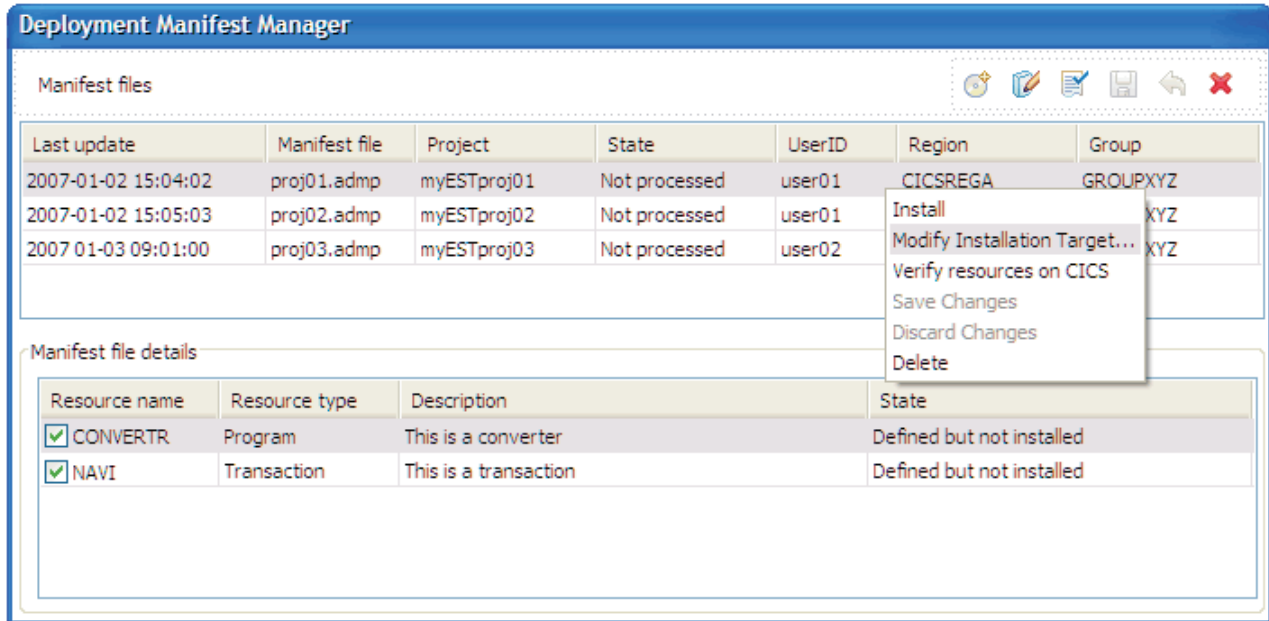
Figure 3. Manifest Processing tool

The Manifest Processing tool main view contains the Manifest files area and the Manifest file details area.

Manifest files area

Manifest files are listed in order by status, date/time, userid, project name, and file name.

Selecting a manifest from the list will cause the manifest to be retrieved from the manifest repository on z/OS and displays the manifest resources at the top of the manifest file details area. When a manifest file is selected the user may right click the selection area to bring up a context menu with the following options:

- Install – installs CICS resources contained in the manifest. Installable resources are DB2Tran, Doctemplate, File, Processtype, Program TD Queue, and Transaction. Following installation Program and Mapset resources are new copied, and scans are performed against Pipeline and Service Flow Repository file resources.

- Save Changes – the manifest file is checked into the manifest repository on z/OS. When a user modifies the installation target and/or edit resource attributes, the changes are stored in the local cache until Save Changes is selected.

- Discard Changes - discards locally made changes.

- Delete – deletes the manifest from the manifest repository on z/OS.

- Verify resources on CICS - check for resources in the target region by the same name. Only those resources with a state listed as defined in manifest or CICS install error will be checked. If an existing resource of the same name and resource type is found, the state will change to existing name in CICS.

- Verify against all connected regions – greater scope then *Verify resources on CICS*. The primary connection region and all active MRO connected regions are checked.

- Modify Installation Target – used to modify the target region or group. The following pop-up is launched:
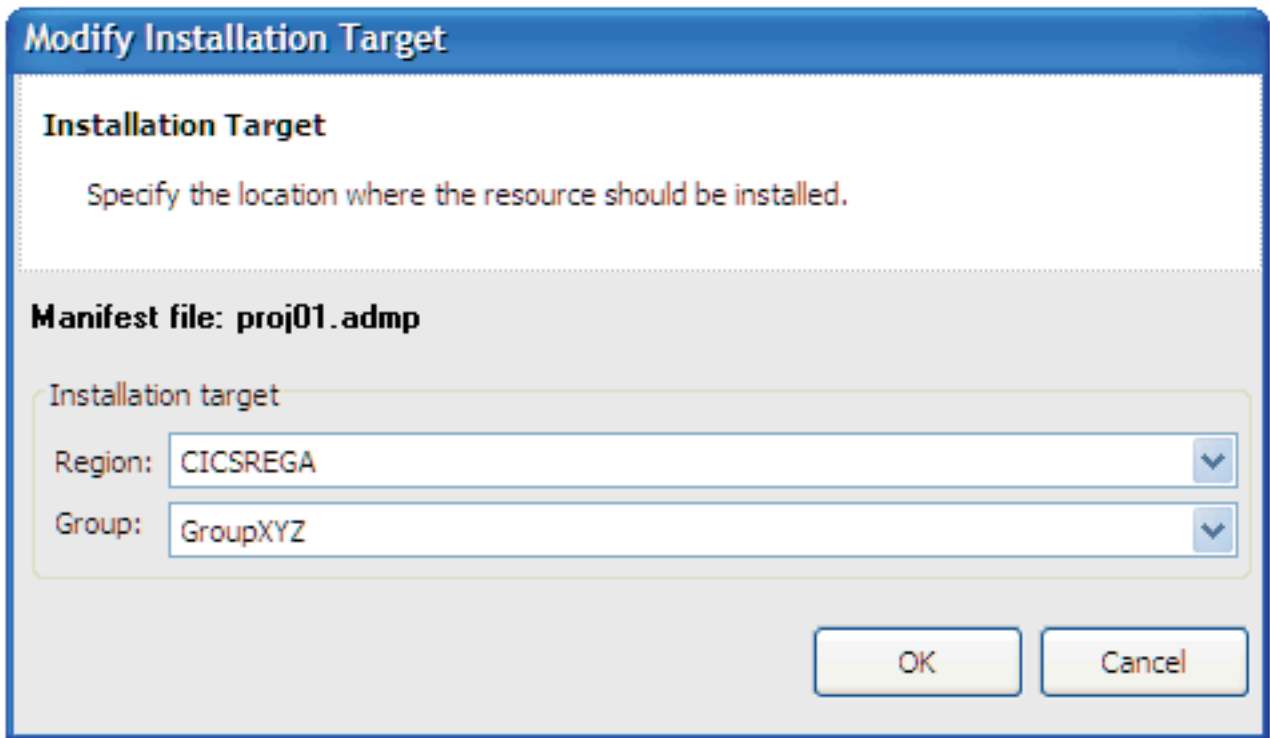
Figure 4. Modify Installation Target

The Region is used to select the target region within the CICS test environment. The dropdown is populated by region names from the CICS test environment.

The Group is used in CICSPlex SM managed systems to indicate the group to associate the installable resources contained in the manifest. The group name displayed is the one set by the System Programmer Administration utility DEFINE STAGINGGROUPNAME control statement. The only valid values are the staging group name or *no group selected*.

Manifest file details area

Each row in the manifest file details area displays information for a single resource. This information includes resource name, resource type, resource description, and resource state.

Checking the selection checkbox for a resource indicates that it should be installed and enabled. It is checked by default. For those resources that have a state of *enable only* it is checked, but grayed out since enable only resources cannot be installed. Un-checking this box allows a user to defer define/install of a resource in CICS, without actually deleting it from the manifest file.
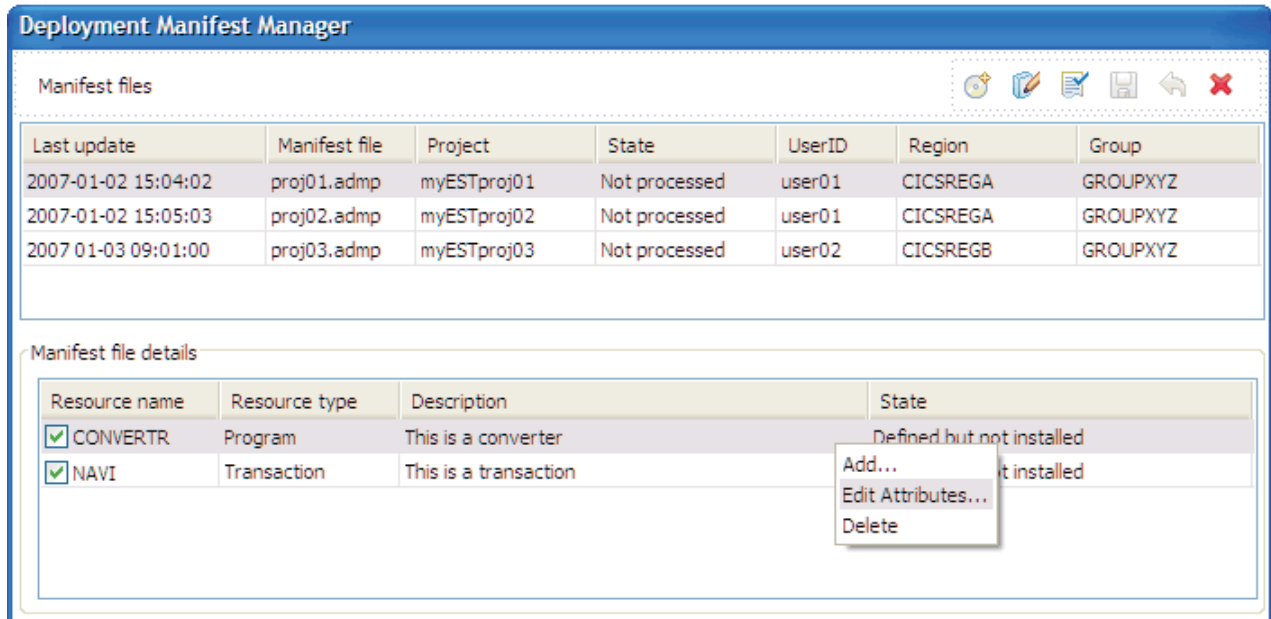
Figure 5. Manifest file details

When a resource is selected the user may right click the selection area to bring up a context menu with the following options:

- Add – launches a pop-up used to add a resource to the manifest
- Delete – deletes a resource from the manifest.

  Note: this does not delete the resource from the CICS region.
- Edit Attributes – launches the following pop-up used to edit the resource attribute values

Edit Attributes

Resource attributes

Edit the resource attributes.

Resource: CONVERTER

Program properties

Program name: GETQUOTD

Description: This is a test program

Resource attributes:

Properties	Value
Language	COBOL
TWAsize	00000
Profile	DFHCICST
Partitionset	
Status	Enabled
Primedsize	00000
Taskdataloc	Below
Taskdatakey	User
Storageclear	No
Runaway	System
Shutdown	Disabled
Isolate	Yes
Brexit	
Remote attributes	
Dynamic	No

OK   Cancel

Figure 6. Resource edit dialog

The Edit Resource dialog appears that allows the user to edit the resource attribute values. Clicking OK saves the resource definition in the manifest.

CICS resource parameter values are governed by rules as specified in the *CICS Resource Definition Guide (SC34-6430)*.

Chapter 5. Messages

Messages are logged to the Application Deployment Manager activity log and optionally to the Eclipse console. The name and location of the Application Deployment Manager activity log can be found by accessing the Application Deployment Manager preferences window.

All Application Deployment Manager messages are of the format WZADnnnnL, where WZAD is the Application Deployment Manager prefix, nnnn is the unique message number, and L is the message level. The message level can have values S for severe errors, E for error, W for warning, and I for informational.

Manifest messages

WZAD0001I Application Deployment Manager has been successfully activated.

Explanation: The Application Deployment Manager plug-in started successfully.

User response: No action is required.

Validation messages

WZAD2001E The dataset or folder <dataset/folder name> does not exist.

Explanation: An error was encountered while performing the specified action.

User response: Verify that the dataset or folder that is being accessed exists on the file system.

WZAD2002E The member or file <member/file name> does not exist.

Explanation: An error was encountered while performing the specified action.

User response: Verify that the dataset member or file that is being accessed exists on the file system.

WZAD2003E The member or file <member/file name> already exists in the dataset/folder <dataset/folder name>.

Explanation: An error was encountered while performing the specified action.

User response: Follow the action in the message prompt. Either use a new member/file name, overwrite the existing one, or skip the current one as instructed in the message prompt.

WZAD2004E An error was encountered while creating the member or file <member/file name> in the dataset/folder <dataset/folder name>.

Explanation: An error was encountered while performing the specified action.

User response: Verify that the file system is not full, that the dataset or folder exists, and that you have permission to create members or files.

WZAD2005E An error was encountered while retrieving the member or file <member/file name> from the dataset/folder <dataset/folder name>.

Explanation: An error was encountered while performing the specified action.

User response: Verify that the dataset or folder exists and that you have permission to read members or files.

Transfer messages

WZAD0002I Attempting to connect to system/region: <system/region name>

Explanation: Connection to the system/region has been initiated.

User response: No action is required.

WZAD0003I Connection successfully established with system/region: <system/region name>.

Explanation: The action listed has been performed.

User response: No action is required.

WZAD0004S Connection failed trying to communicate with system/region: <system/region name>.

Explanation: An error was encountered while performing the specified action.

User response: Verify that the system is active and that server code (CRD, RSE, and so on) is up and running on the remote system/region.

WZAD0005I Sending request: <request name> to system/region: <system/region name>.

Explanation: The action listed is being performed.

User response: No action is required.

WZAD0006I Request: <request name> successfully sent to system/region: <system/region name>.

Explanation: Connection to the system/region has been initiated.

User response: No action is required.

WZAD0007E Unable to send request: <request name> to system/region: <system/region name>.

Explanation: An error was encountered while performing the specified action.

User response: Verify that the system is active and that server code (CRD, RSE, and so on) is up and running on the remote system/region.

WZAD0008S An error was encountered while retrieving deployment system categories.

Explanation: An error was encountered while performing the specified action.

User response: Contact support.

CICSPlex System Manager (CICSPlex SM) return and error codes

The following messages might be logged if the CICSPlex® System Manager is installed to manage CICS® resources. Additional information can be found in the following CICSPlex SM manuals:

CICSPlex SM Application Programming Reference (SC34-6469)

CICSPlex SM Application Programming Guide (SC34-6468)

CICSPlex SM Resource Tables Reference (SC34-6470)

CICSPlex SM return codes:

WZAD1050I CPSM Return code: Ok

Explanation: All CICSPlex SM functions completed normally.

User response: No action is required.

WZAD1051E CPSM Return code: Scheduled

Explanation: The CICSPlex SM command has been scheduled for processing. This condition should not occur.

User response: Contact support.

WZAD1052E CPSM Return code : Not found

Explanation: Either an action or an attribute is not found to be associated with the CICSPlex SM resource table for this resource.

User response: Contact support.

WZAD1053E CPSM Return code: No data

Explanation: A CICSPlex SM Get Object command was issued, but no records were found that matched the specified search criteria.

User response: Verify that that a CICSPlex SM resource definition has not been inadvertently deleted.

WZAD1054E CPSM Return code : Not valid - parameter

Explanation: A CICSPlex SM command was issued and an invalid parameter was detected. The parameter that is invalid is returned as the reason value.

User response: Use the reason code to determine the identity of the parameter.

WZAD1055E CPSM Return code : Failed

Explanation: A CICSPlex SM command failed because of an abend or an exception condition.

User response: Use the reason code to determine if an abend or exception condition occurred.

WZAD1056E CPSM Return code : Environment error

Explanation: A CICSPlex SM command failed because of an environment error for one of the following reasons:

No Service: The application stub program could not load the API service module.

No Storage: The application stub program could not obtain the necessary storage in the address space where the processing thread is running.

Request Time out: One of the CMASs or MASs to which the request was directed did not respond.

Soc Resource: A required resource that is owned by the CMAS is not available.

User response: Use the reason code to determine if a No Service, No Storage, Request Time Out, or Soc Resource condition occurred.

WZAD1057E CPSM Return code : Not permitted

Explanation: A CICSPlex SM command was not permitted for one of the following reasons:

Expired: The security authorization of the specified user ID has expired.

Sign-on parameter: The specified signon parameter is not authorized for the user ID.

UserID: The specified user ID does not have the required security authorization.

User response: Use the reason code to determine if an expired, sign-on parameter, or userid condition occurred.

WZAD1058E CPSM Return code : Busy

Explanation: A CICSPlex SM command failed because the result set specified on the RESULT option is being processed by another command.

User response: Retry the operation. If the condition persists notify support.

WZAD1059E CPSM Return code : Server gone

Explanation: The CMAS to which the processing thread was connected is no longer active.

User response: CMAS may have ended. Retry the operation. If the condition persists notify support.

WZAD1060E CPSM Return code : Not available

Explanation: A not available condition occurred for one of the following reasons:

APITASK: The API control subtask is not active.

CMAS: A CMAS to which the request was directed is not available. CPSMAPI: The CMAS to which the processing thread is connected is not available for API processing.

MAINTPOINT: The maintenance point for the current context is not available.

User response: CMAS may have ended. Retry the operation. If the condition persists notify support.

WZAD1061E CPSM Return code : Not valid version

Explanation: A version conflict occurred for one of the following reasons:

NOTSUPPORTED: The version of the application stub program used for this command is not supported.

NOTVSNCONN: The version of the application stub program used for this command is not the same as the version used with the CONNECT command.

User response: Use the reason code to determine if a NOTSUPPORTED or NOTVSNCONN condition occurred.

WZAD1062E CPSM Return code : Not valid command

Explanation: A CICSPlex SM command was issued and the command is invalid for one of the following reasons:

FILTER: The filter expression passed on the operation is too large or complex.

LENGTH: The total length of all the options on the command exceeds the maximum limit.

User response: Use the reason code to determine if a Filter or Length condition occurred.

WZAD1063E CPSM Return code : Warning

Explanation: A CICSPlex SM command completed processing with a warning, for the following reason:

MAXRECORDS: The number of records added to the result set by a MAS would have exceeded the MAXHISTRECS value for that MAS.

RESULT: During the building of the result set to be used on the command, a non-OK response was received. However some result set records were available and the requested action was successfully performed against them.

During the building of the result set to be used on the command, a non-OK response was received. However some result set records were available and the requested action was attempted.

User response: Use the reason code to determine if a MAXRECORDS, RESULT, or ACTION condition occurred.

WZAD1064E CPSM Return code : Table error

Explanation: A CICSPlex SM command failed because a resource table record is invalid for one of the following reasons:

DATAERROR: The value associated with one or more resource table attributes is invalid. This error can occur if:
– The resource table is missing required attributes, contains one or more conflicting attributes, or is a duplicate.

– A CICS resource definition contains attributes that would cause the EXEC CICS CREATE command to issue warnings.

Use the FEEDBACK command to retrieve additional data about this error.

INVALIDATTR: One of the resource table attributes is invalid. INVALIDVER: The specified version of the resource table is not supported by CICSPlex SM.

User response: Use the reason code to determine if a DATAERROR, INVALIDATTR, or INVALIDVER condition occurred. If a DATAERROR occurred the attributes that caused the error are flagged on the result display window.

WZAD1065E CPSM Return code : Incompatible

Explanation: A CICSPlex SM command failed because the target result set specified on the RESULT option is not compatible with the output of this command. This condition should not occur.

User response: Contact support.

WZAD1066E CPSM Return code : In use

Explanation: A CICSPlex SM DISCARD command failed because an in use condition occurred for one of the following reasons:

FILTER: The specified filter is currently in use and cannot be discarded.

VIEW: The specified view is currently in use and cannot be discarded.

User response: Use the reason code to determine if a FILTER or VIEW condition occurred.

WZAD1067E CPSM Return code : Not valid - data

Explanation: A CICSPlex SM command failed because invalid data was detected. The parameter that contains invalid data is returned as the reason value:

PARM: An attribute value listed in the PARM buffer is not valid for the specified attribute.

CRITERIA: An attribute value listed in the CRITERIA buffer is not valid for the specified attribute.

User response: Use the reason code to determine if a PARM or CRITERIA condition occurred.

WZAD1068E CPSM Return code : Duplicate

Explanation: A CICSPlex SM command failed because the specified view already exists and cannot be built. This condition should not occur.

User response: Contact support.

CICSPlex SM error codes

An attempt to create a CICS resource definition in a CICS system that is managed by CICSPlex SM might fail if the value associated with one or more resource table attributes is invalid. An error can occur for the following reasons:

- The resource table is missing required attributes, contains one or more conflicting attributes, or is a duplicate.
- A CICS resource definition contains attributes that would cause the EXEC CICS CREATE command to issue warnings.

The attributes that caused the error are flagged on the result display window and one of the following messages that interpret the CICSPlex SM error code to provide an explanation for the invalid attributes. In all cases, the action is to correct the invalid attribute value and resubmit the request.

WZAD1100E CPSM Error code: Attribute data not valid

WZAD1101E CPSM Error code: Requested resource not found

WZAD1102E CPSM Error code: Resource already exists

WZAD1103E CPSM Error code: Resource definition already changed

WZAD1104E CPSM Error code: Not valid - resource type

WZAD1105E CPSM Error code: Not valid - resource version

WZAD1106E CPSM Error code: Maintenance point CMAS not available

WZAD1107E CPSM Error code: Context not found

WZAD1108E CPSM Error code: Inconsistent set condition

WZAD1109E CPSM Error code: Resource group not found

WZAD1110E CPSM Error code: Not valid - action

WZAD1111E CPSM Error code: Not valid - record address

WZAD1112E CPSM Error code: Not valid - record length

WZAD1113E CPSM Error code: Different version

WZAD1114E CPSM Error code: Early name list end

WZAD1115E CPSM Error code: Not valid - name list

WZAD1116E CPSM Error code: Not valid - name

WZAD1117E CPSM Error code: Not valid - minor name

WZAD1118E CPSM Error code: Notify

WZAD1119E CPSM Error code: Partial install

WZAD1120E CPSM Error code: Nothing installed

WZAD1121E CPSM Error code: No targets

WZAD1122E CPSM Error code: No related systems

WZAD1123E CPSM Error code: Not valid - target scope

WZAD1124E CPSM Error code: Not valid - related scope

WZAD1125E CPSM Error code: Not valid - usage

WZAD1126E CPSM Error code: Not valid - mode

WZAD1127E CPSM Error code: Not valid - state check

WZAD1128E CPSM Error code: Not valid - force install

WZAD1129E CPSM Error code: Not valid - notify

WZAD1130E CPSM Error code: Not valid - overtype

WZAD1131E CPSM Error code: Not valid - override block

WZAD1132E CPSM Error code: Not valid - override string

WZAD1133E CPSM Error code: Not valid - string terminator

WZAD1134E CPSM Error code: Not valid - embedded terminator

WZAD1135E CPSM Error code: Not valid - attribute

WZAD1136E CPSM Error code: Not valid - literal

WZAD1137E CPSM Error code: Not valid - override string

WZAD1138E CPSM Error code: Scope required

WZAD1139E CPSM Error code: Usage conflict

WZAD1140E CPSM Error code: No definitions selected

WZAD1141E CPSM Error code: More than one related system

WZAD1142E CPSM Error code: Missing related system identifier

CICS response 2 (RESP2) codes

Only selected CICS RESP2 codes are documented in this publication. For additional information refer to the following books:

CICS System Programming Reference (SC34-6435)

CICS Application Programming Reference (SC34-6434)

When an attempt to create a CICS resource definition with an invalid attribute is detected in a CICS system that is not managed by CICSPlex SM the following message is logged.

```
WZAD1424E  CRD Reason code: Not valid - create resource attribute string
```

The attributes that caused the error are flagged on the result display window and the WZAD1424E message might be accompanied by one of the following messages that interpret the CICS RESP2 code to provide an explanation for the invalid attributes. In all cases, the action is to correct the invalid attribute value and resubmit the request.

WZAD1200E CICS RESP2: A required keyword is omitted

WZAD1201E CICS RESP2: One specified keyword requires another one to be specified

---

WZAD1202E CICS RESP2: A keyword occurs more than once

WZAD1203E CICS RESP2: Conflicting keywords are specified

WZAD1204E CICS RESP2: An Not valid - operand is supplied

WZAD1205E CICS RESP2: An operand is supplied for a keyword that does not need one

---

WZAD1206E CICS RESP2: A required operand for a keyword is omitted

---

WZAD1207E CICS RESP2: The operands of two or more keywords conflict with one another

---

WZAD1208E CICS RESP2: The value of the operand of a keyword is too small

---

WZAD1209E CICS RESP2: In the pair of values specified as the operand of a keyword, the second value must not exceed the first

---

WZAD1210E CICS RESP2: The value of the operand must be different from the name of the resource

---

WZAD1211E CICS RESP2: A closing parenthesis has been omitted from the DESCRIPTION keyword

---

CICS Resource Deployment server return codes

Requests processed by the CICS Resource Deployment (CRD) server return one of the following return codes. For the Warning and Error return codes an accompanying reason code is also provided.

WZAD1300I CRD Return code: Ok

WZAD1301W CRD Return code: Warning

WZAD1302E CRD Return code: Error

CICS Resource Deployment server reason codes

WZAD1400E CRD Reason code: Commarea too short for response

Explanation: The communication area passed to the CRD server from the CRD client was too short to contain the response.

User response: Contact support.

WZAD1401E CRD Reason code: Too many items to return

Explanation: There were more array items then could be returned.

User response: Contact support.

WZAD1402E CRD Reason code: Inquire webservice start failure

Explanation: An Inquire Webservice Start command failed.

User response: Retry the operation. If the condition persists contact support.

WZAD1403E CRD Reason code: Inquire webservice next failure

Explanation: An Inquire Webservice Next command failed.

User response: Retry the operation. If the condition persists contact support.

WZAD1404E CRD Reason code: Inquire webservice end failure

Explanation: An Inquire Webservice End command failed.

User response: Retry the operation. If the condition persists contact support.

WZAD1405E CRD Reason code: Inquire pipeline start failure

Explanation: An Inquire Pipeline Start command failed.

User response: Retry the operation. If the condition persists contact support.

WZAD1406E CRD Reason code: Inquire pipeline next failure

Explanation: An Inquire Pipeline Next command failed.

User response: Retry the operation. If the condition persists contact support.

WZAD1407E CRD Reason code: Inquire pipeline end failure

Explanation: An Inquire Pipeline End command failed.

User response: Retry the operation. If the condition persists contact support.

WZAD1408E CRD Reason code: Inquire urimap start failure

Explanation: An Inquire URIMap Start command failed.

User response: Retry the operation. If the condition persists contact support.

WZAD1409E CRD Reason code: Inquire urimap next failure

Explanation: An Inquire URIMap Next command failed.

User response: Retry the operation. If the condition persists contact support.

WZAD1410E CRD Reason code: Inquire urimap end failure

Explanation: An Inquire URIMap End command failed.

User response: Retry the operation. If the condition persists contact support.

WZAD1411E CRD Reason code: Inquire connection start failure

Explanation: An Inquire Connection Start command failed.

User response: Retry the operation. If the condition persists contact support.

WZAD1412E CRD Reason code: Inquire connection next failure

Explanation: An Inquire Connection Next command failed.

User response: Retry the operation. If the condition persists contact support.

WZAD1413E CRD Reason code: Inquire connection end failure

Explanation: An Inquire Connection End command failed.

User response: Retry the operation. If the condition persists contact support.

WZAD1414E CRD Reason code: Validate failure

Explanation: Prior to a resource create and install, an existing resource with the same name was found.

User response: Decide whether to replace the current definition, skip the current definition, retry, skip all definitions for this system, skip all definitions for this category, or stop the entire operation.

WZAD1415E CRD Reason code: Uninstall failure

Explanation: An Uninstall request failed.

User response: Use the accompanying CICS response codes, or the CPSM return, reason, and error codes to determine the cause.

WZAD1416E CRD Reason code: Resource was not found

Explanation: A request to retrieve a CICS resource definition failed because the resource was not found.

User response: Check that the correct resource name and resource type were specified.

WZAD1417E CRD Reason code: Not valid - command type

Explanation: An invalid request type was received by the CRD server from the CRD client. This should not occur.

User response: Contact support.

WZAD1418E CRD Reason code: Read repository file error

Explanation: An attempt to read the CRD repository failed.

User response: Use the accompanying CICS response codes to determine the cause.

WZAD1419E CRD Reason code: Write repository file error

Explanation: An attempt to write to the CRD repository failed.

User response: Use the accompanying CICS response codes to determine the cause.

WZAD1420E CRD Reason code: Rewrite repository file error

Explanation: An attempt to rewrite to the CRD repository failed.

User response: Use the accompanying CICS response codes to determine the cause.

WZAD1421E CRD Reason code: Not valid - artifact type

Explanation: An invalid artifact type was received by the CRD server from the CRD client. This should not occur.

User response: Contact support.

WZAD1422E CRD Reason code: Not valid - logmessage value

Explanation: A Create resource command was issued with an invalid log parameter. This should not occur.

User response: Contact support.

WZAD1423E CRD Reason code: Not valid - executionset value of dplsubset

Explanation: A Create resource command was issued in a program defined with an EXECUTIONSET value of DPLSUBSET. This should not occur.

User response: Contact support.

WZAD1424E CRD Reason code: Not valid - create resource attribute string

Explanation: A Create resource command was issued that contained a syntax error in the ATTRIBUTES string. The attributes that caused the error are flagged on the result display window.

User response: Use the CICS RESP2 code to determine the specific cause for the flagged attribute.

WZAD1425E CRD Reason code: Inquire db2tran failure

Explanation: An Inquire DB2Tran command failed.

User response: Use the CICS RESP and RESP2 codes to determine the cause of the failure.

WZAD1426E CRD Reason code: Inquire doctemplate failure

Explanation: An Inquire Doctemplate command failed.

User response: Use the CICS RESP and RESP2 codes to determine the cause of the failure.

WZAD1427E CRD Reason code: Inquire file failure

Explanation: An Inquire File command failed.

User response: Use the CICS RESP and RESP2 codes to determine the cause of the failure.

WZAD1428E CRD Reason code: Inquire processtype failure

Explanation: An Inquire Processtype command failed.

User response: Use the CICS RESP and RESP2 codes to determine the cause of the failure.

WZAD1429E CRD Reason code: Inquire program failure

Explanation: An Inquire Program command failed.

User response: Use the CICS RESP and RESP2 codes to determine the cause of the failure.

WZAD1430E CRD Reason code: Inquire tdqueue failure

Explanation: An Inquire TD queue command failed.

User response: Use the CICS RESP and RESP2 codes to determine the cause of the failure.

WZAD1431E CRD Reason code: Inquire transaction failure

Explanation: An Inquire Transaction command failed.

User response: Use the CICS RESP and RESP2 codes to determine the cause of the failure.

WZAD1432E CRD Reason code: CPSM connect error

Explanation: A CPSM Connect command failed.

User response: Use the CPSM return, reason, and error codes to determine the cause.

WZAD1433E CRD Reason code: CPSM get object error

Explanation: A CPSM Get Object command failed.

User response: Use the CPSM return, reason, and error codes to determine the cause.

WZAD1434E CRD Reason code: CPSM create error

Explanation: A CPSM Create command failed.

User response: Use the CPSM return, reason, and error codes to determine the cause.

WZAD1435E CRD Reason code: CPSM install error

Explanation: A CPSM Perform Object with Install action command failed.

User response: Use the CPSM return, reason, and error codes to determine the cause.

WZAD1436E CRD Reason code: CPSM delete error

Explanation: A CPSM Delete command failed.

User response: Use the CPSM return, reason, and error codes to determine the cause.

WZAD1437E CRD Reason code: CPSM add resource to group error

Explanation: A CPSM Perform Object with AddtoGroup action command failed.

User response: Use the CPSM return, reason, and error codes to determine the cause.

WZAD1438E CRD Reason code: CPSM remove resource from group error

Explanation: A CPSM Perform Object with Remove action command failed.

User response: Use the CPSM return, reason, and error codes to determine the cause.

WZAD1439E CRD Reason code: ASSIGN FAILURE

Explanation: An Assign command failed.

User response: Use the CICS RESP and RESP2 codes to determine the cause of the failure.

WZAD1440E CRD Reason code: CICS Resource security checking not in effect

Explanation: The check for CICS resource security is no longer performed. This should not occur.

User response: Contact support.

WZAD1441E CRD Reason code: Not valid - attempt to define a CICS transaction with program = CRD server

Explanation: An attempt was made to define a CICS transaction with the program attribute equal to the CRD server program name. This is not allowed.

User response: Change the name of the program.

WZAD1442E CRD Reason code: INQUIRE TCPIPSERVICE FAILURE

Explanation: An Inquire TCPIPService command failed.

User response: Use the CICS RESP and RESP2 codes to determine the cause of the failure.

WZAD1443E CRD Reason code: CPSM FETCH RESOURCE ERROR

Explanation: A CPSM Fetch command failed.

User response: Use the CPSM return, reason, and error codes to determine the cause.

WZAD1444E CRD Reason code: CPSM FEEDBACK ERROR

Explanation: A CPSM Feedback command failed.

User response: Use the CPSM return, reason, and error codes to determine the cause.

WZAD1445E CRD Reason code: Discard ERROR

Explanation: A Discard command failed.

User response: Use the CICS RESP and RESP2 codes to determine the cause of the failure.

WZAD1446E CRD Reason code: CPSM CONNECT AUTHORIZATION ERROR

Explanation: A CPSM Connect command failed because the user ID did not have authorization to issue the command.

User response: Check with the security administrator.

WZAD1447E CRD Reason code: CPSM CICSPLEX NAME NOT IN REPOSITORY

Explanation: CICSPlex SM is installed but the CICSPlex SM name is not in the CRD repository.

User response: The CICS system programmer should use Application Deployment Manager to provide the CICSPlex name to the CRD repository.

WZAD1448E CRD Reason code: CPSM CICS SYSTEM NAME NOT IN TOPOLOGY DATA SPACE

Explanation: CICSPlex SM is installed but the *Applid* field contains a value that is not a valid CICSPlex SM CICS system name because it cannot be found in the CICSPlex SM topology data space.

User response: Correct the name in the *Applid* field.

WZAD1449W CRD Reason code: Same module size after newcopy

Explanation: A request to newcopy a program or mapset was performed, but the new load module size is the same as the old load module size.

User response: Check that the updated program source was compiled and linked to the correct load library. The load module size may be the same and is common when only modifying a single instruction.

WZAD1450E CRD Reason code: The CICS release level does not support the request.

Explanation: Certain requests require function not supported in all levels of CICS.

User response: None.

WZAD1451E CRD Reason code: Inquire library start failure, <resp>.

Explanation: An Inquire Library Start Browse command failed.

User response: Use the accompanying CICS response code to determine the cause. Retry the operation. If the condition persists contact support.

WZAD1452E CRD Reason code: Inquire library next failure, <resp>.

Explanation: An Inquire Library Next command failed.

User response: Use the accompanying CICS response code to determine the cause. Retry the operation. If the condition persists contact support.

WZAD1453E CRD Reason code: Inquire library end failure, <resp>.

Explanation: An Inquire Library End Browse command failed.

User response: Use the accompanying CICS response code to determine the cause. Retry the operation. If the condition persists contact support.

WZAD1454E CRD Reason code: Program abend <abend code>

Explanation: The CRD server has abended.

User response: Contact support and refer to the handle abend code returned with the message.

WZAD1455E CRD Reason code: Program link error, <resp>.

Explanation: A Program Link command failed.

User response: Use the accompanying CICS response code to determine the cause. Retry the operation. If the condition persists contact support.

WZAD1456E CRD Reason code: Inquire resource start failure, <resp>.

Explanation: An Inquire resource Start Browse command failed.

User response: Use the accompanying CICS response code to determine the cause. Retry the operation. If the condition persists contact support.

WZAD1457E CRD Reason code: Inquire resource next failure, <resp>.

Explanation: Use the accompanying CICS response code to determine the cause. An Inquire resource Next command failed.

User response: Use the accompanying CICS response code to determine the cause. Retry the operation. If the condition persists contact support.

WZAD1458E CRD Reason code: Inquire resource end failure, <resp>.

Explanation: An Inquire resource End Browse command failed. Retry the operation. If the condition persists contact support.

User response: Retry the operation. If the condition persists contact support.

WZAD1459E CRD Reason code: Read manifest repository file error, <resp>.

Explanation: An attempt to read the manifest repository failed.

User response: Use the accompanying CICS response code to determine the cause. Retry the operation. Use the accompanying CICS response codes to determine the cause.

WZAD1460E CRD Reason code: Write manifest repository file error, <resp>.

Explanation: An attempt to write to the manifest repository failed.

User response: Use the accompanying CICS response code to determine the cause. Retry the operation. Use the accompanying CICS response codes to determine the cause.

WZAD1461E CRD Reason code: Rewrite manifest repository file error, <resp>.

Explanation: An attempt to rewrite to the manifest repository failed.

User response: Use the accompanying CICS response code to determine the cause. Retry the operation. Use the accompanying CICS response codes to determine the cause.

WZAD1462E CRD Reason code: Inquire manifest repository start failure, <resp>.

Explanation: An Inquire resource Start Browse command failed.

User response: Use the accompanying CICS response code to determine the cause. Retry the operation. If the condition persists contact support.

WZAD1463E CRD Reason code: Inquire manifest repository next failure, <resp>.

Explanation: An Inquire File Next command failed.

User response: Use the accompanying CICS response code to determine the cause. Retry the operation. If the condition persists contact support.

WZAD1464E CRD Reason code: Inquire manifest repository prev failure, <resp>.

Explanation: An Inquire File Prev command failed.

User response: Use the accompanying CICS response code to determine the cause. Retry the operation. If the condition persists contact support.

WZAD1465E CRD Reason code: Inquire manifest repository end failure, <resp>.

Explanation: An Inquire File End Browse command failed.

User response: Use the accompanying CICS response code to determine the cause. Retry the operation. If the condition persists contact support.

WZAD1466E CRD Reason code: Delete manifest repository failure, <resp>.

Explanation: A Delete File command failed.

User response: Use the accompanying CICS response code to determine the cause. Retry the operation. If the condition persists contact support.

WZAD1467W CRD Reason code: Manifest checked out by developer <user ID>

Explanation: A retrieve request was issued for a manifest but it was checked out by a developer.

User response: Request that the developer export the checked out manifest back to the repository and retry the operation.

WZAD1468W CRD Reason code: Manifest checked out by system programmer <user ID>

Explanation: A retrieve request was issued for a manifest but it was checked out by a system programmer.

User response: Request that the system programmer complete processing on the checked out manifest in order to check it back in to the repository, and retry the operation.

WZAD1469W CRD Reason code: Manifest checked out by another system programmer <user ID>

Explanation: A retrieve request was issued for a manifest but it was checked out by another system programmer.

User response: Request that the system programmer complete processing on the checked out manifest in order to check it back in to the repository, and retry the operation.

CICS management tools installation indicators:

The following messages indicate whether CICSPlex SM (CPSM) and/or CICS Configuration Manager (CCM) are installed.

WZAD1500I CPSM Indicator: CPSM Not installed

WZAD1501I CPSM Indicator: CPSM Installed

WZAD1502I CCM Indicator: CCM Not installed

WZAD1503I CCM Indicator: CCM Installed

CICS resource definition authorization indicator

The following messages indicate whether the CICS system programmer has authorized a CICS resource type to be installed.

WZAD1504E CRD Resource Authorization: Not authorized

WZAD1505I CRD Resource Authorization: Authorized

Resource Definition editor messages

The following messages are issued by the Resource Definition editor.

WZAD1600W <resourceName>(<resourceType>) was found already installed on <region>, a phasein will be issued.

Explanation: The named resource was already installed in the CICS region and will not be re-installed. However, a phasein (newcopy) will be issued to refresh the load module.

The refresh is to occur whether or not the module is in use. If it is, the copy or copies in use remain until they are no longer in use, but all requests that occur after the refresh use the new copy.

This message can be issued for a Program or Mapset. They are the only resources that Application Deployment Manager installs that can also be phased in.

User response: Check possible mismatch between the resource definition in the manifest and the installed resource definition.

WZAD1601I <resourceName>(<resourceType>) does not have a naming conflict on <region>

Explanation: The named resource was not found to be installed in the CICS region. It is issued when checking for naming conflicts. This message can be issued for a DB2Tran, Doctemplate, File, Mapset, Processtype, Program, TD Queue, or Transaction.

User response: None.

WZAD1602W <resourceName>(<resourceType>) cannot be <action> because it does not exist on <region>

Explanation: The named resource could not be found in the CICS region. Therefore the action cannot be performed.

For a phasein action this message can be issued for a Program or Mapset.

For a scan action this message can be issued for a Pipeline or Service Flow Repository file.

User response: Check that the correct resource name was specified in the manifest.

WZAD1603I <resourceName>(<resourceType>) was successfully installed on <region>

Explanation: The named resource was successfully installed in the CICS region.

This message can be issued for a DB2Tran, Doctemplate, File, Processtype, TD Queue, or Transaction.

Message WZAD1608I is issued for a Program or Mapset because they can be phased in.

User response: None.

WZAD1604W <resourceName>(<resourceType>) was not successfully installed on <region>

Explanation: The errors were encountered attempting to install the named resource in the CICS region.

This message can be issued for a DB2Tran, Doctemplate, File, Mapset, Processtype, Program, TD Queue, or Transaction.

User response: Double clicking this message in the problem area will open the Resource Definition editor for the named resource where offending resource attributes are flagged.

WZAD1605I <resourceName>(<resourceType>) was successful at performing a <action> on <region>

Explanation: The specified action was successfully performed for the named resource in the CICS region.For a phasein action this message can be issued for a Program or Mapset.

For a scan action this message can be issued for a Pipeline or Service Flow Repository file.

User response: None.

WZAD1606W <resourceName>(<resourceType>) encountered errors during <action> on <region>

Explanation: The errors were encountered attempting to perform the specified action on the named resource in the CICS region.

For a phasein action this message can be issued for a Program or Mapset.

For a scan action this message can be issued for a Pipeline or Service Flow Repository file.

User response: Check any associated messages to determine the problem.

WZAD1607W   <resourceName>(<resourceType>) was found already installed on <region>

Explanation: The named resource was already installed in the CICS region and will not be re-installed. This message can be issued for a DB2Tran, Doctemplate, File, Processtype, TD Queue, or Transaction. Message WZAD1600W is issued for a Program or Mapset because they can be phased in.

User response: Check possible mismatch between the resource definition in the manifest and the installed resource definition.

WZAD1608I <resourceName>(<resourceType>) was successfully installed on <region>, a phasein will be issued.

Explanation: The named resource was successfully installed in the CICS region. This message can be issued for a Mapset or Program.

User response: None.

WZAD1609I Manifest <manifest file name> was successfully exported to <region>

Explanation: The named manifest was successfully exported to the CICS region.

User response: None.

System Programmer Administrative Utility messages

The following messages are issued by the System Programmer Administrative utility. Messages WZAD1803E, contain VSAM status, return, function, and feedback codes. VSAM return, function, and feedback codes are documented in z/OS DFSMS Macro Instructions for Data Sets (SC26-7408). VSAM status codes are as follows:

00 Operation completed successfully

02 Duplicate Key was found

04 Invalid fixed length record

05 The file was created when opened - Successful Completion

07 CLOSE with REEL or NO REWIND executed for non tape dataset.

10 End of File encountered

14 Attempted to READ a relative record outside file boundary

21 Invalid Key - Sequence error

22 Invalid Key - Duplicate Key found

23 Invalid key - No record found

24 Invalid Key - key outside boundary of file.

30 Permanent I/O Error34 Permanent I/O Error - Record outside file boundary

35 OPEN, but file not found

37 OPEN with wrong mode

38 Tried to OPEN a LOCKed file

39 OPEN failed, conflicting file attributes

41 Tried to OPEN a file that is already open

42 Tried to CLOSE a file that is not OPEN

43 Tried to REWRITE without READing a record first

44 Tried to REWRITE a record of a different length

46 Tried to READ beyond End-of-file

47 Tried to READ from a file that was not opened I-O or INPUT

48 Tried to WRITE to a file that was not opened I-O or OUTPUT

49 Tried to DELETE or REWRITE to a file that was not opened I-O

91 Password or authorization failed

92 Logic Error

93 Resource was not available (may be allocated to CICS or another user)

94 Sequential record unavailable or concurrent OPEN error

95 File Information invalid or incomplete

96 No DD statement for the file

97 OPEN successful and file integrity verified

98 File is Locked - OPEN failed

99 Record Locked - record access failed.

WZAD1800I completed successfully on line <last control statement line number>

Explanation: The system programmer administrative utility completed successfully.

User response: None.

WZAD1801W   completed with warnings on line <last control statement line number>

Explanation: The system programmer administrative utility completed with one or more warnings found when processing control statements.

User response: Check other warning messages.

WZAD1802E encountered an error on line <line number>

Explanation: The system programmer administrative utility encountered a severe error.

User response: Check other error messages.

WZAD1803E Repository open error, status=<VSAM status code> RC=<VSAM return code> FC=<VSAM function code> FB=<VSAM feedback code>

Explanation: The system programmer administrative utility encountered a severe error opening the CRD repository.

User response: Check VSAM status, return, function, and feedback codes.

WZAD1804E Unrecognized input record on line <line number>

Explanation: The system programmer administrative utility encountered an unrecognized input control statement.

User response: Check a DEFINE command was followed by a single space, followed by the keyword CPSMNAME, STAGINGGROUPNAME, MANIFESTEXPORTRULE, DSBINDING, DB2TRAN, DOCTEMPLATE, FILE, MAPSET, PROCESSTYPE, PROGRAM, TDQUEUE, or TRANSACTION.

WZAD1805I Processing keyword <keyword> on line <line number>

Explanation: The system programmer administrative utility is processing the DEFINE keyword input control statement.

User response: None.

WZAD1806E Invalid manifest export rule on line <line number>

Explanation: The system programmer administrative utility encountered an invalid manifest export rule.

User response: Check that the MANIFESTEXPORTRULE keyword value is ″installOnly″, ″exportOnly″, or ″both″.

WZAD1807E Missing DSNAME keyword on line <line number>

Explanation: The system programmer administrative utility was processing a DEFINE DSBINDING control statement which is missing the DSNAME keyword.

User response: Check that the DEFINE DSBINDING control statement contains the DSNAME keyword.

WZAD1808W Invalid keyword value for keyword <keyword> on line <line number>

Explanation: The system programmer administrative utility was processing a DEFINE control statement and encountered an invalid value for the named keyword.

User response: Check that the length and value of the named keyword is correct.

WZAD1890W Keyword syntax error on line <line number>

Explanation: The system programmer administrative utility was processing a DEFINE control statement and encountered a syntax error for a keyword or keyword value.

User response: Check that the keyword value is enclosed in parenthesis and immediately follows the keyword. The keyword and keyword value must both be contained on the same line.

WZAD1891E Repository duplicate key write error, status=<VSAM status code> RC=<VSAM return code> FC=<VSAM function code> FB=<VSAM feedback code>

Explanation: The system programmer administrative utility encountered a duplicate key error writing to the CRD repository.

User response: Check VSAM status, return, function, and feedback codes.

WZAD1892E Repository write error, status=<VSAM status code> RC=<VSAM return code> FC=<VSAM function code> FB=<VSAM feedback code>

Explanation: The system programmer administrative utility encountered a severe error writing to the CRD repository.

User response: Check VSAM status, return, function, and feedback codes.

WZAD1893E Repository read error, status=<VSAM status code> RC=<VSAM return code> FC=<VSAM function code> FB=<VSAM feedback code>

Explanation: The system programmer administrative utility encountered a severe error reading from the CRD repository.

User response: Check VSAM status, return, function, and feedback codes.

Build messages

WZAD0009S An error was encountered while retrieving the deployment manifest

Explanation: An error was encountered while performing the specified action.

User response: Verify that the deployment manifest file that is currently being opened had been created by Application Deployment Manager and has not been modified by a process outside of Application Deployment Manager.

WZAD0010S An error was encountered while attempting to create a persistable object from the deployment manifest

Explanation: An error was encountered while performing the specified action.

User response: Verify that newly added contributors to the Application Deployment Manager framework are operational. If they are, contact support and provide this log.

WZAD0011S An error was encountered while creating the interactive deployment page - <cause>

Explanation: An error was encountered while performing the specified action.

User response: Contact support.

WZAD0012S An error was encountered while creating the deployment manifest page - <cause>

Explanation: An error was encountered while performing the specified action.

User response: Contact support.

WZAD0013S An error was encountered while creating the deployment systems page - <cause>

Explanation: An error was encountered while performing the specified action.

User response: Contact support.

WZAD0014S An error was encountered while saving the deployment manifest file. - <cause>

Explanation: An error was encountered while performing the specified action.

User response: Verify that the file system is not full and that you have permission to write to it.

WZAD0015S The object type that was provided as input to the deployment manifest editor is not valid. The object type must implement interface IFileEditorInput

Explanation: An error was encountered while performing the specified action.

User response: Verify that newly added contributors to the Application Deployment Manager framework are operational. If they are, contact support and provide this log.

WZAD0016I The deployment of the manifest has started

Explanation: The action listed is being performed.

User response: No action is required.

WZAD0017I The deployment of the manifest has been completed

Explanation: The action listed has been performed.

User response: No action is required.

WZAD0018E An error was encountered while deploying the manifest - <cause>

Explanation:

User response: Verify that the system is active and that server code (CRD, RSE, and so on) is up and running on the remote system/region.

WZAD0019E The deployment of the manifest could not be completed because the deployment operation was interrupted

Explanation: An error was encountered while performing the specified action.

User response: Verify that the system is active and that server code (CRD, RSE, and so on) is up and running on the remote system/region.

WZAD0020I The existing registry file is being replaced by the newly imported registry.

Explanation: The action listed is being performed.

User response: No action is required.

WZAD0021S An error was encountered while attempting to export the registry to an existing file. Not able to delete the existing registry file. - <cause>

Explanation: An error was encountered while performing the specified action.

User response: Verify that the file system is not full and that you have permission to delete the manifest files from the location where it resides.

WZAD0022I Writing the systems registry to: <file name>

Explanation: The action listed is being performed.

User response: No action is required.

WZAD0023E An error was encountered while creating a duplicate copy of a deployment system. A default deployment system is instead created. - <cause>

Explanation: An error was encountered while performing the specified action.

User response: Verify that newly added contributors to the Application Deployment Manager framework are operational. If they are, contact support and provide this log.

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