AUTOMON/RDO

Technical Reference and Users Guide

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Preface

What this book is about

This book describes how to define and maintain the characteristics of your data processing resources to your CICS system using the AUTOMON/RDO (CICS Resource Definition Online Extended Control) software product. It contains descriptions and explanations of RDO, CEDA, AUTOMON/RDO and the Extended Control features, and various ways to improve CICS with emphasis on the resource definition environment.

Who this book is for

Anyone responsible for managing CICS environments, CICS application development, assisting CICS users, and especially those who will be defining, maintaining, installing, or browsing CICS resources.

To obtain the greatest value from this book you should have a basic understanding of CICS concepts and facilities. Although knowledge of RDO and the CEDA transaction is helpful, it is not necessary in order for you to use AUTOMON/RDO.

How to use this book

This book is an introduction and technical reference guide for the AUTOMON/RDO product. AUTOMON/RDO has extensive online product help built into the software; therefore, it is not necessary to reference this manual during the use of AUTOMON/RDO. The online help facility will also reduce the need to reference the IBM CICS and RDO guides when making resource definitions.

Contents

Contents

Contents

Contents

Contents

Summary of Changes

This is a summary of the changes in AUTOMON/RDO version 4.3. Details of these changes are described throughout this edition of the manual.

- AUTOMON/RDO version 4.3 is supported on CICS Transaction Server (CICS TS) for z/OS version 3 release 1 and higher and CICS Transaction Server for VSE/ESA version 1 release 1. AUTOMON/RDO 4.3 is not supported on CICS releases prior to these versions of CICS TS.

- Support has been added for new CICS RDO resource types which were available with CICS Transaction Server for z/OS version 3.1, 3.2, 4.1, 4.2 and 5.1. The following are the new resource types and the CICS TS version in which they became available:

Resource Type	CICS TS for z/OS Version				
	3.1	3.2	4.1	4.2	5.1
PIPELINE	x	x	x	x	x
URIMAP	x	x	x	x	x
WEBSERVICE	x	x	x	x	x
IPCONN		x	x	x	x
LIBRARY		x	x	x	x
ATOMSERVICE			x	x	x
BUNDLE			x	x	x
JVMSERVER			x	x	x
MQCONN			x	x	x

  The resource type table in chapter 4, Resource Directories, has been updated with these new resource types.

- Several AUTOMON/RDO displays have been added or updated to include the new resource types and new, changed and deleted resource definition attributes. These include :

  - Resource Definition Directories Menu which now uses two screens to display the list of resource types in chapter 4 and chapter 5.

  - Resource Definition Command display for invoking CEDA commands in chapter 3.

  - Resource Definition Displays for new resource types and attribute changes in chapter 5. The CORBASERVICE and URIMAP resource definition displays use multiple screens to display all of their resource attributes.

  - Field Value Limits and User Exit Setup displays of the preference functions in chapter 12.

- The AUTOMON/RDO batch operations processor described in chapter 13 has several updates.

  - New modifiers have been added to the GENSRC, COMPARE and PRINT functions for the new resource types

  - The CICS RELEASE command only accepts release level numbers for the versions of CICS Transaction Server which it supports.

- The RDOCCOBX copybook which provides COMMAREA field definitions for the sample user exit program RDOCEXIT has been updated to support new resource definition record copybooks. The latter are supplied in the product installation library as described in chapter 13 and chapter 14.

- The product password activation process for AUTOMON/RDO z/OS has been changed to use a new procedure which replaces assembly of the STSPASS module in prior releases. This new process is described in detail in the MVS installation steps in chapter 14. The product password activation process for VSE is unchanged and still uses the assembly of the STSPASS module as in prior releases.

- A new section has been added to the the installation instructions in chapter 14 to describe installation of the product on VSE.

- The VSE product installation tape is now available electronically as a VSE virtual tape.

Chapter 1. Introduction

CICS needs information about your systems to operate properly. Information about your environment is presented to CICS as resource definitions. These definitions inform CICS about your programs and transactions, files and data, and your hardware, including terminals, printers, and communications links. Many of these definitions are dependent upon one another. The accuracy of information supplied is critical to the smooth operation of your CICS environment.

IBM introduced the idea of Resource Definitions Online (RDO) at CICS version level 1.6. RDO provides the capability of defining resources online with a specialized CICS transaction named CEDA (including CEDB and CEDC). Using the CEDA transaction, it is possible to define a resource to CICS online. However, IBM does not provide the services needed to easily maintain the CICS environment. The RDO offering by IBM does not provide effective methods for creating, managing, and displaying the resource definitions. Using only RDO from IBM yields only a small gain over resource definitions defined through batch processing for the old macro table generation.

AUTOMON/RDO -- To Better Serve Your Needs

AUTOMON/RDO provides the services you need to manage your CICS resource definitions and your CICS environments effectively and efficiently. AUTOMON/RDO bridges the gap between what IBM offers and what you would expect in today's faster paced GUI type of online operation. CSD file processing by AUTOMON/RDO uses a standard CICS interface to ensure it only updates the CSD through the documented IBM paths of the CEDA transaction.

By using AUTOMON/RDO, you will be able to quickly add, delete, modify, find, display, and move resource definitions online with ease. Managing even very large systems is easy because AUTOMON/RDO provides directories built and maintained dynamically while you use the product. These directories give you immediate access and cross references to requested information. Information such as duplicate definitions, transactions associated with a program, all programs that end in specified character, or any other combinations of information are readily displayed.

As systems grow, they become more complex and the amount of information that must be retained about their operation increases. The more organized and documented the resource definitions are, the less it costs to maintain them. AUTOMON/RDO introduces ways to easily document your work. Although RDO support in CICS Transaction Server releases gives you a short description field, it is limited to just 58 characters. And for those of you operating release levels prior to CICS MVS/ESA 3.1 or CICS Transaction Server for VSE/ESA 1.1, there was no description field in RDO. AUTOMON/RDO solves this problem by providing the standard 58 character descriptive field for all releases of CICS and a new 720 character documentation area for each definition.

Through the AUTOMON/RDO pop-up window techniques it is easy for you to keep the documentation current. When you want to read or update documentation about a definition, you press a key and a pop-up window displays it on your screen. It is displayed where you can still see important information about the definition; therefore, making it easy for you to read and update the documentation.

Structure of AUTOMON/RDO Makes It Effective

AUTOMON/RDO provides an interface with RDO which allows resources to be managed through temporary directories. From the displays of any of the directories, familiar CEDA commands may be issued directly to access resource definitions and perform functions. Multiple resource definitions may be selected and commands issued from the directory for any number of operations. The resource definitions are sequentially processed as each action is completed. AUTOMON/RDO displays all resource characteristics or attributes on screens that make it easy to view and complete definitions. Since AUTOMON/RDO passes all operations to the CEDA transaction for actual update processing, AUTOMON/RDO upholds the same integrity and reliability of RDO. AUTOMON/RDO users quickly discover the benefits of enhanced capabilities.

Cross checks are easily made to find associations between such resources as programs and transactions, profiles and transactions, or terminals and typeterms. Resource definitions may be quickly located, sorted and browsed to determine if an existing resource definition can be modified, or copies made for new users--or deleted due to obsolescence. Using directories and search facilities of AUTOMON/RDO, the proliferation of duplicate definitions can be halted and existing duplicates removed.

Searches and queries employ masking techniques enabling you to quickly find and display the information you need about your CICS environment. Easy to read directory displays presented by AUTOMON/RDO help eliminate many of the common problems associated with the accidental overlay of production definitions during installs. Application programmers requesting information about definitions can easily find their own answers without disrupting the work of others. AUTOMON/RDO eases the tasks associated with CICS resource definitions.

By assigning field value limits, you can secure any attribute of a resource, allowing it to be modified only by authorized personnel. You can protect attributes or hide them altogether where desired.

Central Point of Control for Your CICS Environment

The sheer number of resources on a system can be overwhelming--and many data processing environments run multiple systems. AUTOMON/RDO allows the user to access and maintain definitions on remote systems from the local system. This gives an advantage of having the CICS environment organized as multiple systems, but accessed through a central point of control. AUTOMON/RDO provides online importing of resources from one system to another, including the documentation.

Five types of connection protocol are supported with this release of AUTOMON/RDO.

1). Multiple Region Operation (MRO)
2). Inter-System Communication (ISC)
3). Front-end Processing Interface (FEPI)
4). TSO interface using EXCI Distributed Program Link (MVS).
5). Batch interface using EXCI Distributed Program Link.

Using any of the first four of these protocols the operator can remain logged on to one CICS system and connect directly to a remote CICS system to perform any type of maintenance to the CSD of the remote system. In addition, the operator can remain logged on to the home system and perform Install commands, designating one or more remote systems as the target for the Install.

Resources and commands can be easily routed from one CICS system to another with the powerful EXPORT feature. A queue of commands can be shipped to up to 64 target systems in one operation.

Likewise, resources can be imported online, either with COPY commands or directory picking.

Using the batch interface, resources can be exported or installed in one or more CICS regions from a batch program. A special feature of the batch interface allows CEMT commands to be routed as well. This can be a useful feature for opening and closing online files during batch processing.

Online Help -- When and Where You Need It

Maintaining the actual resource definition is a monumental task since the typical CEDA user faces managing a dozen different types of resources with over four hundred attributes. Even the most experienced user can easily forget the meaning of a particular attribute mnemonic, much less all its possible values or uses. AUTOMON/RDO provides instant online reference at the press of a key for resource attributes. Less experienced users will be able to quickly learn the CICS resource definitions process because of the intuitive design and extensive online help provided by AUTOMON/RDO.

AUTOMON/RDO pop-up help windows provide immediate answers. When definitions are being created or modified the need to know the valid entries cannot be left to chance. AUTOMON/RDO resource definition screens are arranged so you see the complete definition on one screen for most resource types. Some resource types require multiple screens because of the number of attributes required for the resource definition. Help is available for each field of every definition. When you press the help key, you are presented with a help window that contains an explanation of the field and the valid entries. "Copy and Paste" may be used to automatically move the valid entry directly from the help window to the definition field. General help is also available either through an open help window, the pressing of the help key at the screen level, or on command.

Organizing resources

The sheer number of resources on a typical system makes maintaining resources difficult under a command line facility such as CEDA. AUTOMON/RDO allows the user to organize resources into manageable directories, to weed out proliferating duplicate resource definitions, and to cross check the associations between programs and transactions, profiles and transactions, or terminals and typeterms. Resource definitions may be quickly located, sorted and browsed to determine if an existing resource definition can be modified or copied for new uses--or deleted due to obsolescence.

Documenting resources

One cause of the overwhelming number of resource definitions is it is often more difficult to find a current resource and determine its purpose than it is to simply create a new one. Moreover, definitions are often created for temporary needs but remain in the system permanently because no one dares delete a resource they can't identify. The description field in RDO support with CICS Transaction Server helps, but is not long enough to adequately document a resources use and purpose and, moreover, the resource must be accessed in order to view the description. AUTOMON/RDO allows the user to view the description in the directory to quickly identify the resource. Additionally, AUTOMON/RDO provides a facility to fully document a resource definition. This documentation is also conveniently accessible from the directory for each resource definition.

Importing resources

As mentioned above, the sheer number of resources on a system can be overwhelming--and many data processing environments run multiple systems. This can be an advantage, however, as AUTOMON/RDO allows the user to access resource definitions on remote systems in addition to the local system. Resources may be imported from system to system, including the documentation. Moreover, remote resource definitions may be managed from a single system, if desired.

Exporting resources

The EXPORT feature provides a convenient and powerful online ability to move resources from a local CICS system to one or more (up to 64) remote regions in a single operation. Through the use of the Export Copy command, resources can be selected from the local region by List, Group, Masked group, Masked resource or individual resource. Selected resources are converted to CEDA Define statements and stored in a queue of commands, where they can be examined and modified, if need be, before execution. Additional commands may be added to the queue if desired, and backout queues can be generated in the event a set of commands needs to be reversed.

When the operator is ready, target CICS systems are entered and the queue is executed. Targets must be connected CICS systems, either with MRO, ISC or FEPI. A target can also be the local CICS system. All selected resources are shipped to each target consecutively. If errors occur, these are returned to the operator in popup windows.

Command queues can be saved, along with any associated errors, and recalled later for modification or execution. Control identifiers and descriptions may be added to more easily manage the operation. A queue can be shipped to another target to be executed at that site, if desired. Queues can be printed, copied and deleted in batch mode. They can even be unloaded to a sequential file or PDS member for input to DFHCSDUP. Finally, command queues can be created in batch and executed online.

Security for export can be as demanding or forgiving as you choose. Through the use of secured queues, administrator and supervisor transaction codes and queue approval choices, you can ensure that only authorized personnel can perform an export, and a command queue to be exported is examined by more than one person before execution.

Change Management

Change management is easy with AUTOMON/RDO, and it doesn't force you into a mode of operation that is uncomfortable or awkward. You decide how to control resource changes in your environment, using either of two facilities for securing access to a CSD:

1). User Access Matrix — These definition tools in the Preference facility provide methods of securing groups and commands to designated personnel, thereby allowing limited access to CSD updates. Application programmers, for instance, could be allowed to do maintenance on test groups, but systems programming would be required to move those groups to production.

2). Export Control Queues — Through the use of the Export function, programmers can create queues of CEDA commands to be executed, but systems personnel would be required to examine and approve a queue before it can be executed. These command queues can be integrated into a complex control system, if desired, where control queues are reported, moved from one system to another, approved, executed either online or in batch, and the results returned to the originator.

Message Audit Reporting System (MARS)

Included in AUTOMON/RDO is a feature to capture any or all CICS system messages for display in the Audit Trail History file or print in batch mode. MARS can be tailored to capture only the messages from CEDA that pertain to CSD modifications, all CEDA messages, or selected CICS message queues such as the master terminal log or terminal error log. Message queues can be routed to multiple history files, if desired.

The History display operates at two levels. You can display all messages in chronological order, easily positioning in the file to a particular date and time, and you can scan the entire file for character strings, group names, user or terminal Ids. In addition, all CEDA modification messages that pertain to a particular resource are automatically indexed to be retrieved and displayed in a window while that resource is being viewed.

TSO Interface

MVS users can access AUTOMON/RDO directly from TSO without logging on to CICS. The TSO interface uses the EXCI DPL call that is available in CICS Transaction Server. Once connected to a CICS Transaction Server system from TSO, you can use the CONNECT command to link to any other CICS Transaction Server system.

Powerful Batch Functions

The batch processor of AUTOMON/RDO provides many command functions that can be performed to control and maintain your CICS resource environment. These are:

1). Select resource(s) and generate CEDA commands from them.

2). Print, archive and/or purge the audit trail history.

3). Locate resource duplicates.

4). Print report of resources in the CSD.

5). Compare resources in the same or different CSD files.

6). Print, copy, delete or unload export control queues.

7). Locate and print a report of all duplicate resource.

8). Export resources from batch to one or more CICS regions.

9). Install resources in one or more CICS regions.

10). Route CEMT commands to one or more CICS regions.

Chapter 2. Using AUTOMON/RDO

On-line help

Using AUTOMON/RDO you can interactively define resources; modify or delete those definitions; check and browse them; and search, locate, and display definitions types in the form of directories. During any of these functions, especially while defining resources, you may occasionally have questions. You can use this reference guide or any of the IBM Resource Definition (Online) guides to find your answers.

You will find it easier and more productive to press the HELP key of AUTOMON/RDO (by default PF1) and get an immediate response in the form of online help. This chapter introduces you to the online help features of AUTOMON/RDO. It is located first in the book because you may be ready to start using AUTOMON/RDO and want to proceed without reading this entire book. AUTOMON/RDO, with its online help facilities, will accommodate you and let you get started quickly and give you answers at every level of operation.

How to obtain help

Extensive on-line help is provided with AUTOMON/RDO, including general help on the AUTOMON/RDO product, extended help on the purpose and features of each display, specific help for each field and action, and descriptions of all CEDA resource attributes. Help is obtained at any time by pressing the Help key, PF1 (unless redefined during customization). Pressing the help key while the cursor is located in a field will invoke the help display associated with the field. If the help key is pressed with the cursor outside of an input field, screen level help describing the purpose and features of the current screen will be displayed.

Selecting the Extended help option from the Help pull down menu on the Action Bar will also access screen level help.

Certain conventions are followed throughout AUTOMON/RDO to allow you to quickly recognize how to proceed in help. Topical help, including screen level displays and help of a general nature, have a title centered on a full screen display in a yellow banner on terminals that support extended attributes. At the bottom of the screen, instructions on how to use help at that point are provided in pink reverse video, including a listing of 'More' topical help that is available and access to the Help Index.

The Help Index, which may also be accessed by selecting the Help Index option from the Help pull-down menu on the Action Bar, allows you to quickly find help on any topic in AUTOMON/RDO. The Help Index contains a glossary of terms and topics, highlighted in green text throughout AUTOMON/RDO help which may be selected for quick reference by tabbing to the text and pressing ENTER. The Help Index displays these topics in a convenient, alphabetic format.

Types of help

The help displayed in AUTOMON/RDO depends on the method used to access help:

1. Screen Level Help — This help pertains to the general function of the screen and its operation. Screen level help may be accessed by moving the cursor outside of all fields and pressing the designated Help key, PF1.

2. Field Level Help — This is more specific help, identifying the field, its commands, and other pertinent information regarding its function. Field level help is obtained by pressing the designated Help key, PF1, while within the field for which help is desired.

3. Nested Help — Help is designed to provide you with the most important information first. A bright field within a help display indicates more detailed information or help is available. When the highlighted field is tabbed to and the ENTER key pressed additional help is displayed. Nested help may be exited one window at a time by pressing PF3, or the entire Help process may be terminated by pressing the CLEAR key.

4. Chained Help — Many help windows are chained together. Successive help may be obtained by pressing PF8 (forward key) to proceed to the next help window or PF7 (backward key) to return to the previous help window. The entire Help process may be terminated by pressing the CLEAR key.

Cut and Paste from Help Windows

Any time a help window is displayed, information in that window can be transferred to the current AUTOMON/RDO screen field. This is accomplished by positioning the cursor on the desired word in the help text, then pressing the Paste key (PF4). The word will return to the field on the screen where the cursor was positioned when the help key was pressed. Modified-data-tag is set on for the pasted word, just as if the operator keyed it on the screen.

Many help windows have mnemonics values or other text highlighted with tab positions so the operator can easily Tab to the word and paste it into the screen field. The absence of a tab position does not mean a word can’t be pasted, however. Simply use the cursor movement arrows to position the cursor, and then press the Paste key.

The only restriction on cut and paste from help concerns protected fields. If the cursor was positioned on a protected screen field when the help key was pressed, Paste will not overlay the data at that position.

Performing Actions in AUTOMON/RDO

Menu Driven Actions

AUTOMON/RDO is menu driven to provide you with an effective way to use the functions and features of the product. As described earlier, help is available for each screen and each field. There are several methods available in selecting the desired action from a menu. Actions may be invoked by command, PF key, or tabbing to the selection and pressing the enter key. In addition, each screen has an action bar from which various options are available.

AUTOMON/RDO also allows you to initiate certain actions by tabbing to the unprotected text and pressing ENTER. This method is most evident on the Primary Menu and in Help.

The Action Bar

The Action Bar, which appears at the top of each panel, provides quick and convenient access to the various options available for that panel. Each option produces a pull-down menu listing the various actions that may be performed, including an escape option. No action is performed except from the pull down menu, so you may browse through the options without risk of altering your transaction. The Action Bar may be accessed by tabbing to the command line ____ or by moving the cursor to the desired option.

The pull-down menus may be accessed by typing one letter (usually the first) of the menu heading, by tabbing to the selection, or by positioning the cursor anywhere on the keyword and pressing ENTER.

The Action Bar Command Line provides a fast path method for utilizing the Action Bar. The first letter of each pull-down menu or, in some cases, the letter in parenthesis is a mnemonic for selecting the pull-down menu. For example, typing H in the Action Bar command line causes the Help pull-down menu to appear. Note that if a pull-down menu heading contains a letter enclosed in parenthesis, which is the letter to be type in the action bar command line to pull down the menu.

Actions may be invoked by following the mnemonic with the letter of the action from the pull-down menu, entering H1, for example, invokes the help pull-down menu action 1, 'How to get help...' F12 cancels the Action Bar selection. No action is effected. The cursor will be returned to its previous location.

PF Keys

PF keys are another method of invoking actions in AUTOMON/RDO. A prompt is displayed at the bottom of each screen containing the PF key assignments for the screen. The prompt is not always exhaustive. A complete list of PF key assignments can be obtained by pressing the Keys PF key, PF2 (unless altered by customization). A popup window will appear displaying PF key assignments for the screen. These assignments are also listed to the right of menu items to facilitate learning to use the PF keys. While the keys popup window is displayed, any PF key pressed will perform the action described in the window.

The PF key assignments are fully customizable. See *Chapter 12 - Customization*, for details.

Directory Commands

AUTOMON/RDO displays directories of all the various resource types in RDO. There are permanent directories and temporary directories. Every directory contains a command field as the first field of each item line.

Any valid AUTOMON/RDO command can be entered in a directory command field, which will perform the requested action for the resource listed on that line. Multiple commands may be entered, in which case the command will be performed consecutively for each selected resource.

When all commands entered from a directory are exhausted, control returns to the directory display where the commands were entered.

Exiting

There are two methods of exiting in AUTOMON/RDO. To exit from any point to the primary menu, select 'Exit transaction' from the Exit pulldown menu and press ENTER, or press the PF Key assigned the Exit transaction function (PF15 by default). The second method is to enter X2 (Exit pulldown menu, option 2, Exit transaction) in the Action Bar command line. PF3 at the primary menu will exit the transaction to a clear screen.

To exit to the previous screen, select the Exit option from the Exit pulldown menu and press ENTER, or press the PF Key (PF3 by default) assigned to the function. Since AUTOMON/RDO is hierarchical and menu driven, performing exit operations will always return to the previous level, eventually to the Primary Menu.

The Supplemental File to DFHCSD

AUTOMON/RDO maintains a VSAM file for storing information related to the resource data in the CSD. The CICS name of the file is RDO$FIL. It does not mirror the CSD. That is, it does not contain a record for every resource present in the CSD. Whenever supplemental data is created, however, it will be stored in RDO$FIL using a VSAM key that relates it to the resource in the CSD.

Some information is pre-loaded into the supplemental file at installation. This would be screen display records, help text and preset Preference records. All remaining data in the supplemental file is dynamic, created as the product is used.

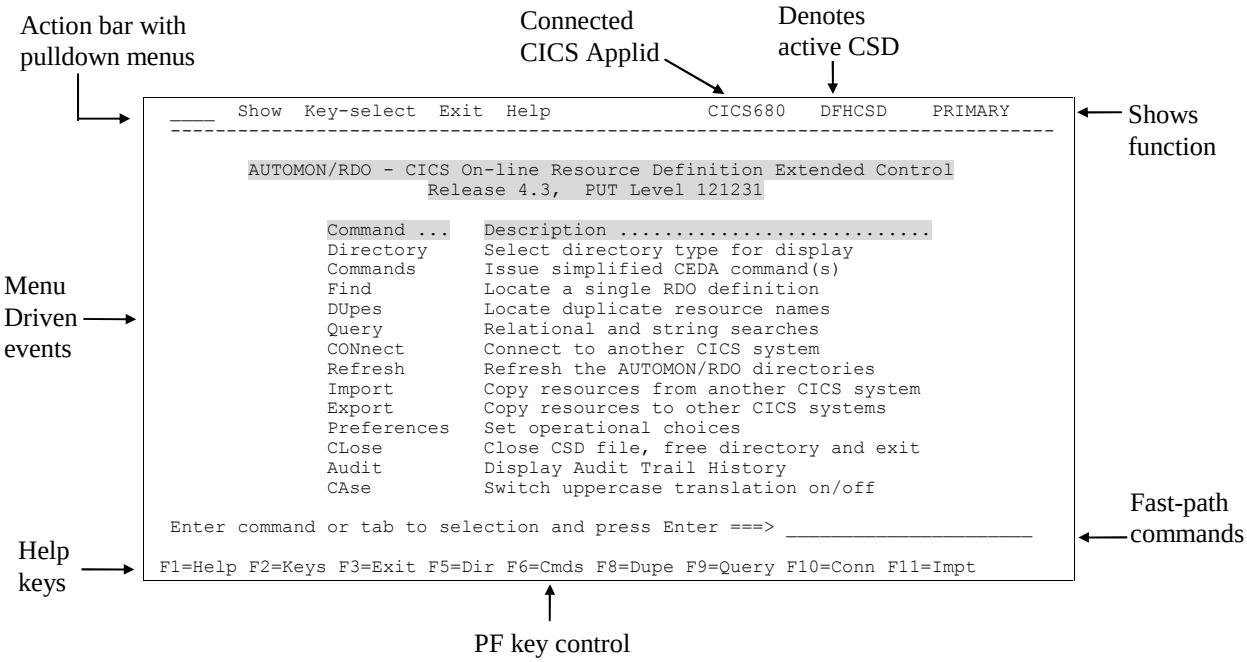
Each record type contains an alpha or numeric character as the first byte of the record to identify its type. The following table illustrates the various record types in RDO$FIL and their associated identifiers:

Identifier	Record Type
A	Audit trail history records
C	Export queue name control records.
E	Export error messages.
Q	Export queue records.
R	Documentation/description records
S	Screen display records
X	Resource history index records
Z	Preference records
0 - 9	Help records

The Primary Menu

To invoke AUTOMON/RDO, from a clear screen key one of the three standard transactions which invoke AUTOMON/RDO: RDOC, RDOI, or RDON. Other transaction codes may be available depending on what the AUTOMON/RDO administrator has defined. The transaction entered determines which operations an AUTOMON/RDO user may access. RDOC is the primary transaction and provides access to all operations. It will invoke the CEDA transaction to perform CSD alterations. RDOI uses the RDO transaction CEDB, which allows all operations except INSTALL. The RDON transaction utilizes CEDC, which does not allow any form of update operation to be performed against the DFHCSD or installation of resources. For convenience, this manual uses the RDOC transaction in all examples.

Once the appropriate transaction is keyed, press ENTER to invoke the Primary Menu:



The Primary Menu is the gateway to the various features of the AUTOMON/RDO product, accessed by selecting options on the menu.

There are four methods of selection from the Primary Menu:

1. Tab to the command selection and press Enter

   or

2. Press the command's corresponding PF key

   or

3. Enter the command or mnemonic on the command line (see the topic *Command Line Operation* later in this chapter)

   or

4. Select the option from the Key Select pulldown menu.

The following table summarizes the options available on the Primary Menu:

Command	Function	Mnemonic	Key
Directory	*Select directory type for display*	D	PF5
Commands	*Issue simplified CEDA commands*	C	PF6
Find	*Locate a single RDO definition*	F	PF7
Dupes	*Locate duplicate resource names*	DU	PF8
Query	*Relational and string searches*	Q	PF9
Connect	*Connect RDO file of another CICS system*	CON	PF10
Refresh	*Refresh the RDO directory*	R	N/A
Import	*Import resources from another CICS system*	I	PF11
Export	*Export resources to another CICS system*	E	
Preferences	*Customize AUTOMON/RDO*	P	PF13
Close	*Close DFHCSD file, free directory and exit*	CL	N/A
Audit	*Display the full audit history file*	A	PF12
Case	*Set uppercase translation off or on*	CA	PF14

Options on the Primary Menu

Directory — This selection displays the Directory menu, which lists all available resource type directories. From there you may select one or more directories to be displayed and optionally qualify the display with a selection mask. From any directory you may pick a specific resource and enter a CEDA command to be performed. You may also update the resource descriptions from the directory if desired.

Commands — This selection will display the Commands menu, which lists all resource types and allows you to enter a CEDA command along with a resource name and optional group. Depending on the command chosen, you may be presented with a display of that resource for further input.

Find — Find is a quick retrieval and display of a resource when the resource name, type or group is known. After selecting a FIND, you will be prompted for resource name, type and group. If group is not entered, the group name of the first matching resource in the directory is used.

Dupes — This selection displays a pop-up window offering four different types of duplicate resource name searches to be performed in the directory. Once executed, a Dupes command creates a Dupes directory with the results of the search. This directory can then be displayed at any time from the directory menu. Each time Dupes is performed, a new Dupes directory is created and the old one discarded. Dupes directories are associated with the terminal and are discarded at transaction end.

Queries — This selection will display the Query menu, which offers a number of different types of searches that can be performed on the DFHCSD file. Once executed, a Query command creates a Query directory with the results of the search. This directory can then be displayed at any time from the directory menu. Each time Query is performed, a new query directory is created and the old one discarded. Query directories are associated with the terminal and are discarded at transaction end.

Connect

This option connects AUTOMON/RDO to another CICS region. You must be operating with FEPI, MRO or ISC to use the Connect command. Upon making this selection you will be prompted for the remote system identifier of the system to be connected.

Refresh

This selection will rebuild the AUTOMON/RDO in-memory directory from the DFHCSD file. There are two reasons for doing this:

1) CEDA has been used independently from AUTOMON/RDO to add or delete records in DFHCSD.

2) A system malfunction has caused the directory to be inconsistent with the DFHCSD file

[Note]. If Administrator transaction codes are coded in the General Preferences display, only an administrator can perform a Refresh command.

Import

Import allows you to copy the resource definitions from a remote CICS DFHCSD file to the local CSD file. When this option is selected, a pop-up window will appear requesting the name of the remote DFHCSD from which resource definitions will be imported, and, optionally, the name of the AUTOMON/RDO supplemental file containing resource definition descriptions and documentation.

The remote CSD will be accessed similarly to the local CSD; resources may be selected by type and mask, relational queries performed and resources located through the AUTOMON/RDO interface. However, the remote CSD may not be altered; only view and copy operations may be performed against it. When all actions against the remote DFHCSD are complete, select the 'Close' option, which replaces the 'Import' option on the menu, to return the local DFHCSD file.

Export

Export provides a method of creating a queue of CEDA commands, which can then be shipped to one or more targets. A target can be the local CICS system (where the Export queue is created) or a remote system, connected through MRO, ISC or FEPI.

To perform an export, you must first create a Temporary queue. This is done by selecting one or more of the command-input choices on the left side of the export menu. Each of these will produce a popup window that looks the same as the windows used for direct CSD maintenance. After entering all required fields of the window, a complete CEDA command is created for that operation and added to the temporary queue.

You can also select resources from the local region. With this option, all resources in the local region which match the selection criteria (List, group, masked group, masked resources, and individual resource) are retrieved from the CSD and formatted into DEFINE commands, then stored in the queue. A Copy-List command will also generate the necessary REMOVE and ADD statements to rebuild the list at the target location.

Preferences

The Preferences display allows you to customize AUTOMON/RDO. Many options are provided to control the operation of the various product features, as well as securing operation from unauthorized users.

[Note]. If Administrator transaction codes are coded in the General Preferences display, only an administrator can modify Preferences.

Close

The Close command closes the DFHCSD and supplemental AUTOMON/RDO files, frees the directory and exits AUTOMON/RDO.

[Note]. If Administrator transaction codes are coded in the General Preferences display, only an administrator can issue a Close command.

Audit

The Audit command displays the audit history file created by the Message Audit Retrieval System (MARS). The display will begin with the oldest message on file and proceed chronologically forward, allowing direct positioning to a particular date or scanning by various criteria. This is the full history file display, as opposed to resource dependent history. To view the history of CSD modifications to a particular resource you must first locate the resource, either in the directory or the full resource display, then use the History command or its associated PF key.

Case

The Case command will toggle the uppercase translation option of the operating terminal on and off. If the terminal normally operates with uppercase translation on, invoking the Case command once will set it off. Invoking it again will set uppercase translation on. Likewise, if uppercase translation is normally off, the Case command will set it on the first time it is executed, off the next, etc.

The Case command is also available on the action bar at several other points in AUTOMON/RDO. At each display, pressing PF13 will toggle the uppercase translation on or off, depending on its current setting. The other screen displays where it appears are:

- Directory menu
- All Directory displays
- All resource displays
- Commands menu
- Export menu
- Export verify window
- Resource documentation window

No matter where The Case command is used, the new setting of the uppercase translation option will remain in effect until you exit the primary menu, at which time it will be reset to the normal terminal operating mode.

Command Line Operation

Certain directory, simplified CEDA commands, and Find actions may be performed from the Primary Menu command line or even a clear screen, providing a fast path method of completing tasks. Following is a summary of the syntax required. Bracketed items are optional. These commands may also be issued from a clear screen by preceding the command with the transaction id and a comma; e.g., RDOC,D,PROG(MYPROG).

Directory actions:

Directory actions may be performed by using the following syntax:

D[irectory], *resource type*[(*resource name*)]

Thus entering on the Primary Menu command line:

D, PROGRAM(MYPROG)

will access a resource definition directory with MYPROG displayed.

Masks may be used for the resource name. Thus entering:

D,TRAN(R*)

will access a resource definition directory with all resources beginning with the letter R displayed. The resource name is not required; entering:

D,TRAN

will display all transactions. Note that only the number of characters needed to make the resource name unique need be entered.

Simplified CEDA commands actions:

Simplified CEDA commands may be issued using the following syntax:

C[ommands](*CEDA command*), *resource type*[(*resource name*)], [G(*group name*)]

Thus entering on the Primary Menu command line:

C(DEF),PR(TESTPROG)

will access the resource definition display for the TESTPROG program resource.

Find actions:

The Find facility may also be accessed from the Primary Menu command line, using the following syntax:

F[ind], *resource type*(*resource name*), [G(group name)]

Thus entering on the Primary Menu command line:

F,PR(TESTPROG)

will produce the resource definition display for the TESTPROG program resource.

Chapter 3. CEDA Operations

AUTOMON/RDO and CEDA

CEDA is one of three transactions included with the IBM CICS RDO facility. By issuing commands and parameters using CEDA, one can create, delete, and maintain individual resource definitions, groups of resource definitions, or lists of groups. AUTOMON/RDO provides an interface to RDO which allows resources to be filtered through masks into manageable temporary directories from which familiar CEDA commands may be performed. AUTOMON/RDO performs no output operations directly on the DFHCSD file. Rather, it formats the desired operation and passes the appropriate command to CEDA for processing. If desired, the resultant CEDA display can be exhibited by selecting the 'Interim CEDA display' option from the AUTOMON/RDO Preferences display. Additionally, the level of warnings generated by the CEDA transaction which will be displayed to the user can be customized on the Preferences display. By default, only serious errors are related to the user. CEDA commands may be issued from directories or by using the AUTOMON/RDO simplified command facility, which allows parameters of the CEDA transaction to be issued in fields without the cumbersome RDO delimiters.

CEDA Commands

AUTOMON/RDO employs all of the standard CEDA commands, using the same mnemonics and abbreviations. Commands may be issued from the 'Cmd' field of a resource definition directory or the 'Command' field of the Simplified CEDA commands display. Following is a description of valid CEDA commands:

ADD	Adds a group to a list, creating the list if it does not exist.
ALTER	Invokes a resource definition for update.
APPEND	Adds the groups of a list to another list. If the second list does not exist, it is created and a copy has effectively been performed.
CHECK	Verifies that resources within a group are consistent.
COPY	Duplicates a resource definition or group of definitions.
DEFINE	Creates a new resource definition.
DELETE	Removes a resource definition from the CSD file. Definitions currently installed on the active CICS are unaffected by deletion. To delete definitions currently active, use the CEMT DISCARD command.
DISPLAY	When issued for a resource, Display invokes the resource definition in read only mode. When issued for a group or list, Display performs an EXPAND function. DISPLAY and VIEW function the same in AUTOMON/RDO.
EXPAND	Displays all the resource definitions for one or more groups or lists.

INSTALL	Makes the resource definitions available to the active CICS session. If the resource definition already exists it will be replaced if it is not currently in use.
LOCK	Restricts write operations on a list or group's resources to a single operator id and CICS system. Other operators may access the resources for read only purposes but may not update or delete them.
MOVE	Transfers resource definitions from one group to another.
REMOVE	Disassociates a group from a list. The group continues to exist in the CSD after a REMOVE is issued, but is no longer a member of the specified list.
RENAME	Specifies a new name for the resource definition or group.
UNLOCK	Releases the update and delete mode restrictions on a list or group established with a LOCK command.
USERDEFINE	May be issued alternatively to the DEFINE command to specify that default values in the new resource definition will be supplied by the user instead of CICS. The user-defined defaults are established by creating a dummy resource definition, USER, in the USERDEF group for the resource type and entering the desired default values in the resource definition fields. This template will be used whenever USERDEFINE is issued to assign default values to fields.
VIEW	When issued for a resource, View invokes the resource definition in read only mode. When issued for a group or list, View performs an EXPAND function. VIEW and DISPLAY function the same in AUTOMON/RDO.

Additional Resource Commands in AUTOMON/RDO

In addition to the standard CEDA commands, there are two modified CEDA commands and three commands that are unique to AUTOMON/RDO. These are:

Delete* or D*	Perform generic or masked deletion. Allows deletion of all resources in one group that match the mask criteria.
Alter* or A*	Perform global alters. Allows changes to one or more fields of a resource type to affect all resources that match either a resource name mask or a group mask or both.
History	Display the history of CSD modifications for a resource.
Lists	Display all lists which contain the current group.
Document	Display or update the documentation for a resource.

Issuing Simplified CEDA commands

CEDA syntax requires that the CEDA command, the resource type, the resource specification, the group mnemonic and the group name, at a minimum follow the CEDA transaction code. AUTOMON/RDO provides a CEDA command interface which allows you to quickly and simply issue CEDA commands.

Selecting the 'Commands' option on the Main Menu invokes the simplified commands display:

```
 ____   Show  Exit  Case  Help                    CICS680   DFHCSD    CMENU
          AUTOMON/RDO - CICS On-line Resource Definition Commands

     Command        Resource type       Resource name  Group name (optional)
  __________        ____________          ________         ________

          Commands ...........        Resource Types ................
            ADd       Expand           Group        Ipconn       Requestmodel
            APpend    History          LIst         JOurnalmodel Sessions
            ALter     Install          Atomservice  JVmserver    TCpipservice
            ALter*    LOck             Bundle       LIBrary      TDqueue
            CHeck     Move             CONnection   LSrpool      TErminal
            COpy      REMove           CORbaserver  MApset       TRANClass
            DEFine    REName           DB2Conn      MQconn       TRANSaction
            DISplay   UNlock           DB2Entry     PARTItionset TSmodel
            DELete    USerdef          DB2Tran      PIpeline     TYpeterm
            DELete*   View             DJar         PARTNer      Urimap
            DOcument                   DOctemplate  PROCesstype  Webservice
                                       Enqmodel     PROFile
            (* = Global command)       File         PROGram

   Enter minimum command and type.  Resource type and group may be masked.
   If Group is omitted, the first directory occurrence will be used.
F1=Help F2=Keys F3=Exit F13=Case
```

Enter a command from the list of valid commands in the first field. The second field must be one of the listed resource types. Minimum abbreviation of both commands and resource types is indicated by capital letters. In the third field, supply the resource name, then the group, if applicable, in the fourth.

[Note]. Depending on the release of CICS in operation, some resource types may not be valid. If an unsupported type is entered, a message to that effect will display.

Any valid AUTOMON/RDO command against resources may be issued from the commands menu; the use of generic characters and wild cards is supported where applicable. For many commands, the group name is optional. If duplicate resources exist in separate groups and no group is specified, the resource from the first group alphabetically will be displayed.

Commands that operate on a list or group, such as Expand, allow entry of the list or group name in either the Resource Name column or the Group Name column.

If a command is issued which causes modification to the CSD, CEDA is called to actually perform the command. The results are displayed by the AUTOMON/RDO interface. For single resource displays, all of the fields for most of the resource types appear on a single rather than the standard CEDA display, which must be scrolled. Some resource types may require more than one screen because of the number of attributes used for their resource definition. Exiting the AUTOMON/RDO display will return the Commands menu so further commands may be issued.

Another method of issuing CEDA commands against resources is described in the next chapter, *Resource Directories.*

Chapter 4. Resource Directories

The Resource Directory Menu

The Resource Directory Menu allows you to select the resource types and masks used to create a directory of resource definitions for display, alteration, or any other CEDA operation. From the Resource Directory Menu you may also display the temporary directories which are created as a result of a Dupes, Query, Expand or Global Alter command.

The Resource Directory menu is entered by selecting the Directory command from the Primary Menu via the command line, tabbing to the option and pressing ENTER, pressing the associated PF key or selecting the option via the Key Select pulldown menu. The first screen of the Resource Directory Menu will then be displayed:

```
 ____   Show  Case  Exit  Help                    CICS680   DFHCSD    DMENU
          AUTOMON/RDO - CICS On-line Resource Definition Directories
  ----- Groups/Lists Directories -----     ------ Temporary Directories -------
    Type             Name     Group          Type             Name     Group
  _ Groups           ________               _ Duplicates       ________ ________
  _ Lists            ________ ________      _ Queries          ________ ________
  _ Select all types ________ ________      _ Expansions       ________ ________
                                            _ Global changes   ________ ________
  -------------------- Resource Directories (Page 1 OF 2) --------------------
  _ Atomservice      ________ ________      _ JVmserver        ________ ________
  _ Bundle           ________ ________      _ LIBrary          ________ ________
  _ CONnection       ________ ________      _ LSrpool          ________ ________
  _ CORbaserver      ________ ________      _ MApset           ________ ________
  _ DB2Conn          ________ ________      _ MQconn           ________ ________
  _ DB2Entry         ________ ________      _ PARTItionset     ________ ________
  _ DB2Tran          ________ ________      _ PARTNer          ________ ________
  _ DJar             ________ ________      _ PIpeline         ________ ________
  _ DOctemplate      ________ ________      _ PROCesstype      ________ ________
  _ Enqmodel         ________ ________      _ PROFile          ________ ________
  _ File             ________ ________      _ PROGram          ________ ________
  _ Ipconn           ________ ________      _ Requestmodel     ________ ________
  _ JOurnalmodel     ________ ________      _ Sessions         ________ ________
    RM03005. Select with / S or Y.  Dark fields do not apply to this CICS
 Enter F1=Help F2=Keys F3=Exit F4=Files F5=Include IBM F7=Bwd F8=Fwd F13=Case
```

The Resource Directory Menu consists of two screens. Pressing the PF8=Fwd key will display the second screen. Pressing PF7=Bwd will return to the first screen.

```
        Show  Case  Exit  Help                    CICS680   DFHCSD    DMENU
          AUTOMON/RDO - CICS On-line Resource Definition Directories
  ----- Groups/Lists Directories -----     ------ Temporary Directories -------
    Type             Name     Group          Type             Name     Group
  _ Groups           ________               _ Duplicates       ________ ________
  _ Lists            ________ ________      _ Queries          ________ ________
  _ Select all types ________ ________      _ Expansions       ________ ________
                                            _ Global changes   ________ ________
  -------------------- Resource Directories (Page 2 OF 2) --------------------
  _ TCpipservice     ________ ________
  _ TDqueue          ________ ________
  _ TErminal         ________ ________
  _ TRANClass        ________ ________
  _ TRANSaction      ________ ________
  _ TSmodel          ________ ________
  _ TYpeterm         ________ ________
  _ Urimap           ________ ________
  _ Webservice       ________ ________



    RM03005. Select with / S or Y.  Dark fields do not apply to this CICS
 Enter F1=Help F2=Keys F3=Exit F4=Files F5=Include IBM F7=Bwd F8=Fwd F13=Case
```

[Note]. Depending on the release of CICS in operation, some resource types may not be valid. The entry fields (name and group) of these types will appear darker than the others and will be protected from input.

AUTOMON/RDO allows you to selectively display resources in directories created by specifying type and/or masks delimiting resource names. These specifications are made in the fields of the Directories Menu. Inserting a selection character, S, Y or /, in the field preceding the resource type selects that type of resource; more than one type may be selected. Entering a mask in the field following the resource will then restrict the resources displayed to those matching the mask criteria. After all types are selected and the desired masks specified, press ENTER to display the directory of selected resources.

The GROUP field beside each resource NAME provides further delimiting of the resources to be displayed. You may enter a full or masked group name, which limits the entry in the NAME field to only those resources that match the specified GROUP.

Fields of the Resource Directory Menu

In each of the resource mnemonics below, the capitalized portion of the word is the minimum number of characters that must be entered from the primary menu command line or at a clear screen to invoke the corresponding directory.

Groups/Lists Directories

Groups	This directory displays GROUPS in alphabetic order. The directory shows the resource type, description if any and the list name if the group is in a list.
Lists	This directory displays LISTS in alphabetic order. Note. Pressing PF6 while in the directory expands the display to show all groups in the list.
Select all types	This selection automatically combines all resource types. If a selection mask is entered it applies to all resource types.

Resource Directories

These directories are permanent, always present if there are resources of the associated type.

Atomservice	This directory displays ATOMSERVICE resources.
Bundle	This directory displays BUNDLE resources.
CONnection	This directory displays CONNECTION resources in alphabetic order.
CORbaserver	This directory displays CORBASERVER resource.
DB2Conn	This directory displays DB2CONN resources in alphabetic order.
DB2Entry	This directory displays DB2ENTRY resources in alphabetic order.
DB2Tran	This directory displays DB2TRAN resources in alphabetic order.
DOctemplate	This directory displays DOCTEMPLATE resources.
DJar	This directory displays DJAR resources.
Enqmodel	This directory displays ENQMODEL resources in alphabetic order.
Files	This directory displays FILE resources in alphabetic order.

Ipconn	This directory displays IPCONN resources.
JOurnalmodel	This directory displays JOURNALMODEL resources.
JVmserver	This directory displays JVMSERVER resources.
LIBrary	This directory displays LIBRARY resources.
LSrpool	This directory displays LSRPOOL resources in alphabetic order.
MApset	This directory displays MAPSET resources in alphabetic order.
MQconn	This directory displays MQCONN resources.
PARTItionset	This directory displays PARTITIONSET resources in alphabetic order.
PARTNer	This directory displays PARTNER resources in alphabetic order.
PIpeline	This directory displays PIPELINE resources.
PROCesstype	This directory displays PROCESSTYPE resources in alphabetic order.
PROFile	This directory displays PROFILE resources in alphabetic order.
PROGram	This directory displays PROGRAM resources in alphabetic order.
Requestmodel	This directory displays REQUESTMODEL resources.
Sessions	This directory displays SESSIONS resources in alphabetic order.
TCpipservice	This directory displays TCPIPSERVICE resources in alphabetic order.
TDqueue	This directory displays TDQUEUE resources in alphabetic order.
TErminals	This directory displays TERMINAL resources in alphabetic order.
TRANClass	This directory displays TRANCLASS resources in alphabetic order.
TRANSaction	This directory displays TRANSACTION resources in alphabetic order.
TSmodel	This directory displays TSMODEL resources in alphabetic order.
TYpeterms	This directory displays TYPETERM resources in alphabetic order.
Urimap	This directory displays URIMAP resources in alphabetic order.
Webservice	This directory displays WEBSERVICE resources in alphabetic order.

Temporary Directories

These directories will only be present if the corresponding function has been performed.

Duplicates — This directory displays duplicate resource definition (Dupes) operation. This directory is not automatically created when the directory is initialized. You can create the duplicates directory by selecting Dupes on the primary menu. If this directory is selected and none has been created, the Dupes function will be automatically invoked. Once a duplicates directory has been created it will continue to display when selected until the transaction is exited.

Queries — This directory displays the results of a Query operation. This directory is not automatically created when the directory is initialized. You can create the queries directory by selecting Query on the main menu. If this directory is selected and none has been created, the Query function will be automatically invoked. Once a queries directory has been created it will continue to display when selected until transaction is ended.

Expansions — This directory displays the results of an EXPAND command issued in a resource directory. This directory is not automatically created when the directory is initialized. You can create an expansion directory by issuing an EXPAND command against a group or list. Once an expansion directory has been created it will continue to display when selected until the transaction is exited.

Global changes — This directory displays the results of a Global Alter command issued in a resource directory. This directory is not automatically created when the directory is initialized. You can create the directory by issuing an A* command against a resource and/or group mask. When the global alter command has completed, this directory reflects all the resources that were affected by the change. Once a global change directory has been created it will continue to display when selected until the transaction is exited.

Relationship between Directories and the CSD

Upon initialization, AUTOMON/RDO reads the contents of the DFHCSD file into memory, constructing an internal master directory. It is this master directory that AUTOMON/RDO uses to construct directories of resource types, groups, lists and dupe or Query results. As resources are manipulated, CEDA performs the operation, updating the DFHCSD, and AUTOMON/RDO alters the master directory to reflect changes in the DFHCSD file.

Refresh

Refresh re-reads the DFHCSD file, rebuilding the AUTOMON/RDO master directory. If additions or deletions are performed against the DFHCSD file using CEDA as a stand-alone transaction, without AUTOMON/RDO as an interface, it will be necessary to refresh the directory so that the master directory will be consistent with the DFHCSD file.

[Note]. If Administrator transaction codes are coded in the General Preferences display, only an administrator can perform a Refresh command.

Close

Although AUTOMON/RDO may be exited using the Exit transaction option from the Exit pulldown menu (or the Exit option from the Primary Menu), the directory remains intact and occupies storage. Directory storage requires seventeen bytes per resource. If you wish to close the DFHCSD file and free the directory, select the Close option from the Primary Menu to exit AUTOMON/RDO.

The default disposition of the DFHCSD file can also be changed by entering YES in the 'Leave DFHCSD open' field of the Preferences display. By default, the 'Leave DFHCSD open' field is coded NO, specifying that both the DFHCSD and RDO$FIL are to be closed at the end of the transaction by the last active user. Both files will be re-opened at the next invocation of AUTOMON/RDO. If the 'Leave DFHCSD open' is coded YES, both files are always left open.

[Note]. If Administrator transaction codes are coded in the General Preferences display, only an administrator can perform a Close command.

Displaying Directories

Directories are displayed by entering a selection character, 'S', 'Y' or '/', in the field immediately preceding the desired resource type or temporary directory and, optionally, entering a mask in the NAME and/or GROUP fields (see *Masks*, below). Multiple resource types may be selected, e.g., PROGRAMS and TRANSACTIONS, but temporary directories must be displayed individually. The generated directory will then display alphabetically all resource definitions of the first selected resource type which meet the mask criteria, followed by all resource definitions of the next selected type, and proceeding through the last selected resource type in the order displayed on the Resource Definition Directory Menu.

After operations are displayed against a directory and the Resource Definition Directory Menu is returned, all previous selections remain in effect. If you wish to deselect a directory, TAB to the desired selection field and remove the selection character with the EOF key or space bar. You can remove all marks by pressing the CLEAR key.

Resource Types

Resources are the devices, applications and connections available to the CICS system. Resources are categorized into twelve types depending whether the resource is a physical device, remote system or transaction component. Each resource is defined to CICS with a resource definition.

Resource types vary between CICS versions and releases. For example, DOCTEMPLATE and TCPIPSERVICE resources were only available on z/OS in CICS TS 1.3 and above and on VSE in CICS TS 1.1.1. The following table summarizes in which CICS Transaction Server version and CICS release level a resource type is available on z/OS and z/VSE operating systems:

	z/VSE			z/OS				
CICS TS version	1.1.0	1.1.1		3.1	3.2	4.1	4.2	5.1
CICS release level	4.1.0	4.1.1		6.4	6.5	6.6	6.7	6.8
PROGRAM	x	x		x	x	x	x	x
TRANSACTION	x	x		x	x	x	x	x
MAPSET	x	x		x	x	x	x	x
FILE	x	x		x	x	x	x	x
LSRPOOL	x	x		x	x	x	x	x
PROFILE	x	x		x	x	x	x	x
PARTITIONSET	x	x		x	x	x	x	x
PARTNERS	x	x		x	x	x	x	x
SESSIONS	x	x		x	x	x	x	x
CONNECTIONS	x	x		x	x	x	x	x
CORBASERVER				x	x	x	x	
TYPETERM	x	x		x	x	x	x	x
TERMINAL	x	x		x	x	x	x	x
TRANCLASS	x	x		x	x	x	x	x
JOURNALMODEL				x	x	x	x	x
TDQUEUE				x	x	x	x	x
DB2CONN				x	x	x	x	x
DB2ENTRY				x	x	x	x	x
DB2TRAN				x	x	x	x	x
DOCTEMPLATE		x		x	x	x	x	x
DJAR				x	x	x	x	
ENQMODEL				x	x	x	x	x
PROCESSTYPE				x	x	x	x	x
REQUESTMODEL				x	x	x	x	x
TCPIPSERVICE		x		x	x	x	x	x
TSMODEL				x	x	x	x	x
PIPELINE				x	x	x	x	x
URIMAP				x	x	x	x	x
WEBSERVICE				x	x	x	x	x
IPCONN					x	x	x	x
LIBRARY					x	x	x	x
ATOMSERVICE						x	x	x
BUNDLE						x	x	x
JVMSERVER						x	x	x
MQCONN						x	x	x

AUTOMON/RDO follows the familiar typing of resources. By selecting a specific resource type, a directory is displayed consisting of resources of that type. Masks may be entered to limit the display to those resources meeting the mask criteria.

Temporary Directories

A temporary directory is created each time a Dupes, Query or Global Alter operation is performed, or a group or list is expanded using the Expand or Lists command. Selecting the desired temporary directory from the Resource Definition Directory Menu can access these directories. A mask may be entered, if desired to limit the display of resource definitions.

When a new Dupe, Query, Global Alter, Lists or Expand command is performed, the previous temporary directory remains intact and a new temporary directory of the same type is added. These temporary directories are associated with the terminal, allowing different temporary directories by user. They are discarded when you exit AUTOMON/RDO to a clear screen.

Temporary directories can be nested by performing commands from a temporary directory display. For instance, expanding a list creates an expansion directory. From that you might expand a group in the list, creating a second expansion directory.

While in a temporary directory, you can browse forward and backward through all directories of that type using PF9 (backward) and PF10 (forward). The Next pulldown menu provides the same function.

Qualified Queries

A special feature of temporary directories is qualified queries. While displaying any temporary directory, you can press PF4 to invoke the Query function. The selected query will then only consider the resources present in the last-used temporary directory when it begins its search.

For instance, you could perform a Dupes function, creating a Duplicates temporary directory. While viewing this directory, invoke query and search the description field for a character string. The query will only look at the records present in the Duplicates temporary directory while searching, rather than passing the entire file, as is the case when Query is invoked from the primary menu. The result of the query could then be queried again, if desired. Each query further reduces the input set. PF9 and PF10 can then be used to browse through all the query results.

Masks

Masks are the method by which resources are delimited when selected. By using masks, you can display only those resources that satisfy the match criteria. Masks are specified using mask characters, which replace selected characters or groups of characters in a resource name. The mask characters that may be used are:

- * Left-to-right generic. Match characters beginning with position one up to the asterisk.
- < Right-to-left generic. Match characters following < at the end of the argument name.
- ? Wild card - accept any character at the corresponding position in the argument name.
- *…* Imbedded string. Match characters between two asterisks anywhere in the argument name.
- = Use mask of previous directory.

[Note]. The characters used for masking (* < ?) can be changed in General Preferences.

MASK Examples

Mask Type	Sample Mask	Meaning	Resources included	Resources excluded
Generic left-to-right	M*	Display all resources beginning with the letter 'M'	MYRES MDOC	YOURRES RDOC
Generic right-to-left	<ES	Display all resources ending with the letters ES	MYRES DOCFILES	MYFILE DOCFILS
Wild card character	M?RES??	Select all resources with ‘M’ as the first character and ‘RES’ as the third, fourth and fifth characters.	MYRES01 MNRES01 MYRESRC	MYRESOUR AARES01 MYFIL01
Imbedded string	*RES*	Select all resources with ‘RES’ appearing anywhere in the name.	MYRES RESTORE TRESTXN	
Imbedded string with wild card characters	*R?S?*	Select if ‘R’, then any character, then ‘S’, then any character anywhere in the name	RESTORE TRESTXN TRDSTXN MYRESS	MYRES
Use previous mask	=	When multiple resource directories are selected, = will repeat the mask entered for the previous directory.		

Note that with wild card characters (?), all positions must be accounted for in the specification for the criteria to be satisfied. In the previous example, MYRESOUR did not meet the criterion because only 7 characters were supplied in the mask M?RES??. A resource may contain fewer characters, however, than the mask. In the example, the specification M?RES??? would have included all the previously included resources as well as the MYRESOUR resource. M?RES* would, however, include MYRESOUR

Imbedded string masks search the entire argument name for a data string matching the characters appearing between the left and right asterisk delimiters. If the specified string appears anywhere in a resource name, it matches the selection criteria.

Wild card characters imbedded in the mask character string function in the same way as they do when used by themselves. That is, a wild card character in an imbedded string mask will accept any character in the corresponding position (relative to the beginning of the mask) in the resource name.

There must be a character in the corresponding position, however, if wild cards are used. Note in the example above (mask of *R?S?*) that the resource name MYRES would not be selected because there is no character to satisfy the ending wild card in the mask.

Entering the equal sign = as the mask causes the last mask entered to be used for the resource type. The equal sign must be entered in the first position of the resource or group name and no other characters can be present in the field. For example if the following mask is entered:

```
/ Programs       V*______
/ Transactions   =_______
```

All programs and transactions beginning with the letter V will be selected. As many mask duplications as desired may be entered.

Resource Directory Display

Once directories have been selected and masked, press ENTER to access the Resource Directory display. A list of resources selected via type and mask will appear, each with its type, a description (if any), and the group of which the resource is a member:

```
____  Show  Next  Case  Exit  Help              CICS680   DFHCSD    DIRECTORY
            AUTOMON/RDO - CICS On-line Resource Definition Directory

Cmd  Name      Type        Description     Page ____1 of     2 Group
____ R660     CONNECTION   TEST CONNECTION RESOURCE___________ TESTEXPO
____ R660     CONNECTION   TEST CONNECTION RESOURCE___________ TESTGRP
____ R660     CONNECTION   TEST CONNECTION RESOURCE___________ TESTNEW
____ CSDOLD   FILE         OLD CICS680 DFHCSD_________________ TESTCSD
____ FILE1    FILE         tHIS IS A TEST AGAIN_______________ TESTEXPO
____ FILE1    FILE         TEST FILE RESOURCE_________________ TESTGRP
____ FILE1    FILE         TEST FILE RESOURCE_________________ TESTNEW
____ TESTCESF PROGRAM      TEST SIGNOFF PROGRAM_______________ TESTCESF
____ TESTPGM1 PROGRAM      TEST PROGRAM 1 AGAIN_______________ TESTEXPO
____ TESTPGM1 PROGRAM      TEST PROGRAM 1 AGAIN_______________ TESTGRP
____ TESTPGM1 PROGRAM      TEST PROGRAM 1 AGAIN_______________ TESTNEW
____ TESTPGM2 PROGRAM      TEST PROGRAM 2 AGAIN_______________ TESTGRP
____ TESTPGM2 PROGRAM      TEST PROGRAM 2 AGAIN_______________ TESTNEW
____ TESTPGM3 PROGRAM      TEST PROGRAM 3 AGAIN_______________ TESTGRP
____ TESTPGM3 PROGRAM      TEST PROGRAM 3 AGAIN_______________ TESTNEW
____ TOFF     TRANSACTION  TEST SIGN OFF PROGRAM______________ TESTCESF
____ TRAN     TRANSACTION  TEST TRANSACTION RESOURCE___________ TESTGRP
  Update description, enter command beside resource, or press desired PF key

 Enter F1=Help F2=Keys F3=Exit F4=Query F5=Groups F6=Time   F7=Bwd F8=Fwd
```

Fields of the Resource Definition Directory Display

Page — Within the directory fields heading (between “Description” and “Group”) is the current directory page indicator. It will display “Page nn of xxx” where nn is the current directory page and xxx is the total number of pages for this selection.

Browsing forward and backward in the display causes the current page to increment or decrement. You may also tab the cursor to this field and enter a specific page number. If the number entered is less than xxx, the display will go directly to that page.

Issuing Commands from the Directory

Cmd — This field is used for issuing AUTOMON/RDO commands against the resource. Following is a short summary of the available commands. Minimum input is indicated with capital letters.

ADd — Adds a group to a list, creating the list if it does not exist. A popup window appears requesting the name of the list to receive the group, and the group to add the list before or after, as follows:

```
      Add group(s) to list

    Group name   ==> ________
    List name    ==> ________
    Before group ==> ________
    After group  ==> ________

  Mask is allowed in group name only
  If list does not exist, a new
  list will be created.
  Omit before/after to add to end.
```

If the Before/After group is omitted, the group will be added to the end of the list. Press ENTER to complete the operation, PF3 to cancel.

ALter — Invokes a resource definition for update. The resource definition will appear in ALTER mode. Key changes in the desired fields and press ENTER to effect the changes. Press ENTER to complete the operation, PF3 to cancel.

Alter* (A*) — Performs a Global Alter command. Global alter, or global changes, is the process of changing one or more fields of a resource and making that change apply to more than one member of a group, and/or more than one group. For instance, you might want to change the TWASIZE of all transactions in a group to the same value.

To perform a global alter, enter the A* command, either from a directory or the command menu. This will produce a window where you specify the resource type and a mask for the resource name or group or both, as follows:

```
                    Global resource alter

             Resource type ==> ____________
             Resource name ==> ________
             Group name    ==> ________

Mask will be accepted in resource name and/or group.
The next display will allow field input based on the
resource type.
```

The next display will be a null resource screen where you enter the field change(s) to be performed for all matching resources. Upon completion, a temporary directory is created showing all resources that were altered.

APpend — Adds the groups of a list to another list or copies a list. A popup window will appear when this command is issued requesting the name of the list to which the groups of the current list are to be appended, as follows:

```
Append list to list or copy list

    List name     ==> ________
    New list name ==> ________

If list does not exist
a new list will be created.
To rename a list, Copy then Remove.
```

If a list exists with the name entered in New List Name, all groups of the List Name will be appended to the New List. If the new list does not exist, the original list will be copied and stored using the new name.

COpy

Duplicates a resource definition. A popup window will appear requesting the name of the group to copy the resource to and/or a new name for the resource, as follows:

```
                    Resource COPY______

             Resource type ==> ____________
             Resource name ==> ________
             Group name    ==> ________
             New group     ==> ________
             New name      ==> ________
             _ Replace target resource if present

Mask will be accepted in resource name only
unless accompanied by a mask in new name, which will
perform a masked rename.
```

The definition can be copied to the same group by entering a new resource name or to a different group by specifying the group name to receive the resource with either the same or a new name. To replace existing resources with the same names, enter Y, S or / in *Replace target resource if present.* Press ENTER to complete the operation, PF3 to cancel.

Mask characters may be used for the resource name to copy multiple resources to a new group. When a mask is coded in resource name, a mask may also be used in the New Name field to perform masked renaming of the selected resources.

DEFine

Produces the definition display for the type of resource selected for the creation of a new resource. The definition in which the command was entered will appear, allowing new resource definitions to be quickly generated from existing resource directories. When all attribute fields are complete, press ENTER to complete the operation or PF3 to cancel.

Delete

Removes a resource definition from the CSD file. The resource definition will appear in DELETE mode. Press ENTER to confirm the delete operation, PF3 to cancel.

D*

Generic Delete. Allows for the deletion of multiple resources through the use of a mask. A popup window will appear requesting the name and type of the resource to be deleted and the group of which it is a member, as follows:

```
                    Resource DELETE____

             Resource type ==> ________
             Resource name ==> ________
             Group name    ==> ________


             _ Suppress prompt for multiple deletes

Mask will be accepted in resource name only.
For multiple resource deletes from directory, suppress
prompt window of each resource with s, y or /.
```

Masks may be used in the resource name to delete selected resources from a group.

When multiple deletes are requested from a directory, the generic delete operation normally stops after each resource is deleted and prompts the operator for verification on the next resource. You can suppress these interim prompts by selecting *Suppress prompt for multiple deletes* with an S, Y or /.

DIsplay — If issued against a resource, Display invokes a resource definition in read only mode. If issued against a group or list, Display will perform an Expand function. .

DOCument — Accesses the documentation associated with a resource. Documentation can be added or edited as desired in a popup window, as follows:

```
Documentation for Connection TS32, group CICSTSXM

_____________________________________________________________
_____________________________________________________________
_____________________________________________________________
_____________________________________________________________
_____________________________________________________________
_____________________________________________________________
_____________________________________________________________
_____________________________________________________________
_____________________________________________________________
_____________________________________________________________
RC13001. Enter documentation text as desired, press Enter to update
```

Up to ten lines of documentation can be associated with any resource, including groups and lists.

Expand — Displays all the resource definitions for one or more groups or lists in a resource directory. This directory is saved as a temporary directory, and may be accessed again by selecting the ‘Expansions’ option on the Resource Definition Directory Menu. .

EXPOrt — This is a modified version of the COPY command of the Export Menu. It will extract resources from the local CICS system, convert them to CEDA Define statements and store them in a temporary queue to be exported upon command.

```
            Create export copy queue

            Resource type ==> ____________
            Resource name ==> ________
            Group name    ==> ________
            New group     ==> ________
            New name      ==> ________

                  Duplicates Option:
            Abort with msg  ==> _ (Y or N)
            Replace         ==> _ (Y or N)
            Do not copy     ==> Y (Y or N)
            Change to group ==> ________

Mask will be accepted in resource and/or group name.
The group and/or resource name may be changed.
```

When EXPO is entered in the command field, a window will appear with the resource type, name and group filled in from the directory selection. Additional fields in the window allow the specification of Duplicate Options -- what to do if the selected resources already exist at the target system.

Upon pressing Enter to the Export Copy window, all matching resources will be selected, converted to Define statements and stored in a temporary queue. If an export temporary queue already exists, it will be deleted first. Control is then passed to the Export Menu, where the queue can be displayed and modified, if desired. This is where you specify the targets to receive the shipped resources.

Execution (routing) of the queue will begin when the operator selects BEGIN EXECUTION NOW from the Export Menu.

For more information see, *Export Copy Window*, in Chapter 8.

History

The History command displays the resource-dependent audit history for this resource. A window will appear showing all commands which have been issued against this resource which resulted in a modification to the CSD. The history is displayed in chronological date/time sequence, allowing browsing, positioning and scanning by various criteria.

```
           Audit trail history, File RDO$AUD , All messages

12/06/12 14:40:13 L704 CICSUSER BEFORE ALTER PROGRAM(RDOCAUDT)
     (CICS680)         GROUP(RDOCGRP) LANGUAGE(ASSEMBLER) RELOAD(NO)
                       RESIDENT(NO) USAGE(NORMAL) USELPACOPY(NO)
                       STATUS(ENABLED) RSL(0) CEDF(YES) DATALOCATION(ANY)
                       EXECKEY(CICS) CONCURRENCY(QUASIRENT) API(CICSAPI)
                       DYNAMIC(NO) EXECUTIONSET(FULLAPI) JVM(NO)
                       HOTPOOL(NO) DEFINETIME(12/05/12 11:19:06)
                       CHANGETIME(12/05/12 11:19:06)
                       CHANGEUSRID(CICSUSER) CHANGEAGENT(CSDAPI)
                       CHANGEAGREL(0680)
12/06/12 14:40:14               AFTER  ALTER PROGRAM(RDOCAUDT)
     (CICS680)         GROUP(RDOCGRP) LANGUAGE(ASSEMBLER) RELOAD(NO)
                       RESIDENT(NO) USAGE(NORMAL) USELPACOPY(NO)
                       STATUS(ENABLED) RSL(0) CEDF(NO) DATALOCATION(ANY)
                       EXECKEY(CICS) CONCURRENCY(QUASIRENT) API(CICSAPI)
                     Enter will move bottom message to top
Date 20121206 Time 144014 Name ________ Group ________ Type ___________
```

For more information on the History display, see chapter 11.

Install

Makes the resource definition available to the active CICS. A popup window will appear pre-filled with the name of the group, resource name and type of the resource.

```
Install full or partial group, local and/or remote

           Group name    ==> ________
           Resource type ==> ____________
           Resource name ==> ________

For full group install, clear resource type and name.

       Target destination for this install:
             (omit for local install)
Use Application target list number __
or enter up to six CICS applids below.
________ ________ ________ ________ ________ ________
System Application Lists are defined in Preferences.
```

To install the entire group, delete the resource name and resource type fields. If the resource name or type is specified, both must be specified.

The lower portion of the install window provides a means of installing resources in remote CICS systems with a single command. You may enter a series of CICS applids or enter the sequence number of an Application Target List created with the Preferences function.

To perform a local install only, omit the fields pertaining to remote installs.

LIsts

Locates all lists which contain the current group name. A temporary directory with the results is created and stored as an Expansions directory.

Lock

Restricts write operations on a list or group's resources to the user's operator id. A popup window will appear, pre-filled with the name of the group of which the resource is a member, as follows:

```
   LOCK a group or list

   Group name ==> MODELCSD

           or

   List name  ==> ________

Enter group or list, no masks
```

A group name or list may be entered. Press ENTER to complete the operation, PF3 to cancel. .

To unlock the resource, use the UNLOCK command.

Move

Transfers resource definitions from one group to another. A popup window will appear requesting the name of the group to move the resource to and/or a new name for the resource, as follows:

```
                    Resource MOVE______

             Resource type ==> ____________
             Resource name ==> ________
             Group name    ==> ________
             New group     ==> ________
             New name      ==> ________
             _ Replace target resource if present

Mask will be accepted in resource name only
unless accompanied by a mask in new name, which will
perform a masked rename.
```

The definition can be moved to the same group by entering a new resource name or to a different group by specifying the group name to receive the resource with either the same or a new name. Press ENTER to complete the operation, PF3 to cancel.

Mask characters may be used for the resource name to move multiple resources to a new group. When a mask is coded in resource name, a mask may also be used in the New Name field to perform masked renaming of the selected resources.

REMove

Disassociates a group from a list. A popup window will appear as follows:

```
 Remove group(s) from list

 Group name ==> MODELCSD
 List name  ==> ________

When last group is removed
the list will be deleted.

Mask allowed in group name.
```

Enter the group name to be removed from the list specified in List name.

REName

Specifies a new name for the resource definition. A popup window will appear as follows:

```
                    Resource RENAME____

             Resource type ==> ____________
             Resource name ==> ________
             Group name    ==> ________
             New group     ==> ________
             New name      ==> ________
             _ Replace target resource if present

Mask will be accepted in resource name only
unless accompanied by a mask in new name, which will
perform a masked rename.
```

A definition can be renamed in the same group by entering a new resource name, or moved to a different group by specifying the group name to receive the resource, with either the same or a new name. Press ENTER to complete the operation, PF3 to cancel.

Mask characters may be used for the resource name to rename multiple resources to a new group. When a mask is coded in resource name, a mask may also be used in the New Name field to perform masked renaming of the selected resources.

Unlock — Releases the update and delete mode restrictions on a list or group established with a LOCK command. A popup window will appear, pre-filled with the name of the group of which the resource is a member. Another group name or list may be entered. Press ENTER to complete the operation, PF3 to cancel.

```
UNLOCK a group or list

Group name ==> MODELCSD

        or

List name  ==> ________

Enter group or list, no masks
```

USerdefine — May be issued alternatively to the DEFINE command to specify that default values in the new resource definition will be supplied by the user instead of CICS.

View — If issued against a resource, View invokes a resource definition in read only mode. If issued against a group or list, View will perform an Expand function.

Fields of the Resource Definition Directory Display (continued)

Name — Displays the name of the resource definition.

Type — Displays the resource type.

Description — Provides a short description of the resource. For CICS TS, the description is an attribute of the resource definition and included in the DFHCSD file.

A description for one or more resources may be added, changed or erased at the resource directory. Note that descriptions are case sensitive and will not be automatically changed to uppercase unless the operating terminal has the uppercase translation option on. The Case command (PF13) is available at the directory display to toggle uppercase translation on or off for the terminal.

Group — Displays the group of which the resource is a member. IF PF6 (Show time) is pressed, the field will change to the date and time of last update for each resource displayed. Pressing PF6 again will display the current installed status, if applicable. Press PF5 (Show groups) to return to the group name display.

Last update — Displays the date and time of the last update of the resource. This field appears when ‘Show time’ is selected from the Show pulldown menu or PF6 is pressed while ‘Status’ is displayed. The date and time of the last modification or creation of each resource is displayed.

Status — Displays the current status of the resource. This field appears when ‘Show status’ is selected from the Show pulldown menu or PF6 is pressed while ‘Last update’ is displayed. IF N/A appears, it means there is no applicable status display for this resource type. The resource attributes displayed in the status field vary between resource type, as listed below:

Resource Attributes Displayed In The Status Field:

PROGRAMS	LANGUAGE	Source language of the program.
	STATUS	Program status
	RESCOUNT	Current program invocations
TRANSACTION	STATUS	Transaction status
	PROGRAM	Program the transaction initiates upon invocation
	REMOTESYSTEM	Name of the remote system on which the transaction is defined.
TERMINAL	ACQSTATUS	Specifies whether CICS is currently in session with the logical unit identified by the definition.
	ATISTATUS	Specifies ATI status
	SERVSTATUS	Indicates if the terminal is available for use.
	REMOTESYSTEM	If the terminal is in session, specifies the name of the associated remote system.
FILE	STATUS	Indicates if applications can access the file.
	OPENSTATUS	Specifies whether the file is opened or closed.
	TYPE	Identifies the method of record organization for the file (ESDS, KSDS, RRDS)
	REMOTESYSTEM	Identifies the name of the system if the file is remote.
CONNECTION	ACCESSMETHOD	Specifies the access method used for the connection.
	ACQSTATUS	Identifies the status of the connection between CICS and a remote system.
	SERVSTATUS	Indicates whether the system can receive and send data.

Operations on Resource Definitions

Resource definitions are selected for the desired AUTOMON/RDO operation by entering a valid command in the 'Cmd' field of the desired resource definition, as described above. Pressing ENTER produces the Resource Definition Display, discussed in the following chapter. If the command is VIEW, DISPLAY, DEFINE, USERDEFINE, DELETE or ALTER, a resource screen will be displayed. For all other commands (COPY, MOVE, etc.), a popup window will appear with further instructions.

Operations on Multiple Resource Definitions

Commands may be issued against multiple resources from the directory using either identical or disparate commands. The selected resources or popup windows will be displayed sequentially in the specified mode in the appropriate Resource Definition display, allowing the user to browse sequentially from selected action to selected action. The next resource to be acted upon is automatically displayed when a resource is exited, using the 'Exit' option on the Action Bar pulldown menu or the appropriate PF key (PF3 by default) until all actions are processed, at which point the directory is redisplayed.

This process is illustrated in the next section entitled ‘Browsing Resource Definitions’ in the next chapter, Resource Definitions.

Operations when displaying temporary directories

When a new Dupe, Query, Global Alter, Lists or Expand command is performed, the previous temporary directory remains intact and a new temporary directory of the same type is added. These temporary directories are associated with the terminal, allowing different temporary directories by user. They are discarded when you exit AUTOMON/RDO to a clear screen.

Temporary directories can be nested by performing commands from a temporary directory display. For instance, an expansion directory is created by expanding a list. From that you might expand a group in the list, creating a second expansion directory.

While in a temporary directory, you can browse forward and backward through all directories of that type using PF9 (backward) and PF10(forward). The Next pulldown menu provides the same function.

A special feature of temporary directories is Qualified queries. While displaying any temporary directory, you can press PF4 to invoke the Query function. The selected query will then only consider the resources present in the last-used temporary directory when it begins its search.

For instance, you could perform a Dupes function, creating a Duplicates temporary directory. While viewing that, invoke query and search the description field for a character string. The query will only look at the records present in the Duplicates temporary directory while searching, rather than passing the entire file, as is the case when Query is invoked from the primary menu. The result of the query could then be queried again, if desired. Each query further reduces the input set. PF9 and PF10 can then be used to browse through all the query results.

Find - Quick Resource Locate

Resources may be located quickly and conveniently by name by using the Find command of AUTOMON/RDO. When the Find command is selected from the Primary Menu, a popup window appears requesting the resource name and type, the group of which the resource is a member, and the command mode when the Resource Definition Display is presented.

```
Enter resource type    ==> ____________
      Resource name    ==> ________
      Group name       ==> ________
      Command mode     ==> VIEW____

Group from directory will be used if omitted
Valid abbreviations will be accepted
Masks accepted for resource name and group
```

Masks may be used to specify the resource name and group; however, only the first resource which satisfies the mask criteria, in the order it appears in the directory, will be displayed. To display all resources satisfying the mask criteria, use the Resource Definition Directory Menu to enter the mask.

The command mode determines the operations that may be performed upon the resource when it is located. The available modes are VIEW, DEFINE, ALTER and DELETE. A complete discussion of modes is provided in the next chapter, *Resource Definitions*, under the topic ‘Command Modes’.

Chapter 5. Resource Definitions

Resource Display

Individual or multiple resource definition entries may be selected from the directory by specifying the CEDA operations ALTER, DELETE, DISPLAY, DEFINE, VIEW, and USERDEFINE. When Enter is pressed, each definition will display in the mode determined by the command keyed for the resource. Following is an example of a DEFINE command issued for a TRANSACTION resource:

```
 ____   Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - TRANSACTION

 TRANSAction  ____        Group ________       Last Updt ________________
 DEScription  ______________________________________________________________
GENERAL PROPERTIES     REMOTE ATTRIBUTES        RECOVERY
 PROGram      ________  REMOTESystem  ____       DTimout  NO__      SPurge NO_
 TWasize      0____     REMOTEName    ________   RESTart  NO_       TPUrge NO_
 PROFile      DFHCICST  TRProf        ________   Otstimeout NO____ TRACe  YES
 PARtitionset ________  Localq        ___        DUmp     YES    COnfdata NO_
 STAtus       ENABLED_  DYnamic       NO_       SECURITY
                        ROutable      NO_        RESSec  NO_
 TASKDATALoc  BELOW    SCHEDULING                CMDsec  NO_
 TASKDATAKey  USER      PRIOrity  1__
 STOrageclear NO_       TRANClass DFHTCL00      INDOUBT ATTRIBUTES
 RUnaway      SYSTEM_  ALIASES
 SHutdown     DISABLED  TASKReq   ____           ACtion   BACKOUT  WAIT   YES
 ISolate      YES       XTRanid   ________       WAITTime __ __ __
 BRexit       ________  ALias     ____
 TPName       ______________________________________________________________
 XTPname      ______________________________________________________________
              ______________________________________________________________
         RC04004. Make any changes and press Enter to define resource
F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

The Resource Definition facility displays the RDO attributes or characteristics for the specified resource type on a single screen or multiple screens, depending on how many attributes the resource definition requires. Default values are provided. Note that this example was produced on CICS TS version 5.1; your display will vary according to your CICS version and release. AUTOMON/RDO automatically determines the CICS level and displays only those resource attributes pertinent to the level of CICS being used.

Unlike CEDA displays, the possible values for each attribute do not automatically appear on the screen beside each field. In order to locate the possible entries, along with an explanation of the attribute's meaning and `function`, position the cursor anywhere in the attribute value and press the help key. This will produce a pop-up window describing the attribute and all valid entries.

For attributes that accept one of several keywords as the value (i.e. TASKDATALOC, may be BELOW or ANY), you can tab to the desired keyword in the help window and press PF4 (paste). This will transfer the selected keyword to the attribute value and remove the help window at the same time.

Command Modes

The actions that may be taken vary according to the command mode, displayed at the top right of the screen. Differences are reflected in the actions available on the action bar.

MODE	AVAILABLE COMMANDS
DEFINE (DEFINE, USERDEFINE)	Alter Resource Delete Resource Copy resource Install resource
VIEW (DISPLAY,VIEW) ALTER DELETE	Alter resource Delete resource Document resource Backward group Forward group Backward directory Forward directory Define resource Install resource Display history

Alter resource — Toggles the mode to ALTER.

Define resource — Toggles the mode to DEFINE.

Delete resource — Toggles the mode to DELETE mode.

Backward directory — Scrolls to the previous resource definition of the current type as ordered in the resource directory from which the current resource definition was selected.

Backward group — Scrolls to the previous resource definition of the current type as ordered in the DFHCSD.

Copy resource — Invokes a popup window requesting the new name or group for the resource. Key the new name or group for the resource and press ENTER. PF3 cancels the action.

Document resource — Produces a popup window in which the current documentation is displayed. Documentation may be added, edited or a new documentation record created by keying the desired text and pressing ENTER. PF3 cancels the action.

Forward directory — Scrolls to the next resource definition of the current type as ordered in the resource directory from which the current resource definition was selected.

Forward group — Scrolls to the next resource definition of the current type as ordered in the DFHCSD.

Install resource — Invokes a popup window allowing a resource to be installed. The field requesting the name of the resource to be installed will be pre-filled with the current resource; if an alternate resource is to be installed, key the name of the resource definition in the resource field. Groups may also be installed by omitting the resource name.

Display history	Invokes a popup window showing all CEDA commands which have been issued against this resource which resulted in a modification to the CSD. The history is displayed in chronological date/time sequence, allowing browsing, positioning and scanning by various criteria.

Browsing Resource Definitions

In all modes, if commands were entered in the Cmd field on the directory for multiple resource definitions, you may proceed to the next selected definition by exiting the current definition. When the last selected resource definition is displayed, exiting will redisplay the Resource Definition Directory.

To visualize the process, assume the FILE, PROGRAM and TRANSACTION resource types have been selected from the Resource Definition Directory Menus along with the GROUPS directory, as follows:

```
 ____   Show  Case  Exit  Help                    CICS680   DFHCSD    DMENU
          AUTOMON/RDO - CICS On-line Resource Definition Directories
  ----- Groups/Lists Directories -----     ------ Temporary Directories -------
    Type             Name     Group          Type             Name     Group
  / Groups           *RDOC*__                _ Duplicates       ________ ________
  _ Lists            ________ ________       _ Queries          ________ ________
  _ Select all types ________ ________       _ Expansions       ________ ________
                                             _ Global changes   ________ ________
  --------------------- Resource Directories (Page 1 OF 2) --------------------
  _ Atomservice      ________ ________       _ JVmserver        ________ ________
  _ Bundle           ________ ________       _ LIbrary          ________ ________
  _ CONnection       ________ ________       _ LSrpool          ________ ________
  _ CORbaserver      ________ ________       _ MApset           ________ ________
  _ DB2Conn          ________ ________       _ MQconn           ________ ________
  _ DB2Entry         ________ ________       _ PARTItionset     ________ ________
  _ DB2Tran          ________ ________       _ PARTNer          ________ ________
  _ DJar             ________ ________       _ PIpeline         ________ ________
  _ DOctemplate      ________ ________       _ PROCesstype      ________ ________
  _ Enqmodel         ________ ________       _ PROFile          ________ ________
  / File             RDO*____ ________       / PROGram          <MAIN___ ________
  _ Ipconn           ________ ________       _ Requestmodel     ________ ________
  _ JOurnalmodel     ________ ________       _ Sessions         ________ ________
    RM03005. Select with / S or Y.  Dark fields do not apply to this CICS
 Enter F1=Help F2=Keys F3=Exit F4=Files F5=Include IBM F7=Bwd F8=Fwd F13=Case
```

Enter the PF8 key to display the second Resource Directory Menu screen on which you can enter additional selection criteria then press ENTER on either screen to process your selections.

```
 ____   Show  Case  Exit  Help                    CICS680   DFHCSD    DMENU
          AUTOMON/RDO - CICS On-line Resource Definition Directories
  ----- Groups/Lists Directories -----     ------ Temporary Directories -------
    Type             Name     Group          Type             Name     Group
  / Groups           *RDOC*__                _ Duplicates       ________ ________
  _ Lists            ________ ________       _ Queries          ________ ________
  _ Select all types ________ ________       _ Expansions       ________ ________
                                             _ Global changes   ________ ________
  --------------------- Resource Directories (Page 2 OF 2) --------------------
  _ TCpipservice     ________ ________
  _ TDqueue          ________ ________
  _ TErminal         ________ ________
  _ TRANClass        ________ ________
  / TRANSaction      STS?____ ________
  _ TSmodel          ________ ________
  _ TYpeterm         ________ ________
  _ Urimap           ________ ________
  _ Webservice       ________ ________



    RM03005. Select with / S or Y.  Dark fields do not apply to this CICS
 Enter F1=Help F2=Keys F3=Exit F4=Files F5=Include IBM F7=Bwd F8=Fwd F13=Case
```

File resources are masked with RDO* to display only those files with RDO as the first three characters in the file name. Program resources are masked with <MAIN, a generic right-to-left mask that will display only those programs ending with the letters ‘MAIN’. The wild card mask, STS?, is used with Transaction resources to display only those transactions with ‘STS’ as the first three characters in the transaction name. Finally, all groups containing “RDOC” anywhere in the name are selected by using the imbedded string mask *RDOC*.

Pressing ENTER will invoke the Resource Directory , as follows:

```
 ____   Show  Next  Case  Exit  Help              CICS680   DFHCSD    DIRECTORY
            AUTOMON/RDO - CICS On-line Resource Definition Directory

Cmd  Name      Type        Description     Page ____1 of     1 Group
____ RDO$AUD  FILE         ____________________________________ RDOCGRP
____ RDO$FIL  FILE         ____________________________________ RDOCGRP
____ RDOCMAIN PROGRAM      ____________________________________ RDOCGRP
____ WNDOMAIN PROGRAM      ____________________________________ WNDOGRP
____ XSCPMAIN PROGRAM      ____________________________________ RDOCGRP
____ STSC     TRANSACTION  ____________________________________ RDOCGRP
____ STSC     TRANSACTION  ____________________________________ WNDOGRP
____ RDOCGRP  GROUP        ____________________________________ UNICOM









  Update description, enter command beside resource, or press desired PF key

 Enter F1=Help F2=Keys F3=Exit F4=Query F5=Groups F6=Time   F7=Bwd F8=Fwd
```

From this directory, any number of resources may be selected for any operation.

Selecting the program resource WNDOMAIN for display, the first transaction resource STSC for deletion, and the group RDOCGRP for expansion, the screen now appears:

```
 ____   Show  Next  Case  Exit  Help              CICS680   DFHCSD    DIRECTORY
            AUTOMON/RDO - CICS On-line Resource Definition Directory

Cmd  Name      Type        Description     Page ____1 of     1 Group
____ RDO$AUD  FILE         ____________________________________ RDOCGRP
____ RDO$FIL  FILE         ____________________________________ RDOCGRP
____ RDOCMAIN PROGRAM      ____________________________________ RDOCGRP
v___ WNDOMAIN PROGRAM      ____________________________________ WNDOGRP
____ XSCPMAIN PROGRAM      ____________________________________ RDOCGRP
____ STSC     TRANSACTION  ____________________________________ RDOCGRP
del_ STSC     TRANSACTION  ____________________________________ WNDOGRP
e___ RDOCGRP  GROUP        ____________________________________ UNICOM









  Update description, enter command beside resource, or press desired PF key

 Enter F1=Help F2=Keys F3=Exit F4=Query F5=Groups F6=Time   F7=Bwd F8=Fwd
```

Note that for the delete function you must enter the characters *del* for the function to be selected.

When ENTER is pressed, the PROGRAM resource definition WNDOMAIN is displayed in VIEW mode.

```
 ____   Commands  Show  Case  Exit  Help          CICS680   DFHCSD    VIEW
                AUTOMON/RDO - Resource Definition - PROGRAM
  PROGram      WNDOMAIN    Group WNDOGRP_     Last Updt 12/05/12 11:19:06
  DEScription  ____________________________________________________________
 GENERAL ATTRIBUTES
  Language     ASSEMBLER            EXECKey         CICS
  RELoad       NO_                  COncurrency     QUASIRENT_
  RESident     NO_
  Status       ENABLED_            REMOTE ATTRIBUTES
                                    REMOTESystem    ____
  CEdf         YES                  REMOTEName      ________
  DAtalocation ANY__                Transid         ____
  USAge        NORMAL___            EXECUtionset    FULLAPI__
  USElpacopy   NO_                  DYnamic         NO_
 JVM ATTRIBUTES
  JVM          NO___
  JVMClass
_____________________________________________________________

_____________________________________________________________

_____________________________________________________________
              ____________________________________________________________
  JVMServer   ________

F1=Help F2=Keys F3=Exit F4=Doc F5=Alter F6=Delete F7=Bwd F8=Fwd F9=History
```

Exiting this display by selecting the ‘Exit’ option from the Exit pulldown menu or pressing the corresponding PF key (PF3) will immediately produce the next resource definition selected from the directory.

This would be the STSC transaction to be deleted:

```
        Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DELETE
                AUTOMON/RDO - Resource Definition - TRANSACTION

 TRANSAction  STSC       Group RDOCGRP_      Last Updt 12/05/12 11:19:05
 DEScription  ____________________________________________________________
GENERAL PROPERTIES     REMOTE ATTRIBUTES        RECOVERY
 PROGram      STSCORE_  REMOTESystem  ____       DTimout  NO__      SPurge NO_
 TWasize      32___     REMOTEName    ________   RESTart  NO_       TPUrge NO_
 PROFile      DFHCICST  TRProf        ________   Otstimeout NO____ TRACe  YES
 PARtitionset ________  Localq        ___        DUmp     YES    COnfdata NO_
 STAtus       ENABLED_  DYnamic       NO_       SECURITY
                        ROutable      NO_        RESSec  NO_
 TASKDATALoc  BELOW    SCHEDULING                CMDsec  NO_
 TASKDATAKey  CICS      PRIOrity  1__
 STOrageclear NO_       TRANClass DFHTCL00      INDOUBT ATTRIBUTES
 RUnaway      SYSTEM_  ALIASES
 SHutdown     DISABLED  TASKReq    ____          ACtion   BACKOUT  WAIT   YES
 ISolate      YES       XTRanid    ________      WAITTime 00 00 00
 BRexit       ________  ALias      ____
 TPName       ____________________________________________________________
 XTPname      ____________________________________________________________
              ____________________________________________________________
       RC03015. Enter=delete, PF13=delete and suppress prompts, PF3=exit
F1=Help F2=Keys F3=Exit F4=Doc F5=Alter F6=Delete F7=Bwd F8=Fwd F9=History
```

The STSC transaction resource definition is displayed in DELETE mode, which is indicated at the top right of the screen. Pressing Enter to perform the delete operation, or pressing PF3 to exit produces the final selected resource display, which in this instance is another directory, since the selected operation was expansion of the group RDOCGRP:

Any number of additional operations may be performed from this directory of the RDOCGRP group.

```
 ____   Show  Next  Case  Exit  Help              CICS680   DFHCSD    DIRECTORY
            AUTOMON/RDO - CICS On-line Resource Definition Directory

Cmd  Name      Type        Description     Page ____1 of     2 Group
____ RCMD     TRANSACTION  ____________________________________ RDOCGRP
____ RDAT     TRANSACTION  ____________________________________ RDOCGRP
____ RDO$AUD  FILE         ____________________________________ RDOCGRP
____ RDO$FIL  FILE         ____________________________________ RDOCGRP
____ RDOC     TRANSACTION  ____________________________________ RDOCGRP
____ RDOCAUDT PROGRAM      ____________________________________ RDOCGRP
____ RDOCCMDS PROGRAM      ____________________________________ RDOCGRP
____ RDOCDIR  PROGRAM      ____________________________________ RDOCGRP
____ RDOCHELP PROGRAM      ____________________________________ RDOCGRP
____ RDOCIMPT PROGRAM      ____________________________________ RDOCGRP
____ RDOCMAIN PROGRAM      ____________________________________ RDOCGRP
____ RDOCUTIL PROGRAM      ____________________________________ RDOCGRP
____ RDOI     TRANSACTION  ____________________________________ RDOCGRP
____ RDON     TRANSACTION  ____________________________________ RDOCGRP
____ RTSO     CONNECTION   ____________________________________ RDOCGRP
____ RTSO     TRANSACTION  ____________________________________ RDOCGRP
____ RTSOSESS SESSIONS     ____________________________________ RDOCGRP
  Update description, enter command beside resource, or press desired PF key
                           Expansion of group RDOCGRP
 Enter F1=Help F2=Keys F3=Exit F4=Query F5=Groups F6=Time   F7=Bwd F8=Fwd
```

When all operations are completed, exiting this display will return to the original directory from which the FILE, PROGRAM and TRANSACTION resources and this group were selected.

Browsing the Resource Directory and Groups

You may also browse the resource type directory by using the Forward Directory and Backward Directory options from the Commands pulldown menu. Browsing forward from the TERMINAL resource definition in the above example would access the next TERMINAL resource definition in the order it appears in the main directory, regardless of the masked entry in the Resource Definition Directory.

Thus, assuming the next two entries in the main directory following V010 are V012 and V020, issuing the Forward Directory command will next access V012. This entry is included in the resource directory because it meets the mask directory, but this is coincidental. The resource was accessed because it follows next sequentially in the main directory order. Repeating the Forward Directory command will therefore access V020, which does not satisfy the mask criteria.

Groups are similarly browsed, using the Forward Group and Backward Group options from the Commands pulldown menu or the corresponding PF keys. The distinction between browsing directories and groups is that directories are limited to the current resource type; browsing a group will find the next resource definition in the group as it exists in the DFHCSD file, regardless of the type.

Using Lowercase Characters in Resource Definitions

Some but not all resources allow lowercase characters in the resource name and certain other attributes. The use of lowercase characters in resource names is generally discouraged because it can lead to confusion. With lowercase, a transaction named ABCD is a different resource than one named ABCd, whereas this is not the case for group names, file names, program names and several others. For resources that do not support lowercase names, CEDA translates any lowercase characters to uppercase when the definition is made.

Entering in Lowercase with CEDA

In order to enter lowercase characters in CEDA, the terminal at which you are operating must be configured with the uppercase translation feature off, or the Profile for the CEDA transaction must specify no uppercase translation. Otherwise, all characters will be translated to uppercase before CEDA can receive them.

If uppercase translation is off, CEDA will translate all input data to uppercase except for those fields where lowercase is allowed. In those fields, the data will be accepted exactly as entered with no translation. A list of these fields appears at the end of this topic.

Entering Lowercase with AUTOMON/RDO

AUTOMON/RDO follows the same general philosophy as CEDA. All input data is translated to uppercase except those fields where lowercase is valid. If uppercase translation is off at the terminal or for the transaction, it is the operator's responsibility to enter names correctly (using the caps or shift key for uppercase) in any resource attribute where lowercase is accepted.

In addition, AUTOMON/RDO makes the process easier by providing the following choices and actions:

1) In General Preferences, you can designate whether to allow lowercase characters in resource names at all. If this option is set to NO, input data to resource mnemonics that would normally accept lowercase will always be translated to uppercase, regardless of the setting of the uppercase translation feature for the terminal.

2) In General Preferences, you can specify that AUTOMON/RDO is always to operate in lowercase mode. If this option is set to YES, the uppercase translation feature of the operating terminal will be turned off any time an AUTOMON/RDO transaction is executed. When the operator exits from the primary menu, it will be reset to its original status.

3) On the primary menu, on every resource definition screen and many other displays in the product, the CASE command can be executed by pressing a PF key (PF13 by default). The CASE command will switch the uppercase translation feature of the operating terminal off or on, depending on its current setting. This makes it easy to enter lowercase characters in specific situations, even though the normal operating mode may be to always translate to uppercase. When the operator exits from the primary menu, the terminal will be reset to its original status.

4) If the Preference option to allow lowercase characters in resource names is set to NO, you can still enter lowercase in description and documentation fields. To do this, make sure uppercase translation is set off for your operating terminal by issuing the CASE command (press PF13 to toggle the option off/on). Now you can enter

lowercase anywhere in a resource definition. AUTOMON/RDO will translate all input to uppercase except description or documentation fields.

Resource Attributes Where Lowercase is Allowed

The following table shows, for each resource type, the attribute mnemonics where lowercase characters are accepted by CEDA. The italicized mnemonics indicate those resources where the resource name can be lowercase.

Atomservice	Description	Bindfile	Configfile
	Resourename		
Bundle	*Bundle*	Basescope	Bundledir
	Description		
Connection	Description		
Corbaserver	Description	Shelf	JNDIprefix
	Djardir		
DB2conn	Description		
DB2entry	*DB2entry*	Description	Transid
DB2tran	*DB2tran*	Entry	Description
	Transid		
Djar	Description	Hfsfile	Corbaserver Name
Doctemplate	*Doctemplate*	Tsqueue	Tdqueue
	Description	Hfsfile	Templatename
Enqmodel	*Enqmodel*	Enqname	Description
File	Description	Password	
Ipconn	Description	Certificate	Host
Journalmodel	Description		
Jvmserver	*Jvmserver*	Description	Jvmprofile
Library	Description		
Lsrpool	Description		
Mapset	Description		
Mqconn	Description	Initqname	
Partitionset	Description		
Partner	Description	Profile	TPname
Pipeline	Description	Configfile	Shelf
	Wsdir		
Processtype	*Processtype*	Description	
Profile	*Profile*	Description	
Program	Description	Jvmclass	Jvmserver
	Transid		
Requestmodel	*Requestmodel*	Omgmodule	Omginterface
	Omgoperation	Transid	Description
	Bean Name	Corbaserver	
Sessions	*Sessions*	Sendpfx	Sessname
	Receivepfx	Transaction	Description
TCPIPservice	Transaction	Tsqprefix	Certificate
	Description	Host	Realm
Tdqueue	*Tdqueue*	Indirectname	Remotename
	Transid	Description	
Terminal	*Terminal*	Altprinter	Printer
	Description	Remotename	Transaction

Tranclass	Description		
Transaction	*Transaction*	Remotename	Alias
	Trprof	Tpname	
	Description	Profile	
Tsmodel	*Tsmodel*	Prefix	Remoteprefix
	Description		
Typeterm	Description		
Urimap	*Urimap*	Description	Certificate
	Hfsfile	Host	Location
	Mediatype	Path	Templatename
	Transaction	Webservice	
Webservice	*Webservice*	Archivefile	Description
	Wsbind	Wsdlfile	

In addition to these, the resource documentation window, the export queue description, the export verify window and the query scan windows will accept lowercase.

The directory menu will accept lowercase in the resource names that can have lowercase characters if the Preference option is set to allow lowercase resource names. Likewise, if this option is set, any pop-up window

The command line of the primary and import menus will always translate to uppercase. This is also true of tran/command shortcut entry from a clear screen.

[Note]. With the Preference option to allow lowercase resource names set to YES and with uppercase translation turned off at the operating terminal, it is the operator's responsibility to enter the resource name exactly as it appears on file, using the shift key as needed, in any window or field where resource name can be supplied.

Resource Definition Displays

The Define command displays the attributes or characteristics, for a specified resource type on a single screen or multiple screens, depending on how many attributes the resource definition requires. Resource attributes vary according to the operating system being used (VSE or MVS) and the level of CICS. AUTOMON/RDO automatically determines the operating system and CICS level, displaying only applicable resource attributes

On the following pages, each of the resource definition displays are pictured, using the display as it appears in CICS TS 4.1 and CICS TS 5.1. Please use the screen's APPLID to determine which version is being used CICS660 for CICS TS 4.1 or CICS680 for CICS TS 5.1. No attempt is made in this document to describe every resource attribute. That information can be obtained by either of two methods:

1) Display a resource type, then tab the cursor to any input field and press the help key. A brief description of the mnemonic and possible values will be presented.
2) Consult the IBM *CICS Resource Definition Guide* for your release of CICS.

[Note]. To enter lowercase data, the CASE command (PF13) is available at all resource displays to toggle uppercase translation on or off as needed.

The resource displays are presented here in alphabetical order.

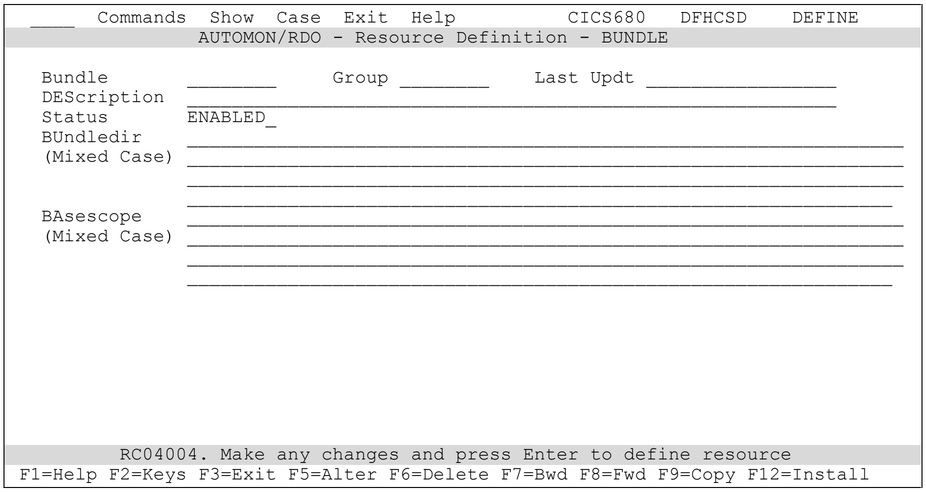
Atomservice Resources

An ATOMSERVICE resource defines an Atom service, feed, collection or category document that CICS can deliver to a Web client over HTTP. For an Atom feed or collection the ATOMSERVICE resource identifies the Atom configuration file, CICS resource or application program, and XML binding that is used to supply the data and metadata for the Atom entries. The XML binding is stored in z/OS UNIX system services. A URIMAP resource definition is required to handle the incoming Web client request and direct it to the appropriate ATOMSERVICE resource.

```
____   Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - ATOMSERVICE

  Atomservice  ________     Group ________    Last Updt ________________
  DEScription  ____________________________________________________________
  Atomtype     FEED______ Status ENABLED_
  COnfigfile   ____________________________________________________________
  (Mixed Case) ____________________________________________________________
               ____________________________________________________________
               ____________________________________________________________

  ASSOCIATED CICS RESOURCE
  RESOURCEName _________________ RESOURCEType _______
  Bindfile     ____________________________________________________________
  (Mixed Case) ____________________________________________________________
               ____________________________________________________________
               ____________________________________________________________

         RC04004. Make any changes and press Enter to define resource
F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Bundle Resources

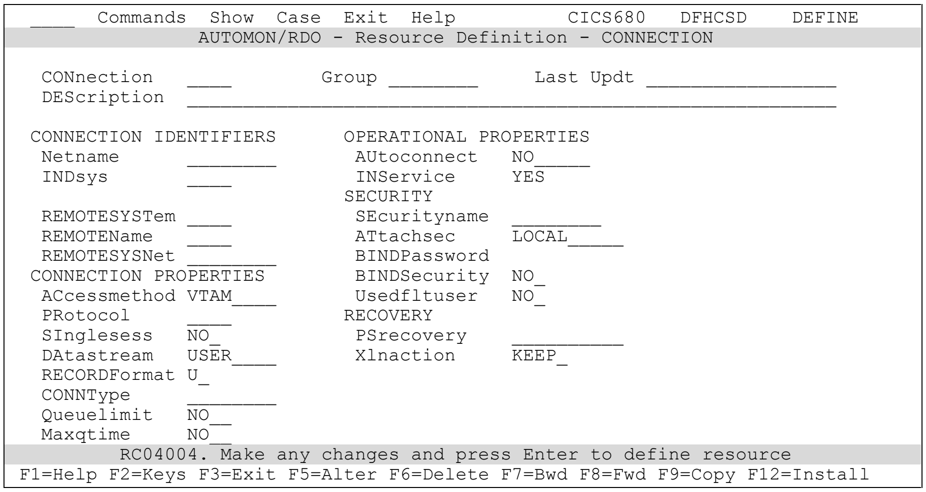
A BUNDLE resource defines a bundle which is a collection of CICS resources, artifacts, references, and a manifest that can be deployed in a CICS region to represent an application. The manifest is a z/OS UNIX file identified by the BUNDLEDIR attribute. The BASESCOPE attribute specifies a Uniform Resource Identifier (URI) used to group bundles together or associate a CICS bundle with a cloud-style application.



```
  ____  Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                 AUTOMON/RDO - Resource Definition - BUNDLE

   Bundle        ________     Group ________    Last Updt _________________
   DEScription   __________________________________________________________
   Status        ENABLED_
   BUndledir     ________________________________________________________________
   (Mixed Case)  ________________________________________________________________
                 ________________________________________________________________
                 _______________________________________________________________
   BAsescope     ________________________________________________________________
   (Mixed Case)  ________________________________________________________________
                 ________________________________________________________________
                 _______________________________________________________________








          RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Connection Resources

CONNECTION resource definitions identify a remote system and define its attributes to the local CICS connected to the remote system using MRO or ISC. Upon installation, information contained in the CONNECTION definition is stored in the Terminal Control Table (TCT) as a Terminal Control Table System Entry (TCTSE). The Remotesystem specified in a TRANSACTION or TERMINAL definition references a CONNECTION.



```
  ____  Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                 AUTOMON/RDO - Resource Definition - CONNECTION

   CONnection    ____        Group ________     Last Updt _________________
   DEScription   __________________________________________________________

  CONNECTION IDENTIFIERS      OPERATIONAL PROPERTIES
   Netname       ________       AUtoconnect   NO_____
   INDsys        ____           INService     YES
                              SECURITY
   REMOTESYSTem ____            SEcurityname  ________
   REMOTEName    ____           ATtachsec     LOCAL_____
   REMOTESYSNet ________       BINDPassword
  CONNECTION PROPERTIES         BINDSecurity  NO_
   ACcessmethod VTAM____        Usedfltuser   NO_
   PRotocol      ____         RECOVERY
   SInglesess    NO_            PSrecovery    __________
   DAtastream    USER____       Xlnaction     KEEP_
   RECORDFormat U_
   CONNType      ________
   Queuelimit    NO__
   Maxqtime      NO__
          RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Corbaserver Resources

A CORBASERVER resource defines an execution environment for enterprise beans and stateless CORBA objects. Attributes in the CORBASERVER resource contain information used in constructing Generic Factory Interoperable Object References for invoking stateless CORBA objects as well as information used in making outbound method requests on objects in remote EJB or CORBA servers.

```
        Commands  Show  Case  Exit  Help          CICS660   DFHCSD    DEFINE
                 AUTOMON/RDO - Resource Definition - CORBASERVER
   CORbaserver  ________     Group ________    Last Updt ________________
   DEScription  ____________________________________________________________
   Jndiprefix   ________________________________________________________________
   (Mixed Case) ________________________________________________________________
                ________________________________________________________________
                ________________________________________________________________
   AUtopublish  ___  SEssbeantime  __ , __ , __
   SHelf        ________________________________________________________________
   (Mixed Case) ________________________________________________________________
                ________________________________________________________________
                ________________________________________________________________
   DJardir      ________________________________________________________________
   (Mixed Case) ________________________________________________________________
                ________________________________________________________________
                ________________________________________________________________
   INITIAL STATUS
   STatus       ENABLED_

   This is page 1 of 2 press Forward for next page press Enter to process

         RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

[Note]. The CORBASERVER resource definition uses two screens for its attribute definitions. Use the PF8=Fwd key to navigate from the first CORBASERVER resource definition screen to the second screen. Use the PF7=Bwd key to return from the second CORBASERVER resource definition screen to the first screen. The ENTER key can be pressed on either screen to process the resource definition.

```
  ____  Commands  Show  Case  Exit  Help          CICS660   DFHCSD    DEFINE
                 AUTOMON/RDO - Resource Definition - CORBASERVER
   CORbaserver  ________     Group ________    Last Updt ________________
   DEScription  ____________________________________________________________

   SERVER ORB ATTRIBUTES
   Host         ________________________________________________________________
   (Mixed Case) ________________________________________________________________
                ________________________________________________________________
                ________________________________________________________________

   CLIENT ORB ATTRIBUTES
   CErtificate  ________________________________________________________

   TCPIP SERVICES
   Unauth  ________  CLientcert ________  SSlunauth ________ ASserted ________

   OUTBOUND SECURITY
   CIphers ____________________________________________________________

   This is page 2 of 2 press Backward for first page press Enter to process


 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

DB2conn Resources

DB2CONN defines the global attributes of the connection to be established between CICS and DB2 as well as the attributes of pool threads and command threads to be used with the connection.

Following is a DB2conn resource definition in CICS TS 5.1.

```
 ____   Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - DB2CONN

  DB2Conn       ________     Group ________      Last Updt ________________
  DEScription   ____________________________________________________________

 CONNECTION ATTRIBUTES                 POOL THREAD ATTRIBUTES
  CONnecterror SQLCODE                  ACcountrec   NONE
  DB2Groupid   ____                     AUTHId       ________
  DB2Id        ____                     AUTHType     ______
  MSGQUEUE1    CDB2                     DRollback    YES
  MSGQUEUE2    ____                     PLAN         ________
  MSGQUEUE3    ____                     PLANExitname ________
  Nontermrel   YES                      PRiority     HIGH_
  PUrgecycle   __ __                    THREADLimit  0003
  RESyncmember YES                      THREADWait   YES
  REUselimit   01000
  SIgnid       ________                COMMAND THREAD ATTRIBUTES
  STANdbymode  RECONNEC_                COMAUTHId    ________
  STATsqueue   CDB2                     COMAUTHType  ______
  TCblimit     0012                     COMThreadlim 1___
  THREADError  N906D
          RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

DB2entry Resources

DB2ENTRY defines resources to be used by a specific CICS transaction, or a group of transactions, when using the CICS DB2 interface. A DB2ENTRY can specify one specific transaction or a group of transactions may be represented by the use of one or more wildcard characters.

```
 ____   Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - DB2ENTRY

  DB2Entry      ________     Group ________      Last Updt ________________
  DEScription   ____________________________________________________________

 THREAD SELECTION ATTRIBUTES
  TRansid      ____

 THREAD OPERATION ATTRIBUTES
  ACcountrec   NONE
  AUTHId       ________
  AUTHType     ______
  DRollback    YES
  PLAN         ________
  PLANExitname ________
  PRIority     HIGH_
  PROtectnum   0___
  THREADLimit  0___
  THREADWait   POOL


          RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

DB2tran Resources

A DB2TRAN resource definition defines additional transactions to be associated with a particular DB2Entry. DB2Tran allows a DB2Entry to have an unrestricted number of transactions associated with it, including names using wildcard characters.

```
        Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                 AUTOMON/RDO - Resource Definition - DB2TRAN


   DB2Tran       ________     Group ________    Last Updt ________________
   DEScription   ____________________________________________________________

   Entry         ________
   Transid       ____


          RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Djar Resources

The DJAR resource defines an instance of a deployed JAR file containing Enterprise JAVA Beans and is associated with a related CORBASERVER, which defines the execution environment that an EJB executes in. Generally, DJAR resources are created dynamically when a CORBASERVER resource specifies a pickup directory containing one or more JAR files. For each JAR file in the pickup directory, CICS dynamically creates a DJAR resource definition and moves the JAR file to the shelf directory, defined in the CORBASERVER.

```
  ____  Commands  Show  Case  Exit  Help          CICS660   DFHCSD    DEFINE
                 AUTOMON/RDO - Resource Definition - DJAR

   DJar          ________     Group ________    Last Updt ________________
   DEScription   ____________________________________________________________

   COrbaserver   ____
   Hfsfile       ____________________________________________________________
   (Mixed Case)  ____________________________________________________________
                 ____________________________________________________________
                 ____________________________________________________________
                 ____________________________________________________________


          RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Doctemplate Resources

A DOCTEMPLATE resource defines document templates to CICS. Document templates allow you to perform variable substitution on documents in a manner similar to that done by BMS for 3270 screens.

```
        Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - DOCTEMPLATE

  DOctemplate  ________     Group ________     Last Updt ________________
  DEScription  ____________________________________________________________

 FULL TEMPLATE NAME            PARTITIONED DATA SET
  TEmplatename ________         DDname      ________
                                Membername  ________
 ASSOCIATED CICS RESOURCE
  File         ________        TEMPLATE PROPERTIES
  TSqueue      ________________ Appendcrlf  YES
  TDqueue      ____             TYpe        EBCDIC
  Program      ________
  Exitpgm      ________

 HIERARCHICAL FILE SYSTEM
  Hfsfile      ____________________________________________________________
  (Mixed Case) ____________________________________________________________
               ____________________________________________________________
               ____________________________________________________________

         RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Enqmodel Resources

An ENQMODEL resource provides an enqueue mechanism that serializes access to a named resource across a specified set of CICS regions operating with a sysplex. This applies equally to a CICSplex within a single MVS image and to a CICSplex that resides in more than one MVS.

```
  ____  Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - ENQMODEL


  ENQModel     ________     Group ________     Last Updt ________________
  DEScription  ____________________________________________________________

  ENQScope     ____
  Status       ENABLED_
  ENQName      ____________________________________________________________
               ____________________________________________________________
               ____________________________________________________________
               ____________________________________________________________

         RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

File Resources

FILE resource definitions describe file attributes to CICS, including the types of operations allowed against the file, journalling, security, and recovery procedures. Information in the FILE resource definition is used to construct CICS control information and generate an access control block (ACB).

```
 ____   Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - FILE

  FIle          ________      Group ________    Last Updt ________________
  DEScription   ____________________________________________________________
  DSNAme        ________________________________________
 VSAM PARAMETERS            REMOTE ATTRIBUTES       AUTO JOURNALING
  LSRPOOLNum  1___           REMOTESystem ____       JOurnal      NO
  STRings     1__            REMOTEName   ________   JNLRead      NONE______
  DSNSharing  ALLREQS___     RECORDSize   _____      JNLSYNCRead  NO_
  Nsrgroup    ________       Keylength    ___        JNLUpdate    NO_
  Password    ________      BUFFERS                  JNLAdd       NONE__
  RLsaccess   NO_            DAtabuffers  2____      JNLSYNCWrite YES
  READInteg   UNCOMMIT___    Indexbuffers 1____     RECOVERY PARAMETERS
 INITIAL STATUS             DATATABLE PARAMETERS     RECOVery     NONE_______
  STAtus      ENABLED__      TABLE        NO__       FWdrecovlog  NO
  Opentime    FIRSTREF       Maxnumrecs   NOLIMIT_   BAckuptype   STATIC_
  DIsposition SHARE         DATA FORMAT             CFDATATABLE PARAMETERS
 OPERATION                   RECORDFormat V          CFdtpool     ________
  BRowse  NO_   READ  YES                             TABLEName    ________
  DELete  NO_   Add   NO_                             UPDATEModel  LOCKING___
  UPDATE  NO                                          LOad         NO
         RC04004. Make any changes and press Enter to define resource
F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

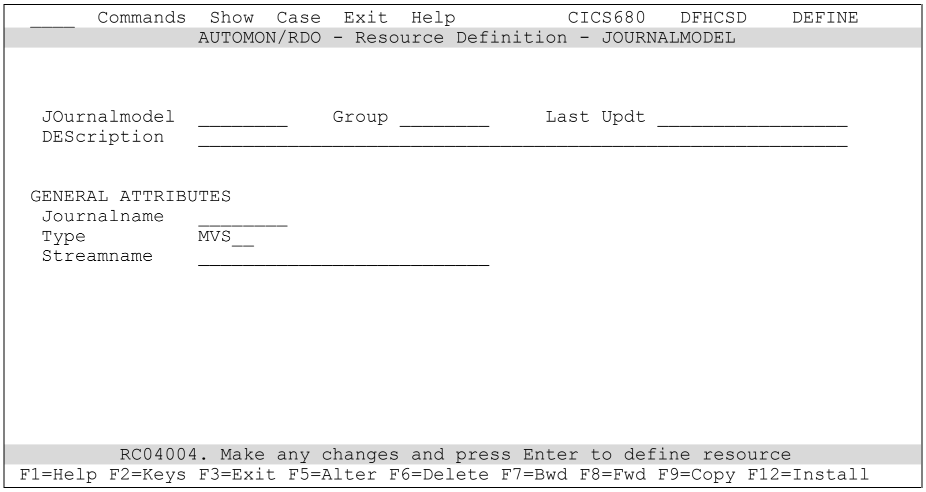
Ipconn Resources

An IPCONN resource defines an outbound TCP/IP communication link to CICS remote systems. This type of link is called an IPIC connection. An IPCONN resource has a corresponding TCPIPSERVICE resource definition that defines the attributes for inbound processing. An IPIC connection can support many of the same functions that MRO and ISC support such as Distributed Program Link (DPL) ECI, function shipping and transaction routing depending on the levels of CICS that are connected with IPIC.

```
 ____   Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - IPCONN
  Ipconn        ________    Group ________     Last Updt ________________
  DEScription   ____________________________________________________________

 IPIC CONNECTION IDENTIFIERS   OPERATIONAL PROPERTIES
  APplid        ________        AUtoconnect   NO_
  Networkid     ____            INservice     YES
  Host          ____________________________________________________________
  (Mixed Case)  ____________________________________________________________
  Port          _____
  Tcpipservice  ________
 IPIC CONNECTION PROPERTIES    RECOVERY
  Receivecount  ___              Xlnaction  KEEP_
  SENdcount     ___
  Queuelimit    ____            MIRROR TASK PROPERTIES
  MAxqtime      ____             MIrrorlife REQUEST
 SECURITY
  SSl           NO_  CErtificate ________________________________
  CIphers       ____________________________________________________________
  Linkauth      SECUSER_  SECurityname ________
  Userauth      LOCAL______      IDprop NOTALLOW__
         RC04004. Make any changes and press Enter to define resource
F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Journalmodel Resources

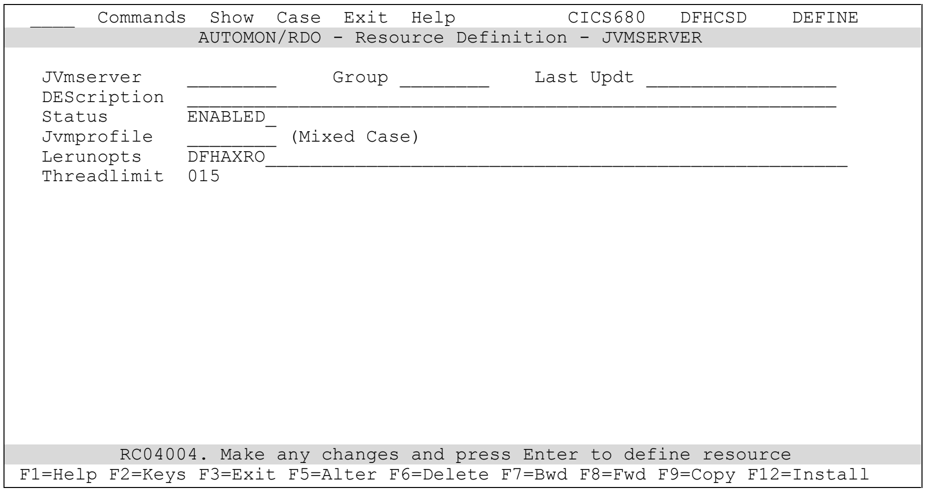
A JOURNALMODEL resource definition provides the connection between a CICS journal name (or identifier) and the associated physical log streams managed by the MVS system logger, or between the journal name and the SMF log.



```
 ____  Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                  AUTOMON/RDO - Resource Definition - JOURNALMODEL



  JOurnalmodel  ________     Group ________     Last Updt _________________
  DEScription   __________________________________________________________


 GENERAL ATTRIBUTES
  Journalname   ________
  Type          MVS__
  Streamname    __________________________









           RC04004. Make any changes and press Enter to define resource
F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Jvmserver Resources

A JVMSERVER resource defines the runtime environment for a JVM server executing in a CICS region. The JVMSERVER resource definition provides the name of the JVM profile which is a file stored in the z/OS UNIX directory or file system and the runtime options for the Language Environment.



```
 ____  Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                  AUTOMON/RDO - Resource Definition - JVMSERVER

  JVmserver    ________      Group ________     Last Updt _________________
  DEScription  __________________________________________________________
  Status       ENABLED_
  Jvmprofile   ________ (Mixed Case)
  Lerunopts    DFHAXRO____________________________________________________
  Threadlimit  015














           RC04004. Make any changes and press Enter to define resource
F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Library Resources

A LIBRARY resource defines the physical and operational characteristics of up to sixteen dataset names that make up the LIBRARY concatenation for CICS. The LIBRARY resource name is the name that is used as the DD name to represent the concatatenation of datasets in the resource definition. The datasets contain the programs, mapsets and other elements used for CICS applications.

```
 ____    Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - LIBRARY
  LIbrary      ________     Group ________     Last Updt ________________
  DEScription  ________________________________________________________
  Status       ENABLED_  CRitical NO_  Ranking 50

  DSNAME01     ____________________________________________
  DSNAME02     ____________________________________________
  DSNAME03     ____________________________________________
  DSNAME04     ____________________________________________
  DSNAME05     ____________________________________________
  DSNAME06     ____________________________________________
  DSNAME07     ____________________________________________
  DSNAME08     ____________________________________________
  DSNAME09     ____________________________________________
  DSNAME10     ____________________________________________
  DSNAME11     ____________________________________________
  DSNAME12     ____________________________________________
  DSNAME13     ____________________________________________
  DSNAME14     ____________________________________________
  DSNAME15     ____________________________________________
  DSNAME16     ____________________________________________
         RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Lsrpool Resources

LSRPOOL resource definitions determine the type and size of data buffers, strings, and Hiperspace buffers for a Local Shared Resource (LSR) pool. LSR pools allow a user to customize the buffer allocation of the system to enhance performance. Files associated with LSR pools utilize the defined buffers instead of the default buffers assigned by CICS. Eight LSR pools may be concurrently defined.

```
 ____    Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - LSRPOOL


  LSrpool      ________     Group ________      Last Updt ________________
  DEScription  ____________________________________________________________

  LSRPOOLNUm   1__  Maxkeylength ___    SHarelimit ___      STrings ___

 DATA BUFFERS      INDEX BUFFERS     HIPERSPACE DATA       HIPERSPACE INDEX
  DATA512 _____     INDEX512 _____    HSDATA4K  ________    HSINDEX4K  ________
  DATA1K  _____     INDEX1K  _____    HSDATA8K  ________    HSINDEX8K  ________
  DATA2K  _____     INDEX2K  _____    HSDATA12K ________    HSINDEX12K ________
  DATA4k  _____     INDEX4k  _____    HSDATA16K ________    HSINDEX16K ________
  DATA8k  _____     INDEX8k  _____    HSDATA20K ________    HSINDEX20K ________
  DATA12k _____     INDEX12k _____    HSDATA24K ________    HSINDEX24K ________
  DATA16k _____     INDEX16k _____    HSDATA28K ________    HSINDEX28K ________
  DATA20k _____     INDEX20k _____    HSDATA32K ________    HSINDEX32K ________
  DATA24k _____     INDEX24k _____
  DATA28k _____     INDEX28k _____
  DATA32k _____     INDEX32k _____

         RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Mapset Resources

MAPSET resource definitions identify a set of maps to CICS and determines its characteristics, such as the mapsets disposition and status. MAPSET definitions correspond to mapsets specified in the DFHMSD macro containing maps whose fields are defined using the DFHMDI and DFHMDF macros.

The members of a mapset are specified in the DFHMSD macro, and maps and their fields are defined using the DFHMDI and DFHMDF macros as a Terminal Control Table System Entry (TCTSE).

```
        Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                 AUTOMON/RDO - Resource Definition - MAPSET



  MApset       ________      Group ________     Last Updt ________________
  DEScription  ____________________________________________________________

 GENERAL ATTRIBUTES
  Status       ENABLED_
  REsident     NO_

  USAge        NORMAL___
  USElpacopy   NO_





         RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Mqconn Resources

An MQCONN resource defines a coonection between CICS and Websphere MQ. Only one MQCONN resouce with the same or different name can be installed at a time in a CICS region and can only be installed or discarded when CICS is not connected to Websphere MQ.

```
  ____  Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                 AUTOMON/RDO - Resource Definition - MQCONN

  MQconn       ________      Group ________     Last Updt ________________
  DEScription  ____________________________________________________________
  Resyncmember YES________
  Mqname       ____
  Initqname    ___________________________________________________________









         RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Partitionset Resources

PARTITIONSET resource definitions specify the characteristics of the display partitions available with certain display devices, such as the 8775 Display and the IBM 3290 Information Panel. Partitions on devices which support display partitioning require partitionset definitions to route display data streams to the desired display areas. The partitionset is utilized by specifying a defined partitionset in the PARTITIONSET field of the TRANSACTION definition.

```
        Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                 AUTOMON/RDO - Resource Definition - PARTITIONSET



 PARTItionset ________     Group ________    Last Updt ________________
 DEScription  ____________________________________________________________

 GENERAL ATTRIBUTES
 Status       ENABLED_
 REsident     NO_

 USAge        NORMAL___
 USElpacopy   NO_



          RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Partner Resources

PARTNER definitions identify a program and communication profile to be used to allow a CICS application to communicate to an application executing on a remote logical unit. The remote program is a 'partner', and the communication between the applications is a 'conversation'.

```
 ____   Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                 AUTOMON/RDO - Resource Definition - PARTNER



  PARTNEr      ________     Group ________    Last Updt ________________
  DEScription  ____________________________________________________________

 REMOTE LU NAME
  NETName     ________
  NETWork     ________

 SESSION PROPERTIES
  Profile     ________

 REMOTE TP NAME
  Tpname      ________________________________________________________________
  Xtpname     ________________________________________________________________
              ________________________________________________________________


          RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Pipeline Resources

A PIPELINE resource is part of the CICS Web support and provides information about which message handler programs are to process a service request and provide a response. URIMAP resource definitions identy PIPELINE resources that are to handle inbound Web service requests. The PIPELINE resource definition contains attributes identifying the processing and web service binding information stored in z/OS UNIX files and directories.

```
        Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - PIPELINE

  PIpeline      ________      Group ________    Last Updt ________________
  DEScription   ______________________________________________________________
  STatus        ENABLED_ Respwait DEFT (Deft or 0-9999)

  COnfigfile    ______________________________________________________________
  (Mixed Case)  ______________________________________________________________
                ______________________________________________________________
                ______________________________________________________________

  SHelf         ______________________________________________________________
  (Mixed Case)  ______________________________________________________________
                ______________________________________________________________
                ______________________________________________________________

  Wsdir         ______________________________________________________________
  (Mixed Case)  ______________________________________________________________
                ______________________________________________________________
                ______________________________________________________________

         RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Processtype Resources

A PROCESSTYPE resource defines a BTS process-type. It names the CICS file which relates to the physical VSAM data set(repository) on which details of all processes of this type (and their activity instances) are to be stored.

```
  ____  Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - PROCESSTYPE



  PROCesstype   ________      Group ________    Last Updt ________________
  DEScription   ______________________________________________________________

 INITIAL STATUS
  Status        ENABLED_

 DATA SET PARAMETERS_
  File          ________

 AUDIT TRIAL
  AUDITLOg      ________
  AUDITLEvel    OFF_____




         RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Profile Resources

PROFILE resource definitions specify the interaction between transactions and terminals or logical units, including defining the display buffer size, printer compatibility, message journalling and node error program. A profile definition is specified in each TRANSACTION definition, eliminating the need to define the interaction between each transaction and terminals using the transaction.

```
 ____   Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - PROFILE


  PROFile       ________    Group ________    Last Updt ________________
  DEScription   ______________________________________________________________
  Scrnsize      DEFAULT__
  MOdename      ________                      PROTOCOLS
  PRIntercomp   NO_                            DVsuprt    ALL____
  Uctran        NO_                            Inbfmh     NO__
  Facilitylike  ____                           RAq        NO_
 JOURNALLING                                   Logrec     NO_
  Journal       NO                            RECOVERY
  MSGJrnl       NO____                         Nepclass   0__
 PROTECTION                                    RTimout    NO__
  MSGInteg      NO_
  Onewte        NO_

  CHAIncontrol  NO_


         RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Program Resources

PROGRAM resource definitions define applications to CICS, declaring such properties as the source language, the disposition of the program, and the program's status. The program definition is used to generate control information stored in the program library and used to process a TRANSACTION.

Following is a program display in CICS TS 5.1.

```
 ____   Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - PROGRAM
  PROGram       ________    Group ________     Last Updt ________________
  DEScription   ______________________________________________________________
 GENERAL ATTRIBUTES
  Language      _________            EXECKey         USER
  RELoad        NO_                  COncurrency     QUASIREN__
  RESident      NO_
  Status        ENABLED_            REMOTE ATTRIBUTES
                                     REMOTESystem    ____
  CEdf          YES                  REMOTEName      ________
  DAtalocation  BELOW                Transid         ____
  USAge         NORMAL___            EXECUtionset    FULLAPI__
  USElpacopy    NO_                  DYnamic         NO_
 JVM ATTRIBUTES
  JVM           NO___
  JVMClass      ______________________________________________________________
                ______________________________________________________________
                ______________________________________________________________
                ______________________________________________________________
  JVMServer     ________

         RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Requestmodel Resources

A REQUESTMODEL resource provides the connection between an internet inter-ORB Protocol (IIOP) inbound request and the name of the CICS transaction that is to be initiated.

```
        Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                 AUTOMON/RDO - Resource Definition - REQUESTMODEL
   Requestmodel ________     Group ________    Last Updt ________________
   DEScription  ____________________________________________________________

   COrbaserver  ____   TRansid ____
   TYpe GENERIC INTFacetype ______
   Beanname     ____________________________________________________________
                ____________________________________________________________
                ____________________________________________________________
                ____________________________________________________________
   Module       ____________________________________________________________
                ____________________________________________________________
                ____________________________________________________________
                ____________________________________________________________
   INTErface    ____________________________________________________________
                ____________________________________________________________
                ____________________________________________________________
                ____________________________________________________________
   OPeration    ____________________________________________________________
                ____________________________________________________________
                ____________________________________________________________
          RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Sessions Resources

SESSIONS resource definitions specify the characteristics of the logical link between two systems connected using MRO or ISC, including the protocol to be used, the transmission buffers, and recovery actions to be employed. The CONNECTION specification in the SESSIONS definition identifies the connection associated with sessions using SESSIONS definition.

```
  ____  Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                 AUTOMON/RDO - Resource Definition - SESSIONS

   SEssions     ________     Group ________    Last Updt ________________
   DEScription  ____________________________________________________________
  SESSION IDENTIFIERS
   COnnection   ____
   SESSName     ____
   NETnameq     ________
   MOdename     ________
  SESSION PROPERTIES
   Protocol     ____
   MAximum      _____ _____  PRESET SECURITY            RECOVERY
   RECEIVEPfx   __            USERId        ________     RECOVOption SYSDEFAULT_
   RECEIVECount ___          OPERATIONAL PROPERTIES
   SENDPfx      __            Autoconnect  NO_
   SENDCount    ___           Buildchain   YES
   SENDSize     4096_         USERArealen  0__
   RECEIVESize  4096_         IOarealen    _____ _____
   SESSPriority 0__           RELreq  NO_  DIscreq NO_   NEPclass    0__


          RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Tcpipservice Resources

A TCPIPSERVICE resource defines which TCP/IP services are to use CICS internal sockets support. The internal CICS services that can be defined are ECI, CICS Web Interface (HTTP), IP connecitivity (IPIC) or user-defined protocol.

```
        Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                 AUTOMON/RDO - Resource Definition - TCPIPSERVICE
   TCpipservice ________     GROup ________    Last Updt ________________
   DEScription  ____________________________________________________________

   Urm          ________        Backlog      00001
   POrtnumber   00000           Ipaddress    ________________
   STatus       OPEN__          TSqprefix    ______
   PROtocol     HTTP            SOcketclose  NO____
   TRansaction  CWXN            MAXDatalen   ______  MAXPersist _____
   Host         ____________________________________________________________
   (Mixed Case) ____________________________________________________________
  SECURITY
   SSl          NO________
   CErtificate  ____________________________________________________
   CIphers      ____________________________________________________
   AUthenticate ___________
   Realm        ____________________________________________________
   ATtachsec    ______
  DNS CONNECTION BALANCING
   DNsgroup     ___________________
   GRPcritical  NO_
          RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Tdqueue Resources

The TDQUEUE resource definition is used to describe the physical and operational characteristics of a transient data queue. The following transient data resources can be managed:

1) Intrapartition
2) Extrapartition
3) Indirect
4) Remote

```
 ____   Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                 AUTOMON/RDO - Resource Definition - TDQUEUE

    TDqueue      ____        Group ________     Last Updt ________________
    DEScription  ____________________________________________________________
    TYPE         ________
   EXTRAPARTITION PARAMETERS          INDIRECT PARAMETERS
    DDname       ________             Indirectname  ____
    DSname       ____________________________________________
    Erroroption  ______              INTRAPARTITION PARAMETERS
    Opentime     ________             Atifacility   ________
    REWind       ______               RECOVstatus   ________
    TYPEFile     ______               Facilityid    ____
    RECORDSize   _____                TRIggerlevel  _____
    BLOCKSize    _____                TRAnsid ____  Userid   ________
    RECORDFormat _________           INDOUBT ATTRIBUTES
    BLOCKFormat  _________            WAIT        ___  WAITAction ______
    Printcontrol _                   REMOTE PARAMETERS
    DIsposition  ___                  REMOTESystem  ____
    DAtabuffers  ___                  REMOTEName    ____
    Sysoutclass  _                    REMOTELength  _____

          RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Terminal Resources

TERMINAL resource definitions, in conjunction with TYPETERM definitions, identify a terminal to the system. The TERMINAL definition further refines the terminal's characteristics, including associating a printer with the terminal, establishing its security, and defining it to a network. The TERMINAL and TYPETERM definition are used to construct a terminal entry (TCTTE) in the terminal control table (TCT).

```
 ____   Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - TERMINAL

  TErminal      ____        Group ________      Last Updt ________________
  DEScription   ______________________________________________________________
 AUTOINSTALL              TERMINAL USAGES         PIPELINE PROPERTIES
  AUTINSTModel NO__        TRAnsaction  ____        POol            ________
  AUTINSTName  ________    TERMPriority 0__         TASklimit    NO___
 TERMINAL IDENTIFIERS      Inservice    YES        SESSION SECURITY
  TYpeterm     ________   ASSOCIATED PRINTERS       SEcurityname ________
  NEtname      ________    PRINTER      ____        ATtachsec    LOCAL_____
                           PRINTERCopy  NO_         BINDPassword
  REMOTESYSTem ____        ALTPRINTEr   ____        BINDSecurity NO_
  REMOTEName   ____        ALTPRINTCopy NO_         USEDfltuser  NO_
  REMOTESYSNet ________                             PRESET SECURITY
  Modename     ________                              USERid       ________
  CONSName     ________                              NAtlang      _

          RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Tranclass Resources

TRANCLASS resource definitions delineate transaction classes, which allow the user to control how CICS schedules transactions. Transactions are assigned a transaction class in the TRANCLASS attribute of the TRANSACTION definition. The TRANCLASS definition determines how many transactions of the transaction class may be concurrently active, queuing new transaction attachments if the limit is exceeded. How many transactions may be queued also is determined in the TRANCLASS definition.

```
 ____   Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - TRANCLASS


  TRANClass    ________      Group ________     Last Updt ________________
  DEScription  ____________________________________________________________

 CLASS LIMITS
  Maxactive    0__
  Purgethresh  NO_____

          RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Transaction Resources

TRANSACTION resource definitions specify options for CICS to employ when processing the defined transaction, such as priority, security, and size of the Transaction Work Area (TWA). Installed transactions are available for use and are stored in the Program Control Table (PCT). The TRANSACTION definition is used to link the transaction with other resource definitions, including PROGRAM, PARTITIONSET and PROFILE resources.

```
        Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - TRANSACTION

 TRANSAction  ____       Group ________      Last Updt ________________
 DEScription  ____________________________________________________________
GENERAL PROPERTIES     REMOTE ATTRIBUTES        RECOVERY
 PROGram      ________  REMOTESystem  ____       DTimout  NO__      SPurge NO_
 TWasize      0____     REMOTEName    ________   RESTart  NO_       TPUrge NO_
 PROFile      DFHCICST  TRProf        ________   Otstimeout NO____  TRACe  YES
 PARtitionset ________  Localq        ___        DUmp     YES    COnfdata NO_
 STAtus       ENABLED_  DYnamic       NO_       SECURITY
                        ROutable      NO_        RESSec  NO_
 TASKDATALoc  BELOW    SCHEDULING                CMDsec  NO_
 TASKDATAKey  USER      PRIOrity  1__
 STOrageclear NO_       TRANClass DFHTCL00      INDOUBT ATTRIBUTES
 RUnaway      SYSTEM_  ALIASES
 SHutdown     DISABLED  TASKReq   ____           ACtion   BACKOUT  WAIT   YES
 ISolate      YES       XTRanid   ________       WAITTime __ __ __
 BRexit       ________  ALias     ____
 TPName       ____________________________________________________________
 XTPname      ____________________________________________________________
              ____________________________________________________________
         RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Tsmodel Resources

A TSMODEL resource allows you to specify a TS queue name prefix, and associate attributes with that name. You can also map names directly to a shared TS pool (without the need for a shared sysid).

```
 ____   Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - TSMODEL

  TSmodel      ________     Group ________     Last Updt ________________
  DEScription  ____________________________________________________________

  PRefix       ________________
  XPrefix      ________________________________
  Location     AUXILIAR_ Auxiliary | Main
  Expiryint    00000 0-15000 (Hours)

 RECOVERY ATTRIBUTES              SECURITY ATTRIBUTES
  RECovery     NO_ NO | YES        Security     NO_ NO | YES

 REMOTE ATTRIBUTES                SHARED ATTRIBUTES
  REMOTESystem ____                POolname     ________
  REMOTEPrefix ________________
  XRemotepfx   ________________________________

         RC04004. Make any changes and press Enter to define resource
 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Typeterm Resources

TYPETERM resource definitions are generic terminal definitions which group shared attributes of terminals in a single definition, thus reducing the number of parameters required to define an individual device. TYPETERM resource definitions are thus referenced by TERMINAL definitions to define device, printer, session, operator and mapping attributes.

```
____    Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - TYPETERM
 TYpeterm    ________ Group ________ ________________________________________
 RESOURCE TYPE        AUDiblealarm  NO_ OUtline        NO_  DIscreq     YES
 DEVice      ________ COLor         NO_ Query NO_ SOsi NO_  Nepclass    0__
 TERmmodel   _        COPy          NO_ BAcktrans      NO_  SIgnoff     YES___
 SESsiontype ________ DUalcasekybd  NO_ CGcsgi _____ _____  CReatesess  NO_
 LDclist     ________ EXtendedds    NO_ SESSION PROPERTIES
 SHippable   NO_      HIlight       NO_ AScii          NO_  RStsignoff  NOFORCE
                      Katakana      NO_ SENdsize     0____  MESSAGE RECEIVING
 MAPPING PROPERTIES   LIghtpen      NO_ RECEivesize  0____  ROutedmsgs NO_____
 PAGesize    ___ ___  Msrcontrol    NO_ BRacket        YES  LOGOnmsg    NO_
 ALTPage     ___ ___  OBFormat      NO_ LOGMODE    ________ APPLICATION FEATURE
 ALTSUffix   _        PARtitions    NO_ DIAGNOSTIC DISPLAY  BUildchain  NO_
 FMhparm     NO_      PRINTAdapter  NO_ ERRColor NO_______  USerarealen 0__
 OBOperid    NO_      PROgsymbols   NO_ ERRHili  NO_______  UCtran      NO___
 PAGING PROPERTIES    VAlidation    NO_ ERRLastline    NO_  Ioarealen   _____
 AUTOPage    NO_      FOrmfeed      NO_ ERRIntensify   NO_              _____
 DEVICE PROPERTIES    HOrizform     NO_ OPER PROPERTIES     RECOVERY
 DEFScreen   ___ ___  VErticalform  NO_ AUTOConnect    NO_  RECOVOp SYSDEFAULT_
 ALTSCreen   ___ ___  TEXTKybd      NO_ ATi NO_   TTi  YES  RECOVNo NONE_______
 APLKy NO_ APLTe NO_  TEXTPrint     NO_ RELreq         NO_  ________________
        RC04004. Make any changes and press Enter to define resource
F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Urimap Resources

URIMAP resource definitions match Web requests to their appropriate client or server process. A URIMAP definition with the SERVER attribute maps the URI of inbound HTTP requests to CICS resources. A URIMAP definition with the CLIENT attribute handles request for CICS as an HTTP client. A URIMAP definition with an ATOM, PIPELINE or JVMSERVER attribute handles incoming requests for Atom feed, web services or JVM server respectively in CICS. A corresponding ATOMSERVICE, PIPELINE or JVMSERVER resource definition would be used to define the processing done when CICS provides any of these three services.

```
____    Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - URIMAP
  Urimap       ________     Group ________    Last Updt ________________
  DEScription  ____________________________________________________________
  STatus       ENABLED_ USAge SERVER__
  UNIVERSAL RESOURCE IDENTIFIER
  SCheme       HTTP_ POrt NO___
  HOST         ____________________________________________________________
  (Mixed Case) ____________________________________________________________
  PAth         ________________________________________________________________
  (Mixed Case) ________________________________________________________________
               ________________________________________________________________
               ______________________________________________________________
  OUTBOUND CONNECTION POOLING
  SOcketclose  ______ 0-240000 (HHMMSS)
  ASSOCIATED CICS RESOURCES
  TCpipservice ________ ANalyzer NO_ (No or YES)
  COnverter    ________ TRansaction ____ PRogram ________ PIpeline ________
  Webservice   ________________________________ ATomservice ________

  This is page 1 of 3 press Forward for next page press Enter to process

        RC04004. Make any changes and press Enter to define resource
F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

[Note]. The URIMAP resource definition uses three screens for its attribute definitions. Use the PF8=Fwd key to navigate from the first URIMAP resource definition screen to the second. Use PF7=Bwd to return to the first screen.

```
        Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - URIMAP
   Urimap       ________     Group ________    Last Updt ________________
   DEScription  ____________________________________________________________

   SECURITY ATTRIBUTES
   USErid       ________
   CIphers      ____________________________________________________________
   CErtificate  ________________________________ AUthenticate NO___

   STATIC DOCUMENT PROPERTIES
   Mediatype    ____________________________________________________________
   CHARacterset ___________________________________________ HOSTCodepage ___________
   TEmplatename ________________________________________________
   HFsfile      ________________________________________________________________
   (Mixed Case) ________________________________________________________________
                ________________________________________________________________
                ________________________________________________________________


   This is page 2 of 3 press Forward or Backward or press Enter to process


 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Use the PF8=Fwd key to navigate from the second URIMAP resource definition screen to the third. Use PF7=Bwd to return to the previous screen.

```
        Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - URIMAP
   Urimap       ________     Group ________    Last Updt ________________
   DEScription  ____________________________________________________________

   REDIRECTION: Redirecttype NO_______
   Location     ________________________________________________________________
   (Mixed Case) ________________________________________________________________
                ________________________________________________________________
                ________________________________________________________________
                ________________________________________________________________


   This is page 3 of 3 press Backward for prev page or press Enter to process


 F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

The ENTER key can be pressed on any of the three screens to process the resource definition.

Webservice Resources

WEBSERVICE resource definitions define the aspects of the run time enivonment for CICS Web Services. These can be a Web service description used when runtime validation of requests with SOAP messages is required, a Web service binding file used to perform mapping between application data structures and SOAP messages, and a pipeline that defines the processes that handle Web services requests and responses with a PIPELINE resource definition. Inbound Web service requests are associated with a Webservice definition using a URIMAP resource definition.

```
 ____   Commands  Show  Case  Exit  Help          CICS680   DFHCSD    DEFINE
                AUTOMON/RDO - Resource Definition - WEBSERVICE

  Webservice   ________     Group ________    Last Updt ________________
  DEScription  ____________________________________________________________
  Pipeline     ________ Validation NO_ (No or Yes)

  WSBind       ____________________________________________________________
  (Mixed Case) ____________________________________________________________
               ____________________________________________________________
               ____________________________________________________________

  WSDlfile     ____________________________________________________________
  (Mixed Case) ____________________________________________________________
               ____________________________________________________________
               ____________________________________________________________

  Archivefile  ____________________________________________________________
  (Mixed Case) ____________________________________________________________
               ____________________________________________________________
               ____________________________________________________________

         RC04004. Make any changes and press Enter to define resource
F1=Help F2=Keys F3=Exit F5=Alter F6=Delete F7=Bwd F8=Fwd F9=Copy F12=Install
```

Chapter 6. Relational Operations

CICS resource definitions often relate to one another in various ways. This chapter presents the operations that can be performed with AUTOMON/RDO to handle and exploit these relationships.

Lists and groups

Resource definitions are members of groups, which in turn may be members of lists. AUTOMON/RDO supports the following commands for manipulating lists and groups:

ADD
: Adds a group to a list, creating the list if it does not exist. A popup window appears requesting the name of the list to receive the group, and the group to add the list before or after. If the Before/After group is omitted, the group will be added to the end of the list. Press ENTER to complete the operation.

APPEND
: Adds the groups of a list to another list. A popup window will appear requesting the name of the list to which the groups of the current list are to be appended. Press ENTER to complete the operation, PF3 to cancel.

COPY
: Duplicates a resource definition. A popup window will appear requesting the name of the group to copy the resource to and/or a new name for the resource. The definition can be copied to the same group by entering a new resource name or to a different group by specifying the group name to receive the resource with either the same or a new name. Press ENTER to complete the operation, PF3 to cancel.

  Mask characters may be used for the resource name to copy multiple resources to a new group. When a mask is used in the resource name, a mask may also be placed in the New Name field to rename all selected resources.

DOC
: Document a list or group. The Document command can be used at the list and group level as well as at the resource level. This command will produce a popup window where up to ten lines of documentation can be entered.

EXPAND
: Displays all the resource definitions for one or more groups or lists in a resource directory. This directory is saved as a temporary directory, and may be accessed by selecting the ‘Expansions’ option on the Resource Definition Directory Menu. .

  Note that AUTOMON/RDO displays groups in lists in alphabetic order, although this may not be the actual order in the DFHCSD.

HISTORY
: Displays the audit history for this list or group. The only history messages captured by MARS that will be indexed to lists or groups are operations which involve only a list or group, and not a specific resource. This would be commands like Lock and Unlock, Add, Append, or group copies and moves. If a CEDA operation involves a specific resource, the history is indexed to that resource and not to the group.

INSTALL
: Makes the resource definition available to the active CICS. A popup window will appear pre-filled with the name of the group, resource name and type of the resource. To install the entire group, delete the resource name and resource type fields. If the resource name or type is specified,

both must be specified. Press ENTER to complete the operation, PF3 to cancel.

On CICS TS a partial install may be accomplished with a single call to CEDA.

LISTS Locates all lists which contain the current group name. A temporary directory with the results is created and stored as an Expansions directory.

LOCK Restricts write operations on a list or group's resources to the user's operator id. A popup window will appear, pre-filled with the name of the group of which the resource is a member. Another group name or list may be entered. . Press ENTER to complete the operation, PF3 to cancel. .LOCK command

To unlock the resource, use the UNLOCK command.

MOVE Transfers resource definitions from one group to another. A popup window will appear requesting the name of the group to move the resource to and/or a new name for the resource. The definition can be moved to the same group by entering a new resource name or to a different group by specifying the group name to receive the resource with either the same or a new name. . Press ENTER to complete the operation, PF3 to cancel.

Generic left-to-right characters may be used for the resource name to copy multiple resources to a new group. If the asterisk is used, only one call to CEDA is required to perform the operation. Generic right-to-left characters (>) and wild cards (?) require that a call be made to CEDA for each resource to be copied.

REMOVE Disassociates a group from a list.

Duplicates

AUTOMON/RDO provides a facility to search for duplicate resource definitions on a system and display the Dupes in a directory. This facility may be accessed by selecting the Dupes command from the Primary Menu or by selecting the Duplicates temporary directory when no previous Dupes option has been performed. A popup window will appear, requesting the type of search required.

```
Enter type of duplicate search desired ==> T

A All dupes  (Same name, different type or group)
T Type dupes (Same name and type, different group)
R Resource dupes (Same name, different type)
S Selected types, all dupes for resource type ______________
  Limit search to (optionally masked) group:  ______________
  Limit search to groups in this list:        ______________
```

All searches locate resource definitions with identical names; the type of search is dependent on whether the resources must belong to the same group, type, or be of the same or a different type to satisfy the search criteria, as summarized below:

A	*All*	Resources with the same name, regardless of type or group, satisfy the search criteria.
T	*Type*	Resources with the same name and type, but members of different groups, satisfy the search criteria.
R	*Resource*	Resources with the same name but different types, regardless of the group, satisfy the search criteria.
S	*Selected Type*	Resources with the same name for the type entered in the field satisfy the search criteria.

Based on the search type requested, a temporary directory of duplicate resource names will be created and displayed. This directory is operated identically to other directories, as described in *Chapter 4 - Resource Directories*. After exiting, the directory may be redisplayed at any time, using a selection mask if desired, by selecting the Duplicates temporary directory from the Resource Definition Directory Menu.

Limiting the Duplicate Search

For users with extremely large CSD files, it may be desirable to reduce the duplicate resources display to a manageable number. This can be accomplished in either of two ways:

1) Enter a full or masked group name in the *Limit search to group* field. When this is done, only the resources present in matching groups will be candidates for the duplicate search.

2) Enter a list name (no mask characters) in the *Limit search to list* field. When this is done, only the resources present in groups within that list will be candidates for the duplicate search.

   [Note]. The resultant duplicates display may contain resources for groups other than those specified in the limit fields. These are the *duplicate* resources that have the same name as the members of the control group(s).

Interrelationships between resource definitions

Query

Resource definitions often reference other resource definitions. For example, transactions identify the program CICS calls when the transaction is invoked in the PROGRAM field of the TRANSACTION definition. The Query facility of AUTOMON/RDO allows you to examine the interrelationships between resource definitions.

[Note]. Queries must read the CSD file directly. Although VSAM skip-sequential processing is utilized where possible, queries against large CSD files can be very time consuming.

When the Query command is selected from the Primary Menu, the Query display appears:

```
____    Show  Exit  Help                          CICS680   DFHCSD    QUERIES
            AUTOMON/RDO - CICS On-line Resource Definition Queries

              _ Find all Transactions for Program ________
              _ Find all Transactions for Profile ________
              _ Find all Terminals for Typeterm ________
              _ Find all Autinstmodels
              _ Find all Typeterms with Device ________
              _ Find all Files for Lsrpoolid ____
              _ Find all Sessions for Connection ____
              _ Find all remote resources
              _ Find all Transactions for Remotesys ____
              _ Find all Terminals for Remotesys ____
              _ Find all Files for Remotesys ____
              _ Find all Connections for Remotesys ____
              _ Find resources by date/time stamp
              _ Search description for character string
              _ Search documentation for character string
              _ Search entire resource for character string
              _ Search by field identifier and value

 Make selection with "s", "y" or "/", supply search value if required.

 Enter F1=Help F2=Keys F3=Exit F4=Files F5=Include IBM
```

Find all Transactions for Program

AUTOMON/RDO will find all transactions which reference the specified program in the PROGRAM field of the TRANSACTION definition and display them in a directory.

To use this feature, enter 'S', 'Y' or '/' in the selection field and the resource name in the query data field following the feature listing.

Find all Transactions for Profile

AUTOMON/RDO will find all transactions which reference the specified profile in the PROFILE field of the TRANSACTION definition and display them in a directory.

Find all Terminals for Typeterm

AUTOMON/RDO will find all terminals which reference the specified typeterm in the TYPETERM field of the TERMINAL definition and display them in a directory.

Find all Autinstmodels

AUTOMON/RDO will find all TERMINAL definitions that may be used as model terminal definitions for autoinstall. A TERMINAL definition is a model if YES or ONLY is coded in the AUTOINSTMODEL field of the definition.

Find all Typeterms with Device

AUTOMON/RDO will find all TYPETERM definitions for a specified type of device. The device type is referenced in the DEVICE field of the TYPETERM definition.

Find all Files for Lsrpoolid

AUTOMON/RDO will find all files which are members of the specified Local Shared Resource (LSR) pool as determined by the entry in the LSRPOOL field of the FILE resource definition.

Find all Sessions for Connection

AUTOMON/RDO will find all sessions associated with the specified connection in the CONNECTION field of the SESSIONS resource definition and display them in a directory.

Find all remote resources

AUTOMON/RDO will find all remote connections, transactions, files and terminals and display them in a directory. The resources are designated as remote in the REMOTESYSTEM field of the resource definition.

Find all Transactions for Remotesys

AUTOMON/RDO will find all remote transactions and display them in a directory. Transactions are remote if an entry is made in the REMOTESYSTEM field of the TRANSACTION definition.

To use this feature, enter 'S', 'Y' or '/' in the selection field and the remotesystem name in the query data field following the feature listing.

Find all Terminals for Remotesys

AUTOMON/RDO will find all remote terminals and display them in a directory. Terminals are remote if an entry is made in the REMOTESYSTEM field of the TERMINAL resource definition.

To use this feature, enter 'S', 'Y' or '/' in the selection field and the remotesystem name in the query data field following the feature listing.

Find all Files for Remotesys

AUTOMON/RDO will find all remote files and display them in a directory. Files are remote if an entry is made in the REMOTESYSTEM field of the FILE resource definition.

To use this feature, enter 'S', 'Y' or '/' in the selection field and the remotesystem name in the query data field following the feature listing.

Find all Connections for Remotesys

AUTOMON/RDO will find all remote connections and display them in a directory. Connections are remote if an entry is made in the REMOTESYSTEM field of the CONNECTION resource definition.

To use this feature, enter 'S', 'Y' or '/' in the selection field and the remotesystem name in the query data field following the feature listing.

Find resources by date/time stamp

Displays a popup window allowing entry of a date and time range. All resources in the CSD whose last update date/time falls within this range will be located.

Search description for character string

Searches the description fields of resource definitions for a specific character string. A popup window will appear requesting the character string to serve as criteria for the search. Since all characters are permissible in the string, generic searches are disallowed.

Search documentation for character string

Searches resource documentation for a specific character string. A popup window will appear requesting the character string to serve as criteria for the search. Since all characters are permissible in the string, generic searches are disallowed.

Search entire resource for character string

Searches all entry fields of resource definitions for a specific character string. A popup window will appear requesting the character string to serve as criteria for the search. Since all characters are permissible in the string, generic searches are disallowed.

Search by field identifier and value

Searches for resource definitions containing a specified value in an entry field. A popup window will appear, prompting for the resource type, field to search, and search criteria, which is specified using an operator and value for comparison.

The comparison operator may be any of the following:

EQ	Equal to
NE	Not Equal to
LT	Less Than
LE	Less than or Equal to
GT	Greater Than
GE	Greater than or Equal to

Thus by entering PROGRAM as the resource type, the LANGUAGE field as the Field identifier, EQ as the operator and ASSEMBLER as

the Search value, all program resource definitions written is assembler will be retrieved.

Masks may be used on variable fields to specify the value to add further flexibility. Thus a search could be performed against the PROFILE field for all TRANSACTION resource definitions which use a profile beginning with the letter 'D' by specifying D* as the Search value and EQ as the operator.

Fields which only accept specific values (such as YES or NO), or 'fixed-code' fields, are not eligible for this generic search feature. Thus in the earlier example, specifying EQ as the operator and C* as the language would generate an error, since only values specified by CEDA (ASSEMBLER, COBOL, etc.) may be entered in the LANGUAGE field.

Fixed-code fields are also not eligible for comparative searches (GE, GT, LT, LE), but may only use the EQ and NE operators.

Qualified Queries

A special feature of temporary directories is Qualified queries. While displaying any temporary directory, you can press PF4 to invoke the Query function. The selected query will then only consider the resources present in the last-used temporary directory when it begins its search.

For instance, you could perform a Dupes function, creating a Duplicates temporary directory. While viewing that, invoke query and search the description field for a character string. The query will only look at the records present in the Duplicates temporary directory while searching, rather than passing the entire file, as is the case when Query is invoked from the primary menu. The result of the query could then be queried again, if desired. Each query further reduces the input set. PF9 and PF10 can then be used to browse through all the query results.

Chapter 7. Documenting Resource Definitions

Description Fields

Descriptions were added as a resource attribute with CICS MVS/ESA version 3.2 and CICS TS for VSE 1.1.0. In AUTOMON/RDO, descriptions are included for all versions of CICS as an integral part of resource directories to allow quick recognition of a resource. Descriptions may also be used to locate resources using the 'Search description for character string' option on the Query menu. Descriptions may be up to 58 characters in length.

AUTOMON/RDO allows use of a description field with all versions of CICS. For CICS TS versions the description is stored in the resource definition in the DFHCSD file. For versions of CICS prior to CICS MVS/ESA 3.2, the description was stored in a supplemental file to the DFHCSD, the RDO$FIL. The description associated with resource definitions on a remote system may be imported with the resource definition by specifying the name of the remote supplemental file in the pop-up window which appears when the import command is selected from the Main Menu. This file must be defined to the local CICS using an alternate name since RDO$FIL is already in use in the local CICS.

Documentation Window

The DOCUMENT feature of AUTOMON/RDO allows comments to be associated with a resource regarding its purpose, contents, history or any other information deemed useful. These comments may be displayed, edited or added by:

1. Selecting the 'Document resource' option from the Commands pull-down menu while on the Resource Definition display or pressing the PF key associated with that option as indicated on the pull down menu and PF key prompt at the bottom of the screen.
2. Entering the DOC command in the Cmd field of the desired resource on the Resource Definition Directory display and pressing ENTER.
3. Entering DOC on the simplified commands menu.

Documentation is stored in the AUTOMON/RDO supplemental file using a key to associate it with the record in the CSD. When you perform an action on a CSD record such as move, copy, delete, etc., the same action is automatically performed on the documentation record.

Note that lists and groups can be documented as well as individual resources. To document a list or group, you must display it in the Lists or Groups directory, and then enter DOC in the Cmd field beside the individual item to be documented. This will produce the documentation window and associate it with the list or group. You can also enter the DOC command at the Commands menu in the list or group category.

These actions invoke a Documentation popup window, as follows:

```
____  Show  Case  Exit  Help                    CICS680   DFHCSD    DOCUMENT
 ---------------------------------------------------------------------------

Cmd  Name      Type        Description     Page ____1 of     2 List
____ CEE      GROUP        ____________________________________
____ CICSLOGS GROUP        ____________________________________ UNICOM
 ____________________________________________________________________________
|    Documentation for Group RDOCGRP                                         |
|                                                                            |
|    ________________________________________________________________        |
|    ________________________________________________________________        |
|    ________________________________________________________________        |
|    ________________________________________________________________        |
|    ________________________________________________________________        |
|    ________________________________________________________________        |
|    ________________________________________________________________        |
|    ________________________________________________________________        |
|    ________________________________________________________________        |
|    ________________________________________________________________        |
|                                                                            |
|____________________________________________________________________________|
     RC13001. Enter documentation text as desired, press Enter to update
F1=Help F2=Keys F3=Exit F13=Case
```

This window is invoked in update mode unless:

1) VIEW or DISPLAY was used to access a resource first; or,
2) The trancode used to invoke AUTOMON/RDO has no update authorization.

A new record may be added by simply entering desired text and pressing ENTER. Existing documentation may be modified by overtyping the text and pressing ENTER. Pressing the CLEAR key before ENTER is pressed restores the documentation without updating the record. To exit the window, press PF3.

Resource documentation is stored in a supplemental file to the DFHCSD, the RDO$FIL. The documentation associated with resource definitions on a remote system may be imported with the resource definition by specifying the name of the remote supplemental file in the pop-up window which appears when the import command is selected from the Main Menu. This file must be defined to the local CICS using an alternate name since RDO$FIL is already in use in the local CICS.

[Note]. The Case command (PF13) can be used to switch the uppercase translation option of the operating terminal off, if needed, in order to enter documentation in lowercase.

Chapter 8. Operation with Remote Systems

Introduction

Many data processing facilities have multiple CICS regions, which can mean there are multiple DFHCSD files and multiple definitions. AUTOMON/RDO will manage resources for all regions from a single point of control, import resource definitions, and export definitions from one region to many others in a single operation.

Access to remote systems is accomplished through the use of:

1). Connect — A direct connection to another system, where AUTOMON/RDO can be operated without logging off and logging on. Connections can be daisy-chained. That is, you can connect, and then connect again, etc.

2). Export — Ship queues of CEDA commands to one or more remote systems in a single operation.

3). Import — Copy resources from a remote CSD file.

4). Install — Allows Installs to be done for remote as well as local systems.

5). EXPO — This is a shortcut to Export which can be entered from the directory. It will extract all resources matching the selection criteria and construct an export queue to be shipped to the target(s).

6). Batch export — Individual resources or commands, or a queue or resources can be routed to one or more CICS regions from a batch program. Any command valid in AUTOMON/RDO can be sent. In addition, CEMT commands can be routed to one or more CICS regions.

7). TSO connect — This function works exactly like Connect, except it is invoked from a TSO command prompt. You can connect from TSO to a CICS region and operate AUTOMON/RDO as if you were logged on to CICS.

The names of the current CICS and the DFHCSD file being accessed are always displayed on the action bar. To keep track of the primary and import CSD files, select the 'Show files' option on the Show pulldown menu. A popup window will appear, displaying the names of the local (primary) and import DFHCSD files and the supplemental files used by AUTOMON/RDO to store documentation. Press ENTER to exit the window.

Installation Requirements for Remote Operation

Of the seven types of remote operations listed above, all except Import require that AUTOMON/RDO be installed in the remote region as well as the local region. Even if you plan to use Export and never create a directory in the remote region, the product load modules must be available in the CICS system to be exported to.

Thus, if you plan to use the single point of control feature of AUTOMON/RDO to manage resources in multiple CICS regions, you <u>must</u> install the product in all regions to be managed.

Anywhere the product is installed, there must be a file definition for the supplemental file, RDO$FIL. It is not necessary to dedicate a separate supplemental file to each region, although you may, if desired. You should think of the supplemental file as just that -- supplemental to DFHCSD. Therefore, it should be defined and accessed in the same way that DFHCSD is. If DFHCSD is shared between multiple CICS systems, RDO$FIL should be also. If you maintain a separate CSD for each CICS, do the same with RDO$FIL.

Import does not physically connect to any other region. Rather, it uses read-only definitions of the CSD files of other regions to copy data into the CSD of the local region. To use Import, define file definitions in the local CICS for each remote CSD with the OPERATIONS values of READ and BROWSE only. Assign any name desired to these files, except DFHCSD.

Connectivity Types

The functions, Connect, Export, TSO connect, Batch export and Remote install all require connectivity to another CICS system, whereas IMPORT works in the local system with read-only CSD files.

Four types of connection protocol are supported with this release of AUTOMON/RDO.

1). Multiple Region Operation (MRO)

2). Inter-System Communication (ISC)

3). Front-end Processing Interface (FEPI)

4). EXCI Distributed Program Link. Used for TSO and batch connections.

For MRO and ISC, there must be CONNECTION and SESSIONS resource defined in the local and remote systems. FEPI requires definitions to be made in the Preference function of AUTOMON/RDO. The TSO interface requires that TSO have access to the external CICS interface modules, as well as the RDOCTSO load module.

To use the TSO and batch interface, there must be a CONNECTION defined in the target CICS region specifying EXCI protocol. There must also be a TRANSACTION resource pointing to the DFHMIRS program. For more information on this, see chapter 10 (TSO interface) or chapter 13 (batch interface).

[Note.] For MRO and ISC, CONNECTION definitions should specify ATTACHSEC (IDENTIFY). If they do not, the User ID from the local region will not be passed to the remote region. With Export, this will cause an incorrect User ID to be stored in the remote system audit trail file. It can also be a problem when a LOCK or UNLOCK command is exported.

Connect

AUTOMON/RDO can interface with the RDO facilities of a remote system connected with the local CICS via a FEPI, MRO or ISC link, allowing the resources of the remote system to be manipulated identically to resources on the local system. If a FEPI, MRO or ISC link has been established with the remote system, this interface is accomplished by selecting the Connect option on the AUTOMON/RDO Primary Menu. A popup window will appear showing all available connections.

```
                Connect to another CICS system (MRO/ISC/FEPI)

    Netname  Sysid   Netname  Sysid   Netname  Sysid   Netname  Sysid
    CICS640  C640    CICS650  C650    CICS660  C660    CICS670  C670
    LJLDFH64 LL64    LJLDFH65 LL65    LJLDFH66 LL66    LJLDFH67 LL67
    LJLDFH68 LL68    CICSTS32 TS32    CICSTS41 TS41    CICSTS51 TS51


    Tab to desired SYSID and press Enter, or enter the SYSID
    in the following field ==> ____        _ FEPI free session
```

The desired CICS system is selected by cursor position. Tab the cursor to the SYSID field of the desired system and press Enter. Note that for FEPI connections, the SYSID is actually the target name specified on the FEPI Application List of the Preferences function (See *Customizing AUTOMON/RDO).*

If there are more available connections than shown in the window, PF8 and PF7 can be used to browse forward and backward. The maximum number of connections that can be displayed is 560. Alternatively, you can enter the SYSID of the desired region in the field at the bottom of the window and press Enter.

Operating in Connect mode

If the selected CICS system is available for connection, the AUTOMON/RDO primary menu will appear next. The same transaction code that was entered in the local region to initiate AUTOMON/RDO will be passed to the remote region, so it must be defined there. On the upper right of the screen, the Applid of the remote system will display, for example, CICS670 in the figure below. This is the only indication that you are connected to a remote system, so if you use this facility often, make a habit of checking the Applid, which always displays on all AUTOMON/RDO screens.

Remote connected
CICS Applid

```
____   Show  Key-select  Exit  Help              CICS670   DFHCSD    PRIMARY
-------------------------------------------------------------------------------

       AUTOMON/RDO - CICS On-line Resource Definition Extended Control
                      Release 4.3,  PUT Level 121231

              Command ...   Description ............................
              Directory     Select directory type for display
              Commands      Issue simplified CEDA command(s)
                 .
                 .
                 .
```

At this point you may perform any AUTOMON/RDO function or command and it will operate on the remote system, using the CSD which is connected to that CICS.

When you are ready to return to the home system, simply exit back to the primary menu, then exit one more time. At that point, the Applid displayed on the upper right of the screen will revert to the home system Applid, CICS680 for the local system in the examples in this manual.

It is also possible to 'daisy-chain' connect, or connect multiple times. You might connect from CICS system A to CICS system B. While connected to B, you could invoke the Connect function again and connect to CICS system C. There is no limit to the number of nested connections as long as the necessary CICS and VTAM definitions are in place for the connected systems.

Note that AUTOMON/RDO will not let you perform a circular connection. That is, you cannot connect from CICS system A to B, and then connect back to A.

FEPI versus MRO and ISC Connections

As the operator, you need not be concerned whether the Sysid and Applid shown in the connect window uses MRO, ISC or FEPI. If it is present in the window, that means it can be used for connection. AUTOMON/RDO searches all available CONNECTION resources first, and displays them as MRO or ISC targets. After that, any Applids defined in the FEPI Application List Preference record will appear.

Operation with FEPI may be slightly different from MRO and ISC, however, depending on your system configuration. An MRO or ISC connection can pass the operator sign-on information to the remote system, whereas FEPI cannot. That means that a sign-on must be performed when using FEPI.

Signing on to the Remote System with FEPI

If the security system in use in your environment supports the PASSTICKETS option, AUTOMON/RDO can pass the sign-on information to the remote system with no operator intervention. If it does not, however, the next display that will appear after selecting a FEPI connection is a sign-on screen requesting your user ID and password.

Enter a valid user ID and password for the remote region, or press PF3 to bypass the sign-on. If bypassed, the transaction in the remote region must be unsecured. That is, it must be capable of execution without an operator sign-on. If sign-on information is entered, AUTOMON/RDO will pass a CESN transaction to the remote region, using the short form sign-on, which does not require an intermediate screen display.

If the sign-on is accepted by the remote system, the next display will be the primary menu for AUTOMON/RDO in the remote CICS. Operation will then proceed normally. Once you exit the remote region and return to the local region, a subsequent identical connection will not require a sign-on again unless you exit completely from AUTOMON/RDO in the local region.

If the sign-on fails, control will return to the local region, the Connect window will redisplay with an error message, indicating an invalid sign-on attempt. To retry, select the same target again.

[Note]. If the TSO interface was used to invoke AUTOMON/RDO, the user ID and password must have been entered at the TSO command screen. There will not be an intervening prompt for the sign-on information. Failure to enter sign-on data at the TSO command screen is the same as pressing PF3, described above. That is, the transaction will be invoked with no sign-on, and must be unsecured to execute.

FEPI Free Sessions

At the lower-right of the Connect window, there is a selection entitled FEPI free session. Enter S, Y or / to select it, then back-tab to the desired connection. A free session is a connection to a remote system without invoking any transaction. That is, no attempt is made to sign on, and AUTOMON/RDO will not be automatically initiated. Instead, you will receive the good-morning message from that CICS system, or, if this is not the first free session connection made from this terminal, you will receive a message from AUTOMON/RDO indicating the CICS applid to which you are connected.

At this point, press Clear, or follow the normal procedure you would use when first logging on directly to this CICS system. To sign-on, enter CESN, or whatever trancode you would normally use.

Now you can execute any CICS transaction desired in the remote system, including AUTOMON/RDO. Note that control will not automatically return to the local CICS, as in a non-free session. A clear screen will remain clear, allowing entry of other transactions.

To return to the local CICS system, you must enter CANCEL, from a clear screen. Control will then return to the AUTOMON/RDO primary menu.

Free sessions are only available through FEPI connections. If attempted with an MRO or ISC connection, it will be ignored. Free sessions are available from the TSO interface as well. It should even be possible to connect to non-CICS systems, such as IMS, using a FEPI free session. This facility has not been extensively tested, however, so its support is not guaranteed.

Remote Installs

This is the process whereby you initiate an install from one CICS and the resource is installed in another CICS system. You must be able to connect to the remote system(s) via MRO, ISC or FEPI.

You can install this group or resource in many remote systems with one command, designating the target systems in one of two ways:

1). Enter an Application Target List sequence number.
2). Enter up to six CICS applids.

```
Install full or partial group, local and/or remote

           Group name    ==> ________
           Resource type ==> ____________
           Resource name ==> ________

For full group install, clear resource type and name.

       Target destination for this install:
             (omit for local install)
Use Application target list number __
or enter up to six CICS applids below.
________ ________ ________ ________ ________ ________
System Application Lists are defined in Preferences.
```

Application Target Lists are created with the Preference function. Each list may contain up to 64 CICS applids, including the local CICS applid, if desired. Likewise when entering the remote applids directly, you may include the local applid. If you do not, the resource will not be installed in the local system. Including the local Applid allows the resource to be installed in all necessary systems with a single command.

When you press Enter to the install window, an install command will be routed to each designated remote system. AUTOMON/RDO must be present in each remote system, but the directory need not be activated, nor will the remote install command automatically build a directory if one is not present.

When all installs have completed, a window will display with the results.

```
 ____   Show  Exit  Help                          CICS680   DFHCSD    EXPERRS
 ------------------------------------------------------------------------------
-

Cmd  Name      Type        Description     Page ____1 of     1 List
____ CEE      GROUP        ____________________________________
____ CICSLOGS GROUP        ____________________________________ UNICOM
____ CICSTSXM GROUP        ____________________________________ CICS680
____ CICS6XX  GROUP        ____________________________________ CICS680
____ HYPRGRP  GROUP        ____________________________________
____ LJLSYSID GROUP        ____________________________________ CICS680
 ____________________________________________________________________________
|                                                                            |
|       CICS670   RI10003. Install was successful                            |
|                                                                            |
|____________________________________________________________________________|
____ TESTCSD  GROUP        ____________________________________
____ TESTEXPO GROUP        ____________________________________
____ TESTGRP  GROUP        ____________________________________
____ TESTNEW  GROUP        ____________________________________
____ USERDEF  GROUP        ____________________________________
____ WNDOGRP  GROUP        ____________________________________ UNICOM
  Update description, enter command beside resource, or press desired PF key
                    RI10006. Export command queue processed
F1=Help F2=Keys F3=Exit F6=Command
```

If CEDA or AUTOMON/RDO returns an error message from the remote region, you can tab to the applid and press Enter to display the messages.

```
 ____   Show  Exit  Help                          CICS680   DFHCSD    EXPERRS
 ------------------------------------------------------------------------------
-

Cmd  Name      Type        Description     Page ____1 of     1 List
____ CEE      GROUP        ____________________________________
____ CICSLOGS GROUP        ____________________________________ UNICOM
____ CICSTSXM GROUP        ____________________________________ CICS680
____ CICS6XX  GROUP        ____________________________________ CICS680
____ HYPRGRP  GROUP        ____________________________________
 ____________________________________________________________________________
|                                                                            |
|   RC16012. FILE RDO$AUD in group RDOCGRP is in use                         |
|                                                                            |
|INSTALL GROUP(RDOCGRP) F7=prev, F8=next msg_________________________________|
____ TESTCESF GROUP        ____________________________________
____ TESTCSD  GROUP        ____________________________________
____ TESTEXPO GROUP        ____________________________________
____ TESTGRP  GROUP        ____________________________________
____ TESTNEW  GROUP        ____________________________________
____ USERDEF  GROUP        ____________________________________
____ WNDOGRP  GROUP        ____________________________________ UNICOM
  Update description, enter command beside resource, or press desired PF key

F1=Help F2=Keys F3=Exit F6=Command
```

Upon exiting the install response window, control will return to the install window.

[Note.] Remote install uses the export temporary queue to accomplish shipping the Install command to remote targets. If an export temporary queue exists prior to executing the Install, it will be deleted.

Remote Installs with a FEPI Connection

If any of the target applids of a remote install uses FEPI for its connection protocol, you may be required to sign-on to the remote system before the install can complete. For more information about signing on with FEPI, see *Signing on to the Remote System with FEPI*, earlier in this chapter.

Import

Resources may be imported from the DFHCSD file of a remote system into the local CICS without a FEPI, MRO or ISC link, since no updates are being performed on the remote DFHCSD file. The facility is accessed by selecting the Import command from the Primary Menu.

A popup window will appear, as follows:

```
         Import resources from another CICS

Enter file name of CSD to import from       ==> ________
Enter import supplemental filename (if any) ==> ________

You must be logged-on to the system you wish to import into.
The import CSD must be defined as read-only in this CICS.
Resources will be copied into CSD of this CICS.

_ Suppress directory build (Use copy commands only)
```

To import resources, first define the remote DFHCSD file in the local system using a different name. It should be defined as read only (see *File Definitions Required for Import*, following). Next, select the Import option on the AUTOMON/RDO Primary Menu. A popup window will appear requesting the name of the remote CSD and the supplemental file used by AUTOMON/RDO to store resource documentation.

Upon entering the import file names, a separate directory will be created for the remote CSD unless *Suppress directory build* is selected. At that point, the Import Menu will appear which contains most of the same selections as the primary menu. You can display directories, issue Find, Dupes, and Query, which will all operate on the Import directory rather than the primary directory. You can also switch import files, close the import directory, and display the primary directory from the import menu.

The import menu appears as follows:

```
 ____   Show  Key-select  Exit  Help             CICS680   CSD670    IMPORT
 ------------------------------------------------------------------------------


            AUTOMON/RDO - Import Resources from another CICS system

               Command ...    Description ........................
               Directory      Display import directory, perform Copies
               Copy           Issue global Copy commands
               Find           Locate a single RDO definition
               DUpes          Locate duplicate resource names
               Query          Relational and string searches
               Switch         Switch to a different import CSD file
               Refresh        Refresh the import file directory
               CLose          Close import CSD file and free directory
               RDirectory     Display receiving CSD file directory


 Enter command or tab to selection and press Enter ===> ______________________


F1=Help F2=Keys F3=Exit F5=Dir F6=Copy F7=Fnd F8=Dupe F9=Sch F10=Swi F11=Ref
```

If *Suppress directory build* is selected, there will be no directory created for the remote CSD. In this case, you import resources by means of the COPY command from the import menu, described below, rather than picking them from a directory.

The remote DFHCSD will be accessed similarly to the local DFHCSD: resources may be selected by type and mask, relational queries performed, and resources located using the AUTOMON/RDO interface. However, the remote DFHCSD may not be altered. Only view and copy operations may be performed against the file.

Resource documentation is stored in a supplemental file to the DFHCSD, the RDO$FIL. The documentation associated with resource definitions on a remote system may be imported with the resource definition by specifying the name of the remote supplemental file in the pop-up window which appears when the import command is selected from the Main Menu. This file must be defined to the local CICS using an alternate name since RDO$FIL is already in use in the local CICS.

The Import Copy Window

You use the COPY command to perform an import. If you select Copy directly from the import menu, a popup window will display where the resources to be copied can be specified. Alternatively, you can display the directory containing the resource(s) to import and enter the COPY command in the CMD field beside those resources. The copy window will appear when you press Enter.

The import copy window appears as follows:

```
 ____   Show  Exit  Help                          CICS680   CSD670    IMPCOPY
 ---------------------------------------------------------------------------


            AUTOMON/RDO - Import Resources from another CICS system

               Command ...   Description ........................
    ____________________________________________________________________
   |                                                                    |
   |            Resource copy from import CSD file CSD670               |
   |                                                                    |
   |  Resource type ==> ___________            Duplicates Option:       |
   |  Resource name ==> ________          Abort with msg  ==> Y (Y or N)|
   |  Group name    ==> ________          Replace         ==> _ (Y or N)|
   |  New group     ==> ________          Do not copy     ==> _ (Y or N)|
   |  New name      ==> ________          Change to group ==> ________  |
   |                                                                    |
   |        Use mask in resource name for selection.                    |
   |        Use mask in resource and new names for masked rename.       |
 En |        Group name may be masked for resource type GROUP.           | ___
   |                                                                    |
   |____________________________________________________________________|

 F1=Help F2=Keys F3=Exit
```

Fields of the Import Copy Window

Resource Type — Enter the resource type to be imported from the remote DFHCSD file. If you enter LIST and press Enter, the window fields will change for a list copy. Any other resource type will change the window fields for all other copy types.

Resource Name — Enter the name of the resource to be imported from the remote DFHCSD file. A resource name may be a mask, if desired.

Group Name — Enter the name of the group to be imported from the remote DFHCSD file. Group names cannot be entered as a mask.

List Name — For list copies, enter the name of the list to be copied.

List Only — For list copies, entering Y in this field will create the same remote list in the local CSD, but will not copy the groups in the list.

New Group — If you want to import these resources into a different group name, enter the new group name here.

New Name — For non-generic copies only, you can rename the resource in the receiving CSD, if desired.

Duplicates Options

The following four fields specify the action to be taken if a duplicate resource (same type, name and group) exists in the receiving CSD. These four options are mutually exclusive. That is, only one option can be selected with a 'Y' response or a group name.

Abort With Message

Y = Abort the import and display an error message.
N = Action taken will depend on the other Duplicates options specified.

Replace

Y = Overwrite the resource definition in the local DFHCSD.
N = Action taken will depend on the other Duplicates options specified.

Do Not Copy

Y = Skip this resource and do not import it.
N = Action taken will depend on the other Duplicates options specified.

Change To Group

Enter the name of an alternate group in the local DFHCSD to which the resource will be copied. All other Duplicates options must be coded 'N' to activate this option.

Exiting Import Mode

When all actions are complete, select the 'Close' option from the Import Menu or press PF3 to return to the local CICS. Closing the import menu will release the import directory, if present, and close the import files.

File Definitions Required for Import

The CSD belonging to the remote CICS system where resources are to be imported from must be defined in the receiving CICS system using a different name. The service request options (OPERATIONS) for the file should be set to READ and BROWSE only, which will allow the file to be opened, even though it may be open in update mode in the remote system.

If resources to be imported have associated documentation, or, in CICS releases prior to Version 3, description fields, this information is stored in the supplemental file to AUTOMON/RDO, known as RDO$FIL in the receiving CICS. You do not have to specify a remote supplemental file to accomplish an import, but if you do not, any associated documentation with the imported resources will not be copied.

To illustrate, assume you want to import resources from a CICS TS 4.1 system (release 6.6) to a CICS TS 5.1 system (release 6.8). Following are the required file definitions and the entries to accomplish the import.

CICS TS 4.1 System:

DFHCSD	DSNAME=CICS660.CSD.FILE
RDO$FIL	DSNAME=CICS660.RDO-EC.FILE

CICS TS 5.1 System:

DFHCSD	DSNAME=CICS680.CSD.FILE
RDO$FIL	DSNAME=CICS680.RDO-EC.FILE
CSD660	DSNAME=CICS660.CSD.FILE (read-only)
RDO$660	DSNAME=CICS660.RDO-EC.FILE (read-only)

To perform the import, invoke AUTOMON/RDO in the CICS TS 5.1 system, select the Import command from the primary menu, then enter CSD660 as the file name of the CSD to import from. Enter RDO$660 as the import supplemental file name.

A directory will be built using the CSD660 file and the import menu will display. Go to the directory to locate the resources to be copied, or enter the Copy command from the import menu. The selected resources will be copied into DFHCSD in the CICS TS 5.1 system. If there is associated documentation for the selected resources, it will be copied into RDO$FIL of the CICS TS 5.1 system.

When finished with the import, perform the CLOSE command from the import menu. This will close the import files and free the storage associated with the import directory.

Export

Resources may be exported from the local CICS system to one or more (up to 64) remote targets. After selecting Export from the primary menu, the Export menu appears as follows:

```
 ____   Show  Exit  Case  Help                    CICS680   DFHCSD    EXPMENU
         AUTOMON/RDO - Export commands and resources to remote targets

  Target Destination for this Export:
  Enter Target List number __ or up to six CICS direct appls: ________ ________
                                                              ________ ________
  CSD filename DFHCSD__ <== Enter ? for file list             ________ ________
  CSD dataset  CICS.CICS680.DFHCSD___________________________  BID => _________

  Select one or more functions (/,s,y)     Execute now ==> NO_ Test execute NO_
  Temporary queue creation:                Permanent control queue handling:
  _ ADD group to list                      _ Save control queue
  _ APPEND list to list                    _ Retrieve control queue  ________
  _ CHECK _ LOCK _ UNLOCK group or list    _ Locate control queue    ________
  _ COPY resources, groups or list         _ Approve or delete queue ________
  _ DELETE resources or groups             _ Create backout queue    ________
  _ INSTALL resources or groups            _ Move control queue      ________
  _ MOVE or RENAME resources or groups
  _ REMOVE group from list                 First, create a temporary queue.
  _ DEFINE resource type ____________      Press Enter to view it.  Once saved,
  _ ALTER  resource type ____________      it becomes a control queue.
  _ Free-form CEDA commands                Press PF1 for more information.

 Enter F1=Help F2=Keys F3=Exit F4=Files F5=Approval F13=Case
```

Summary of Operation

Export provides a method of creating a queue of CEDA commands, which can then be shipped to one or more targets. A target can be the local CICS system (where the Export queue is created) or a remote system, connected through MRO, ISC or FEPI.

To perform an export, you must first create a Temporary queue. This is done by selecting one or more of the command-input choices on the left side of the export menu. Each of these will produce a popup window which looks the same as the windows used for direct CSD maintenance.

After entering all required fields of the window, a complete CEDA command is created for that operation and added to the temporary queue. No direct maintenance on the CSD is performed.

At any time the export menu is displayed, pressing Enter will display the temporary queue that has been built to this point. The commands are in summary form first, showing only 62 bytes of each command. This display is the Queue Verify function.

A number of options are available while viewing the Verify screen. These appear as PF key prompts on the last row and in pull-down menus. Among these are single-command displays, showing the full command, individual command deletion or update.

New commands may continue to be added to the temporary queue by invoking additional command choices from the menu. Optionally, you can enter up to 14 commands at once with the Free-form Commands choice, wherein you key the CEDA commands, rather than using popup windows to generate them.

The COPY command choice offers two options:

1). You can generate a single COPY command to be shipped to the target.

2). You can select resources from the local region. With this option all resources in the local region which match the selection criteria (List, group, masked group, masked resources, individual resource) are retrieved from the CSD and formatted into a DEFINE command, then stored in the queue. A Copy-List command will also generate the necessary REMOVE and ADD statements to rebuild the list at the target location.

Once the temporary queue is built to your satisfaction, it may be executed at that time if desired. This is accomplished by entering Y to BEGIN EXECUTION NOW on the export menu. You must be using an administrator trancode to execute a queue.

A temporary queue can also be saved permanently. Once saved, it becomes a Control Queue. Control queues can be moved from one location to another, approved for execution, printed, unloaded to batch and a number of other operations.

If queue approval is required for execution (specified in Preferences), it only applies to control queues. That is, if a temporary queue has never been saved, it can be executed without approval as long as the trancode is an administrator. Once saved, however, it must be approved before it can be executed. Approval requires a supervisor trancode.

Any time you exit from the Export menu after creating or modifying a temporary queue, you will be prompted to save the queue, if desired. Enter YES to save it. Enter NO or press PF3 to exit without saving. If you exit all the way out of the AUTOMON/RDO transaction to a blank screen, the temporary export queue is deleted.

There are two shortcuts to Export operation. Both require an administrator to operate. These are:

1). Remote installs. From the normal Install window, you can specify remote targets in the same manner as the export menu. An INSTALL command is then placed in the temporary queue and control is passed to the export routing processor to ship it to all targets immediately. If there is a temporary export queue created, remote install will erase it before routing the install command.

2). The EXPO command can be entered in the command area of any directory. This will produce a popup window where the selection criteria are entered (if the defaults are incorrect). All matching resources are selected and converted to DEFINE statements, placed in the temporary queue, and control passes to the export menu. You can then review the queue and execute it when ready.

The EXPO command will <u>not</u> erase the temporary export queue before adding to it. Each EXPO will add its define commands to the end of the queue. You can use a series of EXPO commands to construct a full export queue, then route them all at once.

Fields of the Export Menu

Target List Number

This is a two-digit number that corresponds to the SEQUENCE field of an Application Target List record defined in Preferences. A Target List can contain up to 64 CICS

applids. If you specify a Target List, do not enter anything in the CICS Applid fields, following.

CICS Applids

Instead of an Application Target List, you can enter up to six CICS applids. Each applid refers to a CICS system, either local or remote.

[Note.] In both methods, above, the target applid must be defined either as the local CICS system (in the System Initialization Table), a NETNAME on a CONNECTION definition, or an Applid field of the FEPI Application List defined in Preferences.

CSD Filename

This is the 1-8 character CICS file name of the CSD from which resources are to be copied with the export COPY command. It may be DFHCSD to copy from the primary CSD of this CICS region, or any other CSD may be used.

To change CSD files, enter the CICS filename with the DSNAME blank, or enter the DSNAME with the filename blank. In either case, AUTOMON/RDO will search for a defined file named MODELCSD to obtain the group name where CSD definitions reside.

When only the filename has been entered, the referenced name must exist in the model group. For a popup window with a list of available CSD file definitions, enter ? in the first position of this field.

Once a definition has been selected or created, it will be automatically installed in this CICS region (if not already installed). The CSD file name and dataset name will then reflect the names of the CSD in use.

CSD Dataset

This is the 1-44 character DSNAME of the CSD file from which resources are to be copied with the export COPY command. It may be the primary CSD of this CICS region, or any other CSD may be used.

To change CSD files, enter the CICS filename with the DSNAME blank, or enter the DSNAME with the filename blank. In either case, AUTOMON/RDO will search for a defined file named MODELCSD to obtain the group name where CSD definitions reside.

When only the DSNAME has been entered, the model group is searched for a definition with a matching dataset name. If found, it will be used, otherwise a new definition will be created using the attributes of the model definition, MODELCSD. New definitions are assigned CICS filenames of CSDnnnnn, where nnnnn is a sequential number starting with 00001.

Once a definition has been selected or created, it will be automatically installed in this CICS region (if not already installed). The CSD file name and dataset name will then reflect the names of the CSD in use.

For a popup window showing all available definitions in the model group, enter ? in the first position of the filename field or the dataset name field..

BID

This a user control field known as the Business Identifier, used for grouping export queues and automatically assigning export queue names. It can be used as nothing more than an information item, if desired, or it can be used as follows:

In General Preferences, specify the BID prefix, which is the first 1 to 7 characters of the BID. Once this is done, any time a SAVE QUEUE command is issued from the export

menu, the queue name will be automatically generated, using the BID prefix followed by a sequential number.

The BID can also control which queues can be viewed and retrieved, based on the authority of the operator. Two additional fields in General Preferences control the viewing level for Supervisors and users, which can be ALL, USERID or BID. In other words, they can only see queues created with their user ID or their BID.

Administrators always have access to all export queues. The BID can be assigned in the TSO interface before invoking AUTOMON/RDO. When this is done, the BID field in the export menu is protected and cannot be changed. If Export was invoked from CICS, however, the BID field will be unprotected.

Execute Now

If YES (or Y) is entered in this field, execution of the temporary queue will begin. The first page of the queue is displayed with a verify message to ensure that you intend to begin execution. Pressing Enter to the verify prompt will begin the routing process.

In order to execute a queue, the following conditions must be in place:

1). There must be at least one command in the temporary queue.

2). The operator must be using an administrator or supervisor transaction code, as defined in Preferences.

3). If this temporary queue was retrieved from a Control Queue or saved as a Control Queue, and if Export Queue Approval Required is specified YES in Preferences, the queue must have a valid approval code before it can be executed.

4). If the queue was previously approved and executed and the operator has now modified it, the approval code is automatically removed. It must be approved again before it can be executed.

For more information on execution of a queue, see *Queue Execution,* later in this chapter.

Test Execute

If YES (or Y) is entered in this field, the queue will execute in the same manner as with the previous field (Execute Now). The difference is that a Test Execute does not call CEDA to apply the commands. It will perform all editing done by AUTOMON/RDO and return with any error messages, or successful completion. The target CSD is unchanged.

Temporary Queue Creation

The left side of the Export menu contains selections used to build the temporary queue. Note that a temporary queue can also be created by some of the selections on the right side of the menu. The left side is used for individual command generation.

Enter S, Y, or / in the selection field for the desired command. A popup window will display, requesting the appropriate information for the selected command type. You can make multiple selections, if desired, and the windows will appear consecutively.

Add Group To List

This will add a CEDA command to the queue in the form:

```
ADD        GROUP(gggggggg) LIST(llllllll)
           {BEFORE(bbbbbbbb) AFTER(aaaaaa)}
```

where the values in parentheses are supplied from the window fields.

Append List To List

This will add a CEDA command to the queue in the form:

```
APPEND    LIST(xxxxxxxx) TO(yyyyyyyy)
```

where the values in parentheses are supplied from the window fields.

Check Group Or List

This will add a CEDA command to the queue in the form:

```
CHECK     GROUP(xxxxxxxx)          or
CHECK     LIST(xxxxxxxx)
```

where the values in parentheses are supplied from the window fields.

Lock Group Or List

This will add a CEDA command to the queue in the form:

```
LOCK      GROUP(xxxxxxxx)          or
LOCK      LIST(xxxxxxxx)
```

where the values in parentheses are supplied from the window fields.

Unlock Group Or List

This will add a CEDA command to the queue in the form:

```
UNLOCK    GROUP(xxxxxxxx)          or
UNLOCK    LIST(xxxxxxxx)
```

where the values in parentheses are supplied from the window fields.

Copy Resources, Groups Or Lists

The COPY command choice offers two options:

1). You can generate a single COPY command to be shipped to the target.

2). You can select resources from the local region. With this option all resources in the local region which match the selection criteria (List, group, masked group, masked resources, individual resource) are retrieved from the CSD and formatted into a DEFINE command, then stored in the queue. A Copy-List command will also generate the necessary REMOVE and ADD statements to rebuild the list at the target location.

See the discussion entitled *Export Copy Window*, later in this chapter, for more information.

Delete Resources Or Groups

This will add a CEDA command to the queue in the form:

```
DELETE    GROUP(xxxxxxxx)   All(*)      or
DELETE    Restype(xxxxxxxx) GROUP(yyyyyyyy)
```

where Restype and the values in parentheses are supplied from the window fields.

Install Resources Or Groups

This will add a CEDA command to the queue in the form:

```
INSTALL   GROUP(xxxxxxxx)              or
INSTALL   Restype(xxxxxxxx) GROUP(yyyyyyyy)
```

where Restype and the values in parentheses are supplied from the window fields.

Move Or Rename Resources Or Groups

This will add a CEDA command to the queue in the form:

```
MOVE      GROUP(xxxxxxxx) TO(yyyyyyyy)   or
MOVE      Restype(ttttttt) GROUP(xxxxxxxx)
          {TO(yyyyyyyy)    AS(zzzzzzzz)}
```

where Restype and the values in parentheses are supplied from the window fields.

[Note.] MOVE and RENAME perform the same function in CEDA.

Remove Group From List

This will add a CEDA command to the queue in the form:

```
REMOVE    GROUP(xxxxxxxx) LIST(yyyyyyyy)
```

where the values in parentheses are supplied from the window fields.

Define Resource Type

The Define command will produce an input screen for the designated resource type with all default values. Some resource types may have multiple screens depending on the number of attributes used for the resource definition. After keying the required fields, a CEDA DEFINE command is generated and added to the queue reflecting the desired resource definition.

Alter Resource Type

The Alter command will produce an input screen for the designated resource type with no default values. Some resource types may have multiple screens depending on the number of attributes used for the resource definition. After keying the fields to be altered, a CEDA ALTER command is generated and added to the queue reflecting the desired field changes.

[Note.] For both DEFINE and ALTER, enter a valid resource type mnemonic in the designated field. Minimum abbreviations will be accepted.

Free-Form CEDA Commands

Free-form commands invokes an editor-like window allowing up to 14 CEDA commands to be keyed as desired. Commands may be continued by leaving the command field of subsequent lines blank.

Basic syntax checking and mnemonic validity checking is performed as entered and errors are highlighted. Full editing of the command will be done by CEDA when the queue is executed.

The free-form window appears as follows:

```
 ____   Show  Exit  Case  Help                    CICS680   DFHCSD    FREEFORM
         AUTOMON/RDO - Export commands and resources to remote targets

  _____________________________________________________________________________
 |                  Free-form CEDA command entry                               |
 | Command  Field mnemonics and values in parentheses ......................   |
 | ________ ___________________________________________________________________ |
 | ________ ___________________________________________________________________ |
 | ________ ___________________________________________________________________ |
 | ________ ___________________________________________________________________ |
 | ________ ___________________________________________________________________ |
 | ________ ___________________________________________________________________ |
 | ________ ___________________________________________________________________ |
 | ________ ___________________________________________________________________ |
 | ________ ___________________________________________________________________ |
 | ________ ___________________________________________________________________ |
 | ________ ___________________________________________________________________ |
 | ________ ___________________________________________________________________ |
 | ________ ___________________________________________________________________ |
 | ________ ___________________________________________________________________ |
 | ________ ___________________________________________________________________ |
 | Enter valid CEDA commands with required operands.  To continue a line,      |
 | leave next command field blank.  Minimal validation is done at entry.       |
 |_____________________________________________________________________________|

 Enter F1=Help F2=Keys F3=Exit F4=Files F5=Approval F13=Case
```

In the command field, enter a valid CEDA command. Minimum abbreviation is acceptable. Note that only commands that modify the CSD or return information from CEDA in popup windows (CHECK) are valid commands for Export. These are:

ADD	ALTER	APPEND	CHECK
COPY	DEFINE	DELETE	INSTALL
LOCK	MOVE	RENAME	UNLOCK
USERDEFINE			

The following commands are not valid for Export:

DISPLAY	EXPAND	HISTORY	LISTS
VIEW	DOCUMENT		

In the operand field, enter a valid set of operand mnemonics and data, conforming to the proper commands structure imposed by CEDA. That is, a mnemonic followed by the value for that mnemonic enclosed in parentheses.

To continue a command, leave the command field of the next line blank and proceed to enter more mnemonics. Do not split a word at the end of the line. It is okay to separate the mnemonic from the value in parentheses on two different lines. Minimum abbreviations are accepted.

Enter as many commands as desired. To erase all data, press Clear. There are no editor functions like Copy, Move, Delete, etc. available, but you can use the erase-eof, insert and delete keys to manipulate commands. Mnemonics may be entered on separate lines, if desired. When you press Enter, all data will be compressed into as few lines as possible.

Permanent Control Queue Handling

The right side of the Export menu contains selections for manipulating Control Queues. Once saved, a temporary queue of commands becomes a Control Queue. It is a permanent collection of CEDA commands that remains until it is specifically deleted.

In addition to the commands, a control queue contains:

The queue name - Up to eight alphanumeric bytes.
Description - Up to forty bytes.
User control field - May be used to associate multiple queues.
Approval code - If supervisor approval is required to execute.
Security indicator - If the queue is secured to the creating user.
User, date and time the queue was created.
User, date and time the queue was last executed.
Target list when the queue was last executed.
Successful or unsuccessful status of last execution.

A variety of operations can be performed for a control queue. Some are available online, while others can only be performed in a batch job.

1). Retrieve a control queue, creating a temporary queue from it.

2). Approve a queue for execution, or remove queue approval.

3). Delete a control queue.

4). Save a queue after execution, saving error messages with it.

5). Create a backout queue from a control queue, generating reversing entries for every command in the queue. The backout queue can then be saved with another name, becoming yet another control queue.

6). Ship a queue (without executing it) to another location.

7). Print a control queue (batch), along with execution status and errors.

8). Copy a queue (batch) to another file.

9). Unload a control queue (batch), creating a PDS member (MVS) or punch queue entry (VSE) to be used as input to DFHCSDUP.

10). Execute a queue from a batch program.

Finally, control queues can be created in the RDOBATCH program with the GENSRC and COMPARE functions.

Save Control Queue

This option will display a popup window where an eight-byte name, a description, control identifier, etc., can be assigned to this temporary queue of commands. The queue is then written to the AUTOMON/RDO supplemental VSAM file using that key name.

Retrieve Control Queue

This selection will fetch a saved control queue from the VSAM file and load it into the temporary queue. If a temporary queue exists prior to the retrieve, it will be deleted.

Once the commands are in the temporary queue, they may be executed. It is also possible to modify, delete or add to the commands, then save again.

If approval is required, any modification of the temporary queue after a Retrieve will remove the approval code, requiring it to be approved again before it can be executed.

To fetch a saved control queue, enter the queue name and press Enter, or leave the queue name blank and press Enter. This will produce a directory of saved queues (See *Export Queue Directory,* later in this chapter).

Locate Control Queue

The Locate function allows you to find a particular control queue, and then fill in all queue names on the menu with that name.

Once a queue name is established on the menu, it will remain until it is changed or CICS is recycled.

To locate a saved control queue, enter the queue name and press Enter, or leave the queue name blank and press Enter. This will produce a directory of saved queues (See *Export Queue Directory,* later in this chapter).

Approve Or Delete Queue

If Export queue approval required is specified in Preferences, this function will fetch a control queue and allow input of an approval code. It may also be used to delete a control queue.

In order to approve a queue, you must be using a supervisor trancode. You must enter a valid approval code as specified in the Export Approval Codes record in Preferences.

When not using a supervisor trancode, approval codes are displayed as asterisks.

To approve or delete a saved control queue, enter the queue name and press Enter, or leave the queue name blank and press Enter. This will produce a directory of saved queues (See *Export Queue Directory,* later in this chapter).

The Approve/update/delete control queue window appears as follows:

```
____   Show  Exit  Help                          CICS680   DFHCSD    QUEUES
                     AUTOMON/RDO - Control queue processing
  ____________________________________________________________________________
 |                                                                            |
 |               Approve/update/delete control queue                          | _
 |                                                                            | _
 |  Control queue name   ==> RDOCQUE                                          | _
 |  Description          ==> All AUTOMON/RDO Definitions_____________         | _
 |  Delete saved queue?  ==> N                                                |
 |  User control field   ==> ________________________________                 | _
 |  Approval code        ==> ________                                         |
 |  Secure to user id?   ==> N                                                |
 |  Queue process date   ==> 00/00/0000                                       |
 |  Current status       ==> APPROVED                                         |
 |  Requestor name/phone ==>                                                  |
 |  Business identifier  ==>                                                  |
 |  CSD copied from      ==> CICS.CICS680.DFHCSD                              |
 |                                                                            |
 |  Created by  CICSUSER  Date 12/12/2012  Time 12:21:31                      |
 |  Executed by           Date             Time                               |
 |  Shipped to                                                                |
 |____________________________________________________________________________|
              RI12021. Alter fields as desired and press Enter
 Enter F1=Help F2=Keys F3=Exit F4=Files
```

The fields in this window are described later in this chapter under the topic, *Approval Queue Window.*

Create Backout Queue

This function will delete the current temporary queue (if any) and create a new temporary queue containing reversing entries for every command in the designated control queue. Defines become Deletes, Alters create a before-image alter, etc.

If the original control queue is to be executed with the local region as a target, you should create a backout queue **before** execution.

Upon completion, the backout queue will display in Verify mode. Save the backout queue under a new name. It then becomes a control queue to be executed if needed.

To create a backout queue for a saved control queue, enter the queue name and press Enter, or leave the queue name blank and press Enter. This will produce a directory of saved queues (See *Export Queue Directory*, later in this chapter).

[Note]. Backout can only reverse entries that exist in the local CSD. That is, if the export queue contains a delete command, for instance, and the resource exists in the local CSD, Backout will create a Define statement to replace the Delete. If the resource only exists in the remote CSD, however, the Delete command will be removed from the queue and not replaced with anything. The function of creating a backout queue should be used when the queue was created using Export Copy commands, copying resources from the local CSD.

Move Control Queue

This function will ship a control queue to the designated target(s) without executing it. The queue can then be executed there, if desired, or approved at that location and shipped elsewhere for execution.

The queue is not shipped immediately. Instead, a QCOPY command is added to the temporary queue. This causes the queue record to be shipped when the temporary queue is executed. Multiple QCOPY commands can process in one execution.

To move a saved control queue, enter the queue name and press Enter, or leave the queue name blank and press Enter. This will produce a directory of saved queues (See *Export Queue Directory*, later in this chapter).

Export Queue Directory

In each of the control queue choices previously described, if the desired queue name is known, enter the full name and press Enter. Otherwise, leave the name blank or enter a partial name (no mask characters or generic specification).

When the queue name is blank, a directory of saved export queue will display, as follows:

```
____   Show  Exit  Options  Next  Help          CICS680   DFHCSD    QDIRECT
                    AUTOMON/RDO - Control queue directory

Queue    Short Description        Requestor  Status                Process date
RDOCQUE_ All RDOC resource definit CICSUSER APPROVED    SUCCESSFUL___ 00/00/00
TESTQUE1 Test export queue 1______ CICSUSER UNAPPROVED  UNSUCCESSFUL_ 00/00/00
TESTQUE2 Test export queue 2______ CICSUSER UNAPPROVED  UNSUCCESSFUL_ 00/00/00
TESTQUE3 Test export______________ CICSUSER APPROVED    SUCCESSFUL___ 12/15/12
TESTQUE4 Test_____________________ CICSUSER UNAPPROVED  SUCCESSFUL___ 12/21/12
TESTQUE5 Test export______________ CICSUSER APPROVED    UNSUCCESSFUL_ 12/21/12









Tab to desired queue and press Enter to select it.  To override menu selection,
press one of the PF keys below (Options pulldown menu).
                    RI13002. End of saved queues reached
 Enter F2=Keys F3=Exit F4=Upd F5=Retr F6=Apr F7=Back F8=Fwd F9=Del F10=Unapr
```

[Note]. Depending on the Preference options specified, the export queue directory may not display all queues. The BID prefix defined in General Preferences can be used to control which queues are available to the operator. Non-administrators (users and supervisors) can be defined to view all queues, only the queues for their BID, or only the queues for their User ID.

Fields of the Export Queue Directory

Queue — This is the permanent queue name, assigned when the queue was saved.

Description — The first 25 bytes of the queue description, assigned when the queue was saved.

Requester — The CICS user ID of the operator who created the queue.

Status — This is a two-part field, showing both the approval and execution status of the queue. The approval status displays first as APPROVED or UNAPPROVED. If the queue has been executed, the execution status will follow as SUCCESSFUL or UNSUCCESSFUL.

Process Date — This is the date assigned to this queue to be executed. Note that this field is used only for information at this time.

Operations at the Export Queue Directory

By tabbing the cursor to one of the queue names and pressing a PF key, the following operations can be performed. These are summarized in the OPTIONS pulldown menu and shown as PF key prompts on row 24.

1). Update queue information (PF4)

This will produce the Approve/Update/Delete window for this queue. Any unprotected field can be altered by overtyping and pressing Enter.

2). Retrieve queue (PF5 or Enter)

This will fetch the permanent queue and store it in a temporary queue where it can be exported or modified.

3). Approve queue (PF6)

This will produce the Approve/Update/Delete window for this queue. Any unprotected field can be altered by overtyping and pressing Enter. Supervisors can enter approval codes to allow this queue to be exported.

4). Create backout queue (PF11)

This will create a backout queue for this permanent queue, by reversing all CEDA commands found in the queue. The backout queue is stored as a temporary queue, which can be subsequently saved if desired.

5). Delete a queue (PF9)

This will perform an immediate delete on the saved queue where the cursor is positioned.

6). Unapprove queue (PF10)

This is a shortcut method of marking a queue unapproved, thereby preventing its execution.

[Note]. The following operations are found in the NEXT pulldown menu:

7). Browse forward (PF8)

If there is more than one page of queue names in the directory, PF8 moves forward to the next page.

8). Browse backward (PF7)

If there is more than one page of queue names in the directory, PF7 moves backward to the next page.

9). Go to top of queue.

This function can only be invoked from the NEXT pulldown menu. It restarts the display at the first page of the directory..

10). Go to bottom of queue.

This function can only be invoked from the NEXT pulldown menu. It positions the display to the last page of the directory.

Export Copy Window

The copy command selection from the Export menu produces a popup window with two options:

1). You can generate a single COPY command to be shipped to the target.

2). You can select resources from the local region. With this option all resources in the local region which match the selection criteria are retrieved from the CSD and formatted into a DEFINE command, and then stored in the queue.

The Export Copy window appears as follows:

```
____   Show  Exit  Case  Help                    CICS680   DFHCSD    EXPMENU
        AUTOMON/RDO - Export commands and resources to remote targets
 ____________________________________________________________________________
|                                                                            |
|                        Export copy command                                 |
|                                                                            |
|   _ Route resources from input CSD           _ Route copy command only     |
|   Resource type ==> ____________ Name ==> ________ Group ==> ________      |
|   New resource name ==> ________ List only? _  New group ==> ________      |
|                                                                            |
|             Input CSD: CICS.CICS680.DFHCSD                                 |
|             If routing resources from this CSD file,                       |
|                   select duplicates option below:                          |
|                   Abort with msg  ==> _ (Y or N)                           |
|                   Replace         ==> _ (Y or N)                           |
|                   Do not copy     ==> Y (Y or N)                           |
|                   Change to group ==> ________                             |
|                                                                            |
|          Mask will be accepted in resource and/or group name.              |
|          For list copy, enter list in resource name, no mask.              |
|                                                                            |
|____________________________________________________________________________|

Enter F1=Help F2=Keys F3=Exit F4=Files F5=Approval F13=Case
```

Fields of the Export Copy Window

Route Resources From (Local applid)

Enter S, /, or Y if you want to extract resources from the local CICS system to be shipped to the specified targets. If selected, all resources which match the selection criteria entered in the remaining window fields will be located and converted to DEFINE statements, then added to the queue.

If you want to ship a single COPY statement to the target(s), skip this field and select the next one.

Route Copy Command Only

Enter S, /, or Y if you want to ship a stand-alone COPY command to the specified targets. No resource selection is done from the local CICS system. The remaining fields in the window are used to construct the COPY command.

If you want to ship resources, select the previous field and leave this one blank.

Resource Type

Enter the resource type for this export copy. If Route resources was selected, you may enter LIST as a resource type, in which case all resources in the list will be copied and the list itself will be rebuilt at the target(s).

If you are not routing resources, you must conform to the normal rules of the COPY command.

[Note.] If resource type is LIST, all resources of all groups in the list will be converted to DEFINE statements and added to the queue. Following that, a REMOVE command is generated to completely delete the list at the target site, then the necessary ADD statements to rebuild the list in the same sequence as it existed in the local system.

Name — Enter the resource name to be copied. If Resource type was Group, omit this field and enter the name in Group ==>. For all other resource types except LIST, the resource name may be a mask.

Group — Enter the group name for this operation. If resource type was Group, omit the resource name field and enter the name here. Masks are accepted in the group field if you are routing resources. Otherwise only a full group name is accepted.

New Resource Name

Enter the new resource name, if applicable. The resource will be added to the group using this name. Masks are not accepted in the new name field.

If resource type is Group, enter the new group name in the next field. For List, this is the new list name.

List Only — For list copies, entering S, Y or / in this field will generate the statements to create the same list in the remote CSD, but not to copy the groups in the list.

New Group — Enter the new group name, if applicable. The resource will be added to this group. Masks are not accepted in the new group field.

If resource type is Group, enter the new group name in this field. For List, NEW RESOURCE NAME is the new list name.

Duplicates Options

These four fields apply **only** if you are routing resources. They determine the action to be taken if a resource definition already exists at the specified target with the same type, bearing the same name, and a member of the same group. The fields are mutually exclusive -- choose one.

Abort With Msg — Abort the copy operation for this target and return an error message.

Replace — Delete the resource at the target site and add the one being shipped.

Do Not Copy — Skip this resource and continue with the copy operation.

Change To Group — Add this resource to the group specified in this field. If a resource of the same type and name already exists in the CHANGE-TO group, it will be replaced with the shipped resource.

Export Verify Window

Once a temporary command queue is built, it can be displayed at any time by pressing Enter at the Export menu. This is a display of the temporary queue that is currently built. There are two modes of display available:

Summary display - Shows up to 15 commands, 62 bytes of the operand field at a time. This appears as follows:

```
____    Show  Exit  Options  Go_to  Help          CICS680   DFHCSD    VERIFY
                     AUTOMON/RDO - Verify Export commands

 ____________________________________________________________________________
|                    Export command verification                             |
|    Command  Field mnemonics and values in parentheses (1st 62 bytes shown) |
|     DEFINE  WEBSERVICE(WEBSERV1) GROUP(TESTEX01) VALIDATION(NO) DESCRIPTIO |
|     DEFINE  WEBSERVICE(WEBSERV2) GROUP(TESTEX01) VALIDATION(NO) DESCRIPTIO |
|     DEFINE  WEBSERVICE(WEBSERV3) GROUP(TESTEX01) VALIDATION(NO) DESCRIPTIO |
|     DEFINE  URIMAP(URIMAP01) GROUP(TESTEX01) STATUS(ENABLED) USAGE(SERVER) |
|     DEFINE  URIMAP(URIMAP02) GROUP(TESTEX01) STATUS(ENABLED) USAGE(SERVER) |
|     DEFINE  URIMAP(URIMAP03) GROUP(TESTEX01) STATUS(ENABLED) USAGE(SERVER) |
|     DEFINE  TYPETERM(TYPETRM1) GROUP(TESTEX01) APLKYBD(N) APLTEXT(N) ASCII |
|     DEFINE  TSMODEL(TSMODEL1) GROUP(TESTEX01) LOCATION(AUXILIARY) RECOVERY |
|     DEFINE  TRANSACTION(TST1) GROUP(TESTEX01) DUMP(YES) RESTART(NO) SPURGE |
|     DEFINE  TRANCLASS(TRAN1) GROUP(TESTEX01) DESCRIPTION(THIS IS A TEST AG |
|     DEFINE  TERMINAL(TERM) GROUP(TESTEX01) AUTINSTMODEL(NO) ALTPRINTCOPY(N |
|     DEFINE  TDQUEUE(TDQU) GROUP(TESTEX01) REMOTESYSTEM(C650) REMOTENAME(TD |
|     DEFINE  SESSIONS(SESSION1) GROUP(TESTEX01) AUTOCONNECT(NO) BUILDCHAIN( |
|     DEFINE  REQUESTMODEL(REQMOD1) GROUP(TESTEX01) TYPE(GENERIC) INTFACETYP |
|     DEFINE  PROGRAM(TESTPGM1) GROUP(TESTEX01) LANGUAGE(ASSEMBLER) RELOAD(N |
| F12=purge queue, Tab-F11=delete, Tab-F10=alter, Exit=more commands.        |
|____________________________________________________________________________|
            RI11021. More commands, PF7 = backward, PF8=forward
F1=Help F2=Keys F3=Exit F4=One F5=Save F6=Err F7=Bwd F8=Fwd F9=Gchg F10=Upd
```

Single command - Displays one command at a time in its entirety. This appears as follows:

```
____    Show  Exit  Options  Go_to  Help          CICS680   DFHCSD    VERIFY
                     AUTOMON/RDO - Verify Export commands

 ____________________________________________________________________________
|                    Export command verification                             |
|    Command  Field mnemonics and values in parentheses                      |
|     DEFINE  TRANSACTION(TST1) GROUP(TESTEX01) DUMP(YES) RESTART(NO) SPURGE |
|             (NO) STATUS(ENABLED) TPURGE(NO) TRACE(YES) TASKDATALOC(BELOW)  |
|             TASKDATAKEY(USER) DYNAMIC(NO) RESSEC(NO) CMDSEC(NO)           |
|             STORAGECLEAR(NO) SHUTDOWN(DISABLED) ISOLATE(YES) CONFDATA(NO)  |
|             ACTION(BACKOUT) WAIT(YES) ROUTABLE(NO) DTIMOUT(NO) PRIORITY(1) |
|             PROGRAM(TESTPGM1) PROFILE(DFHCICST) TWASIZE(0) WAITTIME(0,0,0) |
|             TRANCLASS(DFHTCL00) RUNAWAY(SYSTEM) DESCRIPTION               |
|             (tHIS IS A TEST AGAIN) OTSTIMEOUT(NO)                          |
|                                                                            |
|                                                                            |
|                                                                            |
|                                                                            |
|                                                                            |
|                                                                            |
| F12=purge queue, Tab-F11=delete, Tab-F10=alter, Exit=more commands.        |
|____________________________________________________________________________|
           RI11034. Overtype and press Enter to alter this command
F1=Help F2=Keys F3=Exit F4=All F5=Save F6=Err F7=Bwd F8=Fwd F9=Gchg F10=Upd
```

Pressing PF4 (One/All) while in summary mode changes to single command mode. Pressing it again changes back to summary mode.

There are a number of available functions while in the VERIFY display. These are listed as PF key prompts and in the SHOW, OPTIONS and GO_TO menu.

Show one/all cmds - Change the display to single or summary mode.

Save cmd queue - Save this temporary queue, making it a control queue.

Show errors	-	Display any associated error messages for this queue.
Backward	-	Browse backward to the previous page of commands.
Forward	-	Browse forward to the next page of commands.
Global change	-	Change a text string to a new value in all commands.
Update one cmd	-	Select a single command for update. Tab to the desired command and press PF10. When the command displays, overtype as desired, then press Enter. **[Note].** If uppercase translation is switched off (PF13) while updating in the verify window, be very careful not to change any of the mnemonics to lowercase. CEDA will not recognize a lowercase mnemonic. You can only change a value in parentheses to lowercase, and then only if lowercase is allowed for that value (see *Resource Attributes Where Lowercase is Allowed* in chapter 5).
Delete one cmd	-	Purge a single command. Tab to the desired command and press PF11. The command is marked *PURGE. If you subsequently enter another new command, it will replace the purged command.
Purge the queue	-	Erase the entire temporary queue.
Make success queue	-	Create a new temporary queue with only the commands that executed successfully.
Make error queue	-	Create a new temporary queue with only the commands that failed to execute successfully.
Go to top of queue	-	Reposition the display to the first command.
Go to bottom	-	Reposition the display to the last command.

Queue Execution

Once a temporary queue has been created by any of the available means, it can be executed by entering Yes to BEGIN EXECUTION NOW on the Export menu.

In order to execute a queue, the following conditions must be in place:

1). There must be at least one command in the temporary queue.

2). The operator must be using an administrator or supervisor transaction code, as defined in Preferences.

3). If Export Queue Approval Required is specified YES in Preferences, the queue must be saved as a control queue and have a valid approval code before it can be executed.

4). If the queue was previously approved and executed and the operator has now modified it, the approval code is automatically removed. It must be approved again before it can be executed.

The first page of the queue is displayed with a verify message to ensure that you intend to begin execution. Pressing Enter to the verify prompt will begin the routing process.

While routing is in progress, a window appears as follows, showing the status of the execution. It lists the number of targets, the system currently being routed-to, the number of commands per target and the total number of commands to route. The display refreshes upon completion of every five commands or each time routing begins for a new target.

```
          Please wait, export route in progress

Number of application targets          ==>      2
Number of commands per applid          ==>     38
Currently exporting to target system   ==> CICS650

Total resources remaining to copy      ==>     76
```

Export Queue Execution with a FEPI Connection

If any of the target applids of an export queue uses FEPI for its connection protocol, you may be required to sign-on to the remote system before the export can complete. For more information about signing on with FEPI, see *Signing on to the Remote System with FEPI*, earlier in this chapter.

Execution Messages

When the execution of the temporary queue completes, a summary window appears with the completion status for each target application. It appears as follows:

```
CICS650   RI10001. Error response,  tab to applid and press Enter
CICS670   RI10002. Export completed, no errors
```

If any errors occurred, the applid of the system with errors will be highlighted with a message to that effect. You can tab the cursor to any applid that had errors and press Enter. This will produce the first error message and a brief reference to the command that caused the error.

```
 ____________________________________________________________________
|                                                                    |
|   RC16016. MQCONN MQCONN01 is not supported in this CICS           |
|                                                                    |
|DEFINE GROUP(TESTEX01) MQCONN(MQCONN01)  F7=prev, F8=next msg_______|
```

At that point, pressing PF6 will transfer to the VERIFY screen, displaying the full command in error.

While viewing the command display, if you press PF6 again, control will return to the error window and you can browse forward to the next message. At any time while viewing the command errors, PF3 will return to the summary window for all applications.

Pressing PF6 while in the summary window will transfer to the VERIFY display again, only now the commands will be shown in summary form, starting with the last command that was displayed.

Error messages will be lost unless you save the queue with Save error messages set to Y. By saving the error messages, they can be restored at a later time when you retrieve this control queue, as well as printed with the QPRINT batch command.

The Save Control Queue Window

When SAVE CONTROL QUEUE is selected, a window appears as follows:

```
      Show  Exit  Help                          CICS680   DFHCSD    QUEUES
                    AUTOMON/RDO - Control queue processing

   ____________________________________________________________________
  |                                                                    | _
  |                         Save control queue                         | _
  |                                                                    | _
  |  Control queue name   ==> ________        Current name  ==> TESTQUE1 | _
  |  Description          ==> Test export queue 1                      |
  |  User control field   ==> ______________________________           | _
  |  Approval code        ==> ________                                 |
  |  Replace duplicate?   ==> Y                                        |
  |  Secure to user id?   ==> N                                        |
  |  Save error messages? ==> Y                                        |
  |  Queue process date   ==> 00/00/0000                               |
  |  Current status       ==> UNAPPROVED  UNSUCCESSFUL                 |
  |  Requestor name/phone ==> ____________________ ______________      |
  |  Business identifier  ==>                                          |
  |  CSD copied from      ==> CICS.CICS680.DFHCSD                      |
  |                                                                    |
  |  Created by CICSUSER  Date 12/14/2012  Time 09:03:12               |
  |____________________________________________________________________|

 Enter F1=Help F2=Keys F3=Exit F4=Files
```

Key the required information and press Enter to save the queue.

Fields of the Save Control Queue Window

QUEUE NAME

The queue name can be up to eight bytes long, using any combination of alpha and numeric characters. The only characters that should not be used are the mask characters -- *, ?, <, >.

Export queue names can be automatically generated. This is done by supplying a BID Prefix in General Preferences and identifying the first nn positions of the BID to be used as a control field for export queues. The BID prefix, followed by a consecutive sequential number, will be automatically supplied as the export queue name whenever a SAVE command is issued for an export queue. For more information, see chapter 12.

CURRENT NAME

If this field contains a name, it is the name of the queue that was last retrieved or saved. You can enter this same name in Queue Name to replace this queue.

DESCRIPTION

Up to 40 bytes of description information can be associated with this queue. Use any combination of alpha and numeric characters.

USER CONTROL

This field can be used to associate queues under a common control identifier. Any alphanumeric information can be in the field. The batch QPRINT, QCOPY, QUNLOAD and QDELETE functions can select on the user control field, thereby performing the function for several queues at once.

APPROVAL CODE

An approval code is required to export this queue if REQUIRE EXPORT QUEUE APPROVAL is specified in Preferences. The code may be entered when the queue is saved or using the Approve Queue function of the menu. You must be operating with a supervisor transaction code in order to approve a queue. An approval code viewed with a non-supervisor trancode appears as ********.

REPLACE DUPLICATE

If a queue already exists with this queue name, this field specifies whether to delete it first before saving. If set to N, an error message will display when a duplicate queue name is found.

SECURE TO USER ID

If this field is coded Y, the queue will be secured to the User ID of the person who saved it initially. No one else will be able to retrieve or modify the queue except that person. Note that the supervisor transaction overrides Secure to User. Supervisors can access any queue.

SAVE MESSAGES

Once a queue executes, any error messages returned from the target systems are written to temporary storage for viewing. When the queue is saved, if there are associated messages and this field is coded Y, the messages are saved along with the queue. This allows the queue to be retrieved later and the error messages to be reviewed. It also allows printing of the messages with QPRINT.

QUEUE PROCESS DATE

You can supply a date in this field to be the date the queue is to be executed. AUTOMON/RDO does not use this field. It is intended to interface with an external user control system.

CURRENT STATUS This field contains the approval and execution status of the queue.

REQUESTER NAME/PHONE

This is a user information field which can be provided if desired. It can contain any information.

BUSINESS IDENTIFIER The 10-position business identifier supplied at the export menu.

CSD COPIED FROM This is the dataset name of the CSD that was used if resources were copied to create the export queue.

CREATED BY This is the user ID of this SAVE operation.

DATE This is the date of this SAVE operation.

TIME This is the time of this SAVE operation.

Approval Queue Window

The windows used for control queue approval, update and delete are all very similar to the save control queue window, but additional information is shown if the queue has been executed. The Approval window appears as follows:

```
      Show  Exit  Help                          CICS680   DFHCSD    QUEUES
                     AUTOMON/RDO - Control queue processing
  ____________________________________________________________________________|
  |                                                                          |
  |              Approve/update/delete control queue                         | _
  |                                                                          | _
  |  Control queue name   ==> TESTQUE1                                       | _
  |  Description          ==> Test export queue 1                            | _
  |  Delete saved queue?  ==> N                                              |
  |  User control field   ==> ______________________________                 | _
  |  Approval code        ==> ________                                       |
  |  Secure to user id?   ==> N                                              |
  |  Queue process date   ==> 00/00/0000                                     |
  |  Current status       ==> UNAPPROVED  UNSUCCESSFUL                       |
  |  Requestor name/phone ==>                                                |
  |  Business identifier  ==>                                                |
  |  CSD copied from      ==> CICS.CICS680.DFHCSD                            |
  |                                                                          |
  |  Created by  CICSUSER  Date 12/14/2012  Time 08:35:39                    |
  |  Executed by CICSUSER  Date 12/14/2012  Time 08:37:17  UNSUCCESSFUL      |
  |  Shipped to  CICS650  CICS670                                            |
  |__________________________________________________________________________|
             RI12021. Alter fields as desired and press Enter
 Enter F1=Help F2=Keys F3=Exit F4=Files
```

Fields of the Approval Window

QUEUE NAME

The queue name can be up to eight bytes long, using any combination of alpha and numeric characters. The only characters that should not be used are the mask characters -- *, ?, <, >.

DESCRIPTION

Up to 40 bytes of description information can be associated with this queue. Use any combination of alpha and numeric characters.

DELETE SAVED QUEUE

The queue currently displayed can be deleted by entering Y in this field. There is no subsequent verify prompt. The currently viewed queue will be deleted.

USER CONTROL FIELD

This field can be used to associate queues under a common control identifier. Any alphanumeric information can be in the field. The batch QPRINT, QCOPY, QUNLOAD and QDELETE functions can select on the user control field, thereby performing the function for several queues at once.

APPROVAL CODE

An approval code is required to export this queue if REQUIRE EXPORT QUEUE APPROVAL is specified in Preferences. The code may be entered when the queue is saved or using the Approve Queue function of the menu. You must be operating with a supervisor transaction code in order to approve a queue. An approval code viewed with a non-supervisor trancode appears as ********.

SECURE TO USER ID — If this field is coded Y, the queue will be secured to the User ID of the person who saved it initially. No one else will be able to retrieve or modify the queue except that person. Note that the supervisor transaction overrides Secure to User. Supervisors can access any queue.

QUEUE PROCESS DATE

You can supply a date in this field to be the date the queue is to be executed. AUTOMON/RDO does not use this field. It is intended to interface with an external user control system.

CURRENT STATUS — This field contains the approval and execution status of the queue.

REQUESTER NAME/PHONE

This is a user information field which can be provided if desired. It can contain any information.

BUSINESS IDENTIFIER — The 10-position business identifier supplied at the export menu.

CSD COPIED FROM — This is the dataset name of the CSD that was used if resources were copied to create the export queue.

CREATED BY — This is the user ID when the queue was last saved.

DATE — This is the date when the queue was last saved.

TIME — This is the time when the queue was last saved.

EXECUTED BY — This is the user ID when the queue was last executed.

DATE — This is the date when the queue was last executed.

TIME — This is the time when the queue was last executed.

EXECUTION STATUS — The word SUCCESSFUL or UNSUCCESSFUL will appear following the EXECUTION TIME field. A queue is considered unsuccessfully executed if any error messages are returned for any command from any target. There must be no errors at all for successful execution.

Note that a queue may be marked unsuccessful even though several of the commands completed with no error. Those commands are not automatically backed-out because another command fails. It's also possible that a queue of commands may execute with no errors for one target, but fail for another. This is still considered an unsuccessful execution.

SHIPPED TO — The target(s) of the last execution of this queue will display here. It will either contain TARGET LIST nn (target list number) or the CICS applids as they were entered on the Export menu.

Reviewing the error messages will reveal which targets (if any) were unsuccessful.

Handling Unsuccessful Queue Executions

When an error occurs during queue execution, it may be one detected by AUTOMON/RDO or it may be returned from CEDA when it attempts to apply an individual command to the CSD. In either case, one or more of the commands in the queue failed to execute properly.

The error messages are returned to the terminal where the Export was done and the commands in the temporary queue are marked individually as to whether they executed successfully or had an error. When you display the temporary queue, all commands that failed will be highlighted and shown in pink.

There are several options available at this point.

1). You could simply correct the commands in error and re-execute the entire queue. This will most likely cause other errors, however, since the commands that completed successfully the first time will now probably fail. A second Define will get a duplicate resource error; a second delete will get a resource not found, etc.

2). You can create a new queue consisting of only the commands that failed. These could be corrected and executed and there should be no more errors. This is accomplished by first displaying the temporary queue (press Enter at the Export menu), then choosing MAKE ERROR QUEUE from the OPTIONS pull-down menu.

3). If you created a backout queue prior to execution, you could now execute the backout queue. This will correctly restore the CSD to its previous status. However, the backout queue execution will probably return with errors. This is because some of the original commands did not execute properly, therefore the reversing entry in the backout queue is incorrect. If a Define failed in the original queue, for instance, the corresponding Delete in the backout queue will now fail because the resource does not exist.

4). Still another option is to create a Success queue. This is a new queue consisting of only the commands in the original queue that executed with no error. It is accomplished by first displaying the temporary queue (press Enter at the Export menu), then choosing MAKE SUCCESS QUEUE from the OPTIONS pull-down menu.

    From the Success queue, you could create a new Backout queue. This could be executed to back-out all the commands that executed successfully without generating any new errors.

5). Finally, it may be the case that you’re not ready to take action on this queue until someone else (the application programmer who created it, perhaps) can review the errors. In this event, you should save the queue again, either under the same name or a different name, and make sure that SAVE MESSAGES is set to YES in the Save Control Queue window. At that point, you could run the RDOBATCH program with the QPRINT command to produce a complete report of the queue, showing all commands in the queue, all associated errors and the commands that caused the errors.

Chapter 9. Change Management

Change management, as it pertains to CICS resource definitions, is the process whereby the creation of new definitions or changes to existing definitions can be originated by the users who need those changes to be made. These are then applied to production CICS systems in a controlled manner to minimize the potential of error that would cause down time.

This is a procedural process, therefore it cannot be said that there is any “best” way to handle change management. It differs, sometimes radically, from one environment to the next, depending on such elements as security concerns, toleration of errors, transaction workload, employee availability and a myriad of other factors

As the developers of AUTOMON/RDO, we do not attempt to force you to handle change management “our” way. We believe that no one, certainly not a utility-oriented software company, understands the particular needs of your business better than you.

Therefore, in AUTOMON/RDO, there are several ways to approach change management. You can use all or some of them, or develop your own system with various parts. AUTOMON/RDO can provide the fundamental elements of a change management system. The implementation and customization of it is up to the individual user.

Methods of Change Management

There are essentially four approaches to change management in AUTOMON/RDO. Two of these involve the User Access Matrix and the third utilizes the Export feature. These are:

1). Controlled access to direct CSD maintenance. Through the User Access Matrix, you can designate what commands can be executed by certain users and what resource groups can be modified by those users. Therefore, one approach is to simply allow application programmers to use AUTOMON/RDO to directly update the CSD, but limit their access in such a way that only the systems they are developing can be modified.

The audit trail can be activated to record all CSD maintenance so a history of changes to a group of resources can be recovered. If an error is made, it will at least be possible to track it to the last change.

2). CSD maintenance of test groups only. This approach is a refinement of number one. Application programmers can be assigned a series of test group names. Transactions can be secured to a set of programmers and defined in the Tran/Group Association Preference screen such that users of a certain transaction can only modify groups that begin with TEST, for instance.

As the programmers develop their systems, they are free to make direct changes to the CSD, as long as their changes are in a test group. When it’s time to implement their system in production, the system programmer who has authorization for all groups can migrate the test groups to the correct production names.

With this method there will be two stages of history recorded in the audit file -- the original definitions and modifications made to the test groups and the migration of those test groups to production.

3). A still more controlled method of change management involves the use of the Export feature of AUTOMON/RDO. This approach can be used to create an effective change management system whereby application programmers can submit resource maintenance changes to be applied to the appropriate CICS systems, but cannot make direct changes to the CSD themselves.

The suggested procedure for a change management system using Export is as follows:

A). Set Export Queue Approval Required to YES in Preferences.

Define one or more Supervisor transaction codes and assign them to authorized systems programming personnel.

Define valid Export Approval Codes in Preferences.

B). Application programmers create control queues of CEDA commands in any of four ways:

1). Online, using the Export menu.
2). Batch, using the GENSRC function.
3). Batch, using the COMPARE function.
4). Batch or online with user-written programs to build a queue.

Systems Programming is then notified of the queue names to be reviewed and approved for execution. Alternately, the application programmer could ship the queue(s) to another site for approval. This can be done online, or queues can be moved to another file in batch.

C). The queues are reviewed and approved by authorized personnel. It may be desirable to run the QPRINT batch job to print a report of all queues to be executed. This job can select queues based on name, control identifier, user id, date created, etc.

D). Once approved, the queues are executed, which ships the CEDA commands to all designated targets. Alternatively, the QUNLOAD batch job could be run, which creates a sequential file or PDS member of the CEDA commands, to be input to the DFHCSDUP utility. If necessary, the queues could be moved to yet another location before execution.

E). When executed, the queue is marked with an execution status of successful or unsuccessful. It is unsuccessful if any command in the queue produces an error message. Failing commands are highlighted.

F). If unsuccessful, the queue should be saved again, which also saves any associated error messages.

G). The QPRINT batch job can be run to produce a report of the queue, showing all information about it, including the error messages and failing commands.

H). The application programmer can display the queue at any time to check the execution status.

4). By writing one or more user exits, you can “build your own” change management system to do essentially anything you want. User exits can be associated with combinations of commands and resource types, as well as users and transaction codes. In a user exit, you can modify the resource prior to command execution,

write records to another file of your choice, edit the resource for your own unique security requirements, return a warning message or stop command execution altogether. User exits are described in chapter 12.

Error Recovery

If a queue of commands does not complete successfully, there are several available options:

1). A Backout Queue can be created from the original queue, and executed. This will back-out all commands that completed successfully.

2). An Error Queue can be created, which produces a new temporary queue containing only the commands that failed. Corrections can be made to this queue, then it is executed.

3). A Success Queue can be created, which generates a new temporary queue containing only the commands that executed successfully. From this, a backout queue can be made and executed, thereby backing out all successful commands with no further errors.

Associating Queues

The User Control Field of the queue record can be used to associate multiple queues. For instance, a programmer might create a queue to be executed, and then create a backout queue for it. Both queues could be assigned the same User Control Identifier (up to 30 bytes). The QPRINT, QUNLOAD, QDELETE and QCOPY batch functions will all select on the User Control field, if desired.

Another method would be a naming convention for the queue name, whereby the last character is 'E' for execute and 'B' for backout, for instance. The above-mentioned batch functions can also select on a generic or masked queue name.

Executing and modifying a control queue

Before a control queue can be executed, it must be moved to a temporary queue. This is accomplished with the Retrieve control queue function of the export menu.

Once in the temporary queue, it can be modified. Individual commands can be deleted or changed, and new commands can be added. However, any time a temporary queue is created from a control queue, or once a temporary queue is saved as a control queue, subsequent modification to the queue will automatically remove the approval code from the control queue. Thus it must be approved again before it can be executed.

If a queue is re-saved after execution, the approval code is not removed unless modifications were made to the queue prior to saving.

Approval of control queues

If Export queue approval required is YES in Preferences, a control queue must be approved before it can be executed. Only an operator using a supervisor transaction code can approve a queue.

Export queue approval codes must be defined in Preferences. These are 8-byte fields containing any value. The value is encrypted before writing to the file, and visible only with a supervisor trancode.

To approve a queue, select APPROVE OR DELETE QUEUE from the export menu. When the desired queue is located, enter a valid approval code and press Enter. If you are using a supervisor trancode and the approval code matches a code in the Preferences Export Approval Codes, the queue will be marked as approved.

Security control for export

There are three levels of security available for export queue execution:

1). A queue can be Secured to User ID, which means that only the user who created it or a supervisor can retrieve or modify it.

2). To execute a queue when approval is not required, the operator must be using an Administrator transaction code.

3). If approval is required, only an operator using a Supervisor trancode can approve a queue for execution. It requires a supervisor trancode to define approval codes as well as turn off the approval required option in Preferences.

Chapter 10. TSO Interface to AUTOMON/RDO

MVS users can access AUTOMON/RDO directly from TSO without logging on to CICS. The TSO interface uses the EXCI DPL call that is available in all CICS Transaction Server releases on z/OS. Refer to *Installation Requirements for TSO,* later in this chapter for the necessary installation setup to use the TSO interface.

It is possible to invoke the CONNECT or EXPORT commands from a CICS TS system (after connecting to it from TSO) and link to any other release of CICS TS. FEPI connections to other systems are fully supported. MRO and ISC connections are also available. Note, however, that IBM documentation of the DPL command states that MRO and ISC API commands are not supported when running under a DPL. Despite this documented restriction, there appears to be no problem in using MRO or ISC connections through the TSO interface. Upon consulting with IBM on this issue, they were unable to say why it would not work; therefore the facility is available at this time. If future usage uncovers problems in this area, MRO and ISC connections from the TSO interface may be removed.

Invoking the TSO Interface

To invoke the TSO interface, go to the COMMAND panel in TSO, enter RDOCTSO and press Enter. Or you can enter TSO RDOCTSO at any command field of any TSO panel.

A screen will appear as follows

```
          TSO Interface to AUTOMON/RDO   Release 4.3.121231

          User: JEL1
          Enter CICS applid for connection ==>
          CICS transaction for connection  ==> RTSO
          Business identifier (BID)        ==>
          User identifier (USERID)         ==> JEL1
          Extended terminal datastreams?   ==> YES

          The following fields are required to do
          a subsequent connection to another CICS:

          Subsequent trancode to invoke:   ==> RDOC
          Sign-on trancode (if FEPI)...... ==> CESN
          CICS user id (if FEPI).......... ==>
          CICS password (if FEPI)......... ==>





PF1=Help, PF3=Exit
                   (C) COPYRIGHT UNICOM SYSTEMS, INC., 2012
```

Fields of the TSO Interface Display

CICS applid for connection	This must be the Applid of a CICS system with the necessary Connections defined. *(See installation Requirements for TSO).*
Transaction for connection	This is the transaction code defined in the CICS system to operate the mirror transaction. The distributed name is RTSO. The Program name for the transaction code must be DFHMIRS.
Business identifier (BID)	If the BID control number is supplied at the TSO interface, it will be propagated into the export menu when an export operation is performed and it will be protected from change by the operator.

User identifier (USERID) — The value supplied here is the TSO user ID, but the field can be entered by the operator, if desired. When connecting from TSO, this value becomes the CICS user ID.

Extended terminal datastreams — Leave this value as YES unless you are operating on a terminal that does not support extended attributes, or you wish to suppress extended attributes. If you want extended attributes suppressed, enter NO.

Subsequent trancode to invoke — If you plan to do a CONNECT command from a CICS TS system to any other system, you must supply a transaction code to pass to the system you want to connect to. The default is RDOC.

Sign-on trancode (if FEPI) — For subsequent connections, if the connection protocol is through FEPI, sign-on information is required. Enter the sign-on transaction code here. The default is CESN.

CICS user ID (if FEPI) — For subsequent connections, if the connection protocol is through FEPI, sign-on information is required. Enter the sign-on user ID here.

CICS password (if FEPI) — For subsequent connections, if the connection protocol is through FEPI, sign-on information is required. Enter the sign-on password here (password will not display).

[Note]. If the sign-on user ID and password are omitted, the subsequent transaction will be invoked with no sign-on. It must be an unsecured transaction in order to execute

Operating in the TSO Interface

When you press Enter to this screen, the primary menu of AUTOMON/RDO will appear. You operate from TSO exactly as you would if you were logged-on to CICS, and all the screens appear on your terminal in exactly the same manner. Operation will continue until you exit from the primary menu, at which time control will return to the last TSO panel that was displayed.

You can exit directly from any AUTOMON/RDO display by pressing PA1. This will terminate the connection and return control to the last TSO panel displayed.

All functions of AUTOMON/RDO are available from TSO. Note, however, that you will not see any intervening window displays when operating from TSO. Intervening windows are the Please wait ... windows when a directory is being built or a file opened, and the decrementing count window while and export queue is being processed. You will only see the final display when these events occur, which may make it appear that the response time is longer than usual.

Shortcut Invocation

You can invoke the TSO interface without going through the preliminary screen described above. To do this, enter the command

TSO RDOCTSO,aaaaaaaa

at any TSO command point, where aaaaaaaa is the Applid of the CICS system to be connected.

This command will bypass the preliminary screen and invoke AUTOMON/RDO. Using the shortcut invocation does not give you an opportunity to set values for extended datastreams, subsequent transaction or sign-on information.

TSO PARM Invocation

RDOCTSO may also be invoked from a REXX script or other means. When this is done, the PARM to be passed to it should appear as follows:

1). *USERDATA — This is a constant value to distinguish the parmlist from a connect Applid.

2). Connect Applid — The 1-8 character Applid of the CICS 4.1 (or greater) system to connect to.

3). Connect trancode — A 4-character transaction code to be used for the connection. There will be at least three trancodes, corresponding to users, bid supervisors and administrators. The supervisor and administrator trancodes must be coded in their respective fields in the AUTOMON/RDO General Preferences panel.

4). User ID — A 1-8 character value identifying the user.

5). BID — A 1-10 character field identifying the business unit.

A typical parmlist, entered as a TSO command, would appear as follows:

```
TSO RDOCTSO,*USERDATA,CICS410,RTSO,LGAKERS,SRB
    (program)  (constant)     (applid)  (tran)  (user id)   (bid)
```

If the connect Applid is omitted or left blank, or if no parm is passed, RDOCTSO will present a panel with additional fields for User id and Bid.

Installation Requirements for TSO

In order to use the TSO interface, the following conditions must be met:

1). The RDOCTSO program must be available to TSO. You can copy this load module into SYS1.CMDLIB or any other dataset included in the STEPLIB of the TSO Logon Procedure.

2). The external CICS interface modules that are supplied with CICS TS must be available to TSO. These modules are supplied for CICS TS in CICSnnn.SDFHEXCI where nnn is your CICS TS release number. You should add this dataset to the STEPLIB of your TSO Logon procedure.

3). In the target CICS system, there must be a CONNECTION and A TRANSACTION defined. These are distributed with AUTOMON/RDO for CICS TS and should have been installed when the product was installed. If not, however, the minimum definitions for these should appear as follows:

```
DEFINE    CONNECTION(RTSO)
          GROUP(RDOCGRP)
          ACCESSMETHOD(IRC)
          PROTOCOL(EXCI)
          SINGLESESS(NO)
          DATASTREAM(USER)
          RECORDFORMAT(U)
          CONNTYPE(GENERIC)
          ATTACHSEC(LOCAL)
          AUTOCONNECT(NO)
          INSERVICE(YES)
DESCRIPTION (CONNECTION TO TSO USING EXCI INTERFACE)

DEFINE    TRANSACTION(RTSO)
          PROGRAM(DFHMIRS)
          GROUP(RDOCGRP)
          PROFILE(DFHCICSA)
          TASKDATALOC(BELOW)
          TASKDATAKEY(CICS)
          SHUTDOWN(DISABLED)
          ISOLATE(YES)
          DESCRIPTION(MIRROR TRANSACTION FOR TSO INTERFACE
          CALL)
```

4). Interregion Connection must be OPEN in the target CICS system. To check this, enter CEMT IRC. If it shows CLO, change it to OPE and press Enter.

[Note.] The IBM manual, *External CICS Interface,* provides more information about the EXCI distributed program link used by RDOCTSO.

Chapter 11. Message Audit Retrieval System

The Audit Trail / History Display

The audit trail, also known as the History display, is created from the messages that CICS creates in the course of daily operation. By default, the only messages captured are those created by CEDA when some type of resource maintenance is performed. It is possible, however, to capture and log other CICS messages and display them in the audit trail.

When invoked from the primary menu, the history display begins with the oldest message and proceeds forward in date/time sequence showing all messages in the file. When invoked for a specific resource, the only messages displayed are CEDA messages unique to that resource.

The Audit trail is not automatically activated when AUTOMON/RDO is first installed. The system programmer must activate audit trail logging in the General Preferences display and tailor the Audit Trail Setup record, also in the Preference function. It is also necessary to add one entry to the CICS Destination Control Table (DCT).

Once activated, CICS messages are automatically captured and logged to the audit trail file any time they occur. Resource-dependent messages are also indexed and associated with a resource-group-type record in the CSD.

The specification of which CICS messages will be captured and logged to the audit trail is done in Preferences using Audit Trail Setup. This function defines whether to capture messages that pertain only to CSD modifications, all CEDA message output or selective CICS message queues.

Before any messages can be captured, one additional entry must be made to the CICS Destination Control Table (DCT). This is the AUTOMON/RDO DCT entry, normally named RDTD. If you do not want to allow this product to dynamically modify the DCT, you must correlate the Destination Control Table with the options specified in Audit Trail Setup. For details on DCT requirements, see Chapter 12 - *Customizing AUTOMON/RDO.*

Invoking the history display

The history display can be invoked from three sources:

1). The Audit command or selection from the primary menu.
2). Entering H in the directory command field beside a resource.
3). Pressing PF9 at any resource display.

The first option displays the full audit trail, beginning at the start. The second two methods display only the messages that pertain to the selected resource.

The history display window appears as follows:

```
 ____   Show  Exit  Help                          CICS680   DFHCSD    HISTORY
 ---------------------------------------------------------------------------
 _____________________________________________________________________________
|               Audit trail history, File RDO$AUD , All messages               |
|                                                                             |
| 12/06/12 14:40:13 L704 CICSUSER BEFORE ALTER PROGRAM(RDOCAUDT)              |
|      (CICS680)         GROUP(RDOCGRP) LANGUAGE(ASSEMBLER) RELOAD(NO)        |
|                        RESIDENT(NO) USAGE(NORMAL) USELPACOPY(NO)            |
|                        STATUS(ENABLED) RSL(0) CEDF(YES) DATALOCATION(ANY)   |
|                        EXECKEY(CICS) CONCURRENCY(QUASIRENT) API(CICSAPI)    |
|                        DYNAMIC(NO) EXECUTIONSET(FULLAPI) JVM(NO)            |
|                        HOTPOOL(NO) DEFINETIME(12/05/12 11:19:06)            |
|                        CHANGETIME(12/05/12 11:19:06)                        |
|                        CHANGEUSRID(CICSUSER) CHANGEAGENT(CSDAPI)            |
|                        CHANGEAGREL(0680)                                    |
| 12/06/12 14:40:14                AFTER  ALTER PROGRAM(RDOCAUDT)              |
|      (CICS680)         GROUP(RDOCGRP) LANGUAGE(ASSEMBLER) RELOAD(NO)        |
|                        RESIDENT(NO) USAGE(NORMAL) USELPACOPY(NO)            |
|                        STATUS(ENABLED) RSL(0) CEDF(NO) DATALOCATION(ANY)    |
|                        EXECKEY(CICS) CONCURRENCY(QUASIRENT) API(CICSAPI)    |
|                     Enter will move bottom message to top                   |
| Date 20121206 Time 144014 Name ________ Group ________ Type ____________    |
|_____________________________________________________________________________|
F1=Help F2=Keys F3=Exit F5=Up F6=Dn F7=Bwd F8=Fwd F9=Start F10=End F11=Scan
```

Fields of the History Display window

Message text — Up to seventeen lines of message text will display in the window. CEDA messages that pertain to a resource are formatted with date and time, terminal ID, user ID and the before and after indicator of an ALTER command. The CEDA command stream text appears indented on the right side of the display.

Messages not created by CEDA are unformatted, displaying just as they would in their normal message queue.

Note that the date and time accompanying every message is the date and time that AUTOMON/RDO captured the message. In some cases, the time may reflect a few seconds later than the message actually originated.

The second line of every message contains the CICS Applid where this action occurred. The applid is enclosed in parentheses.

At the bottom of the window are five fields, as follows:

Date — This is the date corresponding to the last message displayed in the window. You can change this date if desired, by entering a new date in the form CCYYMMDD with no delimiters. This will reposition the

display to the message with an equal or next-higher date and time. When you press Enter to move the bottom message to the top, the message with this date and time is the one displayed at the start of the window.

Time — This is the time corresponding to the last message displayed in the window. You can change this time if desired, by entering a new time in the form HHMMSS with no delimiters. This will reposition the display to the message with an equal or next-higher date and time. When you press Enter to move the bottom message to the top, the message with this date and time is the one displayed at the start of the window.

Name — This is the resource name corresponding to the last message displayed in the window. It will only be there if this display was invoked by the History command from a resource display. In that case, Name, Group and Type will be filled-in with the information from the last message in the window.

Group — This is the resource group name corresponding to the last message displayed in the window. It will only be there if this display was invoked by the History command from a resource display.

Type — This is the resource type corresponding to the last message displayed in the window. It will only be there if this display was invoked by the History command from a resource display.

PF key functions in the history display

Beyond the standard Help, Keys and Exit functions (PF1, PF2 and PF3), the following keys are available while in the history display:

PF4 (Up)	Scroll up (backward) one message.
PF5 (Dn)	Scroll down (forward) one message.
PF7 (Bwd)	Browse backward one full window.
PF8 (Fwd)	Browse forward one full window.
PF9 (Start)	Go to the first message in the history display.
PF10 (End)	Go to the last message in the history display.
PF11 (Scan)	Invoke the scan window for searching by date, user id, group, terminal id or character string.
Enter	Browse forward starting with the last message in the window.

Scanning in the history display

If PF11 is pressed while in the history display, the history scan window appears as follows:

```
 ____  Show  Exit  Help                          CICS680   DFHCSD    HISTORY
 ---------------------------------------------------------------------------

        AUTOMON/RDO - CICS On-line Resource Definition Extended Control
         ____________________________________________________________
        |                                                            |
        |   Character string   ____________________________________  |
        |   Start date 20121206 End date 20121207   Direction   FORWARD_  |
        |   User id __________  Group name ________ Terminal ID ____  |
        |                                                            |
        |   1. All characters are valid, including imbedded spaces.  |
        |   2. Enter dates as CCYYMMDD, time as HHMMSS, no delimiters.  |
        |   3. Enter start/end date only for date positioning.       |
        |   4. User, group and terminal are optional qualifiers,     |
        |      with or without character string.  If present,        |
        |      only CSD modifications are displayed.                 |
        |   5. Direction Forward searches start date to end.         |
        |   6. Direction Backward searches end date to start.        |
        |   7. Masks are valid in User, Group and Terminal only.     |
        |                                                            |
        |____________________________________________________________|
 Enter command or tab to selection and press Enter ===> A_______________________

F1=Help F2=Keys F3=Exit F5=Up F6=Dn F7=Bwd F8=Fwd F9=Start F10=End F11=Scan
```

Fields of the History Scan Window

The search begins with the specified Start date and stops at the End date, moving either forward or backward as indicated in Direction. Any or all of the fields, Character string, User Id, Group name and Terminal Id can be entered to qualify the search.

Character string — This field allows entry of up to 40 characters of data (with imbedded spaces). Do not delimit in quotes or use generic masks as they will be considered part of the character string. All messages in the current history display with a matching string will be collected for display.

User ID — If entered, all CEDA messages in the current history display with a matching user ID will be collected for display.

Group name — If entered, all CEDA messages in the current history display with a matching group name will be collected for display.

Terminal ID — If entered, all CEDA messages in the current history display with a matching terminal ID will be collected for display.

Start date — This field is a date in the form CCYYMMDD where you wish to begin or end a history file search. If erased, the lowest possible date will be used.

End date — This field is a date in the form CCYYMMDD where you wish to end or begin a history file search. If erased, the highest possible date will be used.

Direction — This field specifies whether the search is to be performed backward or forward. Enter B or F. The default is forward. If forward, the search begins with the specified Start date and stops at the End date. The display will start with the oldest matching record.

If backward, the search begins with the specified End date and stops at the Start date. The display will start with the newest matching record.

Multiple Audit Trail Files

It is possible to segregate messages from different CICS message queues into separate audit trail files. For details of the set-up requirements for this, see Chapter 12 - *Customizing AUTOMON/RDO*. When multiple audit trail files are in effect, the Audit command from the primary menu will invoke a popup window where you choose which audit trail file you wish to display.

All available files are present in the window. To pick one, tab to the message queue name beside that file and press Enter. The display of messages for that file will begin.

The history command, which is resource dependent, will not offer the choice of files. History messages always originate from the CEDA message log, CSDL, so the file associated with that message queue will be automatically chosen.

Chapter 12. Customizing AUTOMON/RDO

Introduction

The PREFERENCES display allows you to customize the way AUTOMON/RDO works in your environment. There are many changes that can be made, both to the appearance and operation of the product.

There are eleven preference displays available, each concerned with a different area of customization. When Preferences is first invoked, a display appears with a small window for each of the Preference functions, as follows:

```
 ____   Show  Exit  Help                          CICS680   DFHCSD    PREFS
                    AUTOMON/RDO - Operational Preferences

        _____________________  ___________________________
       |  General preferences |  Group exclusions         |
       |    ____________________  __________________________
       |   |  Trancode security   |  Group associations       |
       |   |    ____________________  __________________________
       |   |   |  Audit trail setup   |  Export approval codes    |
       |   |   |    ____________________  __________________________
       |__ |   |   |  FEPI applid list    |  FEPI node list           |
       |   |   |   |    ____________________  __________________________
       |__ |   |   |  Field value limits  |  Application target list  |
           |   |   |                  ____________________________       |
           |__ |   |  Define |      User exit setup      | t of       |
               |   |  limit  |                           | port       |
               |__ |  resour |    Define user exits      |            |
                   |         |    for commands and       |            |
                   |_________|    resource types         | ___________|
                             |                           |
                             |___________________________|

           RM12001. Tab to window and Enter, or browse with PF7/PF8
 Enter F1=Help F2=Keys F3=Exit F4=Files F7=Bwd F8=Fwd
```

Choose the Preference display you want to access by tabbing to the desired window and pressing Enter. Pressing PF8 will browse forward, popping each window up as it is reached. PF7 will do the same thing going backward.

Adding, Deleting and Updating Preference Records

As you move through the various Preference displays, each record type will always display. If all the data fields of a Preference screen are empty, no Preference record has been created for this type. To create one, simply fill in the required data fields and press Enter.

Some Preference records are multi-occurring, meaning you can have more than one record of that type. If a Preference record is multi-occurring it will have a SEQ (sequence) field somewhere at the upper right of the screen. The first record of this type will be sequence 01. To add another record of this type, browse forward to the last one (go to the next type with PF8, then back-up one display with PF7), change the sequence number to the next higher value and press Enter. This will add another record which contains all the data from the previous record. You can then modify the new record as desired by overtyping or erasing fields and pressing Enter. PF6 (Erase) can be used to erase all fields of a multi-occurring preference record.

To delete a Preference record, invoke the DELETE pull-down menu and select the delete record option (selection number 1), or enter D1 in the Action Command line. You will then be prompted to ensure that's what you want to do. Press Enter to complete the deletion.

If the deleted record was multi-occurring, the previous record of that type will display when the deletion completes. If it is a single-occurring record, either a null record (all fields blank) or a record with the system defaults for that Preference type will display.

[Note]. Delete (PF5) is not the same as Erase (PF6). Delete physically removes the preference record, whereas Erase simply blanks out all data fields, but leaves the record there. Erase will only take effect for multi-occurring preference records.

To update a Preference record, simply key any desired fields and press Enter.

Preference Types

The eleven Preference displays are:

1). General Preferences - Operational and visual choices.
2). Group Exclusions - Exclude groups from the directory.
3). Trancode Security - Assign commands by transaction code.
4). Group Associations - Assign groups to transaction codes.
5). Audit Trail Setup - Specifications for audit trail capture.
6). Export Approval Codes - Supervisor approval of export queues.
7). FEPI Application List - Target names and applids for FEPI.
8). FEPI Node List - Node names for use by FEPI.
9). Field value limits - Assign security limits to resource mnemonics.
10). Application Target List - CICS applids for remote installs.
11). User Exit Setup - Invocation specification for user exits.

General Preferences

The General Preferences display appears as follows:

```
 ____   Show  Case  Delete  Exit  Help            CICS680   DFHCSD    PREFS
                    AUTOMON/RDO - General Preferences

General Options ...............................................      PF Key
  Extended attributes            DEF   Leave DFHCSD open     YES  Substitution
  USERDEF defaults for DEFINE    NO_   Interim CEDA display  NO_   PF1  =  PF1_
  Require Export queue approval  NO_   OS getmains > 65K     NO_   PF2  =  PF2_
  Remove deleted grps from lists NO_   Create audit trail    YES   PF3  =  PF3_
  Operate in lowercase mode      YES   Suppress CEDA warning NO_   PF4  =  PF4_
  Allow lowercase resource names YES   Export restrict level 00    PF5  =  PF5_
                                                                   PF6  =  PF6_
Windows and menus:         Mask codes:    Color Substitution:      PF7  =  PF7_
  Graphic escape YES       Gen left  *    Blue      = BLUE         PF8  =  PF8_
  Dotted line    NO_       Gen right <    Red       = RED          PF9  =  PF9_
  Reverse video  NO_       Wild card ?    Pink      = PINK         PF10 =  PF10
  Color          YELLOW___                Turquoise = TURQUOISE    PF11 =  PF11
                                          Yellow    = YELLOW___    PF12 =  PF12
Administrators: ____ ____ ____ ____       Green     = GREEN____    PF13 =  PF13
Supervisors:    ____ ____ ____ ____       White     = WHITE____    PF14 =  PF14
Other trancodes:           Export Queue View:                      PF15 =  PF15
  Export tran   RCMD        Supervisors ALL___
  Audit tran    RDAT        Users       ALL           Bid Prefix 0
               RM08001. Make changes as desired and press Enter
 Enter F1=Help F2=Keys F3=Exit F4=Files F5=Del F6=Erase F7=Bwd F8=Fwd
```

There are seven classes of information on the General Preferences display:

1). General Options
2). Pop-up windows and pull-down menus
3). Mask code character substitution
4). Secured transaction codes
5). Color substitution
6). PF key substitution
7). Export operation choices

General Options

Extended attributes

This choice can be used to force the use of extended attributes, either on or off. The choices are:

1) DEF Use the default setting for the terminal in use. If the terminal or emulator supports extended attributes, they will be used for all displays.

2) ON Force the used of extended attributes, even though the terminal in use does not use them by default.

3) OFF Turn off extended attribute usage altogether

USERDEF defaults for DEFINE

The USERDEFINE command may be issued alternatively to the DEFINE command to specify that default values in the new resource definition will be supplied by the user instead of CICS. Entering YES in this field will issue a global USERDEFINE command, meaning the DEFINE command functions exactly like USERDEFINE, all defaults supplied by the user.

The user-defined defaults are established by creating a dummy resource definition, USER, in the USERDEF group for the resource type and entering the desired default values in the resource definition fields. This template will be used whenever DEFINE is issued to assign default values to fields.

Require Export queue approval

Set this option to YES if supervisor approval is to be required before a control queue can be executed. Once the option is set to YES, it cannot be set to NO unless the operator is using a supervisor transaction code.

You must also define one or more Export Approval Codes for this option. This is accomplished by selecting number 9 - Export Approval Codes, from the NEXT pull-down menu (or browsing backward until the Export Approval Code screen appears). Enter as many approval codes as desired. You must be operating with a supervisor transaction code in order to define approval codes.

Remove deleted groups from lists.

This option provides a convenient way to maintain the integrity of the CSD as far as LISTS are concerned. With CEDA, when a group is deleted, that group may be defined as part of one or more lists and it remains in the list definition, even though the group no longer exists. When that list is executed (as the startup GRPLIST, for instance), the presence of the non-existent group can cause errors in CICS.

If this option is set to YES, AUTOMON/RDO searches the list directory each time a group is deleted by any means. For every list where the deleted group is present, it will be removed.

Operate in lowercase mode

This option provides a way to turn off the uppercase translation feature of any terminal where an AUTOMON/RDO transaction is executed, regardless of the normal mode of operation for that terminal. Entering YES in this field will place the operating terminal in

lowercase mode (no uppercase translation) any time AUTOMON/RDO is used. Coding NO (the default) will leave the setting of uppercase translation as-is with no changes.

[Note]. The choice in this option does not preclude use of the CASE command, which will switch uppercase translation on or off for the operating terminal.

Allow lowercase resource names

If this option is set to YES, lowercase alpha characters will be accepted without translation in all mnemonic values where mixed case is accepted by CEDA. When set to NO, all terminal input will be translated to uppercase, regardless of the uppercase translation option setting for the terminal.

CEDA allows lowercase alpha characters in some, but not all resource name fields. The group, program, mapset and other resource names, for instance, can only have the characters A-Z @ # and $, whereas a terminal name can contain A-Z a-z 0-9 $ @ # . / _ % & ¢ ? ! : | " = ¬ , ; < >. For a complete listing of allowable characters for a value, press the help key with the cursor positioned to the field in question, in the resource display of that type.

With this option set to YES, the uppercase translation option for the terminal in use must be off. If your terminal normally operates with uppercase translation on, you can temporarily turn it off with the CASE command of the AUTOMON/RDO primary menu.

If this option is YES and uppercase translation is off for the terminal in use, the operator is responsible for properly entering uppercase and lowercase characters in those fields where lowercase is allowed. Where lowercase is not allowed, alpha characters will be translated to uppercase, regardless of how they are entered.

[Note]. These options must be set to YES in order to use underscore characters in resource names.

For more information on lowercase handling, see *Using Lowercase Characters in Resource Definitions* in chapter 5.

Leave DFHCSD open

By default, AUTOMON/RDO closes the local DFHCSD file when the AUTOMON/RDO transaction is exited by the last active user. If you desire that the file remain open, enter YES in the field.

Interim CEDA display

AUTOMON/RDO does not perform any update or output operations on the DFHCSD file; instead, it formats and passes the command to the CEDA transaction for execution. The CEDA transaction is invisible to the user. If you desire that the CEDA transaction be displayed, enter YES in this field. In this mode, you can remain in the CEDA transaction and perform other functions, returning to AUTOMON/RDO when finished by pressing PF3 or ENTER with no other CEDA operations specified.

MVS Getmains > 65K

This option is only applicable to MVS systems. When AUTOMON/RDO must acquire storage larger than 65K (directory storage) you can choose whether to take the storage from the CICS extended DSA or from outside CICS altogether. Coding YES means take it from outside CICS. Coding NO tells AUTOMON/RDO to use a CICS Getmain command.

Create Audit Trail

Entering NO in this field will suppress the capture of messages for the audit trail and history displays. Entering YES will allow messages to be captured in the audit trail file once the Audit Trail Setup Preference screen has been defined.

Suppress CEDA warning

By default, the user of AUTOMON/RDO is notified only of severe errors returned by the CEDA transaction. Enter NO in this field if you desire that users be also notified of warning errors returned by the CEDA transaction.

Export restrict level

See *Export Operation Choices*, below.

Popup windows and pulldown menus

You can customize the appearance of AUTOMON/RDO product by specifying the type and color of borders used around pop-up windows and pull-down menus. Borders may be one of three types:

Graphic Escape	Borders are constructed of graphic escape characters, usually a solid line.
Dotted Lines	Borders are constructed of dotted lines.
Reverse Video	Borders are displayed in reverse video.
Color of borders	The color to be assigned to window borders.

Mask Codes

You can change the characters AUTOMON/RDO uses as masking codes, if desired. The following three values are the standard masking characters:

Asterisk (*)	Left-to-right generic, and imbedded string masks.
Less-than sign (<)	Right-to-left generic.
Question mark (?)	Wild card character.

Since CEDA allows some of these characters to be present in certain resource names, it may be necessary to change the values that AUTOMON/RDO uses, if your installation has resources that utilize any of these characters in their name.

To change any of the mask codes, replace the currently displayed character with the value of your choice. Allowable characters for mask codes are:

` ~ ! @ # $ % ^ & * + = { } : ; “ ‘ | \ < > ? /

[Note]. For a discussion of masking characters and how they are used, see *Displaying Directories, Masks* in chapter 4. Note that the additional code mentioned there, equals sign (=), is used for directory positioning only. This character can be present in a resource name (where allowed by CEDA) without changing its use by AUTOMON/RDO.

Color Substitution

AUTOMON/RDO makes extensive use of extended colors. The colors are used consistently, in most instances in conformity to CUA standards; for example, titles are always yellow. You customize the appearance of your AUTOMON/RDO product by assigning the desired color to the color used by default by AUTOMON/RDO. You may choose, for example, to display all titles in red rather than yellow by entering red in the YELLOW field of the preferences display. Any of the extended colors may be used, and may be assigned to more than one default color.

PF Key substitution

Action selection is customizable by assigning the desired PF key to replace the PF key currently being used for a action. The new key will then initiate the action invoked by the previous key and will appear in the PF Key prompt, PF Key list, and pull-down menus.

AUTOMON/RDO uses 15 PF keys for actions. In several instances these actions are consistent from screen to screen, e.g., PF1 for help. Replacing a PF Key will affect all actions invoked by the key. Although there are only 15 assignments, any PF key from 1-24 may be used.

Secured Transactions

Administrators

Administrator Transaction Codes are used to provide the AUTOMON/RDO administrator with the ability to secure designated functions. The four fields provide for up to four unique transaction codes. If all four fields are left blank, no security is in effect.

When one or more transaction codes are entered here, only those transactions can make preference changes, perform a Refresh command or a Close command. These transaction codes can then be secured to authorized personnel.

[Note]. When this screen is displayed with a transaction code that is not an administrative transaction code, these fields are filled with asterisks and cannot be altered. The use of these fields is suggested if you intend to use the User Access Matrix and allow others to use all or part of the AUTOMON/RDO facilities.

Supervisors

These four fields define the transaction codes required in order to do a supervisor function. Each of the fields can contain a CICS transaction code with security authorization as desired. If no trancodes are present, no supervisor-level security exists.

Supervisor functions are:

1) Changing Require export queue approval to NO.
2) Adding or updating a Preference Export Approval Codes record.
3) Approving an export control queue for execution.
4) Overriding the SECURED TO USER ID queue setting.

[Note]. If any of the *Export Operation Choices* are set (described below), there can be other operations unique to supervisors.

[Note]. When this screen is displayed with a transaction code that is not a supervisor transaction code, these fields are filled with asterisks and cannot be altered.

Other trancodes

Two additional transaction codes can be altered from the default, if desired. These are:

1) Export tran — The internal transaction code used to route export queues to remote targets. The default is RCMD.

2). Audit tran — The internal transaction code used to capture audit messages from CEDA. Default is RDAT.

Export operation choices

Export restrict level

This option modifies the way Export works based on the operator status (administrator, supervisor or user). Three levels of export restrictions are provided:

00 No restrictions.

The AUTOMON/RDO product operates as documented for all users.

01 Limited export menu.

Non-administrators (users and supervisors) receive a limited export menu that only includes resource access. All other functions of the product work normally for all users.

02 Limited product access.

Users (non-administrators and non-supervisors) can only access the export menu. No other AUTOMON/RDO commands will be honored. If a shortcut command is entered from a clear screen to display a directory, for example, the command is ignored and control passed to the export menu. Users see the limited export menu described in 01, above.

Supervisors can only access the export menu and the Preference displays. Supervisors are responsible for approving export queues for execution, plus setting the export approval codes. Supervisors also receive the limited export menu.

Administrators have full access to all functions except assigning export approval codes.

Export queue view

This option limits the export queues available to operators in the export queue directory, based on their operation status (supervisor or user). Administrators always view all queues. Three choices are provided. Enter one of the choices in both the Supervisors and Users field.

ALL — View all saved queues.

BID — View only the saved queues containing a BID prefix value which matches the one in use (in the Export menu BID field).

USERID View only the saved queues containing the same user ID as this operator in the CREATED BY field of the export queue.

Bid prefix This is a one-position number designating how many characters of the business identifier (BID) are to be used as a control prefix. If zero is entered, no BID prefix control is in use. The number 3 would indicate that the first three characters of the BID are to be used as the BID prefix, if either of the previous two fields (Supervisors and Users) contains BID as the queue view limit value. To use BID prefix control, enter a number from one to nine.

The use of Bid prefix allows for BID values up to ten characters, but the first nn characters can be common for different users or user groups. It may be that you choose to use a standard BID value that is always five characters long, for instance and you want to control access to export queues by the entire BID value. In this case, code 5 as the BID prefix, even though BID values never exceed five characters.

User Access Matrix

There are times when it is desirable to allow others besides systems personnel to use AUTOMON/RDO. However, the CICS systems administrator will generally want to restrict its use to either certain types of functions or to specific resource groups. AUTOMON/RDO provides this capability through additional preference screens designed to create a matrix of user options and security.

The preference screens used to create the matrix are available for update only by the authorized CICS systems administrator by using one of the transactions designated for such use. Others may view these preference screens but are not allowed to alter them.

Group Exclusions

It is sometimes desirable to exclude certain groups (either explicitly or generically) from the on-line directory. Three reasons for doing this are:

1) The volume of entries in the CSD is very large, requiring an inordinate amount of time to initially build or refresh the directory.

2) Some groups are completely static, meaning no maintenance is ever required to these groups. Excluding these groups will reduce the storage requirement for the directory.

3) Security. Certain groups are to be maintained only by the CEDA transactions by authorized users. Note that Preference option 4, Trancode Associations, can also accommodate this requirement.

The Group Exclusion Preferences screen appears as follows:

```
____  Show  Case  Delete  Exit  Help            CICS680   DFHCSD    PREFS
                    AUTOMON/RDO - Group Exclusions

     Group          Group          Group          Group          Group   Seq 01
    ________       ________       ________       ________       ________
    ________       ________       ________       ________       ________
    ________       ________       ________       ________       ________
    ________       ________       ________       ________       ________
    ________       ________       ________       ________       ________
    ________       ________       ________       ________       ________
    ________       ________       ________       ________       ________
    ________       ________       ________       ________       ________
    ________       ________       ________       ________       ________
    ________       ________       ________       ________       ________
    ________       ________       ________       ________       ________
    ________       ________       ________       ________       ________
    ________       ________       ________       ________       ________
    ________       ________       ________       ________       ________
    ________       ________       ________       ________       ________
    ________       ________       ________       ________       ________

    Enter full group name or selection mask.  All matching groups in the
    CSD will NOT be included in the on-line directory.
              RM08001. Make changes as desired and press Enter
 Enter F1=Help F2=Keys F3=Exit F4=Files F5=Del F6=Erase F7=Bwd F8=Fwd
```

In each of the 8-position Group fields, enter a full or masked group name. The standard three mask characters may be used to qualify a group name, as follows:

*	Left-to-right generic	Example:	MY*
<	Right-to-left generic	Example:	<MY
?	Wild-card character	Example:	MY???GRP

During the initial directory build process, or any time a Refresh Directory command is invoked, all groups that match any of the full or generic group names in the Group Exclusion preferences record will not be included in the AUTOMON/RDO directory. If any of these groups need to be accessed the CEDA transaction must be used.

Trancode Security

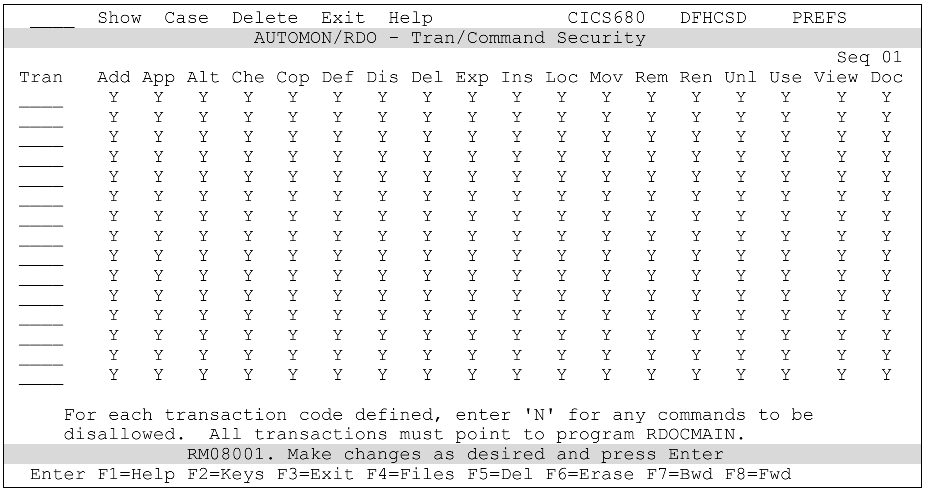
Security within the IBM-supplied RDO facility consists of three transactions, as follows:

1) CEDA Full function, all commands accepted.

2) CEDB All commands accepted except INSTALL.

3) CEDC Read-only, no commands accepted that modify the CSD.

The AUTOMON/RDO equivalent of transactions CEDA, CEDB and CEDC are RDOC, RDOI and RDON, respectively. It is possible, however, to go beyond these three options or change the functionality of the standard transaction codes by using the Trancode Security Preferences display.



```
 ____  Show  Case  Delete  Exit  Help          CICS680   DFHCSD    PREFS
                     AUTOMON/RDO - Tran/Command Security
                                                                   Seq 01
Tran   Add App Alt Che Cop Def Dis Del Exp Ins Loc Mov Rem Ren Unl Use View Doc
____    Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y    Y   Y
____    Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y    Y   Y
____    Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y    Y   Y
____    Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y    Y   Y
____    Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y    Y   Y
____    Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y    Y   Y
____    Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y    Y   Y
____    Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y    Y   Y
____    Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y    Y   Y
____    Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y    Y   Y
____    Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y    Y   Y
____    Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y    Y   Y
____    Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y    Y   Y
____    Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y    Y   Y
____    Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y   Y    Y   Y

    For each transaction code defined, enter 'N' for any commands to be
    disallowed.  All transactions must point to program RDOCMAIN.
               RM08001. Make changes as desired and press Enter
 Enter F1=Help F2=Keys F3=Exit F4=Files F5=Del F6=Erase F7=Bwd F8=Fwd
```

First, define and install a new transaction code of your choice. The program name is RDOCMAIN. To use a predefined trancode as a model, do the following:

1) Display the Transaction directory using a mask of RDO*, which will position you to the RDOC transaction.

2) Enter DEF in the Command field beside this trancode.

3) When the resource displays, change the transaction code as desired and press Enter to define the new transaction.

4) Install this transaction (Use the Commands pull-down menu).

Now display the Trancode Security Preference screen. In the next available row under the TRAN field heading, key your new transaction code. To the right, in each of the eighteen 1-position fields, enter a Y (yes) or N (no) to designate if that command may be used with this transaction code.

The eighteen commands listed for each column of fields are:

1) Add — Add group to a list

2) Append — Add a list to a list

3) Alter — Alter a resource

4) Check — Check group or list associations

5) Copy — Duplicate a resource or group

6) Define — Create a new resource definition

7) Display — Display a resource

8) Delete — Delete a resource or group

9) Expand — Expand a group or list

10) Install — Install a resource or group

11) Lock — Lock a group

12) Move — Move a resource from one group to another

13) Remove — Remove a group from a list

14) Rename — Change the name of a resource or group

15) Unlock — Remove lock from a group

16) Userdefine — Define with user defaults

17) View — View a resource

18) Document — Add or change documentation for a resource

As shown in this example, the three standard transactions (RDOC, RDOI, RDON) may be included in the Trancode Security display and the command supported for those trancodes may be changed. If they are not present in the display they will function as previously described.

If new transaction codes are defined for the RDOCMAIN program and are not included in the Trancode Security display, they will have full functionality (all commands accepted).

SEQ — This field will always contain '01' for the first (or only) Trancode Security record. If more transactions are needed, change the SEQ field to the next available number and press Enter. Another record will be added using the entered sequence number which contains the same data as the previous record. You may then modify the new record as desired.

If a preference record exists for the specified number, it will be displayed.

Group Associations

The Group Associations display allows groups (either specific or generic) to be assigned to a transaction code. This means that authorized users of that transaction code can only access the included groups. All other transaction codes (except RDOC) cannot access groups assigned to this transaction code. The Trancode Security display can be used to control what commands are available for this trancode, and therefore, what commands are available for the listed groups.

Group Association is a method of providing additional security within a single CSD. All of the payroll resource definitions, for instance, could be assigned to one transaction code and only authorized users could access them.

If different (or the same) groups are to be associated with more than one transaction code, multiple Group Association records must be created. There is at least one Group Association record for each transaction code required.

If a transaction code has no Group Associations record defined for it, all groups in the directory are available for that trancode except those assigned to other transaction codes.

The Group Association display appears as follows:

```
____   Show  Case  Delete  Exit  Help          CICS680   DFHCSD    PREFS
                 AUTOMON/RDO - Tran/Group Associations

Tran    Group       Group       Group       Group       Group     Seq  01
____    ________    ________    ________    ________    ________
        ________    ________    ________    ________    ________
        ________    ________    ________    ________    ________
        ________    ________    ________    ________    ________
        ________    ________    ________    ________    ________
        ________    ________    ________    ________    ________
        ________    ________    ________    ________    ________
        ________    ________    ________    ________    ________
        ________    ________    ________    ________    ________
        ________    ________    ________    ________    ________
        ________    ________    ________    ________    ________
        ________    ________    ________    ________    ________
        ________    ________    ________    ________    ________
        ________    ________    ________    ________    ________
        ________    ________    ________    ________    ________
        ________    ________    ________    ________    ________
   Enter defined transaction code followed by groups or mask entries. Only
   matching groups in the CSD are accessible with this trancode. To add a
   new record, overtype TRAN with new value.  To delete, erase TRAN field.
             RM08001. Make changes as desired and press Enter
Enter F1=Help F2=Keys F3=Exit F4=Files F5=Del F6=Erase F7=Bwd F8=Fwd
```

TRAN This field contains the transaction code to which these groups are to be assigned. When viewing an existing Group Association record, if a trancode for which no record exists is entered, a new, empty Group Association record will be added for that trancode.

If the trancode entered does have a Group Association record present, that record will be displayed.

SEQ This field will always contain '01' for the first (or only) Group Association record of this transaction code. If more GROUP fields are needed for this transaction, change the SEQ field to the next available number and press Enter. Another record for this trancode, using the entered sequence number, will be added which contains the same data as the previous record. You may then modify the new record as desired.

GROUP These fields contain the group names to be associated with the transaction code in TRAN. You may enter full group names or any of the three standard mask characters may be used, as follows:

*	Left-to-right generic	Example:	MY*
<	Right-to-left generic	Example:	<MY
?	Wild-card character	Example:	MY???GRP

Group Association Logic

The logic used by AUTOMON/RDO to handle Group Associations is as follows:

1). When a resource within a group is accessed by any valid AUTOMON/RDO command, the table of Group Associations, which is constructed from all Group Association records is searched.

2). If the group is found, the transaction code in use must have a Group Association record and this group must be present in it. Otherwise the command will be rejected.

3). If the group is not found in the table, meaning it was never associated with any particular transaction code, a check is made to see if the transaction code in use has <u>any</u> groups associated with it (Was a Group Association record defined for this trancode?).

4). If yes (Group Association record is present for this trancode), the command will be rejected, since this group is not associated with this trancode.

5). If no (no Group Association record present for this trancode), the command will be allowed.

Adding a new Group Association record

There must be a separate Group Association record present for each transaction to which groups are to be assigned. There are two methods of adding a new record.

1). Go to the NEXT pull-down menu and select number 4 -- Group Associations. This will display a blank Group Association screen, ready for input. When you enter the TRAN and SEQ fields and press Enter, the record will be added.

2). At an existing Group Association display, change the TRAN field (and SEQ field, if necessary) and press Enter. This will add a new Group Association record using the entered transaction code.

Defining transactions with access to all groups

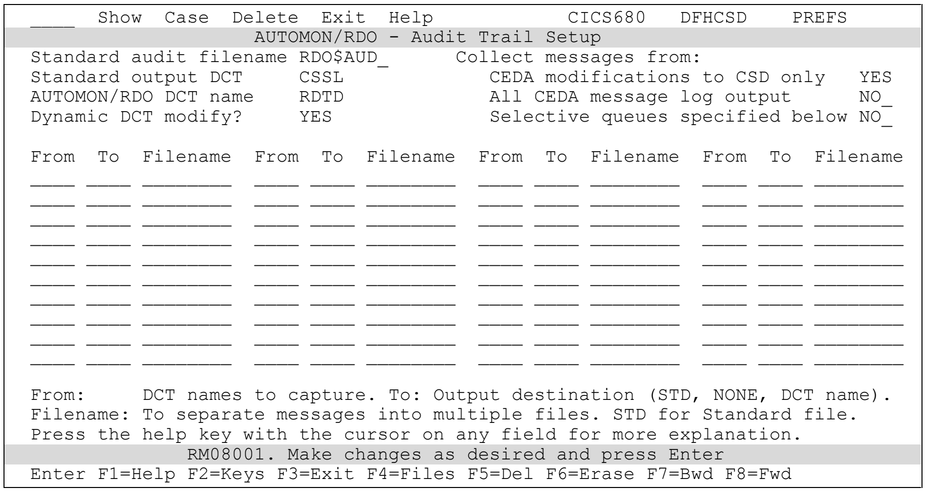
In the case where some Group Association records are present and it is necessary to define a transaction (other than RDOC) which has access to all groups, simply add a Group Association record for this trancode and enter a single asterisk (*) in one of the GROUP fields. If you don't use a single asterisk, you must define all groups from all other Group Association records on this record.

Audit Trail Setup

This Preference screen is where decisions are made concerning which CICS messages are to be captured for the audit trail history display. By default, AUTOMON/RDO will capture only the messages from CEDA that pertain to CSD modifications. However, you can expand on that to capture all CEDA messages, or even non-RDO messages. Any transient data message queue can be designated, which will cause messages routed to it to be captured and logged, then displayed with the AUDIT command. Multiple audit trail files can be specified, allowing messages from various CICS queues to be split and separately maintained.

Other decisions must be made here, such as the name of the audit trail file, the final indirect destination for captured messages and whether to let AUTOMON/RDO dynamically tailor the DCT or to predefine the DCT as needed.

The Audit Trail Setup preference screen appears as follows:



```
____  Show  Case  Delete  Exit  Help            CICS680   DFHCSD    PREFS
                    AUTOMON/RDO - Audit Trail Setup
Standard audit filename RDO$AUD_      Collect messages from:
Standard output DCT     CSSL             CEDA modifications to CSD only   YES
AUTOMON/RDO DCT name    RDTD             All CEDA message log output      NO_
Dynamic DCT modify?     YES              Selective queues specified below NO_

From  To  Filename  From  To  Filename  From  To  Filename  From  To  Filename
____ ____ ________  ____ ____ ________  ____ ____ ________  ____ ____ ________
____ ____ ________  ____ ____ ________  ____ ____ ________  ____ ____ ________
____ ____ ________  ____ ____ ________  ____ ____ ________  ____ ____ ________
____ ____ ________  ____ ____ ________  ____ ____ ________  ____ ____ ________
____ ____ ________  ____ ____ ________  ____ ____ ________  ____ ____ ________
____ ____ ________  ____ ____ ________  ____ ____ ________  ____ ____ ________
____ ____ ________  ____ ____ ________  ____ ____ ________  ____ ____ ________
____ ____ ________  ____ ____ ________  ____ ____ ________  ____ ____ ________
____ ____ ________  ____ ____ ________  ____ ____ ________  ____ ____ ________
____ ____ ________  ____ ____ ________  ____ ____ ________  ____ ____ ________

From:     DCT names to capture. To: Output destination (STD, NONE, DCT name).
Filename: To separate messages into multiple files. STD for Standard file.
Press the help key with the cursor on any field for more explanation.
              RM08001. Make changes as desired and press Enter
Enter F1=Help F2=Keys F3=Exit F4=Files F5=Del F6=Erase F7=Bwd F8=Fwd
```

[Note]. This picture shows an example of selective queue capture. The installation default is for CEDA modifications to CSD only. Note also that the installation default for Standard audit filename is RDO$FIL. You may want to define a separate for audit trail messages, particularly if you are expecting a high volume of messages.

Fields of the Audit Trail Setup Display

Standard Audit Filename

This is a VSAM file where CICS messages are to be logged for the audit trail. The file must be defined to VSAM and CICS using the same file attributes as the AUTOMON/RDO supplemental file, RDO$FIL. These are:

Key location 0
Key length 40
Record format Variable-blocked
Service requests REA ADD UPD DEL BRO
Maximum record size 2048 or greater (up to 12000)
Control interval size 8192

Standard Output DCT

This is the CICS massage queue (Destination control table DESTID) that is to be the final destination for captured messages. The default name is CSSL, which is final destination for messages when CICS is initially distributed. CSSL normally points to a printer file. AUTOMON/RDO uses this DCT name to determine where to send a message after it has logged it to the audit file.

It must be a 'final' destination. That is, it cannot be an indirect destination that points to another queue which is to be captured by AUTOMON/RDO. That would cause a circular loop logging the same message over and over. It can be an indirect destination as long as the INDDEST name points to a destination whose type is OUTPUT.

AUTOMON/RDO DCT name

This is the input destination control table (DCT) id used for message capture. There must be a definition for this entry in the DCT as follows:

```
DFHDCT  TYPE=INTRA,DESTFAC=FILE,
        DESTID=nnnn,TRANSID=RDAT,TRIGLEV=1
```

where nnnn is the value in this field. The default name is RDTD.

Transaction RDAT must be defined as pointing to program RDOCAUDT.

[Note]. For CICS Transaction Server on z/OS, no changes need be made to the DCT (Tdqueue resources) if Dynamic DCT Modification is set to YES. AUTOMON/RDO will create this entry, along with any other requirements as defined in this Preference display.

If Dynamic DCT Modify is designated as YES, no other modifications need be made to the DCT. AUTOMON/RDO will dynamically alter the DCT in memory to conform to the specifications of the Audit Trail Setup screen.

If Dynamic DCT Modify is designated as NO, the DCT must be tailored to capture messages according to the specifications of the Audit Trail Setup display. For details to accomplish this, see the section following entitled *Pre-defining the DCT for Message Capture*.

Dynamic DCT Modification (MVS)

If this field is designated as YES, no other modifications need be made to the DCT. AUTOMON/RDO will dynamically alter the DCT in memory to conform to the specifications of the Audit Trail Setup screen. This includes verification checking to ensure that there are no circular references in the DCT that would cause problems with audit trail logging.

For CICS Transaction Server on z/OS, the Tdqueue entries required will be automatically created or altered, as needed.

If Dynamic DCT Modify is designated as NO, refer to the section following entitled *Pre-defining the DCT for Message Capture.*

CEDA modifications to CSD only

If this field is coded YES, the only message queues that will be captured are the ones originating from CEDA which pertain to CSD maintenance. This would include alters, deletions, defines, copies, moves, renames, removes, locks, unlocks, adds and appends.

All CEDA message output

Entering YES in this field denotes you want to capture all messages that originate with the CEDA transaction. In addition to CSD modification messages, this would include all install and delete messages, such as terminal autoinstalls and automatic deletions.

If this field is coded YES, the preceding field, CEDA modifications to CSD only, must be coded NO.

Selective queues

Any transient data message queue can be designated, which will cause messages routed to it to be captured and logged, then displayed with the AUDIT command.

Specifying YES in this field means you will enter the CICS queue names for which messages are to be captured in the fields below. If you do this, you must include the CSDL queue to capture CEDA messages.

From queue name

Enter the 4-character CICS message queue name whose messages you want to log to the audit trail file. In order for AUTOMON/RDO to capture messages from selected queues, you must have Dynamic DCT modify coded YES or pre-define the destination control table according to the instructions in *Pre-defining the DCT for Message Capture*, following.

[Note]. These fields do not apply unless Selective queues Specified Below is coded YES.

To queue name

Enter STD or the 4-character CICS message queue name that is to be the final destination for the messages of this From queue after logging them. STD refers to Standard output DCT name, above and will direct messages to that queue. This queue must be TYPE=OUTPUT in the DCT or be an indirect destination which points to a TYPE=OUTPUT entry. You may also code NONE, to suppress the message.

If anything other than STD is coded, there must be an additional entry in the DCT and an additional trancode defined. See *Non-standard Output Queues,* following.

To Filename

This field can be used to create multiple audit trail files, logging message queues in different files. Enter STD or a defined CICS file name that is to be the audit trail file for the messages of this From queue. STD refers to Standard audit filename, above, and will log messages in that file. This file must be defined with the same file attributes of the AUTOMON/RDO supplemental file, RDO$FIL.

If anything other than STD is coded, there must be an additional entry in the DCT and an additional trancode defined. See *Non-standard Output Queues,* following.

Non-standard output queues

To direct messages anywhere other than the standard output DCT or use multiple logging files, you must have an additional entry in the DCT, as follows:

```
DFHDCT TYPE=INTRA,DESTFAC=FILE,
       DESTID=nnnn,TRANSID=tttt,TRIGLEV=1
```

The destination ID, nnnn, must begin with 'R'. The next three characters must be the same as the last three characters of the From queue name.

The transaction ID, tttt must be the same as nnnn and must be a defined transaction code pointing to RDOCAUDT.

For example, if the From queue name = CSMT, the DCT entry must appear as follows:

```
DFHDCT TYPE=INTRA,DESTFAC=FILE,DESTID=RSMT,
       TRANSID=RSMT,TRIGLEV=1
```

Pre-defining the DCT for Message Capture

If you choose to not allow AUTOMON/RDO to dynamically tailor the CICS destination control table in memory to conform to the specifications of the audit trail setup record, then you must alter the DCT yourself, assemble and link it and cycle CICS before you can begin capturing messages to log in the audit trail file.

For CICS Transaction Server on z/OS, you can perform this setup online with Tdqueue resources.

First of all, there must always be a DCT entry for the AUTOMON/RDO DCT name. This is the input DCT which must be defined whether you allow the product to dynamically modify the DCT or not. This DCT entry must be coded as follows:

```
DFHDCT    TYPE=INTRA,DESTFAC=FILE,
          DESTID=nnnn,TRANSID=RDAT,TRIGLEV=1
```

where nnnn is the name specified in the Audit Trail Setup record. The default is RDTD.

Transaction RDAT must be defined as pointing to program RDOCAUDT.

Based on the message queues to be captured and logged in the audit trail file, you must modify certain standard DCT entries as follows:

DCT requirements for CEDA modifications to CSD only

The DCT entry for message queue CSDL should be defined as TYPE=INDIRECT and it normally points to CSSL. Change it to appear as follows

```
DFHDCT TYPE=INDIRECT,
       DESTID=CSDL,
       INDDEST=nnnn
```

where nnnn is the name specified in the Audit Trail Setup record for the AUTOMON/RDO DCT. The default is RDTD.

DCT requirements for all CEDA messages

Refer to the list of *CICS Message Queues*, following, and locate every DCT entry which originates with CEDA. These would be CSDL, CADL, CAIL, CRDI, CSFL, CSKL, CSPL and CSAL. Note that not all releases of CICS have all these queues. Change each to appear as:

```
DFHDCT TYPE=INDIRECT,
       DESTID=cccc,
       INDDEST=nnnn
```

where cccc is the CICS message queue name and nnnn is the name specified in the Audit Trail Setup record for the AUTOMON/RDO DCT. The default is RDTD.

DCT requirements for Selected message queues

Refer to the list of *CICS Message Queues*, following, and locate every DCT entry whose messages you want to capture. Change each to appear as:

```
DFHDCT TYPE=INDIRECT,
       DESTID=cccc,
       INDDEST=nnnn
```

where cccc is the CICS message queue name and nnnn is the name specified in the Audit Trail Setup record for the AUTOMON/RDO DCT. The default is RDTD.

If you specify anything other than STD as the ‘To queue name’ or ‘To file name’ you must make one additional DCT entry for each message queue to be captured. It should appear as follows:

```
DFHDCT TYPE=INTRA,DESTFAC=FILE,
       DESTID=nnnn,TRANSID=tttt,TRIGLEV=1
```

The destination ID, nnnn, must begin with 'R'. The next three characters must be the same as the last three characters of the From queue name.

The transaction ID, tttt must be the same as nnnn and must be a defined transaction code pointing to program RDOCAUDT.

For example, if the From queue name = CSMT, the DCT entry must appear as follows:

```
DFHDCT TYPE=INTRA,DESTFAC=FILE,DESTID=RSMT,
       TRANSID=RSMT,TRIGLEV=1
```

AUTOMON/RDO will verify the DCT in memory whether you specify Dynamic DCT Modification or not. If the DCT is not correctly coded according to the options set in the Audit Trail Setup record, audit trail capture will be suppressed until it is corrected.

CICS Message queues

The standard message queues distributed with CICS TS 3.1 are as follows. For later versions of CICS TS, refer to the *System Definition Guide.*

CADL	CEDA VTAM resource log
CSFL	File allocation message log
CAIL	Autoinstall terminal log
CSKL	Transaction/profile resource log
CCPI	CPI communications log
CSML	Sign-on/signoff message log
CCSE	C/370 error datastreams
CSMT	Terminal errors/transaction abends
CCSI	C/370 input datastreams
CSNE	ZNAC messages
CCSO	C/370 output datastreams
CSPL	Program resource log
CDBC	Database log CSRL Partner resource log
CDUL	Dump message log
CSSL	Statistics - direct output
CESE	Language environment/370
CSTL	Terminal I/O errors
CMIG	Migration log
CSZL	FEPI messages
CPLD	PL/I dumps
CSZX	FEPI processing
CPLI	PL/I SYSPRINT output
CRDI	RDO install log
CSCS	Sign-on/signoff security
CSDL	CEDA command log

FEPI Application List

FEPI (Front-end Processor Interface) is available in CICS TS for use in connecting CICS systems. During the CONNECT processing of AUTOMON/RDO, if the requested applid is defined in Preferences as using a FEPI link rather than MRO or ISC, FEPI will be used to make the connection. This screen is where you define all of the non-MRO/ISC applids that you want to connect to with a CONNECT command or with a remote Install command.

```
        Show  Case  Delete  Exit  Help            CICS680   DFHCSD    PREFS
                    AUTOMON/RDO - FEPI Application List
   Target  Applid    Target  Applid    Target  Applid    Target  Applid   Seq 01
    ____   ________   ____   ________   ____   ________   ____   ________
    ____   ________   ____   ________   ____   ________   ____   ________
    ____   ________   ____   ________   ____   ________   ____   ________
    ____   ________   ____   ________   ____   ________   ____   ________
    ____   ________   ____   ________   ____   ________   ____   ________
    ____   ________   ____   ________   ____   ________   ____   ________
    ____   ________   ____   ________   ____   ________   ____   ________
    ____   ________   ____   ________   ____   ________   ____   ________
    ____   ________   ____   ________   ____   ________   ____   ________
    ____   ________   ____   ________   ____   ________   ____   ________
    ____   ________   ____   ________   ____   ________   ____   ________
    ____   ________   ____   ________   ____   ________   ____   ________
    ____   ________   ____   ________   ____   ________   ____   ________
    ____   ________   ____   ________   ____   ________   ____   ________
    ____   ________   ____   ________   ____   ________   ____   ________
    ____   ________   ____   ________   ____   ________   ____   ________
         Enter all VTAM Applids available for connect processing.
         For each Applid, assign a target name of your choice.

               RM08001. Make changes as desired and press Enter
 Enter F1=Help F2=Keys F3=Exit F4=Files F5=Del F6=Erase F7=Bwd F8=Fwd
```

In addition to the actual CICS applid, you define 4-character target names which can be anything you want. These target names display in the connect window and are used as a short-cut reference to the applid. Each panel of this screen allows for 64 applids. If more are needed, add additional panels by increasing the sequence number.

Enter the target and applid names for your environment.

Fields of the FEPI Application List

Target name

Enter a 4-character target name to be associated with the applid of this remote system. Target names can be anything of your choice and do not correspond to any VTAM definitions. The only rule is they must not conflict with any MRO or ISC Sysid names that may be in use.

FEPI target names will display in the CONNECT window along with their associated applid. You select a connection by target name.

Application ID

This is the 8-character APPLID of the remote system as it is defined to VTAM and CICS. Enter all applids that can be connected-to using FEPI. If an MRO or ISC connection already exists for this applid, don't define it as a FEPI application.

Sequence number

This field always contains '01' for the first (or only) FEPI Application List record. If more applids are needed, change the SEQ field to the next available number and press Enter. Another record, using the entered sequence number, will be added containing the same data fields as this record. You can then modify as desired.

FEPI Node List

This Preference screen is used to inform AUTOMON/RDO of the node names to be used during a connection which uses FEPI protocol. The names in this list correspond to the ACBNAME keyword of a VTAM APPL statement of a VTAM major node. For details concerning VTAM definitions, see *VTAM Definitions for FEPI*, following.

```
____   Show  Case  Delete  Exit  Help            CICS680   DFHCSD    PREFS
                    AUTOMON/RDO - FEPI Node List

   Node     Node     Node     Node     Node     Node     Node     Node  Seq 01
 ________ ________ ________ ________ ________ ________ ________ ________
 ________ ________ ________ ________ ________ ________ ________ ________
 ________ ________ ________ ________ ________ ________ ________ ________
 ________ ________ ________ ________ ________ ________ ________ ________
 ________ ________ ________ ________ ________ ________ ________ ________
 ________ ________ ________ ________ ________ ________ ________ ________
 ________ ________ ________ ________ ________ ________ ________ ________
 ________ ________ ________ ________ ________ ________ ________ ________
 ________ ________ ________ ________ ________ ________ ________ ________
 ________ ________ ________ ________ ________ ________ ________ ________
 ________ ________ ________ ________ ________ ________ ________ ________
 ________ ________ ________ ________ ________ ________ ________ ________
 ________ ________ ________ ________ ________ ________ ________ ________
 ________ ________ ________ ________ ________ ________ ________ ________
 ________ ________ ________ ________ ________ ________ ________ ________
 ________ ________ ________ ________ ________ ________ ________ ________

 Enter all SLU node names required for connect processing as defined to VTAM.
              RM08001. Make changes as desired and press Enter
Enter F1=Help F2=Keys F3=Exit F4=Files F5=Del F6=Erase F7=Bwd F8=Fwd
```

There must be one node name allocated for every concurrent FEPI session. That is, each user that is connected to a remote system through FEPI must have a unique node name. If as many as five operators might connect at the same time, there must be five node names available. If a sixth one attempts to connect while five are active, the sixth must wait until one of the others drops the connection.

Each panel of this screen allows for 128 node names. If more are needed, add additional panels by increasing the sequence number.

Fields of the FEPI Node List

Node name

Enter the 8-character node name to be used during a connection which uses FEPI protocol. Each node name must correspond to the ACBNAME keyword of a VTAM APPL statement of a VTAM major node. There must be one node name allocated for every concurrent FEPI session. For details concerning VTAM definitions, see *VTAM Definitions for FEPI*, following.

Sequence number

This field always contains '01' for the first (or only) FEPI Node List record. If more nodes are needed, change the SEQ field to the next available number and press Enter. Another record, using the entered sequence number, will be added containing the same data fields as this record. You can then modify as desired.

VTAM Definitions for FEPI

The procedure for changing VTAM definitions is very straightforward. The definitions are a set of parameter statements which must reside in a source library available to VTAM. This is usually SYS1.VTAMLST. You must edit the appropriate members, as described below, make the necessary changes, and then activate the changes in VTAM.

The resources that must be defined to VTAM are the node names that will be used for connecting.

The node names are defined as APPLs, not logical units (LUs), or LOCALs, as are physical terminals. Likewise, the target application name is an APPL to VTAM. Thus, all that is required is the addition of a series of APPL statements.

There are two approaches to adding the necessary VTAM definitions:

1). Adding a new major node.

2). Adding additional APPL statements to an existing major node.

ADDING A NEW MAJOR NODE

The advantage of adding a new major node which consists entirely of the necessary definitions for FEPI is that you can then vary the new major node ACTIVE to install all of the APPLs in the node, without disturbing the rest of your VTAM network.

The procedure for adding a new major node is as follows:

1). Locate the current active configuration list member, where major nodes are defined. This member will be named ATCCONxx, where xx is the suffix code for the current member. This suffix code is established in the CONFIG=xx keyword of the current start option list, which is named ATCSTRxx. The xx suffix of the ATCSTR member will normally be '00' (there will always be an ATCSTR00 member) but there may be additional start option lists with different suffixes. If a different start option list is in use, there will be a LIST=xx keyword on the VTAM START command used to initiate VTAM, which identifies the suffix.

2). Edit the ATCCONxx member. This member consists of a series of major node names, many of them IBM-supplied. Each major node name except the last must be followed by a comma, and, if continued to the next line, must contain a non-blank character in position 72.

3). Add a new unique major node name anywhere in the list. The name can be anything you desire as long as it is unique. It must correspond to the name in the label of the VBUILD statement, described below, and must also be the library member name for the VBUILD member. If you add the new name to the end of the list, be sure and continue the previous entry.

4). Now create a source member with the necessary definitions. This member should appear as follows:

```
FEPI     VBUILD  TYPE=APPL

F001     APPL    ACBNAME=FEPIF001,DLOGMOD=D4B32782,
                 MODETAB=ISTINCLM
```

```
F002    APPL    ACBNAME=FEPIF002,DLOGMOD=D4B32782,
                MODETAB=ISTINCLM

F003    APPL    ACBNAME=FEPIF003,DLOGMOD=D4B32782,
                MODETAB=ISTINCLM

F004    APPL    ACBNAME=FEPIF004,DLOGMOD=D4B32782,
                MODETAB=ISTINCLM

F005    APPL    ACBNAME=FEPIF005,DLOGMOD=D4B32782,
                MODETAB=ISTINCLM
```

The APPL statements (F001, F002, etc.) correspond to the names coded in the FEPI Node List Preference display. There must be an APPL statement for every node defined.

The DLOGMOD keywords specify the name of a member which describes the session parameters to be used for various terminal types. You must specify the correct DLOGMOD for the session characteristics to be established, such as SNA, alternate screen size, protocol, etc. The DLOGMOD name specified in the sample definition defines a local bisync 3270 terminal. Refer to DLOGMOD NAMES, below for a more complete discussion.

[Note]. If the specified DLOGMOD is an IBM-supplied name, no further coding is necessary. If not, you will need to supply the MODETAB keyword to identify the correct mode table containing this entry. If it is not an IBM-supplied name, you can usually determine the correct MODETAB name by referring to the LBUILD or PU statement which defines the physical terminal.

ADDING TO AN EXISTING NEW MAJOR NODE

The simplest definition is to add the new APPL statements to an existing major node. This eliminates the definition of a new major node name and an additional VBUILD statement. However, to activate the new APPLs you must either vary the existing major node inactive, then active again, or bring VTAM down and back up. Either of these may disturb some current terminal operators.

To add to an existing major node, locate the current ATCCONxx configuration list member as described above for adding a new major node. Select one of the major node names defined in this member and edit it. The VBUILD statement will already be present, along with one or more APPL statements. Add the APPL statements for the FEPI node names to the end of this member.

DLOGMOD NAMES

The DLOGMOD keyword specifies the name of a member which describes the session parameters to be used for various terminal types. This member is called a mode table, or MODETAB. There are various IBM-supplied DLOGMOD members which may be used for most terminal types. The names of these members, along with the procedure for creating a new member is described in VTAM CUSTOMIZATION GUIDE. (See Log Mode tables, IBM-Supplied Tables).

In most cases, it is a safe bet to use the same DLOGMOD name that was used to define a terminal, or logical unit, to VTAM. This can be found in the current major node member which contains the LBUILD (local non-SNA terminals) or VBUILD (local or switched SNA terminals) statement. These members are usually named VTMNSNA (non-SNA

terminals) or VTMSNA (SNA terminals). The DLOGMOD name is specified on the LOCAL statement for non-SNA terminals and in the PU or LU statements for SNA terminals. If the MODETAB keyword is used here to define a non-IBM mode table, the same MODETAB name must be supplied on the APPL statement for the virtual terminal.

However, it is not required that the session parameters for the virtual terminal be exactly the same as for the real terminal. FEPI can talk to an application system where the terminal is described as an SNA terminal, for instance, when the real terminal is non-SNA.

It is essential, however, that the DLOGMOD name used to describe the terminal session parameters be correct as far as CICS is concerned. That is, if CICS defines the node as an SNA terminal, the DLOGMOD name used on the APPL statement must describe an SNA terminal with exactly the same characteristics. Otherwise, FEPI will not be able to establish a session with that application.

ACTIVATING THE NEW VTAM DEFINITIONS

After making all changes to VTAM definitions, vary the new major node active, or if APPL statements were added to an existing major node, vary it first inactive, then active. This will cause the new VTAM definitions to take effect. If desired, you may bring VTAM down and back up to create the same effect.

The format of the console command to vary a new major node active, whose name is FEPIVTM, is:

V NET,ACT,ID=FEPIVTM

The command to vary it inactive is:

V NET,INACT,ID=FEPIVTM

Additional CICS Requirements for FEPI

To activate FEPI in CICS, you must have FEPI=YES in the System Initialization Table (SIT). Also, you need to include group DFHFEPI in the startup GRPLIST, if it is not already present.

Application Target List

This Preference screen can be used to define a list of CICS applids that are the targets for a remote install command. Use of an Application Target List avoids entering the remote applids when an Install is done, as well as allowing for more targets than can be specified in the install window.

```
 ____   Show  Case  Delete  Exit  Help            CICS680   DFHCSD    PREFS
                    AUTOMON/RDO - Application Target List
          Applid            Applid            Applid            Applid   Seq 01
          ________          ________          ________          ________
          ________          ________          ________          ________
          ________          ________          ________          ________
          ________          ________          ________          ________
          ________          ________          ________          ________
          ________          ________          ________          ________
          ________          ________          ________          ________
          ________          ________          ________          ________
          ________          ________          ________          ________
          ________          ________          ________          ________
          ________          ________          ________          ________
          ________          ________          ________          ________
          ________          ________          ________          ________
          ________          ________          ________          ________
          ________          ________          ________          ________
          ________          ________          ________          ________
        Enter CICS Applids to be targets for the export function.
        Add additional lists by changing Seq to a non-existant number.
        Extend this list by changing 00 to a higher number.
               RM08001. Make changes as desired and press Enter
 Enter F1=Help F2=Keys F3=Exit F4=Files F5=Del F6=Erase F7=Bwd F8=Fwd
```

Each panel of this screen allows for up to 64 applids. You can define up to 99 of these panels, each one representing a separate target list. When an Install command is performed, you enter the sequence number (SEQ) of the list to be used.

Likewise, a single target list can contain up to 99 pages of targets. The current page number, also known as List Extension Number, appears at the bottom of the display.

Fields of the Application Target List

Application ID

This is the 8-character APPLID of the remote system as it is defined to VTAM and CICS. Enter all applids that need to be a target for a remote install command, or the target to receive and export queue of commands.

This applid must be defined in an MRO or ISC Connection or in the FEPI Application List preference display.

Sequence number

This field always contains '01' for the first (or only) application target list. If you need different target lists for different install commands, change the SEQ field to the next available number and press Enter. Another list record will be added, using the entered sequence number, containing the same data fields as this record. You can then modify as desired.

List Extension number

At the bottom of the display is a comment that reads “Extend this list by changing 00 to a higher number.” The number in this comment is the List Extension number. It can also be called the page number of this list.

This field always contains '00' for the first (or only) page of an application target list. If you need more than 64 targets on one list, you can add up to 99 pages of targets to a single list. The total number of targets that can be contained in one list is 6,366.

To add another page, browse forward with PF8 until a new list (different SEQ field) or the end of all lists is reached. Note the highest list extension number found. Now change the extension number on any page of the list to a higher number. A new page with this number will be added, copying the contents of the current page. You can then change the target names as needed.

[Note]. The SEQ field identifies a list. The List extension number identifies one page of 64 target within a single list. All pages of one list contain the same SEQ number.

Export Approval Codes

This Preference screen is used to define the approval codes for exporting a control queue. If REQUIRE EXPORT QUEUE APPROVAL is set to YES in General Preferences, these definitions are required.

```
____  Show  Case  Delete  Exit  Help            CICS680   DFHCSD    PREFS
                    AUTOMON/RDO - Export approval codes
        Approval          Approval          Approval          Approval Seq 01
        ________          ________          ________          ________
        ________          ________          ________          ________
        ________          ________          ________          ________
        ________          ________          ________          ________
        ________          ________          ________          ________
        ________          ________          ________          ________
        ________          ________          ________          ________
        ________          ________          ________          ________
        ________          ________          ________          ________
        ________          ________          ________          ________
        ________          ________          ________          ________
        ________          ________          ________          ________
        ________          ________          ________          ________
        ________          ________          ________          ________
        ________          ________          ________          ________
        ________          ________          ________          ________
      Enter approval codes to authorize export queue execution.
      Add additional lists by changing Seq to a non-existant number.

              RM08001. Make changes as desired and press Enter
 Enter F1=Help F2=Keys F3=Exit F4=Files F5=Del F6=Erase F7=Bwd F8=Fwd
```

Each panel of this screen allows for up to 64 approval codes. You can define up to 99 panels, if needed. You must be operating with a supervisor transaction code to update this screen.

Fields of the Export Approval Codes screen

Sequence number

This field always contains ‘01’ for the first (or only) panel of export approval codes. If you need more than 64 codes, change the SEQ field to a non-existent number and press Enter. This will copy the current panel to the new sequence number, where it can be modified as desired.

Approval Code

Enter any combination of alpha, numeric or special characters to define the approval code. The code will be encrypted before writing to the file. When viewed with any non-supervisor transaction code, it will appear as asterisks.

Field Value Limits

This Preference function is used to set security and/or limits on the values that can be entered for resource mnemonics. Limits can be set for any attribute of any resource type. The following options are available:

1). A list or range of acceptable values can be set for any resource mnemonic. Masks may be used in list values.

2). A mnemonic value can be protected from user input.

3). Both a mnemonic and its value field can be hidden so they do not appear on the resource screen.

4). A non-standard default value can be set to be supplied when a mnemonic value is not entered.

These four options, or combinations thereof, can be secured in the following manner:

1). Unsecured, applying to any operator in any CICS region.

2). Secured to one or more AUTOMON/RDO transaction codes, so that the limits apply only to authorized users of those trancodes.

3). Secured to a full or masked user ID, so that the limits apply only to operators with a matching user ID.

4). Secured to a full or masked CICS applid, , so that the limits apply only when a resource is modified in one of these CICS regions.

Setting Field Value Limits

From the Preference menu, tab to the small window labeled *Field Value Limits* and press Enter. Another popup window will appear requesting the resource type, as follows:

```
 ____   Show  Exit  Next  Case  Help              CICS680   DFHCSD    ALIMITS
                AUTOMON/RDO - Field Value Limits  - xxxxxxxxxxxx

        _____________________ _________________________
       |  General preferences |  Group exclusions        |
       |   ___________________ _________________________
       |   |  Trancode security   |  Group associations       |
       |   |   ___________________ _________________________
       |   |   |  Audit trail setup   |  Export approval codes    |
       |   |   |   ___________________ _________________________
       |__ |   |   |  FEPI applid list    |  FEPI node list           |
           |   |   |   ___________________ _________________________
           |__ |   |   |  Field value limits  |  Application target list  |
               |   |   |   ___________________________              |
               |__ |   |  Define | ____________________________       |
                   |   |  limit  | |  Field value limits          |  |
                   |__ |  resour | |                              |  |
                     |         | |  Resource type ==> ________  |  |
                     |________ | |                              | _____|
                               | |  Press PF1 for help          |
                               | |                              |
                               |_______________________________|

 Enter F1=Help F2=Keys F3=Exit F4=Files F5=Delete F7=Bwd F8=Fwd F13=Case
```

Enter a valid resource type from the following list.

Atomservice	Bundle	Connection	Corbaserver
DB2conn	DB2entry	DB2tran	Djar
Doctemplate	Enqmodel	File	Ipconn
Journalmodel	Jvmserver	Library	Lsrpool
Mapset	MQconn	Partitionset	Partner
Pipeline	Processtype	Profile	Program
Requestmodel	Sessions	Tcpipservice	Tdqueue
Terminal	Tranclass	Transaction	Tsmodel
Typeterm	Urimap	Webservice	

The next display will be a standard resource screen of the requested type, with all mnemonic values absent. From this screen, you choose the mnemonics for which you wish to set value limits.

As an example, assume TRANSACTION was entered in the previous window as the resource type, because you want to set a value limit on the Remotesystem field.

The transaction resource screen appears as follows:

```
____   Show  Exit  Next  Case  Help              CICS680   DFHCSD    VLIMITS
              AUTOMON/RDO - Field Value Limits  - TRANSACTION

 TRANSAction  ____       Group ________      Last Updt ________________
 DEScription  ____________________________________________________________
GENERAL PROPERTIES     REMOTE ATTRIBUTES        RECOVERY
 PROGram      ________  REMOTESystem  ____       DTimout  ____      SPurge ___
 TWasize      _____     REMOTEName    ________   RESTart  ___       TPUrge ___
 PROFile      ________  TRProf        ________   Otstimeout ______ TRACe  ___
 PARtitionset ________  Localq        ___        DUmp       ___   COnfdata ___
 STAtus       ________  DYnamic       ___       SECURITY
              ________  ROutable      ___        RESSec  ___
 TASKDATALoc  _____    SCHEDULING                CMDsec  ___
 TASKDATAKey  ____      PRIOrity  ___
 STOrageclear ___       TRANClass ________      INDOUBT ATTRIBUTES
 RUnaway      _______  ALIASES
 SHutdown     ________  TASKReq    ____          ACtion   _______  WAIT   ___
 ISolate      ___       XTRanid    ________      WAITTime __ __ __
 BRexit       ________  ALias      ____
 TPName       ____________________________________________________________
 XTPname      ____________________________________________________________
              ____________________________________________________________
              RM13001. Tab to any field and press Enter
 Enter F1=Help F2=Keys F3=Exit F4=Files F5=Delete F7=Bwd F8=Fwd F13=Case
```

Tab to the Remotesystem field and press Enter. The following window will display:

```
____   Show  Exit  Next  Case  Help              CICS680   DFHCSD    ALIMITS
              AUTOMON/RDO - Field Value Limits  - TRANSACTION
     ____________________________________________________________________
 TRA |                     Field value limit set                        |
 DES |                                                                  |
GENE |  Resource type  ==> TRANSACTION                                  |
 PRO |  Field mnemonic ==> REMOTESYSTEM                                 | _
 TWa |  Trancode       ==> ____        Restrict limits to this trancode. | _
 PRO |  User ID        ==> ________    Restrict limits to this userid.   | _
 PAR |  Applid         ==> ________    Restrict limits to this applid.   | _
 STA |  Protect entry  ==> _           Allow no updates (/,y,s).         |
     |  Hide mnemonic  ==> _           Make field invisible (/,y/s).     |
 TAS |  Field values   ==> ________________________________               |
 TAS |                     ________________________________               |
 STO |                     ________________________________               |
 RUn |  Default value  ==> ________________________________               |
 SHu |                                                                  | _
 ISo |  Values may be entered as a list separated by spaces,            |
 BRe |      or a low/high range separated by a "-".                     |
 TPN |  Masks may be used for values in a list, but not in ranges.      | __
 XTP |  Masks may also be used in Trancode, User ID and Applid.         | __
     |__________________________________________________________________| __
              RM13004. Enter new field values or PF3 to exit
 Enter F1=Help F2=Keys F3=Exit F4=Files F5=Delete F7=Bwd F8=Fwd F13=Case
```

Fields of the Value Limits Window

Resource type — This field will be pre-filled with TRANSACTION, since that was the chosen resource type.

Field Mnemonic — This will contain REMOTESYSTEM, the mnemonic chose with the previous screen. You can change this value to another field mnemonic if desired.

Trancode — If the value limits for this field only apply to certain operators, one way to define that is to provide a full or masked transaction code in this field. Supply the AUTOMON/RDO transaction which has been defined and authorized to the desired group of operators. Any of the standard mask characters (*, <, ?) can be used.

If Trancode is left blank, these value limits apply to all AUTOMON/RDO transaction codes.

User ID — Another method of assigning these value limits to an operator or group of operators is to provide a full or masked USERID in this field. The limits will then only apply if the operator has a matching user ID. . Any of the standard mask characters (*, <, ?) can be used.

If User ID is left blank, no user ID checking will be performed for these limits.

Applid — In this field, you can supply a full or masked CICS Applid. If present, it means these limits only apply if the resource is being modified in the specified CICS region. When exporting resources, you might want to set limits for the remote region that are different from the local region. Any of the standard mask characters (*, <, ?) can be used.

If Applid is left blank, no applid checking will be performed for these limits.

Protect entry — Enter a /, Y or S in this field if you want the field value for this mnemonic to be protected on the screen, thereby preventing it from modification. The field will be visible but not modifiable.

Hide mnemonic — Enter a /, Y or S in this field if you want the mnemonic and the field value for this mnemonic to be invisible and protected on the screen, thereby preventing it from modification or viewing.

Field values — These three lines are where you supply value limits. Values are entered in a free-form fashion using either of the following methods. Consider the three lines as if they were one contiguous field. That is, a value at the end of one line can continue into the next with no continuation characters or other coding.

Field values are not required as long as one of the other limits (Hide mnemonic, Protect mnemonic) or a default value is present.

List entry — You can supply a list of acceptable values, with each value in the list separated by a space (not a comma). If the field value is a single non-numeric word or code, you can use mask characters in any value in the list. Numeric values can be entered as 1 or more digits, regardless of the display length of the value. Double and triple entry values must be entered with commas separating each portion of the value. See the examples below.

Range entry — You can supply the value limits as a range of values, codes in the form “low value”-”high value”. Separate the low and high values of the range with a dash (-). Range values can be supplied for numeric or alphanumeric values as long as the first value is sequentially lower than the second value in the range. You cannot use mask characters in a value range pair.

Both methods — For any one mnemonic, the value limits can be coded as a list of values, but one or more entries in the list can be a range pair.

Examples: Mnemonic: REMOTESYSTEM

Field values: CICA CICB A??Z RB01-RB09 SB01-SB09

This coding states that the REMOTESYSTEM value in the resource can contain CICA, CICB, any value beginning with A and ending with Z, values in the range of RB01 through RB09 or values in the range of SB01 through SB09.

Mnemonic	PAGESIZE
Field values	24,80 27,132

PAGESIZE is a double-entry field, requiring two values. Accordingly, the value limits must be supplied as sets of two values separated by a comma. Use a space to separate value entries in the list. Masks and ranges cannot be used with double and triple entry fields.

This coding states that the only acceptable values for PAGESIZE are 24,80 or 27,132.

Note that the Preference processor will enforce the entry format based on the field mnemonic chosen. That is, if a mnemonic requires a numeric value, you cannot enter alpha characters in the field limits.

Default value

In this field, you can supply a non-standard default value for this mnemonic. If a value is entered here it will be supplied any time a resource is added or updated and this mnemonic value is left blank. The default value supplied here overrides the standard CEDA default.

Default values must correspond to the coding format for this mnemonic and must conform to the field values supplied in the previous three lines, if any. The Preference processor will enforce these rules.

Notes on Field Value Limits

1) PF7 and PF8 will browse (backward and forward) through all the field value limits that have been defined for one resource type. If you are unsure what limits have been defined for a resource type, tab the cursor to any field on the resource screen and press Enter. Then press PF8 to browse through all values, if there are any.

2) PF5 will delete one set of value limits. When you press PF5, a message will appear stating that the field value set has been deleted, but the current value window remains unchanged. If you press Enter, the same set of values will be added to the file. Any other function key will leave the set deleted. This allows you to delete one set, then make changes to the values and press Enter to add them back again.

3) When PF3 is pressed at the value limits window, control returns to the resource screen, where another mnemonic can be picked if desired. When PF3 is pressed at the resource screen, the small popup window requesting resource type appears, allowing a different resource type to have value limits defined for it. Pressing PF3 again will return to the Preference menu.

4) It is possible to have several different value sets for the same mnemonic. You might want one set that applies to all users and another set that applies only to certain transaction codes, for instance. If a value set has been created and any of the fields, FIELD MNEMONIC, TRANCODE, USER ID or APPLID are changed, this will add a new value set to the file without deleting or changing the previous set.

5) Point 3, above, can cause confusion. If you add a field value set with the User ID blank, for instance, then remember that you intended to supply a user ID, simply keying a User ID and pressing Enter will add a second set. You must then browse to the previous set and delete it.

6) There are a maximum number of field value limits that can be supplied. For each resource type, there can be up to 80 value limit sets. While this is more than the

maximum number of mnemonics of any one type, the fact that you can have multiple sets per mnemonic might prevent you from supplying limits for every possible mnemonic value.

7) For alphanumeric mnemonics, if field value limits are set, the field can still be left blank without resulting in an error. Use the Default value field to supply a value if it is left blank. For numeric mnemonics, however, this is not the case. Leaving the field blank results in a numeric value of zero. If this is an acceptable value it must be coded as a list entry in the Field values.

8) When AUTOMON/RDO is first initialized, or any time a REFRESH command is performed, all field value sets are constructed in an in-memory table contained in the resident RDOCDIR program module. Ordered searches are performed on this table to minimize any I/O required to verify field values.

9) When performing an Export, the export queue is validated against the supplied field value limits prior to routing to the remote target. If any errors are found, the queue will not be routed.

10) If a DEFINE or ALTER command is performed and the value for a mnemonic does not conform to the field value limits set, the following message will display:

    RC12008. xxxxxxxxx is not within value limits

    where xxxxxxxx is the field mnemonic in error.

11) Field values and Default value can be supplied as lowercase or mixed case, if desired. To do this, the operating terminal must be in lowercase mode (use PF13 to switch uppercase translation off or on), and the General Preference option to allow lower case resource names must be set to YES.

    If lowercase characters are used in Field values or Default value, the values must be supplied exactly as they are to be processed, using the shift key for uppercase entry.

User Exit Setup

This Preference function is used to define the invocation rules for user exits. An exit is a CICS command level program written in any supported language. Exit programs are invoked for on-line operation only, not batch, with the exception of batch export. There can be any number of exits defined by adding additional sequence numbers.

The user exit setup panel appears as follows:

```
____   Show  Case  Delete  Exit  Help            CICS680   DFHCSD    PREFS
                     AUTOMON/RDO - User exit setup
                                                                  Seq 01
  Exit name ==> ________     Trancode ==> ____     User ID ________

  Commands  ==> ADD____ APPEND_ ALTER__ CHECK__ COPY___ DEFINE_ DELETE_ EXPAND_
                INSTALL LOCK___ MOVE___ REMOVE_ RENAME_ UNLOCK_ USERDEF VIEW___

  Resources ==> GROUP  ATOMSERVICE_  ENQMODEL____  PARTITIONSET  TDQUEUE_____
                LIST_  BUNDLE______  FILE________  PARTNER_____  TERMINAL____
                       CONNECTION__  IPCONN______  PIPELINE____  TRANCLASS___
                       CORBASERVER_  JOURNALMODEL  PROCESSTYPE_  TRANSACTION_
                       DB2CONN_____  JVMSERVER___  PROFILE_____  TSMODEL_____
                       DB2ENTRY____  LIBRARY_____  PROGRAM_____  TYPETERM____
                       DB2TRAN_____  LSRPOOL_____  REQUESTMODEL  URIMAP______
                       DJAR________  MAPSET______  SESSIONS____  WEBSERVICE__
                       DOCTEMPLATE_  MQCONN______  TCPIPSERVICE
  Supply exit name and type.  Remove commands and resource types where this
  exit is not to be invoked.  Press PF9 to reset defaults.  Supply Trancode
  and/or User ID to limit exit to those users.  These fields may be masked.
  To add additional exit definitions, enter next sequence number in "Seq".

                RM08001. Make changes as desired and press Enter
 Enter F1=Help F2=Keys F3=Exit F4=Files F5=Del F6=Erase F7=Bwd F8=Fwd
```

Enter the program name as the Exit name. Trancode and User ID are not required, but may be used to further limit when an exit program is called.

The list of Commands and Resources define when the exit will be invoked. Every time a listed command is executed for one of the listed resource types, the exit will be called immediately prior to calling CEDA. This means the exit can perform additional edits and stop command execution, or it can modify the resource definition prior to execution.

Fields of the User Exit Setup Display

Exit name — This is the 8-character execution name of a CICS program. The program must be compiled using the command level interpreter, whether CICS functions are invoked in the program or not.

Trancode — This field can be used to limit when the exit is invoked. If omitted, the exit will be called (based on remaining criteria) regardless of the transaction code in use. If present, the exit will be called only if a matching transaction code is in use. Enter a full or masked AUTOMON/RDO transaction code.

User ID — This field can be used to limit when the exit is invoked. If omitted, the exit will be called (based on remaining criteria) regardless of the current user. If present, the exit will be called only if the operator's CICS user ID matches this field. Enter a full or masked user ID.

Commands — All supported CEDA commands are initially present in this list, which means the exit will be called any time one of the listed commands is executed. To limit this, remove any of the commands in the list by spacing them out or pressing Erase-EOF.

The commands in the list are positional. That is, ADD always appears in the first field, APPEND in the second, etc. If a command is field is currently blank and you wish to

reinstate it, enter any character in the field and press Enter. The correct command for that position will be inserted.

Pressing PF9 will reset all of the commands in the list, after which any of them can be erased.

Resources

All supported resource types are initially present in this list, which means the exit will be called any time one of the previously listed commands is executed that affects one of the resource types in this list. To limit this, remove any of the resource types in the list by spacing them out or pressing Erase-EOF.

Like Commands, the resource types in the list are positional. If a resource type is field is currently blank and you wish to reinstate it, enter any character in the field and press Enter. The correct resource type for that position will be inserted.

Pressing PF9 will reset all of the resource types in the list, after which any of them can be erased.

Writing a User Exit Program

User exits can be developed using any language supported by CICS. The program must be compiled using the command level interpreter, whether CICS functions are invoked in the program or not.

Exit programs are invoked with a CICS LINK command, passing a formatted Commarea. Invocation occurs after any other security or field value processing is performed, just before linking to CEDA to execute the command. The exit can perform any editing desired and/or modify the attributes of the resource definition. Copybooks are provided for each of the resource type records.

Upon completion, the exit must provide a response code in one of the formatted fields of the Commarea, and may optionally return a message to be displayed to the operator.

There can be any number of user exits, using the same or different invocation rules. Be aware, however, that user exit calls can add overhead and slow down operation. It is better to perform multiple functions in one exit than to invoke multiple exits.

The exit is called each time CEDA is called to modify or create a resource. This means that copy and move commands could link to the exit many times, depending on the number of resources affected.

User Exit Commarea

Upon invocation of the exit program, the Commarea contains the following information. A COBOL copybook is provided to map this area. The name of the copybook is RDOCCOBX.

Field	Length	Type	Description
Eyecatcher	8	Alpha	Constant value RDUSEX
Response	4	Binary	Return code provided by exit: 00 Accepted, execute the command 04 Warning, execute the command and display the supplied message. 08 Rejected. Display the supplied message and do not execute the command. 12 Severe error. Display the supplied message if present, otherwise display a standard message. Do not execute the command.
Message	80	Alpha	Here is where the exit must place a message if the response code is 4 or 8, and optionally 12. The contents of this field will be centered and displayed on row 23 of the screen.
Command	10	Alpha	This is the full mnemonic of the CEDA command to be executed.
Resource type	12	Alpha	This is the full mnemonic of the resource type for which the command will affect.
Resource name	8	Alpha	The name of the currently affected resource. If Resource type is GROUP, the group name will be in the next field and Resource name is not applicable. If Resource type is LIST, the list name will be in this field and group name is not applicable.
Group name	8	Alpha	The group to which the current resource belongs. If Resource type is LIST, this field is not applicable.
New name	8	Alpha	For copy, move and rename commands, this is the new resource name, if any.
New group	8	Alpha	For copy, move and rename commands, this is the new group name, if any.
Function	10	Alpha	This field will contain one of the following, depending on the mode of operation: 1) EXPORT Currently in export mode 2) IMPORT Currently in import mode 3) DIRECTORY Local (all other) modes
Primary DDname	8	Alpha	The CICS file name of the local CSD file.

Field	Length	Type	Description
Primary Dsname	44	Alpha	The dataset name of the local CSD file.
Export DDname	8	Alpha	The CICS file name of the export CSD file, if in export mode.
Export Dsname	44	Alpha	The dataset name of the export CSD file, if in export mode.
Import DDname	8	Alpha	The CICS file name of the import CSD file, if in import mode.
Import Dsname	44	Alpha	The dataset name of the import CSD file, if in import mode.
CSD record	2200	Alpha	This area contains the current CSD resource record, in fixed format, as described below.

Fixed CSD Record

In order to facilitate user exit processing, the affected CSD resource record is converted to fixed format. COBOL copybooks are provided to describe each or the resource types.

[Note]. There will be no fixed resource record present if the resource type is GROUP or LIST. In this case, the fixed record area contains all spaces.

Each resource attribute is represented in the record by two consecutive fields. First is the attribute mnemonic, which is always 15 bytes, left justified. The second field contains the mnemonic value, which varies in length depending on the attribute type, as described following.

For example, the LANGUAGE attribute of a Program resource might appear as LANGUAGE(COBOL) in CEDA. In the fixed record, this would appear as:

LANGUAGE^^^^^^^COBOL^^^^^^^^^^ (^ = space)

The mnemonic, LANGUAGE is left-justified in a 15-byte field, followed immediately by another left-justified 15-byte field containing the value, COBOL.

There are four different types of field values, each requiring different formatting. These are:

Alphanumeric	15 bytes, left justified	Example: Program LANGUAGE
Numeric single	8 bytes, right justified	Example: Transaction PRIORITY
Numeric double	7 bytes right justified, comma, 7 bytes right justified.	Example: Typeterm ALTPAGE
Numeric triple	7 bytes right justified, comma, 7 bytes right justified, comma, 7 bytes right justified.	Example: Transaction WAITTIME

Modifying the CSD Record

The exit program can make any changes desired to the value of any mnemonic in the record. It does this by changing the value field (not the mnemonic field). Of course, the exit must abide by all RDO rules for a modified value in order to prevent an error response from CEDA. An exit cannot damage a resource by inadvertent modification, since CEDA will perform all edits for that resource type before accepting the command.

To delete a value for a mnemonic, set the value to all spaces and leave the mnemonic intact. If both the mnemonic and value of an attribute are spaced out, it causes that mnemonic to not be sent to CEDA, which means the current or default value for that mnemonic will not be affected.

The exit must not alter the mnemonic fields in any way, except to remove both the mnemonic and value, as previously described.

If the exit returns a response code of 0 or 4, AUTOMON/RDO will used the contents of the fixed CSD record to construct a command stream to be sent to CEDA. It does this by moving through the record extracting mnemonics and values, restructuring them into the format required by CEDA.

If a mnemonic exists with an all-blank value, it will be sent to CEDA as a null value. If CEDA accepts it, the corresponding attribute will be removed from the resource. If both mnemonic and value are spaces, nothing is sent to CEDA for that attribute. For all attributes containing both a mnemonic and value, the value is sent exactly as it exists in the fixed record, whether modified by the exit or not.

Resource Record Copybooks

A COBOL copybook is provided with the product installation to describe each resource type. In the copybook, all field labels are preceded by the copybook name. The label of the mnemonic field of each attribute is preceded with MNE- and the value field label is preceded with VAL-.

The order of attributes follows no particular formula. That is, the resource name and group name do not always appear first, nor are the attributes in alphabetic order. In order to locate a particular attribute, simply examine the copybook, looking for a label that contains the mnemonic in question.

To illustrate, the EXECKEY attribute of a Program resource appears in the fixed program record copybook as:

```
RDOCPROG-MNE-EXECKEY
RDOCPROG-VAL-EXECKEY
```

The first field contains the mnemonic, EXECKEY. The second contains the value, which might be CICS or USER.

Note that each of the copybooks contains fields for every possible attribute at the latest CICS release. The program copybook, for instance, contains the fields JVM and JVMCLASS, even though those attributes are not valid prior to CICS Transaction Server 1.3. Any attributes not supported by the release of CICS you are using will contain spaces in the record for both the mnemonic and the value fields.

Following are the member names of each of the supplied copybooks. There is one for each resource type.

[Note]. Copybook RDOCCOBX, which describes the user exit Commarea, contains copy statements for all of the resource type copybooks provide for each operating systems, each redefining the fixed CSD record area. Copybooks for resource types designated with (V) are the only ones provided with the AUTOMON/RDO product on VSE.

Copybook	Type	Copybook	Type
RDOCATOM	Atomservice	RDOCPSET	Partitionset (V)
RDOCBUND	Bundle	RDOCPNER	Partner (V)
RDOCCONN	Connection (V)	RDOCPIPE	Pipeline
RDOCCORB	Corbaservice	RDOCPROS	Processtype
RDOCDCON	DB2conn	RDOCPROF	Profile (V)
RDOCDENT	DB2entry	RDOCPROG	Program (V)
RDOCDTRN	DB2tran	RDOCREQ	Requestmodel
RDOCDJAR	Djar	RDOCSESS	Session (V)
RDOCDOCT	Doctemplate (V)	RDOCTCPI	Tcpipservice (V)
RDOCENQM	Enqmodel	RDOCTDQ	Tdqueue
RDOCFILE	File (V)	RDOCTERM	Terminal (V)
RDOCIPCO	Ipconn	RDOCTCLS	Tranclass (V)
RDOCJOUR	Journalmodel	RDOCTRAN	Transaction (V)
RDOCJVMS	Jvmservice	RDOCTSM	Tsmodel
RDOCLIBR	Library	RDOCTYPE	Typeterm (V)
RDOCLSRP	Lsrpool (V)	RDOCURIM	Urimap
RDOCMAPS	Mapset (V)	RDOCWEBS	Webservice
RDOCMQCO	Mqconn		

Sample User Exit Program

Following is a sample AUTOMON/RDO user exit written in COBOL. Bold text in this example is for edification only.

```
*****************************************************************
*                                                               *
*        RDOCEXIT - AUTOMON/RDO SAMPLE COBOL USER EXIT          *
*                                                               *
*        THIS EXIT IS INVOKED BASED ON THE USER EXIT SETUP      *
*        PREFERENCE RECORD.  WHEN CALLED, THE COMMAREA CONTAINS *
*        DATA AS FORMATTED BY COPY BOOK RDOCCOBX.               *
*                                                               *
*        THIS EXIT EXERCISES A FEW FUNCTIONS FOR ILLUSTRATION   *
*        ONLY.                                                  *
*                                                               *
*****************************************************************
 IDENTIFICATION DIVISION.
 PROGRAM-ID.    RDOCEXIT.
 AUTHOR.        UNICOM.
 INSTALLATION.  UNICOM SYSTEMS.
 DATE-WRITTEN.  01/09/13.
 DATE-COMPILED.
 SECURITY.      FREE-ACCESS.
 ENVIRONMENT DIVISION.
 CONFIGURATION SECTION.
 SOURCE-COMPUTER.   IBM-ESA.
 OBJECT-COMPUTER.   IBM-ESA.
 INPUT-OUTPUT SECTION.
```

```
FILE-CONTROL.
DATA DIVISION.
WORKING-STORAGE SECTION.

77  SUB                         PIC 999 COMP.
01  WK-OPID                     PIC X(3).
01  WK-FIELD.
    05  WK-FIELD-12.
        10  WK-FIELD-10.
            15  WK-FIELD-3      PIC X(3).
            15  FILLER          PIC X(7).
        10  FILLER              PIC X(2).
01  VALIDATE-SW                 PIC X(1) VALUE 'N'.
    88  AUTHORIZED                  VALUE 'Y'.
    88  UNAUTHORIZED                VALUE 'N'.

01  USER-TABLE.
    05  FILLER                  PIC X(8)  VALUE 'WFX     '.
    05  FILLER                  PIC X(8)  VALUE 'LGA     '.
    05  FILLER                  PIC X(8)  VALUE 'TDD     '.
    05  FILLER                  PIC X(8)  VALUE 'CAJ     '.
    05  FILLER                  PIC X(8)  VALUE 'OSB     '.
    05  FILLER                  PIC X(8)  VALUE 'DLS     '.
01  FILLER REDEFINES USER-TABLE.
    05  USER-DATA OCCURS 6 TIMES.
        10  WK-USERID           PIC X(8).


LINKAGE SECTION.
01  DFHCOMMAREA.
    COPY RDOCCOBX.
**** Copybook RDOCCOBX for MVS shown here for illustration: ****
**** Copybook RDOCCOBX for VSE shown after end of program.  ****
*****************************************************************
*
*     Copybook RDOCCOBX - User Exit Interface
*
*     Length = 2552
*
*****************************************************************
 02 USEXAREA.
    05 UX-EYECATCHER              PIC X(8).
    05 UX-RESPONSE                PIC S9(8) COMP.
       88 ACCEPTED                    VALUE 0.
       88 ACCEPT-WARNING              VALUE 4.
       88 REJECTED                    VALUE 8.
       88 SEVERE-ERROR                VALUE 12.
    05 UX-ERROR-MESSAGE           PIC X(80).
    05 UX-CURR-COMMAND            PIC X(10).
    05 UX-RESOURCE-TYPE           PIC X(12).
    05 UX-RESOURCE-NAME           PIC X(8).
    05 UX-RESOURCE-GROUP          PIC X(8).
    05 UX-NEW-RESOURCE-NAME       PIC X(8).
    05 UX-NEW-RESOURCE-GROUP      PIC X(8).
*****************************************************
*   Caller Function : Directory, Import, Export
*****************************************************
    05 UX-CALLER-FUNCTION         PIC X(10).
    05 UX-PRIMARY-CSD-DDNAME      PIC X(8).
    05 UX-PRIMARY-CSD-DSNAME      PIC X(44).
    05 UX-EXPORT-CSD-DDNAME       PIC X(8).
```

```
05 UX-EXPORT-CSD-DSNAME       PIC X(44).
05 UX-IMPORT-CSD-DDNAME       PIC X(8).
05 UX-IMPORT-CSD-DSNAME       PIC X(44).
05 UX-CSD-RECORD              PIC X(2200).
05 UX-ATOMSERVICE-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCATOM.
05 UX-BUNDLE-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCBUND.
05 UX-CONNECTION-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCCONN.
05 UX-CORBASERVER-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCCORB.
05 UX-DB2CONN-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCDCON.
05 UX-DB2ENTRY-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCDENT.
05 UX-DB2TRAN-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCDTRN.
05 UX-DJAR-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCDJAR.
05 UX-DOCTEMPLATE-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCDOCT.
05 UX-ENQMODEL-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCENQM.
05 UX-FILE-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCFILE.
05 UX-IPCONNECTION-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCIPCO.
05 UX-JOURNAL-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCJOUR.
05 UX-JVMSERVER-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCJVMS.
05 UX-LIBRARY-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCLIBR.
05 UX-LSRPOOL-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCLSRP.
05 UX-MAPSET-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCMAPS.
05 UX-MQCONN-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCMQCO.
05 UX-PARTITIONSET-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCPSET.
05 UX-PARTNER-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCPNER.
05 UX-PIPELINE-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCPIPE.
05 UX-PROCESSTYPE-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCPROS.
05 UX-PROFILE-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCPROF.
05 UX-PROGRAM-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCPROG.
05 UX-REQUESTMODEL-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCREQ.
05 UX-SESSION-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCSESS.
05 UX-TCPIPSERVICE-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCTCPI.
05 UX-TDQUEUE-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCTDQ.
```

```
    05 UX-TERMINAL-RECORD REDEFINES UX-CSD-RECORD.
       COPY RDOCTERM.
    05 UX-TRANCLASS-RECORD REDEFINES UX-CSD-RECORD.
       COPY RDOCTCLS.
    05 UX-TRANSACTION-RECORD REDEFINES UX-CSD-RECORD.
       COPY RDOCTRAN.
    05 UX-TSMODEL-RECORD REDEFINES UX-CSD-RECORD.
       COPY RDOCTSM.
    05 UX-TYPETERM-RECORD REDEFINES UX-CSD-RECORD.
       COPY RDOCTYPE.
    05 UX-URIMAP-RECORD REDEFINES UX-CSD-RECORD.
       COPY RDOCURIM.
    05 UX-WEBSERVICE-RECORD REDEFINES UX-CSD-RECORD.
       COPY RDOCWEBS.
    05 FILLER                     PIC X(40).
**** End of copybook RDOCCOBX for MVS *******

PROCEDURE DIVISION.
1000-BEGIN.
******* Go to different routines based on mode of operation *****
   IF EIBCALEN = ZERO
        GO TO 9999-RETURN-TO-CALLER.

    EXEC CICS ASSIGN OPID(WK-OPID) END-EXEC.

    IF UX-CALLER-FUNCTION = 'DIRECTORY '
        GO TO 2000-DIRECTORY
    ELSE
        IF UX-CALLER-FUNCTION = 'IMPORT    '
            GO TO 3000-IMPORT
        ELSE
            IF UX-CALLER-FUNCTION = 'EXPORT    '
                GO TO 4000-EXPORT
            ELSE
                GO TO 9999-RETURN-TO-CALLER.

2000-DIRECTORY.
***** For certain commands, authorize by user ID *****
   IF UX-CURR-COMMAND = 'ALTER     ' OR 'DEFINE    ' OR
                        'COPY      ' OR 'DELETE    '
        GO TO 2100-VALIDATE
    ELSE
        GO TO 9999-RETURN-TO-CALLER.

2100-VALIDATE.
*    MOVE ZERO TO SUB.
*    MOVE 'N' TO VALIDATE-SW.
*    PERFORM 2110-VALIDATE-USER THRU
*            2110-VALIDATE-USER-EXIT.
*    IF AUTHORIZED
*        NEXT SENTENCE
*    ELSE
*        GO TO 9000-ERROR-AUTHORIZE.

    IF EIBTRNID = 'WFX1' AND
       UX-CURR-COMMAND = 'DELETE    '
        IF WK-OPID = 'WFX'
            GO TO 9000-ERROR-AUTHORIZE.

    MOVE UX-RESOURCE-GROUP TO WK-FIELD.
    IF WK-FIELD-3 = 'LGX' OR 'XPL' OR 'CEE' OR 'CIC' OR
```

```
                    'RDO'
        GO TO 9000-ERROR-AUTHORIZE
    ELSE
        IF WK-FIELD-3 = 'WFX' OR 'LGA'
            NEXT SENTENCE
        ELSE
            GO TO 9999-RETURN-TO-CALLER.
    MOVE UX-RESOURCE-NAME TO WK-FIELD.
    IF WK-FIELD-3 = 'WFX' OR 'LGA'
        NEXT SENTENCE
    ELSE
        GO TO 9999-RETURN-TO-CALLER.
    IF UX-RESOURCE-TYPE = 'PROGRAM     '
      GO TO 2200-SET-PROGRAM
    ELSE
      IF UX-RESOURCE-TYPE = 'TRANSACTION '
        GO TO 2300-SET-TRANSACTION
      ELSE
        IF UX-RESOURCE-TYPE = 'FILE        '
          GO TO 2400-SET-FILE.
    GO TO 9999-RETURN-TO-CALLER.

*2110-VALIDATE-USER.
*    ADD 1 TO SUB.
*    IF SUB > 6
*        GO TO 2110-VALIDATE-USER-EXIT.
*    IF UX-USERID = WK-SUERID (SUB)
*        MOVE 'Y' TO VALIDATE-SW.
*    GO TO 2110-VALIDATE-USER.
*2110-VALIDATE-USER-EXIT.
*    EXIT.
```

********* Modify attributes in program definition ********

```
2200-SET-PROGRAM.
    MOVE 'COBOL          ' TO RDOCPROG-VAL-LANGUAGE.
    MOVE 'CICS           ' TO RDOCPROG-VAL-EXECKEY.
    MOVE 'BELOW          ' TO RDOCPROG-VAL-DATALOCATION.
    GO TO 9999-RETURN-TO-CALLER.
```

********* Modify attributes in transaction definition ********

```
2300-SET-TRANSACTION.
    MOVE  32               TO RDOCTRAN-VAL-TWASIZE.
    MOVE  01               TO RDOCTRAN-VAL-WAITTIME1.
    MOVE  07               TO RDOCTRAN-VAL-WAITTIME2.
    MOVE  30               TO RDOCTRAN-VAL-WAITTIME3.
    MOVE 'YES            ' TO RDOCTRAN-VAL-WAIT.
    MOVE 'CICS           ' TO RDOCTRAN-VAL-TASKDATAKEY.
    MOVE 'BELOW          ' TO RDOCTRAN-VAL-TASKDATALOC.
    GO TO 9999-RETURN-TO-CALLER.
```

********* Modify attributes in file definition ********

```
2400-SET-FILE.
    MOVE  3                TO RDOCFILE-VAL-STRINGS.
    MOVE  4                TO RDOCFILE-VAL-DATABUFFERS.
    MOVE  3                TO RDOCFILE-VAL-INDEXBUFFERS.
    MOVE 'YES            ' TO RDOCFILE-VAL-BROWSE.
    MOVE 'YES            ' TO RDOCFILE-VAL-READ.
    MOVE 'YES            ' TO RDOCFILE-VAL-UPDATE.
    MOVE 'YES            ' TO RDOCFILE-VAL-ADD.
    MOVE 'NO             ' TO RDOCFILE-VAL-DELETE.
    GO TO 9999-RETURN-TO-CALLER.
```

```
******* Currently in import mode ******
3000-IMPORT.
    MOVE UX-NEW-RESOURCE-GROUP TO WK-FIELD.
    IF WK-FIELD-3 = 'LGX' OR 'RDO' OR 'CEE' OR 'XPL'
        GO TO 9000-ERROR-AUTHORIZE.

    IF UX-RESOURCE-TYPE = 'PROGRAM     '
        GO TO 2200-SET-PROGRAM
    ELSE
        IF UX-RESOURCE-TYPE = 'TRANSACTION '
            GO TO 2300-SET-TRANSACTION
        ELSE
            IF UX-RESOURCE-TYPE = 'FILE        '
                GO TO 2400-SET-FILE.
    GO TO 9999-RETURN-TO-CALLER.

******* Currently in export mode ******
4000-EXPORT.
*****************************************************************
* NEXT IF STATEMENT STOP SOME OPID TO GENERATE TEMP EXPORT QUEUE
*****************************************************************
    IF EIBTRNID = 'WFX1' AND WK-OPID = 'WFX '
        GO TO 9000-ERROR-AUTHORIZE.

    MOVE UX-RESOURCE-GROUP TO WK-FIELD.
    IF WK-FIELD-3 = 'RDO' OR 'XPL' OR 'CEE'
        GO TO 9000-ERROR-AUTHORIZE.

    MOVE UX-NEW-RESOURCE-GROUP TO WK-FIELD.
    IF WK-FIELD-3 = 'RDO' OR 'XPL' OR 'CEE'
        GO TO 9000-ERROR-AUTHORIZE.

    MOVE UX-EXPORT-CSD-DSNAME TO WK-FIELD.
    IF WK-FIELD-12 = 'STS.CICSTS13'
        IF UX-RESOURCE-TYPE = 'PROGRAM     '
            GO TO 4200-SET-PROGRAM
        ELSE
            IF UX-RESOURCE-TYPE = 'TRANSACTION '
                GO TO 4300-SET-TRANSACTION
            ELSE
                IF UX-RESOURCE-TYPE = 'FILE        '
                    GO TO 4400-SET-FILE.
    GO TO 9999-RETURN-TO-CALLER.

4200-SET-PROGRAM.
    MOVE 'C              ' TO RDOCPROG-VAL-LANGUAGE.
    MOVE 'CICS           ' TO RDOCPROG-VAL-EXECKEY.
    MOVE 'BELOW          ' TO RDOCPROG-VAL-DATALOCATION.
    GO TO 9999-RETURN-TO-CALLER.

4300-SET-TRANSACTION.
    MOVE  01               TO RDOCTRAN-VAL-WAITTIME1.
    MOVE  02               TO RDOCTRAN-VAL-WAITTIME2.
    MOVE  05               TO RDOCTRAN-VAL-WAITTIME3.
    MOVE 'YES            ' TO RDOCTRAN-VAL-WAIT.
    MOVE 'USER           ' TO RDOCTRAN-VAL-TASKDATAKEY.
    MOVE 'BELOW          ' TO RDOCTRAN-VAL-TASKDATALOC.
    GO TO 9999-RETURN-TO-CALLER.

4400-SET-FILE.
    MOVE  2                TO RDOCFILE-VAL-STRINGS.
```

```
    MOVE  3                TO RDOCFILE-VAL-DATABUFFERS.
    MOVE  2                TO RDOCFILE-VAL-INDEXBUFFERS.
    MOVE 'YES            ' TO RDOCFILE-VAL-BROWSE.
    MOVE 'YES            ' TO RDOCFILE-VAL-READ.
    MOVE 'NO             ' TO RDOCFILE-VAL-UPDATE.
    MOVE 'NO             ' TO RDOCFILE-VAL-ADD.
    MOVE 'NO             ' TO RDOCFILE-VAL-DELETE.
    GO TO 9999-RETURN-TO-CALLER.
```

********* Return error response and message ********

```
9000-ERROR-AUTHORIZE.
    MOVE 'INSUFFICIENT AUTHORIZATION' TO UX-ERROR-MESSAGE.
    MOVE 8 TO UX-RESPONSE.
    GO TO 9999-RETURN-TO-CALLER.

9100-ERROR-COMMAND.
    MOVE 'UPDATE IMPORT CSD NOT ALLOWED' TO UX-ERROR-MESSAGE.
    MOVE 8 TO UX-RESPONSE.
    GO TO 9999-RETURN-TO-CALLER.

9999-RETURN-TO-CALLER.
    EXEC CICS RETURN END-EXEC.
```

********** Copybook RDOCCOBX for VSE shown here: **********

```
****************************************************************
*                                                              *
*     Copybook RDOCCOBX - User Exit Interface                  *
*                                                              *
*     Length = 2552                                            *
*                                                              *
****************************************************************
*
 02 USEXAREA.
    05 UX-EYECATCHER              PIC X(8).
    05 UX-RESPONSE                PIC S9(8) COMP.
       88 ACCEPTED                    VALUE 0.
       88 ACCEPT-WARNING              VALUE 4.
       88 REJECTED                    VALUE 8.
       88 SEVERE-ERROR                VALUE 12.
    05 UX-ERROR-MESSAGE           PIC X(80).
    05 UX-CURR-COMMAND            PIC X(10).
    05 UX-RESOURCE-TYPE           PIC X(12).
    05 UX-RESOURCE-NAME           PIC X(8).
    05 UX-RESOURCE-GROUP          PIC X(8).
    05 UX-NEW-RESOURCE-NAME       PIC X(8).
    05 UX-NEW-RESOURCE-GROUP      PIC X(8).
*****************************************************
*   Caller Function : Directory, Import, Export
*****************************************************
    05 UX-CALLER-FUNCTION         PIC X(10).
    05 UX-PRIMARY-CSD-DDNAME      PIC X(8).
    05 UX-PRIMARY-CSD-DSNAME      PIC X(44).
    05 UX-EXPORT-CSD-DDNAME       PIC X(8).
    05 UX-EXPORT-CSD-DSNAME       PIC X(44).
    05 UX-IMPORT-CSD-DDNAME       PIC X(8).
    05 UX-IMPORT-CSD-DSNAME       PIC X(44).
    05 UX-CSD-RECORD              PIC X(2200).
    05 UX-CONNECTION-RECORD REDEFINES UX-CSD-RECORD.
    COPY RDOCCONN.
 05 UX-DOCTEMPLATE-RECORD REDEFINES UX-CSD-RECORD.
```

```
   COPY RDOCDOCT.
 05 UX-FILE-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCFILE.
 05 UX-LSRPOOL-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCLSRP.
 05 UX-MAPSET-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCMAPS.
 05 UX-PARTITIONSET-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCPSET.
 05 UX-PARTNER-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCPNER.
 05 UX-PROFILE-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCPROF.
 05 UX-PROGRAM-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCPROG.
 05 UX-SESSION-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCSESS.
 05 UX-TCPIPSERVICE-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCTCPI.
 05 UX-TERMINAL-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCTERM.
 05 UX-TRANCLASS-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCTCLS.
 05 UX-TRANSACTION-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCTRAN.
 05 UX-TYPETERM-RECORD REDEFINES UX-CSD-RECORD.
   COPY RDOCTYPE.
 05 FILLER                     PIC X(40).
******** End of copybook RDOCCOBX for VSE *******
```

Chapter 13. Batch Operations

This chapter describes the AUTOMON/RDO Batch Operations Processor.

Types of Batch Operations

There are currently six types of batch operations available with AUTOMON/RDO.

1). Printing, archiving and purging the audit trail file.
2). Creating source input to DFHCSDUP.
3). Duplicate searching and reporting.
4). Printing resource definitions and associated documentation.
5). Comparing resources in the same or different CSD files.
6). Manipulating export control queues.
7). Routing CEDA or CEMT commands to CICS regions.
8). Setting the CICS release identifier.

Printing, Archiving and Purging the Audit Trail File

The audit trail file, also known as the History file, can be selectively printed, purged or copied to another file for archive purposes. The input control statements required to print, copy or purge the audit trail (history) file are:

HPRINT - Print all or selected records from file RDOHIST. Messages are printed in their original format as generated by CICS.

HPURGE - Delete all or selected records from file RDOHIST. Records are deleted in-place. If the file designated by the RDOHIST ddname is open in CICS, it must be closed.

HCOPY - Copy all or selected records from file RDOHIST to file RDOHOUT. Records are copied and written to the RDOHOUT file in REPLACE mode, which allows stacking of multiple sets of archive history records. If the file designated by ddname RDOHOUT is empty, you must initialize it with a dummy record. The RDOHOUT file cannot be open in CICS.

Each of these control statements can be qualified with FROM and THRU keywords designating the starting and ending dates to be used for the operation. If no FROM/THRU keywords are present, the entire file will be processed. Code the selection keywords as:

FROM(MM/DD/YY) or FROM(MMDDYY)
THRU(MM/DD/YY) or THRU(MMDDYY)

See *Running the AUTOMON/RDO batch processor,* following, for the JCL required.

CICS Release Control

In order for the batch functions to operate correctly, it is imperative that the batch processor knows the correct CICS release level for the CSD file in use. CSD files contain a release identifier record at the beginning of the file, and if the IBM Migrate facility was used to upgrade to a later release level, this record will be correct.

However, system programmers sometimes copy a CSD and use it for a new release of CICS. In this case, the release identifier in the file is incorrect. If you are unsure of the

status of the release identifier in the CSD, refer to the CICS command, later in this chapter, before attempting any batch operations.

Creating source input to DFHCSDUP

The AUTOMON/RDO batch processor can be used to create resource definition statements acceptable to the IBM-supplied RDO batch utility, DFHCSDUP. This feature provides a method of porting information from one CSD to another in batch mode.

Output from the batch processor consists of 80-byte statements, directed to a PDS member (MVS) or SYSPCH (VSE), which contain all attributes of one or more resource definitions. The attributes are preceded by the DEFINE command.

You may extract individual resources, groups or lists from the CSD. The output source statements can then be accessed with TSO or any source editor, modified if desired, then used as SYSIN or SYSIPT input statements to DFHCSDUP or your own source processor.

Example. Assume transaction BILL in group YHPGRP was extracted using the GENSRC command of the batch utility. The resultant source statement output would appear as follows:

```
DEFINE   TRANSACTION(BILL)
         GROUP(YHPGRP)
         DUMP(YES)
         EXTSEC(NO)
         INDOUBT(BACKOUT)
         RESTART(NO)
         RSLC(NO)
         SPURGE(NO)
         STATUS(ENABLED)
         TPURGE(NO)
         TRACE(YES)
         DTIMOUT(NO)
         PRIMEDSIZE(0)
         PRIORITY(0)
         PROGRAM(YHPREXEC)
         PROFILE(DFHCICST)
         RSL(0)
         TCLASS(NO)
         TWASIZE(32)
```

[Note]. Output may also be created in condensed form, fitting as many attributes on each line as possible, separated by one space.

Duplicate Searching and Reporting

The batch duplicate search performs an identical function to the online DUPES command from the primary menu. The difference is that there is no restriction to the number of duplicate resources located, as there is in the online version. In addition, the duplicate resources are printed on a hard-copy report.

Printing resource definitions and associated documentation

The PRINT command will produce a hard-copy report of resources in the CSD, along with any documentation that has been added to those resources with AUTOMON/RDO.

There are two formats of reporting available:

1). Command format. The CSD records are printed in CEDA command format, with full mnemonics and values in parentheses. Documentation follows in a boxed window on the page.

2). Screen image. CSD records are printed in the familiar screen format that AUTOMON/RDO uses to present resource definitions of each type. A border of asterisks surrounds the data to portray it as a screen image. Documentation follows in a boxed window on the page.

Comparing resources in the same or different CSD files

It is often desirable to keep mirror images of two CSD files or mirror images of resources in different groups. The COMPARE command provides a method of checking for differences between any two entities.

Comparison can be made at the five levels:

1). List compare - compares the list, then all groups in the list

2). Group level - compares all resources in one or more groups

3). Masked groups - compares matching group names first, then all resources of matching groups.

4). Masked resources - Compares all resources in a group that match the resource name mask.

5). Individual resource - Compare two resources, fully defined.

In addition to a report that lists all differences, an option is available to generate the necessary CEDA commands to align one side of the comparison with the other. That is, make them equal. These commands can be output to a sequential file for input to DFHCSDUP or to an export control queue for input to online AUTOMON/RDO.

Manipulating export control queues

The QPRINT, QUNLOAD, QDELETE and QCOPY commands allow for export control queues to be processed in batch. The function of each verb is as follows:

QPRINT — Print a report of one or more queues, listing all queue attributes and all commands in the queue, along with any error messages that occurred at execution of the queue.

QUNLOAD — Create a sequential file of CEDA commands from one or more control queues. This file is output to a sequential file (MVS PDS member or VSE punch queue) to be input to the DFHCSDUP utility.

QDELETE — Delete one or more control queues.

QCOPY — Copy one or more queues to another VSAM file.

Routing CEDA or CEMT commands to CICS regions.

The EXECUTE command can be used to route one or more CEDA or CEMT commands to one or more CICS regions. Execute uses EXCI (External CICS Interface) to connect from to CICS from a batch region, so the target CICS systems must be CICS TS.

EXECUTE operates in the same manner as export. Control statements are used to set the target CICS applid or application target list number. Commands to be executed can be coded in-line in the SYSIN dataset or a previously created export queue can be routed.

When an export queue is executed, the queue execution status can be updated, even if the export queue resides in a different CICS region than the target system.

Any CEDA command can be routed and executed, including installs. The results of the EXECUTE are printed, by target applid. Likewise, any CEMT command can be routed and executed with results printed, but you cannot enter a CEMT conversation from the batch processor. That is, an executed CEMT function must have all information supplied in a single command.

Setting the CICS release identifier.

The CSD file is distributed from IBM with a release identifier as the first record in the file. If you use MIGRATE to upgrade a CSD to a new CICS release, this release record is set correctly. However, system programmers sometimes copy a CSD and use it for a new release of CICS. In this case, the release identifier in the file is incorrect.

The batch processor of AUTOMON/RDO depends on this release identifier record to properly format DEFINE and other CEDA commands for the CICS release in use. If the release identifier specifies a prior release of CICS, errors will result.

If this situation exists, a batch command is provided, called CICS, which can be used to specify the correct release of CICS that is using this CSD.

Migrating from a Prior Release of AUTOMON/RDO

The MIGRATE command will update the RDO$FIL supplemental file if a prior relase of AUTOMON/RDO has been in use. Record format or content in the supplemental file sometimes changes from one release to another and the file must be upgraded before the new release will work correctly.

Refer to Chapter 14, *Installation*, to see if migration is required for this release of the product.

Running the AUTOMON/RDO batch processor

The program name of the batch processor is RDOBATCH. Output commands are directed to SYSPCH, the printer is SYSPRINT in MVS and SYSLST in VSE. Input selection commands come from SYSIN in MVS and SYSIPT in VSE. Four ddnames are used for VSAM files accessed, depending on the type of operation:

DFHCSD	-	The CSD file from which resources are to be extracted. Also the first input CSD file to COMPARE.
DFHCSD2	-	The second input CSD file to COMPARE.
RDO$FIL	-	AUTOMON/RDO supplementary VSAM file.
RDO$OUT	-	Output supplementary file.
RDOHIST	-	The audit trail history input file.
RDOHOUT	-	The audit trail history output file.

MVS JCL example:

```
//RDOBCH      JOB   (Installation defined)
//STEP1       EXEC  PGM=RDOBATCH,REGION=300K
//SYSPRINT    DD    SYSOUT=*
//SYSUDUMP    DD    SYSOUT=*
//STEPLIB     DD    AUTOMON.RDO.V430.MVS.LOADLIB,
//                  DISP=SHR
//                DSN=CICS680.SDFHEXCI,DISP=SHR
//DFHCSD      DD    DSN=CICS660.DFHCSD,DISP=SHR
//DFHCSD2     DD    DSN=CICS680.DFHCSD,DISP=SHR
//RDO$FIL     DD    DSN=CICS.RDO-EC.CONTROL.FILE,
//                  DISP=SHR
//RDO$OUT     DD    DSN=CICS.RDO-EC.OUTPUT.FILE,
//                  DISP=SHR
//RDOHIST     DD    DSN=CICS.RDO-EC.HISTORY.FILE,
//                  DISP=SHR
//RDOHOUT     DD    DSN=CICS.RDO-EC.ARCHIVE.FILE,
//                  DISP=SHR
//SYSPCH      DD    DSN=RDOC.SOURCE.PDS(RDOCSRC),
//                  DISP=SHR
//SYSIN       DD    *
                .
                Input selection commands
                .
/*
//
```

VSE JCL example:

```
* $$ JOB JNM=RDOBATCH,CLASS=C,DISP=D
* $$ PRT HL
// JOB RDOBATCH
// OPTION PARTDUMP
// DLBL RDO$FIL,'RDO-CICS.CONTROL.FILE',,VSAM
// DLBL RDO$OUT,'RDO-CICS.OUTPUT.FILE',,VSAM
// DLBL RDOHIST,'RDO-CICS.HISTORY.FILE',,VSAM
// DLBL RDOHOUT,'RDO-CICS.ARCHIVE.FILE',,VSAM
// DLBL DFHCSD,'CICS111.DFHCSD',,VSAM
```

```
// DLBL DFHCSD2,'CICS110.DFHCSD',,VSAM
// LIBDEF *,SEARCH=Library containing RDOBATCH
// EXEC RDOBATCH,SIZE=300K
                    .
                    Input selection commands
                    .
/*
/&
* $$ EOJ.
```

Input selection commands

There are fourteen available input control commands.

1).	OPTIONS	sets debugging choices and controls the output of various commands.
2).	GENSRC	selects resource(s) to be extracted in source form.
3).	HPRINT	prints the audit trail history.
4).	HPURGE	purges the audit trail history.
5).	HCOPY	archives the audit trail history.
6).	DUPES	creates the duplicate resources report.
7).	PRINT	prints report of resources in the CSD.
8).	COMPARE	compares resources in the same or different CSD files.
9).	QPRINT	prints report from export queues.
10).	QCOPY	copies queue records to another file.
11).	QDELETE	deletes export queue records.
12).	QUNLOAD	creates a sequential command file from an export queue.
13).	EXECUTE	routes CEDA or CEMT commands to CICS regions.
14).	CICS	sets the release identifier for the CICS system using this CSD.

Command syntax

Commands may begin in any position, followed by one or more modifiers. Each modifier is a mnemonic, usually followed by a value enclosed in parentheses.

Multiple modifiers are allowed, separated by commas. To continue a statement, code a hyphen (-) in any position after the last resource name of one statement, then begin the next statement in any position. Mnemonics and values must be fully contained on one line. That is, do not attempt to continue in the middle of a mnemonic or between the modifier and the value in parentheses.

And asterisk (*) in position one denotes a comment, which will be printed on the report with the command.

Multiple commands may be input in one job, if desired. Simply follow one command with another, making sure to end the continuation of the first command before the next one begins.

File Status Requirements

Most commands will operate in batch while the CSD and supplemental file are open in CICS. Exceptions to this are:

1). HPURGE RDOHIST must be closed online.
2). HCOPY RDOHOUT must be closed online.
3). COMPARE Only if the QUEUE modifier is supplied, RDO$FIL must be closed online.
4). GENSRC Only if the QUEUE modifier is supplied, RDO$FIL must be closed online.
5). QCOPY RDO$OUT must be closed online.
6). QDELETE RDO$FIL must be closed online.
7). EXECUTE If routing an export queue with UPDATE(YES) coded, RDO$FIL must be closed online. This can be avoided by coding UPDATE(applid).

OPTIONS Command

The OPTIONS command (which may be abbreviated as 'O' or any number of characters in the command) would normally appear as the first control statement in the SYSIN stream, but may appear anywhere. OPTIONS modifiers are single mnemonics with no values in parentheses. The operator is 'OPTIONS', starting in any position, followed by at least one space, then one or all of the following modifiers:

ONEPER - Specifies that the output command statements are to contain one attribute per line. If this modifier is omitted or if the OPTIONS command is not present, output will be in condensed form, each attribute of the resource separated by one space with as many attributes on each line as will fit.

This option applies to GENSRC, COMPARE, HPRINT, PRINT, QUNLOAD and QPRINT

TRACE - This is a debugging option instructing the program to output trace statements on SYSPRINT.

DUMP - This option instructs the program to abnormally terminate with a core dump if any error condition is encountered. If this is omitted, error messages will be printed and processing continues.

GENCSD - For COMPARE, generate source statements to update the CSD1 file.

GENCSD2 - For COMPARE, generate source statements to update the CSD2 file.

MSGONLY - For COMPARE, print messages only. Do not print full resources.

NAMEONLY - For COMPARE, masked groups or lists, print group list comparison only, do not do resource compare of groups.

SORTLIST - For COMPARE, sort lists before comparing.

SCRIMAGE - For PRINT, print report in screen image format.

CLEAR - Reset all options (used for multiple commands in one jobstream).

GENSRC Command

This command (which may be abbreviated as 'G' or any number of characters in the command) instructs the batch processor to generate source statements from the selected CSD members that are acceptable in format to DFHCSDUP.

The operator is 'GENSRC', starting in any position, followed by one or more modifiers. Each modifier is a resource type, with the resource name enclosed in parentheses.

Multiple resource names are allowed, separated by commas, the entire set enclosed in parentheses. To continue a statement, code a hyphen (-) in any position after the last resource name of one statement, then begin the next statement in any position. Resource names must be fully contained on one statement. That is, do not attempt to continue in the middle of a resource name.

If selection is to be made by GROUP or LIST, no additional modifiers are necessary. For individual resource types (PROG, TRANS, etc.), follow the resource names with a group identifier, coded as GROUP(group name).

You may code as many GENSRC commands as desired in one run of the batch processor, mixing the selection criteria in any way.

Following are all valid modifiers to the GENSRC command:

A - Selection by ATOMSERVICE. Follow with one or more atomservice names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated atomservices.

B - Selection by BUNDLE. Follow with one or more bundle names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated bundles.

CON - Selection by CONNECTION. Follow with one or more connection names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated connections.

COR - Selection by CORBASERVICE. Follow with one or more corbaservice names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated corbaservices.

DB2C - Selection by DB2CONN. Follow with one or more DB2conn names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated DB2conns.

DB2E - Selection by DB2ENTRY. Follow with one or more DB2entry names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated DB2entrys.

DB2T - Selection by DB2TRAN. Follow with one or more DB2tran names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated DB2trans.

DJ - Selection by DJAR. Follow with one or more djar names, separated by commas, enclosed in parentheses. Follow that with GROUP (xxxxxxxx), where xxxxxxxx is the group name containing all designated djars.

DO - Selection by DOCTEMPLATE. Follow with one or more doctemplate names, separated by commas, enclosed in parentheses. Follow that with GROUP (xxxxxxxx), where xxxxxxxx is the group name containing all designated doctemplate.

E - Selection by ENQMODEL. Follow with one or more enqmodel names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated enqmodels.

F - Selection by FILE. Follow with one or more file names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated files.

G - Selection by GROUP. Follow with one or more group names, separated by commas, enclosed in parentheses. All resources in each group will be extracted.

I - Selection by IPCONN. Follow with one or more ipconn names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated ipconn definitions.

JO - Selection by JOUNALMODEL. Follow with one or more journalmodel names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated journalmodels.

JV - Selection by JVMSERVER. Follow with one or more jvmserver names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated jvmservers.

LI - Selection by LIST. Follow with one or more list names, separated by commas, enclosed in parentheses. All resources in every group of each list will be extracted.

LIB - Selection by LIBRARY. Follow with one or more library names, separated by commas, enclosed in parentheses. All resources in every group of each library resource defintion will be extracted.

LS - Selection by LSRPOOL. Follow with one or more Lsrpool names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated lsrpools.

MA - Selection by MAPSET. Follow with one or more mapset names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated mapsets.

MQ - Selection by MQCONN. Follow with one or more MQconn names, separated by commas, enclosed in parentheses. Follow that with

GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated MQconns.

PARTI - Selection by PARTITIONSET. Follow with one or more partitionset names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated partitionsets.

PARTN - Selection by PARTNER. Follow with one or more partner names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated partners.

PI - Selection by PIPELINE. Follow with one or more pipeline names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated pipelines.

PROC - Selection by PROCESSTYPE. Follow with one or more processtype names, separated by commas, enclosed in parentheses. Follow that with GROUP (xxxxxxxx), where xxxxxxxx is the group name containing all designated processtypes.

PROF - Selection by PROFILE. Follow with one or more profile names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated profiles.

PROG - Selection by PROGRAM. Follow with one or more program names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated programs.

R - Selection by REQUESTMODEL. Follow with one or more requestmodel names, separated by commas, enclosed in parentheses. Follow that with GROUP (xxxxxxxx), where xxxxxxxx is the group name containing all designated requestmodels.

SE - Selection by SESSIONS. Follow with one or more sessions names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated sessions.

TC - Selection by TCPIPSERVICE. Follow with one or more TCPIPservice names, separated by commas, enclosed in parentheses. Follow that with GROUP (xxxxxxxx), where xxxxxxxx is the group name containing all designated TCPIPservices.

TD - Selection by TDQUEUE. Follow with one or more tdqueue names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated tdqueues.

TE - Selection by TERMINAL. Follow with one or more terminal names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated terminal.

TRANC - Selection by TRANCLASS. Follow with one or more tranclass names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated tranclasses.

TRANS - Selection by TRANSACTION. Follow with one or more transaction names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated transactions.

TS - Selection by TSMODEL. Follow with one or more tsmodel names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated tsmodels.

TY - Selection by TYPETERM. Follow with one or more Typeterm names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated typeterms.

U - Selection by URIMAP. Follow with one or more urimap names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated urimaps.

W - Selection by WEBSERVICE. Follow with one or more webservice names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated webservices.

[Note]. All resource types may be abbreviated in the minimum form, or may be spelled out completely.

Mask entry of resource names

Resource names may be entered using masks, if desired, to select all occurrences of a given resource whose name matches the mask. The standard three mask characters may be used to qualify a resource name, as follows:

*	Left-to-right generic	Example:	MY*
<	Right-to-left generic	Example:	<MY
?	Wild-card character	Example:	MY???GRP

Masks may **not** be used as LIST names or as the GROUP name following a resource specification.

[Note]. If a mask character (< or ?) is used in the first byte of a resource name, serious performance degradation will occur. It will be necessary to sequentially read the entire CSD, searching every resource name for a match. If the first byte of the name is alphabetic, skip-sequential processing is used.

To select all entries in the CSD, code GROUP(*).

Creating an Export Control Queue

The output from GENSRC can be sent to and export control queue, if desired, for execution online. To do this, add the QUEUE operand following the other modifiers on

the statement, with the queue name in parentheses. Following is an example of control queue generation:

```
GENSRC     GR(PROG*) QUEUE(MYQUEUE)
```

This will direct the output commands for groups beginning with PROG to the export control queue, MYQUEUE, instead of sending it to SYSPCH. Note that the supplemental file, RDO$FIL, must be closed online if this option is used.

Examples of GENSRC command input:

```
GENSRC  GROUP(LGAGRP,ABC*,X??Z*)

GENSRC  GR(PROG*)

GEN     LIST(STSLIST,ABCLIST)

G       PROG(MYPROG,YOURPROG) GR(MYGRP)

GENSRC  PROG(MYPROG,      -
        YOURPROG),        -
        GROUP(MYGRP)

GENSRC  TRANS(A*,B*,C*,D*,E*,F*,G*,H*,I*,J*,K*,L*     -
        M*,N*,O*,P*,Q*,R*,S*,T*,U*,V*,W*,X*,Y*,Z*)  -
        GR(TRANGRP)

GENSRC  TRANS(*),GR(TRANGRP)
```

HPRINT Command

The HPRINT command (which may be abbreviated as 'HPR' or any number of characters in the command) is used to print all or selected records from the audit trail history file, RDOHIST. The operator is 'HPRINT', starting in any position, followed by at least one space, then one or both of the following modifiers:

FROM - Designates the starting date for record selection. Code as MM/DD/YY or MMDDYY enclosed in parentheses. If omitted, the lowest possible date will be used.

THRU - Designates the ending date for record selection. Code as MM/DD/YY or MMDDYY enclosed in parentheses. If omitted, the highest possible date will be used.

HPURGE Command

The HPURGE command (which may be abbreviated as 'HPU' or any number of characters in the command) is used to delete all or selected records from the audit trail history file, RDOHIST. The operator is 'HPURGE', starting in any position, followed by at least one space, then one or both of the following modifiers:

FROM - Designates the starting date for record selection. Code as MM/DD/YY or MMDDYY enclosed in parentheses. If omitted, the lowest possible date will be used.

THRU - Designates the ending date for record selection. Code as MM/DD/YY or MMDDYY enclosed in parentheses. If omitted, the highest possible date will be used.

HCOPY Command

The HCOPY command (which may be abbreviated as 'HC' or any number of characters in the command) is used to copy all or selected records from the audit trail history file, RDOHIST, and write them to the audit history output file, RDOHOUT. The operator is 'HCOPY', starting in any position, followed by at least one space, then one or both of the following modifiers:

FROM - Designates the starting date for record selection. Code as MM/DD/YY or MMDDYY enclosed in parentheses. If omitted, the lowest possible date will be used.

THRU - Designates the ending date for record selection. Code as MM/DD/YY or MMDDYY enclosed in parentheses. If omitted, the highest possible date will be used.

DUPES Command

The DUPES command (which may be abbreviated as 'D' or any number of characters in the command) is used to produce a report of duplicate resource names. It performs exactly the same function as the online DUPES command from the primary menu, except that the output is directed to a printer. In addition, there is no limitation to the number of duplicates that can be handled by the batch processor, as there is online.

[Note]. The batch DUPES functions must build a complete directory in memory by reading the entire CSD file. If the input DFHCSD file is quite large, it may be necessary to increase the region size on the EXEC statement in order to accommodate it.

DUPES requires two files for operation. They are:

DFHCSD	The CSD file to be checked for duplicates.
RDO$FIL	The supplemental file containing preference records.

The operator is 'DUPES', starting in any position, followed by at least one space, then any or none of the following modifiers:

SEARCH(ALL | TYPE | RESOURCE | SELECT)

The SEARCH modifier specifies the type of duplicate search to perform. Code one of the mnemonics in parentheses (The first character is sufficient). Meanings are:

All	Locate all dupes.
Type	Locate all dupes with the same resource type.
Resource	Locate dupes with the same name and group, but different resource types.
Select	Locate dupes of one resource type. Code the TYPE modifier to specify which type.

If SEARCH is not coded, the default is TYPE.

TYPE(resource type)

The TYPE modifier is required if SELECT is specified as the search type. Code the resource type (PROG, TRANS, etc.) enclosed in parenthesis. Valid abbreviation of resource type will be accepted.

EXCLUDE(YES | NO)

This modifier specifies whether to honor Group Exclusions or not. If a Group Exclusion Preference record is present in the supplemental file, coding EXCLUDE(YES) or omitting this modifier means you want the batch dupes job to ignore (don't check for duplicates) any groups or group masks coded.

EXCLUDE(NO) will disregard the group exclusion preference record and examine all groups except those beginning with 'DFH' for duplicates.

IBM(YES | NO)

This modifier specifies whether to include IBM groups in the duplicate search or not. Coding EXCLUDE(NO) or omitting this modifier means you want the batch dupes job to ignore (don't check for duplicates) any groups beginning with 'DFH'.

IBM(YES) will include DFH groups in the duplicate search.

DESCRIP(YES | NO)

This modifier specifies whether to include resource descriptions in the printed report or not. The retrieval of descriptions makes the batch duplicate job run longer than if descriptions are bypassed. Coding DESCRIP(YES) or omitting this modifier means you want the batch dupes job to print resource descriptions on the report if they are present.

DESCRIP(NO) will bypass retrieval of description and last date/time updated. The only thing appearing on the report will be the resource name, type and group.

DELETE(FIRST |LAST|ALL)

This modifier specifies whether to generate delete commands for some or all duplicates found. Omitting this modifier means you want the printed report only. The creation of delete commands is intended as an aid for cleaning up the CSD file.

Delete commands will be written to the sequential file specified as SYSPCH, which should be defined as a PDS member. This allows the resultant file of delete commands to be edited and modified as desired. Commands are in the form:

DELETE Type(resource name) GROUP(group name)

which can be subsequently input to DFHCSDUP.

Meanings of the three mnemonic values are:

First Generate delete commands for the first duplicate of each duplicate set found.

Last Generate delete commands for all except the first duplicate of each duplicate set.

All Generate delete commands for all duplicates found.

Handling High Volume with DUPES

Users with extremely large CSD files may want to reduce the duplicate resources display to a manageable number. This can be accomplished with either of following operators:

GROUP(group name)

Enter a full or masked group name as the value of the GROUP keyword. When this is done, only the resources present in matching groups will be candidates for the duplicate search.

LIST(list name)

Enter a list name (no mask characters) as the value of the LIST keyword. When this is done, only the resources present in groups within that list will be candidates for the duplicate search.

[Note]. The resultant duplicates report may contain resources for groups other than those specified in the limit fields. These are the *duplicate* resources that have the same name as the members of the control group(s).

[Note]. Using GROUP or LIST to limit the report output will not reduce the run time or the amount of storage required to build a directory. There must be a complete directory in order to locate duplicate resource names that are not in the control groups.

DIRBGN(group name)
DIREND(group name)

These two operators can be used to limit the size of the in-memory directory that is built for the DUPES command. For large CSD files, the time and memory required for the entire directory can be prohibitive.

DIRBGN and DIREND provide a starting and ending group name so that a partial directory can be built. While this will not locate every duplicate resource name, it allows you to control the groups that are included in the directory, using multiple executions, if needed, to examine the entire CSD file.

For DIRBGN, code at least the first character of a group name where you want the directory to begin. The CSD file is in group name sequence, so the batch processor will position directly to the nearest matching group, then begin reading sequentially.

For DIREND, enter a group name that is alphabetically greater than DIRBGN. The directory build will stop when a group name that is alphabetically higher than DIREND is reached.

[Note]. When using DIRBGN and DIREND to limit the directory size, you will not be able to use the LIST mnemonic, because a List directory will not be constructed. You can still use the GROUP mnemonic, if desired.

[Note]. When using DIRBGN and DIREND to limit the directory size, coding such as the following will usually not work: DIRBGN(A) DIREND(A). In this example, the user intended to include all groups beginning with ‘a’. In practice, this will include only a group whose complete name is ‘a’, if such a group exists. The ending group name must be alphabetically higher than the beginning. To include all groups that begin with ‘a’, the correct coding is: DIRBGN(A) DIREND(A9999999).

PRINT Command

This command (which may be abbreviated as 'P' or any number of characters in the command) instructs the batch processor to print a report of the selected resources, along with any documentation on file for each resource.

There are two formats of reporting available:

1). Command format. The CSD records are printed in CEDA command format, with full mnemonics and values in parentheses. Documentation follows in a boxed window on the page.

2). Screen image. CSD records are printed in the familiar screen format that AUTOMON/RDO uses to present resource definitions of each type. A border of asterisks surrounds the data to portray it as a screen image. Documentation follows in a boxed window on the page. This format will be produced if OPTIONS SCRIMAGE precedes the PRINT command.

The operator is 'PRINT', starting in any position, followed by one or more modifiers. Each modifier is a resource type, with the resource name enclosed in parentheses.

Multiple resource names are allowed, separated by commas, the entire set enclosed in parentheses. To continue a statement, code a hyphen (-) in any position after the last resource name of one statement, then begin the next statement in any position. Resource names must be fully contained on one statement. That is, do not attempt to continue in the middle of a resource name.

If selection is to be made by GROUP or LIST, no additional modifiers are necessary. For individual resource types (PROG, TRANS, etc.), follow the resource names with a group identifier, coded as GROUP(group name).

You may code as many PRINT commands as desired in one run of the batch processor, mixing the selection criteria in any way.

Following are all valid modifiers to the PRINT command:

A - Selection by ATOMSERVICE. Follow with one or more atomservice names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated atomservices.

B - Selection by BUNDLE. Follow with one or more bundle names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated bundles.

CON - Selection by CONNECTION. Follow with one or more connection names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated connections.

COR - Selection by CORBASERVICE. Follow with one or more corbaservice names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated corbaservices.

DB2C - Selection by DB2CONN. Follow with one or more DB2conn names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated DB2conns.

DB2E - Selection by DB2ENTRY. Follow with one or more DB2entry names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated DB2entrys.

DB2T - Selection by DB2TRAN. Follow with one or more DB2tran names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated DB2trans.

DJ - Selection by DJAR. Follow with one or more djar names, separated by commas, enclosed in parentheses. Follow that with GROUP (xxxxxxxx), where xxxxxxxx is the group name containing all designated djars.

DO - Selection by DOCTEMPLATE. Follow with one or more doctemplate names, separated by commas, enclosed in parentheses. Follow that with GROUP (xxxxxxxx), where xxxxxxxx is the group name containing all designated doctemplate.

E - Selection by ENQMODEL. Follow with one or more enqmodel names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated enqmodels.

F - Selection by FILE. Follow with one or more file names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated files.

G - Selection by GROUP. Follow with one or more group names, separated by commas, enclosed in parentheses. All resources in each group will be extracted.

I - Selection by IPCONN. Follow with one or more ipconn names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated ipconn definitions.

JO - Selection by JOUNALMODEL. Follow with one or more journalmodel names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated journalmodels.

JV - Selection by JVMSERVER. Follow with one or more jvmserver names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated jvmservers.

LI - Selection by LIST. Follow with one or more list names, separated by commas, enclosed in parentheses. All resources in every group of each list will be extracted.

LIB - Selection by LIBRARY. Follow with one or more library names, separated by commas, enclosed in parentheses. All resources in every group of each library resource defintion will be extracted.

LS - Selection by LSRPOOL. Follow with one or more Lsrpool names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated lsrpools.

MA - Selection by MAPSET. Follow with one or more mapset names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated mapsets.

MQ - Selection by MQCONN. Follow with one or more MQconn names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated MQconns.

PARTI - Selection by PARTITIONSET. Follow with one or more partitionset names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated partitionsets.

PARTN - Selection by PARTNER. Follow with one or more partner names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated partners.

PI - Selection by PIPELINE. Follow with one or more pipeline names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated pipelines.

PROC - Selection by PROCESSTYPE. Follow with one or more processtype names, separated by commas, enclosed in parentheses. Follow that with GROUP (xxxxxxxx), where xxxxxxxx is the group name containing all designated processtypes.

PROF - Selection by PROFILE. Follow with one or more profile names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated profiles.

PROG - Selection by PROGRAM. Follow with one or more program names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated programs.

R - Selection by REQUESTMODEL. Follow with one or more requestmodel names, separated by commas, enclosed in parentheses. Follow that with GROUP (xxxxxxxx), where xxxxxxxx is the group name containing all designated requestmodels.

SE - Selection by SESSIONS. Follow with one or more sessions names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated sessions.

TC - Selection by TCPIPSERVICE. Follow with one or more TCPIPservice names, separated by commas, enclosed in parentheses. Follow that with GROUP (xxxxxxxx), where xxxxxxxx is the group name containing all designated TCPIPservices.

TD - Selection by TDQUEUE. Follow with one or more tdqueue names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated tdqueues.

TE - Selection by TERMINAL. Follow with one or more terminal names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated terminal.

TRANC - Selection by TRANCLASS. Follow with one or more tranclass names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated tranclasses.

TRANS - Selection by TRANSACTION. Follow with one or more transaction names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated transactions.

TS - Selection by TSMODEL. Follow with one or more tsmodel names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated tsmodels.

TY - Selection by TYPETERM. Follow with one or more Typeterm names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated typeterms.

U - Selection by URIMAP. Follow with one or more urimap names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated urimaps.

W - Selection by WEBSERVICE. Follow with one or more webservice names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated webservices.

[Note]. All resource types may be abbreviated in the minimum form, or may be spelled out completely.

Mask entry of resource names

Resource names may be entered using masks, if desired, to select all occurrences of a given resource whose name matches the mask. The standard three mask characters may be used to qualify a resource name, as follows:

*	Left-to-right generic	Example:	MY*
<	Right-to-left generic	Example:	<MY
?	Wild-card character	Example:	MY???GRP

Masks may **not** be used as LIST names or as the GROUP name following a resource specification.

[Note]. If a mask character (< or ?) is used in the first byte of a resource name, serious performance degradation will occur. It will be necessary to sequentially read the entire CSD, searching every resource name for a match. If the first byte of the name is alphabetic, skip-sequential processing is used.

To select all entries in the CSD, code GROUP(*).

Examples of PRINT command input:

```
PRINT   GROUP(LGAGRP,ABC*,X??Z*)

PRINT   GR(PROG*)

GEN     LIST(STSLIST,ABCLIST)

G       PROG(MYPROG,YOURPROG) GR(MYGRP)

PRINT   PROG(MYPROG,        -
        YOURPROG),          -
        GROUP(MYGRP)

PRINT   TRANS(A*,B*,C*,D*,E*,F*,G*,H*,I*,J*,K*,L*     -
        M*,N*,O*,P*,Q*,R*,S*,T*,U*,V*,W*,X*,Y*,Z*)   -
        GR(TRANGRP)

PRINT   TRANS(*),GR(TRANGRP)
```

COMPARE Command

The COMPARE command will perform resource comparison between two sets of resources, either in the same or different CSD files. Comparison can be made at the five levels:

1). List compare - compares the list, then all groups in the list

2). Group level - compares all resources in one or more groups

3). Masked groups - compares matching group names first, then all resources of matching groups.

4). Masked resources - Compares all resources in a group that match the resource name mask.

5). Individual resource - Compare two resources, fully defined.

JCL File Names for COMPARE

The CSD file designation is handled by JCL. Any time COMPARE is used, you must specify dataset information for two file names (DDNAMES).

1). DFHCSD - The file name of CSD number one.

2). DFHCSD2 - The file name of CSD number two.

If the compare is for different entities in the same CSD, both DD or DLBL statements must be included, but the DSNAME would be the same for both of them. Throughout COMPARE, references are made to CSD1 or CSD2. This refers to the CSD dataset specified with file names DFHCSD and DFHCSD2, respectively.

The sequential output file if either of the two GENCSD options is used is SYSPCH. For MVS, this can be a PDS member or a QSAM file. For VSE it is the POWER punch queue.

Command Modifiers for COMPARE

The operands of the COMPARE command are the same as for GENSRC and PRINT, with some additions. The modifiers to denote the resources to be compared are as follows:

A - Selection by ATOMSERVICE. Follow with one or more atomservice names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated atomservices.

B - Selection by BUNDLE. Follow with one or more bundle names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated bundles.

CON - Selection by CONNECTION. Follow with one or more connection names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated connections.

COR - Selection by CORBASERVICE. Follow with one or more corbaservice names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated corbaservices.

DB2C - Selection by DB2CONN. Follow with one or more DB2conn names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated DB2conns.

DB2E - Selection by DB2ENTRY. Follow with one or more DB2entry names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated DB2entrys.

DB2T - Selection by DB2TRAN. Follow with one or more DB2tran names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated DB2trans.

DJ - Selection by DJAR. Follow with one or more djar names, separated by commas, enclosed in parentheses. Follow that with GROUP (xxxxxxxx), where xxxxxxxx is the group name containing all designated djars.

DO - Selection by DOCTEMPLATE. Follow with one or more doctemplate names, separated by commas, enclosed in parentheses. Follow that with

GROUP (xxxxxxxx), where xxxxxxxx is the group name containing all designated doctemplate.

E - Selection by ENQMODEL. Follow with one or more enqmodel names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated enqmodels.

F - Selection by FILE. Follow with one or more file names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated files.

G - Selection by GROUP. Follow with one or more group names, separated by commas, enclosed in parentheses. All resources in each group will be extracted.

I - Selection by IPCONN. Follow with one or more ipconn names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated ipconn definitions.

JO - Selection by JOUNALMODEL. Follow with one or more journalmodel names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated journalmodels.

JV - Selection by JVMSERVER. Follow with one or more jvmserver names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated jvmservers.

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MA - Selection by MAPSET. Follow with one or more mapset names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated mapsets.

MQ - Selection by MQCONN. Follow with one or more MQconn names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated MQconns.

PARTI - Selection by PARTITIONSET. Follow with one or more partitionset names, separated by commas, enclosed in parentheses. Follow that with

GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated partitionsets.

PARTN - Selection by PARTNER. Follow with one or more partner names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated partners.

PI - Selection by PIPELINE. Follow with one or more pipeline names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated pipelines.

PROC - Selection by PROCESSTYPE. Follow with one or more processtype names, separated by commas, enclosed in parentheses. Follow that with GROUP (xxxxxxxx), where xxxxxxxx is the group name containing all designated processtypes.

PROF - Selection by PROFILE. Follow with one or more profile names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated profiles.

PROG - Selection by PROGRAM. Follow with one or more program names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated programs.

R - Selection by REQUESTMODEL. Follow with one or more requestmodel names, separated by commas, enclosed in parentheses. Follow that with GROUP (xxxxxxxx), where xxxxxxxx is the group name containing all designated requestmodels.

SE - Selection by SESSIONS. Follow with one or more sessions names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated sessions.

TC - Selection by TCPIPSERVICE. Follow with one or more TCPIPservice names, separated by commas, enclosed in parentheses. Follow that with GROUP (xxxxxxxx), where xxxxxxxx is the group name containing all designated TCPIPservices.

TD - Selection by TDQUEUE. Follow with one or more tdqueue names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated tdqueues.

TE - Selection by TERMINAL. Follow with one or more terminal names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated terminal.

TRANC - Selection by TRANCLASS. Follow with one or more tranclass names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated tranclasses.

TRANS - Selection by TRANSACTION. Follow with one or more transaction names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated transactions.

TS - Selection by TSMODEL. Follow with one or more tsmodel names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated tsmodels.

TY - Selection by TYPETERM. Follow with one or more Typeterm names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated typeterms.

U - Selection by URIMAP. Follow with one or more urimap names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated urimaps.

W - Selection by WEBSERVICE. Follow with one or more webservice names, separated by commas, enclosed in parentheses. Follow that with GROUP(xxxxxxxx), where xxxxxxxx is the group name containing all designated webservices.

[Note]. All resource types may be abbreviated in the minimum form, or may be spelled out completely.

Mask entry of resource names

Resource names may be entered using masks, if desired, to select all occurrences of a given resource whose name matches the mask. The standard three mask characters may be used to qualify a resource name, as follows:

*	Left-to-right generic	Example:	MY*
<	Right-to-left generic	Example:	<MY
?	Wild-card character	Example:	MY???GRP

Masks may **not** be used as LIST names or as the GROUP name following a resource specification.

[Note]. If a mask character (< or ?) is used in the first byte of a resource name, serious performance degradation will occur. It will be necessary to sequentially read the entire CSD, searching every resource name for a match. If the first byte of the name is alphabetic, skip-sequential processing is used.

To select all entries in the CSD, code GROUP(*).

Comparing Resources in Different CSD Files

If the JCL for file names DFHCSD and DFHCSD2 refer to different datasets, you need only code the command modifiers listed above with the COMPARE command. Following are a few examples:

File name 1 - CICS680.DFHCSD
File name 2 - CICS660.DFHCSD

COMPARE GROUP(WFXGRP1,WFXGRP2,WFXGRP3) Compare 3 groups

COMPARE	LIST(WFX1,WFX6)	Compare 2 lists
COMPARE	PROGRAM(WFX*) GROUP(WFXGRP)	All programs starting with WFX in one group
COMPARE	G(<2)	All groups ending in ‘2’
COMPARE	GROUP(*)	Compare all groups

No additional modifiers or commands are required unless you invoke the source generation feature, discussed below.

Comparing Resources in the Same CSD File

It follows that comparing resources in the same CSD means the group or list names will be different. COMPARE takes this into account and ignores these differences, concentrating only on the resources contained in each group.

The JCL for file names DFHCSD and DFHCSD2 must refer to the same dataset, and you must code the resource selection modifiers twice, preceding each with a DDNAME verb. Following are a few examples:

File name 1 - CICS680.DFHCSD
File name 2 - CICS680.DFHCSD

COMPARE	DDNAME(DFHCSD)	GROUP(GRP1,GRP2,GRP3) -	
	DDNAME(DFHCSD2)	GROUP(GRP5,GRP6,GRP7)	Compare GRP1 to GRP5, GRP2 to GRP6 GRP3 to GRP7
COMPARE	DDNAME(DFHCSD)	LIST(WFX1,WFX6) -	Compare list WFX1 to LGA1 WFX6 to LGA6
	DDNAME2(DFHCSD)	LIST(LGA1,LGA6)	
COMPARE	DDNAME(DFHCSD)	PROGRAM(WFX*) GROUP(WFXGRP) -	
	DDNAME(DFHCSD2)	PROGRAM(WFX*) GROUP(WFXGRP2)	
			All programs starting with WFX in two groups
COMPARE	DDNAME(DFHCSD)	G(<2) -	All groups ending in 2 to all ending in ‘3’.
	DDNAME(DFHCSD2)	G(<3)	

Note that the specification with DDNAME modifiers is still all one COMPARE statement. It is usually necessary to specify continuation with a trailing hyphen as in these examples.

The Differences Report

There are three types of resource differences printed in the comparison report.

1). Missing resource When comparing a group, there may be resources in one group that are not present in the other. These will be printed with a

message that refers to the file name (DFHCSD or DFHCSD2) from which the resource is missing.

2). Resource attributes When two resources match as far as the resource type, group and name, there can still be differences in the field values. In this case, the entire resource is printed one line at a time, first the data from CSD1, then the data from CSD2. Where differences occur, they are marked underneath the difference with asterisks.

3). Missing group For list compares and masked group compares, it may be the case that groups will be missing from one set or the other. In this case, the list of groups from each file is printed with differences marked with asterisks.

Following is a sample report of a list compare: (Print is adjusted to fit the page)

```
AUTOMON/RDO                 RESOURCE DEFINITION DIFFERENCES                 12/19/12   11:36

****************** COMPARING LIST(STSLIST) IN DFHCSD TO LIST(STSLIST) IN DFHCSD2 *************
LIST (STSLIST) IN DFHCSD IS NOT IDENTICAL TO LIST (STSLIST) IN DFHCSD2
COMPARE WILL PROCEED WITH MATCHING GROUPS AS SHOWN

          DFHCSD     BIMGRP   CAJGRP   FCTDGRP  FLEXGRP  HELPGRP  JUGLGRP  ******** RDOCGRP
          DFHCSD2    BIMGRP   CAJGRP   FCTDGRP  FLEXGRP  HELPGRP  JUGLGRP  RADGRP   RDOCGRP
          DFHCSD     ******** STSGRP   STSTGRP  TCTGRP   TDDGRP   TERMINST VENDGRP  ********
          DFHCSD2    RESGRP   STSGRP   STSTGRP  ******** TDDGRP   ******** VENDGRP  VTEXGRP
          DFHCSD     WNDOGRP  YHPGRP
          DFHCSD2    WNDOGRP  YHPGRP

GROUP DIFFERENCES FOUND           5

****************** COMPARING GROUP(BIMGRP) IN DFHCSD TO GROUP(BIMGRP) IN DFHCSD2 *************
GROUP DIFFERENCES FOUND           0

****************** COMPARING GROUP(CAJGRP) IN DFHCSD TO GROUP(CAJGRP) IN DFHCSD2 *************
MISSING RESOURCE FROM FILE DFHCSD:   MAPSET (TESTMAP) GROUP(CAJGRP)

          MAPSET(TESTMAP) GROUP(CAJGRP ) STATUS(ENABLED) RSL(0)


MISSING RESOURCE FROM FILE DFHCSD2:  PROFILE (ALTERNAT) GROUP(CAJGRP)

          PROFILE(ALTERNAT) GROUP(CAJGRP ) DVSUPRT(ALL) INBFMH(NO) LOGREC(NO)
          MSGINTEG(NO) MSGJRNL(NO) ONEWTE(NO) PRINTERCOMP(NO) PROTECT(NO) RAQ(NO)
          SCRNSIZE(ALTERNATE) JOURNAL(NO) NEPCLASS(0) RTIMOUT(NO)


MISSING RESOURCE FROM FILE DFHCSD2:  PROFILE (RTIMOUT) GROUP(CAJGRP)

          PROFILE(RTIMOUT) GROUP(CAJGRP ) DVSUPRT(ALL) INBFMH(NO) LOGREC(NO)
          MSGINTEG(NO) MSGJRNL(NO) ONEWTE(NO) PRINTERCOMP(NO) PROTECT(NO) RAQ(NO)
          SCRNSIZE(DEFAULT) JOURNAL(NO) NEPCLASS(0) RTIMOUT(2)


MISSING RESOURCE FROM FILE DFHCSD:   PROGRAM (ADSCR000) GROUP(CAJGRP)

          PROGRAM(ADSCR000) GROUP(CAJGRP ) LANGUAGE(ASSEMBLER) RELOAD(NO) RESIDENT(NO)
          STATUS(ENABLED) RSL(0)


GROUP DIFFERENCES FOUND          4

****************** COMPARING GROUP(FCTDGRP) IN DFHCSD TO GROUP(FCTDGRP) IN DFHCSD2 ***********
MISSING RESOURCE FROM FILE DFHCSD:   PROGRAM (DFHPLTH7) GROUP(FCTDGRP)

          PROGRAM(DFHPLTH7) GROUP(FCTDGRP) LANGUAGE(ASSEMBLER) RELOAD(NO) RESIDENT(NO)
          STATUS(ENABLED) RSL(0)


MISSING RESOURCE FROM FILE DFHCSD2:  PROGRAM (FCTDTEST) GROUP(FCTDGRP)
```

```
          PROGRAM(FCTDTEST) GROUP(FCTDGRP) LANGUAGE(ASSEMBLER) RELOAD(NO) RESIDENT(NO)
          STATUS(ENABLED) RSL(0)


MISSING RESOURCE FROM FILE DFHCSD2:  TRANSACTION (FTES) GROUP(FCTDGRP)

          TRANSACTION(FTES) GROUP(FCTDGRP) DUMP(YES) EXTSEC(NO) INDOUBT(BACKOUT)
          RESTART(NO) RSLC(NO) SPURGE(NO) STATUS(ENABLED) TPURGE(NO) TRACE(YES)
          DTIMOUT(NO) PRIMEDSIZE(0) PRIORITY(0) PROGRAM(FCTDTEST) PROFILE(DFHCICST)
          RSL(PUBLIC) TCLASS(NO) TWASIZE(1500)


TRANSACTION (TESP) GROUP(FCTDGRP) IN DFHCSD IS NOT IDENTICAL
TO TRANSACTION (TESP) GROUP(FCTDGRP) IN DFHCSD2

          DFHCSD    TRANSACTION(TESP) GROUP(FCTDGRP) DUMP(YES) EXTSEC(NO) INDOUBT(BACKOUT)
          DFHCSD2   TRANSACTION(TESP) GROUP(FCTDGRP) DUMP(YES) EXTSEC(NO) INDOUBT(BACKOUT)
          DFHCSD    RESTART(NO) RSLC(NO) SPURGE(NO) STATUS(ENABLED) TPURGE(NO) TRACE(YES)
          DFHCSD2   RESTART(NO) RSLC(NO) SPURGE(NO) STATUS(ENABLED) TPURGE(NO) TRACE(YES)
          DFHCSD    DTIMOUT(NO) PRIMEDSIZE(0) PRIORITY(0) PROGRAM(TESTPROG) PROFILE(DFHCICST)
          DFHCSD2   DTIMOUT(NO) PRIMEDSIZE(0) PRIORITY(0) PROGRAM(TESTPROG) PROFILE(DFHCICST)
          DFHCSD    RSL(PUBLIC) TCLASS(NO) TWASIZE(1500)
          DFHCSD2   RSL(PUBLIC) TCLASS(NO) TWASIZE(0)
                                                *****

MISSING RESOURCE FROM FILE DFHCSD2:  TRANSACTION (YTES) GROUP(FCTDGRP)

          TRANSACTION(YTES) GROUP(FCTDGRP) DUMP(YES) EXTSEC(NO) INDOUBT(BACKOUT)
          RESTART(NO) RSLC(NO) SPURGE(NO) STATUS(ENABLED) TPURGE(NO) TRACE(YES)
          DTIMOUT(NO) PRIMEDSIZE(0) PRIORITY(0) PROGRAM(FCTDTEST) PROFILE(DFHCICST)
          RSL(PUBLIC) TCLASS(NO) TWASIZE(0)


MISSING RESOURCE FROM FILE DFHCSD2:  TRANSACTION (ZTES) GROUP(FCTDGRP)

          TRANSACTION(ZTES) GROUP(FCTDGRP) DUMP(YES) EXTSEC(NO) INDOUBT(BACKOUT)
          RESTART(NO) RSLC(NO) SPURGE(NO) STATUS(ENABLED) TPURGE(NO) TRACE(YES)
          DTIMOUT(NO) PRIMEDSIZE(0) PRIORITY(0) PROGRAM(FCTDTEST) PROFILE(DFHCICST)
          RSL(PUBLIC) TCLASS(NO) TWASIZE(32)


GROUP DIFFERENCES FOUND           7

****************** COMPARING GROUP(FLEXGRP) IN DFHCSD TO GROUP(FLEXGRP) IN DFHCSD2 ***********
GROUP DIFFERENCES FOUND           0

****************** COMPARING GROUP(STSGRP) IN DFHCSD TO GROUP(STSGRP) IN DFHCSD2 *************
TYPETERM (SHIP3270) GROUP(STSGRP) IN DFHCSD IS NOT IDENTICAL
TO TYPETERM (SHIP3270) GROUP(STSGRP) IN DFHCSD2

   DFHCSD    TYPETERM(SHIP3270) GROUP(STSGRP ) APLKYBD(NO) APLTEXT(NO) ASCII(NO) ATI(YES)
   DFHCSD2   TYPETERM(SHIP3270) GROUP(STSGRP ) APLKYBD(NO) APLTEXT(NO) ASCII(NO) ATI(YES)
   DFHCSD    AUDIBLEALARM(YES) AUTOCONNECT(YES) AUTOPAGE(NO) BACKTRANS(NO) BRACKET(YES)
   DFHCSD2   AUDIBLEALARM(YES) AUTOCONNECT(YES) AUTOPAGE(NO) BACKTRANS(NO) BRACKET(YES)
   DFHCSD    BUILDCHAIN(NO) COLOR(NO) COPY(NO) CREATESESS(NO) DISCREQ(YES)
   DFHCSD2   BUILDCHAIN(NO) COLOR(NO) COPY(NO) CREATESESS(NO) DISCREQ(YES)
   DFHCSD    DUALCASEKYBD(NO) ERRCOLOR(NO) ERRHILIGHT(NO) ERRINTENSIFY(YES)
   DFHCSD2   DUALCASEKYBD(NO) ERRCOLOR(NO) ERRHILIGHT(NO) ERRINTENSIFY(YES)
   DFHCSD    ERRLASTLINE(YES) EXTENDEDDS(NO) FMHPARM(NO) FORMFEED(NO) HILIGHT(NO)
   DFHCSD2   ERRLASTLINE(YES) EXTENDEDDS(NO) FMHPARM(NO) FORMFEED(NO) HILIGHT(NO)
   DFHCSD    HORIZFORM(NO) KATAKANA(NO) LIGHTPEN(NO) LOGONMSG(NO) MSRCONTROL(NO)
   DFHCSD2   HORIZFORM(NO) KATAKANA(NO) LIGHTPEN(NO) LOGONMSG(NO) MSRCONTROL(NO)
   DFHCSD    OBFORMAT(NO) OBOPERID(NO) OUTLINE(NO) PARTITIONS(NO) PRINTADAPTER(NO)
   DFHCSD2   OBFORMAT(NO) OBOPERID(NO) OUTLINE(NO) PARTITIONS(NO) PRINTADAPTER(NO)
   DFHCSD    PROGSYMBOLS(NO) QUERY(NO) RELREQ(YES) ROUTEDMSGS(NONE) SHIPPABLE(YES)
   DFHCSD2   PROGSYMBOLS(NO) QUERY(NO) RELREQ(YES) ROUTEDMSGS(NONE) SHIPPABLE(YES)
   DFHCSD    SIGNOFF(YES) SOSI(NO) TEXTKYBD(NO) TEXTPRINT(NO) TTI(YES) UCTRAN(YES)
   DFHCSD2   SIGNOFF(YES) SOSI(NO) TEXTKYBD(NO) TEXTPRINT(NO) TTI(YES) UCTRAN(YES)
   DFHCSD    VALIDATION(NO) VERTICALFORM(NO) ALTPAGE(0,0) ALTSCREEN(0,0) CGCSGID(0,0)
   DFHCSD2   VALIDATION(NO) VERTICALFORM(NO) ALTPAGE(24,80) ALTSCREEN(24,80) CGCSGID(0,0)
                                             ************************************
   DFHCSD    DEFSCREEN(24,80) DEVICE(3270) IOAREALEN(512,512) NEPCLASS(0) PAGESIZE(24,80)
   DFHCSD2   DEFSCREEN(24,80) DEVICE(3270) IOAREALEN(512,512) NEPCLASS(0) PAGESIZE(24,80)
   DFHCSD    RECEIVESIZE(1920) SENDSIZE(0) TERMMODEL(2) USERAREALEN(255)
   DFHCSD2   RECEIVESIZE(1920) SENDSIZE(0) TERMMODEL(2) USERAREALEN(255)
```

```
TERMINAL (AAAA) GROUP(STSGRP) IN DFHCSD IS NOT IDENTICAL
TO TERMINAL (AAAA) GROUP(STSGRP) IN DFHCSD2

   DFHCSD    TERMINAL(AAAA) GROUP(STSGRP ) AUTINSTMODEL(ONLY) ALTPRINTCOPY(NO)
   DFHCSD2   TERMINAL(AAAA) GROUP(STSGRP ) AUTINSTMODEL(ONLY) ALTPRINTCOPY(NO)
   DFHCSD    ATTACHSEC(LOCAL) INSERVICE(YES) PRINTERCOPY(NO) OPERPRIORITY(0) OPERSECURITY(1)
   DFHCSD2   ATTACHSEC(LOCAL) INSERVICE(YES) PRINTERCOPY(NO) OPERPRIORITY(0) TASKLIMIT(NO)
                                                                             ***************
   DFHCSD    TASKLIMIT(NO) TERMPRIORITY(0) TYPETERM(SHIP3270)
   DFHCSD2   TERMPRIORITY(0) TYPETERM(SHIP3270)
             **********************************************

GROUP DIFFERENCES FOUND           2
```

Generating Source Alignment Commands

In addition to producing a report of differences, COMPARE can also generate CEDA commands to be applied to one CSD or the other in order to make the two compared entities identical. These commands can then be input to the DFHCSDUP utility or can be output to an Export Control Queue, where the commands can be executed online.

This is accomplished with one of two OPTIONS statements and an additional command modifier. The two OPTIONS are:

1). GENCSD - Generate commands to update the DFHCSD file.
2). GENCSD2 - Generate commands to update the DFHCSD2 file.

If either of these options is coded with no additional command modifiers, the source command statements will be output to the SYSPCH file. This can be a PDS member or sequential file in MVS or the POWER punch queue in VSE.

To output the command statements to an export control queue, an additional command modifier is required on the COMPARE command (not on the OPTIONS statement). The modifier is:

QUEUE(xxxxxxxx) where xxxxxxxx is the name to be used for the control queue.

For example, the following statements:

OPTIONS GENCSD

COMPARE GROUP(WFX*) QUEUE(WFXQUE)

would compare all groups beginning with WFX and generate CEDA command statements to update file DFHCSD in order to make the groups equal. These commands would be stored in a control queue named WFXQUE. This queue could then be RETRIEVED, using the Export menu and executed, routing the commands to one or more target CICS systems. (For more information on export control queues, see *EXPORT*, in chapter 8, or *CHANGE MANAGEMENT*, chapter 9.)

In the report example above, if OPTIONS GENCSD2 were coded, the command statements output would appear as follows:

REMOVE GROUP(*) LIST(STSLIST)
ADD GROUP(BIMGRP) LIST(STSLIST)
ADD GROUP(CAJGRP) LIST(STSLIST)
ADD GROUP(FCTDGRP) LIST(STSLIST)
ADD GROUP(FLEXGRP) LIST(STSLIST)

```
ADD    GROUP(HELPGRP)  LIST(STSLIST)
ADD    GROUP(JUGLGRP)  LIST(STSLIST)
ADD    GROUP(RDOCGRP)  LIST(STSLIST)
ADD    GROUP(STSGRP)   LIST(STSLIST)
ADD    GROUP(STSTGRP)  LIST(STSLIST)
ADD    GROUP(TCTGRP)   LIST(STSLIST)
ADD    GROUP(TDDGRP)   LIST(STSLIST)
ADD    GROUP(TERMINST) LIST(STSLIST)
ADD    GROUP(VENDGRP)  LIST(STSLIST)
ADD    GROUP(WNDOGRP)  LIST(STSLIST)
ADD    GROUP(YHPGRP)   LIST(STSLIST)
DELETE MAPSET (TESTMAP) GROUP(CAJGRP)
DEFINE PROFILE(ALTERNAT) GROUP(CAJGRP) DVSUPRT(ALL) INBFMH(NO)
    LOGREC(NO) MSGINTEG(NO) MSGJRNL(NO) ONEWTE(NO)
    PRINTERCOMP(NO) PROTECT(NO) RAQ(NO) SCRNSIZE(ALTERNATE)
    JOURNAL(NO) NEPCLASS(0) RTIMOUT(NO)
DEFINE PROFILE(RTIMOUT) GROUP(CAJGRP) DVSUPRT(ALL) INBFMH(NO)
    LOGREC(NO) MSGINTEG(NO) MSGJRNL(NO) ONEWTE(NO)
    PRINTERCOMP(NO) PROTECT(NO) RAQ(NO) SCRNSIZE(DEFAULT)
    JOURNAL(NO) NEPCLASS(0) RTIMOUT(2)
DELETE PROGRAM (ADSCR000) GROUP(CAJGRP)
DELETE PROGRAM (DFHPLTH7) GROUP(FCTDGRP)
DEFINE PROGRAM(FCTDTEST) GROUP(FCTDGRP) LANGUAGE(ASSEMBLER)
    RESIDENT(NO) STATUS(ENABLED) RSL(0) RELOAD(NO)
DEFINE TRANSACTION(CTES) GROUP(FCTDGRP) DUMP(YES) EXTSEC(NO)
    INDOUBT(BACKOUT) RESTART(NO) RSLC(NO) SPURGE(NO)
    STATUS(ENABLED) TPURGE(NO) TRACE(YES) DTIMOUT(NO)
    PRIORITY(0) PROGRAM(FCTDTES1) PROFILE(DFHCICST) RSL(PUBLIC)
    TCLASS(NO) TWASIZE(0) PRIMEDSIZE(0)
DEFINE TRANSACTION(FTES) GROUP(FCTDGRP) DUMP(YES) EXTSEC(NO)
    INDOUBT(BACKOUT) RESTART(NO) RSLC(NO) SPURGE(NO)
    STATUS(ENABLED) TPURGE(NO) TRACE(YES) DTIMOUT(NO)
    PRIORITY(0) PROGRAM(FCTDTEST) PROFILE(DFHCICST) RSL(PUBLIC)
    TCLASS(NO) TWASIZE(1500) PRIMEDSIZE(0)
ALTER  TRANSACTION(TESP) GROUP(FCTDGRP) DUMP(YES) EXTSEC(NO)
    INDOUBT(BACKOUT) RESTART(NO) RSLC(NO) SPURGE(NO)
    STATUS(ENABLED) TPURGE(NO) TRACE(YES) DTIMOUT(NO)
    PRIORITY(0) PROGRAM(TESTPROG) PROFILE(DFHCICST) RSL(PUBLIC)
    TCLASS(NO) TWASIZE(1500) PRIMEDSIZE(0)
DEFINE TRANSACTION(YTES) GROUP(FCTDGRP) DUMP(YES) EXTSEC(NO)
    INDOUBT(BACKOUT) RESTART(NO) RSLC(NO) SPURGE(NO)
    STATUS(ENABLED) TPURGE(NO) TRACE(YES) DTIMOUT(NO)
    PRIORITY(0) PROGRAM(FCTDTEST) PROFILE(DFHCICST) RSL(PUBLIC)
    TCLASS(NO) TWASIZE(0) PRIMEDSIZE(0)
DEFINE TRANSACTION(ZTES) GROUP(FCTDGRP) DUMP(YES) EXTSEC(NO)
    INDOUBT(BACKOUT) RESTART(NO) RSLC(NO) SPURGE(NO)
    STATUS(ENABLED) TPURGE(NO) TRACE(YES) DTIMOUT(NO)
    PRIORITY(0) PROGRAM(FCTDTEST) PROFILE(DFHCICST) RSL(PUBLIC)
    TCLASS(NO) TWASIZE(32) PRIMEDSIZE(0)
ALTER  TYPETERM(SHIP3270) GROUP(STSGRP) APLKYBD(NO) APLTEXT(NO)
    ASCII(NO) ATI(YES) AUDIBLEALARM(YES) AUTOCONNECT(YES)
    AUTOPAGE(NO) BACKTRANS(NO) BRACKET(YES) BUILDCHAIN(NO)
    COLOR(NO) COPY(NO) CREATESESS(NO) DISCREQ(YES)
    DUALCASEKYBD(NO) ERRCOLOR(NO) ERRHILIGHT(NO)
    ERRLASTLINE(YES) EXTENDEDDS(NO) FMHPARM(NO) FORMFEED(NO)
```

HILIGHT(NO) HORIZFORM(NO) KATAKANA(NO) LIGHTPEN(NO)
LOGONMSG(NO) MSRCONTROL(NO) OBFORMAT(NO) OBOPERID(NO)
OUTLINE(NO) PARTITIONS(NO) PRINTADAPTER(NO)
QUERY(NO) RELREQ(YES) ROUTEDMSGS(NONE) SHIPPABLE(YES)
SIGNOFF(YES) SOSI(NO) TEXTKYBD(NO) TEXTPRINT(NO) TTI(YES)
UCTRAN(YES) VALIDATION(NO) VERTICALFORM(NO) ALTPAGE(0,0)
ALTSCREEN(0,0) CGCSGID(0,0) DEFSCREEN(24,80) DEVICE(3270)
IOAREALEN(512,512) NEPCLASS(0) PAGESIZE(24,80)
RECEIVESIZE(1920)SENDSIZE(0) TERMMODEL(2) USERAREALEN(255)
PROGSYMBOLS(NO) ERRINTENSIFY(YES)

ALTER TERMINAL(AAAA) GROUP(STSGRP) AUTINSTMODEL(ONLY)
ALTPRINTCOPY(NO) ATTACHSEC(LOCAL) INSERVICE(YES)
PRINTERCOPY(NO) OPERPRIORITY(0) OPERSECURITY(1)
TERMPRIORITY(0) TYPETERM(SHIP3270) TASKLIMIT(NO)

Options of the Compare Command

Six verbs are available on the OPTIONS statement for use with the COMPARE command:

1). GENCSD — Generate CEDA commands to update DFHCSD.

2). GENCSD2 — Generate CEDA commands to update DFHCSD2.

3). MSGONLY — Print messages only. Do not print the full resources.

4). NAMEONLY — When comparing lists or masked groups, only print the group name comparison. Do not proceed to compare all the resources affected.

5). SORTLIST — When comparing lists, sort the list to alphabetic sequence before beginning the compare. Lists are often kept in non-alphabetic sequence, which can cause COMPARE to report a missing group from one list, when, in fact, the group is there, just in a different position. Sorting the list first will maximize the number of matching group names in the lists.

6). ONEPER — Designates one mnemonic and value per line. With this option, Missing resources will print one value per line, and the CEDA output commands will generate one value per line instead of the compressed format illustrated above.

Queue Handling Commands

Four batch commands are available for handling export control queues. These are:

QPRINT - Print a report of one or more queues, listing all queue attributes and all commands in the queue, along with any error messages that occurred at execution of the queue.

QUNLOAD - Create a sequential file of CEDA commands from one or more control queues. This file is output to a sequential file (MVS PDS member or VSE punch queue) to be input to the DFHCSDUP utility.

QDELETE - Delete one or more control queues.

QCOPY - Copy one or more queues to another VSAM file.

JCL File Names for the Queue Commands

The input file (DDNAME) for all Queue commands is RDO$FIL. If the command is QDELETE, this file is opened as output, so it must be closed in CICS.

The output VSAM file (DDNAME), only used for QCOPY, is RDO$OUT. It must not be open in CICS. This file must have the same VSAM attributes as the AUTOMON/RDO supplemental file, RDO$FIL.

The sequential output file for QUNLOAD is SYSPCH. For MVS, this can be a PDS member or a QSAM file. For VSE it is the POWER punch queue.

Command Modifiers for the Queue Commands

Each of the four queue commands operates in the same way. One or more command modifiers are used to specify the select criteria, that is, what queue(s) are to be selected for this operation. Operands are:

QUEUE(xxxxxxxx) - Select queue by queue name
USERID(xxxxxxxx) - Select queue by user id
CONTROL(xxxxxxxx) - Select queue by control id
APPROVAL(xxxxxxxx) - Select queue by approval code
APPROVAL(*) - Select all approved queues
REPLACE(Y or N) - Replace option for QCOPY
EXECUTED(Y or N) - Select if executed or not
STATUS(Successful) - Select if successful execution
STATUS(Unsuccessful) - Select if unsuccessful execution
DATE(Create) - Select on create date
DATE(Executed) - Select on execution date
FROM(mmddyy) - From date selection
THRU(mmddyy) - Through date selection

[Note.] The xxxxxxxx in each occurrence above can be specified as a mask.

Multiple operands may be specified, in which case it designates an AND condition. That is, all selection criteria must be met before the queue will be selected.

Examples:

QPRINT	QUEUE(LGA*)	Print all queues beginning with LGA.
QPRINT	CONTROL(10590) EXECUTED(Y)	Print all executed queues with control ID 10590.
QUNLOAD	STATUS(S)	Unload all queues with successful execution status.
QCOPY	DATE(CREATE) FROM(011596) - THRU(020196) REPLACE(YES)	Copy all queues created from 01/15/96 through 02/01/96
QDELETE	CONTROL(<20) APPROVAL(*) - EXECUTED(NO)	Delete all approved queues not yet executed with control ID ending in '20'.

Options of the Queue Commands

One verb is available on the OPTIONS statement for use with the queue commands:

1). ONEPER — Designates one mnemonic and value per line. With this option, commands listed with QPRINT will print one value per line, and the output commands generated by QUNLOAD will have one value per line instead of the compressed format.

EXECUTE Command

The EXECUTE command (which may be abbreviated as 'E' or any number of characters in the command) is only available for MVS. It can be used to route one or more CEDA or CEMT commands to one or more CICS regions. It functions like EXPORT, using SYSIN statements to control the operation.

EXECUTE requires the following files for operation:

RDO$FIL The supplemental file containing preference records and export queues.

DFHCSD This DD statement should point to the CSD that is to receive the routed CEDA commands. It is used to read the release control record to determine the CICS release of the target system.

The operator is 'EXECUTE, starting in any position, followed by at least one space, then any or none of the following modifiers:

APPLID(xxxxxxxx) The CICS applid of the target CICS system where the commands are to be routed. Only one target may be specified with the APPLID modifier. If multiple targets are desired, an application target list must be used.

TLIST(nn) This is sequence number of an Application Target List Preference record. Up to 64 CICS applids can be specified in a target list.

TRANSACTION(xxxx) The EXECUTE command uses EXCI to connect to the target CICS system. EXCI requires a transaction code which points to the DFHMIRS program in order to operate. If the TRANSACTION modifier is omitted, CICS will use the mirror transaction, CSMI.

AUTOMON/RDO is supplied with a transaction for use with EXCI, called RTSO. This trancode is used by the TSO interface, but it works equally well for EXECUTE.

Code RTSO as the transaction code to use, or copy the RTSO transaction resource giving it a different name, or omit this modifier to use CSMI.

QUEUE(xxxxxxxx) If the command(s) to be routed are not contained in the SYSIN dataset, you must designate the name of a saved export queue which contains the commands. Export queues are created online with the Export function, or they may be created by GENSRC or COMPARE with the batch utility.

The named export queue must reside in the VSAM file referenced by the DD statement for RDO$FIL.

UPDATE(NO | YES | applid)

This modifier is only valid when the QUEUE modifier is also in use, designating an export queue to be routed to a CICS system.

UPDATE denotes the logic to be used to post the execution status in the queue record.

When a queue executes, if all commands completed successfully, the queue is marked SUCCESSFUL in the execution status field. If any command fails, it is set to UNSUCCESSFUL.

There are three choices for the UPDATE modifier:

1). NO Do not update the queue record with the execution status.

2). YES Update the queue record in the RDO$FIL referenced the DD name for that file in this batch jobstream. If YES is coded, the file must be closed online.

3). Applid This choice avoids the necessity of closing RDO$FIL online. Code the applid of the CICS region which owns the RDO$FIL where the export queue resides. It does not have to be the same applid as the target CICS system.

When Applid is coded, the updating of the queue execution status is done on-line in the designated CICS system. Since the batch program does not need to write to RDO$FIL in this scenario, the file can be open in the CICS region when the batch job is run.

Coding CEDA Commands in the SYSIN Dataset

To route CEDA commands in SYSIN, rather than using an export queue, simply follow the EXECUTE control statement with the first command to be routed. Syntax is the same as that used for DFHCSDUP. That is, the command must begin in position one, followed by mnemonics and values in parentheses. Continuation is accomplished by starting the continued line anywhere other than position one.

Following is an example:

```
//LGAEXEC  JOB 1,UNICOM,MSGCLASS=X,CLASS=A,NOTIFY=LGA
//STEP1        EXEC PGM=RDOBATCH,REGION=2M
//SYSPRINT     DD  SYSOUT=*
//SYSUDUMP     DD  SYSOUT=*
//STEPLIB      DD  DSN=AUTOMON.RDO.V430.MVS.LOADLIB
//             DD  DSN=CICS6.SDFHEXCI,DISP=SHR                  [Note 1]
//RDO$FIL      DD  DSN=CICS670.RDO43.CONTROL.FILE,DISP=SHR      [Note 2]
//DFHCSD       DD  DSN=CICS680.DFHCSD,DISP=SHR                  [Note 3]
//SYSIN        DD  *
EXECUTE APPLID(CICS670) TRAN(RTSO)                              [Note 4]
DELETE GROUP(LGAGRP) ALL(*)
DEFINE TYPETERM(LGATYPE) GROUP(LGAGRP) APLKYBD(NO)
        APLTEXT(NOATI(NO) AUDIBLEALARM(NO) AUTOCONNECT(NO)
        AUTOPAGE(NO)  BACKTRANS(NO) BRACKET(YES) BUILDCHAIN(NO)
        COLOR(NO) COPY(NO)  DISCREQ(YES) DUALCASEKYBD(NO)
        ERRCOLOR(NO) ERRHILIGHT(NO)  ERRINTENSIFY(NO)
```

```
        ERRLASTLINE(NO) EXTENDEDDS(NO) FMHPARM(NO)
        FORMFEED(NO) HILIGHT(NO) HORIZFORM(NO) KATAKANA(NO)
        LIGHTPEN  (NO) LOGONMSG(NO) MSRCONTROL(NO)
        OBFORMAT(NO) OBOPERID(NO)  OUTLINE(NO) PARTITIONS(NO)
        PRINTADAPTER(NO) PROGSYMBOLS(NO)  QUERY(NO)
        RECOVNOTIFY(NONE) RECOVOPTION(SYSDEF) RELREQ(NO)
        ROUTEDMSGS(NO) SHIPPABLE(NO) SIGNOFF(YES) SOSI(NO)
        TEXTKYBD  (NO) TEXTPRINT(NO) TTI(YES) UCTRAN(NO)
        VALIDATION(NO)  VERTICALFORM(NO) XRFSIGNOFF(NOFORCE)
        DEVICE(3270) NEPCLASS(0)  RECEIVESIZE(0) SENDSIZE(0)
        TERMMODEL(2) USERAREALEN(0)
DEFINE PROGRAM(LGATEST) GROUP(LGAGRP) LANGUAGE(C) RELOAD(NO)
        USAGE(NORMAL) USELPACOPY(NO) STATUS(ENABLED) CEDF(YES)
        DATALOCATION(BELOW) EXECKEY(USER)
        EXECUTIONSET(FULLAPI)  DESCRIPTION(TEST PROGRAM)
        RESIDENT(NO) INSTALL PROGRAM(LGATEST) GROUP(LGAGRP)
/*
```

Notes.

1) The STEPLIB must include the CICS load library containing EXCI modules as well as the load library containing the RDOBATCH program..

2) Even though this example is not routing an export queue, the DD statement for RDO$FIL must be present. The batch processor opens the file, though it will not be used for this example.

3) This is the CSD of the receiving CICS system. It will be opened for input, so it can be open in the online CICS region.

4) A single target system is specified, using the distributed transaction code for EXCI, which is RTSO.

Routing an Export Queue

To route CEDA commands from an export queue, first create the queue by any available means and save it in the supplemental file. Code the JCL as in the following example:

```
//LGAEXEC  JOB 1,UNICOM,MSGCLASS=X,CLASS=A,NOTIFY=LGA
//STEP1        EXEC PGM=RDOBATCH,REGION=2M
//SYSPRINT     DD  SYSOUT=*
//SYSUDUMP     DD  SYSOUT=*
//STEPLIB      DD  AUTOMON.RDO.V430.MVS.LOADLIB,
//                 DISP=SHR
//           DD  DSN=CICS6.SDFHEXCI,DISP=SHR                  [Note 1]
//RDO$FIL      DD  DSN=CICS670.RDO43.CONTROL.FILE,DISP=SHR   [Note 2]
//DFHCSD       DD  DSN=CICS680.DFHCSD,DISP=SHR                [Note 3]
//SYSIN        DD  *
EXECUTE QUEUE(BAT1QUE) TLIST(01) UPDATE(CICS670)             [Note 4]
//
```

Notes.

1) The STEPLIB must include the CICS load library containing EXCI modules as well as the load library containing the RDOBATCH program..

2) This DD statement must point to the supplemental file where the export queue was saved. In this example, the queue was created in a CICS670 region.

3) This is the CSD of the receiving CICS system. It will be opened for input, so it can be open in the online CICS region.

4) Multiple target systems are specified by designating TLIST(01). There must be an application target list Preference record in RDO$FIL which names the target applids. The UPDATE modifier will cause the execution status of the queue to be updated online in the CICS670 region. No TRANSACTION was specified, so CSMI will be used for EXCI.

Execution Results Report

The results of any EXECUTE attempt are summarized in a report. Each command that was attempted is listed in its entirety, followed by a summary showing the results for each target system.

Following is an example of such a report. (The listing is adjusted to fit the page). In this example, an export queue was routed to five targets, a CICS TS 3.1 system (CICS640), a CICS TS 3.2 system (CICS650), a CICS TS 4.1 system (CICS660), a CICS TS 4.2 system (CICS670) and a CICS TS 5.1 system (CICS680). All commands executed successfully except five. These were the MQCONN, JVMSERVER and BUNDLE resources in the queue, which were rejected by CEDA in the CICS TS 3.1 and 3.2 systems, since these CICS versions do not support these resources and the LIBRARY and IPCONN resources in the queue which were rejected by CEDA in the CICS TS 3.1 system for the same reason.

```
CICS RELEASE(6.7)
EXECUTE TLIST(01) QUEUE(BAT1QUE) UPDATE(CICS670)
DEFINE   CONNECTION(R660) GROUP(TESTBAT1) ACCESSMETHOD(IRC) ATTACHSEC(LOCAL)
         AUTOCONNECT(NO ) DATASTREAM(USER) INSERVICE(YES)
         RECORDFORMAT(U) SINGLESESS(NO ) BINDSECURITY(NO ) USEDFLTUSER(NO )
         XLNACTION(KEEP) QUEUELIMIT(NO ) MAXQTIME(NO )
         NETNAME(CICS660) DESCRIPTION(TEST CONNECTION RESOURCE)
DEFINE   CORBASERVER(COB1) GROUP(TESTBAT1) AUTOPUBLISH(NO ) STATUS(ENABLED)
         DESCRIPTION(Test CORBASERVER 1) JNDIPREFIX(jndiprefix)
         SESSBEANTIME(1,12,13) SHELF(/var/cicsts) DJARDIR(/djar/dir/)
         HOST(localhostaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaab
         bbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbccccccc
         cccccccccccccccccccccccccccccccccccccccccccccccccccccccccdeeeeeeeeeeeeee
         eeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee)
         CERTIFICATE(testcert) UNAUTH(TEST1) SSLUNAUTH(SSLUNAUT)
         ASSERTED(ASSERTED)
         CIPHERS(ABCDEF789012345678901234567890123456789012345678901234567890123456)
DEFINE   CORBASERVER(COB2) GROUP(TESTBAT1) AUTOPUBLISH(NO ) STATUS(ENABLED)
         DESCRIPTION(Test CORBASERVER 1) JNDIPREFIX(jndiprefix)
         SESSBEANTIME(1,12,13) SHELF(/var/cicsts) DJARDIR(/djar/dir/)
         HOST(localhost) CERTIFICATE(testcert) UNAUTH(TEST1)
         SSLUNAUTH(SSLUNAUT) ASSERTED(ASSERTED)
         CIPHERS(ABCDEF789012345678901234567890123456789012345678901234567890123456)
DEFINE   DJAR(DJAR1) GROUP(TESTBAT1) DESCRIPTION(This is a TEST AGAIN)
         CORBASERVER(COB1) HFSFILE(test.hfs)
DEFINE   LSRPOOL(LSRPOOL1) GROUP(TESTBAT1) DESCRIPTION(TEST LSRPOOL RESOURCE)
         LSRPOOLNUM(129) DATA32K(3) INDEX32K(3) HSDATA32K(3)
         HSINDEX32K(3)
DEFINE   FILE(FILE1) GROUP(TESTBAT1) DSNSHARING(ALLREQS) STATUS(ENABLED)
         OPENTIME(FIRSTREF) DISPOSITION(SHARE) ADD(NO ) BROWSE(NO )
         DELETE(NO ) READ(YES) UPDATE(NO ) TABLE(CF) RECORDFORMAT(V)
         JNLREAD(NONE) JNLSYNCREAD(NO ) JNLUPDATE(NO ) JNLADD(NONE)
         JNLSYNCWRITE(YES) RECOVERY(NONE) BACKUPTYPE(STATIC) RLSACCESS(NO )
         READINTEG(UNCOMMITTED) LOAD(YES) UPDATEMODEL(LOCKING)
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         DESCRIPTION(tHIS IS A TEST AGAIN) DSNAME(CSH9.JUNK) LSRPOOLNUM(NO )
         STRINGS(1) DATABUFFERS(2) INDEXBUFFERS(1)
         MAXNUMRECS(NO ) JOURNAL(NO ) FWDRECOVLOG(NO ) CFDTPOOL(POOLTEST)
DEFINE   JOURNALMODEL(JOURN1) GROUP(TESTBAT1) TYPE(DUMMY) JOURNALNAME(JOURNAL1)
         DESCRIPTION(THIS IS A TEST AGAIN)
DEFINE   MAPSET(MAPSET1) GROUP(TESTBAT1) STATUS(ENABLED) RESIDENT(NO )
         USAGE(NORMAL) USELPACOPY(NO )
         DESCRIPTION(THIS IS A TEST AGAIN)
DEFINE   PARTITIONSET(PARTSET1) GROUP(TESTBAT1) STATUS(ENABLED) RESIDENT(NO )
         USAGE(NORMAL) USELPACOPY(NO )
         DESCRIPTION(THIS IS A TEST AGAIN)
DEFINE   PARTNER(PARTNER1) GROUP(TESTBAT1) DESCRIPTION(THIS IS A TEST AGAIN)
         NETNAME(CICS650) TPNAME(TP650)
DEFINE   PROFILE(PROFILE1) GROUP(TESTBAT1) DVSUPRT(ALL) INBFMH(NO ) LOGREC(NO )
         MSGINTEG(NO ) MSGJRNL(NO ) ONEWTE(NO )
         PRINTERCOMP(NO ) RAQ(NO ) SCRNSIZE(DEFAULT) CHAINCONTROL(NO )
         UCTRAN(NO ) JOURNAL(NO ) NEPCLASS(0) RTIMOUT(NO )
         DESCRIPTION(THIS IS A TEST AGAIN)
DEFINE   PROGRAM(TESTPGM1) GROUP(TESTBAT1) LANGUAGE(ASSEMBLER) RELOAD(NO )
         RESIDENT(NO ) USAGE(NORMAL) USELPACOPY(NO )
         STATUS(ENABLED) CEDF(YES) DATALOCATION(BELOW) EXECKEY(CICS)
         EXECUTIONSET(FULLAPI) DYNAMIC(NO ) CONCURRENCY(THREADSAFE)
         JVM(NO ) DESCRIPTION(TEST PROGRAM 1 AGAIN) JVMSERVER(JVMSERV2)
DEFINE   PROGRAM(TESTPGM4) GROUP(TESTBAT1) LANGUAGE(COBOL) RELOAD(NO )
         RESIDENT(NO ) USAGE(NORMAL) USELPACOPY(NO ) STATUS(ENABLED)
         CEDF(YES) DATALOCATION(BELOW) EXECKEY(USER) EXECUTIONSET(FULLAPI)
         DYNAMIC(NO ) CONCURRENCY(QUASIRENT) JVM(NO ) TRANSID(TSX4
DEFINE   SESSIONS(SESSION1) GROUP(TESTBAT1) AUTOCONNECT(NO ) BUILDCHAIN(YES)
         DISCREQ(NO ) PROTOCOL(APPC) RECOVOPTION(SYSDEFAULT)
         RELREQ(NO ) CONNECTION(C650) IOAREALEN(0,0) MAXIMUM(1,0) NEPCLASS(0)
         RECEIVESIZE(4096) SENDSIZE(4096) SESSPRIORITY(0)
         USERAREALEN(0) DESCRIPTION(THIS IS A TEST AGAIN)
DEFINE   TYPETERM(TYPETRM1) GROUP(TESTBAT1) APLKYBD(NO ) APLTEXT(NO ) ASCII(NO)
         ATI(NO ) AUDIBLEALARM(YES) AUTOCONNECT(NO )
         AUTOPAGE(NO ) BACKTRANS(YES) BRACKET(YES) BUILDCHAIN(NO ) COLOR(YES)
         COPY(YES) CREATESESS(NO ) DISCREQ(YES)
         DUALCASEKYBD(YES) ERRCOLOR(YELLOW) ERRHILIGHT(REVERSE)
         ERRINTENSIFY(YES) ERRLASTLINE(YES) EXTENDEDDS(YES) FMHPARM(NO )
         FORMFEED(YES) HILIGHT(YES) HORIZFORM(YES) KATAKANA(YES) LIGHTPEN(YES)
         LOGONMSG(NO ) MSRCONTROL(YES) OBFORMAT(YES)
         OBOPERID(NO ) OUTLINE(YES) PARTITIONS(YES) PRINTADAPTER(YES)
         PROGSYMBOLS(YES) QUERY(ALL) RECOVNOTIFY(NONE)
         RECOVOPTION(SYSDEFAULT) RELREQ(NO ) ROUTEDMSGS(NONE) SHIPPABLE(NO )
         SIGNOFF(YES) SOSI(YES) TEXTKYBD(YES) TEXTPRINT(YES)
         TTI(YES) UCTRAN(NO ) VALIDATION(YES) VERTICALFORM(YES)
         RSTSIGNOFF(NOFORCE) ALTPAGE(0,0) ALTSCREEN(0,0) CGCSGID(0,0)
         DEFSCREEN(24,80) DEVICE(3270) IOAREALEN(0,0) NEPCLASS(0)
         PAGESIZE(24,80) RECEIVESIZE(0) SENDSIZE(0) TERMMODEL(2)
         USERAREALEN(0)
DEFINE   TERMINAL(TERM) GROUP(TESTBAT1) AUTINSTMODEL(NO ) ALTPRINTCOPY(NO )
         ATTACHSEC(LOCAL) INSERVICE(YES) PRINTERCOPY(NO )
         BINDSECURITY(NO ) USEDFLTUSER(NO ) NETNAME(TERM) TASKLIMIT(NO )
         TERMPRIORITY(0) TYPETERM(T123) CONSNAME(CONSNAME) NATLANG(E
         DESCRIPTION(THIS IS A TEST AGAIN)
DEFINE   TRANCLASS(TRAN1) GROUP(TESTBAT1) DESCRIPTION(THIS IS A TEST AGAIN)
         MAXACTIVE(0) PURGETHRESH(NO )
DEFINE   TRANSACTION(TST1) GROUP(TESTBAT1) DUMP(YES) RESTART(NO ) SPURGE(NO )
         STATUS(ENABLED) TPURGE(NO ) TRACE(YES)
         TASKDATALOC(BELOW) TASKDATAKEY(USER) DYNAMIC(NO ) RESSEC(NO )
         CMDSEC(NO ) STORAGECLEAR(NO ) SHUTDOWN(DISABLED) ISOLATE(YES)
         CONFDATA(NO ) ACTION(BACKOUT) WAIT(YES) ROUTABLE(NO ) DTIMOUT(NO )
         PRIORITY(1) PROGRAM(TESTPGM1) PROFILE(DFHCICST)
         TWASIZE(0) WAITTIME(0,0,0) TRANCLASS(DFHTCL00) RUNAWAY(SYSTEM)
         DESCRIPTION(tHIS IS A TEST AGAIN) OTSTIMEOUT(NO )
DEFINE   TRANSACTION(TSX1) GROUP(TESTBAT1) DUMP(YES) RESTART(NO ) SPURGE(NO )
         STATUS(ENABLED) TPURGE(NO ) TRACE(YES)
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         TASKDATALOC(BELOW) TASKDATAKEY(USER) DYNAMIC(NO ) RESSEC(NO )
         CMDSEC(NO ) STORAGECLEAR(NO ) SHUTDOWN(DISABLED) ISOLATE(YES)
         CONFDATA(NO ) ACTION(BACKOUT) WAIT(YES) ROUTABLE(NO ) DTIMOUT(NO )
         PRIORITY(1) PROGRAM(TESTPGM1) PROFILE(DFHCICST)
         TWASIZE(0) WAITTIME(0,0,0) TRANCLASS(DFHTCL00) RUNAWAY(SYSTEM)
         DESCRIPTION(tHIS IS A TEST AGAIN) OTSTIMEOUT(NO )
DEFINE   TRANSACTION(TSX4) GROUP(TESTBAT1) DUMP(YES) RESTART(NO ) SPURGE(NO )
         STATUS(ENABLED) TPURGE(NO ) TRACE(YES)
         TASKDATALOC(BELOW) TASKDATAKEY(USER) DYNAMIC(NO ) RESSEC(NO )
         CMDSEC(NO ) STORAGECLEAR(NO ) SHUTDOWN(DISABLED) ISOLATE(YES)
         CONFDATA(NO ) ACTION(BACKOUT) WAIT(YES) ROUTABLE(NO ) DTIMOUT(NO )
         PRIORITY(1) PROGRAM(TESTPGM4) PROFILE(DFHCICST)
         TWASIZE(0) WAITTIME(0,0,0) TRANCLASS(DFHTCL00) RUNAWAY(SYSTEM)
         OTSTIMEOUT(NO )
DEFINE   ENQMODEL(ENQMOD1) GROUP(TESTBAT1) STATUS(ENABLED) ENQNAME(TEST)
         DESCRIPTION(THIS IS A TEST AGAIN)
DEFINE   LIBRARY(LIBR001) GROUP(TESTBAT1) STATUS(DISABLED) CRITICAL(YES)
         DESCRIPTION(Test LIBRARY 01) RANKING(1)
         DSNAME01(DSNAME01.AAAAAAAA.BBBBBBBB.CCCCCCCC.DDDDDDD1)
         DSNAME02(DSNAME02.AAAAAAAA.BBBBBBBB.CCCCCCCC.DDDDDDD2)
         DSNAME03(DSNAME03.AAAAAAAA.BBBBBBBB.CCCCCCCC.DDDDDDD3)
         DSNAME04(DSNAME04.AAAAAAAA.BBBBBBBB.CCCCCCCC.DDDDDDD4)
         DSNAME05(DSNAME05.AAAAAAAA.BBBBBBBB.CCCCCCCC.DDDDDDD5)
         DSNAME06(DSNAME06.AAAAAAAA.BBBBBBBB.CCCCCCCC.DDDDDDD6)
         DSNAME07(DSNAME07.AAAAAAAA.BBBBBBBB.CCCCCCCC.DDDDDDD7)
         DSNAME08(DSNAME08.AAAAAAAA.BBBBBBBB.CCCCCCCC.DDDDDDD8)
         DSNAME09(DSNAME09.AAAAAAAA.BBBBBBBB.CCCCCCCC.DDDDDDD9)
         DSNAME10(DSNAME10.AAAAAAAA.BBBBBBBB.CCCCCCCC.DDDDDDD0)
         DSNAME11(DSNAME11.AAAAAAAA.BBBBBBBB.CCCCCCCC.DDDDDDDA)
         DSNAME12(DSNAME12.AAAAAAAA.BBBBBBBB.CCCCCCCC.DDDDDDDB)
         DSNAME13(DSNAME13.AAAAAAAA.BBBBBBBB.CCCCCCCC.DDDDDDDC)
         DSNAME14(DSNAME14.AAAAAAAA.BBBBBBBB.CCCCCCCC.DDDDDDDD)
         DSNAME15(DSNAME15.AAAAAAAA.BBBBBBBB.CCCCCCCC.DDDDDDDE)
         DSNAME16(DSNAME16.AAAAAAAA.BBBBBBBB.CCCCCCCC.DDDDDDDF)
DEFINE   MQCONN(MQCONN01) GROUP(TESTBAT1) RESYNCMEMBER(YES) DESCRIPTION(Test
         MQCONN 01) MQNAME(B123)
         INITQNAME(initQNAME123456789012345678901234567890123456789)
DEFINE   TDQUEUE(TDQU) GROUP(TESTBAT1) REMOTESYSTEM(C650) REMOTENAME(TDQU)
         DESCRIPTION(THIS IS A TEST AGAIN)
DEFINE   DB2ENTRY(DB2ENT1) GROUP(TESTBAT1) ACCOUNTREC(NONE) AUTHTYPE(USERID)
         DROLLBACK(YES) PRIORITY(HIGH) THREADWAIT(POOL)
         DESCRIPTION(THIS IS A TEST AGAIN) PLANEXITNAME(DSNCUEXT) PROTECTNUM(0)
         THREADLIMIT(0)
DEFINE   DB2TRAN(DB2TRAN1) GROUP(TESTBAT1) DESCRIPTION(THIS IS A TEST AGAIN)
         ENTRY(DB2ENT1) TRANSID(DB2E)
DEFINE   TSMODEL(TSMODEL1) GROUP(TESTBAT1) LOCATION(AUXILIARY) RECOVERY(NO )
         SECURITY(NO ) DESCRIPTION(THIS IS A TEST AGAIN)
         EXPIRYINT(15000)
DEFINE   PROCESSTYPE(PROCTYP1) GROUP(TESTBAT1) STATUS(ENABLED) AUDITLEVEL(OFF)
         FILE(FILE1) DESCRIPTION(THIS IS A TEST AGAIN)
DEFINE   REQUESTMODEL(REQMOD1) GROUP(TESTBAT1) TYPE(GENERIC) INTFACETYPE(BOTH)
         TRANSID(CIRP) DESCRIPTION(THIS IS A TEST AGAIN)
         CORBASERVER(COBR) BEANNAME(*) MODULE(*) INTERFACE(*) OPERATION(*)
DEFINE   DOCTEMPLATE(DOCTEMP1) GROUP(TESTBAT1) APPENDCRLF(YES) TYPE(EBCDIC)
         TEMPLATENAME(DOCTEMP1) TSQUEUE(1234567890123456)
         DESCRIPTION(THIS IS A TEST AGAIN)
DEFINE   URIMAP(URIMAP0X) GROUP(TESTBAT1) STATUS(ENABLED) USAGE(SERVER)
         SCHEME(HTTP) ANALYZER(NO ) AUTHENTICATE(NO )
         REDIRECTTYPE(TEMPORARY) DESCRIPTION(Test Define URIMAP 0X) PORT(NO )
         HOST(abcde) PATH(/pa/th/X) TCPIPSERVICE(TCPIPX)
         CONVERTER(CONVERTX) TRANSACTION(TRNX) PROGRAM(PROGRAMX) USERID(USERX)
         LOCATION(/loc/a/tion/X)
DEFINE   URIMAP(URIMAP01) GROUP(TESTBAT1) STATUS(ENABLED) USAGE(SERVER)
         SCHEME(HTTP) ANALYZER(NO ) AUTHENTICATE(NO )
         REDIRECTTYPE(TEMPORARY) DESCRIPTION(Test Define URIMAP 0X) PORT(NO )
         HOST(host5335) PATH(/pa/th/X) TCPIPSERVICE(TCPIPX)
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         CONVERTER(CONVERTX) TRANSACTION(TRNX) PROGRAM(PROGRAMX) USERID(USERX)
         LOCATION(/loc/a/tion/X)
DEFINE   URIMAP(URIMAP02) GROUP(TESTBAT1) STATUS(ENABLED) USAGE(SERVER)
         SCHEME(HTTP) ANALYZER(NO ) AUTHENTICATE(NO )
         REDIRECTTYPE(PERMANENT) DESCRIPTION(Test Define URIMAP 02) PORT(NO )
         HOST(host5335) PATH(/pa/th/1) TCPIPSERVICE(TCPIP1)
         CONVERTER(CONVERT1) TRANSACTION(TRN1) PROGRAM(PROGRAM1)
         USERID(USER5335) LOCATION(/loc/a/tion/5335)
DEFINE   URIMAP(URIMAP03) GROUP(TESTBAT1) STATUS(ENABLED) USAGE(SERVER)
         SCHEME(HTTP) ANALYZER(NO ) AUTHENTICATE(NO )
         REDIRECTTYPE(TEMPORARY) DESCRIPTION(Test Define URIMAP 03) PORT(NO )
         HOST(host3) PATH(/pa/th/3) TCPIPSERVICE(TCPIP3)
         CONVERTER(CONVERT3) TRANSACTION(TRN3) PROGRAM(PROGRAM3)
         USERID(USER3333) LOCATION(/loc/a/tion/3)
DEFINE   PIPELINE(PIPELIN1) GROUP(TESTBAT1) STATUS(ENABLED) DESCRIPTION(Test
         PIPELINE 01) RESPWAIT(DEFT)
         CONFIGFILE(/configfile/aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaab
         bbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbc
         cccccccccccccccccccccccccccccccccccccccccccccccccccddddddddddddddddddddddd
         dddddddddddddddddddddddddddddddddddddeeeeeeeeeeeeeeeeeeeeeeeeee)
         SHELF(/shelf/aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa
         bbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbc
         cccccccccccccccccccccccccccccccccccccccccccccccccccddddddddddddddddddddddd
         dddddddddddddddddddddddddddddddddddddeeeeeeeeeeeeeeeeeeeeeeeeee)
         WSDIR(/wsdir/aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa
         bbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbc
         cccccccccccccccccccccccccccccccccccccccccccccccccccddddddddddddddddddddddd
         dddddddddddddddddddddddddddddddddddddeeeeeeeeeeeeeeeeeeeeeeeeee)
DEFINE   WEBSERVICE(WEBSERV1) GROUP(TESTBAT1) VALIDATION(NO ) DESCRIPTION(Test
         WEBSERVICE 01) PIPELINE(PIPELIN1)
         WSBIND(/wsbind/aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa
         aaa)
         WSDLFILE(/wsdlfile/bbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbb
         bbbbb)
         ARCHIVEFILE(/archivefile/cccccccccccccccccccccccccccccccccccccccccccccccc
         cccccccccc)
DEFINE   WEBSERVICE(WEBSERV2) GROUP(TESTBAT1) VALIDATION(NO ) DESCRIPTION(Test
         Webservice 02) PIPELINE(PIPELIN1)
         WSBIND(/wsbind/aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa
         aaaa1234567890bbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbb
         bbbbbcccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccc
         ccccccceeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee)
         WSDLFILE(/wsdlfile/aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa
         aaaaaa0987654321bbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbb
         bbbbbbbcccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccc
         ccccccceeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee)
         ARCHIVEFILE(/archivefile/aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa
         aaaaaaaaaaa5678901234bbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbb
         bbbbbbbbbbbcccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccc
         ccccccccccccceeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee)
DEFINE   WEBSERVICE(WEBSERV3) GROUP(TESTBAT1) VALIDATION(NO ) DESCRIPTION(TEST
         WEBSERVICE 03) PIPELINE(PIPELIN1)
         WSBIND(/WSBIND/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
         AAAA1234567890BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB
         BBBBBCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
         CCCCCCEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE)
         WSDLFILE(/WSDLFILE/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
         AAAAAA0987654321BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB
         BBBBBBBCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
         CCCCCCCEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE)
         ARCHIVEFILE(/ARCHIVEFILE/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
         AAAAAAAAAAA5678901234BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB
         BBBBBBBBBBBCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
         CCCCCCCCCCCCEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE)
DEFINE   IPCONN(IPCON001) GROUP(TESTBAT1) INSERVICE(YES) AUTOCONNECT(YES)
         XLNACTION(KEEP) SSL(YES) USERAUTH(IDENTIFY)
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          LINKAUTH(SECUSER) IDPROP(NOTALLOWED) MIRRORLIFE(REQUEST)
          DESCRIPTION(Test IPCONNECTION 01) APPLID(IPCON001) NETWORKID(A123)
          HOST(host-
          aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaabbbbbbbbbbbbcde)
          PORT(12345) TCPIPSERVICE(TCPIP123)
          RECEIVECOUNT(101) SENDCOUNT(102) QUEUELIMIT(1234) MAXQTIME(5678)
          CERTIFICATE(/cert/ifi/cate/) CIPHERS(ABCDEF)
          SECURITYNAME(SECNAME)
 DEFINE   JVMSERVER(JVMS001) GROUP(TESTBAT1) STATUS(ENABLED) DESCRIPTION(Test
          JVMSERVER 01) JVMPROFILE(jvmprof1) LERUNOPTS(12345678)
          THREADLIMIT(15)
 DEFINE   BUNDLE(BUND001) GROUP(TESTBAT1) STATUS(ENABLED) DESCRIPTION(Test
          BUNDLE 01) BUNDLEDIR(/bundledir/) BASESCOPE(/basescope/)
```

Applid	Type	Resource	Group	Command	Results .....
CICS640	CONNECTION	R660	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	CORBASERVER	COB1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	CORBASERVER	COB2	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	DJAR	DJAR1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	LSRPOOL	LSRPOOL1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	FILE	FILE1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	JOURNALMODE	JOURN1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	MAPSET	MAPSET1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	PARTITIONSE	PARTSET1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	PARTNER	PARTNER1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	PROFILE	PROFILE1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	PROGRAM	TESTPGM1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	PROGRAM	TESTPGM4	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	SESSIONS	SESSION1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	TYPETERM	TYPETRM1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	TERMINAL	TERM	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	TRANCLASS	TRAN1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	TRANSACTION	TST1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	TRANSACTION	TSX1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	TRANSACTION	TSX4	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	ENQMODEL	ENQMOD1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	LIBRARY	LIBR001	TESTBAT1	DEFINE	RC16016. LIBRARY LIBR001 is not supported in this CICS
CICS640	MQCONN	MQCONN01	TESTBAT1	DEFINE	RC16016. MQCONN MQCONN01 is not supported in this CICS
CICS640	TDQUEUE	TDQU	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	DB2ENTRY	DB2ENT1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	DB2TRAN	DB2TRAN1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	TSMODEL	TSMODEL1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	PROCESSTYPE	PROCTYP1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	REQUESTMODE	REQMOD1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	DOCTEMPLATE	DOCTEMP1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	URIMAP	URIMAP0X	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	URIMAP	URIMAP01	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	URIMAP	URIMAP02	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	URIMAP	URIMAP03	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	PIPELINE	PIPELIN1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	WEBSERVICE	WEBSERV1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	WEBSERVICE	WEBSERV2	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	WEBSERVICE	WEBSERV3	TESTBAT1	DEFINE	RC16001. Export function completed
CICS640	IPCONN	IPCON001	TESTBAT1	DEFINE	RC16016. IPCONN IPCON001 is not supported in this CICS
CICS640	JVMSERVER	JVMS001	TESTBAT1	DEFINE	RC16016. JVMSERVER JVMS001 is not supported in this CICS
CICS640	BUNDLE	BUND001	TESTBAT1	DEFINE	RC16016. BUNDLE BUND001 is not supported in this CICS

CICS650	CONNECTION	R660	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	CORBASERVER	COB1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	CORBASERVER	COB2	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	DJAR	DJAR1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	LSRPOOL	LSRPOOL1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	FILE	FILE1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	JOURNALMODE	JOURN1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	MAPSET	MAPSET1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	PARTITIONSE	PARTSET1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	PARTNER	PARTNER1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	PROFILE	PROFILE1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	PROGRAM	TESTPGM1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	PROGRAM	TESTPGM4	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	SESSIONS	SESSION1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	TYPETERM	TYPETRM1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	TERMINAL	TERM	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	TRANCLASS	TRAN1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	TRANSACTION	TST1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	TRANSACTION	TSX1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	TRANSACTION	TSX4	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	ENQMODEL	ENQMOD1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	LIBRARY	LIBR001	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	MQCONN	MQCONN01	TESTBAT1	DEFINE	RC16016. MQCONN MQCONN01 is not supported in this CICS
CICS650	TDQUEUE	TDQU	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	DB2ENTRY	DB2ENT1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	DB2TRAN	DB2TRAN1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	TSMODEL	TSMODEL1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	PROCESSTYPE	PROCTYP1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	REQUESTMODE	REQMOD1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	DOCTEMPLATE	DOCTEMP1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	URIMAP	URIMAP0X	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	URIMAP	URIMAP01	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	URIMAP	URIMAP02	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	URIMAP	URIMAP03	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	PIPELINE	PIPELIN1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	WEBSERVICE	WEBSERV1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	WEBSERVICE	WEBSERV2	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	WEBSERVICE	WEBSERV3	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	IPCONN	IPCON001	TESTBAT1	DEFINE	RC16001. Export function completed
CICS650	JVMSERVER	JVMS001	TESTBAT1	DEFINE	RC16016. JVMSERVER JVMS001 is not supported in this CICS
CICS650	BUNDLE	BUND001	TESTBAT1	DEFINE	RC16016. BUNDLE BUND001 is not supported in this CICS
CICS660	CONNECTION	R660	TESTBAT1	DEFINE	RC16001. Export function completed
CICS660	CORBASERVER	COB1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS660	CORBASERVER	COB2	TESTBAT1	DEFINE	RC16001. Export function completed
CICS660	DJAR	DJAR1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS660	LSRPOOL	LSRPOOL1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS660	FILE	FILE1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS660	JOURNALMODE	JOURN1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS660	MAPSET	MAPSET1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS660	PARTITIONSE	PARTSET1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS660	PARTNER	PARTNER1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS660	PROFILE	PROFILE1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS660	PROGRAM	TESTPGM1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS660	PROGRAM	TESTPGM4	TESTBAT1	DEFINE	RC16001. Export function completed
CICS660	SESSIONS	SESSION1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS660	TYPETERM	TYPETRM1	TESTBAT1	DEFINE	RC16001. Export function completed
CICS660	TERMINAL	TERM	TESTBAT1	DEFINE	RC16001. Export function completed

```
CICS660  TRANCLASS       TRAN1       TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  TRANSACTION     TST1        TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  TRANSACTION     TSX1        TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  TRANSACTION     TSX4        TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  ENQMODEL        ENQMOD1     TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  LIBRARY         LIBR001     TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  MQCONN          MQCONN01    TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  TDQUEUE         TDQU        TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  DB2ENTRY        DB2ENT1     TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  DB2TRAN         DB2TRAN1    TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  TSMODEL         TSMODEL1    TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  PROCESSTYPE     PROCTYP1    TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  REQUESTMODE     REQMOD1     TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  DOCTEMPLATE     DOCTEMP1    TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  URIMAP          URIMAP0X    TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  URIMAP          URIMAP01    TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  URIMAP          URIMAP02    TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  URIMAP          URIMAP03    TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  PIPELINE        PIPELIN1    TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  WEBSERVICE      WEBSERV1    TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  WEBSERVICE      WEBSERV2    TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  WEBSERVICE      WEBSERV3    TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  IPCONN          IPCON001    TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  JVMSERVER       JVMS001     TESTBAT1  DEFINE    RC16001. Export function completed
CICS660  BUNDLE          BUND001     TESTBAT1  DEFINE    RC16001. Export function completed
                                     .
                                     .
                                     .
```

******** Export results and messages for CICS670 and CICS680 in the report are the same as *******
******** CICS660 and are not included included here. Summary page from the report follows: *******

```
NUMBER OF COMMANDS PER APPLID            41
NUMBER OF APPLIDS ATTEMPTED              5
TOTAL NUMBER OF COMMANDS ATTEMPTED       205
TOTAL COMMANDS EXECUTED SUCCESSFULLY     197
TOTAL COMMAND EXECUTION FAILURES         8
```

Routing CEMT Commands

A special feature of the batch EXECUTE command is the ability to route CEMT commands to one or more CICS systems. Any CEMT command can be routed, but it must be a complete command. That is, you can not enter a conversation with CEMT in the same manner that can be done at a terminal. You must include all required mnemonics of the CEMT command to be executed.

CEMT commands can be coded in the SYSIN dataset, or they can be included in an export queue. Use the same syntax as with CEDA commands. That is, the command, CEMT, must begin in position one. All subsequent lines that are part of the command must begin beyond position one.

Following is an example, showing the jobstream and the results report:

```
//LGAEXEC  JOB 1,UNICOM,MSGCLASS=X,CLASS=A,NOTIFY=LGA
//STEP1        EXEC PGM=RDOBATCH,REGION=2M
//SYSPRINT   DD     SYSOUT=*
//SYSUDUMP DD     SYSOUT=*
//STEPLIB      DD     AUTOMON.RDO.V430.MVS.LOADLIB,
//                         DISP=SHR
//                DD     DSN=CICS6.SDFHEXCI,DISP=SHR
//RDO$FIL      DD     DSN=CICS680.RDO43.CONTROL.FILE,DISP=SHR
//DFHCSD       DD     DSN=CICS680.DFHCSD,DISP=SHR
//SYSIN        DD     *
EXECUTE APPLID(CICS670) TRAN(RTSO)
CEMT SET FILE(YHP$FIL) CLO
CEMT INQ PROGRAM(LGATEST)
//
```

Results:

```
EXECUTE APPLID(CICS670) TRAN(RTSO)
CEMT SET FILE(YHP$FIL) CLO
CEMT INQ PROGRAM(LGATEST)

Applid    Type                Resource     Group       Command   Results ......................................
CICS670   CEMT SET FILE(YHP$FIL) CLO                    CEMT      RC=00, FILE(YHP$FIL) ACCESSMETHOD(VSAM)
                                                                  OPENSTATUS( CLOSED ) ENABLESTATUS
                                                                  (UNENABLED ) READSTATUS( READ )
                                                                  UPDATESTATUS( UPDATE ) ADDSTATUS
                                                                  (ADDABLE ) BR  OWSESTATUS( BROWSE )
                                                                  DELETESTATUS( DELETE ) EXCLSTATUS()
                                                                  DISPOSITION( SHARE   ) RLSACCESS( NOTRLS )
                                                                  EMPTYSTATUS( NOEMPTYREQ ) DSNAME
                                                                  (STS.CROSSPLX.CICS510  .FILE ) TABLE
                                                                  (NOTTABLE ) MAXNUMRECS( 00000000 )
                                                                  NORMAL
CICS670   CEMT INQ PROGRAM(LGATEST)                     CEMT      RC=01, PROG(LGATEST ) NOT FOUND

NUMBER OF COMMANDS PER APPLID                    2
NUMBER OF APPLIDS ATTEMPTED                      1
TOTAL NUMBER OF COMMANDS ATTEMPTED               2
TOTAL COMMANDS EXECUTED SUCCESSFULLY             1
TOTAL COMMAND EXECUTION FAILURES                 1
```

Installation Requirements for the Execute Command

In order to use the Execute command, the following conditions must be met:

1). The external CICS interface modules that are supplied with CICS TS must be available to the batch jobstream in the STEPLIB concatenation. These modules are supplied for CICS TS 5.1 in CICS680.SDFHEXCI.

2). In the target CICS system, there must be a CONNECTION and a TRANSACTION defined. These are distributed with AUTOMON/RDO and will be installed with the product. The minimum definitions for these appear as follows:

```
DEFINE    CONNECTION(RTSO)
          GROUP(RDOCGRP)
          ACCESSMETHOD(IRC)
          PROTOCOL(EXCI)
          SINGLESESS(NO)
          DATASTREAM(USER)
          RECORDFORMAT(U)
          CONNTYPE(GENERIC)
          ATTACHSEC(LOCAL)
          AUTOCONNECT(NO)
          INSERVICE(YES)
          DESCRIPTION (CONNECTION USING EXCI INTERFACE)

DEFINE    TRANSACTION(RTSO)
          PROGRAM(DFHMIRS)
          GROUP(RDOCGRP)
          PROFILE(DFHCICSA)
          TASKDATALOC(BELOW)
          TASKDATAKEY(CICS)
          SHUTDOWN(DISABLED)
          ISOLATE(YES)
          DESCRIPTION(MIRROR TRANSACTION FOR EXCI CALL)
```

3). Interregion Connection must be OPEN in the target CICS system. To check this, enter CEMT IRC. If it shows CLO, change it to OPE and press Enter.

[Note.] The IBM manual, *External CICS Interface*, publication number provides more information about the EXCI distributed program link used by RDOBATCH.

CICS Command

The CSD file is distributed from IBM with a release identifier as the first record in the file. If you use MIGRATE to upgrade a CSD to a new CICS release, this release record is set correctly. However, system programmers sometimes copy a CSD and use it for a new release of CICS. In this case, the release identifier in the file is incorrect.

The batch processor of AUTOMON/RDO depends on this release identifier record to properly format DEFINE and other CEDA commands for the CICS release in use. If the release identifier specifies a prior release of CICS, errors will result. The CICS command can be used to override the release identifier record and inform RDOBATCH as to the correct CICS level.

The operator is 'CICS, starting in any position, followed by at least one space, then one or both of the following modifiers:

RELEASE(x.x) — Code the release level of the CICS system which owns this CSD as two digits separated by a period. Only the major portion of the modification level need be coded.

Valid CICS release levels are 6.4, 6.5, 6.6, 6.7 and 6.8 on z/OS (CICS TS version 3.1, 3.2 4.1, 4.2 and 5.1 respectively) and 4.1 on z/VSE (CICS TS version 1.1).

UPDATE(yes | <u>no</u>) — The UPDATE modifier can be used to permanently alter the release identifier record in the CSD, so that subsequent batch operations do not require the CICS command to identify the release level. If UPDATE is omitted, the default is NO.

To permanently set the CICS release level in the CSD, code UPDATE(YES) on the CICS command. The CSD file, DFHCSD, must be closed in all CICS regions.

MIGRATE Command

Record format or content in the supplemental file sometimes changes from one release to another and the file must be upgraded before the new release will work correctly. The MIGRATE command will update the RDO$FIL supplemental file if a prior release of AUTOMON/RDO has been in use.

The operator is 'MIGRATE', starting in any position, followed by at least one space, then the following modifier:

RELEASE(x.x) Code the release level of AUTOMON/RDO that you are migrating from as two digits separated by a period.

Valid prior AUTOMON/RDO release levels which require migration to this release are 2.0, 2.1 and 2.2.

Upon successful completion of a migrate operation, the following messages will print on SYSPRINT:

INPUT GROUP/LIST RECORDS	nn,nnn
NUMBER OF LIST RECORDS CONVERTED	nn,nnn
NUMBER OF GROUP RECORDS CONVERTED	nn,nnn

For this release of the product, the only records in the supplemental file that require conversion are documentation records at the group or list level. The totals printed on the report indicate the number of these records that were found in the file and converted.

If the totals are zero it indicates that no group or list documentation records were present in the supplemental file.

[Note]. MIGRATE must be performed at installation of the new release and not thereafter. Migration of a supplemental file after operators have been using the new release could cause loss of documentation records.

Chapter 14. INSTALLATION OF AUTOMON/RDO

This section describes the procedures for installing AUTOMON/RDO in your CICS environment. Procedures for both MVS and VSE are described.

MVS Installation

This section describes the installation of the AUTOMON/RDO product on MVS. A general overview of the installation steps is described first followed by a description of the installation media and the detailed steps to complete the installation of the product.

This release of AUTOMON/RDO is supported on CICS Transaction Server for z/OS version 3.1 (CICS release level 6.4) or higher.

MVS Installation Overview

Installation consists of the following steps:

1) Download the installation media and unload the product files.

2) Tailor the installation JCL if required.

3) Run the installation JCL to load all programs and files and define the required CICS table entries.

4) Install the product password

Optional Installation steps:

5) Change CICS Destination Control Table to activate the AUTOMON/RDO audit trail.

6) Install the TSO interface to AUTOMON/RDO.

7) Migrate the supplemental file from a prior release.

8) Archive and purge prior release audit trail file.

MVS Installation Media

The installation media is available for download from the UNICOM FTP site in two formats: DSS dump format or TSO XMIT format. The installation media provides three files used to install the product:

- An installation library containing JCL to complete installation of the product.

- A product load library containing the program load modules and source members for the AUTOMON/RDO product A separate product load library is provided for CICS Transaction Server verson 3.2 and up. A product load library for CICS Transaction Server version 3.1 is available upon request.

- A file containing the VSAM records to be loaded into the supplemental file, RDO$FIL. These are screen maps, help records and preset Preference records.

The source records in the product load library include the RDO commands to define the CICS resources needed and a series of COBOL copybooks for user exit program development. These members are:

RDOCRDO	Resource definition commands input to DFHCSDUP to define the programs, transactions, files, etc. need by AUTOMON/RDO.
RDOCCOBX	Cobol copybook describing the Commarea for user exit programs.
RDOCEXIT	Sample Cobol user exit program.
RDOCATOM	Cobol copybook of the ATOMSERVICE resource record
RDOCBUND	Cobol copybook of the BUNDLE resource record
RDOCCONN	Cobol copybook of the CONNECTION resource record.
RDOCCORB	Cobol copybook of the CORBASERVICE resource record.
RDOCDCON	Cobol copybook of the DB2CONN resource record.
RDOCDENT	Cobol copybook of the DB2ENTRY resource record.
RDOCDJAR	Cobol copybook of the DJAR resource record.
RDOCDOCT	Cobol copybook of the DOCTEMPLATE resource record.
RDOCDTRN	Cobol copybook of the DB2TRAN resource record.
RDOCENQM	Cobol copybook of the ENQMODEL resource record.
RDOCFILE	Cobol copybook of the FILE resource record.
RDOCIPCO	Cobol copybook of the IPCONN resource record.
RDOCJOUR	Cobol copybook of the JOURNALMODEL resource record.
RDOCJVMS	Cobol copybook of the JVMSERVER resource record.
RDOCLIBR	Cobol copybook of the LIBRARY resource record.
RDOCLSRP	Cobol copybook of the LSRPOOL resource record.
RDOCMAPS	Cobol copybook of the MAPSET resource record.
RDOCMQCO	Cobol copybook of the MQCONN resource record
RDOCPNER	Cobol copybook of the PARTNER resource record.
RDOCPIPE	Cobol copybook of the PIPELINE resource record.
RDOCPROF	Cobol copybook of the PROFILE resource record.
RDOCPROG	Cobol copybook of the PROGRAM resource record.
RDOCPROS	Cobol copybook of the PROCESSTYPE resource record.
RDOCPSET	Cobol copybook of the PARTITIONSET resource record.
RDOCREQ	Cobol copybook of the REQUESTMODEL resource record.
RDOCSESS	Cobol copybook of the SESSIONS resource record.
RDOCTCLS	Cobol copybook of the TRANCLASS resource record.
RDOCTCPI	Cobol copybook of the TCPIPSERVICE resource record.
RDOCTDQ	Cobol copybook of the TDQUEUE resource record.
RDOCTERM	Cobol copybook of the TERMINAL resource record.
RDOCTRAN	Cobol copybook of the TRANSACTION resource record.

RDOCTSM	Cobol copybook of the TSMODEL resource record.
RDOCTYPE	Cobol copybook of the TYPETERM resource record.
RDOCURIM	Cobol copybook of the URIMAP resource record.
RDOCWEBS	Cobol copybook of the WEBSERVICE resource record.

The program load library contains the following load modules for the AUTOMON/RDO product:

RDOBATCH	Batch processor
RDOCAUDT	Audit message capture
RDOCCMDS	Command processor
RDOCDIR	Directory anchor
RDOCEXIT	Sample user exit program
RDOCHELP	Help processor
RDOCIMPT	Import/export processor
RDOCMAIN	Main/directory processor
RDOCTSO	TSO interface processor
RDOCUTIL	Utility functions
STSCORE	Memory display/alter utility
XSCPMAIN	Cross-region conversation handler

MVS Installation Steps

STEP 1 (Download the Installation Media and Unload the Product Files)

Step 1 describes how to download the installation media from the UNICOM FTP site and to unload the files from the installation media to your system. The installation media is available in DSS Dump format and TSO XMIT format. The procedures for using each follows.

DSS Dump Format

This procedure provides the instructions that UNICOM customers can use to obtain the AUTOMON/RDO 4.3.0 DSS dump file.

Pre-allocate a dataset for FTP 'your.prealloc.ftp.file' with the following attributes:

DSORG=PS, RECFM=FB, LRECL=1024, BLKSIZE=6144
CYLINDERS PRIMARY=5 SECONDARY=1

From an MVS TSO/E command prompt issue:

ftp 64.183.79.190
user: SEPTEMBER
password: SEPTEMBER

Once you login to the ftp site,

Issue: CD lib\RDO43
Issue: BIN to set up binary mode transmission
Issue: GET RDOMVS.V430.BIN 'your.prealloc.ftp.file' (REPLACE
Issue: QUIT

When the file RDOMVS.V430.BIN is on your MVS system, you must run TRSMAIN with the 'unpack' option. You are now ready to process the DSS dump.

Here is sample JCL to 'unpack' the tersed file.

```
//UNPACK  JOB (1),'RDO',CLASS=A,NOTIFY=&SYSUID,MSGCLASS=X
//*********************************************
//*       TRSMAIN WITH UNPACK OPTION        *
//*********************************************
//STEP1    EXEC  PGM=TRSMAIN,PARM=UNPACK
//SYSPRINT DD  SYSOUT=X
//INFILE   DD  DISP=SHR,DSN=your.prealloc.ftp.file
//OUTFILE  DD  DISP=(NEW,CATLG),UNIT=SYSDA,
//         DSN=your.unpack.dss.file,
//         SPACE=(CYL,(3,1),RLSE)
```

To unload the AUTOMON/RDO 4.3.0 files to disk, run a DFDSS 'restore'. The restore will create six datasets.

Below is the JCL used to 'restore' the files. Delete the nullstorclas, bypassacs(**) and outdy(sys002) if you are using SMS allocation. Change OUTDY(volser) to your target volume (without SMS allocation).

****
If this is an upgrade, rename your existing high-level RDO.V430 files else, the restore will fail due to duplicate dataset names.

Example: Rename 'RDO.V430.INSTLIB' 'RDO.V430.INSTLIB.OLD'
****

```
//RESTORE JOB (1),CLASS=A,MSGCLASS=X,NOTIFY=&SYSUID
//STEP1    EXEC     PGM=ADRDSSU,REGION=4M
//SYSPRINT DD  SYSOUT=X
//TAPE     DD  DISP=SHR,DSN=your.unpack.dss.file
//SYSIN    DD *
 RESTORE DS(INC(          -
            **         -
            ))         -
    INDDNAME(TAPE)       -
    TOL(ENQF)            -
    WAIT(0,0)            -
    ADMIN                -
    NULLSTORCLAS         -
    BYPASSACS(**)        -
    OUTDY(volser)        -
    CATALOG              -
    SPHERE
/*
```

The restore will create the following datasets.

FILE1 RDO.V430.INSTLIB
FILE2 RDO.V430.CTS320.LOADLIB (CICS TS 3.2 installation)
FILE3 RDO.V430.CTS410.LOADLIB (CICS TS 4.1 nstallation)
FILE4 RDO.V430.CTS420.LOADLIB (CICS TS 4.2 installation)
FILE5 RDO.V430.CTS510.LOADLIB (CICS TS 5.1 installation)
FILE6 RDO.V430.CONTROL.FILE

Modify the JCL in member hlq.RDO.V430.INSTLIB(#DSS6XX) to complete the installation process. The remainder of the installation steps in this member are described below starting with Step 2.

This JCL will unload the load modules, create new AUTOMON/RDO CONTROL and AUDIT files and create the resource definitions using the CSD utility program. You can optionally migrate your records from your previous AUTOMON/RDO CONTROL and AUDIT files.

TSO XMIT Format

This procedure provides the instructions that UNICOM customers can use to obtain the AUTOMON/RDO 4.3.0 installation files in TSS XMIT format.

Obtain the following binary files from the UNICOM FTP site

RDO.V430.CONTROL.FILE.XMIT
RDO.V430.CTS320.LOADLIB.XMIT
RDO.V430.CTS410.LOADLIB.XMIT
RDO.V430.CTS420.LOADLIB.XMIT
RDO.V430.CTS510.LOADLIB.XMIT
RDO.V430.INSTLIB.XMIT

To connect to the UNICOM FTP site, issue:

ftp 64.183.79.190
user: SEPTEMBER
password: SEPTEMBER

Once you login to the ftp site,

Issue: CD lib\RDO43\XMIT
Issue: BIN to set up binary mode transmission
Issue: GET RDO.V430.CONTROL.FILE.XMIT hlq.RDO.V430.CONTROL.FILE.XMIT
Issue: GET commands for the rest of the XMIT files listed above
Issue: QUIT

These files are an altennate method for downloading RDO 4.3. They are in 'TSO TRANSMIT' format instead of the DSS dump format. Consider downloading this distribution if it has been several months since the product was distributed to you. The files you have may have been updated since you received them.

When downloading the above datasets change the hlq to use your hlq for your site. These files must be downloaded in a binary format and stored on the MVS system with the following attributes:

RECFM=FB LRECL=80 BLKSIZE=3120
CYL PRIMARY=3 SECONDARY=1

Use the TSO RECEIVE command to restore the files as:

hlq.RDO.V430.CONTROL.FILE
hlq.RDO.V430.CTS320.LOADLIB
hlq.RDO.V430.CTS410.LOADLIB
hlq.RDO.V430.CTS420.LOADLIB
hlq.RDO.V430.CTS510.LOADLIB
hlq.RDO.V430.INSTLIB

For example:

TSO RECEIVE INDATASET('hlq.RDO.V430.CTS510.LOADLIB.XMIT')

Then at the prompt::

INMR906A Enter restore parameters or 'DELETE' or 'END' +

Enter: DATASET('hlq.RDO.V430.CTS510.LOADLIB')

Perform the TSO RECEIVE for each of the files required.

Modify the JCL in member hlq.RDO.V430.INSTLIB(#XMIT6XX) to complete the installation process. The remainder of the installation steps in this member are described below starting with Step 2.

This JCL will unload the load modules, create new AUTOMON/RDO CONTROL and AUDIT files and create the resource definitions using the CSD utility program. You can optionally migrate your records from your previous AUTOMON/RDO CONTROL and AUDIT files.

STEP 2 Define RDO VSAM Clusters CONTROL and AUDIT

Step 2 in the installation JCL defines the VSAM files required for AUTOMON/RDO. Modify the following JCL to conform to your installation standards. Note that the AUTOMON/RDO VSAM file definitions create VSAM files with a 16KB data CI size. Ensure your CICS LSRPOOL definition which these files use has 16KB data buffers defined.

```
//* ==================================================================
//* STEP 2 - DEFINE THE VSAM CLUSTERS * UPDATE VSAM CONTROL CARDS    */
//* CHECK note2 (VSAM DATASET NAME)                                  */
//* CHECK note3 Change CTSrrr to your CICS TS Release,               */
//* ex: CTS320, CTS410, CTS420 or CTS510                             */
//* CHECK note4 (SHARE OPTIONS) & note5 (VOLSER)                     */
//* ==================================================================
//STEP02   EXEC PGM=IDCAMS
//SYSPRINT DD  SYSOUT=*
//SYSIN    DD  *
  DELETE 'hlq.RDO.V430.CTSrrr.CONTROL.FILE' PURGE
  SET MAXCC=0
  DEFINE CLUSTER                        -
    (NAME(hlq.RDO.V430.CTSrrr.CONTROL.FILE) -
     INDEXED                            -
     KEYS(40 0)                         -
     RECSZ(12292 12296)                 -
     SHR(3 3)                           -
     FSPC (10 10)                       -
     VOL(VVVVVV))                       -
   DATA                                 -
     (NAME(hlq.RDO.V430.CTSrrr.CONTROL.FILE.DATA) -
     CISZ(8192)                          -
     CYL(5 1))                           -
   INDEX                                 -
    (NAME(hlq.RDO.V430.CTSrrr.CONTROL.FILE.INDEX) -
    CYL(1 1))
  DELETE 'hlq.RDO.V430.CTSrrr.AUDIT.FILE' PURGE
  SET MAXCC=0
  DEFINE CLUSTER                        -
    (NAME(hlq.RDO.V430.CTSrrr.AUDIT.FILE) -
     INDEXED                            -
     KEYS(40 0)                         -
     RECSZ(12292 12296)                 -
     SHR(3 3)                           -
     FSPC (10 10)                       -
     VOL(VVVVVV))                       -
   DATA                                 -
     (NAME(hlq.RDO.V430.CTSrrr.AUDIT.FILE.DATA) -
     CISZ(8192)                          -
     CYL(5 1))                           -
   INDEX                                 -
    (NAME(hlq.RDO.V430.CTSrrr.AUDIT.FILE.INDEX) -
    CYL(1 1))
/*
```

STEP 3 Restore new RDO Control file data

Step 3 in the installation JCL restores the new AUTOMON/RDO control file data. Modify the following JCL to conform to your installation standards.

```
//* ==================================================================
//* STEP 3 - RESTORE THE VSAM CLUSTER
//* ==================================================================
//STEP03   EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=*
//IN3      DD DISP=OLD,DSN=hlq.RDO.V430.CONTROL.FILE    /*note1*/
//RDO$FIL  DD DISP=SHR,DSN=hlq.RDO.V430.CTSrrr.CONTROL.FILE
//SYSIN    DD *
  REPRO INFILE (IN3) OUTFILE (RDO$FIL)
/*
```

STEP 4 Copy customization options from RDO 2.3 control file, copy audit file (optional)

Step 4 in the installation JCL is optional and only used if you are migrating from a previous release of AUTOMON/RDO. Use it to copy customization options from your current AUTOMON/RDO control file to the new control file and to copy your current audit file to the new audit file. Modify the following JCL to conform to your installation standards

```
//* ==================================================================
//* STEP 4 - OPTIONALLY COPY THE CUSTOMIZATION OPTIONS FROM THE
//*          AUTOMON/RDO 2.3 CONTROL FILE, COPY THE AUTOMON/RDO 2.3
//*          AUDIT FILE.
//*
//*     Uncomment STEP04 to copy V2.3 Control file      /*note6*/
//*     records and the V2.3 Audit file records to
//*     the new V4.3 Control/Audit files.
//*
//* ==================================================================
//*STEP04    EXEC PGM=IDCAMS
//*SYSPRINT DD SYSOUT=*
//*RDO$F23  DD DISP=SHR,DSN=hlq.RDO.V230.CONTROL.FILE
//*RDO$FIL  DD DISP=OLD,DSN=hlq.RDO.V430.CTSrrr.CONTROL.FILE
//*RDO$A23  DD DISP=SHR,DSN=hlq.RDO.V230.AUDIT.FILE
//*RDO$AUD  DD DISP=OLD,DSN=hlq.RDO.V430.CTSrrr.AUDIT.FILE
//*SYSIN    DD *
//*  REPRO INFILE  (RDO$F23)    -
//*        OUTFILE (RDO$FIL)    -
//*        FROMKEY (Z)          -
//*        TOKEY   (Z)          -
//*        REPLACE
//*  REPRO INFILE  (RDO$A23)    -
//*        OUTFILE (RDO$AUD)
//*
```

STEP 5 Create the RDO CSD GROUP RDOCGRP

Step 5 in the installation JCL creates the CICS CSD group RDOCGRP for AUTOMON/RDO. You need to edit the #csdm629 member in your INSTLIB and change the HLQ for the control and audit file definitions.

```
//* ==================================================================
//* STEP 5 - DEFINE RESOURCES TO CICS
//* ==================================================================
//STEP05   EXEC PGM=DFHCSDUP
//SYSPRINT DD SYSOUT=*
//STEPLIB  DD DISP=SHR,DSN=CICS620.CICS.SDFHLOAD        /*note7*/
//DFHCSD   DD DISP=SHR,DSN=CICS620.DFHCSD               /*note8*/
//SYSIN    DD DISP=SHR,
//            DSN=hlq.RDO.V430.INSTLIB(#CSDM620)        /*note9*/
//*
```

STEP 6 Install the AUTOMON/RDO product password

Complete the following procedure to install and activate the AUTOMON/RDO 4.3.0 product password.

1. Obtain a password from UNICOM Systems Customer Service or your local sales representative. You must provide your real CPU ID and model number. You can obtain this information by entering 'D M=CPU' from the command line of your z/OS console. The following shows the response from this command and the information you need to extract.

```
RESPONSE=USZOS113
 IEE174I 11.21.29 DISPLAY M 935
 PROCESSOR STATUS
 ID  CPU              SERIAL
 00  +               A432102098
 01  +               A432102098
 02  +I               A432102098

 CPC ND = 002098.E10.IBM.51.000000123ABC
 CPC SI = 2098.J04.IBM.51.0000000000123ABC
        Model: E10
 CPC ID = 00

 + ONLINE    - OFFLINE    . DOES NOT EXIST    W WLM-MANAGED
 N NOT AVAILABLE

 I       INTEGRATED INFORMATION PROCESSOR (zIIP)
 CPC ND  CENTRAL PROCESSING COMPLEX NODE DESCRIPTOR
 CPC SI  SYSTEM INFORMATION FROM STSI INSTRUCTION
 CPC ID  CENTRAL PROCESSING COMPLEX IDENTIFIER
```

   The CPC SI string identifies the real CPU ID is as 0123ABC and the model/submodel is 2098/J04.

2. Edit the RDOCPSWD member of your site's AUTOMON/RDO INSTLIB dataset. UNICOM Systems Customer Service will supply you with a password that looks similar to the example below. Replace this with the supplied password in INSTLIB member RDOCPSWD.

```
**
** Obtain the correct license information from
** AUTOMON/RDO   customer service:
**
** Unicom Systems, Inc.
** Telephone: (818) 838-0606
** eMail: support@unicomsi.com
**
**
**
CUSTOMER_NAME='UNICOM Systems Intl, Inc.      '
*   RULER-LINE 123456789012345678901234567890 12
*   RULER-LINE         1         2         3
*
CUSTOMER_NO=01234567
*
PRODUCT_CODE=YYYNNNNN
*
CPUID=0123ABC
*
MODEL=2098/J04
*
EXPIRATION_DATE=YYYY/MM/DD
*
```

```
PASSWORD=12345,12345,12345,12345,12345,12345,12345,12345,12345,12345
*
* Product Password for: AUTOMON/RDO V4R3M0 Generated MM/DD/YYYY HH:MM
```

Before any AUTOMON/RDO execution can be attempted it is first necessary to activate the AUTOMON/RDO Product Password. This only needs to be done once after a System IPL.

There are two methods to activate the password. The first method is to run the RDOCINIT of your site's AUTOMON/RDO INSTLIB dataset as a job. The second method is to execute the RDOCV430 PROCLIB member of your site's AUTOMON/RDO INSTLIB dataset as a started task.

You will need to create a new LOADLIB that is APF authorized and copy the RDOCV430 load module from your AUTOMON/RDO loadlib to this new APF LOADLIB (YOUR.RDOC.V430.APFLIB).

This new APFLIB (YOUR.RDOC.V430.APFLIB) that you created MUST BE APF AUTHORIZED for the RDOCINIT and/or the RDOCV430 PROC to run successfully.

Then you will need to edit the RDOCINIT and/or the RDOCV430 PROC to change the values for YOUR.RDOC.V430.APFLIB and YOUR.RDOC.V430.INSTLIB so these datasets can be located. The following is the JCL from the RDOCV430 PROC.

```
//*                    SYSOUT CLASS
//RDOCV430 PROC OUT='*',
//*                    AUTOMON/RDO AUTH LOADLIB
//          APFLIB='YOUR.RDOC.V430.APFLIB',
//*                    AUTOMON/RDO INSTALL LIBRARY
//          INSTLIB='YOUR.RDOC.V430.INSTLIB',
//*                    INSTLIB LICENSE PASSWORD FILE MEMBER NAME.
//          PSWD=RDOCPSWD
//*                    PARMLIB MEMBER NAME LOCATED IN INSTLIB THAT
//*                    CONTAINS THE AUTOMON/RDO LICENSE
//*                    INFORMATION PROVIDED BY CUSTOMER SERVICES
//*-----------------------------------------------------------------
//*
//*   AUTOMON/RDO RELEASE 4.3.0 LICENSE INITIALIZATION PROCEDURE
//*
//*-----------------------------------------------------------------
//RDOCV430 EXEC PGM=RDOCV430,
//          REGION=4096K
//STEPLIB  DD  DISP=SHR,
//          DSN=&APFLIB
//SYSOUT   DD  SYSOUT=&OUT
//SYSPRINT DD  SYSOUT=&OUT
//SYSABEND DD  SYSOUT=&OUT
//SYSIN    DD  DISP=SHR,
//          DSN=&INSTLIB(&PSWD)
```

To run as a started task copy the RDOCV430 PROCLIB member to a system PROCLIB or a PROCLIB known to JES or to make your AUTOMON/RDO INSTLIB know to JES.

The 'S RDOCV430' command can be added to your COMMNDxx parmlib member so that the AUTOMON/RDO product password is activated every time a System IPL is performed.

Issue the 'S RDOCV430' command from the system console to activate the product password. Watch for the following messages that indicate the AUTOMON/RDO product password is now active.

```
IEF403I RDOCINIT - STARTED - TIME=10.08.09
Unicom AUTOMON/RDOVersion: V4R3M0 Production Date: 01/22/12   Time: 22.27
CUSTOMER_NAME='UNICOM Systems Intl, Inc.       '
*   RULER-LINE 12345678901234567890123456789012
*   RULER-LINE         1        2        3
*
CUSTOMER_NO=01234567
*
PRODUCT_CODE=YYYNNNNN
*
CPUID=0123ABC
*
MODEL=2098/J04
*
EXPIRATION_DATE=YYYY/MM/DD
*
PASSWORD=12345,12345,12345,12345,12345,12345,12345,12345,12345,12345
*
* Product Password for: AUTOMON/RDO V4R3M0 Generated MM/DD/YYYY HH:MM
RDOC082I: Unicom AUTOMON/RDO V430 Refresh Successful, DYN=(FC9CB3F0)
IBM       Model=2098   SubModel=J04            Serial#=000123ABC Capacity=E10
MF=IBM    Model=2098   Capacity=J04            Serial#=000123ABC SubModel=E10
Unicom AUTOMON/RDO Licensed to Company: UNICOM Systems Intl, Inc.
Unicom AUTOMON/RDO Licensed Customer#.: 01234567
Unicom AUTOMON/RDO Licensed CPUid.....: 0123ABC,2098/J04
Unicom AUTOMON/RDO Licensed Parms.....: YYYNNNNN :
Unicom AUTOMON/RDO Password...:  12345,12345,12345,12345,12345,12345,12345,12345
12345,12345
Unicom AUTOMON/RDO Expiration Date....: YYYY/MM/DD
Unicom AUTOMON/RDO Execution Date.....: YYYY/MM/DD
Unicom AUTOMON/RDO Execution CPUid....: 0123ABC,2098/J04
Unicom AUTOMON/RDO Execution LPAR Name: LPAR01
Unicom AUTOMON/RDO Execution VM Userid: USZOS113
Unicom AUTOMON/RDO Execution Hware Cfg: VM-TOKEN
Unicom AUTOMON/RDO Execution Sys. Name: ZOS113
-                              -----TIMINGS (MINS.)------
-STEPNAME PROCSTEP    RC   EXCP   CONN       TCB       SRB  CLOCK          SERV
-RDOCV430 RDOCV430     0     46     11       .00       .00     .0           295
IEF404I RDOCINIT - ENDED - TIME=HH.MM.SS
-RDOCINIT ENDED.  NAME-AUTOMON/RDO V430     TOTAL TCB CPU TIME=      .00
```

STEP 7 Add RDO LOADLIB TO CICS PROC DFHRPL

You need to add the AUTOMON/RDO loadlib you created in step 1 to your CICS PROC DFHRPL. Insert hlq.RDO.V430.CTSrrr.LOADLIB into the DFHRPL DD statement in your CICS startup procedure. Restart the CICS region you just installed AUTOMON/RDO into. Comments are included in STEP 7 of the installation JCL to remind you to do this.

STEP 8 Install the RDO CSD GROUP and APPEND to your CICS LIST

After control is given to CICS, logon to the CICS region and install the AUTOMON/RDO CSD group RDOCGRP.

CEDA INSTALL GROUP(RDOCGRP)

Then append the AUTOMON/RDO CSD group to your CICS region startup CSD group list.

CEDA APPEND GROUP(RDOCGRP) LIST(yourlist) /*note10*/

The installation JCL also contains comments as a reminder for this step.

STEP 9 Start RDO

You can now start AUTOMON/RDO by executing the transaction RDOC as indicate in the comments in the last step of the installation JCL.

At this point, the basic AUTOMON/RDO product is installed and ready for use. Perform the optional installation topics that follow the VSE Installation section depending on your installation requirements.

MVS Installation Notes

1. Note that the control file REPRO data was restored in STEP 1.
2. Change names of VSAM datasets if desired..
3. Change qualifier CTSrrr to your CICS TS version, ex: CTS320, CST410, CTS420 or CTS510.
4. Change SHAREOPTIONS if desired
5. Change volume information to allow allocations of the VSAM datasets at your installation.
6. Uncomment STEP04 to copy V2.3 control file records and the V2.3 audit file records to the new V4.3 control/audit files.
7. Change 'CICS620.CICS.SDFHLOAD' to the IBM distributed CICS load library that contains the DFHCSDUP module.
8. Change 'CICS620.DFHCSD' to the CSD dataset name.
9. Note that the resource definitions are accessed from the same output INSTLIB PDS, received and restored in STEP 1. You need to edit the #CSDM620 member in your INSTLIB and change the HLQ for the control and audit file definitions.. Verify that your CICS LSRPOOL definition which these file definitions use has 16KB data buffers defined.
10. Change 'yourlist' to the correct CICS CSD LIST name.

VSE Installation

This section describes the installation of the AUTOMON/RDO product on VSE. A general overview of the installation steps is described first followed by a description of the installation tape and the detailed steps to complete the installation of the product.

This release of AUTOMON/RDO is supported on CICS Transaction Server for VSE/ESA version 1.1 (CICS release level 4.1) or higher.

VSE Installation Overview

Installation consists of the following steps

1) Load the product library from the installation tape.

2) Tailor the installation JCL if required.

3) Run the installation JCL to define and load files and to define the required CICS table entries.

4) Install the product password

Optional Installation steps:

5) Change CICS Destination Control Table to activate the AUTOMON/RDO audit trail.

6) Migrate the supplemental file from a prior release.

7) Archive and purge prior release audit trail file.

VSE Installation Tape

The AUTOMON/RDO for VSE installation tape is disturbed on a VSE virtual tape (RDO43INS.AWS) and is installed using VSE virtual tape support. The installation tape consists of the following:

File 1. Null file

File 2. Library backup header, RDOC430

File 3. File three is the product installation library containing source, object and phase members in LIBR backup format. The VSE LIBR utility RESTORE function is used to restore the library.

The source records supplied in the installation library include the UNICOM password table, RDO commands to define the CICS resources needed, and a series of COBOL copybooks for user exit program development. These members are:

STSPASS — The password table. The installation library contains a load module of STSPASS preset with a temporary password that will expire in approximately 30 days. This is the source code of STSPASS with assembly and link-edit JCL.

	If you are a licensed user, you should preserve your existing STSPASS member, which contains a permanent password, before loading the tape. When installation is complete, restore or reassemble the permanent password member.
RDOCRDO	Resource definition commands input to DFHCSDUP to define the programs, transactions, files, etc. need by AUTOMON/RDO.
RDOCCOBX	Cobol copybook describing the Commarea for user exit programs.
RDOCEXIT	Sample Cobol user exit program.
RDOCCONN	Cobol copybook of the CONNECTION resource record.
RDOCDOCT	Cobol copybook of the DOCTEMPLATE resource record.
RDOCFILE	Cobol copybook of the FILE resource record.
RDOCLSRP	Cobol copybook of the LSRPOOL resource record.
RDOCMAPS	Cobol copybook of the MAPSET resource record.
RDOCPNER	Cobol copybook of the PARTNER resource record.
RDOCPROF	Cobol copybook of the PROFILE resource record.
RDOCPROG	Cobol copybook of the PROGRAM resource record.
RDOCPSET	Cobol copybook of the PARTITIONSET resource record.
RDOCSESS	Cobol copybook of the SESSIONS resource record.
RDOCTCLS	Cobol copybook of the TRANCLASS resource record.
RDOCTCPI	Cobol copybook of the TCPIPSERVICE resource record.
RDOCTERM	Cobol copybook of the TERMINAL resource record.
RDOCTRAN	Cobol copybook of the TRANSACTION resource record.
RDOCTYPE	Cobol copybook of the TYPETERM resource record.

The program load modules for the AUTOMON/RDO product included in the installation library are:

RDOBATCH	Batch processor
RDOCAUDT	Audit message capture
RDOCCMDS	Command processor
RDOCDIR	Directory anchor
RDOCHELP	Help processor
RDOCIMPT	Import/export processor
RDOCMAIN	Main/directory processor
RDOCUTIL	Utility functions
STSCORE	Memory display/alter utility
STSPASS	Preset password module
XSCPMAIN	Cross-region conversation handler

File 4. The fourth file contains the VSAM records to be loaded into the supplemental file, RDO$FIL. These are screen maps, help records and preset Preference records.

VSE Installation Steps:

STEP 1 Restore the RDO Product Library

The following JCL will allow you to restore the product library from the AUTOMON/RDO VSE virtual tape file (RDO43INS.AWS) that you received. Modify the JCL to specify the location of the installation virtual tape file, the virtual tape address to use for installation and the library into which you want to restore the product.

```
* $$ JOB JNM=ISTEP01,CLASS=0,DISP=D
// JOB ISTEP01
* ************************************************************
* STEP 1 - RESTORE RDO PRODUCT LIBRARY FROM TAPE FILE 1        *
* ************************************************************
// VTAPE START,UNIT=cuu,LOC=nnn.nnn.nnn.nnn,                *note1*    C
              FILE='C:\UNICOM\VTAPE\RDO43INS.AWS',READ
// ASSGN SYS006,cuu   ASSIGN TO VIRTUAL TAPE                *note2*
// MTC REW,SYS006
// EXEC LIBR,PARM='MSHP'
   RESTORE SUBLIB = AUTOMON.AUTORDO:PRD2.AUTORDO             -
                                 /* SUBLIBRARY ID   *NOTE3*   */ -
          ID = RDOC430           /* MNEMONIC-ID OF THE SUBLIB */ -
          LIST  = YES            /* LIST SPECIFICATION     */ -
          REPLACE = YES          /* REPLACE OPTION         */ -
          TAPE = SYS004          /* TAPEADDRESS              */
/*
// VTAPE STOP,UNIT=cuu                                       *note2*
/&
* $$ EOJ
```

Once you have restored the product library you will find that it contains additional members to complete the installation steps. Modify the JCL in members ISTEP02.Z, ISTEP03.Z, ISTEP04.Z and ISTEP05.Z to complete the installation process. Be sure to change all of the $$$$ to * $$ on POWER JECL statements and to remove the $$ prefix on /* and /& statements. This JCL will create a new AUTOMON/RDO control and audit file, create resource definitions using the CSD utility program and assemble the AUTOMON/RDO password table. You can optionally migrate your records from your previous AUTOMON/RDO control and audit files.

STEP 2 Define RDO VSAM Clusters CONTROL and AUDIT

Step 2 in the installation JCL defines the VSAM files required for AUTOMON/RDO. Modify the JCL in member ISTEP02.Z to conform to your installation standards. You may need to change the AUTOMON/RDO control file name and audit file name in the VSAM DEFINE and DLBL statements. Note that the AUTOMON/RDO VSAM file definitions create VSAM files with a 16KB data CI size. Ensure your CICS LSRPOOL definition which these files use has 16KB data buffers defined.

This JCL also adds the following control and audit file DLBLs to the standard label area.

```
// DLBL RDO$FIL,'CICS.RDO.V430.VSE.CONTROL.FILE',,VSAM,CAT=USERCAT
// DLBL RDO$AUD,'CICS.RDO.V430.VSE.AUDIT.FILE',,VSAM,CAT=USERCAT
```

This is done so it is not necessary to add the DLBL statements to the CICS start up JCL or in AUTOMON/RDO batch jobs.

ISTEP02.Z

```
* $$ JOB JNM=ISTEP02,DISP=D,CLASS=0
// JOB ISTEP02 - DEFINE AND INIT VSAM CLUSTERS FOR AUTOMON/RDO
* ***************************************************************
*  DEFINE AND INITIALIZE CONTROL AND AUDIT FILES FOR AUTOMON/RDO *
*  note4(VSAM DATASETS), note5 (SHARE OPTIONS) & note6 (VOLSER)  *
* ***************************************************************
// EXEC IDCAMS,SIZE=AUTO
 /*                                                            */
 /*  DELETE OLD VSAM AUTOMON/RDO CONTROL FILE                  */
 /*                                                            */
     DELETE 'CICS.RDO.V430.VSE.CONTROL.FILE' -
      CATALOG(YOUR.USER.CATALOG) PURGE
     SET MAXCC=0
 /*                                                            */
 /*  DEFINE NEW VSAM AUTOMON/RDO CONTROL FILE                  */
 /*                                                            */
    DEFINE CLUSTER -
     (NAME(CICS.RDO.V430.VSE.CONTROL.FILE) -
      INDEXED -
      KEYS(40 0) -
      RECSZ(2080 12288) -
      SHR(3 4) -
      FSPC (10 10) -
      VOL(VVVVVV)) -
    DATA -
      (NAME(CICS.RDO.V430.VSE.CONTROL.FILE.DATA) -
      CISZ(16384) -
      TRK(40 5)) -
    INDEX -
     (NAME(CICS.RDO.V430.VSE.CONTROL.FILE.INDEX) -
     TRK(1 1)) -
    CATALOG(YOUR.USER.CATALOG)
 /*                                                            */
 /*  DELETE OLD VSAM AUTOMON/RDO AUDIT FILE                    */
 /*                                                            */
     DELETE 'CICS.RDO.V430.VSE.AUDIT.FILE' -
      CATALOG(YOUR.USER.CATALOG) PURGE
     SET MAXCC=0
 /*                                                            */
 /*                                                            */
 /*  DELETE NEW VSAM AUTOMON/RDO AUDIT FILE                    */
 /*                                                            */
    DEFINE CLUSTER -
     (NAME(CICS.RDO.V430.VSE.AUDIT.FILE) -
      INDEXED -
      KEYS(40 0) -
      RECSZ(2080 12288) -
      SHR(3 4) -
      FSPC (10 10) -
      VOL(VVVVVV)) -
    DATA -
      (NAME(CICS.RDO.V430.VSE.AUDIT.FILE.DATA) -
      CISZ(16384) -
      TRK(40 5)) -
    INDEX -
     (NAME(CICS.RDO.V430.VSE.AUDIT.FILE.INDEX) -
     TRK(1 1)) -
    CATALOG(YOUR.USER.CATALOG)
 /*
/*
// IF $RC > 0 THEN
CANCEL
*
*    DELETE AND REDEFINE THE STANDARD LABEL FOR RDO$FIL RDO$AUD
*
// OPTION STDLABEL=DEL
RDO$FIL
RDO$AUD
/*
/*
// OPTION STDLABEL=ADD
// DLBL RDO$FIL,'CICS.RDO.V430.VSE.CONTROL.FILE',,VSAM,CAT=USERCAT
// DLBL RDO$AUD,'CICS.RDO.V430.VSE.AUDIT.FILE',,VSAM,CAT=USERCAT
```

```
/*
// EXEC IESVCLUP,SIZE=AUTO
A CICS.RDO.V430.VSE.CONTROL.FILE              RDO$FIL USERCAT
A CICS.RDO.V430.VSE.AUDIT.FILE                RDO$AUD USERCAT
/*
*
*    INITIALIZE THE NEW AUTOMON/RDO CONTROL FILE
*
// DLBL RDO$FIL,'CICS.RDO.V430.VSE.CONTROL.FILE',,VSAM,CAT=USERCAT
// VTAPE START,UNIT=cuu,LOC=nnn.nnn.nnn.nnn,                *note1*    C
               FILE='C:\UNICOM\VTAPE\RDO43INS.AWS',READ
// ASSGN SYS004,cuu
// MTC REW,SYS004
// MTC FSF,SYS004,3
// EXEC IDCAMS,SIZE=AUTO
   REPRO INFILE ( -
                TAPEFIL -
                   ENVIRONMENT -
                   ( -
                     RECORDFORMAT(VARBLK) -
                     RECORDSIZE(12292) -
                     BLOCKSIZE(12296) -
                     PDEV(2400) -
                     NOLABEL -
                     NOREWIND -
                   ) -
               ) -
        OUTFILE (RDO$FIL)
/*
// VTAPE STOP,UNIT=cuu                                     *note2*
/&
* $$ EOJ
```

STEP 3 Copy customization options from RDO 4.2 control file, copy audit file (optional)

Step 3 in the installation JCL is optional and only used if you are migrating from a previous release of AUTOMON/RDO. Use it to copy customization options from your current AUTOMON/RDO control file to the new control file and to copy your current audit file to the new audit file. Modify the following JCL in member ISTEP03.Z to conform to your installation standards.

ISTEP03.Z

```
* $$ JOB JNM=ISTEP03,DISP=D,CLASS=0
// JOB ISTEP03 - COPY PRIOR CUSTOMIZATION OPTIONS AND AUDIT FILE
* ****************************************************************
* STEP 3 - OPTIONALLY COPY THE CUSTOMIZATION OPTIONS FROM THE     *
*          AUTOMON/RDO 4.2 CONTROL FILE, COPY THE AUTOMON/RDO 4.2 *
*          AUDIT FILE.                                *note7*    *
* ****************************************************************
// DLBL RDO$F42,'CICS.RDO.V420.VSE.CONTROL.FILE',,VSAM,CAT=USERCAT
// DLBL RDO$FIL,'CICS.RDO.V430.VSE.CONTROL.FILE',,VSAM,CAT=USERCAT
// DLBL RDO$A42,'CICS.RDO.V420.VSE.AUDIT.FILE',,VSAM,CAT=USERCAT
// DLBL RDO$AUD,'CICS.RDO.V430.VSE.AUDIT.FILE',,VSAM,CAT=USERCAT
// EXEC IDCAMS,SIZE=AUTO
   REPRO INFILE  (RDO$F42)    -
         OUTFILE (RDO$FIL)    -
           FROMKEY (O)        -
           TOKEY   (O)        -
           REPLACE
   REPRO INFILE  (RDO$A42)    -
         OUTFILE (RDO$AUD)

/*
/&
* $$ EOJ
```

STEP 4 Create the RDO CSD GROUP RDOCGRP

Step 4 creates the CICS CSD group RDOCGRP for AUTOMON/RDO. You need to edit the ISTEP04.Z member in your product installation library and change the DLBL for the DFHCSD file to the correct one used by your CICS (*note8*). If you already have AUTOMON/RDO installed you MUST use these definitions for this new release to work correctly.

STEP 5 Assemble and Link STSPASS Password module

The product control password is a special code which controls the authorized use of any product from UNICOM Systems. During the trial evaluation period, the product control password defines the date at which the trial version of the product will expire and can no longer be used.

For permanent licensed users, the product password defines all of the CPUs where the product may be used. Passwords for lease or lease-purchase licenses contain an expiration date and CPU ID.

When you initially receive an installation tape, whether for a trial evaluation or not, the tape contains a temporary password that will keep the product from expiring for approximately 30 days. If you are a licensed user, you should preserve your existing STSPASS member, which contains a permanent password, before loading the tape. When installation is complete, restore or reassemble the permanent password member to the new product installation library.

If you do not have a product password please contact Unicom Systems, Inc. to obtain a product password for AUTOMON/RDO. If you are evaluating the product and have received a new temporary password from your sales representative, you must assemble the password table with the new password to keep the product from expiring.

The following job control is used to assemble and catalog the password control table, STSPASS. Make sure to change the sublibrary in the JCL to your product installation library.

ISTEP05.Z

```
* $$ JOB JNM=ISTEP05,DISP=D,CLASS=0
// JOB ISTEP05       ASSEMBLE AND LINK AUTOMON/RDO PASSWORD MODULE
*
* IF YOU DO NOT ALREADY HAVE A PRODUCT PASSWORD FOR AUTOMON/RDO
* CALL UNICOM SYSTEMS TO OBTAIN A PRODUCT PASSWORD
*
// LIBDEF *,CATALOG=PRD2.AUTORDO                          *note3*
// LIBDEF SOURCE,SEARCH=(PRD2.AUTORDO)                    *note3*
// OPTION CATAL,LIST
// EXEC ASMA90,SIZE=(ASMA90,64K),PARM='EXIT(LIBEXIT(EDECKXIT)),SIZE(MAXC
              -200K,ABOVE)'
         PUNCH ' PHASE STSPASS,+0'
         PUNCH ' ACTION MAP'
*
****     STSPASS - UNICOM AUTOMON/RDO CONTROL PASSWORD TABLE
*
STSPASS  AMODE 31
STSPASS  RMODE ANY
STSPASS  CSECT ,
         DC    CL6'000000'          CPU ID
         DC    CL4'ANY '            AUTOMON/RDO PRODUCT ID
         DC    CL6'MMDDYY'          MMDDYY EXPIRATION DATE
         DC    CL16'XXXXXXXXXXXXXX' PRODUCT PASSWORD SUPPLIED BY UNICOM
         END   STSPASS
/*
// IF $MRC GT 4 THEN
// GOTO NOLINK
// EXEC LNKEDT
/. NOLINK
/*
/&
•   $$ EOJ
```

Data Fields of the Password Control Table

The password table is a series of define constant instructions. The same password table is used for all products from UNICOM Systems.

There are four DC statements required for each product, or for each occurrence of the same product on multiple CPUs. There is no limit to the number of product entries that may be present. The four DC instructions define the following values:

1. The first entry in the table is a 6-position CPU ID. For temporary passwords, code this as all zeros. For licensed users, code the full 6-position CPU ID where the product will operate.

   If you are a VM user and have multiple guest machines on the same CPU, you can get by with a single entry if the last five positions of the CPU ID on each guest machine are the same. If this is the case, code zero as the first digit, followed by the five identifying digits. If each guest CPU ID is different, you must make an entry for each unique CPU ID.

2. The second entry is a 4-position product ID. Codes are:

WNDO	-	CICS-WINDOWS	VTWO	-	VTAM-WINDOWS
JUGL	-	CICS-JUGGLER	YHPR	-	HYPERCODER
FSRV	-	CICS-FILESERV	RDOC	-	AUTOMON/RDO

3. The third entry is the expiration date. For temporary passwords or for lease and lease-purchase licenses, you will be given an expiration date along with your password. That date must be coded here in MMDDYY format. For perpetual licenses, code this as all zeros.

4. The last entry is the password itself. You must define it as a 16-byte field, although the total number of characters in the password may not reach 16. Code the password that you have been given.

STEP 6 Add RDO Product Library to CICS Startup JCL

You need to add the AUTOMON/RDO product library you created in step 1 to the LIBDEF in your CICS startup JCL. Restart the CICS partition you just installed AUTOMON/RDO into.

STEP 7 Install the RDO CSD GROUP

After control is given to CICS, logon to the CICS partition and install the AUTOMON/RDO CSD group RDOCGRP.

CEDA INSTALL GROUP(RDOCGRP)

Then append the AUTOMON/RDO CSD group to your CICS partition startup CSD group list.

CEDA APPEND GROUP(RDOCGRP) LIST(yourlist) *note9*

STEP 8 Start RDO

You can now start AUTOMON/RDO by executing the transaction RDOC.

At this point, the basic AUTOMON/RDO product is installed and ready for use. The following topics are optional, depending on your installation requirements.

VSE Installation Notes

1. Change VTAPE location and tape address information.
2. Change installation tape address
3. Change installation library name.
4. Change names of VSAM datasets if desired..
5. Change SHAREOPTIONS if desired
6. Change volume information to allow allocations of the VSAM datasets at your installation.
7. Run STEP03 to copy prior AUTOMON/RDO version control file records and the audit file records to the new V4.3 control/audit files.
8. Change DFHCSD to your CSD dataset name. Verify that your CICS LSRPOOL definition which these files use has 16KB data buffers defined.
9. Change 'yourlist' to the correct CICS CSD LIST name.

Installation Requirements for Remote Operation

If you plan to use the single point of control feature of AUTOMON/RDO to manage resources in multiple CICS regions, you must install the product in all regions to be managed.

Anywhere the product is installed, there must be a file definition for the supplemental file, RDO$FIL. It is not necessary to dedicate a separate supplemental file to each region, although you may, if desired. You should think of the supplemental file as just that -- supplemental to DFHCSD. Therefore, it should be defined and accessed in the same way DFHCSD is. If DFHCSD is shared between multiple CICS systems, RDO$FIL should be also. If you maintain a separate CSD for each CICS, do the same with RDO$FIL.

If a separate audit trail file is used, it should be defined in all regions as well. Most users prefer to dedicate an audit trail file to each region, but the files may be shared if desired. Audit trail files use the same exact VSAM definition parameters as the supplemental file.

Additional file definitions may be required to use the Import command. Import does not physically connect to any other region. Rather, it uses read-only definitions of the CSD files of other regions to copy data into the CSD of the local region. To use Import, define file definitions in the local CICS for each remote CSD with the OPERATIONS values of READ and BROWSE only. Assign any name desired to these files, except DFHCSD.

CICS Destination Control Table Changes

[Note]. *The following discussion only applies to CICS Transaction Server on z/VSE..* In CICS Transactions Server version 3.1 and later on z/OS, these changes are handled dynamically when the product initializes.

In order to activate the Message Audit Retrieval System (MARS) so that CICS messages can be captured and logged to the audit trail file, you must add an additional entry to the CICS DCT. AUTOMON/RDO will operate properly without this DCT entry, but no audit trail records will be logged.

The DCT entry must be coded as follows:

```
DFHDCT TYPE=INTRA,DESTFAC=FILE,                    X
       DESTID=nnnn,TRANSID=RDAT,TRIGLEV=1
```

where nnnn is the name specified in the AUTOMON/RDO DCT name field of the Preference Audit Trail Setup record. The default is RDTD. Refer to *Audit Trail Setup,* in Chapter 12 for more information.

Transaction RDAT must be defined as pointing to program RDOCAUDT. This transaction code is present as part of normal installation.

Depending on the choices you make in the Audit Trail Setup Preference display, additional changes to the DCT may be required. Refer to *Audit Trail Setup,* in Chapter 12 for more information.

After changing the DCT, assemble and link it to the CICS load library. When you cycle the CICS system again, the DCT will be available and you can complete the Audit Trail Setup Preference display.

Migrating from a Prior Release

If release 2.0, 2.1 or 2.2 of AUTOMON/RDO was previously in use, you should migrate the RDO$FIL supplemental file for release 4.3.0. Failure to do this could cause loss of resource documentation records for groups and lists.

Run the following job to migrate RDO$FIL to release 4.3.0 of AUTOMON/RDO:

VSE ...

```
// JOB RDOBATCH
// DLBL RDO$FIL,'RDO-CICB.CONTROL.FILE',,VSAM
// DLBL DFHCSD,'CICS110.DFHCSD',,VSAM
// LIBDEF *,SEARCH=UNICOM.AUTORDO
// EXEC RDOBATCH,SIZE=300K
MIGRATE RELEASE(2.2)                          Release migrating from
/*
```

MVS ...

```
//LGAEXEC      JOB1,UNICOM-SYSTEMS,MSGCLASS=X,CLASS=A
//STEP1        EXEC PGM=RDOBATCH,REGION=2M
//SYSPRINT     DD  SYSOUT=*
//STEPLIB      DD  AUTOMON.RDO.V430.MVS.LOADLIB,
//                 DISP=SHR
//RDO$FIL      DD  DSN=AUTOMON.RDOC22.CONTROL.FILE,DISP=SHR
//DFHCSD       DD  DSN=CICS5.CTS.DFHCSD,DISP=SHR
//SYSIN        DD  *
MIGRATE RELEASE(2.2)                          Release migrating from
//
```

Archiving and Purging the Audit Trail File

If release 2.0 or 2.1 of AUTOMON/RDO was previously in use, you must purge all audit trail records from the file before using release 4.3.0. This is not necessary if the prior release was 2.2 or later. Failure to do this will cause erroneous displays with the HISTORY command. Refer to the HPURGE and (optionally) HCOPY commands in chapter 13 for details of this process.

Installation Requirements for TSO Interface to AUTOMON/RDO

In order to use the TSO interface on MVS, the following conditions must be met:

1). The RDOCTSO program must be available to TSO. You can copy this load module into SYS1.CMDLIB or any other dataset included in the STEPLIB of the TSO Logon Procedure.

2). The external CICS interface modules that are supplied with CICS Tramsaction Server must be available to TSO. These modules are supplied for CICS TS 5.1 in CICS680.SDFHEXCI. You should add this dataset to the STEPLIB of your TSO Logon procedure.

3). In the target CICS system, there must be a CONNECTION and a TRANSACTION defined. These are distributed with AUTOMON/RDO for Version 4.1 and above and will be installed with the product. The minimum definitions for these appear as follows:

```
DEFINE    CONNECTION(RTSO) GROUP(RDOCGRP)
          ACCESSMETHOD(IRC) PROTOCOL(EXCI)
          SINGLESESS(NO) DATASTREAM(USER)
          RECORDFORMAT(U) CONNTYPE(GENERIC)
          ATTACHSEC(LOCAL) AUTOCONNECT(NO) INSERVICE(YES)
          DESCRIPTION (CONNECTION USING EXCI INTERFACE)

DEFINE    TRANSACTION(RTSO) PROGRAM(DFHMIRS)
          GROUP(RDOCGRP) PROFILE(DFHCICSA)
          TASKDATALOC(BELOW) TASKDATAKEY(CICS)
          SHUTDOWN(DISABLED) ISOLATE(YES)
          DESCRIPTION(MIRROR TRANSACTION FOR EXCI CALL)
```

4). Interregion Connection must be OPEN in the target CICS system. To check this, enter CEMT IRC. If it shows CLO, change it to OPE and press Enter.

[Note.] The IBM manual, *External CICS Interface*, publication number SC33-1390-00 provides more information about the EXCI distributed program link used by RDOCTSO.

Installation Notes, MVS and VSE

1). If you wish to use a different transaction code than RDOC, you may make the TRANSID value any desired transaction code.

2). If you want AUTOMON/RDO to build its directory at CICS start-up, include the RDOCMAIN program in a PLTPI start-up list.

At this point, the basic AUTOMON/RDO product is installed and ready to operate.

You may want to tailor the product to fit your environmental needs, described in Chapter 12 - *Customizing AUTOMON/RDO*, however the product is operational without doing so.

Chapter 15. Messages

Messages are listed by code. Each entry contains the error message, a brief explanation of the error, and recommended action for correction. If you have any questions or need assistance, please call our technical hot line at 1-800-944-3036.

RA00001. AUDIT TRAIL FILE UNAVAILABLE - xxxxxxxx

The audit trail processor could not write to the audit file, indicated by xxxxxxxx in the message. The file is either closed, disabled or undefined.

ACTION: Verify the file name in the Preferences Audit Trail Setup screen. Correct the status of the file, if needed.

RA00002. DUPLICATE IN AUDIT TRAIL FILE - xxxxxxxxxxxxxxxxxxxxxxxxxx

While writing an audit message that originated from CEDA, the audit program was unable to store the record because of a duplicate VSAM key. This is a "should not occur" situation, since the audit processor uses the date, time and an incrementing sequence number to ensure there will be no duplicates in the file. The x's in the message are the record key which could not be written.

ACTION: This audit record is dropped. A legitimate duplicate could theoretically happen when a large volume of messages is generated all at once from CEDA, but under normal cicumstances it should never occur. If the problem persists, notify UNICOM Systems technical support.

RA00003. AUDIT TRAIL FILE IS FULL - xxxxxxxx

The audit file, indicated by xxxxxxxx in the message, cannot suballocate any more extents.

ACTION: This message will continue to appear on the system console until the audit file is reorganized or enlarged. Audit records in the interim are sent to the appropriate CICS message log without saving them.

RA00004. OUTPUT DCT IS NOT AVAILABLE - xxxx

The destination control file (TDQUEUE) indicated by xxxx in the message, is not available to receive an audit message. The queue may be undefined, or disabled.

ACTION: Verify the DCT name in the Preferences Audit Trail Setup screen. Correct the status if needed.

RA00005. I/O ERROR OCCURRED IN DCT xxxx

The destination control file (TDQUEUE) indicated by xxxx in the message returned an I/O error condition while attempting to write send audit message.

ACTION: Verify the DCT name in the Preferences Audit Trail Setup screen. Correct the status if needed. If the problem persists, notify UNICOM Systems technical support.

RA00006. THIS IS AN INTERNAL TRANSACTION

This message appears if the audit transaction code is entered at a terminal. The audit transaction code is normally RDAT, but it may be changed in General Preferences.

ACTION: The audit transaction code is used internally to initiate the audit logging processor. It cannot be used at a terminal. It is possible that the Audit Tran in the General Preferences display could be specified incorrectly.

RB00001. INSUFFICIENT STORAGE, RC=xxX

During batch processing, dynamic storage could not be obtained. RC is the return code from a GETVIS macro (VSE) or a GETMAIN macro (MVS).

ACTION: Increase the region size and rerun the job.

RB00002. DATA FILE xxxxxxxx IS FULL

During batch processing, the file specified by DDNAME xxxxxxxx cannot suballocate any more extents.

ACTION: Redefine the file, giving it more space, then rerun the job.

RB00003. VSAM ERROR, RC=AA, ERRCODE=X'BBBB', TYPE=CCCCCCCC, FILE=DDDDDDDD

VSAM has returned an error code in response to an OPEN macro or a request macro. Values in the message are:

aa	R15 return code.
bbbb	Hex error code.
cccccccc	Macro that issued the request (OPEN, GET, POINT, etc.)
dddddddd	DDNAME of the file being accessed.

ACTION: Determine the cause of the error from the VSAM MESSAGES AND CODES manual. If the solution is not obvious, notify UNICOM Systems technical support.

RB00004. SCREEN RECORD NOT FOUND - xxxxxxxx

A screen control record is missing from the AUTOMON/RDO supplemental file (RDO$FIL). In the message, xxxxxxxx is the identity of the screen.

ACTION: Examine any available backup files for the missing record. The key of screen records begins with an 'S', followed by xxxxxxxx in the message. If the missing record cannot be located, notify UNICOM Systems technical support.

RB00005. CSD RELEASE-LEVEL RECORD NOT PRESENT

The first record in the CSD should begin with x'0000000000000FFF' and contain the identity of the release of CICS using this CSD. This record cannot be found.

ACTION: The batch operation is terminated since the CICS release level cannot be determined. Examine this and other CSD files and, if possible, restore the missing record. This record is supplied by IBM when CICS is installed. Note that the release level can be supplied with the CICS RELEASE control statement (see chapter 13).

RB00006. EXCI call failure, command = aaaaaaa
RESPONSE = bbbbbbb
REASON = cccccccc
SUB-REASON1 = dddddddd

SUB-REASON2 = eeeeeeee
DPL-RESPONSE = ffffffff
DPL-RESP2 = gggggggg
DPL-ABCODE = hhhh

This message indicates a failure occurred during or when attempting an EXCI connection from a batch program to CICS. In the message …

aaaaaaaa = the current EXCI command, one of the following:
INIT_USER
ALLOCATE_PIPE
OPEN_PIPE
CLOSE_PIPE
DEALLOCATE_PIPE
DPL_REQUEST

bbbbbbb = response code, as follows:
00 Normal
04 Warning
08 Retryable
12 User error
16 System error

cccccccc = reason code. These are documented in the IBM publication, *CICS Internet and External Interfaces Guide*. Following are brief descriptions of each code:

001 PIPE ALREADY OPEN
002 PIPE ALREADY CLOSED
003 VERIFY BLOCK FM ERROR
004 WS FREEMAIN ERROR
005 XCPIPE FREEMAIN ERROR
006 IRP IOAREA FM FAILURE
007 SERVER TERMINATED
201 NO CICS IRC STARTED
202 NO PIPE AVAILABLE
203 NO CICS OR IRC AVAILABLE
401 INVALID CALL TYPE
402 INVALID VERSION NUMBER
403 INVALID APPL NAME
404 INVALID USER TOKEN
405 PIPE NOT CLOSED
406 PIPE NOT OPEN
407 INVALID USERID
408 INVALID UOWID
409 INVALID TRANSID
410 DFHMEMB LOAD FAILED
411 DFHMET4E LOAD FAILED
412 DFHXCURM LOAD FAILED
413 DFHXCTRA LOAD FAILED
414 IRP ABORT RECEIVED
415 INVALID CONNECTION DEFINED
416 INVALID CICS RELEASE
417 PIPE MUST CLOSE
418 INVALID PIPE TOKEN
419 CICS AFCB PRESENT

420 DFHXCOPT LOAD FAILED
421 RUNNING UNDER AN IRB
422 SERVER ABENDED
601 WS GETMAIN ERROR
602 XCGLOBAL GETMAIN ERROR
603 XCUSER GETMAIN ERROR
604 XCPIPE GETMAIN ERROR
605 VERIFY BLOCK GM ERROR
606 SSI VERIFY FAILED
607 CICS SVC CALL FAILURE
608 IRC LOGON FAILURE
609 IRC CONNECT FAILURE
610 IRC DISCONNECT FAILURE
611 IRC LOGOFF FAILURE
612 TRANSFORM 1 ERROR
613 TRANSFORM 4 ERROR
614 IRP NULL DATA RECEIVED
615 IRP NEGATIVE RESPONSE
616 IRP SWITCH PULL FAILURE
617 IOAREA GM FAILURE
618 TRANSFORM 1 ERROR
619 IRP BAD IOAREA
620 IRP PROTOCOL ERROR
621 PIPE RECOVERY FAILURE
622 ESTAE SETUP FAILURE
623 ABEND, ESTAE INVOKED
624 SERVER TIMEOUT
625 STIMER SETUP FAILURE
626 STIMER CANCEL FAILURE
627 INCORRECT SVC LEVEL
628 IRP LEVEL CHECK FAILURE
629 SERVER PROTOCOL ERROR

dddddddd = additional reason code, see *CICS Internet and External Interfaces Guide.*

eeeeeeee = additional reason code, see *CICS Internet and External Interfaces Guide.*

ffffffff = DPL response, present only if the command is DPL REQUEST. Codes are:

16 INVREQ
22 LENGERR
27 PGMIDERR
53 SYSIDERR
70 NOTAUTH
81 TERMERR
82 ROLLEDBACK

gggggggg = DPL response2 field, present only if the command is DPL REQUEST.

hhhh = Transaction abend code from CICS. This will only be present if the CICS transaction initiated with EXCI abnormally terminated.

ACTION: Determine the cause of the error, using these descriptions or the *CICS Internet and External Interfaces Guide*. If the solution is not obvious, notify UNICOM Systems technical support.

RB00007. OPEN ERROR FOR SYSIN, POSSIBLE MISSING DD, RC=xxX

A QSAM open error occurred while attempting open the input SYSIN file. The open return code from register 15 is displayed by xxx in the message.

ACTION: The most common cause of this error is a missing DD statement for SYSIN. If that is not the case, locate the open return code in the IBM document, *System Macros and Facilities.* If the solution is not obvious, notify UNICOM Systems technical support.

RB00008. OPEN ERROR FOR SYSPRINT, POSSIBLE MISSING DD, RC=xxX

A QSAM open error occurred while attempting open the input SYSPRINT file. The open return code from register 15 is displayed by xxx in the message.

ACTION: The most common cause of this error is a missing DD statement for SYSPRINT. If that is not the case, locate the open return code in the IBM document, *System Macros and Facilities.* If the solution is not obvious, notify UNICOM Systems technical support.

RB01001. BATCH COMMAND "xxxxxxxx" IS INVALID

The control statement input to the batch processor contains an invalid command. Refer to chapter 13, entitled BATCH PROCESSING, for valid commands.

ACTION: Correct the control statement and rerun the job.

RB01002. INVALID COMMAND SYNTAX

The control statement input to the batch processor is incorrectly coded. Refer to chapter 13, entitled BATCH PROCESSING, for proper syntax.

ACTION: Correct the control statement and rerun the job.

RB01003. GROUP NAME MUST BE SUPPLIED

The control statement input to the batch processor identifies a unique resource, but the group name was not specified.

ACTION: Correct the control statement and rerun the job.

RB01004. FROM DATE MUST BE MMDDyy OR MM/DD/yy

Invalid date format for the FROM keyword of HPRINT, HPURGE or HCOPY statement. The date must be entered as month, day, year in either of the forms listed above.

ACTION: Correct the control statement and rerun the job.

RB01005. THRU DATE MUST BE MMDDYY OR MM/DD/YY

Invalid date format for the THRU keyword of HPRINT, HPURGE or HCOPY statement. The date must be entered as month, day, year in either of the forms listed above.

ACTION: Correct the control statement and rerun the job.

RB01006. SEARCH TYPE "xxxxxxxx" IS INVALID

For batch duplicate checking, the SEARCH keywords must contain one of the following:

ALL

TYPE

RESOURCE

SELECT

ACTION: Correct the keyword and rerun the job.

RB01007. RESOURCE TYPE "xxxxxxxx" IS INVALID

For batch duplicate checking, when SEARCH is coded SELECT, the value in parentheses for TYPE must be a valid resource type mnemonic.

ACTION: Correct the keyword and rerun the job.

RB01008. TYPE KEYWORD IS REQUIRED FOR SEARCH(SEL)

For batch duplicate checking, when SEARCH is coded SELECT, the TYPE keyword is required.

ACTION: Correct the keyword and rerun the job.

RB01009. INVALID REPLACE KEYWORD (Y OR N)

For QCOPY, the REPLACE keyword must specify YES or NO (First character is acceptable).

ACTION: Correct the keyword and rerun the job.

RB01010. INVALID EXECUTE KEYWORD (Y OR N)

For any of the Queue commands, the EXECUTE keyword must specify YES or NO (First character is acceptable).

ACTION: Correct the keyword and rerun the job.

RB01011. INVALID STATUS KEYWORD (S OR U)

For any of the Queue commands, the STATUS keyword must specify SUCCESSFUL or UNSUCCESSFUL (First character is acceptable).

ACTION: Correct the keyword and rerun the job.

RB01012. INVALID DATE KEYWORD (C OR E)

For any of the Queue commands, the DATE keyword must specify CREATE or EXECUTE (First character is acceptable).

ACTION: Correct the keyword and rerun the job.

RB01013. TLIST MUST BE 2 NUMERIC DIGITS

The target list (TLIST) keyword is incorrectly coded. It must be two numeric digits identifying an application target list sequence number.

ACTION: Correct the keyword and rerun the job.

RB01014. INVALID OR UNSUPPORTED CICS RELEASE, CHOICES ARE: 4.1 6.4 6.5 6.6 6.7 6.8

For the RELEASE keyword of the CICS command, the specified release level is not valid. Following the message are all supported versions of CICS Transaction Server. Note that CICS release 4.1 corresponds to CICS Transaction Server version 1.1 on VSE and CICS releases 6.4, 6.5, 6.6, 6.7 and 6.8 correspond to CICS Transaction Server version 3.1, 3.2, 4.1, 4.2 and 5.1 respectively on z/OS.

ACTION: Correct the keyword and rerun the job.

RB01015. INVALID OR UNSUPPORTED AUTOMON/RDO RELEASE, CHOICES ARE: 2.0 2.1 2.2 2.3 4.2 4.3

For the RELEASE keyword of the MIGRATE command, the specified release level of AUTOMON/RDO is not valid. Supported releases are 2.0, 2.1, 2.2, 2.3. 4.2 and 4.3.

ACTION: Correct the keyword and rerun the job.

RB01016. INVALID UPDATE OPTION, YES OR NO

The UPDATE keyword of the CICS command is incorrectly coded. Choices are YES or NO (first character is acceptable).

ACTION: Correct the keyword and rerun the job.

RB01017. RELEASE RECORD NOT PRESENT IN CSD, CANNOT UPDATE

An attempt was made to correct the CSD release identifier record, using UPDATE(YES) of the CICS command. The release identifier record cannot be altered because it is absent. This function will not create a new release identifier record, only change the release level in an existing record.

ACTION: Either the CSD release identifier record must be present or you must always include the CICS command (without UPDATE) as the first statement of batch jobs. In order to add a release identifier record to a CSD that does not have one, you must use IDCAMS to REPRO a an identifier record from some other CSD file. It will be the first record in the file, the VSAM key beginning with x'0000000000000FFF'. After copying a release identifier to this CSD file, you can use the CICS command with UPDATE(YES) to set the correct release level.

RB01018. CSD RELEASE RECORD IS ALREADY SET TO X.X

An attempt was made to correct the CSD release identifier record, using UPDATE(YES) of the CICS command. The release identifier record currently in the target CSD is currently set for the same release level (specified by x.x in the message) as that coded in the RELEASE mnemonic.

ACTION: Correct the keyword and rerun the job if the release was specified incorrectly. Otherwise there is no need to run this step.

RB01019. CSD RELEASE RECORD HAS BEEN CHANGED TO X.X

In response to the CICS command with UPDATE(YES), this message indicates successful completion. The release identifier record has been changed to the specified CICS release, indicated by x.x in the message.

ACTION: No action is required.

RB01020. SCAN DATA TOO LONG, MAXIMUM 20 BYTES

When using the SCAN keyword of GENSRC to search description fields, the designated scan data is too long. The maximum text length that can be scanned is 20 bytes.

ACTION: Correct the keyword and rerun the job.

RB01021. INVALID DELETE KEYWORD (FIRST, LAST, All)

The DELETE mnemonic of the DUPES command is incorrectly coded. Valid entries are FIRST, LAST and ALL (first character is acceptable).

ACTION: Correct the keyword and rerun the job.

RB01022. LIST NAME CANNOT BE MASKED

The LIST mnemonic of the DUPES command is incorrectly coded. It must be a full list name containing no masking characters (* ? <).

ACTION: Correct the keyword and rerun the job.

RB03001. NO RECORDS PRESENT IN DFHCSD

For a GENSRC batch operation, the file identified by DFHCSD does not contain any valid groups

ACTION: Examine the JCL. Verify you are pointing to the correct file. If the problem persists, notify UNICOM Systems technical support.

RB03002. GROUP MASK NOT ALLOWED FOR RESOURCE EXTRACT

The control statement input to the batch processor identifies a unique resource, and a mask character was used in the group name. Generic masks cannot be used in the group name, only the resource name.

ACTION: Correct the control statement and rerun the job.

RB03003. MASK NOT ALLOWED IN LIST NAME

The control statement input to the batch processor identifies a list and a mask character was used in the list name. Generic masks cannot be used for list extracts.

ACTION: Correct the control statement and rerun the job.

RB03004. LIST EXTRACT CAPACITY EXCEEDED

The control statement input to the batch processor identifies one or more lists and the area reserved in the program to table all groups in one list is exhausted.

ACTION: This list cannot be extracted unless the number of entries in the list is reduced. If this cannot be done notify UNICOM Systems technical support.

RM05001. NO DUPLICATE RESOURCE NAMES FOUND

This message indicates that no duplicates of the specified type were found when executing the DUPES command.

ACTION: No action is necessary.

RB06001. GROUP MASK NOT ALLOWED FOR RESOURCE COMPARE

For COMPARE, if a resource type and name is specified, you cannot specify a generic or masked group name.

ACTION: Correct the keyword and rerun the job.

RB06002. MASK NOT ALLOWED IN LIST NAME

For COMPARE, generic or masked list names cannot be processed.

ACTION: Correct the keyword and rerun the job.

RB06003. LIST NOT FOUND OR IGNORED IN YYYYYYY - xxxxxxxx

For COMPARE, the specified list name could not be found in the CSD. The yyyyyyyy in the message is the file name and xxxxxxxx is the list name.

ACTION: Correct the keyword and rerun the job.

RB06004. GROUP NOT FOUND OR IGNORED IN YYYYYYY - xxxxxxxx

For COMPARE, the specified group name could not be found in the CSD. The yyyyyyyy in the message is the file name and xxxxxxxx is the group name.

ACTION: Correct the keyword and rerun the job.

RB06005. MASKED GROUP NOT FOUND OR IGNORED IN YYYYYYY - xxxxxxxx

For COMPARE, the specified group name could not be found in the CSD. The yyyyyyyy in the message is the file name and xxxxxxxx is the group name.

ACTION: Correct the keyword and rerun the job.

RB07001. NO QUEUE FOUND FOR SELECT CRITERIA

For this queue command, there were no queue found which matched all of the selection criteria.

ACTION: Correct the keyword and rerun the job.

RB07002. DATE NOT SPECIFIED FOR FROM/THRU SELECT

For this queue command, if you code a from/thru date, you must also designate which date by means of the DATE(CREATE) or DATE(EXECUTE) keyword.

ACTION: Correct the keyword and rerun the job.

RB07003. FROM OR THRU DATE OMITTED

For this queue command, the DATE keyword was coded, but no FROM/THRU selection dates.

ACTION: Correct the keyword and rerun the job.

RB08001. REQUESTED QUEUE NOT FOUND -

The export queue specified by the QUEUE mnemonic could not be found in RDO$FIL.

ACTION: Verify the presence of the queue with the online EXPORT *Locate control queue* function. If the queue is there, verify that the batch job is pointing to the correct file with the DD statement for RDO$FIL. Correct the keyword or DD statement and rerun the job.

RB08002. NO QUEUE NAME OR APPLID SUPPLIED

The EXECUTE command must know the target CICS region. This is specified with either the APPLID or TLIST mnemonic, or it must be present in the export queue if the QUEUE mnemonic is used.

ACTION: Correct the keyword or export queue and rerun the job.

RB08003. TARGET LIST RECORD NOT FOUND - xx

The application target list number designated with the TLIST mnemonic or specified in the export queue designated with the QUEUE mnemonic could not be found in RDO$FIL.

ACTION: Verify the presence of the application target list using the on-line Preferences function. If present, verify that the batch job is pointing to the correct file with the DD statement for RDO$FIL. Correct the keyword or DD statement and rerun the job.

RB08004. TARGET APPLID NOT PRESENT IN QUEUE RECORD

The export queue designated with the QUEUE mnemonic does not contain a valid target Applid or target list number. The EXECUTE command must know the target CICS region. This is specified with either the APPLID or TLIST mnemonic, or it must be present in the export queue if the QUEUE mnemonic is used.

ACTION: Correct the keyword or export queue and rerun the job.

RB08005. xxxxxxxx IS CURRENTLY UNAVAILABLE

The CICS region indicated by xxxxxxxx in the message is currently not available for the batch EXECUTE command. The target CICS system must be up and operational.

ACTION: Verify the correct Applid is coded. Correct the keyword or activate the target CICS system and rerun the job.

RB08006. COMMAND MUST BEGIN IN POSITION 1

When using the EXECUTE command with CEDA commands specified in SYSIN, the command (alter, define, etc.) must begin in the first position of the SYSIN statement.

ACTION: Correct the SYSIN commands and rerun the job.

RB08007. INPUT COMMAND TOO BIG, MAX 15 LINES

When using the EXECUTE command with CEDA commands specified in SYSIN, the number of lines dedicated to one command cannot exceed 15.

ACTION: Correct the SYSIN commands and rerun the job. It may be necessary to code multiple mnemonic/value pairs on each line.

RB08008. NO EXECUTABLE STATEMENTS IN INPUT

If the QUEUE command is omitted from an EXECUTE command, the batch processor expects to find CEDA commands in the SYSIN dataset. This message indicates no commands were found.

ACTION: Correct the keywords or the SYSIN designation and rerun the job.

RB08009. CODE APPLID OR TLIST, NOT BOTH

For the EXECUTE command, the target CICS region must be specified with the APPLID or TLIST keywords. This message indicates that neither were specified.

ACTION: Correct the keyword and rerun the job.

RB08010. UNABLE TO OPEN RDO$FIL FOR UPDATE

In the EXECUTE command, an export queue was designated with the QUEUE mnemonic, and UPDATE(YES) was coded. The supplemental file, RDO$FIL, could not be opened in update mode.

ACTION: This message usually indicates that the file is open in another region. If this is the case, message RB08012 will follow. It must be closed and defined as read only in order to update it from batch. If message RB08012 does not accompany this message, check the system console and locate the VSAM open error message to determine the cause.

RB08011. EXECUTE COMPLETED, QUEUE RESULTS NOT POSTED

This message accompanies RB08010 when UPDATE(YES) is coded and the file could not be opened in output mode. It indicates that the export queue record was not posted with the execution results.

ACTION: See message RB08010.

RB08012. FILE IS OPEN/UPDATE IN ANOTHER REGION

This message accompanies RB08010 when UPDATE(YES) is coded and the file could not be opened in output mode. It indicates that the file is open in update mode somewhere else.

ACTION: See message RB08010.

RB09001. MIGRATION HAS ALREADY BEEN PERFORMED

In response to the MIGRATE command, the message indicates that the supplemental file (RDO$FIL) has already been migrated to the current release. A release identifier record is present in RDO$FIL, written when the MIGRATE command is executed. The version level in this record is correct for the current product release.

ACTION: No action is required. This file does not need to be migrated.

RC01001. COMMAND “ “ IS INVALID.

An invalid command was issued.

ACTION: Enter a valid command and try again.

RC03001. “xxxxxxxx” not found in RDO directory. Retry.

A valid CEDA command has been issued against a resource from the Simplified Commands display, but the resource does not exist in the in-memory directory.

ACTION: Check the spelling of the resource. If correct, try refreshing the directory by selecting the Refresh command from the primary menu.

RC03002. The first Directory Entry has been displayed.

When browsing through a directory the first entry has been reached.

ACTION: No action is required.

RC03002. The last Directory Entry has been displayed.

When browsing through a directory the last entry has been reached.

ACTION: No action is required.

RC03003. Resource name is required for “xxxxxxxxxx”

A simplified CEDA command has been issued, but no resource has been specified to perform the operation against. The xxxxxxxxxx in the message is replaced by the issued command.

ACTION: Enter a resource name in the appropriate field and retry the operation.

RC03004. Press ENTER to delete this resource, PF3 to exit.

A resource has been selected for deletion. This message asks for confirmation.

ACTION: Press ENTER to delete the resource or PF3 to exit delete mode.

RC03005. Delete successful.

A resource has been selected for deletion and the action confirmed. The resource has been deleted.

ACTION: No action required.

RC03006. Make any changes and press ENTER to alter this resource.

A resource has been selected for alteration.

ACTION: Make desired changes and press ENTER to complete the action, or press PF3 to exit without performing any alteration.

RC03007. Alter successful, overtype to modify.

The changes entered have been made in the resource.

ACTION: Press PF3 to exit the resource definition, or make additional changes by overtyping in the desired fields and pressing ENTER.

RC03008. Resource not defined, can't alter.

An ALTER command has been issued against a resource which could not be located in the DFHCSD.

ACTION: Check the spelling of the resource name, using the AUTOMON/RDO directory, if necessary.

RC03009. Cannot alter or delete import CSD.

An ALTER or DELETE command has been issued against a remote DFHCSD file being accessed to import resources into the local CSD.

ACTION: In import mode the remote DFHCSD file is accessed in read only mode. If you wish to alter the remote CSD, you must use the Connect command from the primary menu.

RC03010 Beginning of file reached.

While browsing through a group, the first DFHCSD entry has been displayed.

ACTION: No action is required.

RC03011. End of file reached.

While browsing through a group, the last DFHCSD entry has been displayed.

ACTION: No action is required.

RC03012. CEDA command not supported for this release of CICS.

A CEDA command has been issued against a resource that is not available in the version of CICS being used.

ACTION: Enter a valid CEDA command. Consult the IBM CICS/ESA Resource Definition Guide for your version of CICS for a list of valid commands.

RC03013. Security error, no updates allowed.

AUTOMON/RDO was invoked with the RDON transaction, which uses CEDC rather that CEDA to process operations. Updates are not allowed with the CEDC transaction and hence not with the RDON transaction.

ACTION: If authorized for updates, use the RDOC transaction to invoke AUTOMON/RDO.

RC0314. Security error, no installs allowed.

AUTOMON/RDO was invoked with the RDOI or RDON transactions, which uses CEDB and CEDC, respectively, rather that CEDA to process operations. Installations are not allowed with the CEDB or CEDC transactions and hence not with the RDOI or RDON transactions.

ACTION: If authorized for installation, use the RDOC transaction to invoke AUTOMON/RDO.

RC03015. ENTER=DELETE, PF13=DELETE AND SUPPRESS PROMPTS, PF3=EXIT

This prompt will appear when delete commands have been entered for multiple resources at the directory.

ACTION: Pressing Enter will delete this resource, then display the next selected resource. PF13 will delete this resource and delete all subsequent selected resources without displaying them for verification. PF3 will exit without deleting this resource, then display the next one selected.

RC04001. Resource name required.

A DEFINE command has been issued and ENTER pressed to complete the operation, but no resource name has been entered.

ACTION: Key a resource name and press ENTER to define the resource.

RC04002. Group name required.

A DEFINE command has been issued and ENTER pressed to complete the operation, but no group name has been entered.

ACTION: Key a group name and press ENTER to define the resource.

RC04003. Resource already exists in this group.

An attempt has been made to define a resource, but a resource definition already exists in the specified group with the name assigned the new resource.

ACTION: Alter the name of the resource or assign it to a different group and press ENTER to define the resource.

RC04004. Make any changes and press ENTER to define resource.

A DEFINE command has been issued from the Cmd field of a resource directory. The resource adjacent to the command line is currently displayed.

ACTION: Since the resource already exists, it cannot be defined, but a new resource may be defined by altering the name of the resource and/or group. Make these and any other changes desired and press ENTER to define the resource.

RC04005. Change resource name or group, press ENTER to define resource.

An attempt has been made to define a resource, but a resource definition already exists in the specified group with the name assigned the new resource.

ACTION: Alter the name of the resource or assign it to a different group and press ENTER to define the resource.

RC04006. Definition completed, change name or group to define another.

The DEFINE operation has been successfully completed.

ACTION: Additional resources may be defined by altering the resource or group name, keying any other changes desired, and pressing ENTER.

RC04007. Resource not defined, can’t alter.

An ALTER command has been issued against a resource which could not be located in the DFHCSD.

ACTION: Correct the resource name and retry. If in doubt, refresh the directory.

RC04008. Security error, no installs allowed.

AUTOMON/RDO was invoked with the RDOI or RDON transactions, which uses CEDB and CEDC, respectively, rather that CEDA to process operations. Installations are not allowed with the CEDB or CEDC transactions and hence not with the RDOI or RDON transactions.

ACTION: If authorized for installation, use the RDOC transaction to invoke AUTOMON/RDO.

RC05001. Invalid command, COPY, MOVE, RENAME or DELETE.

The initial command in the COPY, MOVE, RENAME or DELETE popup window has been altered by the user; however, the command entered is invalid.

ACTION: Overtype with COPY, MOVE, RENAME or DELETE and retry the operation.

RC05002. Invalid resource type, press PF1 for help

An improper resource type has been entered in the "Resource Type" field of the popup window.

ACTION: Key a valid resource type in the field. A list of resource types may be obtained by pressing the Help key. The type may be pasted into the field by tabbing to the desired type in the list and pressing PF4.

RC05003. Resource not present in DFHCSD.

The resource selected for the operation in the COPY, MOVE, RENAME or DELETE popup window was not found in the DFHCSD file.

ACTION: Check the spelling of the resource and group names. Also, check that the resource is a member of the group indicated.

RC05004. New name or new group required.

A COPY command has been issued, but a duplicate resource already exists in the specified group.

ACTION: Alter the resource or group name and press ENTER to complete the operation.

RC05005. Generic name not allowed with RENAME.

Generic characters have been entered in the "Resource Name" field of the RENAME popup window.

ACTION: Generic characters may not be specified in a RENAME operation. Enter the exact name of the resource.

RC05006. Resource maintenance complete.

The selected operation has been successfully completed.

ACTION: Enter a new resource for the operation or press PF3 to exit.

RC05007. Resource xxxxxxxx, group yyyyyyyy already present in DFHCSD.

An attempt has been made to copy, move or rename a resource, but a duplicate resource (xxxxxxxx) exists in the group specified (yyyyyyyy).

ACTION: Alter the name of the resource and/or group and retry the operation.

RC05008. Group name is required.

An attempt has been made to copy, move, rename or delete a resource, but the group of which the resource is a member was not specified.

ACTION: Enter the name of the group and press ENTER to complete the operation.

RC05009. No matching entries were found in directory.

A generic copy, move, rename or delete operation has been attempted, but no entries which satisfy the mask criteria have been found in the directory.

ACTION: Alter the mask to include the desired resources and try again the operation.

RC05010. No entries for group found in directory.

The group does not exist in the DFHCSD file which was used to construct the in-memory AUTOMON/RDO directory.

ACTION: Check the spelling of the group.

RC05011. NEW NAME IS INVALID UNLESS USED WITH MASKED RESOURCE NAME

An attempt has been made to copy or move resources from one group to another, and a name has been entered in the "New name" field of the popup window. This is only valid of both New name and Resource name are entered as masks. When this is done, the result is a copy/move with masked rename.

ACTION: Correct the Resource and/or New name field and retry.

RC05012. CANNOT SUPPRESS PROMPT WINDOW WITH MASKEd rESOURCE NAME

An attempt has been made to suppress verification of individual resource deletes by selecting *Suppress prompt for multiple deletes* in the delete window. While this is valid, it is not allowed when the resource name is masked, due to the possibility of incorrect mask entry resulting in erroneous deletions.

ACTION: Remove the selection character from *Suppress prompt for multiple deletes* and retry.

RC05013. MASKED GROUP NAME IS NOT ALLOWED

Masked group entry is not allowed for copy/move/rename/mass delete, due to the high potential for erroneous results.

ACTION: Enter a full group name and retry.

RC07001. Resource maintenance complete.

The selected operation has been successfully completed.

ACTION: Enter a new resource for the operation or press PF3 to exit.

RC07002. Group name is required.

An attempt has been made to ADD, APPEND or REMOVE a group, but the group name was omitted.

ACTION: Enter the name of the group and press ENTER to complete the operation.

RC07003. List name is required.

An attempt has been made to ADD, APPEND or REMOVE a group, but the list name was omitted.

ACTION: Enter the name of the list and press ENTER to complete the operation.

RC07004. Group not found in directory.

An attempt has been made to ADD, APPEND or REMOVE a group, but the group does not exist in the AUTOMON/RDO in-memory directory.

ACTION: Check the spelling of the group. If the spelling is correct, refresh the directory and try again the operation.

RC07005. Group already exists in this list.

An attempt was made to ADD a group to a list, but a duplicate group is defined in the list.

ACTION: Rename the group and press ENTER to complete the operation.

RC07006. Before group is not in this list.

The group to be added was specified to be located before a group currently in the list. The current group specified, however, does not exist in the list.

ACTION: Check the spelling of the before group. If it is spelled correctly, use other facilities in AUTOMON/RDO to find the desired group to locate the resource before, then try again the operation.

RC07007. After group is not in this list.

The group to be added was specified to be located after a group currently in the list. The current group specified, however, does not exist in the list.

ACTION: Check the spelling of the before group. If it is spelled correctly, use other facilities in AUTOMON/RDO to find the desired group to locate the resource after, then try again the operation.

RC07008. Group is not present in this list.

The group to be removed or appended does not exist in the specified list.

ACTION: Check the spelling of the before group. If it is spelled correctly, use other facilities in AUTOMON/RDO to find the desired group, then retry the operation with a group in the list.

RC07009. List not found in directory.

The list specified for an ADD, APPEND or REMOVE operation does not exist in the AUTOMON/RDO in-memory directory.

ACTION: Check the spelling of the group. If the spelling is correct, refresh the directory and try again the operation.

RC07010. New list name is required.

A new list was omitted for an APPEND operation.

ACTION: Enter the list name and try again the operation.

RC07011. Mask entry not allowed in this context.

A mask was specified for an operation that does not allow masks.

ACTION: A mask cannot be used for the operation. Enter the complete name.

RC07012. NO MATCHING GROUPS FOUND

A mask was specified in the group name of an ADD command. No groups were found in the directory that match the specified group criteria.

ACTION: Correct the group mask and retry.

RC08001. Install function completed.

An INSTALL command has been successfully executed.

ACTION: No action is required.

RC08002. Group name is required.

An attempt has been made to install a group or resource, but the group name was omitted.

ACTION: Enter the name of the group and press ENTER to complete the operation.

RC08003. Resource type is required.

An attempt has been made to install a resource without specifying a valid resource type.

ACTION: Enter a valid resource type and try again the operation.

RC08004. Group not found in directory.

The group to be installed does not exist in the AUTOMON/RDO in-memory directory..

ACTION: Check the spelling of the group. If it is spelled correctly, use other facilities in AUTOMON/RDO to find the desired group, then retry the operation.

RC08005. Resource name is required.

A resource type was specified in the INSTALL popup window, but no resource name was specified.

ACTION: Resources may not be installed by type. Enter a resource name and press ENTER to complete the operation.

RC08006. Reply must be ‘Y’ or ‘N’.

A response other they Y(es) or N(o) was entered in the prompt window warning that a file or program is in use.

ACTION: Enter ‘Y’ or ‘N’ as desired.

RC08008. Resource not found in group.

The resource specified for installation does not exist in the indicated group.

ACTION: Check the spelling of the resource. If it is spelled correctly, use other facilities in AUTOMON/RDO to locate the desired resource, then retry the operation.

RC08009. Program RDOCCMDS must be installed with CEDA.

The AUTOMON/RDO RDOCCMDS, RDOCMAIN or RDOCUTIL programs cannot be installed because they are in use.

ACTION: These programs cannot be installed using the AUTOMON/RDO product. You must use CEDA to install them.

RC08010. APPLICATION TARGET LIST xx NOT FOUND

The operator entered a number in the Application Target List Number field of the Install window and no such list exists. In order to perform a remote install using an application target list, the list must be defined using the Preferences function.

ACTION: Either create an application target list with this sequence number of redo the Install command and do not specify a list number.

RC08011. APPLICATION TARGET LIST OR DIRECT APPLIDS, NOT BOTH

The operator entered a number in the Application Target List Number field of the Install window and also entered one or more applids in the six following fields. You must either use an application target list or enter the target system applids, not both.

ACTION: Re-issue the Install command correctly.

RC09001. Function completed, no errors found.

The LOCK or UNLOCK command was successfully performed.

ACTION: No action required.

RC09002. Group name is required.

A CHECK, LOCK or UNLOCK command was issued but neither a group or a list was entered in the popup window.

ACTION: Enter a group or list name and try again the operation.

RC09003. Group or list name, not both.

A group name and a list name were entered in the LOCK popup window.

ACTION: LOCK and UNLOCK actions are performed on groups or lists. Delete either the group name or list name and press ENTER to complete operation.

RC09004. Group or list not found in directory.

The specified group or list does not exist in the AUTOMON/RDO in-memory directory.

ACTION: Check the spelling of the resource. If it is spelled correctly, use other facilities in AUTOMON/RDO to locate the desired resource, then retry the operation.

RC10001. GROUP xxxxxxxx DELETED AND REMOVED FROM LIST YYYYYYYY

RC10001. GROUP xxxxxxxx DELETED AND REMOVED FROM ALL LISTS

The previous action (Delete, Move, Rename) has caused a group to be deleted. In the General Preferences record, REMOVE GROUPS FROM ALL LISTS WHEN DELETED is specified YES and this group existed in one or more lists. This message indicates that it has been removed from the list indicated by yyyyyyyy. Note that up to three list names will display in this message. If the group was removed from more lists than three, the second version of the message will display.

ACTION: No action required, this is a confirmation message.

RC12001. xxxxxxxx CONTAINS INVALID VALUE, PRESS PF1 FOR HELP

The resource value for the mnemonic indicated by xxxxxxxx in the message is not valid for this mnemonic. If you are unsure of the acceptable values, press PF1.

ACTION: Correct this value and continue.

RC12002. xxxxxxxx IS REQUIRED

The resource value for the mnemonic indicated by xxxxxxxx in the message was erased or omitted, and it is required for this resource type.

ACTION: Correct this value and continue.

RC12003. xxxxxxxx MUST BE NUMERIC

The resource value for the mnemonic indicated by xxxxxxxx in the message must be numeric. If you are unsure of the acceptable values, press PF1.

ACTION: Correct this value and continue.

RC12004. xxxxxxxx MUST BE TWO NUMERIC VALUES

The resource value for the mnemonic indicated by xxxxxxxx in the message is not valid for this mnemonic. It must be entered as two numeric values. If you are unsure of the acceptable values, press PF1.

ACTION: Correct this value and continue.

RC12005. xxxxxxxx CONTAINS TWO DELIMITERS WITH NO VALUE

The resource value for the mnemonic indicated by xxxxxxxx in the message is not valid for this mnemonic. Two delimiters are present with no intervening value. If you are unsure of the acceptable values, press PF1.

ACTION: Correct this value and continue.

RC12006. xxxxxxxx CONTAINS A VALUE THAT EXCEEDS yyyyyy

The resource value for the mnemonic indicated by xxxxxxxx in the message is too large. The maximum value is indicated by yyyyy in the message. If you are unsure of the acceptable values, press PF1.

ACTION: Correct this value and continue.

RC12007. xxxxxxxx CONTAINS A ZERO VALUE

The resource value for the mnemonic indicated by xxxxxxxx in the message cannot be zero. If you are unsure of the acceptable values, press PF1.

ACTION: Correct this value and continue.

RC12008. xxxxxxxx IS NOT WITHIN VALUE LIMITS [FOR TRAN yyyy] [FOR APPLID zzzzzzzz]

The resource value for the mnemonic indicated by xxxxxxxx in the message has passed all standard edits, but there are Preference value limits defined for it. The value entered does not agree with those specified in value limits. If *FOR TRAN yyyy* or *APPLID zzzzzzzz* appears in the message, it indicates that the specified Value Limits only apply to this transaction code, or when operating in this Applid.

ACTION: Correct this value and continue. If necessary, interrogate Field Value Limits in Preferences to determine an acceptable entry.

RC13001. Enter documentation text as desired, press ENTER to update.

Documentation for a resource has been accessed.

ACTION: Type the desired text in the documentation window and press ENTER to update the resource documentation, or PF3 to exit the document without effecting changes.

RC13002. Documentation update completed.

The documentation entered has been successfully added.

ACTION: No action is required.

RC13003. Group name required.

The DOCument command has been issued in the Simplified CEDA commands display but no group was specified.

ACTION: Enter the name of the group in the appropriate field on the Simplified CEDA commands display.

RC13004. CANNOT ALTER OR DELETE IMPORT CSD

The ALTER and DELETE functions are invalid when using an Import CSD.

ACTION: The request is ignored, Continue with some other function.

RC13005. IMPORT SUPPLEMENTAL FILE NOT SUPPLIED

In order to view or access resource documentation while in import mode, the import supplemental file must be specified.

ACTION: The import supplemental file name is supplied at the initial import window. If the import directory has already been built, you must close it in order to return to the import window, where the supplemental file name can be entered.

RC15001.ENTER DATA IN ALL FIELDS TO BE ALTERED

For global alter processing, the screen displayed is a null resource definition with no data fields present. Key data in all fields to be changed and press Enter. The altered fields will be replaced in all resources that match the group/resource mask entered in the previous window.

ACTION: Key data fields and press Enter.

RC15002..INVALID RESOURCE TYPE, PRESS PF1 FOR HELP

For global alter processing, the resource type entered in the window is not a valid type mnemonic.

ACTION: Correct the field and press Enter. For a list of valid resource types, press the help key.

RC15003. RESOURCE NAME IS REQUIRED

For global alter processing, the resource name field was left blank. It must contain either a full resource name or a mask..

ACTION: Correct the field and press Enter.

RC15004..GROUP NAME IS REQUIRED

For global alter processing, the group name field was left blank. It must contain either a full group name or a mask..

ACTION: Correct the field and press Enter.

RC15005. GLOBAL ALTER COMPLETED

For global alter processing, the all resources matching the entered group/name mask have been altered. The current display is a temporary directory listing every resource that was affected..

ACTION: This is a Global Changes temporary directory, therefore any response that is valid for any directory can be performed here. You can enter a command in the CMD field or perform any of the listed actions.

RC15006. NO MATCHING ENTRIES FOUND IN DIRECTORY

For global alter processing, there were no resources found which matched the group/name mask entered in the initial window.

ACTION: Correct the mask and try again, or press PF3 to exit.

RC16001. EXPORT FUNCTION COMPLETED

This message indicates successful completion of an export execution.

ACTION: No action required.

RC16002. COMMAND NOT SUPPORTED AS IMMEDIATE

This message can only occur if the RCMD transaction code was entered on the screen. RCMD is an internal transaction code used for remote installs and should not be keyed directly.

ACTION: Issue any AUTOMON/RDO command using a valid transaction code.

RC16003. RESOURCE xxxxxxxx, GROUP YYYYYYYY ALREADY ON FILE

This message occurs in response to an export copy command when the Duplicate Option was set to Abort with message. The resource is already on file at the target location.

ACTION: No action required.

RC16004. QUEUE xxxxxxxx ALREADY ON FILE

This message occurs in response to an QCOPY command when the Replace option was set to No. The queue is already on file at the target location.

ACTION: No action required.

RC16005. GROUP xxxxxxxx NOT PRESENT IN CSD

This message occurs in response to a command referencing a specific group in the target CSD. The group specified by xxxxxxxx could not be found.

ACTION: Correct the group name and retry.

RC16006. LIST xxxxxxxx NOT PRESENT IN CSD

This message occurs in response to a command referencing a specific list in the target CSD. The list specified by xxxxxxxx could not be found.

ACTION: Correct the list name and retry.

RC16007. GROUP xxxxxxxx NOT IN LIST YYYYYYYY'

This message occurs in response to a command such as REMOVE, referencing a specific group in a list in the target CSD. The group specified by xxxxxxxx could not be found.

ACTION: Correct the list name and retry.

RC16008. xxxxxxxxxxxx YYYYYYYY NOT PRESENT IN GROUP ZZZZZZZZ'

This message occurs in response to a command referencing a specific resource in the target CSD. The resource could not be found. In the message, xxxxxxxxxxxx is the resource type, yyyyyyyy is the resource name and zzzzzzzz is the group name

ACTION: Correct the resource specification and retry.

RC16009. xxxxxxxxxxxx YYYYYYYY IS ALREADY IN GROUP ZZZZZZZZ

This message occurs in response to a command adding a specific resource to a group in the target CSD. The resource is already present in that group. In the message, xxxxxxxxxxxx is the resource type, yyyyyyyy is the resource name and zzzzzzzz is the group name

ACTION: Correct the resource specification and retry.

RC16010. NO MATCHING xxxxxxxxxxxx RESOURCES IN GROUP YYYYYYYY

This message occurs in response to a command referencing a generic resource in a group in the target CSD. No resources could be found with the generic specification as entered. In the message, xxxxxxxxxxxx is the resource type and yyyyyyyy is the group name

ACTION: Correct the resource specification and retry.

RC16011. GROUP xxxxxxxx ALREADY IN LIST YYYYYYYY

This message occurs in response to a command referencing a generic resource in a group in the target CSD. No resources could be found with the generic specification as entered. In the message, xxxxxxxxxxxx is the resource type and yyyyyyyy is the group name

ACTION: Correct the resource specification and retry.

RC16012. xxxxxxxxxxxx YYYYYYYY IN GROUP ZZZZZZZZ IS IN USE

This message occurs in response to an Install command. At least one resource of the same name is in use and cannot be installed. In the message, xxxxxxxxxxxx is the resource type, yyyyyyyy is the resource name and zzzzzzzz is the group name. When this message occurs, no resources for the current command are installed.

ACTION: You need to take this resource out of use before it can be re-installed. Files must be closed and disabled, terminals must be out of service, programs must have no resident use count, etc. It may be necessary to connect directly to the remote system to accomplish this.

RC16013. GROUP YYYYYYYY ALREADY EXISTS IN LIST ZZZZZZZZ

This message occurs in response to an Append or Add command. The group specified by yyyyyyyy in the message is already present in the list designated by zzzzzzzz.

ACTION: Correct the resource specification and retry.

RC16014. INVALID CEMT COMMAND OR DFHEMTA NOT FOUND

The CEMT command exported to a target CICS region could not be executed. Either the command is unknown or the CEMT processor (DHFEMTA) is not available.

ACTION: Correct the command and retry. Verify that program DFHEMTA is enabled in the target region.

RC16015. xxxxxxxx NOT FOUND IN YYYYYYYYYYYY

During an export function, and export queue (xxxxxxxx in the message) could not be retrieved to update the execution status. This could mean that the file became unavailable during the operation, or the queue was deleted during the operation. In the message, yyyyyyyyyy is the dataset name of the RDO$FIL being accessed.

ACTION: Verify the file status and queue record presence. If the problem persists, notify UNICOM Systems technical support.

RC16016. xxxxxxxxxxxx YYYYYYYY IS NOT SUPPORTED IN tHIS CICS

This message occurs during an export execution, indicating that the resource type is invalid for the target CICS. This can happen when resources are exported to a down-level CICS region (exporting from CICS TS 5.1 to CICS TS 3.1, for instance). In the message, xxxxxxxxxxxx is the resource type and yyyyyyyy is the resource name.

ACTION: No action is required. The unsupported resource was ignored in the target CICS, while any other valid routed resources were processed.

RC16017. MISSING GROUP NAME

A group name is required for the function you are attempting to perform.

ACTION: Enter a group name in the GROUP field on the screen and press enter.

RC16018. MASKED GROUP NAME IS NOT ALLOWED

A masked group name cannot be used for the function requested. A fully qualified group name is required for the function you are attempting to perform.

ACTION: Enter a fully qualified group name in the GROUP field on the screen and press enter.

RC18001. USER EXIT PROGRAM NOT FOUND – xxxxxxxx

A User Exit Setup definition is present in Preferences specifying a user exit program that could not be found. Either the program has not been installed or it is disabled.

ACTION: Validate the status of the designated program (xxxxxxxx in the message) or remove the program name in User Exit Setup.

RH00003. FILE “xxxxxxxx” IS NOT OPEN

During help processing, the indicated file is closed.

ACTION: Help cannot be accessed at this time. Press Clear or PF3 to exit.

RH00004. FILE “xxxxxxxx” HAS NOT BEEN DEFINED

During help processing, the indicated file is either not present or disabled.

ACTION: Help cannot be accessed at this time. Press Clear or PF3 to exit.

RH00005. SCREEN “xxxxxxxx” IS NOT ON FILE

During help processing, the indicated screen record could not be found in RDO$FIL.

ACTION: This is probably an installation error. Perhaps the wrong RDO$FIL is in use or the VSAM file was not properly loaded. Review the installation and, if necessary, call UNICOM Systems technical support.

RH00006. ERROR IN CALLING PROTOCOL, TRANSACTION xxxx

This is an internal logic error in AUTOMON/RDO. An invalid call was made to the help processor.

ACTION: Call UNICOM Systems technical support.

RI01001. Program "RDOCMAIN" not available.

Indicates an installation error or disabled program. RDOCMAIN is unavailable to CICS.

ACTION: Use CEDA to ensure that RDOCMAIN is installed and enabled.

RI01002. Import directory released, PF3 to exit.

The Import directory has been successfully released.

ACTION: Press PF3 to exit.

RI01003. IMPORT DIRECTORY SUPPRESSED, INVALID SELectION

A DIRECTORY command was issued in import mode, but the import directory was suppressed when the IMPORT command was executed.

ACTION: When the import command is suppressed, the only command that can be used in import mode is COPY.

RI03001. IMPORT CSD FILE NOT DEFINED - xxxxxxxx

During import processing, the file indicated by xxxxxxxx in the message is either not defined in this CICS system or is disabled.

ACTION: Verify the file definition and make sure it is enabled. The CSD of the remote system from which you want to import resources must be defined in the receiving CICS system. It should be defined as read-only.

RI03002. IMPORT SUPPLEMENTAL FILE NOT DEFINED - xxxxxxxx

During import processing, the file indicated by xxxxxxxx in the message is either not defined in this CICS system or is disabled.

ACTION: Verify the file definition and make sure it is enabled. Supplemental AUTOMON/RDO files contain documentation records and if the file is included at the initial Import window, any associated documentation will be imported along with records from the remote CSD. The file must be defined in the receiving CICS, preferably as read-only. Optionally, you may restart the import command and omit the remote supplemental file name.

RI03003. DFHCSD IS NOT A VALID IMPORT FILE NAME.

You cannot use 'DFHCSD' as a filename for an import CSD, as it would conflict with the primary CSD name.

ACTION: Choose the name of a file defined to CICS as a read-only CSD.

RI03004. RDO$FIL IS NOT A VALID IMPORT FILE NAME

You cannot use ‘RDO$FIL as a filename for an import supplemental file, as it would conflict with the primary supplemental file name.

ACTION: Choose the name of a file defined to CICS as a supplemental file.

RI03005. IMPORT CSD FILE IS EMPTY OR IS NOT A CSD - xxxxxxxx

The CSD filename specified for Import is either empty or not a CSD file. CSD files have a key length of 22 and a release identifier record as the first record of the file.

ACTION: Choose the name of a file defined to CICS as a read-only CSD.

RI04001. Cursor was not positioned on a SYSID, please retry.

The cursor was not located on a valid SYSID when ENTER was pressed to connect to a remote CSD.

ACTION: Ensure that the cursor is located on a SYSID whenever ENTER is pressed to complete the connection.

RI04002. SYSID xxxx is currently not available to this CICS.

The local CICS was unable to establish a session with the selected remote CICS region.

ACTION: An MRO or ISC link must be established with the remote CICS. Ensure also that the appropriate resource definitions exist to access the remote CICS.

RI04003. There are no connections defined to this CICS.

The Connect option was selected from the Primary menu, but there are no CICS regions eligible for a connection.

ACTION: An MRO or ISC link must be established with the remote CICS. Ensure also that the appropriate resource definitions exist to access the remote CICS.

RI04004. 560 MAXIMUM CONNECTIONS REACHED

There are too many available connections for AUTOMON/RDO to display them all.

ACTION: If the SYSID to which you wish to connect is not present in the display, you can enter the SYSID in the field provided for that purpose at the bottom of the window. You must know the correct SYSID for this option.

RI05001. END OF HISTORY RECORDS FOR THIS DISPLAY

During audit trail/history display processing, the end of file has been reached while browsing forward or backward, or there are no more history records to display.

ACTION: Press PF3 to exit or perform any listed action.

RI05002. INVALID RESOURCE TYPE REQUESTED

During audit trail/history display processing, a new resource type was entered in the TYPE field at the bottom of the window. It is not a valid type mnemonic.

ACTION: Correct the type mnemonic and try again.

.RI05003. INVALID DATE ENTERED

During audit trail/history display processing, a new date was entered in the DATE field at the bottom of the window. It is not in the correct yyMMDD form or it is an invalid date.

ACTION: Correct the date and try again.

RI05004..DIRECTION MUST BE F OR B

During audit trail/history display processing, the scan function was invoked and the DIRECTION field was incorrectly entered. It must contain (F)orward or (B)ackward.

ACTION: Correct the direction field and try again.

RI05005. NO HISTORY RECORDS ON FILE

In response to a History command, this message indicates that no audit trail records from CEDA have been captured and logged for this resource. If this message appears in response to the Primary Menu AUDIT command, it indicates that no audit trail records are being logged at all.

ACTION: Press PF3 to exit this window.

RI06001. CURSOR WAS NOT POSITIONED ON A QUEUE, PLEASE RETRY

During audit trail/history display processing, there are multiple audit trail files present to collect messages from different CICS message queues. The multiple file selection window appears listing all available files. Enter was pressed while the cursor was not positioned at one of the queue names. Note that the first file in the window is assumed and the display begins, even though the error message appears..

ACTION: If the correct audit trail file name is not displayed at the top of the history display window, press PF3 to return to the multiple file selection window. Position the cursor correctly and press Enter.

RI07001. Invalid resource type, press PF1 for help.

An improper resource type has been entered in the “Resource Type” field.

ACTION: Key a valid resource type in the field. A list of resource types may be obtained by pressing the Help key.

RI07002. Resource not present in xxxxxxxx.

Member in import directory not found in import CSD.

ACTION: The resource was possibly deleted in another CICS. Refresh the import directory and try again the operation.

RI07003. Generic name not allowed with RENAME.

Generic characters have been entered in the “Resource Name” field of the RENAME popup window.

ACTION: Generic characters may not be specified in a RENAME operation. Enter the exact name of the resource.

RI07004. Resource maintenance complete.

The selected operation has been successfully completed.

ACTION: Enter a new resource for the operation or press PF3 to exit.

RI07005. Resource xxxxxxxx, group yyyyyyyy already present in DFHCSD.

An attempt has been made to import a resource, but a duplicate resource (xxxxxxxx) exists in the group specified (yyyyyyyy) in the local CSD.

ACTION: Alter the name of the resource and/or group and retry the operation.

RI07006. Group name is required.

An attempt has been made to import a resource, but the group of which the resource is a member was not specified.

ACTION: Enter the name of the group and press ENTER to complete the operation.

RI07007. No matching entries were found in directory.

A generic import copy operation has been attempted, but no entries which satisfy the mask criteria have been found in the directory.

ACTION: Alter the mask to include the desired resources and try again the operation.

RI07008. No entries for group found in directory.

The group does not exist in the DFHCSD file which was used to construct the in-memory AUTOMON/RDO directory.

ACTION: Check the spelling of the group.

RI07009. New name not allowed with group copy.

An attempt has been made to import resources from one group to the local system, but a name has been entered in the “New name” field of the popup window.

ACTION: Resources may not be renamed during group copy operations. Erase the name and try again.

RI07010. Duplicates option omitted.

No duplicates option was specified in the import popup window.

ACTION: Enter a duplicates option and try again the operation.

RI07011. Inconsistent or invalid duplicates option.

Multiple duplicates options or an invalid option code was entered in the import popup window.

ACTION: Enter a single duplicates option using a valid code and try again the operation.

RI07012. LIST xxxxxxxx ALREADY PRESENT IN DFHCSD

While attempting to import a LIST and all groups in the list, a duplicate list name was found in the receiving CSD. You must assign a new list name as the import function will not replace an existing list.

ACTION: Restart the import copy command, assigning a new list name..

RI07013. ACCESS TO GROUP NOT ALLOWED WITH TRANCODE xxxx - yyyyyyyy

This transaction is not authorized to access resources in this group.

The group indicated by yyyyyyyy in the message is specified in a Tran/Group Association Preference record as being associated with a specific transaction code, and the transaction code indicated by xxxx in the message is not that transaction.

or

The transaction code indicated by xxxx in the message is specified in a Tran/Group Association Preference record as being associated with designated groups and group yyyyyyyy is not one of those groups.

ACTION: The command attempted cannot be performed with this transaction code for this group unless the Preference specification is changed.

RI07014. GENERIC NAME NOT ALLOWED WITH LIST COPY

For Import, generic or masked list names cannot be processed. You must enter a full list name.

ACTION: Correct the field and press Enter.

RI07015. NEW NAME IS INVALID FOR MASKED RENAME, "*" "?" OR "<" ALLOWED

For Import, generic or masked values in the New name field are valid if the resource name is masked, indicating a masked rename function. Either a value is present in New name when Resource name does not contain a mask, or a mask character other than on of the three listed in this message is present in New name. This message can also occur if the right-to-left generic (<) mask character is specified with nothing following it.

ACTION: Correct the field(s) and press Enter.

RI07016. RESOURCE NAME MUST BE BLANK WITH MASKED GROUP NAME

For Import, if the group name is masked, indicating multiple group copies, the resource name must be omitted. Masked rename is not supported form multiple groups.

ACTION: Correct the field and press Enter.

RI07017. DIRECTORY SUPPRESSED, MASKED GROUP CANNOT BE USED

For Import, masked groups are not supported unless the import directory has been built.

ACTION: Correct the field and press Enter.

RI07018. RESOURCE TYPE NOT VALID FOR THIS RELEASE OF CICS

This message occurs during an import execution, indicating that the resource type selected from the import directory is invalid for the local CICS. This can happen when resources are imported to a down-level CICS region (importing from CICS TS 5.1 to CICS TS 3.1, for instance).

ACTION: Remove the selection for the unsupported type. If unsupported resource types are encountered during a group or list copy, they will be skipped.

RI07019. UNRECOGNIZED MNEMONIC IN CSD RECORD,

This is a "should not occur" error, indicating that a mnemonic was found in a CSD record that is unrecognized by AUTOMON/RDO.

ACTION: Notify UNICOM Systems technical support.

RI08001. INVALID RESOURCE TYPE, PRESS PF1 FOR HELP

The Resource Type field of the window is not a valid type mnemonic.

ACTION: Correct the field and press Enter.

RI08003. GENERIC NAME NOT ALLOWED WITH RENAME

For export copy, the New Name or New Group fields cannot be generic or masked.

ACTION: Correct the field and press Enter.

RI08004. GROUP NAME IS REQUIRED

The Group Name field of the window must be entered.

ACTION: Correct the field and press Enter.

RI08005. NO RESOURCES FOUND MATCHING SELECTION CRITERIA

There are no resources in the local CICS system matching the values entered for Resource Type, Name and Group.

ACTION: Correct the fields and press Enter.

RI08006. NEW NAME NOT ALLOWED WITH GROUP COPY

For export copy, the New Name field implies a resource rename. For a group-level copy, this is invalid.

ACTION: Correct the field and press Enter.

RI08007. RESOURCE NAME IS REQUIRED

The Resource Name field of the window must be entered.

ACTION: Correct the field and press Enter.

RI08008. GENERIC NAME NOT ALLOWED WITH LIST COPY

For export copy, generic or masked list names cannot be processed. You must enter a full list name.

ACTION: Correct the field and press Enter.

RI08009. LIST NAME IS REQUIRED

The List Name field of the window must be entered.

ACTION: Correct the field and press Enter.

RI08010. EXPORT COPY QUEUE HAS BEEN CREATED

This message indicates the temporary export queue has been successfully built from the selection criteria entered in the window.

ACTION: You are now viewing the Export menu. Enter the target information and press Enter to display the completed queue of commands. When you enter YES to BEGIN EXECUTION NOW, the commands will begin routing to the specified targets.

RI09001. xxxxxxxx IS CURRENTLY UNAVAILABLE

During command queue execution, one of the target CICS systems could not be connected. The xxxxxxxx in the message is the CICS applid in question. Either the system is down or you entered an incorrect applid.

ACTION: Determine the cause of the failure and re-execute the queue for the missing target.

RI09002. CANNOT CONNECT TO FRONT END SYSTEM xxxxxxxx

This message can only occur if you invoked Export after doing a CONNECT to another CICS system. During command queue execution, one of the target CICS systems was the original system you were logged-on to when the CONNECT was done. The xxxxxxxx in the message is the CICS applid in question. This would be a circular route situation which cannot be handled.

ACTION: Remove the front-end applid from the target list. If you need to export to the local CICS system, and the resources are in another system, you must either do an Import from the local system or log on to the remote system and export from there.

RI09003. CEDA FAILURE, BACKOUT COMPLETED

This message should occur rarely, if ever. In CICS Version 3 and above, the CEDA program will sometimes request a Syncpoint Rollback when certain error conditions occur. This is a request to back out the last update made. When CEDA has been called to apply a command during Export to a remote target, this causes an unresolvable STATE error in the distributed transaction conversation.

When this happens, the original error message from CEDA is lost, and AUTOMON/RDO cannot properly report it to the operator in a window. The command that caused the error is backed out. However, previous commands in the queue that executed properly are not backed out.

ACTION: The presence of this message means the command in question did not execute due to some sort of error. In order to determine exactly what the error is, you must connect directly to the target CICS system and execute the command there instead of exporting it.

When you get this message, please notify UNICOM Systems Technical Support and report the precise command which caused the error, so a correction can be developed to prevent the situation in the future.

RI10001. ERROR RESPONSE, TAB TO APPLID AND PRESS ENTER

Command queue execution has completed. The CICS applid to the left of this message had at least one error message occur while processing the exported commands.

ACTION: Tab to the applid and press Enter. This will display the first error message in a window. A portion of the command displays on the lower window border. To view the entire command, press PF6. After viewing the command, press PF6 again to return to this error message, then browse forward with PF8 for the next message.

RI10002. EXPORT COMPLETED, NO ERRORS

Command queue execution has completed. The CICS applid to the left of this message had no errors while processing the exported commands.

ACTION: No action required. If all target applids completed with no errors, the queue execution was successful.

RI10003. INSTALL WAS SUCCESSFUL

Command queue execution of a remote install command has completed with no errors.

ACTION: No action required. If all target applids completed with no errors, the queue execution was successful.

RI10004. MORE MESSAGES, F7=BACK, F8=FWD, F9=UP, F10=DOWN

This message indicates there are more error messages then can be viewed in one window.

ACTION: PF8 will scroll forward to the next window, PF7 will go back. PF9 and PF10 will move up and down one message at a time.

RI10005. SYSTEM ERROR, MESSAGE WINDOW NOT FOUND

This message indicates a logic problem of some kind.

ACTION: Notify UNICOM Systems technical support.

RI10006. EXPORT COMMAND QUEUE PROCESSED

This is an informational message indicating the export queue has completed execution.

ACTION: Check the messages beside each CICS applid for any that completed with errors. If so, tab to that applid and press Enter to view the errors.

RI11001. INVALID OR MISSING RESOURCE TYPE

The Resource Type field of the window is not a valid type mnemonic.

ACTION: Correct the field and press Enter.

RI11002. NO RESOURCES FOUND MATCHING SELECTION CRITERIA

There are no resources in the local CICS system matching the values entered for Resource Type, Name and Group.

ACTION: Correct the fields and press Enter.

RI11003. GENERIC NAME NOT ALLOWED WITH RENAME

For export copy, the New Name or New Group fields cannot be generic or masked.

ACTION: Correct the field and press Enter.

RI11004. GROUP NAME IS REQUIRED

The Group Name field of the window must be entered.

ACTION: Correct the field and press Enter.

RI11005. NEW NAME NOT ALLOWED AT THE GROUP LEVEL

For export copy, the New Name field implies a resource rename. For a group-level copy, this is invalid.

ACTION: Correct the field and press Enter.

RI11006. RESOURCE NAME IS REQUIRED

The Resource Name field of the window must be entered.

ACTION: Correct the field and press Enter.

RI11007. GENERIC NAME NOT ALLOWED WITH LIST COPY

For export copy, generic or masked list names cannot be processed. You must enter a full list name.

ACTION: Correct the field and press Enter.

RI11008. APPLICATION TARGET LIST xx NOT FOUND

The number enter for Application Target List must refer to the SEQ field of an Application Target List record in Preferences. No such record could be found.

ACTION: Correct the field and press Enter.

RI11009. APPLICATION TARGET LIST OR DIRECT APPLIDS, NOT BOTH

The target information is mutually exclusive. Either an application target list, which specifies up to 64 applids, or from one to six applids entered in the following fields.

ACTION: Correct the fields and press Enter.

RI11010. APPLICATION TARGET LIST OR DIRECT APPLIDS MUST BE ENTERED

No target information was entered. You must supply either a target list number or from one to six CICS applids.

ACTION: Correct the fields and press Enter.

RI11011. LIST NAME IS REQUIRED

The List Name field of the window must be entered.

ACTION: Correct the field and press Enter.

RI11012. NO SELECTIONS MADE

On the Export menu, Enter was pressed with nothing selected and there is no temporary queue constructed. You must enter a "/", "s" or "y" in one of the selection fields on the lower portion of the menu.

ACTION: Correct the field and press Enter.

RI11013. TO LIST NAME IS REQUIRED

For this command, an output list name is required.

ACTION: Correct the field and press Enter.

RI11014. EITHER GROUP OR LIST NAME REQUIRED

For this command, you must enter a group name or a list name.

ACTION: Correct the field and press Enter.

RI11015. AT LEAST ONE COMMAND IS INVALID

Errors have been found in the command field of free-form command entry. The command in error will be highlighted.

ACTION: Correct the field and press Enter.

RI11016. NO FREE-FORM COMMANDS ENTERED

No data was entered to the free-form command screen.

ACTION: Either enter one or more commands or press PF3 to exit.

RI11017. MAKE ADDITIONAL SELECTIONS OR PRESS ENTER TO VERIFY COMMANDS

The last selection is completed. You can now make another selection, if desired, or press Enter to view the temporary queue of commands that have been built to this point.

ACTION: Select, Enter or PF3.

RI11018. SELECT ROUTE RESOURCES OR ROUTE COMMAND

In the export copy window, you must choose whether to export a copy command or to extract resources from the local CICS region and build a queue of define statements from them. Enter a "/", "s" or "y" in the selection field beside ROUTE RESOURCES or ROUTE COMMAND.

ACTION: Correct the field and press Enter.

RI11019. GROUP GENERIC NOT ALLOWED WHEN SENDING COMMAND ONLY

When routing a copy command only, you must conform to the rules imposed by CEDA. CEDA will not allow a generic group copy.

ACTION: Correct the field and press Enter.

RI11020. NON-GENERIC MASK NOT ALLOWED WHEN SENDING COMMAND ONLY

When routing a copy command only, you must conform to the rules imposed by CEDA. CEDA will only process a generic mask (*) in the resource name field.

ACTION: Correct the field and press Enter.

RI11021. MORE COMMANDS, PF7 = BACKWARD, PF8=FORWARD

This message indicates there are more commands in the queue to be viewed.

ACTION: Press PF8 to view the next window of commands, PF7 to go backward.

RI11022. POSITION CURSOR ON COMMAND TO BE SELECTED AND PRESS KEY AGAIN

PF10 (Alter) or PF11 (Delete) was pressed at the queue verify window, but the cursor was not positioned on the command field.

ACTION: Use TAB to position the cursor on the desired command, the press the key again.

RI11023. CANNOT DO LIST COPY WHEN SENDING COMMAND ONLY

When routing a copy command only, you must conform to the rules imposed by CEDA. CEDA will not allow a list copy.

ACTION: Correct the field and press Enter.

RI11024. NEW GROUP OR NEW NAME IS REQUIRED

You must enter either a new resource name or new group name for this command.

ACTION: Correct the field and press Enter.

RI11025. RESOURCE NAME IS INVALID AT THE GROUP LEVEL

‘Group’ was entered for resource type, therefore the resource name should be omitted. Enter the group name in the Group Name field.

ACTION: Correct the field and press Enter.

RI11026. GROUP FIELDS ARE NOT VALID WITH LIST COPY

‘List was entered for resource type, therefore the Group Name and New Group should be omitted. Enter the list name in the resource Name field.

ACTION: Correct the field and press Enter.

RI11027. COMMAND IS NOT VALID FOR EXPORT

The only commands that can be exported are those that will update the CSD in some way, or commands like CHECK, that gather information form CEDA and pass it back in a window. Commands like View, Display, etc. cannot be exported. To do those actions, CONNECT to the target system and operate AUTOMON/RDO in that region.

ACTION: Correct the field and press Enter.

RI11028. ENTER ALL REQUIRED FIELDS FOR xxxxxx

DEFINE or ALTER was selected from the Export menu. An input screen for the designated resource type is now displayed. Supply all necessary fields and press Enter. For Alter, you need only fill in the fields to be altered.

ACTION: Press Enter when the screen is completed.

RI11029. END OF EXPORT QUEUE REACHED

While browsing forward or backward in the temporary command queue, the end or beginning of the queue has been reached.

ACTION: No action required.

RI11030. QUEUE xxxxxxxx MUST BE APPROVED BEFORE ROUTING

REQUIRE EXPORT QUEUE APPROVAL is specified YES in Preferences and an attempt has been made to execute an unapproved queue.

ACTION: The queue must be approved by a supervisor transaction before it can be executed.

RI11031. MUST BE ADMINISTRATOR TO EXECUTE

An attempt has been made to execute a command queue with a transaction that is not defined as an administrator or supervisor transaction code.

ACTION: You must use an administrator trancode to execute a queue.

RI11032. PRESS ENTER TO EXECUTE THIS QUEUE, PF3 TO EXIT

This is a verify prompt. BEGIN EXECUTION NOW has been specified. The first page of the queue is displayed with this message. If you want to begin execution, press Enter.

ACTION: Press Enter to execute, PF3 to return to the Export menu.

RI11033. TEMPORARY QUEUE HAS NOT BEEN CREATED

An attempt has been made to execute or save a command queue and there is no temporary queue.

ACTION: You must first make a selection that will build a temporary command queue.

RI11034. OVERTYPE AND PRESS ENTER TO ALTER THIS COMMAND

When a command in the queue is displayed in single-command mode, showing the entire command, you can make any desired changes to the command and press Enter to update it.

ACTION: Update the command or perform some other function.

RI11035. BRIGHT/PINK COMMANDS FAILED TO EXECUTE

A command queue has completed execution and at least one command received an error message at the target system. All commands that failed to execute successfully will be high-intensity on a monochrome terminal and pink on a color terminal.

ACTION: PF6 (ERR) will display the current error message screen. This will not necessarily correspond to the current command. You must work from the error messages to the commands, and not vice-versa. That is, when an error message is displayed, PF6 will transfer to the full command that had the error. When you press PF6 again, it transfers to the last error message displayed.

RI11036. TEMPORARY QUEUE OF SUCCESSFUL EXECUTIONS CREATED

In response to MAKE SUCCESS QUEUE, this message indicates a new queue has been created containing only the commands that executed successfully.

ACTION: Perform any desired operation for this queue.

RI11037. TEMPORARY QUEUE OF FAILED EXECUTIONS CREATED

In response to MAKE ERROR QUEUE, this message indicates a new queue has been created containing only the commands that failed to execute successfully.

ACTION: Perform any desired operation for this queue.

RI11038. NO MATCHING COMMANDS FOUND

In response to GLOBAL CHANGES, this message indicates that no commands in the queue contained the search text as entered.

ACTION: No action required.

RI11039. NO ERROR MESSAGES CURRENTLY AVAILABLE

PF6 was pressed to display the error messages associated with this queue, but none are present. This either means the queue has not been executed or it was saved with SAVE MESSAGES set to NO. Even when a queue completes with no errors, PF6 will still display the summary screen showing the status of each target applid.

ACTION: No action required.

RI11040. TEMPORARY QUEUE HAS BEEN CLEARED

This is a confirmation message in response to pressing PF12 (Purge all commands) while viewing a temporary export queue. The temporary queue has been erased.

ACTION: No action required.

RI11041. BRIGHT/PINK COMMANDS CONTAIN VALIDATION ERRORS

A command queue has completed execution and at least one command received a validation error at the target system. All commands that failed to execute successfully will be high-intensity on a monochrome terminal and pink on a color terminal.

ACTION: PF6 (ERR) will display the current error message screen. This will not necessarily correspond to the current command. You must work from the error messages to the commands, and not vice-versa. That is, when an error message is displayed, PF6 will transfer to the full command that had the error. When you press PF6 again, it transfers to the last error message displayed.

RI11042. QUEUE IS APPROVED, NO UPDATES ALLOWED

The export control queue has been approved for execution. At that point, no more updates to the queue can be performed except by administrator transactions.

ACTION: No action required. If the queue must be updated, either it must be set to unapproved status by a supervisor, or an administrator must perform the update.

RI12001. QUEUE xxxxxxxx HAS BEEN SAVED

In response to the SAVE CONTROL QUEUE window, this message indicates the queue indicated by xxxxxxxx was saved successfully.

ACTION: Perform any desired operation for this queue.

RI12002. QUEUE NAME IS REQUIRED

In response to the SAVE CONTROL QUEUE window, the queue name was omitted.

ACTION: Supply the queue name and press Enter.

RI12003. SAVED QUEUE xxxxxxxx NOT FOUND

In response to the RETRIEVE, APPROVE or MOVE CONTROL QUEUE, this message indicates the queue indicate by xxxxxxxx could not be found.

ACTION: Erase the queue name to display the first control queue on file, then browse forward from there to see all the queues.

RI12004. QUEUE xxxxxxxx ALREADY ON FILE

In response to the SAVE CONTROL QUEUE window, this message indicates the queue indicated by xxxxxxxx is already present. REPLACE IF DUPLICATE was specified NO.

ACTION: No action required.

RI12005. QUEUE xxxxxxxx HAS BEEN DELETED

In response to DELETE QUEUE = YES, this message indicates the queue indicated by xxxxxxxx was successfully deleted.

ACTION: No action required.

RI12006. END OF SAVED QUEUE RECORDS REACHED

While browsing forward or backward in LOCATE CONTROL QUEUE mode, the end or beginning of control queue records has been reached.

ACTION: No action required.

RI12007. QUEUE FOUND, PERFORM DESIRED FUNCTION

In response to pressing Enter at the LOCATE CONTROL QUEUE window, this message indicates the queue indicate by xxxxxxxx was found and its name has been supplied in all queue name positions of the Export menu.

ACTION: Perform any desired operation for this queue.

RI12008. SAVE BACKOUT QUEUE AND SUPPLY NAME NOW

In response to the CREATE BACKOUT QUEUE window, this message is reminding you to save the new backout queue under a different name than the original queue.

ACTION: Perform any desired operation for this queue.

RI12009. SHIP QUEUE (QCOPY) COMMAND HAS BEEN STORED

In response to the MOVE CONTROL QUEUE window, this message indicates a QCOPY command has been placed in the temporary queue. When the queue is executed, the queue designated by the QCOPY command will be shipped to the target(s).

ACTION: Perform any desired operation for this queue.

RI12010. CSD RECORD NOT FOUND - xxxxxxxx yyyy zzzzzzzz

In response to CREATE BACKOUT QUEUE, this message indicates there are references to resources that do not exist in the local CSD. This situation can occur if the queue was created on another system and moved to this one, or sometimes if the queue was created in batch, using a CSD that is not attached to the local CICS system.

In the message, xxxxxxxx is the group name, yyyy is the hex CSD resource type code and zzzzzzz is the resource name.

ACTION: The backout queue has been created to the point of the offending command. It will not be possible to create the remainder unless you remove any commands that refer to resources not present in this CSD.

RI12011. QUEUE IS SECURED TO A DIFFERENT USER, CANNOT UPDATE

This queue has been saved with SECURE TO USER ID set to YES. It cannot be retrieved or updated by another user unless they are operating with a supervisor transaction code.

ACTION: No action required.

RI12012. INVALID APPROVAL CODE - xxxxxxxx

In response to the APPROVE CONTROL QUEUE window, this message indicates the approval code xxxxxxxx is not a valid code.

ACTION: With a supervisor transaction code, examine EXPORT APPROVAL CODES in Preferences for a valid code.

RI12013. APPROVAL REQUIRES SUPERVISOR TRANCODE

You must be using a supervisor transaction code to approve a queue.

ACTION: Perform any authorized operation for this queue.

RI12014. QUEUE xxxxxxxx HAS BEEN APPROVED

In response to the APPROVE CONTROL QUEUE window, this message indicates the queue indicate by xxxxxxxx was successfully approved.

ACTION: Perform any desired operation for this queue.

RI12015. SEARCH DATA IS REQUIRED

In response to the GLOBAL CHANGES window, this message indicates the search data was omitted.

ACTION: Supply the search character string and press Enter.

RI12016. GLOBAL CHANGE COMPLETED - xxxx CHANGES

This message indicates the global change operation found one or more commands in the queue that contained the search data and successfully altered them with the replace data. The xxxx in the message is the number of changes made.

ACTION: Perform any desired operation for this queue.

RI12017. DUPLICATES OPTION OMITTED

For export copy when routing resources, you must supply a duplicates option.

ACTION: Enter one of the duplicates options and press Enter.

RI12018. INCONSISTENT OR INVALID DUPLICATES OPTION

The duplicates options are mutually exclusive. Enter only one.

ACTION: Enter one of the duplicates options and press Enter.

RI12019. MORE THAN 999 MESSAGES, 999 SAVED

While creating an export queue from selected resources, the maximum number of queue records that can be processed has been reached. The queue creation stops at that point.

ACTION: Restrict the selection criteria to a more narrow range. An excessively large queue will use a great deal of CICS resources to execute and will take quite a long time.

RI12020. QUEUE xxxxxxxx IS NOT APPROVED

In response to the APPROVE CONTROL QUEUE window, this message indicates no approval code was entered and the queue indicate by xxxxxxxx was not approved. If other changes were made, such as adding a control identifier or description, those changes were done.

ACTION: Perform any desired operation for this queue.

RI12021. ALTER FIELDS AS DESIRED AND PRESS ENTER

In response to a request to approve or update a control queue, this message indicates the queue status is ready for alteration.

ACTION: Enter or change any of the unprotected queue status fields and press Enter to complete the update.

RI12022. INVALID PROCESS DATE, ENTER AS MM/DD/CCYY OR MMDDCCYY

The export queue process date was set incorrectly. It must be entered as an 8-digit date (month, day, century, year), and may contain slashes as delimiters or not.

ACTION: Correct the date format and press Enter to complete the queue status update.

RI12023. QUEUE xxxxxxxx IS IN USE BY yyyyyyyy

The export control queue cannot be modified because it is secured to another user. In the message, xxxxxxxx is the queue name, and yyyyyyyy is the user ID who has it locked. The queue was saved with SECURE TO USER ID set to YES. It cannot be retrieved or updated by another user unless they are operating with a supervisor transaction code.

ACTION: Perform any desired operation for this queue.

RI13001. IMPROPER CURSOR POSITION

In the export control queue directory, Enter of a function key was pressed while the cursor was positioned somewhere outside of rows 5 through 20. The cursor must be anywhere in the row containing the desired queue name when a function key is pressed.

ACTION: Tab to the desired queue name and repeat the operation.

RI13002. END OF SAVED QUEUES REACHED

The export control queue directory has reached the end of all saved queues.

ACTION: No action is required. PF7 will browse backward, or you may tab to one of the queue names and perform any of the functions on the prompt line (row 24).

RI13003. MUST BE SUPERVISOR OR ADMINISTRATOR TO UNAPPROVE

PF10 (unapprove queue) was chosen at the export control queue directory, but the operator is not using a supervisor or administrator transaction code.

ACTION: No action required. The queue cannot be unapproved with this transaction code.

RM00001. AUTOMON/RDO WILL EXPIRE IN nn DAYS

This warning message indicates that the temporary product password is about to expire, after which the AUTOMON/RDO product will no longer be operational. In the message, nn is the number of days remaining until expiration is reached.

Action: You must obtain a new product password from UNICOM Systems.

RM00002. AUTOMON/RDO PASSWORD ERROR, CODE=x, - EXPIRATION DATE REACHED
PROGRAM STSPASS NOT FOUND
CODE RDOC NOT IN STSPASS
PASSWORD CODE IS INCORRECT
PROGRAM STS0100 NOT FOUND
CPU ID CODE INCORRECT FOR CPU
PASSWORD NOT VALID FOR RDO/EC
UNDETERMINED ERROR OCCURRED

AUTOMON/RDO cannot operate with the supplied product password. One of the conditions listed above has occurred.

Action: If the condition cannot be corrected, you must obtain a new product password from UNICOM Systems.

RM00003. FILE "xxxxxxxx" IS NOT OPEN

The file designated by xxxxxxxx in the message is closed to online users.

ACTION: The file must be opened before operation can continue.

RM00004. FILE "xxxxxxxx" HAS NOT BEEN DEFINED

The file designated by xxxxxxxx in the message is not present in the CICS file control table

ACTION: the file must be defined before operation can continue.

RM00005. PROGRAM "xxxxxxxx" IS NOT PRESENT

The program designated by xxxxxxxx in the message is not present in the CICS program control table

ACTION: The program must be defined before operation can continue.

RM00007. SCREEN xxxxxxxx NOT FOUND

A screen control record is missing from the AUTOMON/RDO supplemental file (RDO$FIL). In the message, xxxxxxxx is the identity of the screen.

ACTION: This is probably an installation error. Examine any available backup files for the missing record. The key of screen records begins with an 'S', followed by xxxxxxxx in the message. If the missing record cannot be located, notify UNICOM Systems technical support.

RM0008. FILE "xxxxxxxx" IS INCORRECTLY DEFINED

The file designated by xxxxxxxx in the message is not defined correctly to function as the supplemental VSAM file, RDO$FIL. One or more of the following conditions are not present:

1). Type must be VSAM, KSDS.

2). Record format must be VARIABLE, BLOCKED

3). String number must be at least 2.

ACTION: Redefine either the file or the FCT definition, whichever is incorrect.

RM00009. PROGRAM "xxxxxxxx" COULD NOT BE LOADED

The program designated by xxxxxxxx in the message is either not present in the CICS program control table or is disabled.

ACTION: The program must be defined and enabled before operation can continue.

RM00010. PROGRAM "xxxxxxxx" IS NOT AVAILABLE

The program designated by xxxxxxxx in the message is either not present in the CICS program control table or is disabled.

ACTION: The program must be defined and enabled before operation can continue.

RM00011. INSUFFICIENT GETVIS/OSCOR STORAGE AVAILABLE

There is inadequate available storage in the GETVIS (VSE) or OSCOR (MVS) are of this CICS region to satisfy the request.

ACTION: Increase the GETVIS or OSCOR area of this CICS system.

RM00012. COMMAND NOT ALLOWED WITH TRANCODE tttt -- xxxxxxxxxxxx

The command indicated by xxxxxxxxxxxx in the message is not authorized for use with the transaction code indicated by tttt. The Trancode Security function of the Preferences command is where this association is defined.

ACTION: You cannot issue this command with this transaction code.

RM00013. ACCESS TO GROUP NOT ALLOWED WITH TRANCODE tttt -- xxxxxx

The group indicated by xxxxxxxx in the message is not authorized for access with the transaction code indicated by tttt. The Group Association function of the Preferences command is where this is defined.

ACTION: You cannot access this group with this transaction code.

RM00014. OPEN FAILED FOR FILE xxxxxxxx

The VSAM file indicated by xxxxxxxx in the message did not open properly. The system console will contain the full text of the VSAM open error.

ACTION: Examine the system console to determine the cause of the open failure. This condition is most often caused when the file is open in another region.

RM00015. INCORRECT FILE STATUS FOR REQUEST – xxxxxxxx

CICS has returned the condition INVREQ (invalid request) in response to a file I/O command. The normal cause for this error is an attempt to add, update or delete a record and the file OPERATION codes are not set to support the request. For RDO$FIL and any defined audit trail

files, the operation codes in the file definition must be Browse(YES), Read(YES), Delete(YES), Add(YES) and Update(YES).

ACTION: Verify the file operation codes for the listed file name. If they are set correctly, this message indicates a possible logic error in AUTOMON/RDO. Notify UNICOM Systems technical support.

RM00016. UPPERCASE TRANSLATION IS NOW xxx

This message appears in response to issuing the CASE command (PF13). Uppercase translation has been switched from its previous setting to the status indicated by xxx in the message (ON or OFF).

ACTION: No action is required. Invoking the CASE command again will switch back to the previous setting. For more information about lowercase handling, see *Using Lowercase Characters in Resource Definitions,* in chapter 5.

RM01001. Program "RDOCCMDS" not available.

Indicates an installation error or disabled program. RDOCCMDS is unavailable to CICS.

ACTION: Use CEDA to ensure that RDOCCMDS is installed and enabled.

RM01002. Directory released, end of processing.

The AUTOMON/RDO directory has been released and the transaction will momentarily be exited. This message results from selecting the Close command on the Primary Menu.

ACTION: This is an informational message. No action is required.

RM01003. MUST BE ADMINISTRATOR FOR THIS FUNCTION

The requested function (REFRESH or CLOSE) can only be performed by one of the administrator transaction codes defined in General Preferences.

ACTION: You cannot perform this function with this transaction code.

RM03001. You must first expand a group or list.

The Expansion directory was selected from the Directory Menu, but no group or list has been expanded.

ACTION: Expand a group or list from a directory or the Simplified CEDA commands display menu. The expansion directory may then be accessed.

RM03002. YOU MUST FIRST PERFORM A GLOBAL ALTER

The Global Changes temporary directory was selected from the directory menu, but no global alter has been performed.

ACTION: Perform a global alter with the ALTER* (A*) command. That will create a temporary directory for Global Changes.

RM03003. SELECT PERMANENT OR TEMPORARY DIRECTORIES, NOT BOTH

While it is valid to select multiple permanent directories from the directory menu, it is not valid to select a permanent directory and a temporary directory at the same time.

ACTION: Correct the selection and retry.

RM03004. ONLY ONE TEMPORARY DIRECTORY AT A TIME CAN BE SELECTED

While it is valid to select multiple permanent directories from the directory menu, it is not valid to select multiple temporary directories.

ACTION: Correct the selection and retry.

RM03005. SELECT WITH / S OR Y. DARK FIELDS DO NOT APPLY TO THIS CICS

This is an information message appearing at the directory menu. Any of the directories can be selected by entering '/', 's' or 'y' in the selection field. Resource directories that do not apply to the CICS release level will be protected and darker in color.

ACTION: Select one or more directories for display, supplying full or masked names in the Name and/or Group fields to qualify the display.

RM04001. COMMAND PROCESSING COMPLETED

This message displays with the directory upon returning from command processing. It will appear after completing all commands that are invoked from the CMD field of the directory. It indicates that commands were processed, not whether the result was successful or unsuccessful. That information will appear during the processing of each individual command.

ACTION: No action required, this is an informational message.

RM04002. INVALID COMMAND, PRESS PF1 FOR HELP

The command entered in the CMD field of the directory is not a valid AUTOMON/RDO command. PF1 at this point will display the possible entries.

ACTION: Correct the field and retry.

RM05001. NO DUPLICATE RESOURCE NAMES FOUND

During DUPES processing, there were no duplicates found for the requested search type.

ACTION: Press PF3 to exit the Dupes window or request a different search type.

RM05002. INVALID RESOURCE TYPE

During DUPES processing, the resource type mnemonic enter for Selective Dupes was invalid.

ACTION: Correct the type mnemonic and press Enter. For a list of valid resource types, press the help key.

RM05004. INVALID REQUEST CODE

During DUPES processing, the resource search type was invalid.

ACTION: Correct the type and press Enter. Valid types are A, T, R and S.

RM05005. ENTER LIST OR GROUP, NOT BOTH

For DUPES processing, you can optionally supply a group or list name to limit the search. These fields are mutually exclusive. Enter one or the other.

ACTION: Correct the entry and retry the operation.

RM05006. LIST NAME CANNOT BE MASKED

For DUPES processing, the limiting list name must be a full name containing no mask characters.

ACTION: Correct the list name and retry.

RM05007. LIST NOT FOUND IN DIRECTORY – xxxxxxxx

For DUPES processing, the limiting list name could not be found in the list directory.

ACTION: Enter a valid list name and retry.

RM06001. Invalid resource type.

An improper resource type has been entered in the "Resource Type" field.

ACTION: Overtype with a valid resource type and press ENTER to initiate the search.

RM06002. Invalid field identifier.

A search by field identifier and value has been requested, but the entry made in the 'Field identifier' field is not a valid attribute for the type of resource specified.

ACTION: Overtype with a valid attribute for the resource type and press.

RM06003. Invalid search value.

A search by field identifier and value has been requested, but the entry made in the 'Search value' field is not a valid for the field identifier, e.g., a numerical entry when LANGUAGE is the field identifier for a PROGRAM resource.

ACTION: Enter an appropriate search value and press ENTER to initiate the search.

RM06004. No selected resources found.

The search was successfully performed without any resources matching the search criteria.

ACTION: If the results were unexpected, modify the search criteria and repeat the search.

RM06005. Cannot search on encrypted or bit-string-fields.

A search by field identifier and value has been attempted on a PASSWORD, BINDPASSWORD, or operator security field.

ACTION: Searches by field identifier and value may not be performed on PASSWORD, BINDPASSWORD or operator security fields.

RM06006. Search value cannot exceed 8 digits.

A search by field identifier and value has been requested and the field identifier is numeric, but the search value entered exceeds 8 digits in length.

ACTION: Re-enter the a search value of 8 digits or less and press ENTER to initiate the search.

RM06007. Search value must be numeric.

A search by field identifier and value has been requested and the field identifier is numeric, but the search value is alphabetic.

ACTION: Re-enter a numeric search value and press ENTER to initiate the search.

RM06008. Must be two numeric values separated by a comma.

A search by field identifier and value has been requested, but the field identifier consists of two numeric values whereas only one value has been entered in the 'Search value' field.

ACTION: Key two values, separated by commas and press ENTER to initiate the search.

RM06009. Invalid relational operator.

The operator entered in the 'Operator' field of the Query popup window is not a valid.

ACTION: Enter one of the following operators:

EQ -	Equals	GE -	Greater than or Equal to
NE -	Not Equal to	LT -	Less Than
GT -	Greater Than	LE -	Less than or Equal to

RM06010. Mask is valid for variable character fields only.

A mask has been entered in the 'Search value' field for an attribute, specified as the 'Field identifier', that has a limited set of valid responses (e.g., 'Yes' or 'No').

ACTION: Masks may only be used for attributes which accept any response.

RM06011. Only EQ or NE allowed with fixed-code fields.

A comparative search operation was specified against a field identifier which uses fixed codes, such as the LANGUAGE attribute in PROGRAM definitions, which must be a fixed code such as ASSEMBLER, COBOL, etc.

ACTION: Only EQ (equal) and NE (not equal to) searches may be performed when the field identifier uses a fixed code.

RM06012. Only EQ or NE allowed with mask search.

A mask has been entered in the 'Search value' field but an operator other than EQ (Equal) or NE (Not Equal) has been specified as the operator.

ACTION: Searches using masks may only be performed with the EQ or NE operators. Enter one of these and press ENTER to initiate the search.

RM06013. Too many entries found, not all displayed.

Available memory for the temporary directory is exhausted.

ACTION: This is an informational message, notifying the user that the temporary directory will not display all resources.

RM06014. THE IMPORT SUPPLEMENTAL FILE WAS NOT SPECIFIED

During QUERY processing from the Import menu, one of the queries involving the supplemental file was selected and no import supplemental file was designated at the initial import window. Queries that involve the supplemental file are Search Documentation for Character String and Search Description for Character String on CICS releases prior to 3.2

ACTION: If you have an import supplemental file you wish to search, exit the Query menu to return to the import menu, then either Close the import directory or Switch to another file. This will produce the initial import window where the supplemental file may be specified.

RM06015. INVALID STARTING DATE

During QUERY processing of Find Resources by Date/Time Stamp, the starting date field was entered incorrectly.

ACTION: Enter the starting date as a valid date in the form MMDDyy.

RM06016. INVALID ENDING DATE

During QUERY processing of Find Resources by Date/Time Stamp, the ending date field was entered incorrectly.

ACTION: Enter the ending date as a valid date in the form MMDDyy.

RM06017. INVALID STARTING TIME

During QUERY processing of Find Resources by Date/Time Stamp, the starting time field was entered incorrectly.

ACTION: Enter the starting time as a valid time in the form HHMMSS.

RM06018. INVALID ENDING TIME

During QUERY processing of Find Resources by Date/Time Stamp, the ending time field was entered incorrectly.

ACTION: Enter the ending time as a valid time in the form HHMMSS.

RM07001. INVALID RESOURCE TYPE.

An improper resource type has been entered in the “Resource Type” field of the popup window.

ACTION: Key a valid resource type in the field. A list of resource types may be obtained by pressing the Help key. The type may be pasted into the field by tabbing to the desired type in the list and pressing PF4.

RM07002. INVALID COMMAND MODE.

An invalid command mode has been entered in the ‘Command mode’ field of the Find popup window.

ACTION: Enter a valid command mode and press ENTER. Valid modes are VIEW, ALTER, DELETE and COPY.

RM07003. MUST BE TRUE RESOURCE (NOT GROUP OR LIST).

A group or list has been specified as the object of a Find operation.

ACTION: Find operations may only be performed on resources. Specifying a group or list is invalid.

RM07004. REQUESTED RESOURCE NOT FOUND.

The resource specified was not located in the AUTOMON/RDO in-memory directory.

ACTION: This is an informational message. No action is required.

RM07005. RESOURCE NAME IS REQUIRED.

The name of the resource to be located was omitted.

ACTION: Type the name of the desired resource in the 'Resource name' field and press ENTER.

RM07006. IMPORT CSD IS ACTIVE,CANNOT BE MODIFIED

A FIND command has been issued from the import menu, with the Command mode field set to a command that would cause alteration. Import resources are read-only and cannot be modified without first copying them to the local region.

ACTION: Set the Command mode to VIEW for FIND in import mode.

RM07007. PLEASE USE IMPORT DIRECTORY COPY COMMAND

A FIND command has been issued from the import menu, with the Command mode field set to COPY. While FIND can be used to locate resources in the import directory, you must supply the COPY command at the directory, or issue the COPY command from the import menu.

ACTION: Set the Command mode to VIEW for FIND in import mode.

RM08001. SELECT PREFERENCE TYPE FROM PULLDOWN MENU

The initial invocation of the Preferences function displays the General Preferences screen with the NEXT pulldown menu selected. You must pick one of the available Preference displays from this menu.

ACTION: Select a preference type by entering its number or tabbing to it and pressing Enter. PF12 will cancel the pulldown menu and stay on General Preferences.

RM08002. Preferences update completed.

The changes made to the Preferences display have been successfully entered.

ACTION: Make additional changes and press ENTER, or press PF3 to exit.

RM08003. MUST BE ADMINISTRATOR TO MAKE CHANGES

One or more administrative transaction codes are specified in Preferences and this transaction is not one of them. No Preference changes can be made using this transaction code.

ACTION: Exit to a clear screen and use an administrative transaction code to make Preference changes.

RM08004. PRESS ENTER TO DELETE, ELSE CLEAR OR PF3

A Preference record delete was requested by clearing either the TRAN or SEQ field. This is a confirmation message.

ACTION: Press Enter if delete is desired, otherwise exit with the Clear key or PF3.

RM08005. SELECT PREFERENCE TYPE FROM PULLDOWN MENU

When Preferences if first selected, the NEXT pulldown menu automatically activates. Enter the number of the desired Preference screen, or tab to it and press Enter.

ACTION: PF12 will cancel the pulldown and remain on General Preferences.

RM08006. EXPORT QUEUE APPROVAL REQUIRES SUPERVISOR TRANCODES

If YES is specified for EXPORT QUEUE APPROVAL REQUIRED in General Preferences, there must be at least one supervisor transaction code defined on the screen.

ACTION: Correct the selection and retry.

RM08007. EXPORT QUEUE APPROVAL REQUIRES SUPERVISOR TO CHANGE

If YES is specified for EXPORT QUEUE APPROVAL REQUIRED in General Preferences, you must be operating with a supervisor transaction code to change it to NO.

ACTION: Correct the selection and retry.

RM08008. DUPLICATE SUPERVISOR/ADMINISTRATOR TRANCODE - xxxx

In the administrator and supervisor trancode fields of General Preferences, one or more transaction codes have been duplicated. The same transaction cannot be both administrator and supervisor.

ACTION: The duplicate trancode is indicated with xxxx in the message. Correct the duplication problem and press Enter to update.

RM08009. INVALID MASK "xxxxxxxx"

In Preferences Group Exclusions, one of the group fields contains a mask that would cause all groups to be excluded from the directory. A single asterisk (*) or all wild-card characters (????????) would cause this.

ACTION: The invalid mask is indicated by xxxxxxxx in the message. Correct the mask so that some groups will qualify to be included.

RM08010. AT LEAST ONE COMMAND IS REQUIRED

In Preferences User Exit Setup, all of the command fields have been erased. There must be at least one command for which this exit is to be invoked.

ACTION: Supply at least one command by entering any character in the command field. To restore all default commands, press PF9.

RM08011. AT LEAST ONE RESOURCE TYPE IS REQUIRED

In Preferences User Exit Setup, all of the resource type fields have been erased. There must be at least one resource type for which this exit is to be invoked.

ACTION: Supply at least one resource type by entering any character in the field. To restore all default resource types, press PF9.

RM09001. No entries found for group xxxxxxxx.

The group identified by xxxxxxxx has been selected for expansion but does not contain any member resources.

ACTION: This is an informational message. No action is required.

RM09002. No entries found for list xxxxxxxx.

The list identified by xxxxxxxx has been selected for expansion but does not contain any member groups.

ACTION: This is an informational message. No action is required.

RM11001. DCT NOT DEFINED FOR TD QUEUE - xxxx

The CICS Destination Control Table is not defined properly for audit trail capture. The xxxx in the message is the DCT entry that AUTOMON/RDO requires in order to capture messages according to the specifications of the Audit Trail Setup Preference record.

For more information, refer to Audit Trail Setup in Chapter 12 -- *Customizing AUTOMON/RDO*.

ACTION: You must either correct the CICS DCT or change the specifications of the Audit Trail Setup Preference record.

RM11002. DCT FOR CSDL NOT FOUND

The CICS Destination Control Table is not defined properly for audit trail capture. CSDL is the message queue that CEDA writes to when any CSD modification is performed, and it cannot be found in the DCT. AUTOMON/RDO cannot capture audit history records without it.

For more information, refer to Audit Trail Setup in Chapter 12 -- *Customizing AUTOMON/RDO*.

ACTION: You must either correct the CICS DCT or change the specifications of the Audit Trail Setup Preference record.

RM11003. DCT MUST BE TYPE INTRAPARTITION - xxxx

The CICS Destination Control Table is not defined properly for audit trail capture. The xxxx in the message is the DCT entry that AUTOMON/RDO requires in order to capture messages according to the specifications of the Audit Trail Setup Preference record. It must be defined as TYPE=INTRAPARTITION.

For more information, refer to Audit Trail Setup in Chapter 12 -- *Customizing AUTOMON/RDO*.

ACTION: You must either correct the CICS DCT or change the specifications of the Audit Trail Setup Preference record.

RM11004. DCT MUST BE TYPE INDIRECT - xxxx

The CICS Destination Control Table is not defined properly for audit trail capture. The xxxx in the message is the DCT entry that AUTOMON/RDO requires in order to capture messages according to the specifications of the Audit Trail Setup Preference record and send them to a final destination. It must be defined as TYPE=INDIRECT.

For more information, refer to Audit Trail Setup in Chapter 12 -- *Customizing AUTOMON/RDO.*

ACTION: You must either correct the CICS DCT or change the specifications of the Audit Trail Setup Preference record.

RM11006. DCT MUST HAVE TRIGGER LEVEL > ZERO

The CICS Destination Control Table is not defined properly for audit trail capture. The xxxx in the message is the DCT entry that AUTOMON/RDO requires in order to capture messages according to the specifications of the Audit Trail Setup Preference record. It must be defined as with TRIGLEV=1

For more information, refer to Audit Trail Setup in Chapter 12 -- *Customizing AUTOMON/RDO.*

ACTION: You must either correct the CICS DCT or change the specifications of the Audit Trail Setup Preference record.

.RM11007. STANDARD OUTPUT DCT xxxx CANNOT POINT TO yyyy

The CICS Destination Control Table is not defined properly for audit trail capture. The xxxx in the message is the output DCT entry where AUTOMON/RDO will send messages for final destination. It currently is defined as TYPE=INDIRECT with an INDDEST which points to the input DCT or to a DCT which indirectly points to the input DCT. Yyyy is the name of the DCT in question.

For more information, refer to Audit Trail Setup in Chapter 12 -- *Customizing AUTOMON/RDO.*

ACTION: You must either correct the CICS DCT or change the specifications of the Audit Trail Setup Preference record.

RM11009. FILE xxxxxxxx NOT DEFINED, “FROM” QUEUE yyyy

Selective Queues Specified Below has been selected in the Audit Trail Setup Preference record and a “TO” file name has been entered beside one of the “FROM” queue names. This filename is not defined to CICS or is currently disabled. The “from” queue is indicated by yyyy in the message.

For more information, refer to Audit Trail Setup in Chapter 12 -- *Customizing AUTOMON/RDO.*

ACTION: Either define or enable the file in question or change the filename to STD, indicating the messages are to be logged in the Standard Audit Filename.

RM11010. NON-STANDARD OUTPUT FOR xxxx REQUIRES UNIQUE DCT yyyy

The CICS Destination Control Table is not defined properly for audit trail capture. The xxxx in the message is the "from" queue name specified for Selective Queues in the Audit Trail Setup Preference record. The yyyy in the message is the DCT entry that AUTOMON/RDO requires in order to capture messages for this queue and either send them to a non-standard output queue or log them in a non-standard audit file. This DCT must be defined with DESTID=Rnnn, where nnn is the last three characters of the "from" queue name. The DCT must be TYPE=INTRAPARTITION with TRIGLEV=1 and TRANSID=Rnnn, the same as the DESTID.

For more information, refer to Audit Trail Setup in Chapter 12 -- *Customizing AUTOMON/RDO.*

ACTION: You must either correct the CICS DCT or change the specifications of the Audit Trail Setup Preference record. Entering STD in both the "to" queue name and the Filename fields will eliminate the requirement for a unique DCT.

RM11011. ATI TRANCODE FOR xxxx IS NOT DEFINED - yyyy

The CICS Destination Control Table is not defined properly for audit trail capture. The xxxx in the message is the DCT entry that AUTOMON/RDO requires in order to capture messages according to the specifications of the Audit Trail Setup Preference record. The yyyy in the message is the transaction code specified by the TRANSID keyword of the DCT. This transaction code is not defined to CICS.

For more information, refer to Audit Trail Setup in Chapter 12 -- *Customizing AUTOMON/RDO.*

ACTION: You must either define the transaction code or change the specifications of the Audit Trail Setup Preference record. The transaction code must point to program RDOCAUDT. Use trancode RDAT as a model.

RM11012. ATI TRANCODE FOR xxxx for DCT yyyy MUST POINT TO PROGRAM RDOCAUDT

The CICS Transaction Control Table is not defined properly for audit trail capture. The yyyy in the message is the DCT entry that AUTOMON/RDO requires in order to capture messages according to the specifications of the Audit Trail Setup Preference record. The xxxx in the message is the transaction code specified by the TRANSID keyword of the DCT. This transaction code is defined to CICS but the PROGRAM field is not RDOCAUDT.

For more information, refer to Audit Trail Setup in Chapter 12 -- *Customizing AUTOMON/RDO.*

ACTION: You must either correct the transaction code definition or change the specifications of the Audit Trail Setup Preference record. The transaction code must point to program RDOCAUDT. Use trancode RDAT as a model.

RM11013. LAST 3 CHARACTERS OF TRANCODE xxxx FOR DCT yyyy MUST BE zzzz

The CICS Transaction Control Table is not defined properly for audit trail capture. The yyyy in the message is the DCT entry that AUTOMON/RDO requires in order to capture messages according to the specifications of the Audit Trail Setup Preference record. The xxxx in the message is the transaction code specified by the TRANSID keyword of the DCT. This transaction code must be the same as the DESTID of the DCT entry, where the first character is R and the last three characters are the same as the "from" queue name.

For more information, refer to Audit Trail Setup in Chapter 12 -- *Customizing AUTOMON/RDO.*

ACTION: You must either correct the transaction code or change the specifications of the Audit Trail Setup Preference record. Entering STD in both the "to" queue name and the Filename fields will eliminate the requirement for a unique DCT and unique transaction code.

RM12001. TAB TO WINDOW AND ENTER, OR BROWSE WITH PF7/PF8

This is an information message at the Preferences menu. To operate this menu, you can tab the cursor to any window and press Enter, which will display that preference type. Alternatively, pressing PF8 and PF7 will browse through the preference types, bringing each window to the front with the cursor positioned in it.

ACTION: This is an informational message. Take action as desired.

RM13001. TAB TO ANY FIELD AND PRESS ENTER

For Preferences Field Value Limits, this is an information message.

ACTION: After supplying the resource type in the previous window, an empty resource screen of that type displays. To set value limits, tab the cursor to the value field of the desired mnemonic and press Enter. This will produce a popup window where the value limits can be set.

RM13002. FIELDS VALUES HAVE BEEN SAVED

For Preferences Field Value Limits, this is an information message indicating successful completion of one set of value limits.

ACTION: At this point, you can enter another field mnemonic, if desired, to set additional limits for that field. Changing the Trancode, User ID or Applid field will cause another set of limits to be added. PF3 will return to the resource screen, where you can select another field to add limits, if desired.

RM13003. INVALID RESOURCE TYPE, RE-ENTER

For Preferences Field Value Limits, the resource type entered at the first window is invalid.

ACTION: Enter a valid resource type. PF1 will display a help window where all resource types can be accessed, if desired.

RM13004. ENTER NEW FIELD VALUES OR PF3 TO EXIT

For Preferences Field Value Limits, this is an information message at the Field Value Limit Set window.

ACTION: Enter field value limits as described in *Field Value Limits*, chapter 12.

RM13005. FIELD VALUE SET HAS BEEN DELETED

For Preferences Field Value Limits, this is an information message indicating successful deletion of one set of value limits.

ACTION: When you delete a field value limit set, the previously displayed information remains in the window and this message appears at the bottom. This is so you can easily change one of

the key fields (Mnemonic, Trancode, User ID or Applid) and press Enter to add the limit set again. If you don't need to do this, press PF3 to exit the window.

RM13006. RANGE VALUE PAIR INVALID FOR xxxxxxxxxxxxxxx

For Preferences Field Value Limits, an entry has been entered in the Field Values area that contains an imbedded hyphen (-). A hyphen indicates a range of values, as in 100-300, meaning acceptable values are in the range of 100 to 300.

Some resource attributes cannot be supplied in range form. Any attribute that contains a series of fixed mnemonics (i.e. Language, Execkey, etc.) or attributes that contain pairs of values (i.e. Defscreen, Altscreen, etc.) cannot be entered in range format. Only attributes that contain single, user-supplied values, such as a group name or a single number can be specified in value limits with a range.

ACTION: Correct the entry and retry.

RM13007. MASKS NOT ALLOWED IN VALUE RANGE PAIR

For Preferences Field Value Limits, an entry has been entered in the Field Values area that contains an imbedded hyphen (-). A hyphen indicates a range of values, as in 100-300, meaning acceptable values are in the range of 100 to 300. When using range specification, you cannot include a mask character (*, ? <) in either of the range values.

ACTION: Correct the entry and retry.

RM13008. VALUE LIMIT TABLE SPACE EXHAUSTED

For Preferences Field Value Limits, this message indicates there is no more memory allocated for additional value limits of this resource type. For each resource type, there can be up to 80 value limit sets. While this is more than the maximum number of mnemonics of any one type, the fact that you can have multiple sets per mnemonic might prevent you from supplying limits for every possible mnemonic value.

ACTION: No more value limits can be supplied for this resource type, without first deleting some existing limit sets.

RM13009. DEFAULT VALUE NOT WITHIN SET LIMITS

For Preferences Field Value Limits, the Default value entered in the Field Value Limit Set window does not conform to the rules defined in Field Values for this mnemonic. An example would be coding Field Values of Cobol and PL/I for the program language mnemonic, then specifying Assembler as the default value.

ACTION: Correct the entry and retry.

RM13010. SELECT PROTECT OR HIDE WITH "S" "Y" OR "/"

For Preferences Field Value Limits, in the Field Value Limit Set window, something other than a slash, 's' or 'y' was entered in the Protect Entry or Hide Mnemonic fields. Consistent selection characters are used throughout AUTOMON/RDO.

ACTION: Correct the entry and retry.

RM13011. FIELD MNEMONIC IS ABSENT OR INVALID

For Preferences Field Value Limits, in the Field Value Limit Set window, the Field Mnemonic has been erased or an unrecognized mnemonic was supplied.

ACTION: Correct the entry and retry.

RM13012. VALUE LIMITS CANNOT BE SET FOR xxxxxxxxx

For Preferences Field Value Limits, there are some attribute types for which value limits cannot be set. These are 24 and 64 bit strings, such as OPERRSL and OPERSECURITY, and encoded password fields, such as BINDPASSWORD. Most of these attribute types are obsolete in the more current CICS versions. If you need special edits for these fields, that can be accomplished with a user exit.

ACTION: No value limits can be set for this field.

RM14001. ERROR ON CREATE, RESP=xxxxxxxx, RESP2=yyyyyyyy

For CICS Transaction Server 1.1 and above, coding YES to the *Dynamic DCT modify* field in Preferences Audit Trail Setup causes AUTOMON/RDO to use a CREATE command to modify TDQUEUE entries at start-up. This message indicates that an exception response was returned from CICS for the CREATE command.

ACTION: Try waiting a few moments, then issue a CLOSE command at the primary menu. When the screen goes blank, enter a AUTOMON/RDO trancode. This will retry the CREATE commands. If the failure occurs again, notify UNICOM Systems technical support.

RM14002. NOT AUTHORIZED FOR CREATE, RESP2=xxxxxxxx

For CICS Transaction Server on MVS, coding YES to the *Dynamic DCT modify* field in Preferences Audit Trail Setup causes AUTOMON/RDO to use a CREATE command to modify TDQUEUE entries at start-up. This message indicates that a NOTAUTH response was returned from CICS for the CREATE command.

ACTION: The current user is not authorized to issue a CREATE command. Your company's security administrator can correct this situation. If the problem persists, notify UNICOM Systems technical support .

RT000001. EXCI LINK TO xxxxxxxx FAILED

An attempt to use the TSO interface to AUTOMON/RDO failed because an EXCI (External CICS Interface) call could not complete.

ACTION: Review chapter 10, particularly *Installation Requirements for TSO*. If a resolution cannot be found, notify UNICOM Systems technical support.

RU05001. INITIALIZING AUTOMON/RDO DIRECTORY

This message appears either at a terminal or on the system console during AUTOMON/RDO initialization, after a REFRESH command or when building an import directory. At a terminal, no input will be accepted until this message disappears.

ACTION: No action is required. At a terminal, wait for the directory build to complete. This can take several minutes, depending on the size of the CSD file.

RU05002. AUTOMON/RDO DIRECTORY BUILD COMPLETED

This message appears on the system console when AUTOMON/RDO completes initialization.

ACTION: No action is required. This is an informational message only.

RU09001. PRIMARY COMMAND "xxxxxxxx" IS INVALID

The command entered at the primary menu or from a clear screen is not a valid AUTOMON/RDO command.

ACTION: Correct the command and retry.

RU09002. CEDA COMMAND "xxxxxxxx" IS INVALID

The shortcut CEDA command entered at the primary menu or from a clear screen is not valid

ACTION: Shortcut CEDA commands must be entered as RDOC, C(xxxxxx), where xxxxxx is a valid CEDA command.

RU09003. RESOURCE TYPE "xxxxxxxx" IS INVALID

The shortcut CEDA command entered at the primary menu or from a clear screen does not contain a valid resource type mnemonic.

ACTION: Shortcut CEDA commands must be entered as RDOC, C(xxxxxx),ttttt(yyyyy), where xxxxxx is a valid CEDA command, ttttt is a valid resource type and yyyy is a resource name.

RU09004. INVALID COMMAND SYNTAX

The shortcut command entered at the primary menu or from a clear screen is not syntactically valid

ACTION: Correct the command and retry. For help, press PF1 at the primary menu, browse forward with PF8, then tab to SHORTCUT COMMANDS and press Enter.

RU09005. GROUP NAME IS MISSING OR INVALID

A group name is required or an invalid group name has been entered for the function being performed.

ACTION: Correct the command by entering a valid group name and retry. For help, press PF1 at the primary menu.

RU18001. PROGRAM DFHEDAP NOT AVAILABLE

The interface to CEDA cannot be performed because DFHEDAP is either not defined to CICS or is disabled.

ACTION: Verify that DFHEDAP is defined and enabled.

RU18002. ERRORS RETURNED FROM CEDA, PRESS ANY KEY TO REMOVE WINDOW

CEDA has returned one or more error messages in response to the requested command. These messages appear in a popup window.

ACTION: After reading the messages, press any PF key or Enter to remove the window and return to the resource display.

RU15001. QUERY DATA FIELD REQUIRED

At the Query menu, a query was selected that requires an accompanying data field. The data field was not supplied.

ACTION: Correct the entry and retry.

RU15002. ONLY ONE QUERY AT A TIME ALLOWED

At the Query menu, two or more queries were selected. Only one at a time can be performed.

ACTION: Correct the entry and retry.

RU15003. INVALID COMMAND, PRESS PF1 FOR CHOICES

At the directory, and invalid command was entered in the command field.

ACTION: Correct the entry and retry. PF1 will display all available commands.

RU15004. MUST BE YES OR NO

This field requires a response of yes or no. You can enter “y” or “n” if desired.

ACTION: Correct the entry and retry.

RU15005. INVALID COLOR, PRESS PF1 FOR CHOICES

In General Preferences, one of the color substitution fields was entered incorrectly. Valid choices are blue, red, pink, turquoise, yellow, green or white.

ACTION: Correct the entry and retry. PF1 will display all available colors.

RU15006. INVALID COMMAND

At the Commands menu, the supplied command is unrecognized.

ACTION: Correct the entry and retry. PF1 will display all available commands.

RU15007. IMPORT CSD IS ACTIVE, CANNOT BE MODIFIED

At the import directory or import commands menu, the supplied command would cause modification to a resource. In import mode, the resources cannot be modified without first copying them to the local region.

ACTION: Correct the entry and retry.

RU15008. INVALID PF KEY, PRESS PF1 FOR CHOICES

In General Preferences, one of the PF key substitution fields was entered incorrectly. Valid choices are PF1 through PF9, PF10 through PF24.

ACTION: Correct the entry and retry. PF1 will display all available PF keys.

RU15009. PF KEY SPECIFIED MORE THAN ONCE - xxxx

In General Preferences, one of the PF keys in the PF key substitution fields was duplicated, indicated by xxxx in the message. Each PF key can appear only once.

ACTION: Correct the entry and retry.

RU15010. SECURITY ERROR, NO INSTALLS ALLOWED

An INSTALL command was attempted with a transaction code that does not allow installs, such as RDON.

ACTION: Use a different transaction code to perform an install.

RU15011. SECURITY ERROR, NO UPDATES ALLOWED

An ALTER, DEFINE or other modifying command was attempted with a transaction code that does not allow updates, such as RDON.

ACTION: Use a different transaction code to perform an update.

RU15012. ENTER NUMBER FROM 0 TO 7

The BID prefix in General Preferences will only accept values of blank or zero through seven.

ACTION: Correct the entry and retry.

RU15013. VALUES ARE ALL, BID OR USERID

An unrecognized value was supplied for *Export queue view* of General Preferences. Acceptable values are “ALL,” “BID” or “USERID.”

ACTION: Correct the entry and retry.

RU15014. INVALID RESOURCE TYPE

At the Commands menu, the supplied resource type is unrecognized.

ACTION: Correct the entry and retry. PF1 will display all available commands.

RU15015. MUST BE ON, OFF OR DEF

In General Preferences, the *Extended Attributes* option was entered incorrectly. Choices are DEF (terminal default), ON (force on) or OFF (force off).

ACTION: Correct the entry and retry.

RU18001. PROGRAM DFHEDAP NOT AVAILABLE

Program DFHEDAP is the CEDA interface. This message indicates the program is either not installed or currently disabled.

ACTION: Correct the program status of DFHEDAP and retry the operation.

RU18002. ERRORS RETURNED FROM CEDA, PRESS PF3 TO REMOVE WINDOW

CEDA has returned more error messages in response to the requested command than can display on one screen. The messages appear in a pop-up window.

ACTION: To remove the window, press PF3 or any other function key.

RU18003. CEDA ERRORS, F7=BACK, F8=FWD, F9=UP, F10=DOWN

CEDA has returned more error messages in response to the requested command than can display on one screen. The listed PF keys in the message can be used to page backward and forward or scroll up an down one message at a time.

ACTION: Use the listed PF keys as indicated.

RU19001. INVALID COMMAND FOR THIS RESOURCE TYPE

A command has been issued for a resource type where it does not apply. Entering a group or list command such as Add or Append with a resource type other than group or list could produce this message.

ACTION: Correct the command and retry.

RU19002. CEDA COMMAND NOT SUPPORTED FOR THIS RELEASE OF CICS

A command has been issued for a resource type which is not supported on this release of CICS. Attempting to define or alter a file on a CICS release prior to 3.2 could produce this message.

ACTION: Correct the command and retry.

RU19003. SELECTION NOT VALID FOR THIS RELEASE OF CICS

A command has been issued for a resource type which is not supported on this release of CICS. Attempting to view a TRANCLASS on a CICS release prior to 4.1 could produce this message.

ACTION: Correct the command and retry.

RU19004. GROUP NAME IS REQUIRED

A command has been issued that applies only to groups and the group name was not supplied.

ACTION: Correct the command and retry.

RU19005. AUDIT FILE IS FULL, NO UPDATES ALLOWED

The audit trail file is full and cannot suballocate more extents. When this occurs, all transactions that would result in an audit message from CEDA are suppressed until the situation is resolved.

ACTION: Either reorganize the audit file, or turn off *Create audit trail* in General Preferences. Note that the administrator transaction code can still perform update functions when the audit file is full, although the audit messages will not be captured. This condition is automatically cleared when program RDOCAUDT is once again able to write a record to the audit file.

RU25001. UNKNOWN RESOURCE TYPE

The command in the export queue or the free-form commands window contains a resource type that is not a valid resource mnemonic.

ACTION: Correct the command and retry.

RU25002. xxxxxxxx IS NOT A VALID CEDA COMMAND

The command mnemonic indicated by xxxxxxxx in the message is not valid. Acceptable CEDA commands are Add, Alter, Append, Check, Copy, Define, Delete, Display, Expand, Install, Lock, Move, Remove, Rename, Unlock, Userdefine, View.

ACTION: Correct this value and continue.

RU25003. xxxxxxxx IS UNRECOGNIZED -- SYNTAX ERROR

The mnemonic or value indicated by xxxxxxxx in the message is not recognized. It is not a valid attribute mnemonic of any known resource type.

ACTION: Correct this value and continue.

RU25004. xxxxxxxx IS AN INVALID OR AMBIGUOUS FIELD MNEMONIC

The mnemonic indicated by xxxxxxxx in the message is not recognized. It may contain the first few letters of a valid mnemonic, but it cannot be distinguished from other mnemonics. An example might be PRO, meaning program, when the minimum abbreviation for that mnemonic is PROG.

ACTION: Correct this value and continue.

RU25005. xxxxxxxx CONTAINS INVALID VALUE

The value for the mnemonic indicated by xxxxxxxx in the message is not valid for this mnemonic, or is not valid for this resource type.

ACTION: Correct this value and continue.

RU25006. xxxxxxxx IS REQUIRED

The resource value or both the mnemonic and value for the mnemonic indicated by xxxxxxxx in the message was omitted, and it is required for this resource type.

ACTION: Correct this value and continue.

RU25007. xxxxxxxx MUST BE NUMERIC

The resource value for the mnemonic indicated by xxxxxxxx in the message must be numeric. Some numeric values will accept “no” or some other alpha word, but if this message appears, the supplied value was not acceptable for the mnemonic.

ACTION: Correct this value and continue.

RU25008. xxxxxxxx MUST BE [TWO] [THREE] NUMBERS SEPARATED BY A COMMA

The resource value for the mnemonic indicated by xxxxxxxx in the message is not valid for this mnemonic. It must be entered as two or three numeric values separated by a comma. An example from Typeterm would be DEFSCREEN(24,80). An example from Transaction is WAITTIME(10,20,30).

ACTION: Correct this value and continue.

RU25009. xxxxxxxx CONTAINS TWO DELIMITERS WITH NO VALUE

The resource value for the mnemonic indicated by xxxxxxxx in the message is not valid for this mnemonic. Two delimiters are present with no intervening value. An example would be coding two commas together, such as DEFSCREEN (14,,80).

ACTION: Correct this value and continue.

RU25010. xxxxxxxx CONTAINS TOO MANY CHARACTERS

The resource value for the mnemonic indicated by xxxxxxxx in the message contains more characters than is valid for this mnemonic. The maximum length of any value is 255, but each mnemonic has its own maximum.

ACTION: Correct this value and continue.

RU25011. xxxxxxxx CONTAINS A VALUE THAT EXCEEDS yyyyyy

The resource value for the mnemonic indicated by xxxxxxxx in the message is too large. The maximum value is indicated by yyyyy in the message.

ACTION: Correct this value and continue.

RU25012. xxxxxxxx CONTAINS A ZERO VALUE

The resource value for the mnemonic indicated by xxxxxxxx in the message cannot be zero.

ACTION: Correct this value and continue.

RU25013. xxxxxxxx IS NOT WITHIN VALUE LIMITS [FOR TRAN yyyy] [FOR APPLID zzzzzzzz]

The resource value for the mnemonic indicated by xxxxxxxx in the message has passed all standard edits, but there are Preference value limits defined for it. The value entered does not agree with those specified in value limits. If *FOR TRAN yyyy* or *APPLID zzzzzzzz* appears in the message, it indicates that the specified Value Limits only apply to this transaction code, or when operating in this Applid.

ACTION: Correct this value and continue. If necessary, interrogate Field Value Limits in Preferences to determine an acceptable entry.

RU26001. CSD FILENAME OR DSNAME MUST BE SUPPLIED

At the export menu, either the CSD file name or CSD dataset must be supplied. This is the dataset where resources can be copied to create an export queue.

ACTION: To copy from the local CSD assigned to this region, enter DFHCSD in the CSD Filename field. The dataset name will be automatically supplied. To see a list of available CSD files, enter ? in the first byte of CSD Filename. A dataset can be picked from the resultant list. For more information see *Fields of the Export Menu*, in chapter 8.

RU26002. EXISTING FILE xxxxxxxx HAS DIFFERENT DSNAME

At the export menu, the CSD file name and dataset name was supplied. However, the dataset name is not the same as the currently installed file resource with the supplied CSD file name.

ACTION: Use CEMT to inquire on the currently installed file. Either obtain the correct dataset name from the CEMT display, or used a different CSD file name.

RU26003. MODEL DEFINITION, MODELCSD NOT FOUND

At the export menu, a question mark (?) was entered in CSD file name or CSD dataset to obtain a list of available defined files. In order to do this, there must be a file defined with the name MODELCSD. The group name of this model file is the group that must contain the files to display here. This message indicates that the MODELCSD file definition is not present.

ACTION: You must define a file with the name MODELCSD in order to use the ? help in the CSD fields. For more information see *Fields of the Export Menu,* in chapter 8.

RU26004. MODEL DEFINITION, MODELCSD NEEDS A DSNAME

At the export menu, a question mark (?) was entered in CSD file name or CSD dataset to obtain a list of available defined files. The model file, named MODELCSD was found, but the file definition for MODELCSD does not have a dataset name.

ACTION: The definition for MODELCSD must have a dataset name for this function to work correctly. For more information see *Fields of the Export Menu,* in chapter 8.

RU26005. OPEN FAILED FOR FILE xxxxxxxx

AUTOMON/RDO attempted to open the file identified by the CSD file name field of the export menu, but the open failed.

ACTION: Verify the file is installed, using the correct dataset name. The system console will contain a message that displays the VSAM return codes for the open attempt.

RU26006. TAB TO DESIRED FILE AND PRESS ENTER, ELSE PF3

At the export menu, a question mark (?) was entered in CSD file name or CSD dataset to obtain a list of available defined files. From the resultant list, any dataset can be chosen by tabbing to it and pressing Enter. This will automatically fill in the fields, CSD file name and CSD dataset.

ACTION: Tab to a file and press Enter, or press PF3 to return to the export menu with no changes. For more information see *Fields of the Export Menu,* in chapter 8.

RX00001. PLEASE ENTER YOUR PASSWORD OR PRESS PF3 TO EXIT

During FEPI connect processing, the PASSTICKET function is not available in the CICS external security manager. PASSTICKET allows FEPI to automatically sign-on the user to the remote system when a connection is made. You must enter a valid User ID and password in order to complete the connection.

ACTION: Enter your user ID and password.

RX00002. CONNECT ERROR, CODE xxxx, RESP2 yyyy

During connect processing, an error has been returned from FEPI indicating the system is not available for connection. The error code is designated by xxxx and the response code is yyyy.

Possible values and their meaning for xxxx are:

ITRG	-	FEPI target install error
ISLU	-	FEPI node install error
IPRP	-	FEPI propertyset install error.
IPOL	-	FEPI pool install error.
FALO	-	FEPI allocate error.

FALP	-	FEPI allocate PASSCONVID error.
FREP	-	FEPI FREE PASS error
FREH	-	FEPI FREE HOLD error.
FREC	-	FEPI Receive datastream error.
FCON	-	FEPI CONVERSE datastream error.

The value for yyyy is the response code returned from the FEPI command. These are documented in Appendix B of *CICS-ESA FEPI USER'S GUIDE.*

ACTION: Make sure that the target CICS system is running and available for connection. If yes, verify the FEPI definitions in the Preference function. If problem persists, call UNICOM Systems technical support if necessary.

RX00003. BEGIN SESSION ERROR, CODE xxxx

During connect processing, an error has been returned from FEPI indicating the system is not available for connection. The error code is designated by xxxx.

ACTION: These errors are internal to AUTOMON/RDO indicating a serious logic problem. Call UNICOM Systems technical support if this occurs.

RX00004. xxxxxxxx IS NOT DEFINED TO THIS CICS

During connect processing, the applid indicated by xxxxxxxx in the message is not defined as an MRO or ISC connection or in the FEPI Application List Preference record.

ACTION: You cannot connect to this applid until the proper connections are defined. Refer to For more information, refer to Chapter 12 -- *Customizing AUTOMON/RDO.*

RX00005. THERE ARE NO FEPI CUSTOMIZATION RECORDS

During connect processing, one or both of the FEPI Preference records is missing. In order to use FEPI for connections, there must be both a FEPI Application List and a FEPI Node List record present.

ACTION: This error will not occur if both records are absent at initial invocation of AUTOMON/RDO. The absence of both record types indicates that FEPI is not to be used for connection processing. The error will occur is one or both of the records is deleted after FEPI initialization is done.

RX00006. ERROR INITIALIZING FEPI TARGET LIST

The FEPI Application List Preference record is either absent or incorrectly defined. FEPI connection processing can be completed.

ACTION: Update the FEPI Application List Preference record to properly reflect all applids available for connection.

RX00007. ERROR INITIALIZING FEPI NODE LIST

The FEPI Node List Preference record is either absent or incorrectly defined. FEPI connection processing can be completed.

ACTION: Update the FEPI Node List Preference record to properly reflect all nodes available for connection.

RX00008. INVALID SIGN-ON ATTEMPT

The user ID and password entered in response to a FEPI sign-on request was not accepted by the remote system.

ACTION: To retry, select the same connection and re-enter the correct sign-on information when prompted for it. If you are using the TSO interface to connect to AUTOMON/RDO, exit to the TSO command screen and enter the user ID and password there.

RX00009. CONNECTED TO xxxxxxxx, PRESS CLEAR.
ENTER CANCEL FROM CLEAR SCREEN TO TERMINATE.

This message appears when connecting to a remote system using a FEPI free session. A free session means you can operate other transactions in this region, not just AUTOMON/RDO. The message indicates that the FEPI connection was successful.

ACTION: Press clear to begin operation at the connected system. When you are ready to terminate the FEPI session and return to the local region, clear the screen and enter CANCEL in the first screen position.

Index

A

B

C

D

E

F

G

H

I

J

L

M

P

Q

R

S

T

U

V

W