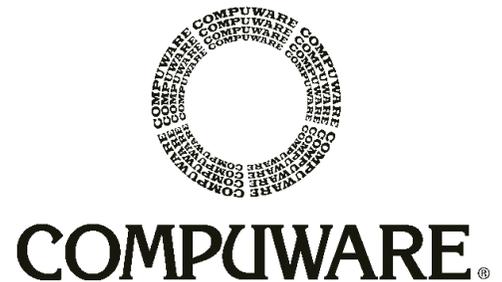


# CICS Abend-AID/FX

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## Installation and Customization Guide

Release 4.4



Please direct questions about CICS Abend-AID/FX  
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# Summary of Changes

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## Release 4.4 Enhancements

The Release 4.4 enhancements include:

- **New, Panel-Driven Installation Dialog:** CICS Abend-AID/FX provides easier implementation with a new panel-driven, installation dialog designed to gather site-specific information used to generate JCL for the product installation. The installation process requires TSO/ISPF.
- **Improved Product Performance and Reduced System Resources:** The amount of elapsed time and system resources needed to view source displays in transaction abend entries and to complete dump capture have been reduced, including:
  - An option to limit the number of BLL cells, per program, that are written to the transaction database.
  - An enhancement to write CICS Abend-AID/FX debugging messages to an internal buffer instead of the FDBDLOG.
  - Updated and tuned defaults shipped with the product.
- **New LE Options Control Block (OCB) Display:** This new screen lets programmers using Language Environment (LE) easily identify LE runtime options in effect at the time of the failure in their COBOL or PL/I program.
- **Distributed Viewing Support:** Users can view dumps captured at remote sites using source information maintained at a central site. This support eliminates the need to distribute the source listing information to remote sites in order to view diagnostics for transaction abends in source format.
- **CICS Web Interface Support:** Users running CICS Transaction Server for OS/390 Version 1 Release 3 or more current can now view and analyze problems in the CICS Web Interface using CICS Abend-AID/FX. This facility provides diagnostic support for CICS transactions using the CICS Web Interface and for CICS region dumps that contain activity related to the CICS Web Interface.
- **Optimized Region Dumps:** A new region dump profile option enables optimized dump capture that provides significant reductions in elapsed SDUMP capture time, system resources, and output SDUMP dataset size. Your site must be using the SVC 51 interface to take advantage of this new facility.
- **Dynamic Duplicate Dump Suppression:** A new transaction dump global option enables dynamic duplicate dump suppression. This option is activated when a CICS region's transaction dump activity reaches the threshold set by the ABLIMIT transaction dump global option. CICS Abend-AID/FX then performs duplicate dump suppression for that CICS region until the number of dumps being processed concurrently falls below 50 percent of the ABLIMIT value.

## Support for Earlier Releases

Please note the following changes in support for CICS Abend-AID/FX:

- Support for CICS Abend-AID/FX Release 4.2 will be discontinued as of March 1, 2003.
- CICS Abend-AID/FX Release 4.4 will be the last release of the product to support the following software releases:

- CICS/MVS Version 2.1.2
- Dumps captured under MVS/XA; support for MVS/XA will be discontinued as of March 1, 2003
- MVS/ESA
- OS/390 Version 1 and associated versions of Language Environment (LE), including LE for MVS and VM 1.5 and 1.4, and LE/370 Versions 1.3 and 1.2.
- ANS COBOL
- DB2 Version 3.1
- PL/I Version 1.5.1.

# Introduction

This guide describes how to install and customize CICS Abend-AID/FX, a fault diagnosis tool that provides a full range of analysis functions for managing abnormal CICS transaction terminations (abends) and CICS region outages.

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## Intended Audience

This guide is intended for the systems programmer responsible for installing CICS Abend-AID/FX. To install, customize, and maintain CICS Abend-AID/FX at your site, you should know how to edit and submit JCL, and you should have a working knowledge of the following:

- The z/OS, OS/390, or MVS/ESA operating system running at your site
- The CICS Transaction Server for z/OS, CICS Transaction Server for OS/390, CICS/ESA, or CICS/MVS version running at your site
- ISPF
- TSO/E
- VTAM
- SMP/E
- IPCS.

**Note:** IPCS experience is required only if your site intends to customize CICS Abend-AID/FX to include IPCS support.

- The DB2 version installed at your site. (CICS Abend-AID/FX supports versions 7.1, 6.1, 5.1, 4.1, and 3.1.)

**Note:** DB2 experience is required only if your site intends to install the CICS Abend-AID/FX for DB2 optional support for transaction dump processing.

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## Installation and Customization Guide Organization

This guide is organized into six main parts:

### Part 1. Preliminary Information and Preparation

Part 1 provides the following information:

- An overview of CICS Abend-AID/FX architecture
- The system environment required for CICS Abend-AID/FX.

Please read Part 1 carefully before installing CICS Abend-AID/FX.

### Part 2. Installation Procedures

Part 2 describes the preinstallation information you should know and the basic installation procedure.

### Part 3. Additional Installation Procedures for Optional Facilities and Preventive Service

Part 3 describes the procedures for installing CICS Abend-AID/FX optional facilities and preventive service.

#### Part 4. Online Customization

Part 4 describes how to customize CICS Abend-AID/FX for your site's requirements.

#### Part 5. Utilities

Part 5 describes the SVC 51 interface and customer profile utilities, and the user diagnostic and user DSECT programs supplied with CICS Abend-AID/FX.

#### Part 6. Appendixes

Part 6 contains the following appendixes:

- Appendix A. Controlling the CICS Abend-AID/FX Viewing Server and TDCAS
- Appendix B. Supplied Transaction
- Appendix C. Site Configuration Examples
- Appendix D. User Abend Codes.

For more information about the contents of this guide, refer either to the beginning of Parts 1 through 6, or to the table of contents.

---

## Notation Rules

This guide uses the following notation rules:

- **Bold** highlighting is used for headings and for commands you are instructed to type in the COMMAND or OPTION fields. It is also used for referring to screen field names and field data and is used in examples of command syntax.
- *Italic* highlighting is used for emphasizing important terms or phrases, for command variables, and for document titles.
- *Notes* provide additional information about the current topic.
- *Cautions* warn of system failures or other problems that can occur if you fail to follow documented procedures.

---

## Related Publications

The following documents provide more information about CICS Abend-AID/FX:

- *CICS Abend-AID/FX Benefits Summary* — Describes the benefits and capabilities of CICS Abend-AID/FX based on a problem-solving approach.
- *CICS Abend-AID/FX Messages and Codes Manual* — Lists all CICS Abend-AID/FX messages, ranks their severity, explains their meaning, and describes any resultant actions performed by the system or required of the user.
- *CICS Abend-AID/FX User's Guide* — Details the functions and features of CICS Abend-AID/FX. It also contains problem determination examples that illustrate the product's use.

## FrontLine Support Web Site

You can access online technical support for Compuware products via our FrontLine support web site. You can read or download documentation, frequently asked questions, and product fixes, or directly e-mail Compuware with questions or comments. To access FrontLine, you must first register and obtain a password at <http://frontline.compuware.com>.

## Online Documentation

Documentation for this product is provided on CD-ROM in several electronic formats. PDF files can be viewed with the free Adobe Acrobat Reader, available at <http://www.adobe.com>. HTML files can be viewed with any standard web browser. BookManager softcopy files can be viewed with any version of IBM BookManager READ or the IBM Softcopy Reader. To learn more about BookManager or download the free Softcopy Reader, go to <http://www.ibm.com>.

## World Wide Web

Compuware's site on the World Wide Web provides information about Compuware and its products. The address is <http://www.compuware.com>.

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## Technical Support

At Compuware we strive to make our products and documentation the best in the industry. Feedback from our customers helps us to maintain our quality standards.

If problems arise while installing this product, consult the CICS Abend-AID/FX documentation or the CICS Abend-AID/FX technical representative at your site. If problems persist, please obtain the following information before calling Compuware's 24-hour product support hotline. This information may be required to help determine the cause of the problem:

- The CICS Abend-AID/FX release you are using.
- The CICS release you are using.
- The DB2 release you are using.
- The exact error message, if any, that was displayed.
- All CICS Abend-AID/FX output for the task you were trying to perform.
- The MVS SYSLOG for the involved time period.
- The contents of the viewing server, TDCAS, and CICS region JES output files.
- Any relevant SMP/E output.
- Any other relevant screen prints.

Refer to Appendix D, "Internal Transaction Abends" in the *CICS Abend-AID/FX User's Guide* for a description of the internal transaction abend entries that may be displayed on the CICS Abend-AID/FX Directory or the user abends you may encounter.

If Compuware requests documentation, please send it to the following address:

**CICS Abend-AID/FX Technical Support**  
Compuware Corporation  
31440 Northwestern Highway  
Farmington Hills, MI 48334-2564  
1-800-538-7822



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## Part 1.

# Preliminary Information and Preparation

Before attempting to install CICS Abend-AID/FX facilities, please read Part 1 thoroughly and complete the preinstallation procedures it describes. Part 1 contains the following chapters.

### **Chapter 1, Product Architecture**

Chapter 1 describes the datasets that CICS Abend-AID/FX uses during dump processing, and it provides a high-level overview of the major components that comprise CICS Abend-AID/FX.

### **Chapter 2, Required System Environment**

Chapter 2 describes the prerequisite products needed to support CICS Abend-AID/FX and the storage requirements for CICS Abend-AID/FX components, libraries and files. It also provides considerations for global resource serialization (GRS) and PL/I.



# Chapter 1.

## Product Architecture

**Note:** Before installing this release of CICS Abend-AID/FX, check the date on the tape label. If the tape is more than 45 days old, call CICS Abend-AID/FX Technical Support for any required maintenance, or download the current maintenance files from Compuware's Internet site, <http://frontline.compuware.com>. If the tape is more than one year old, it is no longer valid and you must call CICS Abend-AID/FX Technical Support for a new tape, or request it from the Internet.

This chapter provides an overview of the CICS Abend-AID/FX system files and datasets, and the major CICS Abend-AID/FX components. It also describes how and when the system and installation datasets are used during processing. Because CICS Abend-AID/FX is a large, multifaceted system, Compuware recommends that you read this chapter before installing the product.

---

## System Files and Datasets

CICS Abend-AID/FX uses the files and datasets listed below at various points during dump and processing and viewing. The following files and datasets are system-wide, and you need only one copy of each at your site:

- Customization file
- System DSECT file
- User DSECT file (if your site has user-defined DSECTs)
- Region dump dataset(s)
- Source listing file(s).

The following files and dataset are viewing server files, and you need one of each per viewing server installed at your site:

- Shared directory
- Transaction database(s)
- Dump information file
- Persistent data (PDSM) file
- Viewing server work file
- Viewing server log file
- IPCS directory file (if supported).

**Note:** The IPCS directory file is used only if your site chooses to install the optional IPCS support. It is not required in CICS Abend-AID/FX.

CICS Abend-AID/FX executable programs reside in the authorized (SKFXAUTH and SKMPAUTH), nonauthorized (SKFXLOAD and SKMPLOAD), and CICS LIB (SKFXCLIB) load libraries. The CICS LIB load library contains the modules required by the CICS region to perform dump analysis and must be included in your CICS region's DFHRPL concatenation. The nonauthorized libraries contain CICS Abend-AID/FX viewing server and utility modules. The authorized libraries must be APF-authorized.

CICS Abend-AID/FX also requires the Compuware Shared Services (CSS) load library (SLCXLOAD) created during the CSS installation.

CICS Abend-AID/FX is installed and maintained by SMP/E, so there are also standard SMP/E libraries required. These include a sample library and a control library. CICS Abend-AID/FX also uses an installation sample library that is not managed by SMP/E.

## Global Files

The files described below are system-wide files, so you need only one copy of each at your site. You can have more than one copy, if your configuration requires it.

## Customization File

The manner in which CICS Abend-AID/FX operates at a site is largely determined by the options and specifications you select when installing and customizing CICS Abend-AID/FX. These site-specific options are stored in the customization file, which is a VSAM KSDS, and are accessed during different phases of CICS Abend-AID/FX processing. You can change this information at any time through the CICS Abend-AID/FX customization procedure. You can have only one customization file per MVS image if you are using automatic region dump import, but you can share a single customization file across multiple MVS images.

## System DSECT File

The system DSECT file is a VSAM RRDS that contains the data required to format DSECT displays when requested by CICS Abend-AID/FX users. The system DSECT file is normally shared among all viewing servers.

**Note:** The system DSECT file is a Compuware Shared Services (CSS) DDIO file. It is formatted using the CSS utility, CWDDSUTL. Refer to the *Compuware Shared Services User/Reference Guide* for more information about DDIO files and the CWDDSUTL utility.

## User DSECT File

The user DSECT file is an optional VSAM RRDS, used if you want to map storage into DSECT formats that you define. You can define multiple user DSECT files, but each viewing server can access only a single file.

**Note:** The user DSECT file is a Compuware Shared Services (CSS) DDIO file. It is formatted using the CSS utility, CWDDSUTL. Refer to the *Compuware Shared Services User/Reference Guide* for more information about DDIO files and the CWDDSUTL utility.

## Region Dump Datasets

**Note:** These datasets are used for CICS Abend-AID/FX *region* dump analysis only.

CICS Abend-AID/FX uses an SVC dump (console, SDUMP, SLIP), or SYSMDUMP as input. You can import any dump in one of these formats into CICS Abend-AID/FX, regardless of whether CICS Abend-AID/FX was involved in taking the dump. A dump dataset can be copied to tape, although it must be copied back to DASD before it can be processed by CICS Abend-AID/FX. Region dumps must be available on DASD while you are viewing them.

Unlike transaction dumps, CICS Abend-AID/FX processes individual region dumps in their own datasets, in SDUMP format. This approach gives your site the advantage of being able to migrate individual SDUMP datasets through either the Data Facility Hierarchical Storage Manager (DFHSM), or an equivalent product that uses the interface provided by the DFHSM ARCGIVER program, thus freeing DASD space for other uses. Another advantage is that your site does not need an export utility to copy dumps from a proprietary file format to an SDUMP format.

You can customize CICS Abend-AID/FX to automatically copy a dump taken to a SYS1.DUMPxx dataset to another dataset and initiate the automatic import and analysis of the dump. As an alternative, CICS Abend-AID/FX can invoke system dumps directly to user-defined SDUMP datasets, bypassing SYS1.DUMPxx datasets. CICS Abend-AID/FX can also automatically import region dumps taken to automatically allocated dump datasets (MVS/ESA version 5, OS/390, or z/OS).

**Notes:**

1. To automatically import dumps into CICS Abend-AID/FX, you must have either the MVS post-dump exit or the SVC 51 interface, or both, installed. Chapter 13, “Configuring Automatic Region Dump Processing” provides details on all options available for processing region dumps.
2. To ensure that the dumps contain complete information, you must set certain SDUMP parameters in SYS1.PARMLIB. These parameters are documented in the IBM *CICS/MVS Operations Guide*, SC33-0510, and the *CICS/ESA Operations Guide*, SC33-0668.
3. CICS Abend-AID/FX cannot import a dump directly from a SYS1.DUMPxx dataset. Instead, it copies the dataset to another DASD file and then imports that file. For CICS Abend-AID/FX to perform a dump copy, the region dump capture profiles must be customized, and the MVS post-dump exit must be installed.

In the event the input dump dataset contains more than one address space, as in a console dump, the import function creates a CICS Abend-AID/FX Directory entry for each address space in the dump. Dump analysis can then be initiated by the user for dumps of individual CICS address spaces. If there is only one CICS ASID in a multi-address space dump, the CICS ASID is automatically analyzed by CICS Abend-AID/FX when the dump is imported if automatic analysis is indicated in the customization information you specify.

## Source Listing Files

Source support is one of the most valuable features of CICS Abend-AID/FX. It is available for transaction abends of COBOL and PL/I programs, and its use greatly simplifies the debugging process for transaction dumps.

Source listing files contain enhanced program compile listings used to provide source support for COBOL and PL/I programs. The listings are enhanced by adding the Compuware postprocessor step to your compile JCL. At view time, the enhanced listing is merged with the information captured for transaction abends so that CICS Abend-AID/FX can identify source statements in error (rather than displacements), and format the source listing and working storage for display.

Only one source listing file is required to use source support, but you may find that having multiple files better supports your organization.

Source support is optional. If you are using Compuware’s XPEDITER/CICS product, you can use the same source files for both products. However, to directly access CICS Abend-AID/FX from XPEDITER/CICS, you need to install XPEDITER/CICS Release 6.6 or more current.

**Note:** A source listing file is a Compuware Shared Services (CSS) DDIO file. It is formatted using the CSS utility, CWDDSUTL. Refer to the *Compuware Shared Services User/Reference Guide* for more information about DDIO files and the CWDDSUTL utility.

## Files/Dataset Owned by the Viewing Server

The files and dataset described below are owned by the viewing server. You must have one copy of each for each viewing server you configure.

**Note:** The parameters that control viewing server configuration are specified in a member or file that is pointed to by the viewing server JCL, ddname FDBDPARM. You can use any FB, 80-byte image dataset or member for this purpose. The CICS Abend-AID/FX installation sample library (TKFXSAMP) contains sample parameter members.

## Shared Directory

The shared directory is a VSAM RRDS that contains CICS Abend-AID/FX Directory records for each region and transaction dump known to a given viewing server. It is required so that CICS Abend-AID/FX can present a complete view of all region and transaction dump activity that the viewing server is processing. There is one shared directory per CICS Abend-AID/FX viewing server.

The name of the shared directory associated with each viewing server is saved in the customization file. CICS Abend-AID/FX routines reference this information at CICS Abend-AID/FX startup in the CICS region to determine which transaction database(s) are available for the CICS region to use.

**Note:** The shared directory is a Compuware Shared Services (CSS) DDIO file. It is formatted using the CSS utility, CWFXSDUT. Refer to the *Compuware Shared Services User/Reference Guide* for more information about DDIO files and the CWFXSDUT utility.

## Transaction Databases

Transaction databases are VSAM RRDS files that contain the results of CICS Abend-AID/FX transaction abend analysis. Unlike region dumps, which are stored in individual dump datasets, multiple transaction reports are stored in a single transaction database. Transaction dumps are stored in a proprietary, compressed format.

Transaction databases are “attached” to a single CICS Abend-AID/FX shared directory when they are allocated and initialized. For this reason, an individual transaction database can be written to and viewed by only one CICS Abend-AID/FX viewing server, but there is no limit to the number of transaction databases you can attach to a single shared directory/viewing server.

By default, all CICS regions that are processed by a given viewing server can write transaction dumps to all transaction databases attached to that viewing server’s shared directory. You can also configure CICS Abend-AID/FX to write transaction analysis information for CICS regions to specific transaction databases. This is described in “Assigning Transaction Databases to CICS Regions” on page 18-8.

**Note:** A transaction database is a Compuware Shared Services (CSS) DDIO file. It is formatted using the CSS utility, CWFXSDUT. Refer to the *Compuware Shared Services User/Reference Guide* for more information about DDIO files and the CWFXSDUT utility.

## Dump Information File

The dump information file is a variable-length record VSAM KSDS. The information in the dump information file is dynamically updated by CICS Abend-AID/FX, users of the system, or both. The file contains the diagnostic output of region dump analysis, saved paperclip lists, and “Wake-up” information that is updated by the SVC 51 interface or the MVS post-dump exit to alert the viewing server component to the presence of new dumps to process.

There is one dump information file per CICS Abend-AID/FX viewing server.

### ***Managing the Dump Information File***

The dump information file is subject to high activity, which can result in control interval (CI) and control area (CA) splits causing file fragmentation. This is particularly true for CICS transaction dump support if you are capturing and viewing the trace table for all tasks, (rather than just the abending task), because the dump information file contains the formatted CICS trace information for transaction dumps. The trace records for a transaction dump are formatted and written to the dump information file the first time a user selects the trace option for the dump.

To avoid large-scale fragmentation, Compuware recommends that you include a step to automatically reorganize the dump information file each time the viewing server is started. The sample viewing server JCL contains a step to perform the reorganization. Refer to “Step 3b. Reorganizing the Dump Information File” on page 7-17 for more information. As an alternative, you can run the JCL in installation sample library (TKFXSAMP) member DINFREOR periodically to reorganize the file manually. The viewing server cannot be active when you run DINFREOR.

### **Persistent Data (PDSM) File**

The persistent data (PDSM) file is a VSAM RRDS that contains user profile information, as well as other information used by CICS Abend-AID/FX to format dump information for display. CICS Abend-AID/FX also uses the file to keep track of in-flight transactions in the event the CICS Abend-AID/FX viewing server fails during processing.

There is one persistent data file per CICS Abend-AID/FX viewing server.

#### **CAUTION:**

**Do not reorganize the PDSM file. It is a self-maintaining file. Reorganizing it causes abends of the CICS Abend-AID/FX viewing server.**

### **Viewing Server Work File**

The viewing server work file is a VSAM RRDS that contains temporary information used for viewing server processing. The viewing server work file is reformatted by the viewing server each time the viewing server initializes. Therefore, you never have to reorganize the viewing server work file.

There is one viewing server work file per CICS Abend-AID/FX viewing server.

### **IPCS Directory File**

A feature of CICS Abend-AID/FX is the ability to execute IPCS commands using a selection on the CICS Abend-AID/FX region dump primary options menu. This feature is optional. You decide when you configure a viewing server if you want this support available for the viewing server.

One IPCS directory file is allocated for each viewing server that is using IPCS support. Access this IPCS directory file only through CICS Abend-AID/FX.

### **Viewing Server Log File**

The viewing server log file, ddname FDBDLOG, is a SYSOUT dataset that is opened during viewing server initialization. It contains messages about important events that occur during viewing server processing — for example, when a user logs on or off the viewing server, or when a new dump is imported. Compuware recommends that you check this file if you experience problems using CICS Abend-AID/FX, since many viewing server-related messages are written to the viewing server log file.

The TDCAS also has a log file with the same ddname, and in the same format.

## Product Components

The CICS Abend-AID/FX architecture consists of three major components:

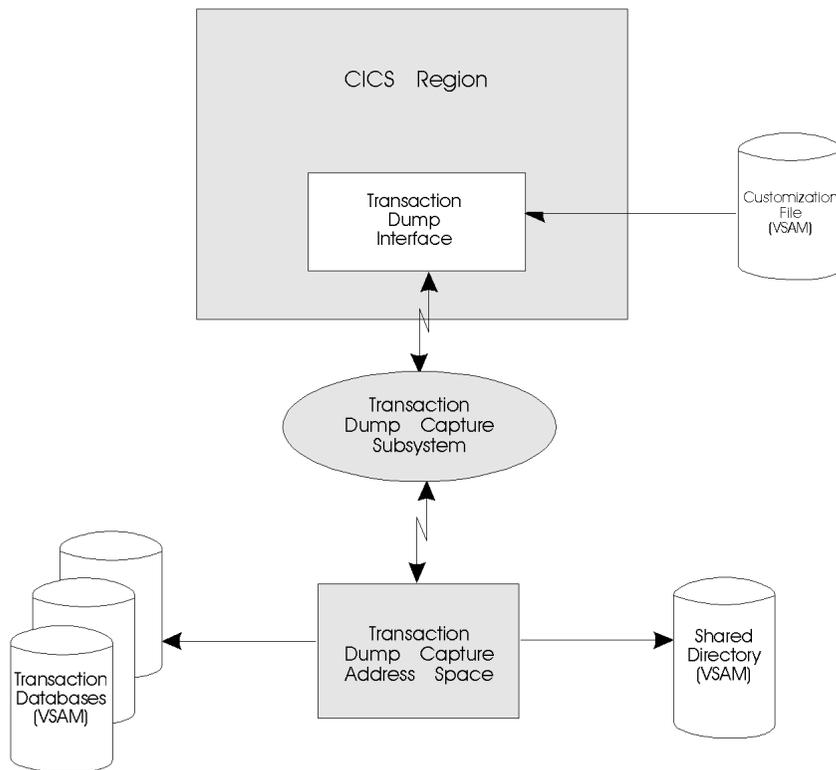
- Transaction dump capture component
- Region dump capture component
- Viewing server component.

CICS Abend-AID/FX also requires Compuware Shared Services (CSS), a set of components used by several Compuware products. Refer to the *Enterprise Common Components Installation and Customization Guide* and the *Compuware Shared Services User/Reference Guide* for a description of the CSS facilities.

### Transaction Dump Capture Component

Figure 1-1 illustrates the transaction dump capture component. For transaction dumps, the dump capture component consists of the *transaction dump interface* and the *transaction dump capture address space (TDCAS)*.

**Figure 1-1.** CICS Abend-AID/FX Transaction Dump Capture Component



### Transaction Dump Interface

The transaction dump interface is the portion of the transaction dump capture component that runs in the CICS address space. It is started and stopped using the AAON transaction, or with entries in the CICS PLT. Very little CICS Abend-AID/FX code actually runs in the CICS address space. Most of the dump capture and processing is done in the transaction dump capture address space (TDCAS).

In CICS Transaction Server for z/OS, CICS Transaction Server for OS/390, and CICS/ESA, the transaction dump interface is a CICS dump domain exit. In CICS/MVS, the interface is a front-end to the CICS dump control program. In all environments, the transaction

dump interface determines whether CICS Abend-AID/FX is to process a transaction abend. If the interface determines that the abend requires processing, it passes control to the TDCAS using the transaction dump capture subsystem to facilitate communication.

**Note:** CICS Abend-AID/FX will not process a transaction abend if *any* of the following situations exist:

- CICS Abend-AID/FX is currently processing an abend for the same task.
- The site has specified that duplicate dumps are suppressed, the abend is a duplicate of a previous abend, and the duplicate dump expiration interval has not expired.
- The abend matches an exception condition for which the site has specified dumps are not taken.
- The CICS region is currently at a short-on-storage condition.
- The CICS region does not currently have enough storage for CICS Abend-AID/FX to process the abend.
- CICS is in the process of shutting down.

## Transaction Dump Capture Address Space (TDCAS)

The transaction dump capture address space (TDCAS) is responsible for transaction dump capture and processing. One TDCAS is required on every MVS image where you use CICS Abend-AID/FX. You can have more than one TDCAS per image, but this is normally not necessary. The TDCAS must be active to capture CICS Abend-AID/FX transaction dumps, so Compuware recommends you start it as a started task automatically after each IPL. If the TDCAS is not available, CICS Abend-AID/FX invokes an IBM transaction dump instead of a CICS Abend-AID/FX transaction dump.

The first TDCAS started on an MVS image starts a subsystem that is used for communication between the CICS region and the TDCAS. All TDCASs on the image use this single subsystem for communication. This subsystem must be unique; it cannot be the same subsystem you use for CICS Abend-AID/FX TSO/ISPF and/or CICS viewing access.

When a dump occurs, the TDCAS allocates a data space into which it writes dump data. You control how much of the captured data is written to the data space, using the DATASPACE TDCAS configuration parameter. Compuware recommends that you write only part of the data — the volatile storage areas — to the data space. The remainder of the captured storage is written directly to the transaction database. This option offers excellent performance while minimizing the amount of auxiliary storage used by the transaction dump capture process.

You can also choose to write all of the dump data to a data space. While this approach has significant performance benefits, it could possibly cause an MVS system problem, such as an auxiliary storage shortage, if multiple transaction dumps are being taken in rapid succession. For this reason, ensure that you have sufficient auxiliary storage available before selecting this option. “Step 1. Specify the Transaction Dump Capture Address Space Configuration Parameters (\$15PARM)” on page 8-1 describes how to calculate the amount of auxiliary storage you require for transaction dump capture.

Finally, you can choose to bypass the data space creation, and write transaction dump data directly to a transaction database. This method is significantly slower than using a data space, and may impact your CICS region if multiple transaction dumps are being taken in rapid succession. Compuware does *not* recommend that you write dumps directly to transaction databases.

The CICS region references information from the CICS Abend-AID/FX customization file to determine which shared directory is associated with the CICS region. Customization information also indicates what transaction databases are candidates to contain dumps

for this CICS region. Using this information, the TDCAS determines to which transaction database it should write dump information.

**Note:** The TDCAS also writes some parameter information to the customization file directly, but it doesn't reference this file during normal processing.

Once the data is written to the data space, TDCAS routines analyze the data. Analysis information and dump storage are written to the appropriate transaction database, and the data space is deleted.

## Region Dump Capture Component

**Note:** CICS Abend-AID/FX does not require any modifications to CICS to capture region dumps. The information in this section describes optional facilities that you can install to capture additional region information or to automatically import region dumps into CICS Abend-AID/FX.

The optional dump capture component for region dumps consists of a *region dump interface*, an *SVC 51 interface*, and an *MVS post-dump exit*. CICS Abend-AID/FX uses these facilities to import dumps automatically, to copy dumps, to gather program change summary information, and to notify users when CICS region dumps occur.

Figure 1-2 illustrates the region dump capture component, which is an optional part of the CICS Abend-AID/FX architecture. Further, the region dump interface, SVC 51 interface, and MVS post-dump exit are independent of one another, so you only have to install the ones you want.

**Note:** If you do not install the SVC 51 interface or MVS post-dump exit, you can still manually import SDUMPs into CICS Abend-AID/FX via the product's online dump dataset import facility. For specifics, refer to the *CICS Abend-AID/FX User's Guide*. For information on the options available for processing region dumps, refer to Chapter 13, "Configuring Automatic Region Dump Processing".

Figure 1-2. CICS Abend-AID/FX Region Dump Capture Component

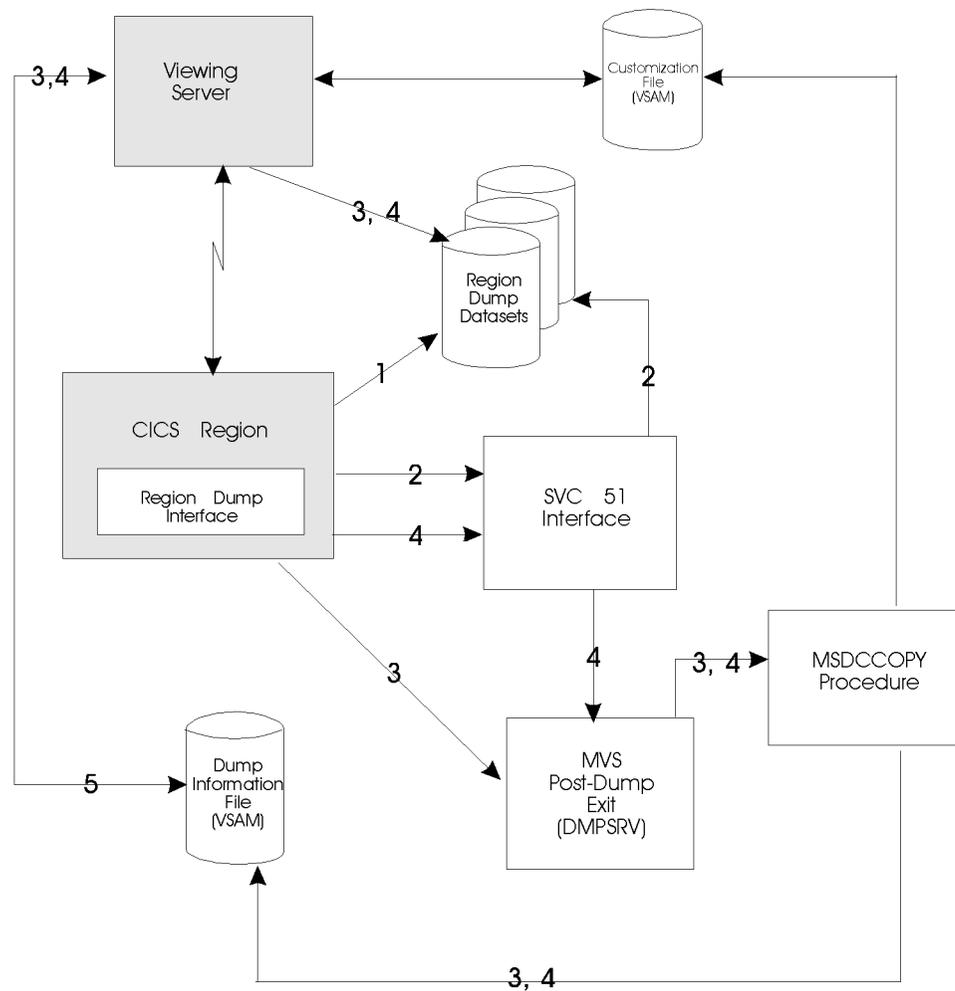


Figure 1-2 illustrates the region dump capture flow. The flow is different depending on whether you're using the CICS Abend-AID/FX SVC 51 interface, the CICS Abend-AID/FX MVS post-dump exit, or neither of these optional facilities. The SVC 51 interface and the MVS post-dump exit are described later in this section. The numbers in this figure have the following explanations:

1. SYS1.DUMPxx or SDUMP to an MVS automatically allocated dataset, without auto import. This method is normal dump capture, without either the SVC 51 interface or the MVS post-dump exit.
2. SDUMP (including optimized SDUMPS) to a CICS Abend-AID/FX user-defined dataset. This method uses the SVC 51 interface.
3. SYS1.DUMPxx or SDUMP to an MVS automatically allocated dataset, with auto copy/auto import. This method uses the MVS post-dump exit.
4. Same as 3 when job name is used as criteria for dump processing on the CICS Region Configuration screen. This method uses the MVS post-dump exit and the SVC 51 interface.
5. File updated by the viewing server whenever a region dump is imported, regardless of how it is being imported, and occurs for all methods, including manual dump import.

## Region Dump Interface

The CICS Abend-AID/FX region dump interface does not participate in dump capture. Its purpose is to capture the data necessary to build the Program Change Summary display. If the region dump interface is not active, this data is not captured, but dump capture and processing continues.

In CICS Transaction Server for z/OS, CICS Transaction Server for OS/390, and CICS/ESA, the region dump interface is a CICS dump domain exit. In CICS/MVS, the interface is a front-end to the CICS formatted dump program DFHFDP. In all environments, this optional interface allows CICS Abend-AID/FX to gather the information necessary to produce a Program Change Summary, which highlights programs that have been recently linked or zapped.

### Notes:

1. The region dump interface is *not* required to capture region dumps. It is required *only* to capture information about recently changed programs in the DFHRPL concatenation. If this list is captured, you can view it through the CICS Abend-AID/FX region dump display screens. Entering the **CHANGES** fast-path command displays the Program Change Summary. Refer to Appendix B, “Supplied Transaction” for information about starting the region dump interface.
2. Capturing the program change summary information adds a small amount of overhead to the dump capture process. Usually this amount is insignificant, but if you see any performance degradation at dump capture time, you can turn off the region dump interface while still leaving the transaction dump interface active.

## SVC 51 Interface

This optional interface allows you to perform the following functions:

- Take an SDUMP to a user-defined dataset, rather than to a SYS1.DUMPxx dataset and, optionally, schedule it for automatic import.
- Automatically copy and/or import a region dump, if you are using job name as a criteria for determining how region dumps are processed.

## MVS Post-Dump Exit

This optional exit performs the following tasks:

- Determine if your site wants to copy a SYS1.DUMPxx dataset to another dataset after a CICS region dump is initially taken to the SYS1.DUMPxx dataset.
- Schedule automatic import of region dumps copied from SYS1.DUMPxx datasets by CICS Abend-AID/FX or — for MVS/ESA version 5, OS/390, or z/OS — for region dumps taken to automatically allocated dump datasets.
- Notify a user when a region dump is taken to a SYS1.DUMPxx, user-defined SDUMP dataset or — for MVS/ESA version 5, OS/390, or z/OS — to an automatically allocated dump dataset.

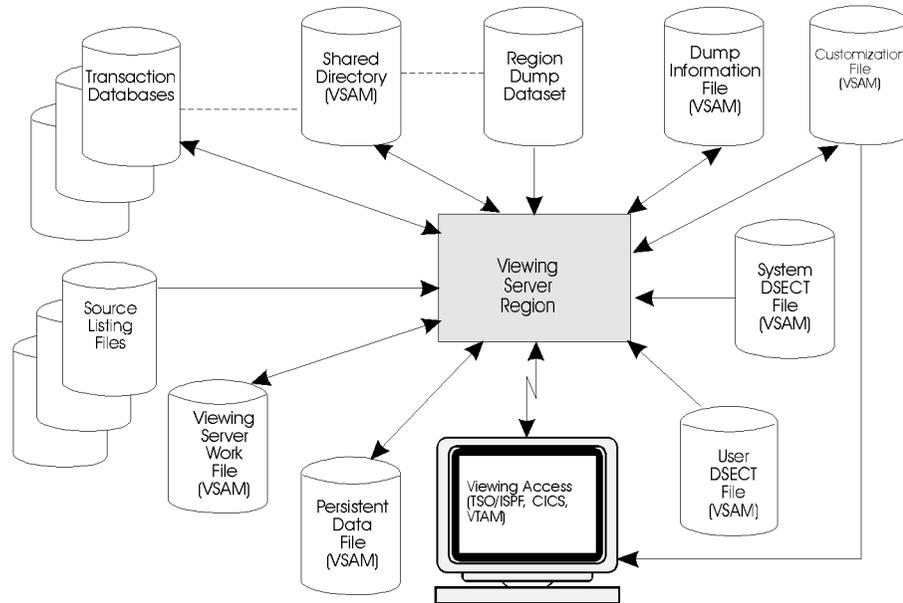
Remember, if your site does not configure the CICS Abend-AID/FX installation to import region dumps automatically, you can still import them manually via the dump dataset import facility. Refer to the *CICS Abend-AID/FX User's Guide* for specifics.

## Viewing Server Component

The viewing server is an MVS address space that allows users to view captured dump information. It also performs imports and processing of CICS region dumps into the product. The viewing server must be active for CICS Abend-AID/FX to display transaction abend information or to import or display region dumps. **The viewing server does not have to be active for CICS Abend-AID/FX to capture transaction or region dumps.**

Figure 1-3 illustrates the CICS Abend-AID/FX viewing server component. You must have at least one viewing server, but you can configure more than one. The number of viewing servers you have depends on your site's configuration requirements. Appendix C, "Site Configuration Examples" describes examples of situations requiring one versus multiple CICS Abend-AID/FX viewing servers.

**Figure 1-3.** CICS Abend-AID/FX Viewing Server Component



The viewing server handles automatic and manual import of region dumps. If you're using automatic region dump import, the viewing server periodically scans for the presence of new dumps to import. This scan results in minimal CPU overhead, and you can tune the scan interval using the `IMPORT_SAMPLE_RATE` viewing server configuration parameter.

You can view CICS Abend-AID/FX dump information from four interfaces: TSO/ISPF, a VTAM application, CICS, or Distributed Viewing Support.

## TSO/ISPF Access

CICS Abend-AID/FX uses cross-memory services to support access from TSO/ISPF using either an ISPF panel or TSO CLIST. ISPF viewing access is the easiest method to configure, but it is only supported when the viewing server and the TSO/ISPF user are running on the same MVS image. If you require cross-system viewing, you should install VTAM viewing access.

## VTAM Access

CICS Abend-AID/FX uses LU 2 communication to support direct VTAM access to view CICS Abend-AID/FX information (that is, entering `LOGON APPLID(xxxxxxx)`).

## CICS Access

CICS Abend-AID/FX provides two methods of CICS viewing access:

- **Local:** If the viewing server and the CICS region are on the same MVS image, CICS Abend-AID/FX uses cross-memory services.

- **Remote:** If the viewing server and the CICS region are on different MVS images, CICS Abend-AID/FX uses LU 6.2 communication to support access from CICS.

## Distributed Viewing Support

New with CICS Abend-AID/FX Release 4.4, Distributed Viewing Support (DVS) enables users to access CICS Abend-AID/FX source listing files that are on different MVS systems that don't share DASD. Users can view dumps captured at remote sites using source information maintained at a central site. This support eliminates the need to distribute the source listing information to remote sites in order to view diagnostics for transaction abends in source format. Users access the files through the CICS Abend-AID/FX online displays as they normally would.

## Chapter 2.

# Required System Environment

CICS Abend-AID/FX supports a wide range of CICS environments and individual site operating standards. An extensive set of options allow you to tailor CICS Abend-AID/FX to your environment. Most of the options relate to internal CICS Abend-AID/FX specifications. Full implementation of CICS Abend-AID/FX requires minor modifications to your local CICS, ISPF, ACF/VTAM, external security, and MVS configurations.

This chapter lists the prerequisite products and the memory and DASD requirements required to support CICS Abend-AID/FX. It also describes the number of each type of CICS Abend-AID/FX file and library you will require at your site, and the type of security access (for example, READ or WRITE) the file or library requires. Finally, this chapter provides considerations for using CICS Abend-AID/FX with Global Resource Serialization (GRS) and PL/I.

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## System Environment

**Note:** Refer to <http://frontline.compuware.com> for updates.

CICS Abend-AID/FX supports the following:

### *CICS*

- CICS Transaction Server for z/OS 2.2
- CICS Transaction Server for OS/390 1.3, 1.2, 1.1
- CICS/ESA 4.1
- CICS/MVS 2.1.2.

### *Operating Systems*

- z/OS
- OS/390
- MVS/ESA 5.2.2.

**Note:** CICS Abend-AID/FX can process dumps captured on any version of z/OS, OS/390, MVS/ESA and MVS/XA. Support for MVS/XA will be discontinued as of March 1, 2003.

### *Programming Language Support*

- Language Environment
  - Language Environment associated with current releases of z/OS and OS/390
  - Language Environment for MVS & VM 1.5, 1.4
  - Language Environment/370 1.3, 1.2.
- COBOL
  - Enterprise COBOL 3.1
  - COBOL for OS/390 & VM 2.1 and 2.2
  - COBOL for MVS & VM 1.2
  - COBOL 370
  - VS COBOL II 1.4 and less current
  - ANS COBOL.
- PL/I

- PL/I for MVS & VM 1.1.1
  - AD/Cycle PL/I 1.1
  - PL/I 2.3
  - PL/I 1.5.1.
- Assembler.

#### Databases

- DB2 7.1, 6.1, 5.1, 4.1, 3.1
- DB2 SQL
- IMS 8.1, 7.1, 6.1, 5.1
- IMS DL/I.

#### Other Software

- CICS Web Interface support for CICS Transaction Server for OS/390 1.3 or more current.
- Interactive Problem Control System (IPCS) Command Facility

**Note:** The IPCS Command Facility is available only for dumps matching the operating system running at your site.

- Hogan System Software
- Geac Enterprise Server (formerly Dun & Bradstreet Software) E Series Applications (MSA DCI).

## Prerequisites

The environment required to run CICS Abend-AID/FX includes the following software versions:

- Compuware Shared Services Release 7.9 or more current, **with all current maintenance applied**
- License Management System Release 1.0 or more current, **with all current maintenance applied.**

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## Memory Requirements

This section provides estimated virtual storage requirements for the following:

- CICS Abend-AID/FX running in the CICS address space
- Transaction Dump Capture Address Space (TDCAS)
- Viewing server
- Optional region dump capture components
- TSO/ISPF viewing access.

## Virtual Memory Requirements in the CICS Address Space

Portions of both the transaction dump capture component and the region dump capture component run in the CICS address space. The CICS address space virtual requirements for these components vary depending on what version of CICS you're running.

## CICS Transaction Server and CICS/ESA

The virtual storage requirements in the CICS address space for CICS Transaction Server for z/OS, CICS Transaction Server for OS/390, and CICS/ESA are shown in Table 2-1.

**Table 2-1.** CICS Address Space Virtual Memory for CICS Transaction Server and CICS/ESA

Description	Estimate
CICS transaction dump interface OSCOR CICS DSA USER DSA USER EDSA Storage > 16MB	80KB 24KB 24KB 280KB <sup>1</sup> 1520KB
CICS transaction abend processing <sup>2</sup> Storage < 16MB Storage > 16MB	400KB 500KB
L3270 screen capture, per abend Storage > 16MB	6KB
Region dump interface <sup>3</sup> program storage	2KB
Region dump interface <sup>3</sup> working storage, change summary data	350KB <sup>1</sup>
<b>Notes:</b>	
1. This storage is above the 16MB line.	
2. This storage is calculated based on the value set for the ABLIMIT transaction dump global option. The estimates listed here are per ABLIMIT value. Multiply the estimates by the value you specify for ABLIMIT (the default value is 10). Note that the total amount of storage is obtained when the CICS Abend-AID/FX transaction dump interface initializes in the CICS region, and is freed when CICS Abend-AID/FX terminates in the CICS region.	
3. The component is optional.	

## CICS/MVS

The virtual storage requirements in the CICS address space for CICS/MVS are shown in Table 2-2.

**Table 2-2.** CICS Address Space Virtual Memory for CICS/MVS

Description	Estimate
CICS transaction dump interface OSCOR CICS DSA Storage > 16MB	80KB 24KB 1520KB
CICS transaction abend processing <sup>3</sup> Storage < 16MB Storage > 16MB	400KB 500KB
L3270 screen capture, per abend Storage > 16MB	6KB
Region dump interface <sup>3</sup> program storage	2KB
<b>Notes:</b>	
1. This storage is above the 16MB line.	
2. This storage is calculated based on the value set for the ABLIMIT transaction dump global option. The estimates listed here are per ABLIMIT value. Multiply the estimates by the value you specify for ABLIMIT (the default value is 10). Note that the total amount of storage is obtained when the CICS Abend-AID/FX transaction dump interface initializes in the CICS region, and is freed when CICS Abend-AID/FX terminates in the CICS region.	
3. The component is optional.	

**Table 2-2.** CICS Address Space Virtual Memory for CICS/MVS

Description	Estimate
Region dump interface <sup>3</sup> work area, change summary data	400KB <sup>1</sup>
<b>Notes:</b>	
<ol style="list-style-type: none"> <li>1. This storage is above the 16MB line.</li> <li>2. This storage is calculated based on the value set for the ABLIMIT transaction dump global option. The estimates listed here are per ABLIMIT value. Multiply the estimates by the value you specify for ABLIMIT (the default value is 10). Note that the total amount of storage is obtained when the CICS Abend-AID/FX transaction dump interface initializes in the CICS region, and is freed when CICS Abend-AID/FX terminates in the CICS region.</li> <li>3. The component is optional.</li> </ol>	

## Virtual Memory Requirements for the TDCAS

The transaction dump capture address space (TDCAS) controls transaction dump capture and processing. The virtual storage requirements for the TDCAS are shown in Table 2-3.

**Table 2-3.** Transaction Dump Capture Address Space Virtual Memory

Description	Estimate
TDCAS executable code	2MB
CICS Transaction Server for z/OS support	1MB per CICS TS release installed
CICS Transaction Server for OS/390 support	1MB per CICS TS release installed
CICS/ESA support	1MB per CICS/ESA release installed
Each open dump	40KB
Each transaction processor subtask <sup>1</sup>	256KB
CSA	4KB – 12KB
ECSA	208KB – 400KB <sup>2</sup>
<b>Notes:</b>	
<ol style="list-style-type: none"> <li>1. The maximum number of transaction processor subtasks is specified by the TP_SUBTASKS TDCAS configuration parameter.</li> <li>2. The maximum number of concurrent users directly affects this usage.</li> </ol>	

## Virtual Memory Requirements for the Viewing Server

The viewing server is a VTAM application that runs in its own address space. It controls CICS Abend-AID/FX access to the files and user access to analysis and dump information. The viewing server virtual memory requirements are shown in Table 2-4.

**Table 2-4.** Viewing Server Component Virtual Memory

Description	Estimate
Viewing server executable code	2MB
CICS Transaction Server for z/OS support	1MB per CICS TS release installed
CICS Transaction Server for OS/390 support	1MB per CICS TS release installed
CICS/ESA support	1MB per CICS/ESA release installed
<b>Notes:</b>	
<ol style="list-style-type: none"> <li>1. The maximum number of transaction processor subtasks is specified by the TP_SUBTASKS viewing server configuration parameter.</li> <li>2. The maximum number of concurrent users directly affects this usage.</li> </ol>	

**Table 2-4.** Viewing Server Component Virtual Memory

Description	Estimate
Each open dump	40KB
Each transaction processor subtask <sup>1</sup>	256KB
Per signed-on user	8KB
CSA	4KB – 12KB
ECSA	208KB – 400KB <sup>2</sup>
<b>Notes:</b>	
1. The maximum number of transaction processor subtasks is specified by the TP_SUBTASKS viewing server configuration parameter.	
2. The maximum number of concurrent users directly affects this usage.	

## Virtual Memory Requirements for Optional Region Dump Capture Components

The MVS post-dump exit and SVC 51 interface are optional portions of the region dump capture component. Table 2-5 provides the virtual memory requirements for these components. The requirements are the same, regardless of what CICS version you're using.

**Table 2-5.** Optional Region Dump Capture Components Virtual Memory

Description	Estimate
DUMPSRV address space (MVS post-dump exit)	4KB
SVC 51 interface	65KB

## TSO/ISPF Viewing Access Method Virtual Memory

Users can access CICS Abend-AID/FX information through TSO/ISPF. The virtual memory requirements for each user signed onto CICS Abend-AID/FX through the TSO/ISPF viewing access method are shown in Table 2-6.

**Table 2-6.** TSO/ISPF Viewing Access Virtual Memory

Description	Estimate
CICS Abend-AID/FX interface	48KB
Storage area	240KB
<b>Note:</b> The storage area requirement is an estimate for average use. The actual value varies, based on the level of product use. Also, this requirement is doubled for ISPF split-screen use if CICS Abend-AID/FX is being used on both screens.	

This is a total of 288KB, which is in addition to the user TSO address space allocation.

---

## DASD Requirements

This section describes the DASD requirements to install and support CICS Abend-AID/FX and the attributes of the CICS Abend-AID/FX libraries and files. The DASD requirements are organized as follows:

- “DASD Requirements for the SMP/E Datasets” describes the SMP/E datasets required by CICS Abend-AID/FX.

- “DASD Requirements for the Target and Distribution Libraries” on page 2-7 describes the CICS Abend-AID/FX target and distribution libraries.
- “DASD Requirements for the CICS Abend-AID/FX Files” on page 2-8 describes the product files used by CICS Abend-AID/FX during processing.
- Region dump dataset attributes are described in “Region Dump Datasets” on page 2-10.

**Note:** All space calculations are based on 3390 devices.

## DASD Requirements for the SMP/E Datasets

Table 2-7 describes the DASD requirements and attributes of the following SMP/E datasets used by CICS Abend-AID/FX:

- Global zone CSI
- Global zone SMPLOG
- PTF temporary store
- Distribution zone CSI
- Distribution zone SMPLOG
- Target zone CSI
- Target zone SMPLOG
- Save control dataset
- Source temporary store
- Macro temporary store.

**Table 2-7.** DASD Requirements for SMP/E Datasets

	DSORG	LRECL	BLKSIZE	RECFM	CI Size	Default Primary Space	Default Secondary Space	Directory Blocks	Notes
Global zone CSI	VSAM KSDS	24 143	n/a	n/a	4096	4 cyls	2 cyls	n/a	1, 2
Global zone SMPLOG	PS	V	6356	VB	n/a	500 blks	250 blks	n/a	1, 2
SMPPTS	PO	80	6160	FB	n/a	685 blks	685 blks	80	1, 2, 3
Distribution zone CSI	VSAM KSDS	24 143	n/a	n/a	4096	6 cyls	2 cyls	n/a	1
Distribution zone SMPLOG	PS	V	6356	VB	n/a	500 blks	250 blks	n/a	1
Target zone CSI	VSAM KSDS	24 143	n/a	n/a	4096	6 cyls	2 cyls	n/a	1
Target zone SMPLOG	PS	V	6356	VB	n/a	500 blks	250 blks	n/a	1
SMPSCDS	PO	80	6160	FB	n/a	130 blks	65 blks	80	1, 3
SMPSTS	PO	80	6160	FB	n/a	685 blks	685 blks	80	1, 3
SMPMTS	PO	See note 4	See note 4	See note 4	n/a	250 blks	65 blks	80	1, 4

**Notes:**

1. n/a stands for *not applicable*.

2. Compuware strongly recommends that you install Compuware Shared Services (CSS) first and that you share these datasets with CICS Abend-AID/FX. The space requirements here reflect CICS Abend-AID/FX sharing the datasets with CSS. If you share them, they should have already been allocated when CSS was installed. Otherwise, they will be allocated as part of the CICS Abend-AID/FX installation procedure.
3. The blocksize can be increased, but must be a multiple of 80.
4. The record length, blocksize, and record format are based on the DCB of your site's SYS1.MACLIB dataset.

In addition to the permanent SMP/E datasets described above, SMP/E allocates relfile datasets when you receive the CICS Abend-AID/FX software. The number of relfiles allocated varies based on the number of CICS releases for which you are installing CICS Abend-AID/FX support. The minimum number of relfiles allocated is 10, and the maximum is 54, and the maximum amount of DASD that must be available to allocate these files is approximately 1900 tracks. All relfiles are automatically deleted by SMP/E when you SMP/E accept the CICS Abend-AID/FX software.

## DASD Requirements for the Target and Distribution Libraries

Table 2-8 describes the DASD requirements and attributes of the following CICS Abend-AID/FX target and distribution libraries:

- CICS Abend-AID/FX authorized load library
- CICS Abend-AID/FX nonauthorized load library
- CICSLIB load library
- DSECT images input library
- CICS Abend-AID/FX sample library
- CICS Abend-AID/FX REXX API library
- CICS Abend-AID/FX installation sample library
- Compuware base services/HCI authorized load library
- Compuware base services/HCI nonauthorized load library
- Compuware base services/HCI control library.

**Note:** “File and Library Access” on page 2-10 describes security considerations for these libraries.

**Table 2-8.** DASD Requirements for Target and Distribution Libraries

	DSORG	LVRECL	BLKSIZE	RECFM	CI Size	Default Primary Space	Default Secondary Space	Directory Blocks	Notes
Target CICS Abend-AID/FX authorized load library (SKFXAUTH)	PO	n/a	6144	U	n/a	8 cyls	1 cyls	n/a	1, 2, 4
Target CICS Abend-AID/FX nonauthorized load library (SKFXLOAD)	PO	n/a	6144	U	n/a	80 cyls	5 cyls	80	1, 2, 4
Target CICSLIB load library (SKFXCLIB)	PO	n/a	6144	U	n/a	4 cyls	1 cyls	80	1, 2, 4
Distribution CICS Abend-AID/FX load library (AKFXLOAD)	PO	n/a	6144	U	n/a	95 cyls	4 cyls	80	1, 2

**Table 2-8.** DASD Requirements for Target and Distribution Libraries

	DSORG	LRECL	BLKSIZE	RECFM	CI Size	Default Primary Space	Default Secondary Space	Directory Blocks	Notes
Distribution DSECT images input library (AKFXDSCT)	PO	80	3200	FB	n/a	25 cyls	6 cyls	n/a	1, 3
Target CICS Abend-AID/FX sample library (SKFXSAMP)	PO	80	3200	FB	n/a	58 trks	2 trks	n/a	1, 3
Distribution CICS Abend-AID/FX sample library (AKFXSAMP)	PO	80	3200	FB	n/a	58 trks	2 trks	80	1, 3
Target CICS Abend-AID/FX REXX API library (SKFXREXX)	PO	80	3200	FB	n/a	10 trks	1 trks	80	1, 3
Installation CICS Abend-AID/FX sample library (TKFXSAMP)	PO	80	3200	FB	n/a	4 cyls	1 cyls	80	1, 3
Target Compuware base services/HCI authorized load library (SKMPAUTH)	PO	n/a	6144	U	n/a	5 cyls	1 cyls	80	1, 2, 5
Target Compuware base services/HCI nonauthorized load library (SKMPLOAD)	PO	n/a	6144	U	n/a	6 cyls	1 cyls	n/a	1, 2, 5
Distribution Compuware base services/HCI load library (AKMPLOAD)	PO	n/a	6144	U	n/a	9 cyls	1 cyls	n/a	1, 2
Target Compuware base services/HCI control library (SKMPCNTL)	PO	80	3200	FB	n/a	10 trks	1 trks	80	1, 3
Distribution Compuware base services/HCI control library (AKMPCNTL)	PO	80	3200	FB	n/a	10 trks	1 trks	80	1, 3

**Notes:**

1. n/a stands for *not applicable*.
2. 6144 is the default block size and the required minimum. You can define the library with a larger block size.
3. 3200 is the default block size. Valid block sizes are a multiple of 80, maximum 3200.
4. The distribution library for this target library is AKFXLOAD.
5. The distribution library for this target library is AKMPLOAD.

## DASD Requirements for the CICS Abend-AID/FX Files

Table 2-9 on page 2-9 describes the DASD requirements and attributes of the following CICS Abend-AID/FX files.:

- Customization file
- System DSECT file
- User DSECT file

- Shared directory
- Dump information file
- Persistent data file
- Viewing server work file
- IPCS directory
- Transaction databases
- Source listing files.

**Note:** “File and Library Access” on page 2-10 describes how many of each of these files you require at your site, and security considerations for the files, which are created outside SMP/E.

**Table 2-9.** DASD Requirements for CICS Abend-AID/FX Files

	DSORG	LRECL	BLKSIZE	RECFM	CI Size	Default Primary Space	Default Secondary Space	Directory Blocks	Notes
Customization file	VSAM KSDS	2000 - 16374	n/a	n/a	16384	5 cyls	5 cyls	n/a	1
System DSECT file	VSAM RRDS	4089	n/a	n/a	4096	60 cyls	0 cyls	n/a	1, 2
User DSECT file	VSAM RRDS	4089	n/a	n/a	4096	1 cyls	0 cyls	n/a	1, 3
Shared directory	VSAM RRDS	24569	n/a	n/a	24576	30 cyls	0 cyls	n/a	1, 3
Dump information file	VSAM KSDS	200 - 16374	n/a	n/a	16384	5 cyls	5 cyls	n/a	1, 4, 5
Persistent data file	VSAM RRDS	6137	n/a	n/a	18432	5 cyls	5 cyls	n/a	1, 6
Viewing server work file	VSAM RRDS	6137	n/a	n/a	18432	5 cyls	5 cyls	n/a	1, 7
IPCS directory (optional)	VSAM KSDS	4089 - 4089	n/a	n/a	20480	5 cyls	5 cyls	n/a	1, 4
Transaction databases	VSAM RRDS	24569	n/a	n/a	24576	30 cyls	0 cyls	n/a	1, 3, 8
Source listing files	VSAM RRDS	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1, 3, 8

**Notes:**

1. n/a stands for *not applicable*.
2. Approximately 10 cylinders are required for each installed release of CICS; 60 cylinders support *all* CICS releases.
3. Refer to the chapter regarding DDIO files in the *Compuware Shared Services User/Reference Guide* for information on calculating the size of this file for your environment.
4. This file requires an average of 1 cylinder per imported region dump.
5. Estimate 1 cylinder per 20 transaction dumps for which you view CICS trace table information.

6. Estimate 1 track for each CICS Abend-AID/FX user at your site. Minimum size is 5 cylinders.
7. Estimate 1 cylinder for each concurrent user. For example, if your site has 20 CICS Abend-AID/FX users, but you expect a maximum of 10 to be logged on concurrently, allocate 10 cylinders.
8. This file can also be a sequential file, although Compuware recommends using a VSAM file. If you want to use a sequential file, refer to the chapter regarding DDIO files in the *Compuware Shared Services User/Reference Guide*.

## Region Dump Datasets

The region dump datasets have the attributes shown in Table 2-10.

**Table 2-10.** Required Region Dump Dataset Attributes

z/OS, OS/390, and MVS/ESA Systems		MVS/XA Systems	
RECFM=F	RECFM=FBS	RECFM=F	RECFM=FBS
LRECL=4160	LRECL=4160	LRECL=4104	LRECL=4104
BLKSIZE=4160	BLKSIZE=a multiple of 4160	BLKSIZE=4104	BLKSIZE=a multiple of 4104
<b>Note:</b> IPCS does not support MVS/XA datasets that have an FBS record format. Therefore, you cannot use the IPCS Command Facility (if installed) on dump datasets with an FBS record format.			

The size of the dump dataset varies, based on the dump options and the size of the region dumped.

---

## File and Library Access

Table 2-11 lists the type of access the viewing server requires for each CICS Abend-AID/FX file and library, and the number of each file or library required per CICS Abend-AID/FX *complex*. It also describes the type of security access the viewing server requires for the file or library.

**Note:** A CICS Abend-AID/FX complex is defined as all the viewing servers, TDCASs, and datasets using a single customization file, regardless of how many MVS images are involved.

**Table 2-11.** Access to CICS Abend-AID/FX Files and Libraries

Name	Access	Number Per Local Complex
Customization file	Read/write	One
System DSECT file <sup>1</sup>	Read	One
User DSECT file	Read	One per viewing server <sup>2</sup>
CICS Abend-AID/FX installation sample library (TKFXSAMP)	Read	One
CICS Abend-AID/FX target sample library (SKFXSAMP) <sup>1</sup>	Read	One
Compuware base services/HCI target control library (SKMPCNTL) <sup>1</sup>	Read	One
<b>Notes:</b>		
1. There is also a distribution version of this library		
2. Multiple viewing servers can use a single user DSECT file, or each viewing server can have a unique user DSECT file.		

**Table 2-11.** Access to CICS Abend-AID/FX Files and Libraries

Name	Access	Number Per Local Complex
Region dump datasets	Read/alter	One to x
Source listing files	Read	One to x
CICS Abend-AID/FX authorized load library (SKFXAUTH)	Read	One
CICS Abend-AID/FX nonauthorized load library (SKFXLOAD) <sup>1</sup>	Read	One
Compuware base services/HCI authorized load library (SKMPAUTH)	Read	One
Compuware base services/HCI nonauthorized load library (SKMPLOAD) <sup>1</sup>	Read	One
CICS Abend-AID/FX CICSLIB load library (SKFXCLIB)	Read	One
CICS Abend-AID/FX REXX API target library (SKFXREXX) (optional)	Read	One
Compuware Shared Services load library (SLCXLOAD) <sup>1</sup>	Read	One
Shared directory	Read/write	One per viewing server
Transaction databases	Read/write	One to x per viewing server
Dump information file	Read/write	One per viewing server
Persistent data file	Read/write	One per viewing server
Viewing server work file	Read/write	One per viewing server
IPCS directory (optional)	Read/write	One per viewing server
<b>Notes:</b>		
1. There is also a distribution version of this library		
2. Multiple viewing servers can use a single user DSECT file, or each viewing server can have a unique user DSECT file.		

---

## GRS Considerations

You can customize CICS Abend-AID/FX so that a given viewing server and its associated files are accessible by more than one processor. Compuware strongly recommends that you do not do this unless you have Global Resource Serialization (GRS) or an equivalent product installed. This is to ensure the integrity of the following files:

- Customization file
- Shared directory
- Dump information file
- Transaction databases.

CICS Abend-AID/FX issues an enqueue with SCOPE=SYSTEMS when accessing these files, with the following qnames:

- ABENDAID
- ABENDDAM
- ABENDSMF
- CWCATALG
- PDVSFILE.

---

## PL/I Considerations

For CICS Abend-AID/FX to intercept PL/I release 1.5.1 abends, you must include IBMBEER1 in the link-edit step of the DFHSAP load module. Refer to the IBM manual *OS PL/I Optimizing Compiler: Installation* and IBM APAR PLO2883 for information about the IBMBEER1 module.

For CICS Abend-AID/FX to intercept PL/I version 2 abends, you must include IBMFXITA in the link-edit step of the DFHSAP load module for CICS/MVS, and the IBMESAP load module for CICS/ESA, CICS Transaction Server for OS/390, and CICS Transaction Server for z/OS. For information about the IBMFXITA module, refer to the IBM manual *OS PL/I Version 2 Installation and Customization Under MVS* and IBM APAR PN32350.

---

## Part 2.

# Installation Procedures

Part 2 contains the following chapters:

### **Chapter 3, Preinstallation Considerations**

Chapter 3 includes an overview of the other people at your site that you should involve in the CICS Abend-AID/FX installation. It provides considerations for migrating to this release from an earlier release of CICS Abend-AID/FX.

### **Chapter 4, Installing CICS Abend-AID/FX**

Chapter 4 describes the steps required to load the CICS Abend-AID/FX files to DASD.

### **Chapter 5, Installing DB2 Support**

Chapter 5 describes how to install the CICS Abend-AID/FX for DB2 extra-cost option.

### **Chapter 6, Installing Viewing Access**

Chapter 6 describes the steps for installing TSO/ISPF, CICS, VTAM, or Distributed Viewing Support viewing access.

### **Chapter 7, Viewing Server Configuration**

Chapter 7 describes the steps for creating CICS Abend-AID/FX viewing servers.

### **Chapter 8, Transaction Dump Capture Address Space Configuration**

Chapter 8 describes the steps for creating CICS Abend-AID/FX transaction dump capture address spaces.

### **Chapter 9, CICS Updates**

Chapter 9 describes the updates to CICS required to make CICS Abend-AID/FX functional.

### **Chapter 10, Installing and Using the Demonstration Transactions**

Chapter 10 describes the steps for installing and using the CICS Abend-AID/FX demonstration transactions.



## Chapter 3.

# Preinstallation Considerations

**Note:** Before installing this release of CICS Abend-AID/FX, check the date on the tape label. If the tape is more than 45 days old, call CICS Abend-AID/FX Technical Support for any required maintenance, or download the current maintenance files from Compuware's Internet site, <http://frontline.compuware.com>. If the tape is more than one year old, it is no longer valid and you must call CICS Abend-AID/FX Technical Support for a new tape, or request it from the Internet.

This chapter helps you identify other people at your site that you may need to involve in the installation of CICS Abend-AID/FX. It also describes considerations for migrating to this release from an earlier release of CICS Abend-AID/FX.

---

## Prerequisite Components

CICS Abend-AID/FX Release 4.4 requires Compuware Shared Service (CSS) Release 7.9 or more current and License Management System (LMS) Release 1.0 or more current. CSS is a set of components shared among several Compuware products. LMS is Compuware's licensing product that replaces the former product security. CSS and LMS are shipped on the separate Enterprise Common Components (ECC) distribution tape, and are installed and maintained using SMP/E. Compuware strongly recommends that you install CSS and LMS first, and then install CICS Abend-AID/FX into the same global zone CSI dataset.

**Note:** You must have the most current maintenance applied to CSS 7.9 and LMS 1.0 to use CICS Abend-AID/FX Release 4.4.

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## License Management System

Compuware provides the License Management System (LMS) to help manage access to Compuware's products at your site. The LMS includes several components that together allow you to establish, maintain, diagnose, and upgrade access to the Compuware products licensed by your enterprise.

You install LMS from the Enterprise Common Components (ECC) installation tape provided in the CICS Abend-AID/FX shipping package. Separately, via e-mail you receive a **License Certificate** for CICS Abend-AID/FX.

### IMPORTANT

CICS Abend-AID/FX operation requires these steps:

1. Ensure that the Compuware License Management System has been installed from the ECC tape. Refer to the Compuware *Enterprise Common Components Installation and Customization Guide* for installation procedures. This step is only necessary for a first-time install of LMS or when upgrading the License Management System itself.
2. Import the **License Certificate** into your License File.
3. Establish and update the **Runtime License Management System** by running the program LMSINIT.

Follow the *License Certificate Import Checklist* of the Compuware *License Management User/Reference Guide* for detailed instructions.

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## Other People You May Need to Involve

This section indicates the portions of the CICS Abend-AID/FX installation that you may need to involve your colleagues in. It also refers to the place in this manual where the requirement is described in detail.

### MVS System Programmer

You may need to involve your MVS system programmer to perform the tasks listed below.

#### Authorizing the CICS Abend-AID/FX and Compuware Base Services/HCI Authorized Libraries (SKFXAUTH and SKMPAUTH)

This step is always required, and is described in “Step 13. APF-Authorize the Authorized Load Libraries” on page 4-12.

#### Specifying a Unique MVS Subsystem Name

This step is required only if you are installing TSO/ISPF or CICS viewing access. It is described in “Parameter Required to Support TSO/ISPF or CICS Viewing Access” on page 7-8.

CICS Abend-AID/FX uses the subsystem for communication. The subsystem name *must* be unique on the MVS image, or CICS Abend-AID/FX does not function.

**Note:** Because the subsystem is dynamically started and stopped by CICS Abend-AID/FX, do *not* add an entry for the subsystem to SYS1.PARMLIB member IEFSSNxx.

#### Adding the CICS Abend-AID/FX Option to an ISPF Menu

This step is required only if you’re installing ISPF viewing access. It is described in “Using an ISPF Panel” on page 6-3.

#### Installing the MVS Post-Dump Exit

The MVS post-dump exit is optional, but you need to install it to use certain region dump functions, including automatic import and notifying users that dumps have occurred. It is described in detail in “MVS Post-Dump Exit” on page 13-4.

#### Installing the SVC 51 Interface

The SVC 51 interface is optional, but you need to install it to use certain region dump functions, including taking SDUMPs to a user-defined dataset and notifying users that dumps have occurred. It is described in detail in “SVC 51 Interface” on page 13-7.

### CICS System Programmer

You may need to involve your CICS system programmer to perform the task listed below.

#### Activating the CICS Web Error Program, DFHWBEP

Beginning with CICS Abend-AID/FX Release 4.4, if your site plans to use the CICS Web Interface function, you’ll need to complete “Step 17. Activate the CICS Web Error

Program, DFHWBEP” on page 4-13. DFHWBEP is an IBM user-replaceable module driven by CICS Web support. This module ensures that a CICS transaction dump is available with the correct information to enable speedy problem resolution.

## VTAM System Programmer

You may need to involve your VTAM system programmer to perform the tasks listed below.

### Add an LU 2 APPLID to SYS1.VTAMLST

An LU 2 APPLID may be required for the transaction dump capture server, as described in “Optional Parameters” on page 8-4. A second LU 2 APPLID is also required if you’re using either VTAM or CICS remote viewing access. This is described in detail in “Configuring VTAM Access” on page 6-2 and “Installing CICS Remote Viewing Access” on page 6-6.

### Add an LU 6.2 APPLID to SYS1.VTAMLST

An LU 6.2 APPLID is required if you’re using CICS remote viewing access. This is described in detail in “Installing CICS Remote Viewing Access” on page 6-6.

### Assemble and Link Edit a Logon Mode Table into SYS1.VTAMLIB

CICS Abend-AID/FX requires a logon mode table entry if you’re using CICS remote viewing access. This is described in detail in “Installing CICS Remote Viewing Access” on page 6-6.

## Database Administrator

If you’re licensed for the CICS Abend-AID/FX for DB2 option, you may need to involve your DBA when you perform the DB2 binds.

CICS Abend-AID/FX’s use of the system catalog tables and binding the CICS Abend-AID/FX DBRMs is described in “Step 2. Perform DB2 Binds (\$09nxxxx)” on page 5-1.

## Security Administrator

If you have an external security package installed at your site, you may want to write rules to control access to CICS Abend-AID/FX datasets and user functions. Chapter 11, “External Security Considerations” contains information on how CICS Abend-AID/FX interfaces to external security packages.

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## Migration Considerations

This section describes considerations for migrating to CICS Abend-AID/FX Release 4.4 from Release 4.1 or more current. It also describes considerations for running these releases of CICS Abend-AID/FX concurrently with Release 4.4. Review the considerations that apply to your installation.

### Notes:

1. If you’re migrating to CICS Abend-AID/FX Release 4.4 from a release less current than Release 4.1, please contact Compuware Technical Support regarding migration considerations.
2. If you’re converting an existing customization file, please review carefully your settings for the transaction dump capture global options. Several viewing server/TDCAS parameters and global options defaults have been tuned in CICS Abend-AID/FX Release 4.4 for better performance. These include:

- TP\_SUBTASKS=32 for the TDCAS
- MESSAGES=NO for the TDCAS and viewing servers
- VSAM cluster CISIZE for transaction databases and the shared directory is 18,432
- GROUPCOUNT for transaction databases is 3
- ABLIMIT global option default is 5
- ABTIME global option default is 120.

The global options defaults shipped with the product are overridden during the conversion of the customization file. To restore the overridden defaults, refer to “Modifying Transaction Dump Global Options” on page 18-24.

Consult <http://frontline.compuware.com> for updates.

3. Beginning with Release 4.1, the CICS Abend-AID/FX server is now referred to as the CICS Abend-AID/FX viewing server to differentiate it from the transaction dump capture address space (TDCAS).
4. Release 4.2 was the last release to support the Fast Dump facility. This proprietary method of taking CICS region dumps is obsoleted by the IBM system dump facilities available in MVS/ESA 4.3 and more current. Compuware recommends that you take region dumps to MVS automatically allocated datasets. Refer to Chapter 13, “Configuring Automatic Region Dump Processing” for information about configuring CICS Abend-AID/FX to process dumps taken to MVS automatically allocated datasets.

## Migrating from Release 4.1 or More Current

This section describes considerations for migrating to CICS Abend-AID/FX Release 4.4 from Release 4.1 or more current.

The following topics are covered in the section:

- New, online installation dialog
- SMP/E considerations
- Migrating files
- Updating JCL with new library and file names
- Migrating CICS table entries
- Migrating the viewing server
- Migrating the new transaction dump capture address space
- Migrating the MVS post-dump exit
- Migrating the SVC 51 interface
- User profile addition
- Distributed Viewing Support
- Optimized region dumps
- Dynamic duplicate dump suppression
- CICS Web Interface support.

## New, Online Installation Dialog

Release 4.4 introduces the new, online installation dialog where you enter information for your site. These panels generate site-specific JCL for the CICS Abend-AID/FX installation jobs that were created by the JCL generator job \$\$01JCLG in previous releases. The installation process requires TSO/ISPF. Refer to Chapter 4, “Installing CICS Abend-AID/FX”, for the updated installation procedure.

## SMP/E Considerations

Compuware recommends the following:

- Install Compuware Shared Services (CSS) Release 7.9 or more current and License Management System (LMS) Release 1.0 or more current before you begin the CICS Abend-AID/FX installation. CSS and LMS are shipped on the separate Enterprise

Common Components (ECC) distribution tape that is included in the box when you order CICS Abend-AID/FX.

**Note:** CSS Release 7.9 or more current and LMS Release 1.0 or more current **with all current maintenance applied** are required for CICS Abend-AID/FX Release 4.4.

Refer to “License Management System” on page 3-1 for more information.

- Install CICS Abend-AID/FX Release 4.4 into the same SMP/E global CSI dataset into which you installed CSS and LMS. Note that, if a previous CICS Abend-AID/FX release is also installed in this global CSI, all references to the previous release will be deleted from the global zone when Release 4.4 is SMP/E accepted. You will still be able to run the previous release, but you won't be able to apply maintenance to it.
- Install CICS Abend-AID/FX Release 4.4 into a new set of SMP/E target zone, distribution zone, target libraries, and distribution libraries than you used for your previous CICS Abend-AID/FX release. Doing so allows you to run Release 4.4 concurrently with your previous release(s). Compuware does not recommend overlaying your current Release 4.3, 4.2, or 4.1 configuration with a Release 4.4 configuration.

If you follow this recommendation, you'll eventually need to delete your Release 4.3, 4.2, and 4.1 target and distribution zones as well as the target and distribution libraries for these releases. **Once you're certain that you're finished with Release 4.3, 4.2, and 4.1**, use the following statements to delete the TZONE and DZONE:

```
//SMPCTL DD *
  SET   BDY(previous release target zone name)
  UCLIN.
    ZDEL TZONE(previous release target zone name)
  ENDUCLIN.
  SET   BDY(previous release distribution zone name)
  UCLIN.
    ZDEL DZONE(previous release distribution zone name)
  ENDUCLIN.
/*
```

## Migrating Files

The Release 4.3, 4.2, and 4.1 files are fully compatible with Release 4.4 and do not have to be redefined or upgraded.

## Updating JCL with New Library and File Names

Review the following items to ensure that they reflect the names of the new CICS Abend-AID/FX libraries you allocate, as well as any changed file names:

- The viewing server JCL.
- The CICS JCL. Ensure that the FDBDCUST DD statement indicates the correct customization file name. Alternatively, if you use an FCT entry for the customization file, make sure it reflects the correct customization file name.
- The ISPF panel or TSO CLIST used to access CICS Abend-AID/FX.
- The JCL used to allocate new transaction databases or source listing files.
- The MSDCCOPY procedure, if you're using the MVS post-dump exit or SVC 51 interface.
- The MSDMINST utility, if you're using the SVC 51 interface.
- The action definition job cards, if you're using the CICS Abend-AID/FX action definition (formerly known as the *notification*) facility.

## Migrating CICS Table Entries

If you use an FCT entry for the customization file, make sure it reflects the correct customization file name.

## Migrating the Viewing Server

Update your Release 4.3, 4.2, or 4.1 viewing server JCL to specify your new Release 4.4 library and file names, and make any additional changes described below.

As an alternative, you can modify the \$13SRVR member that is generated into the Release 4.4 installation sample library (TKFXSAMP) when you complete the Release 4.4 installation dialog. The \$13SRVR member in the Release 4.4 installation sample library already reflects the changes described below. Update the new member to reflect the correct names of your viewing server-owned datasets (the dump information file, and so forth), and the appropriate viewing server configuration parameters for your environment.

### *Enabling IPCS Support for New CICS Releases*

If you're installing support for a new release of CICS and want to use the CICS Abend-AID/FX IPCS command facility for region dumps, add the appropriate DD statement(s) to your viewing server JCL. Refer to "Adding IPCS Support" on page 14-2 for additional information.

### *New Viewing Server Parameter*

Release 4.2 introduced a new viewing server parameter for integration with Compuware's Abend-AID Fault Manager. This fault management tool captures CICS Abend-AID/FX fault data to a reporting database that users access via Windows NT or 2000, and/or the Internet. If your site is licensed for and has installed this product, you must change the value for the new viewing server parameter, MANAGEMENT\_REPORTING, to YES. The default is NO.

## Migrating the New Transaction Dump Capture Address Space

The transaction dump capture component of CICS Abend-AID/FX was completely rearchitected for Release 4.1. Release 4.2 included an additional transaction dump capture address space (TDCAS) parameter.

### *New TDCAS Parameter*

Release 4.2 introduced a new TDCAS parameter for integration with Compuware's Abend-AID Fault Manager. This new fault management tool captures CICS Abend-AID/FX fault data to a reporting database that users access via Windows NT or 2000, and/or the Internet. If your site is licensed for and has installed this product, you must change the value for the new TDCAS parameter, MANAGEMENT\_REPORTING, to YES. The default is NO.

## Migrating the MVS Post-Dump Exit

If you're currently using the MVS post-dump exit to perform automatic region dump processing, replace your Release 4.3, 4.2, or 4.1 MVS post-dump exit with the Release 4.4 version. Choose the method from the two below that describes how you're installing Release 4.4.

- If you install Release 4.4 into a new global CSI dataset, the previous release's version of the MVS post-dump exit module in your authorized system link list library is overlaid by the Release 4.4 version when you apply the Release 4.4 MVS post-dump exit USERMOD, KFXPDEX.

- If you install Release 4.4 into the global CSI dataset into which you installed a previous release, you must restore the previous release's USERMOD KFXPDEX before you apply the Release 4.4 version of the USERMOD.

In addition, verify that the Release 4.4 dataset names are reflected in the MSDCCOPY procedure.

Installing the MVS post-dump exit is described in "MVS Post-Dump Exit" on page 13-4.

## Migrating the SVC 51 Interface

If you're currently using the SVC 51 interface to perform automatic region dump processing, replace your Release 4.3, 4.2, or 4.1 SVC 51 interface with the Release 4.4 version. Choose the method from the two described below that best supports your installation.

- If you install Release 4.4 into a new global CSI dataset, the previous release's version of the SVC 51 interface modules in your authorized system link list library are overlaid by the Release 4.4 version when you apply the Release 4.4 SVC 51 interface USERMOD, KFXSV51.
- If you install Release 4.4 into the global CSI dataset into which you installed the previous release, you must restore the previous release's USERMOD KFXSV51 before you apply the Release 4.4 version of the USERMOD.

In addition, verify that the Release 4.4 dataset names are reflected in the MSDCCOPY procedure and MSDMINST utility. Installation sample library (TKFXSAMP) member JCLINSTL contains sample JCL to execute the MSDMINST utility.

Installing the SVC 51 interface is described in "SVC 51 Interface" on page 13-7.

## User Profile Addition

With Release 4.2, a new user profile option, Enable Source Support Instructional Window, was added to control the display of a window for the first transactionabend selected for which source support is not currently enabled. The window explains how to access the CSS Utilities in ISPF to create a source listing file and how to add it to the CICS Abend-AID/FX Source Directory for use with the selected transactionabend. Valid values are Y and N. The default is Y. Refer to "Specifying the Default Site User Profile" on page 17-3.

## Distributed Viewing Support

Release 4.4 introduces Distributed Viewing Support, which enables users to view dumps captured at remote sites using source information maintained at a central site. This support eliminates the need to distribute the source listing information to remote sites in order to view transaction abends in source format. Refer to "Configuring Distributed Viewing Support" on page 6-10 for specific installation information.

## Optimized Region Dumps

A new Release 4.4 region dump profile option enables optimized dump capture that provides significant reductions in elapsed SDUMP capture time, system resources, and output SDUMP dataset size. This new option requires that your site uses the SVC 51 interface. Valid values are Y, N, and blank. The default is **blank**. Refer to "Optimized SDUMP parameters for FX" on page 18-14 for more information.

## Dynamic Duplicate Dump Suppression

A new Release 4.4 transaction dump global option DUPABLIMT enables dynamic duplicate dump suppression. Using this option, you can specify that CICS Abend-AID/FX automatically suppress duplicate dumps when a CICS region's dump activity reaches the threshold you've set in the ABLIMIT transaction global option. Valid values are Y and N. The default is N. Refer to "DUPABLIMT" on page 18-28 for more information.

## CICS Web Interface Support

Release 4.4 provides CICS Web Interface support for sites running CICS Transaction Server for OS/390 Version 1.3 or more current. This facility provides diagnostic support for CICS transactions using the CICS Web Interface and for CICS region dumps that contain activity related to the CICS Web Interface. Refer to "Step 17. Activate the CICS Web Error Program, DFHWBEP" on page 4-13 for specific installation information.

## Running Release 4.4 Concurrently with Release 4.3, 4.2, or 4.1

Review the following considerations if you plan to run CICS Abend-AID/FX Release 4.4 concurrently with Release 4.3, 4.2, or 4.1.

### Customization File

Because the Release 4.3, 4.2, or 4.1 customization file is fully compatible with Release 4.4, you can run the two releases concurrently without further considerations for the customization file.

### CICS Regions

Each CICS region converts to Release 4.4 when the load libraries are included in the startup JCL. Until then, the regions can continue to use the previous release.

The Release 4.4 transaction dump capture address space (TDCAS) region is compatible with CICS regions running CICS Abend-AID/FX Release 4.3 **with maintenance level May 2001 or more current applied**. For CICS regions running a less current version of the CICS Abend-AID/FX software, you'll need to run two versions of the TDCAS server region. Use the TDCAS field on the CICS Region Configuration customization screen to control which TDCAS each CICS region connects to. Refer to "Tran Dump Capture AS" on page 18-6 for more information about this field.

When all regions have been converted to the new release, then you can discontinue using the less current TDCAS region(s).

**Note:** The Release 4.4 viewing server is fully compatible with all previous CICS Abend-AID/FX releases; that is, the viewing server can be using Release 4.4 libraries while the CICS region(s) and the TDCAS server(s) are still using a previous release.

### DB2 Option

You can run the Release 4.4 CICS Abend-AID/FX for DB2 option concurrently with Release 4.3, 4.2, or 4.1 in a single DB2 subsystem. Follow the appropriate guidelines below, depending on whether you want to share the CICS Abend-AID/FX RCT or use a new RCT.

- **Sharing the RCT between Release 4.4 and a Previous Release:** The default transaction ID for the CICS Abend-AID/FX for DB2 option is AADB. You can continue to use this transaction ID for the previous release, and create a new, unique transaction ID for Release 4.4. Bind the CICS Abend-AID/FX for DB2 Release 4.4 plan with a name other than CCASDB25, and add an entry to the CICS PCT for the new Release 4.4 transaction ID pointing to module CTCCxD22, where x is a letter representing the CICS release:

v	CICS Transaction Server for z/OS 2.2 (CICS 6.2)
s	CICS Transaction Server for OS/390 1.3 (CICS 5.3)
r	CICS Transaction Server for OS/390 1.2 (CICS 5.2)
q	CICS Transaction Server for OS/390 1.1 (CICS 5.1)
p	CICS/ESA 4.1
l	CICS/MVS 2.1.2

Ensure that you use a separate GRPLIST for each release of CICS Abend-AID/FX if you're running concurrent releases of the CICS Abend-AID/FX for DB2 option and sharing the RCT.

- **Using a New RCT:** If you intend to create a new RCT for Release 4.4, complete the instructions for installing the DB2 option, as described in Chapter 5, "Installing DB2 Support". Ensure that you bind the plan for Release 4.4 with a name other than CCASDB25.

## SVC 51 Interface

Only one release level of the SVC 51 interface can be run per MVS image. Dynamically install the Release 4.4 level of the SVC 51 interface using installation sample library (TKFXSAMP) member JCLINSTL and specifying PARM=TEST,jobname. The installation job should use the Release 4.4 load library and customization file. Make sure that the Release 4.4 authorized library is not moved to the link list until Release 4.4 is available throughout the environment. Until then, use the name of the authorized library in the JCLINSTL STEPLIB DD statement. Make sure that the Release 4.4 test SVC 51 interface executes before the previous release's production one.

## MVS Post-Dump Exit

Because only one release level of the MSDCCOPY procedure can be run per MVS image, you can use the MVS post-dump exit to schedule automatic import of region dumps for only one CICS Abend-AID/FX release. You must manually import region dumps for the other release.

## TSO/ISPF and CICS Viewing Access

You must specify a unique, four-character ID for the MVS subsystem name for each release of CICS Abend-AID/FX. Make sure that the MVS\_SUBSYSTEM viewing server parameter for each viewing server indicates the correct subsystem name for its release.



## Chapter 4.

# Installing CICS Abend-AID/FX

### Notes:

1. Before installing this release of CICS Abend-AID/FX, check the date on the tape label. If the tape is more than 45 days old, call CICS Abend-AID/FX Technical Support for any required maintenance, or download the current maintenance files from Compuware's Internet site, <http://frontline.compuware.com>. If the tape is more than one year old, it is no longer valid and you must call CICS Abend-AID/FX Technical Support for a new tape, or request it from the Internet.
2. If you've already installed CICS Abend-AID/FX and want to add support for a DB2 or CICS release, refer to Chapter 14, "Enabling Support for Additional Facilities".

CICS Abend-AID/FX is packaged in SMP/E format for installation on an MVS system. The installation procedure is modeled after the method used to install CICS/ESA. Beginning with CICS Abend-AID/FX Release 4.4, you need to specify parameters in the CICS Abend-AID/FX installation dialog and run a job to generate the installation jobs tailored to your environment.

For more information about using SMP/E, consult the *SMP/E Reference* or *SMP/E User's Guide* for the release of SMP/E you are using.

The following steps are described in this chapter:

1. Review the migration considerations.
2. Verify that CSS and LMS are installed.
3. Unload the installation sample library
4. Execute the installation dialog.
5. Verify CSS installation information.
6. Use the installation dialog.
7. Verify or allocate the Compuware global SMP/E datasets.
8. Allocate and initialize the CICS Abend-AID/FX SMP/E datasets.
9. Allocate the target and distribution libraries.
10. SMP/E receive the CICS Abend-AID/FX software.
11. SMP/E apply CICS Abend-AID/FX into the target libraries.
12. SMP/E accept CICS Abend-AID/FX into the distribution libraries.
13. APF-authorize the authorized load libraries.
14. Allocate and load the system DSECT file.
15. Allocate or upgrade the customization file.
16. Link the CICS Abend-AID/FX copies of the CICS trace formatting modules.
17. Activate the CICS web error program, DFHWBEP.
18. Make the softcopy files available to users.

**Note:** Unless otherwise noted, all jobs described in this chapter should complete with a return code of 4 or less. If you receive a return code greater than 4, do not continue with the installation steps until you determine the reason for the return code.

## CICS Abend-AID/FX Element Prefixes and FMIDs

Compuware has registered two element prefixes with IBM for CICS Abend-AID/FX and supporting Compuware base software:

- **KFX:** Element prefix for CICS Abend-AID/FX
- **KMP:** Element prefix for Compuware base services and host communication interface (HCI) software. This software is required by CICS Abend-AID/FX, but is segregated for packaging purposes because it is used by other Compuware products. Compuware Base Services/HCI provides basic viewing server-related services, including LU6.2 communication support, and, beginning with CICS Abend-AID/FX Release 4.4, Distributed Viewing Support (DVS).

Compuware Shared Services (CSS), a set of common components used by several Compuware products, is a prerequisite for CICS Abend-AID/FX. The CSS registered element prefix is **LCX**. License Management System (LMS) is also a prerequisite. LMS is Compuware's licensing product that replaces the former product security. The LMS registered element prefix is **LMS**. CSS and LMS are shipped on the separate Compuware Enterprise Common Components (ECC) distribution tape and are installed using SMP/E. Compuware recommends that you complete the CSS and LMS installations *before* you install CICS Abend-AID/FX.

Sixteen FMIDs are associated with this release of CICS Abend-AID/FX. The first eight FMIDs provide the following support:

<b>MKMP510</b>	Compuware base services and host communications interface
<b>MKFX441</b>	CICS Abend-AID/FX base code
<b>NKFX442</b>	Support for CICS/MVS 2.1.2
<b>NKFX443</b>	Support for CICS/ESA 4.1.0
<b>NKFX444</b>	Support for CICS Transaction Server for OS/390 1.1.0
<b>NKFX445</b>	Support for CICS Transaction Server for OS/390 1.2.0
<b>NKFX446</b>	Support for CICS Transaction Server for OS/390 1.3.0
<b>NKFX447</b>	Support for CICS Transaction Server for z/OS 2.2.0

The next eight FMIDs provide the CICS Abend-AID/FX transaction abend analysis screens, customization screens, messages, and help text translated into Japanese for the following:

<b>OKMP510</b>	Compuware base services and host communications interface
<b>OKFX441</b>	CICS Abend-AID/FX base code
<b>OKFX442</b>	Support for CICS/MVS 2.1.2
<b>OKFX443</b>	Support for CICS/ESA 4.1.0
<b>OKFX444</b>	Support for CICS Transaction Server for OS/390 1.1.0
<b>OKFX445</b>	Support for CICS Transaction Server for OS/390 1.2.0
<b>OKFX446</b>	Support for CICS Transaction Server for OS/390 1.3.0
<b>OKFX447</b>	Support for CICS Transaction Server for z/OS 2.2.0

You must install MKMP510 and MKFX441. In addition, you must install the CICS Abend-AID/FX FMIDs for each release of CICS that CICS Abend-AID/FX supports at your site, and the FMIDs for Japanese language support if your site requires it.

---

## Format of the Distribution Tape

The CICS Abend-AID/FX distribution tape contains the following files:

1. SMP/E MCS
2. MKFX441 installation and customization library
3. MKFX441 JCLIN
4. MKFX441 LOAD
5. NKFX442 JCLIN
6. NKFX442 LOAD
7. NKFX442 DSECT
8. NKFX443 JCLIN
9. NKFX443 LOAD
10. NKFX443 DSECT
11. NKFX444 JCLIN
12. NKFX444 LOAD
13. NKFX444 DSECT
14. NKFX445 JCLIN
15. NKFX445 LOAD
16. NKFX445 DSECT
17. NKFX446 JCLIN
18. NKFX446 LOAD
19. NKFX446 DSECT
20. NKFX447 JCLIN
21. NKFX447 LOAD
22. NKFX447 DSECT
23. OKFX441 JCLIN
24. OKFX441 LOAD
25. OKFX442 JCLIN
26. OKFX442 LOAD
27. OKFX443 JCLIN
28. OKFX443 LOAD
29. OKFX444 JCLIN
30. OKFX444 LOAD
31. OKFX445 JCLIN
32. OKFX445 LOAD
33. OKFX446 JCLIN
34. OKFX446 LOAD
35. OKFX447 JCLIN
36. OKFX447 LOAD
37. MKMP510 JCLIN
38. MKMP510 LOAD
39. MKMP510 CNTL
40. OKMP510 JCLIN
41. OKMP510 LOAD
42. CICS Abend-AID/FX preventive maintenance

---

## Step 1. Review the Migration Considerations

**Note:** If you're installing CICS Abend-AID/FX for the first time, skip this step and proceed to Step 2.

If you're migrating to CICS Abend-AID/FX Release 4.4 from an earlier release, refer to "Migrating from Release 4.1 or More Current" on page 3-4.

After you've read this section, return here and proceed with Step 2.

**Note:** If you're migrating to CICS Abend-AID/FX Release 4.4 from a release less current than Release 4.1, please contact Compuware Technical Support regarding migration considerations.

---

## Step 2. Verify That CSS and LMS Are Installed

CICS Abend-AID/FX Release 4.4 requires Compuware Shared Services (CSS) Release 7.9 or more current and License Management System (LMS) 1.0 or more current, which should have already been installed. CSS is a set of components shared among several Compuware products. LMS is Compuware's licensing product that replaces the former product security. CSS and LMS are shipped on the separate Enterprise Common Components (ECC) distribution tape and are sent to you with CICS Abend-AID/FX. These components are installed and maintained using SMP/E. Compuware strongly recommends that you install CSS and LMS first, and then install CICS Abend-AID/FX into the same global zone CSI dataset.

**Note:** You must have the most recent CSS and LMS maintenance applied to successfully use CICS Abend-AID/FX. If you installed these components from the ECC tape shipped with CICS Abend-AID/FX Release 4.4, no further action is required. However, if you installed CSS or LMS more than one month ago, you should apply current maintenance. Cumulative maintenance is included on the ECC tape shipped with CICS Abend-AID/FX. Refer to the instructions for applying cumulative maintenance in the accompanying ECC installation guide.

If you choose not to install CICS Abend-AID/FX into the same global CSI dataset, you will need to allocate the global CSI for CICS Abend-AID/FX later in this installation procedure, as described in "Step 7. Verify or Allocate the Compuware Global SMP/E Datasets (\$01ALGBL)" on page 4-8.

---

## Step 3. Allocate and Load the Installation Sample Library

Type the PROC shown in Figure 4-1 on page 4-5 to unload the second file, MKFX441.F1, from the product tape. Execute this PROC to create and load the CICS Abend-AID/FX installation sample library (TKFXSAMP)

**Notes:**

1. The installation sample library (TKFXSAMP) is not managed by SMP/E. All of your site-specific JCL is generated into the installation sample library when you run the CICS Abend-AID/FX installation dialog, as described later in the installation procedure. In most cases, when you are instructed in this book to execute jobs, the jobs are contained in the installation sample library.

Later in the installation procedure, you also allocate target and distribution sample libraries (SKFXSAMP and AKFXSAMP), and these *are* managed by SMP/E. Some instructions in this book refer to members contained in the *target* sample library (SKFXSAMP), although most references are to the *installation* sample library (TKFXSAMP). Please read each instruction carefully to ensure that you are referring to the correct version of the sample library.

2. If you receive a return code of zero or 4, ignore warning message IEB1039W.

**Figure 4-1.** PROC to Allocate and Load the Installation Sample Library (TKFXSAMP)

```

/* INSERT JOB CARD HERE.....
/*
/* UNLOAD CICS ABEND-AID/FX INSTALLATION SAMPLE LIBRARY FROM TAPE.
/*
/* TVOL - TAPE VOLSER FROM INSTALLATION TAPE.
/* TAPE - ESOTERIC TAPE UNIT NAME (CART, 3490, ETC).
/* DISK - ESOTERIC DASD UNIT NAME (SYSDA, 3380, ETC).
/* SAMP - LIBRARY TO ALLOCATE FOR INSTALLATION SAMPLE LIBRARY
/*
/*INSTALL  PROC TVOL=?????,TAPE=CART,DISK=SYSDA,    <-REVIEW
//          SAMP='COMPWARE.KFX440.TKFXSAMP'        <-REVIEW
/*
/*
/*
//PSTEP001 EXEC PGM=IEBCOPY
/*
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DISP=(OLD),UNIT=&TAPE,
//          VOL=SER=&TVOL,DSN=COMPWARE.MKFX441.F1,
//          LABEL=(2,SL,EXPDT=98000)
/*          LABEL=(5,BLP,EXPDT=98000)
/*
//SYSUT2   DD DISP=(,CATLG,DELETE),DSN=&SAMP,
//          SPACE=(CYL,(4,1,100),RLSE),UNIT=&DISK,
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=3200)
/*          VOL=SER=XXXXXX                                <-OPTIONAL
//SYSIN    DD DUMMY
//          PEND
//JCLFILE EXEC INSTALL

```

## Step 4. Execute the CICS Abend-AID/FX Installation Dialog

This release of CICS Abend-AID/FX is installed using an ISPF installation dialog. To start the dialog, execute the following command on the TSO command line:

```
EX 'COMPWARE.KFX440.TKFXSAMP(KFXRDIAG)'
```

Information entered during the use of this dialog is stored in PDS members 'COMPWARE.KFX440.TKFXSAMP(KFXDIAGV)'.

**Note:** Job Card — The job card information entered here is inserted in all of the JCL that is generated by the installation dialog. You have the opportunity to update it during the installation process as well as at the time you execute the jobs.

The CICS Abend-AID/FX Installation Dialog menu is displayed as shown below.

Figure 4-2. Installation Dialog Menu

```

----- CICS Abend-AID/FX Installation Dialog 4.4 -----
Command ==>                                     Panel: KFXPA00

Welcome to the CICS Abend-AID/FX Installation Dialog. CICS Abend-AID/FX
requires that Compuware Shared Services (CSS) be installed. If Compuware
Shared Services is already installed, then select Option 1 below to continue
with CICS Abend-AID/FX. If Compuware Shared Services is not installed, then
select Option 2 below to install CSS.

Type an S next to the desired option and press ENTER.

Option 1: Access CICS Abend-AID/FX Installation Dialog.
Compuware Shared Services (CSS) is already installed.

Option 2: Install Compuware Shared Services (CSS).
Enter the dataset name of your Compuware Enterprise Common
Components (ECC) Installation Library in order to install CSS.
ECC Install Lib ==> 'CX.ECC.R010500.INSTALL'

```

---

## Step 5. Verify CSS Installation Information

Compuware Shared Services (CSS) Release 7.9 or more current must be installed to continue with the installation of CICS Abend-AID/FX. In the installation dialog, select the one option below that describes the status of the current CSS installations.

### *Determine the CSS installation status*

**Option 1:** Access the CICS Abend-AID/FX installation dialog. CSS is already installed.

**Option 2:** Install Compuware Shared Services. Enter the dataset name of your Compuware Enterprise Common Components (ECC) installation library. After completing the installation of CSS, you will be able to continue with the CICS Abend-AID/FX installation.

Depending on which option you select, you'll either go the ECC SMP/E installation JCL customization facility to complete the ECC installation or continue with the CICS Abend-AID/FX installation dialog as described in the next step.

---

## Step 6. Use the Installation Dialog

### Notes:

1. While you're using the installation dialog, online help is available for all screens by pressing the HELP (PF1) key.
2. Press the RETURN (PF4) key within the dialog to exit the dialog.
3. Press the UP (PF7) and DOWN (PF8) keys to navigate multiple screen panels. The functional use of these keys displays in the upper-right corner of screens where they apply.
4. For entered dataset names, the user ID is added as the high-level qualifier if the name is not enclosed in quotes.

5. If you're licensed for and want to install the optional CICS Abend-AID/FX for DB2 support, you must complete the DB2 portion of the installation dialog for each DB2 subsystem at your site. Further, you must complete the SMP/E portion of the installation dialog before you begin the DB2 portion.

Use the installation dialog to complete the following steps:

### 1. Enter information in the installation dialog

Enter the requested information on the dialog panels. Use Table 4-1 to record your entries. The information you enter during this phase of installation is used to generate the JCL required to receive, apply, and accept the FMIDs associated with CICS Abend-AID/FX.

**Table 4-1.** SMP/E Dialog Parameters

Description	Your Value
job card information	
<b>Global and CICS Abend-AID/FX SMP/E Datasets</b>	
global zone CSI	
global zone log dataset	
global zone SMPPTS dataset	
distribution zone name	
target zone name	
library high-level qualifier to be used on SMP/E datasets	
<b>Installation Tape Information</b>	
tape volser	
tape device	
tape label	
tape expiration date	
<b>Dataset Allocation Information</b>	
SMS storage class	
SMS management class	
DASD unit	
DASD volser	
Japanese language support?	
<b>CICS/CTS Library Information</b>	
CICS 2.1.2 load library	
CICS 4.1 load library	
CICS 4.1 link library	
CTS 1.1 load library	
CTS 1.1 link library	
CTS 1.2 load library	
CTS 1.2 link library	
CTS 1.3 load library	
CTS 1.3 link library	
CTS 2.2 load library	
CTS 2.2 link library	
<b>CICS Abend-AID/FX File Names</b>	
DSECT dataset	
customization file	
existing customization file?	
JES2?	
<b>DB2 Option Parameters</b>	
DB2 subsystem ID	
DB2 release	
CICS Abend-AID/FX DB2 plan name	

Table 4-1. SMP/E Dialog Parameters

Description	Your Value
DB2 load library	
DB2 application load library	
packages?	
collection ID	
Type 2 indexes?	
storage group	

### 2. Generate JCL

After entering the information on the installation dialog screens, you're prompted to generate the JCL. Enter the **GENERATE** command on the Command Line of the last panel. The generated JCL is stored in the TKFXSAMP dataset unless you specify otherwise.

### 3. Review the log of generated jobs

When all of the JCL has been generated, you are taken to the member SMPLOG on the TKFXSAMP dataset. This member lists all jobs generated for the SMP/E install. Exiting this member takes you to the member list of TKFXSAMP to continue the installation.

## Step 7. Verify or Allocate the Compuware Global SMP/E Datasets (\$01ALGBL)

**Note:** If you're installing CICS Abend-AID/FX to share the Compuware global SMP/E datasets — global CSI, global SMPLOG, and SMPPTS — that you allocated when you installed Compuware Shared Services (CSS) and License Management System (LMS), your installation sample library (TKFXSAMP) does *not* contain a \$01ALGBL member and you can skip this step.

The job in installation sample library (TKFXSAMP) member \$01ALGBL allocates and initializes the following Compuware global SMP/E datasets for use by CICS Abend-AID/FX only:

- Global zone CSI
- Global zone log
- SMPPTS.

\$01ALGBL is tailored based on the information you specified in the installation dialog. Before you submit \$01ALGBL, verify that the dataset name and unit and volser, or SMS storage and management class information is correct.

**Note:** \$01ALGBL contains a step to delete the datasets before it allocates them.

#### CAUTION:

Compuware strongly recommends that you install Release 4.4 into a different global zone than the one you're using for a previous CICS Abend-AID/FX release. If you install CICS Abend-AID/FX Release 4.4 into your Release 4.3, 4.2, or 4.1 global zone CSI, all references to Release 4.3, 4.2, or 4.1 will be deleted from the global zone when Release 4.4 is SMP/E accepted. You'll still be able to run the previous release, but you won't be able to apply maintenance to it.

---

## Step 8. Allocate and Initialize the CICS Abend-AID/FX SMP/E Datasets (\$02ALSMP)

The job in installation sample library (TKFXSAMP) member \$02ALSMP allocates and initializes the following SMP/E datasets for CICS Abend-AID/FX:

### Global Zone

- SMPMTS
- SMPSTS
- SMPSCDS

### Distribution Zone

- Distribution zone CSI
- Distribution zone log

### Target Zone

- Target zone CSI
- Target zone log

\$02ALSMP is tailored based on the information you specified in the installation dialog. Before you submit \$02ALSMP, verify that the dataset name and unit and volser, or SMS storage and management class information is correct. Also review the SMP/E UCLIN statements and change the defaults if necessary for your site.

#### Notes:

1. The following utility names are specified via the UCLIN statement for the global zone:

- ASMA90 (High-Level Assembler)
- IDCAMS
- IEBUPDTE
- IEBCOPY
- IEWL
- IMASPZAP

If your site uses other names for these utilities, change them accordingly in the global zone UCLIN statement before you submit \$02ALSMP. **If you changed the assembler utility name when you installed the ECC components, you must also change it here.**

2. \$02ALSMP may end with return code 4 if either of the following messages is issued:

```
GIM56501W  THE aaaaaaaaa SUBENTRY WAS ADDED INSTEAD OF REPLACED
           BECAUSE IT DID NOT EXIST.
```

```
GIM27701W  aaaaaaaaa ENTRY bbbbbbbb WAS ADDED INSTEAD OF REPLACED
           BECAUSE IT DID NOT EXIST.
```

Otherwise, the return code should be zero.

3. \$02ALSMP contains a step to delete the datasets before it allocates them.

---

## Step 9. Allocate the Target and Distribution Libraries (\$03ALLIB)

The job in installation sample library (TKFXSAMP) member \$03ALLIB allocates the following CICS Abend-AID/FX distribution and target libraries:

- Distribution CICS Abend-AID/FX sample library (AKFXSAMP)
- Target CICS Abend-AID/FX sample library (SKFXSAMP)
- Distribution CICS Abend-AID/FX load library (AKFXLOAD)
- Target CICS Abend-AID/FX nonauthorized load library (SKFXLOAD)
- Target CICS Abend-AID/FX authorized load library (SKFXAUTH)
- Target CICS Abend-AID/FX CICSLIB load library (SKFXCLIB)
- Target CICS Abend-AID/FX REXX API library (SKFXREXX)
- Distribution CICS Abend-AID/FX DSECT images input library (AKFXDST)
- Distribution Compuware base services/HCI control library (AKMPCNTL)
- Target Compuware base services/HCI control library (SKMPCNTL)
- Distribution Compuware base services/HCI load library (AKMPLOAD)
- Target Compuware base services/HCI nonauthorized load library (SKMPLOAD)
- Target Compuware base services/HCI authorized load library (SKMPAUTH)

\$03ALLIB is tailored based on the information you specified in the installation dialog. Before you submit \$03ALLIB, verify that the dataset name and unit and volser or SMS storage and management class information is correct.

**Note:** \$03ALLIB contains a step to delete the datasets before it allocates them.

---

## Step 10. SMP/E Receive the Software and Preventive Service (\$04RECV)

The job in installation sample library (TKFXSAMP) member \$04RECV does an SMP/E receive of the CICS Abend-AID/FX software. It also receives all CICS Abend-AID/FX preventive service that was available for CICS Abend-AID/FX as of the day your tape was created. If the label on the tape indicates the tape is more than 45 days old, please call CICS Abend-AID/FX Technical Support for any additional required maintenance. Alternatively, download the current maintenance files from Compuware's Internet site, <http://frontline.compuware.com>.

The \$04RECV job has two steps. The first step receives the CICS Abend-AID/FX FMIDs that you require at your site (based on the versions of CICS that CICS Abend-AID/FX supports at your site). The second step receives the preventive service on the tape for the FMIDs that you are installing, using the SMP/E FORFMID operand.

Verify that both RECEIVE statements are correct, based on the information you specified in the installation dialog.

**Notes:**

1. Run \$04RECV in a job class suitable for long-running tape jobs and with a region size of at least 6MB on each receive step.
2. The job ends with a return code 4 if there is no preventive service applicable for the specified FMID(s) in the second step. The following message displays:

```
GIM24801W NO SYSMODS SATISFIED THE OPERANDS SPECIFIED ON THE
RECEIVE COMMAND.
```

3. Bypass label processing (BLP) is not valid for this step. You must use standard label processing.

---

## Step 11. SMP/E Apply the Software (\$05APPLY)

The job in installation sample library (TKFXSAMP) member \$05APPLY does an SMP/E apply of the CICS Abend-AID/FX software and preventive service. Verify that the APPLY SELECT statement is applying the FMIDs that you require at your site (based on the versions of CICS that CICS Abend-AID/FX supports at your site).

\$05APPLY is tailored based on the information you specified in the installation dialog.

### Notes:

1. Compuware recommends that you run an APPLY CHECK before applying the CICS Abend-AID/FX software.
2. Run \$05APPLY in a job class suitable for long-running batch jobs and with a region size of at least 6MB on the apply step.

---

## Step 12. SMP/E Accept the Software (\$06ACCPT)

The job in installation sample library (TKFXSAMP) member \$06ACCPT does an SMP/E accept of the CICS Abend-AID/FX software. Verify that the ACCEPT SELECT statement is accepting the FMIDs that you require at your site (based on the versions of CICS that CICS Abend-AID/FX supports at your site).

\$06ACCPT is tailored based on the information you specified in the installation dialog.

### CAUTION:

**Compuware strongly recommends that you install Release 4.4 into a different global zone than the one you're using for a previous CICS Abend-AID/FX release. If you install CICS Abend-AID/FX Release 4.4 into your Release 4.3, 4.2, or 4.1 global zone CSI, all references to Release 4.3, 4.2, or 4.1 will be deleted from the global zone when Release 4.4 is SMP/E accepted. You'll still be able to run the previous release, but you won't be able to apply maintenance to it.**

### Notes:

1. Preventive service is not accepted by default. Compuware recommends that you thoroughly test any PTFs before you accept them. If you do accept preventive service, the following message is normal and can be ignored:

```
GIM23903W LINK-EDIT PROCESSING FOR SYSMOD aaaaaaa WAS SUCCESSFUL FOR
MODULE bbbbbbbb IN LMOD ccccccc in the ddddddd LIBRARY. THE
RETURN CODE WAS 04. DATE yy.ddd - TIME hh:mm:ss - SEQUENCE
NUMBER nnnnnn.
```

2. Compuware recommends that you run an ACCEPT CHECK before accepting the CICS Abend-AID/FX software.
3. Run \$06ACCPT in a job class suitable for long-running batch jobs and with a region size of at least 6MB on the accept step.

---

## Step 13. APF-Authorize the Authorized Load Libraries

The two target authorized libraries (SKFXAUTH and SKMPAUTH) that you allocated in “Step 9. Allocate the Target and Distribution Libraries (\$03ALLIB)” on page 4-10 must be APF-authorized. Add these libraries to SYS1.PARMLIB member IEAAPFxx or PROGxx (depending on your z/OS, OS/390, or MVS/ESA version and implementation).

**Note:** Use the external security package installed at your site to prevent unauthorized or accidental modification of these libraries.

---

## Step 14. Allocate and Load the System DSECT File (\$07DSCT)

The system DSECT file is a VSAM RRDS that contains the data required to format DSECT displays for each version of CICS that CICS Abend-AID/FX supports at your site. The file is allocated and formatted using the Compuware Shared Services (CSS) utility CWDDSUTL, and accessed using the CSS DDIO access method. Installation sample library (TKFXSAMP) member \$07DSCT contains a procedure to allocate the system DSECT file. \$07DSCT also reblocks the DSECT images from the distribution DSECT images input library (AKFXDSCT) and loads them into the system DSECT file.

\$07DSCT is tailored based on the information you specified in the installation dialog. Before you submit \$07DSCT, verify that the dataset name and unit and volser or SMS storage and management class information is correct.

---

## Step 15. Allocate or Upgrade the Customization File (\$08CUST)

The customization file contains all site-specific processing information used by CICS Abend-AID/FX. Installation sample library (TKFXSAMP) member \$08CUST contains a tailored job based on whether the customization file was specified as *new* or *existing* in the installation dialog.

### Notes:

1. If you're converting an existing customization file, please review carefully your settings for the transaction dump capture global options. Several viewing server/TDCAS parameters and global options defaults have been tuned in CICS Abend-AID/FX Release 4.4 for better performance. These include:
  - TP\_SUBTASKS=32 for the TDCAS
  - MESSAGES=NO for the TDCAS and viewing servers
  - VSAM cluster CISIZE for transaction databases and the shared directory is 18,432
  - GROUPCOUNT for transaction databases is 3
  - ABLIMIT global option default is 5
  - ABTIME global option default is 120.

The global options defaults shipped with the product are overridden during the conversion of the customization file. To restore the overridden defaults, refer to “Modifying Transaction Dump Global Options” on page 18-24.

Consult <http://frontline.compuware.com> for updates.

2. The customization file is defined with share options(3,3). This allows multiple CICS Abend-AID/FX viewing servers running in a single MVS image UPDATE access to the customization data. CICS Abend-AID/FX programmatically ensures WRITE integrity for the customization file.

3. If you're sharing the customization file across multiple MVS images, review the information in "GRS Considerations" on page 2-11.
4. The installation sample library (TKFXSAMP) contains two additional sample members: CUSTALLC and CUSTUPGR. You don't need to run either of the jobs now; they are provided in case you ever need to reallocate or upgrade your customization file. See "Reallocating or Upgrading the Customization File" on page 14-11 for more information.

**Note:** After completing Step 15, you're finished with the CICS Abend-AID/FX product tape. However, you should keep the tape in case you want to add support for additional CICS Abend-AID/FX features at a later date.

---

## Step 16. Link the Trace Formatting Modules (\$10Rxxx)

The installation sample library (TKFXSAMP) contains six members beginning with "\$10R." These jobs link a copy of the CICS trace formatting module for each version of CICS supported by CICS Abend-AID/FX at your site into the corresponding CICS Abend-AID/FX modules. The CICS Abend-AID/FX versions of the trace formatting modules reside in the CICS Abend-AID/FX nonauthorized load library (SKFXLOAD).

The \$10Rxxx jobs are tailored based on the information you specified in the installation dialog. Although all six members are generated, the CICS load library name displays in the member only if you specified it in the installation dialog.

**You must run the appropriate \$10Rxxx job in the installation sample library (TKFXSAMP) for each CICS release at your site that you want CICS Abend-AID/FX to fully support.** Failure to do so causes the CICS Abend-AID/FX trace displays to be unavailable. Verify the CICS load library name before submitting the job.

**Notes:**

1. Messages IEW2635I, IEW2646W, and IEW2651W are normal, and can be ignored.
2. **If you apply IBM maintenance to the CICS trace formatting modules, you must run the \$10Rxxx link jobs again for the appropriate CICS versions.**
3. CICS Transaction Server users must place modules DFHTT620, DFHTT530, DFHTT520, and DFHTT510 in a system link list library. Failure to do so results in messages CSV003I, CSV031I, and IEW4009I when viewing CICS Abend-AID/FX trace displays.

---

## Step 17. Activate the CICS Web Error Program, DFHWBEP

If your site is running CICS Transaction Server for OS/390 Version 1 Release 3 or more current and is planning to use the CICS Abend-AID/FX CICS Web Interface support, Compuware recommends that you use the CICS web error program, DFHWBEP. This program is an IBM user-replaceable module driven by CICS web support when there is a failure in the processing of a web request by a CICS web TCPIP SERVICE. Using DFHWBEP allows modification of the HTTP response issued by CICS or the display of an alternative message.

DFHWBEP is used to take CICS transaction dumps for errors occurring during processing of web requests that otherwise might not be taken. This module ensures that a CICS transaction dump is available with the correct information to enable speedy problem resolution. Without it, a transaction dump may not be taken, and information written to the CICS JESLOG may not be readily available.

A sample DFHWBEP module is supplied in the CICS Abend-AID/FX target sample library (SZECSTAMP) member FXWBEP. This sample program is not supported by Compuware and is intended as an example only. Each installation needs to make its own determination regarding if and how this module is used.

Note the following main considerations for this module:

- The load module name must be DFHWBEP.
- The module must include EXEC CICS IGNORE CONDITION SUPPRESSED. This command statement prevents the AEXW condition when CICS Abend-AID/FX suppresses IBM transaction dumps.
- Field WBEP\_ABEND\_CODE contains the abend code that is to be issued.

## Activating DFHWBEP

To activate the CICS web error program, do the following:

1. Assemble and link-edit DFHWBEP to a CICS DFHRPL library.
2. Define DFHWBEP in the CICS PPT.

For further information, refer to the discussion about the CICS web error program in the IBM manual, *CICS Internet Guide*, for CICS Transaction Server for OS/390.

---

## Step 18. Make the Softcopy Files Available to Users

With Release 4.4, CICS Abend-AID/FX softcopy documentation files are available on CD-ROM in the box with the product tape and at Compuware's FrontLine Internet site. The files are in three electronic formats:

- **BookManager:** Requires that users have the free IBM Softcopy Reader if they download the BookManager files to workstations. Alternatively, you can upload this version to an IBM BookManager READ bookshelf on the host or a network server. Refer to any 1999 or more current IBM softcopy documentation CD-ROM for the specific steps for this process.
- **PDF:** Requires that users have the free Adobe Acrobat Reader. You can upload the PDF version to a network server. Users can view, search, and print this format. The PDF version produces the better quality printouts of the documentation.
- **HTML:** Requires that users have any standard web browser. You can upload the HTML version to a network server. This version provides an alternative search and display functionality to the PDF version.

**Note:** Refer to the README.TXT file on the CD-ROM or to the "Online Documentation" section of the Introduction of this installation guide for Compuware's Internet site address and the Internet site address for the free IBM and Adobe readers.

## Chapter 5.

# Installing DB2 Support

**Note:** If you're adding support for a new DB2 version, refer to "Adding Support for a New Release of DB2" on page 14-7.

This chapter describes the procedure to install the CICS Abend-AID/FX for DB2 option. If you are licensed for this option, perform the steps described in this chapter.

Installing the DB2 option involves the following steps:

1. Generate the DB2 installation JCL.
2. Perform DB2 binds (\$09nxxxx).
3. Add an RCT/RDO entry.
4. Specify the DB2 handle routine (optional).

**Note:** If you are migrating to this release of CICS Abend-AID/FX from an earlier release, review the information in "Migration Considerations" on page 3-3 about migrating the CICS Abend-AID/FX for DB2 option.

---

## Step 1. Generate the DB2 Installation JCL

Select the DB2 option from the CICS Abend-AID/FX installation dialog and enter the required information. Use the GENERATE command to generate the JCL for installing the CICS Abend-AID/FX for DB2 option. The JCL members generated into the installation sample library (TKFXSAMP) are \$09nxxxx, where n represents the one-numeric character DB2 release identifier and xxxx is the four-alphanumeric character DB2 subsystem ID. Generate the JCL for each DB2 release and subsystem at your site by updating the installation dialog information and using the GENERATE command.

---

## Step 2. Perform DB2 Binds (\$09nxxxx)

**Note:** You may require the assistance of a database administrator to perform this step.

This section describes how CICS Abend-AID/FX uses the DB2 system catalog tables, binding the CICS Abend-AID/FX DB2 DBRMs, and granting privileges for the plan.

### How CICS Abend-AID/FX Uses the DB2 System Catalog Tables

The CICS Abend-AID/FX for DB2 option uses SQL statements to obtain information from the DB2 system catalog tables. This requires that a DB2 bind be performed to enable the SQL statements. If you do not bind the DBRMs, the CICS Abend-AID/FX for DB2 option still functions, but the DB2 catalog tables are not accessed and information is missing that is normally provided by CICS Abend-AID/FX.

If the DBRMs are bound, the following DB2 system catalog tables are accessed:

- SYSIBM.SYSCOLUMNS
- SYSIBM.SYSDBRM

- SYSIBM.SYSFIELDS
- SYSIBM.SYSINDEXES
- SYSIBM.SYSKEYS
- SYSIBM.SYSPLAN
- SYSIBM.SYSPLANDEP
- SYSIBM.SYSSTMT
- SYSIBM.SYSSYNONYMS
- SYSIBM.SYSPACKAGE
- SYSIBM.SYSPACKSTMT
- SYSIBM.SYSPACKLIST
- SYSIBM.SYSPACKDEP.

To improve performance at sites with large DB2 catalog tables, you may exclude the following tables from CICS Abend-AID/FX processing:

- SYSIBM.SYSPLANDEP
- SYSIBM.SYSDBRM.

## Binding the DBRMs

The CICS Abend-AID/FX installation sample library (TKFXSAMP) contains members beginning with "\$09nxxxx," where n represents the one-numeric character DB2 release identifier and xxxx is the four-alphanumeric character DB2 subsystem name. These jobs bind the DB2 DBRMs for each DB2 subsystem supported by CICS Abend-AID/FX at your site. You indicated which DB2 releases to support by specifying the names of the corresponding DB2 load libraries in the installation dialog.

The default CICS Abend-AID/FX for DB2 option plan name is **CCASDB25**. You can change the plan name, but it must match the name specified in the RCT entry (see "Step 3. Add DB2 RCT/RDO Table Entry" on page 9-7). Two DBRMs are provided in installation sample library (TKFXSAMP) members CWDB224 and CWDB225. These members are either bound into packages prior to binding plan CCASDB25, or they can simply be bound into the plan.

The \$09nxxxx jobs are tailored based on the information you specified in the installation dialog. The specific \$09nxxxx members generated correspond to the releases of DB2 that you specified in the installation dialog. Whether the CICS Abend-AID/FX for DB2 DBRMs are bound into packages before being bound into a plan, or are simply bound into a plan, depends on what you specified in the installation dialog.

**Note:** For DB2 versions 5.1 and 4.1 only, type 2 indexes are also created by the corresponding \$09nxxxx job if you specified **Yes** in the installation dialog.

**Run all \$09nxxxx jobs in the installation sample library (TKFXSAMP) to fully support your releases of DB2.** You can still run the CICS Abend-AID/FX for DB2 option without binding the DBRMs, but much of the information provided by the option is missing from the CICS Abend-AID/FX displays if you do not perform the bind.

### Notes:

1. If you do not run \$09nxxxx for a DB2 subsystem, program CTCCDB25 will experience a -922 abend. This abend appears as an entry on the CICS Abend-AID/FX Directory for the AADB transaction.
2. CICS Abend-AID/FX supports multiple subsystems, but the DBRMs must be bound for each subsystem.

## Granting Privileges for the Plan

Table 5-1 describes the choices you have for granting privileges for the DB2 plan. The AUTHID to which you grant privileges must match the AUTH/AUTHTYPE parameter you specify on the RCT/RDO entry, as described in “Step 3. Add DB2 RCT/RDO Table Entry” on page 9-7.

**Table 5-1.** Granting Privileges for CICS Abend-AID/FX for DB2 Plan

AUTHID	Privileges Granted
Binder of the plan	No privileges granted
Not specified	AADB or PUBLIC
SIGNID	AADB or PUBLIC
TXID/TX	AADB or PUBLIC
Specific User	Privileges granted to the user

---

## Step 2. Add an RCT/RDO Entry

The CICS Abend-AID/FX for DB2 option requires an entry in the RCT (Resource Control Table)/Resource Definition Online. “Step 3. Add DB2 RCT/RDO Table Entry” on page 9-7 describes adding the entry. You can either add the entry now, or wait until you reach that portion of the CICS Abend-AID/FX installation.

---

## Step 3. Specify the DB2 Handle Routine (Optional)

The CICS Abend-AID/FX for DB2 option generates output for non-zero SQL return codes. However, you must specify the action taken when an SQL code is returned. For non-zero SQL return codes, an EXEC CICS DUMP or EXEC CICS ABEND must be issued to generate the CICS Abend-AID/FX information. The following example produces a CICS Abend-AID/FX analysis and continues processing. You may want to distribute a copy of this example to your site’s application programmers.

```

EXEC SQL WHENEVER SQLERROR
  GOTO 9998-HANDLE-DB2-ERROR
END-EXEC.
.
.
9998-HANDLE-DB2-ERROR
.
.
EXEC CICS DUMP
  DUMPCODE ('DB2E')
END-EXEC.
.
.
EXEC CICS SYNCPOINT ROLLBACK
END-EXEC.
.
.
EXEC CICS RETURN
END-EXEC.

```

The code EXEC CICS DUMP can be changed to EXEC CICS ABEND to stop processing. The programmer chooses the dump code to be used, and whether to issue an EXEC CICS RETURN. Always use EXEC CICS DUMP when SYNCPOINT rollback is a recovery requirement.

Keep the transaction dump global option SNAP set to ALL (the default) to ensure that the EXEC CICS DUMP command produces CICS Abend-AID/FX output. The transaction dump global options are described in “Modifying Transaction Dump Global Options” on page 18-24.

## Using a Separate Error-Handling Routine

If you’re using a separate error-handling routine to perform the EXEC CICS DUMP process, note the following considerations that affect CICS Abend-AID/FX for DB2 support, depending upon how control is passed to that routine.

- If control is passed using EXEC CICS XCTL, the TIE that establishes the DB2 thread may *not* be passed to the error-handling routine, which results in missing DB2 support for the failing transaction.
- If control is passed using EXEC CICS LINK, then the TIE that establishes the DB2 thread is passed to the error-handling routine, which results in DB2 support for the failing routine.

For either method, the CICS Abend-AID/FX failure diagnosis is performed on the error-handling routine, not on the routine that had the failure.

**Next:**

**Continue now with Chapter 6, “Installing Viewing Access”.**

## Chapter 6.

# Installing Viewing Access

You can configure a viewing server to support viewing access from VTAM, CICS (local or remote), TSO/ISPF, Distributed Viewing Support, or from any combination of the four methods concurrently. Each method has different configuration requirements external to CICS Abend-AID/FX (for example, VTAM APPLIDs or ISPF panel modifications).

This chapter describes the steps required to configure each viewing access option. Remember that a viewing server can support more than one viewing option; simply perform the steps for each method you require for the viewing server.

Some of the requirements described in this chapter apply to more than one viewing access method. Table 6-1 indicates the viewing access requirements, and to what method they apply. **If a requirement supports more than one viewing access method, you need to perform it only once per viewing server.** For example, you need to define only one VTAM LU 2 APPLID to support both CICS remote and VTAM viewing access.

**Table 6-1.** Viewing Access Method Requirements

Requirement	VTAM	TSO CLIST	ISPF Panel	CICS Local	CICS Remote	DVS	See
Define VTAM LU 2 APPLID	x				x		page 6-2 or page 6-6
Copy CLIST to a CLIST library		x	x				page 6-3
Add option to an ISPF panel			x				page 6-3
Define VTAM LU 6.2 APPLID					x	x	page 6-6
Create logon mode table entry					x	x	page 6-7
Review CICS connection name					x		page 6-7
Review APPC connection in CICS					x		page 6-8
Specify PARSESS=YES on CICS APPL					x		page 6-8
Specify DFHSIT ISC=YES parameter					x		page 6-8
Specify viewing server LU2_APPLID parameter	x				x		page 7-7
Specify viewing server MVS_SUBSYSTEM parameter		x	x	x	x	x	page 7-8
Specify viewing server LU62_APPLID parameter					x	x	page 7-9
Specify viewing server LOGMODE parameter					x	x	page 7-9

### Notes:

1. DVS is Distributed Viewing Support.
2. If you choose VTAM, CICS remote viewing access, or DVS, you'll probably need to get your VTAM system programmer involved in setting up the configuration you choose.  
  
If you configure a viewing server for VTAM, CICS remote viewing, or DVS, have your VTAM system programmer ensure that the cross-domain resource definitions for all VTAM APPLIDs involved are correct. These include the CICS Abend-AID/FX LU 2 and LU 6.2 APPLIDs as well as all CICS APPLIDs for regions from which viewing is to be supported.
3. If you choose TSO/ISPF, CICS access, or DVS, plan on involving your MVS system programmer to select a unique MVS subsystem name for the viewing subsystem.

- If you configure a viewing server for CICS remote viewing, it also supports VTAM viewing access without any additional configuration.

---

## Configuring VTAM Access

**Note:** You may require the assistance of your VTAM system programmer to install VTAM viewing access.

If you configure a viewing server for VTAM access, users can log onto the viewing server as a native VTAM application.

Complete the steps below to install VTAM viewing access for a viewing server.

### Step 1. Add LU 2 APPLID to SYS1.VTAMLST

To install VTAM viewing access, you must define a VTAM LU 2 APPLID for use by the viewing server and add it to SYS1.VTAMLST. Do not specify any parameters on the APPLID (that is, the attributes as defined to SYS1.VTAMLST are applid APPL). For example:

```
CCFXAPPL  APPL
```

Installation sample library (TKFXSAMP) member SAMPLU2 contains this example. You must also ensure that the VTAM node associated with the APPLID is activated, and the cross-domain resource definitions are correct.

### Step 2. Review External Security Considerations

If you specified the EXTERNAL\_SECURITY\_ENABLED viewing server configuration parameter, each user must have a valid user ID and password to access CICS Abend-AID/FX using VTAM viewing access.

### Step 3. Review Viewing Server Configuration Parameters

When you configure the viewing server as described in Chapter 7, “Viewing Server Configuration”, you must specify the LU2\_APPLID parameter to indicate the VTAM LU 2 APPLID you defined for this viewing server. The LU2\_APPLID parameter is described in “Parameters Required to Support VTAM or CICS Remote Viewing Access” on page 7-7.

---

## Configuring TSO/ISPF Access

**Note:** You may require the assistance of your MVS system programmer to install TSO/ISPF viewing access.

CICS Abend-AID/FX can be accessed either from an ISPF panel or a TSO CLIST. This section describes the steps required for both methods.

CICS Abend-AID/FX uses cross-memory services to support viewing access from TSO/ISPF, so ISPF access is supported only when the viewing server and the TSO/ISPF user are running on the same MVS image. If you require cross-system viewing, install VTAM viewing access.

### Using a TSO CLIST

If you want to provide TSO/ISPF access to a CICS Abend-AID/FX viewing server using a TSO CLIST instead of an ISPF panel, perform the following steps.

### Step 1. Copy the Sample CLIST to a CLIST Library

Copy the sample CLIST in the installation sample library (TKFXSAMP) member \$14CLST to a CLIST library. You can rename the CLIST to conform to site standards.

### Step 2. Review External Security Considerations

If you specified the EXTERNAL\_SECURITY\_ENABLED viewing server configuration parameter, review the information described in “TSO/ISPF Viewing Access Requirements” on page 11-6 to ensure that you provide appropriate dataset access to your TSO/ISPF users.

### Step 3. Review Viewing Server Configuration Parameters

When you configure the viewing server as described in Chapter 7, “Viewing Server Configuration”, you must specify the MVS\_SUBSYSTEM parameter to indicate the MVS subsystem name chosen for this viewing server and whether this viewing server is the “owner” or a “user” of the subsystem. The MVS\_SUBSYSTEM viewing server configuration parameter is described in “Parameters Required to Support VTAM or CICS Remote Viewing Access” on page 7-7.

## Using an ISPF Panel

Perform the following steps to provide TSO/ISPF access to CICS Abend-AID/FX from an ISPF panel.

### Step 1. Copy the Sample CLIST to a CLIST Library

Copy the sample CLIST in the installation sample library (TKFXSAMP) member \$14CLST to a CLIST library. You can rename the CLIST to conform to site standards.

### Step 2. Add a CICS Abend-AID/FX Option to an ISPF panel

Add the CICS Abend-AID/FX options to your ISR@PRIM panel, or if you prefer, an ISPF submenu. A sample ISR@PRIM panel is shown in Figure 6-1 on page 6-4. Installation sample library (TKFXSAMP) member SAMPPRIM contains only the ISR@PRIM statements that apply to CICS Abend-AID/FX. You can use any unique letter or number. The remainder of this document assumes that FX is chosen.

Figure 6-1. Sample ISR@PRIM Panel

```

%----- ISPF/PDF PRIMARY OPTION MENU -----+
%OPTION ==>_ZCMD
%
% 0 +ISPF PARMS - Specify terminal and user parameters +USERID - &ZUSER
% 1 +BROWSE - Display source data or output listings +TIME - &ZTIME
% 2 +EDIT - Create or change source data +TERMINAL - &ZTERM
% 3 +UTILITIES - Perform utility functions +PF KEYS - &ZKEYS
% 4 +FOREGROUND - Invoke language processors in foreground
% 5 +BATCH - Submit job for language processing
% 6 +COMMAND - Enter TSO command or CLIST
% 7 +DIALOG TEST - Perform dialog testing
% FX +CICS AA/FX - CICS Abend-AID/FX
% S +SDSF - SPOOL Display and Search Facility (5798-DGN)
% T +TUTORIAL - Display information about ISPF/PDF
% X +EXIT - Terminate ISPF using log and list defaults
+Enter%END+command to terminate ISPF.
%
)INIT
.HHELP = ISR0003
&ZPRIM = YES
&ZHTOP = ISR0003
&ZHINDEX = ISR91000
VPUT (ZHTOP,ZHINDEX) PROFILE
)PROC
&ZSEL = TRANS( TRUNC (&ZCMD, '.'))
0, 'PANEL(ISPOPTA)'
1, 'PGM(ISRBRO)'
2, 'PGM(ISREDIT)'
3, 'PANEL(ISRUTIL)'
4, 'PANEL(ISRFPA)'
5, 'PGM(ISRJB1) PARM(ISRJPA) NOCHECK'
6, 'PGM(ISRPTC)'
7, 'PGM(ISRYXDR) NOCHECK'

FX, 'CMD(%%$13CLST)'
S, 'PANEL(ZSDSFOP) NEWAPPL(ISF)'
T, 'PGM(ISPTUTOR) PARM(ISR00000)'
, , ,
X, 'EXIT'
*, '? ' )
IF (&ZCMD = 'S')
&ZSEL = 'PGM(ISFISP) NOCHECK NEWAPPL(ISF)'
&ZTRAIL = .TRAIL
)END

```

The statement used for CICS Abend-AID/FX access is:

```
FX, 'CMD(%%$14CLST)'
```

**Note:** Change FX to the letter or number you have chosen, if applicable. Also, if you renamed \$14CLST, ensure that you reflect the correct name in the CMD string.

You must also code the following statement on the ISPF panel you choose, and place it after the &ZSEL variable:

```
&ZTRAIL = .TRAIL
```

**Notes:**

1. Begin the &ZTRAIL statement in column 1.
2. If you receive message ERWIN0006 trying to access CICS Abend-AID/FX, make sure that the variables reserved by ISPF (that is, ZCMD, ZSEL, and ZTRAIL) are used correctly.
3. You must exit and reaccess ISPF for the newly added options to be usable.
4. The dataset names must be in uppercase.

### Step 3. Review External Security Considerations

If you specified the `EXTERNAL_SECURITY_ENABLED` viewing server configuration parameter, review the information described in “TSO/ISPF Viewing Access Requirements” on page 11-6 to ensure that you provide appropriate dataset access to your TSO/ISPF users.

### Step 4. Review Viewing Server Configuration Parameters

When you configure the viewing server as described in Chapter 7, “Viewing Server Configuration”, you must specify the `MVS_SUBSYSTEM` parameter to indicate the MVS subsystem name chosen for this viewing server and whether this viewing server is the “owner” or a “user” of the subsystem. The `MVS_SUBSYSTEM` viewing server configuration parameter is described in “Parameters Required to Support VTAM or CICS Remote Viewing Access” on page 7-7.

---

## Configuring CICS Access

**Note:** You may require the assistance of your VTAM system programmer and your MVS system programmer to install CICS viewing access.

CICS Abend-AID/FX provides two methods of CICS viewing access:

- **local:** If the viewing server and the CICS region are on the same MVS image, CICS Abend-AID/FX uses cross-memory services. This method requires a simple configuration.
- **remote:** If the viewing server and the CICS region are on different MVS images, CICS Abend-AID/FX uses LU 6.2 communication to support access from CICS. This viewing access method is the most complex to configure. Refer to Table 6-1 on page 6-1 for a summary of all the items required to configure CICS remote viewing access.

If CICS access is installed, users can issue the AADF transaction from CICS to directly access the viewing server that is processing dumps for that CICS region. You indicate which viewing servers process dumps for specific CICS regions on the CICS Region Configuration screen, as described in “Configuring CICS Regions” on page 18-2.

**Note:** To directly access CICS Abend-AID/FX from Compuware’s XPEDITER/CICS product, you must install CICS viewing access. Further, XPEDITER/CICS must be at Release 6.6 or more current to directly access CICS Abend-AID/FX.

## Installing CICS Local Viewing Access

Perform the following steps for CICS local viewing access.

### Step 1. Review CICS Transaction Dump Global Option

Specify `LOCAL` for the `CICACCESS` transaction dump global option, as described on page 18-27. This value is the default.

**Note:** If `LOCAL` is specified for this transaction dump global option but the CICS region is not running on the same MVS image as the viewing server, CICS Abend-AID/FX checks for the presence of the appropriate CICS remote configuration.

## Step 2. Review Viewing Server Configuration Parameters

When you configure the viewing server as described in Chapter 7, “Viewing Server Configuration”, you must specify the MVS\_SUBSYSTEM parameter to indicate the MVS subsystem name chosen for this viewing server and whether this viewing server is the “owner” or a “user” of the subsystem. The MVS\_SUBSYSTEM viewing server configuration parameter is described in “Parameters Required to Support VTAM or CICS Remote Viewing Access” on page 7-7.

## Installing CICS Remote Viewing Access

Perform the following steps for CICS remote viewing access.

### Step 1. Add APPLIDs to SYS1.VTAMLST

If a viewing server is supporting CICS remote viewing access, you must define one LU 2 and one LU 6.2 APPLID for the viewing server. Both APPLIDs must be defined in SYS1.VTAMLST. The attributes of the LU 2 APPLID and LU 6.2 APPLID are described below.

#### LU 2 APPLID

Do not specify any parameters on the LU 2 APPLID (that is, the attributes as defined to SYS1.VTAMLST are applid APPL). For example:

```
CCFXAPPL  APPL
```

Installation sample library (TKFXSAMP) member SAMPLU2 contains this example. You must also ensure that the VTAM node associated with the APPLID is activated, and the cross-domain resource definitions are correct.

#### LU 6.2 APPLID

The parameters required for the LU 6.2 APPLID are as follows:

```
CCFXLU62  APPL  ACBNAME=CCFXLU62,APPC=YES,ATNLOSS=ALL,          *
                AUTH=(ACQ),AUTOSES=10,DDRAINL=ALLOW,          *
                DLOGMOD=CCFXLOGM,DMINWNL=10,DMINWNR=10,        *
                DRESPL=ALLOW,DSESLIM=256,EAS=256,              *
                LIMQSINT=1440,LMDENT=256,MODETAB=CWHCIMOD,      *
                OPERCNOS=ALLOW,PARSESS=YES,SECACPT=AVPV,        *
                SYNCLVL=CONFIRM,VERIFY=NONE,VPACING=7,          *
                SRBEXIT=YES
```

Installation sample library (TKFXSAMP) member SAMPLU62 contains these required parameters.

#### Notes:

1. The LU 6.2 APPLID you specify should be for the viewing server that “owns” the CICS Abend-AID/FX subsystem. Refer to “Parameters Required to Support VTAM or CICS Remote Viewing Access” on page 7-7.
2. If you are using VTAM version 3.3 and less current:
  - Specify SECACPT=ALREADYV instead of SECACPT=AVPV.
  - The LIMQSINT and OPERCNOS parameters are not supported.
3. Ensure that the VTAM node associated with the APPLID is activated and the cross-domain definitions are correct.

## Step 2. Assemble and Link-Edit Logon Mode Table

Assemble and link-edit a logon mode table entry to support LU 6.2 communications. Figure 6-2 shows the required bind image for the logmode table. This logmode table is provided in installation sample library (TKFXSAMP) member SAMPMOD.

The logon mode table member must be available in SYS1.VTAMLIB or a library in the SYS1.VTAMLIB concatenation.

**Figure 6-2.** Sample Logon Mode Table Entry LU 6.2 Communications

```

*****
**
**      CCFXLOGM - THIS IS A BIND IMAGE FOR INDEPENDENT LU 6.2.      **
**      IT SPECIFIES PACING AND RU SIZES OF 4096.                    **
**      ADDITIONALLY, IT SPECIFIES THE FOLLOWING:                     **
**                                                                    **
**      BYTE 23  X'10' ACCESS SECURITY ACCEPTED                       **
**                X'02' ALREADY VERIFIED ACCEPTED                   **
**                X'01' PERSISTENT VERIFICATION ACCEPTED             **
**                                                                    **
**      BYTE 24  X'20' CONFIRM SUPPORTED                             **
**                X'0C' EITHER PARTNER WILL REINITIATE SESSION      **
**                X'02' PARALLEL SESSIONS SUPPORTED                 **
**                X'01' CNOS SUPPORTED                               **
**                                                                    **
**      BYTE 25  X'00'                                               **
**                                                                    **
*****
CCFXLOGM MODEENT LOGMODE=CCFXLOGM,      APPL PROCESSING ENTRY      *
      TYPE=0,                                                         *
      ENCR=0,                                                         *
      FMPROF=X'13',                                                  *
      TSPROF=X'07',                                                  *
      PRIPROT=X'B0',                                                 *
      SECPROT=X'B0',                                                 *
      COMPROT=X'D0B1',                                               *
      PSNDPAC=X'07',                                                 *
      RUSIZES=X'8989',                                              *
      SRCVPAC=X'07',                                                 *
      SSNDPAC=X'07',                                                 *
      PSERVIC=X'06020000000000000000132F00'                          *
      MODEEND                                                         *
      END

```

## Step 3. Review CICS Transaction Dump Global Options

Review the following two transaction dump global options.

### **CICS Access**

Specify **REMOTE** for the CICSACCESS transaction dump global option, as described on page 18-27.

### **CICS Connection Name**

CICS Abend-AID/FX requires an APPC connection be defined for *every* CICS region from which CICS viewing access is supported.

The default connection name used by CICS Abend-AID/FX is CCFX. It is specified by the CONNECTION transaction dump global option. If you need to change the connection name, update the transaction dump global option member used by the CICS region, as described in “Modifying Transaction Dump Global Options” on page 18-24.

## Step 4. Review APPC Connection in CICS

The CICS Abend-AID/FX transaction dump RDO members contain sample RDO definitions for defining an APPC connection and sessions. **These are required if you are using CICS remote viewing access.**

“Using Resource Definition Online (RDO) or the CSD Utility DFHCSDUP” on page 9-4 describes the RDO members distributed with CICS Abend-AID/FX. Review the values specified in the RDO members for the following values:

### CONNECTION

The APPC connection name. The default value is CCFX. If you changed this value in “Step 3. Review CICS Transaction Dump Global Options” on page 6-7, ensure that the value you specified for the CONNECTION transaction dump global option is reflected here.

### NETNAME

The LU 6.2 APPLID defined for the viewing server in “LU 6.2 APPLID” on page 6-6.

### MODENAME

The logon mode table name you defined for the viewing server in “Step 2. Assemble and Link-Edit Logon Mode Table” on page 6-7.

## Step 5. Specify PARSESS=YES on CICS VTAM APPL Definition

The VTAM APPL definition for *every* CICS region from which viewing access is supported must be defined to support parallel sessions. Ensure that PARSESS=YES is specified for each CICS region’s VTAM APPL definition.

## Step 6. Code DFHSIT ISC=YES Parameter

For *every* CICS region from which CICS viewing access is supported, code the DFHSIT parameter ISC=YES to enable intersystem communication.

## Step 7. Review External Security Considerations

If you specified the EXTERNAL\_SECURITY\_ENABLED viewing server configuration parameter, review “CICS Requirements” on page 11-9 for information about CICS viewing access and external security.

## Step 8. Review Viewing Server Configuration Parameters

When you configure the viewing server as described in Chapter 7, “Viewing Server Configuration”, you must specify the following parameters:

### MVS\_SUBSYSTEM

The name of the MVS subsystem chosen for this viewing server and whether this viewing server is the “owner” or a “user” of the subsystem.

### LU2\_APPLID

The VTAM LU 2 APPLID defined for this viewing server in “LU 2 APPLID” on page 6-6.

### LU62\_APPLID

The VTAM LU 6.2 APPLID defined for this viewing server in “LU 6.2 APPLID” on page 6-6.

### LOGMODE

The VTAM logmode table entry defined for this viewing server in “Step 2. Assemble and Link-Edit Logon Mode Table” on page 6-7.

The viewing server configuration parameters are described in “Step 2. Specify the Viewing Server Configuration Parameters (\$12xxxx)” on page 7-5.

## Accessing AADF from a User Program

Review the following information if you want to access AADF from a user program. You can link to AADF by a user CICS program using the COMMAREA or TWA. This facility allows you to invoke CICS Abend-AID/FX viewing from your own menu programs.

Figure 6-3 shows a sample COBOL program to link to AADF from a user program.

**Note:** This example is for CICS version 2.1.2. If you are using other releases of CICS, you must change the program name CTCCxAAD to the program name for the appropriate CICS release, where x is the CICS release.

CTCCVAAD	CICS Transaction Server for z/OS 2.2.0
CTCCSAAD	CICS Transaction Server for OS/390 1.3.0
CTCCRAAD	CICS Transaction Server for OS/390 1.2.0
CTCCQAAD	CICS Transaction Server for OS/390 1.1.0
CTCCPAAD	CICS 4.1.0

**Figure 6-3.** Sample COBOL Program to Link to AADF

```

ENVIRONMENT DIVISION.
DATA DIVISION.
WORKING-STORAGE SECTION.
77 TWALENG                                PIC S9(4)  COMP.

LINKAGE SECTION.
01 DFHCOMMAREA.
   05 COM-CMND                             PIC X(?).

01 BLL-CELLS.
   05 FILLER                               PIC S9(8) COMP.
   05 TWAPTR                               PIC S9(8) COMP.

01 WORKAREA.
   05 TWA-AADF                             PIC X(?).

PROCEDURE DIVISION.
  IF FROM COMMAREA
    MOVE 'AADF' TO COM-CMND
    PERFORM LINK-AADF-COMMAREA UNTIL
      COM-CMND EQUAL 'EXIT'.

  IF FROM TWA
    MOVE 'AADF' TO TWA-AADF
    PERFORM LINK-AADF-TWA UNTIL
      TWA-AADF EQUAL 'EXIT'.

LINK-AADF-COMMAREA.

  EXEC CICS LINK PROGRAM('CTCCLAAD')
    COMMAREA(DFHCOMMAREA)
    LENGTH(?)
  EXEC CICS SYNCPOINT
  END-EXEC.

LINK-AADF-TWA.
  EXEC CICS LINK PROGRAM('CTCCLAAD')
  END-EXEC.

```

Instead of linking to AADF, you can issue the EXEC CICS RETURN command with the TRANSID option set to AADF.

## Configuring Distributed Viewing Support

**Note:** You may require the assistance of your VTAM system programmer and your MVS system programmer to install Distributed Viewing Support.

Distributed Viewing Support (DVS) enables users to access to CICS Abend-AID/FX source listing files that are on different MVS systems that don't share DASD. Users access the files through the CICS Abend-AID/FX online displays as they normally would.

The CICS Abend-AID/FX viewing server enables DVS by linking MVS systems over VTAM LU 6.2. The viewing server must be configured and active on the user's local system. A source-sharing server is required on each remote system to be accessed. Alternatively, an existing CICS Abend-AID/FX viewing server can be configured to perform DVS with minor changes. Compuware recommends that you run each server as a started task that is always available.

Complete the following procedure for each CICS Abend-AID/FX remote source-sharing server on each of the MVS systems that users will access.

### Step1. Modify the Server JCL

**Note:** If the remote source-sharing server is an existing CICS Abend-AID/FX server, skip this step and proceed to "Step 2. Configure the LU 6.2 Application ID" on page 6-11.

Review and modify the sample JCL in the installation sample library (TKFXSAMP) member \$13SRVR as described below.

1. Configure JCL as a job or started task:

The server JCL is initially configured to run as a job. If you want to run the remote source-sharing server as a started task, change the JOB statements to PROC statements.

**Notes:**

- a. The TIME=1440 parameter on the execute statement in the JCL prevents the remote source-sharing server from timing out, regardless of the CPU time used. You can modify this parameter to your site's requirements.
- b. The server region size defined on the execute statement is 8 megabytes. This is the minimum recommended region size for the server.

2. Name the server:

Provide a unique 1- to 8-character name for the remote source-sharing server in the PARM= field on the execute statement. This name is required when configuring another server to link to this remote one. It is specified in the HCI\_SIT\_ENTRY parameter TPNAME.

3. Verify the CICS Abend-AID/FX server datasets:

The DD statements listed below point to datasets created during CSS installation. Verify them now to make sure they are correct.

```
//STEPLIB DD DISP=SHR,DSN=compware.kmp510.SKMPAUTH
// DD DISP=SHR,DSN=compware.kfx440.SKFXAUTH
//FDBDRPL DD DISP=SHR,DSN=compware.kmp510.SKMPLoad
// DD DISP=SHR,DSN=compware.kfx440.SKFXLOAD
// DD DISP=SHR,DSN=compware.lcxnnn.SLCXLOAD
```

## 4. Verify the server parameter dataset:

Ensure that the FDBDPARM DD statement points to the dataset and member containing the parameters that you specify for this server in “Step 3. Configure the Server Parameters” on page 6-12, as follows:

```
//FDBDPARM DD DISP=SHR,DSN=server.parm.member.location(member)
```

**Note:** The FDBDPARM DD statement generated into the sample viewing server JCL (\$13SRVR) points to the CICS Abend-AID/FX installation sample library (TKFXSAMP) member \$12VTAM.

## 5. Verify the server log destination:

The FDBDLOG DD statement specifies a SYSOUT dataset for informational and error messages. Compuware recommends that users check this file if they have difficulty using DVS.

```
//FDBDLOG DD SYSOUT=*
```

## 6. Verify the ABNLIGNR DD statement :

Ensure that the server JCL contains an ABNLIGNR DD DUMMY statement so that CICS Abend-AID/FX does not process server dumps.

## 7. Copy the PROC:

If you’re running the remote server as a started task, copy the PROC to a library in your system PROCLIB concatenation. If you’re running it as a job, disregard this step.

## 8. Add START command:

If you’re running the remote server as a started task, add a START command for this PROC to COMMNDxx of SYS1.PARMLIB. If you’re running it as a job, disregard this step.

## Step 2. Configure the LU 6.2 Application ID

**Note:** If this remote source-sharing server is an existing CICS Abend-AID/FX viewing server and an LU 6.2 application ID is already configured, skip this step and proceed to “Step 3. Configure the Server Parameters” on page 6-12.

Define an LU 6.2 application ID (APPLID) for each server before you configure the server’s parameters. The APPLID must be defined in the SYS1.VTAMLST library of the system on which you plan to run the CICS Abend-AID/FX server.

Sample parameters for the LU 6.2 APPLID shown here are in member SAMPLU62 of the installation sample library (TKFXSAMP):

### LU 6.2 APPLID sample

```
ADVFLU62 APPL ACBNAME=ADVFLU62,APPC=YES,ATNLOSS=ALL,
AUTH=(ACQ),AUTOSES=10,DDRAINL=ALLOW,
DLOGMOD=ADVFLGDM,DMINWNL=10,DMINWNR=10,
DRESPL=ALLOW,DSESLIM=256,EAS=256,
LIMSINT=1440,LMDENT=256,MODETAB=CWHCIMOD,
OPERCNOS=ALLOW,PARSESS=YES,SECACPT=AVPV,
SYNCLVL=CONFIRM,VERIFY=NONE,VPACING=7,
SRBEXIT=YES
```

### Notes:

- a. If you are using VTAM version 3.3 and less current:
  - Specify **SECACPT=ALREADYV** instead of **SECACPT=AVPV**.

- The LIMQSINT and OPERCNOS parameters are not supported.
- b. Ensure that the VTAM node associated with the APPLID is activated and the cross-domain definitions are correct.

## Assemble and Link-Edit Logon Mode Table

Assemble and link-edit a logon mode table entry to support LU 6.2 communications. Figure 6-2 on page 6-7 shows the required bind image for the logmode table. This logmode table is provided in installation sample library (TKFXSAMP) member SAMPMOD.

The logon mode table member must be available in SYS1.VTAMLIB or a library in the SYS1.VTAMLIB concatenation.

## Step 3. Configure the Server Parameters

**Note:** If this remote source-sharing server is an existing CICS Abend-AID/FX viewing server, add any of the following parameters that are not already specified for this server in the startup parameters.

The parameters that control server configuration are specified in a member or file that is pointed to by the server JCL FDBDPARM DD statement. The installation sample library (TKFXSAMP) contains two sample server parameter members:

- **\$12ISPF:** A sample configuration to support TSO/ISPF viewing access and/or CICS *local* viewing access.
- **\$12VTAM:** A sample configuration to support VTAM viewing access. This is the default parameter member on the FDBDPARM DD statement in the default server JCL.

**Note:** The server parameter member does not have to reside in the installation sample library (TKFXSAMP). You can use any PDS member or sequential file for the parameters, as long as the dataset has the following attributes:

```
LRECL=80
BLKSIZE=any multiple of 80
RECFM=FB
```

If you rename/move the server parameter member, ensure that you include the new name and its location in the //FDBDPARM DD statement verified in the server JCL in “Verify the server parameter dataset:” on page 6-11.

If you run the server as a job, you can also specify the server configuration parameters as SYSIN in the server JCL by specifying //FDBDPARM DD \* followed by the parameters.

## Parameter Rules

Refer to “Parameter Rules” on page 7-6 for the rules governing parameter specifications.

## Required Parameters

The parameters listed below must always be specified.

### MVS\_SUBSYSTEM

Specifies the subsystem name to be assigned to the CICS Abend-AID/FX remote source-sharing server and whether it is an owner or a user of the subsystem. The server uses the subsystem to handle task and address space termination to ensure proper session outage notification.

*CICS Abend-AID/FX DVS requires only one MVS subsystem per MVS image, regardless of how many servers you are running on the image.* To share a single subsystem, one server must be defined as the subsystem “owner,” and the other servers on the image are defined as “users” of the subsystem. The server that “owns” the MVS subsystem must be active to process communication requests for servers that are “users” of the subsystem.

As an alternative, you can specify a unique MVS subsystem name for each server on the MVS image. In this case, each server is the “owner” of its own subsystem, and has no dependencies on the other servers for communication.

For ease of configuration, Compuware recommends that you define each server on an MVS image as the “owner” of a subsystem, and that you do not share a subsystem between servers.

### **MVS\_SUBSYSTEM parameter**

```
MVS_SUBSYSTEM=(name,OWNER|USER)
```

#### **name:**

Specifies the 4-character MVS subsystem name. The server dynamically starts the subsystem, so you *must not* add an entry for it to SYS1.PARMLIB(IEFSSNxx). The name must be unique on this MVS image in these situations:

- If this is the only CICS Abend-AID/FX server on the MVS image.
- If you have multiple CICS Abend-AID/FX servers on the MVS image that do not share the subsystem.

The name must be the same for multiple servers on this MVS image if they share the subsystem, but unique among any non-CICS Abend-AID/FX subsystems.

#### **OWNER:**

Default. This server owns the MVS subsystem, and therefore processes communication requests for all servers defined on this MVS image that use this subsystem. The “owning” server must be active to process communication requests for any “user” server.

#### **Notes:**

- a. You must specify OWNER for the first server you configure.
- b. If you are not sharing the MVS subsystem between servers, you must specify OWNER for each server.
- c. The LU 6.2 APPLID you specify should be for the server that “owns” the CICS Abend-AID/FX subsystem.

#### **USER:**

The subsystem specified by Name is owned by another server, on this MVS image, and this server is a user of that subsystem. The “owning” server must be active to process communication requests from this server.

### **LU62\_APPLID**

Specifies the 1- to 8-character VTAM LU 6.2 APPLID defined for this server. The parameter requirements were shown in “Step 2. Configure the LU 6.2 Application ID” on page 6-11.

The APPLID you specify must be included in SYS1.VTAMLST. The VTAM node associated with the APPLID must be active.

### **LOGMODE**

Specifies the 1- to 8-character VTAM logon mode table entry associated with conversations using this server. “Assemble and Link-Edit Logon Mode Table” on page 6-12 describes the requirements for the logmode name.

There is no default value for this parameter, but the value used in all distributed CICS Abend-AID/FX examples is ADVFLOGM.

#### **DISTRIBUTED\_VIEWING\_FACILITY**

Turns the CICS Abend-AID/FX server DVS capability on or off. Set this parameter to **YES** on only remote source-sharing servers to make DVS operable.

**NO:** Default. Distributed viewing disabled.

**YES:** Distributed viewing enabled.

#### **EXTERNAL\_SECURITY\_ENABLED**

Activates password checking when logging onto a remote MVS system through the CICS Abend-AID/FX remote source-sharing server. Set this to **YES** to specify that the CICS Abend-AID/FX remote server calls external security packages before accessing its transaction database or source listing files.

**NO:** Default. Password checking disabled.

**YES:** Password checking enabled.

#### **HCI\_SIT\_ENTRY**

Precedes a parameter set that defines a communication link to a remote source-sharing server. Conclude the parameter set with **END**. Each **HCI\_SIT\_ENTRY** set defines a single Side Information Table Entry and a single communication link to a single remote source-sharing server. It is required for connecting from the local viewing server to the remote source-sharing server. It plays no part in connecting from the remote server to the local one. Create as many **HCI\_SIT\_ENTRY** sets as needed. The following parameters comprise a set.

##### **HCI\_SIT\_ENTRY parameter set**

```
HCI_SIT_ENTRY
SYMNAME=xxxxxxxxx
TPNAME=xxxxxxxxx
PLUNAME=xxxxxxxxx
LUTYPE=LU62
MODNAME=xxxxxxxxx
MAXS=nnn
MINCL=nnn
MINCW=nnn
END
```

#### **SYMNAME**

Specifies the 1- to 8-character symbolic name of the remote source-sharing server. A user enters this name in the Remote Server field of the CICS Abend-AID/FX Source Directory or in the Server field of the Remote Dataset Access pop-up window on the CICS Abend-AID/FX Directory to access a dataset on that system.

#### **TPNAME**

Specifies the 1- to 8-character name of the remote source-sharing server. This is the server name that was specified in the parameter on the EXEC card of the remote source-sharing server.

#### **PLUNAME**

Identifies the remote LU 6.2 partner. This is the 8-character LU 6.2 APPLID of the CICS Abend-AID/FX remote source-sharing server.

**LUTYPE**

Specifies the communications type. LU 6.2 is the only option.

**LU62** LU62 must be used, specified in 4 characters.

**MODNAME**

Specifies the 1- to 8-character logon mode table entry that defines the sessions between this CICS Abend-AID/FX local viewing server and the remote source-sharing server. This is the name that was specified for the DLOGMOD parameter when defining the LU 6.2 application ID for this server.

**MAXS**

Specifies the maximum number of sessions that can exist between the CICS Abend-AID/FX local viewing server and the remote source-sharing server. Compuware recommends that you specify **0** here as well as at MINCW and MINCL. VTAM then applies values to these parameters from the APPL definition statement in the VTAMLST for this server.

**0 to 250:** Maximum number of sessions. Installation default: **128**.

**MINCL**

Specifies the minimum number of contention loser sessions that can exist between the CICS Abend-AID/FX local viewing server and the remote source-sharing server. Compuware recommends that you specify **0** here as well as at MAXS and MINCW. VTAM then applies values to these parameters from the APPL definition statement in the VTAMLST for this server.

**0 to 250:** Minimum number of sessions. Installation default: **0**.

**MINCW**

Specifies the minimum number of contention winner sessions that can exist between the CICS Abend-AID/FX local viewing server and the remote source-sharing server. Compuware recommends that you specify **0** here as well as at MAXS and MINCL. VTAM then applies values to these parameters from the APPL definition statement in the VTAMLST for this server.

**0 to 255:** Minimum number of sessions. Installation default: **1**.

**END**

Concludes the HCL\_SIT\_ENTRY parameter set.

## Optional Tuning Parameters

The optional parameters listed below are used to tune the server processing. If a parameter is not specified, the default value is used.

**MESSAGES**

Specifies whether all server messages are produced. Messages are written to the server log file specified by the FDBDLOG DD statement in the server JCL.

**YES:** Default. Logs both error and informational messages.

**NO:** Logs only error messages.

**NON\_SWAPPABLE**

Specifies whether the server address space is non-swappable.

**YES:** Default. The server address space cannot be swapped.

**NO:** The server address space can be swapped.

**Notes:**

- a. If you specified the `MVS_SUBSYSTEM` parameter with the `OWNER` subparameter for this server, the server address space is made non-swappable, and this parameter is ignored. This is because the MVS subsystem uses cross-memory services to communicate and, therefore, the server address space must always be available.
- b. Specifying `NO` can result in longer response time for CICS Abend-AID/FX users.

**SERVER\_TIMEOUT**

Specifies the time, in minutes, that the server remains active without any user activity. When the specified interval is reached, the server shuts down.

**1 to 1,440:** Time in minutes. Installation default: **1,440**.

**Note:** The server JCL is always generated with a `TIME=1440` parameter on the job card, regardless of what you specify for this parameter. `TIME=1440` on the job card refers to the CPU time-out value for the job; 1440 means the server never times out, regardless of how much CPU time it uses. The `SERVER_TIMEOUT` value controls how long the server remains active if there is no user activity.

**SERVER\_DYNAMIC\_SYSOUT**

Specifies where the CICS Abend-AID/FX server writes dumps of the server address space in case of an error. Compuware recommends using the default setting.

**SVCDUMP:** Default. Causes dumps of the server address space to be written to the `SYS1.DUMPxx` datasets.

**class:** Specifies a valid `SYSOUT` class — for example, `*` (asterisk).

## Step 4. Start the Server

Start the remote source-sharing server by the method applicable to its JCL configuration:

- Start the `PROC` that initiates the server.
- Submit the server job.

If you are running the server as a started task, as Compuware recommends, in step 8 on page 6-11 you added a `START` command for the server to `SYS1.PARMLIB(COMMNDxx)`. This automatically starts and makes the server available after a system IPL.

**Note:** If you run the server as a job and a user is logged onto it when the server stops or is shutdown, you may get one of the following messages:

```
IEF355A  INITIATOR TERMINATED, RESTART INITIATOR.
IEF352I  ADDRESS SPACE UNAVAILABLE.
```

This condition is normal and occurs because the server is using cross-memory services. Running the server as a started task avoids this condition.

You can test DVS by accessing transaction entries with source listing files that reside on configured CICS Abend-AID/FX remote source-sharing servers. Note that the servers must be configured for DVS.

Refer to Appendix A, “Controlling the CICS Abend-AID/FX Viewing Server and TDCAS” for more information about starting, stopping, and monitoring the remote source-sharing server. The *CICS Abend-AID/FX User’s Guide* describes logging onto the server.

**Next:**

**Continue now with Chapter 7, “Viewing Server Configuration”.**



## Chapter 7.

# Viewing Server Configuration

This chapter describes the steps in creating CICS Abend-AID/FX viewing servers.

A viewing server is an MVS address space. The viewing server does not need to be active to *take* dumps, but it must be active to view any dump information or to import region dumps. Compuware recommends that you run the viewing server as a started task that is always available.

Your site must have at least one CICS Abend-AID/FX viewing server, although you can run multiple viewing servers if it better suits your needs. You must repeat the steps in this chapter for each viewing server you want to create. For the initial installation, Compuware recommends you create only one viewing server. You can easily add additional viewing servers after you are more familiar with CICS Abend-AID/FX. Appendix C, “Site Configuration Examples” provides examples of CICS Abend-AID/FX site configurations with more than one viewing server.

Each viewing server has datasets that it “owns.” These datasets cannot be shared between servers. The viewing server datasets are described in “Step 1. Allocate the Viewing Server Datasets”.

The following steps are described in this chapter:

1. Allocate the viewing server datasets.
2. Specify the viewing server configuration parameters (\$12xxxx).
3. Modify the viewing server JCL (\$13SRVR).
4. Verify viewing server external security authority.
5. Start the viewing server.

---

## Step 1. Allocate the Viewing Server Datasets

Each viewing server has datasets that it “owns.” You must allocate one of each of the datasets described in this section for each viewing server you create (allocating an IPCS directory is optional). **You cannot share these datasets with other viewing servers.**

The viewing server datasets are:

- Dump information file
- IPCS directory (optional)
- Persistent data file
- Server work file
- Shared directory
- Transaction database(s).

“System Files and Datasets” on page 1-1 contains a description of each file and its function. Refer to “DASD Requirements for the CICS Abend-AID/FX Files” on page 2-8 for information on determining appropriate space allocations for these files at your site.

### Notes:

1. The viewing server datasets are compatible with earlier releases of CICS Abend-AID/FX, so you do not have to redefine or upgrade them if you are migrating from a prior release. For specific considerations, refer to the appropriate section in “Migration Considerations” on page 3-3 for the release from which you’re migrating.

2. If you're using a VSAM buffer management package, exclude the above CICS Abend-AID/FX viewing server datasets so they're not managed by the package.

The jobs to allocate these datasets are located in the installation sample library (TKFXSAMP) in a partially tailored format. The viewing server dataset names were not tailored when the allocation jobs were generated, because your site may have multiple viewing servers and therefore multiple sets of the viewing server datasets. However, the CICS Abend-AID/FX product dataset names (customization file, and so forth) were generated into the sample JCL.

**Note:** There is a one- to eight-character viewing server name that you specify as a parameter on the EXEC statement of the viewing server JCL later in the viewing server creation process (see "Step 3c. Specify the Viewing Server Name" on page 7-18). Compuware recommends that you include the viewing server name you choose as one of the qualifiers of the names you specify for each of the viewing server datasets. The sample dataset allocation jobs in the installation sample library (TKFXSAMP) use the literal SERVER1 as the third qualifier in the viewing server dataset names. For example:

```
COMPWARE.CICSAAFX.SERVER1.DUMPINFO
```

## Step 1a. Allocate the Dump Information File (\$11INFO)

The dump information file is a VSAM KSDS. You must allocate one dump information file per CICS Abend-AID/FX viewing server, and you cannot share dump information files between viewing servers.

Member \$11INFO in the installation sample library (TKFXSAMP) a job to allocate the dump information file using IDCAMS. The job then initializes the file using a CICS Abend-AID/FX utility. Before you run \$11INFO, make the following modifications:

1. Change each occurrence of the file dataset name to the name you choose for the file.
2. Verify that the volume serial number or SMS storage and management class conform to your site standard.
3. Verify that the STEPLIB DD statement points to a concatenation of your Compuware Base Services/HCI and CICS Abend-AID/FX target nonauthorized load libraries (SKMPLOAD and SKFXLOAD), in that order.

**Note:** If the viewing server associated with this dump information file is processing dumps from multiple MVS images, review the information in "GRS Considerations" on page 2-12.

## Step 1b. Allocate the Optional IPCS Directory (\$11IPCS)

**Note:** The IPCS directory is an optional VSAM KSDS. If you want to be able to execute IPCS commands when logged onto this CICS Abend-AID/FX viewing server, you must allocate the IPCS directory specifically for your operating system.

The IPCS directory used by CICS Abend-AID/FX is a standard IPCS directory. There is one IPCS directory per CICS Abend-AID/FX viewing server, and you cannot share IPCS directories between viewing servers. Further, do not access the viewing server's IPCS directory outside of CICS Abend-AID/FX.

Member \$11IPCS in the installation sample library (TKFXSAMP) contains a job to allocate the IPCS directory using IDCAMS. The job then initializes the file using a CICS Abend-AID/FX utility. Before you run \$11IPCS, make the following modifications:

1. Change each occurrence of the the IPCS directory dataset name to the name you choose for the file.

2. Verify that the volume serial number or SMS storage and management class conform to your site standard.
3. Verify that the STEPLIB DD statement points to a concatenation of your Compuware Base Services/HCI and CICS Abend-AID/FX target nonauthorized load libraries (SKMPLOAD and SKFXLOAD), in that order.

## Step 1c. Allocate the Persistent Data File (\$11PDSM)

The persistent data (PDSM) file is a VSAM RRDS. You must allocate one PDSM file per CICS Abend-AID/FX viewing server, and you cannot share PDSM files between viewing servers.

Member \$11PDSM in the installation sample library (TKFXSAMP) contains a job to allocate the PDSM file using IDCAMS. The job then initializes the file using a CICS Abend-AID/FX utility. Before you run \$11PDSM, make the following modifications:

1. Change each occurrence of the the PDSM file dataset name to the name you choose for the file. The dataset name is specified four times in the job.
2. Verify that the volume serial number or SMS storage and management class conform to your site standard.
3. Verify that the STEPLIB DD statement points to your Compuware Base Services/HCI target nonauthorized load library (SKMPLOAD).

## Step 1d. Allocate the Shared Directory (\$11SDIR)

The shared directory is a VSAM RRDS that is allocated and formatted using a Compuware Shared Services (CSS) utility and accessed using a proprietary CSS access method (DDIO). You must allocate one shared directory per CICS Abend-AID/FX viewing server, and you cannot share shared directories between viewing servers.

Member \$11SDIR in the installation sample library (TKFXSAMP) contains a job to allocate and format the shared directory using the CSS program CWFXSDDUT. The default formatting values in member \$11SDIR should be adequate for the shared directory, and Compuware recommends you use the defaults when you allocate and format the shared directory for the first viewing server. If you want to change the values later, or if you need more information about the CWFXSDDUT utility, refer to the *Compuware Shared Services User/Reference Guide*.

### CAUTION:

1. **If you rename a transaction database, you must first detach and rename it, and then attach the renamed transaction database to the shared directory.**
2. **Do *not* use IDCAMS DELETE until after you run a CWFXSDDUT DETACH.**

Before you run \$11SDIR, make the following modifications:

1. Change the shared directory dataset name specified by the DIRDSN parameter to the name you choose for the file.
2. Verify that the volume serial number (DIRVOL parameter) or SMS storage and management class (STORCLAS and MGMTCLAS parameters) conform to your site standard.
3. Verify that the STEPLIB DD statement points to a concatenation of the CSS load library (SLCXLOAD), and the Compuware Base Services/HCI and CICS Abend-AID/FX target nonauthorized load libraries (SKMPLOAD and SKFXLOAD), in that order.
4. Verify that the FDBDCUST DD statement points to the customization file for this CICS Abend-AID/FX release.

**Note:** If the viewing server associated with this shared directory is processing dumps from multiple MVS images, review the information in “GRS Considerations” on page 2-12.

## Step 1e. Allocate a Transaction Database (\$11TRPT)

Transaction databases are VSAM RRDS files that contain the transaction dump information captured and analyzed by CICS Abend-AID/FX. Like the shared directory, transaction databases are allocated and formatted using a Compuware Shared Services (CSS) utility and accessed using a proprietary CSS access method (DDIO).

transaction databases are attached to and managed by a single shared directory. One shared directory can have many transaction databases attached to it, but a given transaction database can be attached to only one shared directory. You specify the shared directory to attach a transaction database to when you allocate the transaction database.

### Notes:

1. **Repeat this step for each transaction database you require.** Compuware recommends that you allocate at least two transaction databases per viewing server. This helps ensure that there is always a usable database in the unlikely event a database becomes corrupted.

There is no limit to the number of transaction databases you can allocate and attach to a shared directory. You may want to start with two databases, and add additional databases later if you find it necessary.

2. Newly allocated/attached transaction databases are not available to a CICS region until you stop and restart CICS Abend-AID/FX in the CICS region.

Member \$11TRPT in the installation sample library (TKFXSAMP) contains a job to allocate and format a transaction database using the CSS utility CWFXSUT. \$11TRPT also attaches the transaction database to a shared directory. The default formatting values in member \$11TRPT should be adequate for the transaction database. Compuware recommends you use the defaults when you allocate and format the first transaction database for the first viewing server. If you want to change the values later, or if you need more information about the CWFXSUT utility, refer to the *Compuware Shared Services User/Reference Guide*.

### CAUTION:

**If you rename a transaction database, you must detach and rename it, and then attach it to the shared directory. Do *not* rename the database until after you run the CWFXSUT DETACH. You must stop CICS Abend-AID/FX in the CICS region prior to the DETACH. After you rename the database, attach it to the shared directory and restart CICS Abend-AID/FX.**

Before you run \$11TRPT, make the following modifications:

1. Change the transaction database name specified by the DSN parameter to the name you choose for the file.
2. Change the shared directory dataset specified by the DIRDSN parameter to point to the shared directory you allocated for this viewing server.
3. Verify that the volume serial number (VOL parameter) or SMS storage and management class (STORCLAS and MGMTCLAS parameters) conform to your site standard.
4. Verify that the STEPLIB DD statement points to a concatenation of the CSS load library (SLCXLOAD), and the Compuware Base Services/HCI and CICS Abend-AID/FX target nonauthorized load libraries (SKMPLOAD and SKFXLOAD), in that order.
5. Verify that the FDBDCUST DD statement points to the customization file for this CICS Abend-AID/FX release.

**Note:** If the viewing server associated with this transaction database is processing dumps from multiple MVS images, review the information in “GRS Considerations” on page 2-12.

## Step 1f. Allocate the Viewing Server Work File (\$11WORK)

The viewing server work file is a VSAM RRDS. You must allocate one viewing server work file per CICS Abend-AID/FX server, and you cannot share viewing server work files between viewing servers.

Member \$11WORK in the installation sample library (TKFXSAMP) contains a job to allocate the viewing server work file using IDCAMS. Before you run \$11WORK, make the following modifications:

1. Change each occurrence of the the viewing server work file dataset name to the name you choose for the file.
2. Verify that the volume serial number or SMS storage and management class conform to your site standard.

---

## Step 2. Specify the Viewing Server Configuration Parameters (\$12xxxx)

The parameters that control viewing server configuration are specified in a member or file that is pointed to by the viewing server JCL FDBDPARM DD statement. The installation sample library (TKFXSAMP) contains two sample viewing server parameter members:

- **\$12ISPF:** A sample configuration to support TSO/ISPF viewing access and/or CICS *local* viewing access.
- **\$12VTAM:** A sample configuration to support VTAM viewing access. This is the default parameter member on the FDBDPARM DD statement in the default server JCL (see “Step 3e. Specify the Viewing Server Parameter Dataset” on page 7-19).

Choose the sample member for the viewing access support you are configuring for the viewing server and modify it according to the instructions in this section. You may want to create a copy of the member and modify it, so you have a template to refer to later.

Refer to Chapter 6, “Installing Viewing Access” for information about the viewing access methods and which viewing server configuration parameters are required for the method(s) you choose.

### Notes:

1. Both sample members contain every viewing server configuration parameter, but the parameters that do not pertain to the viewing access method (either TSO/ISPF and/or CICS local, or VTAM) are commented out. You can configure any combination of viewing access methods by uncommenting and specifying the parameters appropriate to the viewing method. For example, you can configure both VTAM, and TSO/ISPF and/or CICS local viewing access using \$12ISPF by uncommenting and specifying the additional parameters required to support VTAM viewing access.
2. The viewing server parameter member does not have to reside in the installation sample library (TKFXSAMP). You can use any PDS member or sequential file for the parameters, provided the dataset has the following attributes:

```
LRECL=80
BLKSIZE=any multiple of 80
RECFM=FB
```

You can also specify the viewing server configuration parameters as SYSIN in the viewing server JCL by specifying //FDBDPARM DD \* followed by the parameters.

This section describes specifying the viewing server parameters, and contains subsections that identify which parameters must be specified for each of the following configurations:

- Required parameters that must always be specified
- Parameters required to support VTAM or CICS remote viewing access
- Parameter required to support TSO/ISPF or CICS viewing access
- Parameters required to support CICS remote viewing access
- Parameters to enable external security for CICS Abend-AID/FX
- Optional tuning parameters.

## Parameter Rules

Specify the parameters discussed in each of the following sections that pertain to your viewing server configuration. The following rules apply for all parameters:

1. Begin the parameter name in column one, and code it exactly as indicated. Abbreviations for the parameters are not allowed.
2. Specify only one parameter per line.
3. Immediately follow the parameter name by an equal sign (=), and immediately follow the equal sign by the parameter value. No intervening blanks are allowed. For example:

```
WORK_UNIT=SYSDA
```

4. If you do not specify a parameter and there is a default value for the parameter, the default is used.
5. You can specify parameters in any order.
6. Indicate comments by an asterisk (\*) in column one.
7. If a parameter has multiple operands, make sure that you enclose the values you specify in parentheses, as shown in the documentation for the parameter.

You can specify each operand on a separate line. Follow all but the final operand with a comma, and ensure that you put the closing parenthesis after the final operand. Begin the operand on each new line in column one.

8. If you specify a parameter more than once, CICS Abend-AID/FX uses the value specified for the *last* occurrence of the parameter.

When you have specified all applicable parameters, save the parameter member. “Step 3e. Specify the Viewing Server Parameter Dataset” on page 7-19 describes identifying the parameter member in the viewing server JCL.

**Note:** If you add or change a parameter while the viewing server is active, you must stop and restart the viewing server for the new value to take effect.

## Required Parameters That Must Always Be Specified

The parameters listed below must always be specified.

### SERVER\_DESCRIPTION="description"

Specifies a 1- to 32-character description of the viewing server. The description must be enclosed in double quotation marks. The viewing server description is displayed on the Server Selection screen when users access CICS Abend-AID/FX from ISPF.

The default value is the name specified for the viewing server on the parameter value of the viewing server JCL execute statement (see "Step 3e. Specify the Viewing Server Parameter Dataset" on page 7-19).

### WORK\_UNIT=unitname

Specifies a one- to eight-character esoteric unit name used to allocate the temporary datasets used by the viewing server and by the IPCS command facility if IPCS support is enabled. The default is SYSDA.

### PRINT\_FILE\_UNIT=(NONSMS|sms,UNIT|storage\_class,management\_class)

Specifies whether the datasets created by the CICS Abend-AID/FX print function are managed by SMS, and where they are allocated. The print function is described in the *CICS Abend-AID/FX User's Guide*. If you do not specify this parameter, the CICS Abend-AID/FX print function allocates datasets that are not managed by SMS, using the generic DASD unit defined at your site (for example, SYSDA or SYSALLDA).

#### NONSMS,UNIT

The datasets allocated by the print function are not managed by SMS. If you specify **NONSMS**, you must also specify a unit. For example:

```
PRINT_FILE_UNIT=(NONSMS,3390)
```

#### SMS,STORAGE\_CLASS,MANAGEMENT\_CLASS

The datasets allocated by the print function are managed by SMS. If you specify **SMS**, you must also specify the SMS storage class and management class to use for allocating the CICS Abend-AID/FX datasets. For example:

```
PRINT_FILE_UNIT=(SMS,STANDARD,STANDARD)
```

**Note:** If you specify **SMS** and want to release unused space, Compuware recommends that you specify **Partial Release=Yes** in the management class. Doing so releases unused space during the space management cycle.

## Parameters Required to Support VTAM or CICS Remote Viewing Access

The parameters listed below must be specified if you are configuring this viewing server for VTAM or CICS remote viewing access.

### LU2\_APPLID=applid

Specifies the one- to eight-character VTAM LU 2 APPLID defined for use by this viewing server to support native VTAM and CICS remote viewing access. "Configuring VTAM Access" on page 6-2 and "Installing CICS Remote Viewing Access" on page 6-6 describe the requirements for the LU 2 APPLID.

There is no default value for this parameter.

**Note:** This value must be a different LU2 APPLID than the one used for the transaction dump capture address space (TDCAS).

The APPLID must be included in SYS1.VTAMLST, and the VTAM node associated with the APPLID must be active to use VTAM and/or CICS remote viewing access.

**VTAM\_SUBTASKS=number**

Specifies the number of subtasks used by the viewing server to process requests from the VTAM and CICS viewing access methods. Each VTAM subtask is in use only while a user request is processed, and a single VTAM subtask can service multiple users.

Valid values are 1 through 32. The default value is 3, which should be adequate for normal use. If you frequently use the IPCS command facility, the FIND command in the memory display, or the MATCH command from either the VTAM or CICS remote viewing access methods, you can increase the number of VTAM subtasks to increase throughput.

Compuware recommends that, if you need to increase the number of VTAM subtasks, you do so by one until you reach an acceptable performance level. This is because each subtask requires storage in the viewing server address space.

**Note:** This parameter is ignored if you do not specify the LU2\_APPLID parameter.

## Parameter Required to Support TSO/ISPF or CICS Viewing Access

The parameter described below must be specified if you are configuring this viewing server for TSO/ISPF or CICS viewing access (local or remote).

**MVS\_SUBSYSTEM=(name,OWNER|user)**

Specifies the name of the CICS Abend-AID/FX MVS viewing subsystem and whether this viewing server is an “owner” or a “user” of the subsystem. CICS Abend-AID/FX uses the viewing subsystem to handle task and address space termination to ensure proper session outage notification.

*CICS Abend-AID/FX requires only one MVS viewing subsystem per MVS image, regardless of how many viewing servers you are running on the image.* To share a single subsystem, one viewing server must be defined as the subsystem “owner,” and the other viewing servers on the image are defined as “users” of the subsystem. The viewing server that “owns” the MVS subsystem must be active to process communication requests for viewing servers that are “users” of the subsystem.

**CAUTION:**

**The viewing subsystem is not the same as the transaction dump capture subsystem. You cannot share the subsystem between a viewing server and a transaction dump capture address space (TDCAS). Refer to “Step 2b. Specify the Subsystem and TDCAS Names” on page 8-6 for information about specifying the transaction dump capture subsystem name.**

As an alternative, you can specify a unique MVS subsystem name for each viewing server on the MVS image. In this case, each viewing server is the “owner” of its own subsystem, and has no dependencies on the other viewing servers for communication.

For ease of configuration, Compuware recommends that you define each viewing server on an MVS image as the “owner” of a subsystem, and that you do not share a subsystem between viewing servers. “Sharing a CICS Abend-AID/FX MVS Viewing Subsystem Between Viewing Servers” on page C-14 provides an example of configuring CICS Abend-AID/FX viewing servers to share a subsystem.

The name value is a four-character MVS subsystem name. CICS Abend-AID/FX dynamically starts the subsystem, so you must not add an entry for it to SYS1.PARMLIB(IEFSSNxx). The name you specify depends on how this viewing server is using the subsystem, as follows:

- If this is the only viewing server on the MVS image, the name you specify must be unique on this MVS image.

- If you have multiple viewing servers on the MVS image but are not sharing the subsystem between them, the name you specify must be unique on this MVS image.
- If you are sharing the subsystem between multiple viewing servers on this MVS image, the name you specify must be the same for all the viewing servers on the image. The name you specify must not be used by any other non-CICS Abend-AID/FX viewing subsystem on this MVS image.

The second subparameter (OWNER or USER) specifies whether this viewing server is the *owner* or a *user* of the subsystem. The default is OWNER. If you are sharing the subsystem between viewing servers, one server must be designated as the “owner” and all others must be “users.” Valid values for this subparameter are:

#### OWNER

This viewing server owns the MVS subsystem, and therefore handles processing communication requests for all viewing servers defined on this MVS image that are using this subsystem. The “owning” viewing server must be active to process communication requests for any “user” viewing server.

#### Notes:

1. You must specify OWNER for the first viewing server you configure.
2. If you are not sharing the MVS subsystem between viewing servers, you must specify OWNER for each viewing server.

#### USER

The subsystem specified by **name** is owned by another viewing server, on this MVS image, and this viewing server is a user of that subsystem. The “owning” viewing server must be active on the same MVS image as this “user” viewing server to use ISPF or CICS viewing access with the user viewing server.

## Parameters Required to Support CICS Remote Viewing Access

The parameters listed below must be specified if you are configuring this viewing server for CICS remote viewing access.

#### LU62\_APPLID=**applid**

Specifies the one- to eight-character VTAM LU 6.2 APPLID name defined for use by this viewing server to support CICS remote viewing access. “LU 6.2 APPLID” on page 6-6 describes the requirements for the LU 6.2 APPLID. There is no default value for this parameter.

The APPLID you specify must be included in SYS1.VTAMLST, and the VTAM node associated with the APPLID must be active to use CICS remote viewing access.

#### LOGMODE=**logmode**

Specifies the one- to eight-character VTAM logon mode table entry associated with conversations using this viewing server. “Step 2. Assemble and Link-Edit Logon Mode Table” on page 6-7 describes the requirements for the logmode name.

There is no default value for this parameter, but the value used in all distributed CICS Abend-AID/FX examples is CCFXLOGM. This parameter is ignored if you do not specify the LU62\_APPLID parameter.

## Parameters to Enable External Security for CICS Abend-AID/FX Viewing Servers

The parameters listed below control when CICS Abend-AID/FX makes external security calls to verify user access.

The viewing server itself runs using the authority of the individual who starts the viewing server address space. Chapter 11, “External Security Considerations” provides more information about how CICS Abend-AID/FX interfaces to external security managers, and the authority you must grant to the viewing server address space.

**Compuware strongly recommends you review the information in that chapter before specifying any external security viewing server configuration parameters to ensure you have a complete understanding of how CICS Abend-AID/FX interfaces to external security packages.**

#### EXTERNAL\_SECURITY\_ENABLED=NO|yes

Specifies whether CICS Abend-AID/FX makes calls to external security packages. You must specify **YES** for this parameter for any other EXTERNAL\_SECURITY\_\* parameter to be valid. The default value for this parameter is **NO**.

##### NO

CICS Abend-AID/FX external security is not enabled, and the following is in effect:

- No external security calls are issued.
- Users are not required to specify a user ID and password when they access CICS Abend-AID/FX.
- Access to region dump datasets, transaction databases, and source listing files is governed by the authority of the user ID that submitted the viewing server.

##### YES

CICS Abend-AID/FX external security checking is enabled, and CICS Abend-AID/FX requires users to specify a user ID and password when accessing CICS Abend-AID/FX under the following conditions:

- From VTAM.
- From CICS/MVS when the user was not signed onto CICS with CESN or CSSN *and* the CICS region does not have a default user ID specified.

Users who sign onto CICS with CESN or CSSN, or connect from a CICS region that has a default user ID specified, or log onto ISPF are not required to specify a user ID and password when they access CICS Abend-AID/FX.

In addition, dataset level checking (that is, verifying a user’s authority to access the required CICS Abend-AID/FX datasets), is enabled, and is controlled by the value you specify for the EXTERNAL\_SECURITY\_DATASET\_CHECK parameter. “Controlling User Access to CICS Abend-AID/FX Datasets” on page 11-10 describes the authority you must provide users to CICS Abend-AID/FX datasets if you specify **YES** for this parameter.

#### EXTERNAL\_SECURITY\_FUNCTION\_CHECK=NONE|(custom,dircmds,import,ipcs,shutdown,rex,logspool)

Specifies the functions for which CICS Abend-AID/FX makes calls to external security packages. Each subparameter identifies a function for which CICS Abend-AID/FX can potentially make external security calls. If you specify a subparameter for the EXTERNAL\_SECURITY\_FUNCTION\_CHECK parameter, CICS Abend-AID/FX will check the authority of each user who attempts that function. For example, if you specify **IMPORT**, external security calls are made each time a user attempts to import a dump to determine if the user has access to that function.

##### Notes:

- a. **You must write rules for your external security package to restrict these functions;** specifying a subparameter simply enables the exit point. Chapter 11, “External Security Considerations” contains more information about how CICS Abend-AID/FX uses external security packages.

- b. If you specify more than one value, enclose the values in parentheses and separate them by commas. For example:

```
EXTERNAL_SECURITY_FUNCTION_CHECK=(CUSTOM,SHUTDOWN)
```

- c. You must also specify **YES** for the `EXTERNAL_SECURITY_ENABLED` parameter for the `EXTERNAL_SECURITY_FUNCTION_CHECK` parameter to be valid.

To enable security checking for one or more of the resources described below, specify the resource name on the `EXTERNAL_SECURITY_FUNCTION_CHECK` parameter. You must code the appropriate rules for your external security package, as described in Chapter 11, “External Security Considerations”.

#### **NONE**

No external security calls are made to check access to CICS Abend-AID/FX functions. This value is the default.

#### **CUSTOM**

External security calls are made when a user logs onto CICS Abend-AID/FX to determine whether the user can access the online customization screens.

#### **DIRCMDS**

External security calls are made when a user issues a CICS Abend-AID/FX Directory line command (for example, to delete a dump), to determine whether the user has the appropriate authority. If you specify **CSS** for the `EXTERNAL_SECURITY_DDIO_METHOD` viewing server configuration parameter, the CSS security exit module `CWASSECU` is used to determine user authority to select and manipulate a transaction dump from the CICS Abend-AID/FX Directory.

#### **IMPORT**

External security calls are made when a user attempts to import a region dump using the Dataset Import screen, to determine whether the user has the appropriate authority.

**Note:** Users must additionally have **READ** authority to the dump dataset they are attempting to import.

#### **IPCS**

External security calls are made when a user attempts to issue IPCS commands using the CICS Abend-AID/FX IPCS Command Facility, to determine whether the user has the appropriate authority.

#### **SHUTDOWN**

External security calls are made when a user issues the viewing server **SHUTDOWN** command, to determine whether the user has the appropriate authority.

#### **REXX**

External security calls are made when a user attempts to invoke the CICS Abend-AID/FX REXX application program interface (API), to determine whether the user has the appropriate authority.

#### **LOGSPOOL**

External security calls are made when a user issues the viewing server **LOGSPOOL** command, to determine whether the user has the appropriate authority.

**EXTERNAL\_SECURITY\_RESOURCE\_CLASS=class**

Specifies the SAF resource class used by CICS Abend-AID/FX to restrict access to the CICS Abend-AID/FX functions specified by the EXTERNAL\_SECURITY\_FUNCTION\_CHECK parameter. Specify any valid, four- to eight-character SAF resource class for this parameter.

By default, CICS Abend-AID/FX uses *dataset class*, and generates pseudo dataset names that correspond to CICS Abend-AID/FX functions.

**Note:** You must also specify **YES** for the EXTERNAL\_SECURITY\_ENABLED parameter for the EXTERNAL\_SECURITY\_RESOURCE\_CLASS parameter to be valid.

Refer to “Controlling User Access to Specific Functions” on page 11-11 for more information about writing the rules to restrict access to CICS Abend-AID/FX functions.

**EXTERNAL\_SECURITY\_PREFIX=qualifier**

A one- to eight-character high-level qualifier(s) for the viewing server to use when issuing calls to external security packages. The viewing server uses the high-level qualifier you specify to generate a resource name to identify each function being checked, and you write rules for your external security package against the generated resource names. The functions checked are defined by the EXTERNAL\_SECURITY\_FUNCTION\_CHECK parameter.

**Notes:**

- a. This parameter is required if you specify the EXTERNAL\_SECURITY\_FUNCTION\_CHECK parameter.
- b. You must also specify **YES** for the EXTERNAL\_SECURITY\_ENABLED parameter for the EXTERNAL\_SECURITY\_PREFIX parameter to be valid.

The default value for this parameter is **COMPWARE**.

**EXTERNAL\_SECURITY\_DDIO\_METHOD=SAF|css**

**Note:** Please also review the description of the EXTERNAL\_SECURITY\_DATASET\_CHECK parameter (page 7-13). Both parameters control how the transaction database and source listing files are accessed, and one or both may be applicable to your site.

Specifies whether SAF security or the site-customized CSS security exit module CWASSECU should be used by CICS Abend-AID/FX when checking user access to issue CICS Abend-AID/FX directory line commands against transaction dumps and source listing files. This parameter is only referenced if you specify the DIRCMDS subparameter for the EXTERNAL\_SECURITY\_FUNCTION\_CHECK viewing server configuration parameter. Only files in DDIO format (that is, transaction databases and source listing files) are affected by this parameter.

**Notes:**

- a. This parameter was provided to facilitate conversion of CICS Abend-AID customers who wanted to continue to use module CWASSECU with CICS Abend-AID/FX. **However, Compuware recommends that you use SAF security to restrict access to CICS Abend-AID/FX files.**
- b. The CSS security exit module, CWASSECU, is described in the *Compuware Shared Services User/Reference Guide*.
- c. You must specify EXTERNAL\_SECURITY\_FUNCTION\_CHECK=DIRCMDS for the EXTERNAL\_SECURITY\_DDIO\_METHOD parameter to be valid.
- d. You must also specify **YES** for the EXTERNAL\_SECURITY\_ENABLED parameter for the EXTERNAL\_SECURITY\_DDIO\_METHOD parameter to be valid.

**SAF**

External security (SAF) calls are made by CICS Abend-AID/FX even if module CWASSECU is in the CSS load library. This is useful if you want CICS Abend-AID/FX to use SAF security, but you are sharing a CSS load library between Compuware products, and CWASSECU is in the CSS load library for use by another Compuware product. This value is the default.

**CSS**

Module CWASSECU is referenced to determine the access users have for selecting and manipulating transaction dumps. CWASSECU does not affect access to region dump datasets; SAF security is used to control this access.

**Note:** If you specify **CSS** and module CWASSECU is not in the CSS load library, the CICS Abend-AID/FX viewing server will not start.

**EXTERNAL\_SECURITY\_DATASET\_CHECK=(REGION,TRAN,SLS)|none**

Specifies whether user access to the following files should be checked on the dataset-level:

- Region dump datasets
- transaction databases
- Source listing files.

**Notes:**

- a. By default, dataset-level access to all three of the listed files is checked — the default value for this parameter is **REGION,TRAN,SLS**. You can remove any of the three values from the selection to avoid dataset-level checking for the file type.
- b. If you specify more than one value, enclose the values you specify in parentheses and separate them by commas. For example:

```
EXTERNAL_SECURITY_DATASET_CHECK=(TRAN,SLS)
```

- c. You must also specify **YES** for the **EXTERNAL\_SECURITY\_ENABLED** parameter for the **EXTERNAL\_SECURITY\_DATASET\_CHECK** parameter to be valid.
- d. For VTAM and CICS access, external security is always checked for print file dataset allocations. If external security is enabled, the security check is against the dataset name prefix if one is specified, first, in the user's profile (as described in the *CICS Abend-AID/FX User's Guide*) or, next, in the site user profile (as described in "Print dataset prefix for VTAM and CICS access" on page 17-6). If none is specified for either profile, the security check is against the default prefix, which is the user ID of the CICS Abend-AID/FX user. If external security is disabled, the security check is against the CICS Abend-AID/FX viewing server user ID.

**NONE**

User dataset-level access is not checked for the region dump datasets, transaction databases, or source listing files. If you specify **NONE**, access to these files is based on the authority of the *viewing server* to access these files, and not the authority of the user. For example, if a user does not have READ access to region dump dataset A.B.C, but the viewing server does have authority, the user is able to access the dataset from CICS Abend-AID/FX.

**REGION**

User dataset-level access to the region dump datasets is checked.

**TRAN**

User dataset-level access to the transaction databases is checked.

**SLS**

User dataset-level access to the source listing files is checked.

## Optional Tuning Parameters

The optional parameters listed below are used to tune the viewing server processing. If a parameter is not specified, the default value is used.

**MESSAGES=yes|NO**

Specifies whether all viewing server informational messages are produced. Viewing server informational messages are written to the viewing server log file specified by the FDBDLOG DD statement in the viewing server JCL.

The default value is **NO**. Basic viewing server informational messages are still written to the viewing server log, but many of the messages are suppressed.

**NON\_SWAPPABLE=YES|no**

Specifies whether the viewing server address space is non-swappable. The default value is **YES** (the viewing server address space is non-swappable).

**Notes:**

- a. If you specified the MVS\_SUBSYSTEM parameter with the OWNER subparameter for this viewing server, the viewing server address space is made non-swappable, and this parameter is ignored. This is because the MVS subsystem uses cross-memory services to communicate and, therefore, the viewing server address space must always be available.
- b. Specifying **NO** can result in longer response time for CICS Abend-AID/FX users.

**SERVER\_TIMEOUT=minutes**

Specifies the time, in minutes, that the viewing server remains active without any user activity. When the specified interval is reached, the viewing server shuts down.

Valid values are 1 through 1440. The default value is **1440**, which means that the server does not time out even if there is no user activity.

**Note:** The server JCL is always generated with a **TIME=1440** parameter on the job card, regardless of what you specify for this parameter. **TIME=1440** on the job card refers to the CPU time-out value for the job; **1440** means the viewing server never times out, regardless of how much CPU time it uses. The **SERVER\_TIMEOUT** value controls how long the viewing server remains active if there is no user activity.

**USER\_TIMEOUT=minutes**

For VTAM users, specifies the time, in minutes, that the viewing server retains an inactive user session before logging the user off. When the specified interval is reached, the user's CICS Abend-AID/FX session is terminated. This option does not affect TSO/ISPF or CICS users.

Valid values are 1 through 1440. The default value is **60** (sixty minutes). If you do not want user sessions to time out, specify **1440** for this parameter.

**TP\_SUBTASKS=number**

Specifies the number of transaction processor subtasks available for this viewing server. Transaction processor subtasks process *concurrent* requests to the viewing server.

Valid values are 5 through 32. The default value is **5**.

The default value should be adequate for most CICS Abend-AID/FX sites. Use the following formula if you want to change the value:

$$(\text{number of concurrent users} \div 10) + 5$$

#### **IMPORT\_SAMPLE\_RATE=minutes**

Specifies how often (in minutes), CICS Abend-AID/FX checks the dump information file for the presence of new *region* dumps to import. This parameter is applicable only if you are using the MVS post-dump exit or SVC 51 hook to automatically import region dumps (see Chapter 13, “Configuring Automatic Region Dump Processing” for more information).

Valid values are 1 through 999. The default value is 3 minutes. If you are not using either the MVS post dump exit or SVC 51 hook to automatically import region dumps, specify 999 for this parameter.

#### **SHARED\_DIRECTORY\_SAMPLE\_RATE=seconds**

Specifies how often CICS Abend-AID/FX scans the shared directory for updates (new dumps, deleted dumps, and so forth). The CICS Abend-AID/FX Summary and CICS Abend-AID/FX Directory displays are built from the information in the shared directory, and the information presented to a user on these displays reflects the contents of the shared directory the last time it was scanned. Therefore, specify a low number for this value if you want the CICS Abend-AID/FX Directory and CICS Abend-AID/FX Summary to display very recent changes.

**Note:** Increasing this value reduces CPU cycles used by the CICS Abend-AID/FX viewing server.

Valid values are 1 through 999. The default value is 5 seconds.

#### **SERVER\_DYNAMIC\_SYSOUT=SVCDUMP|class**

Specifies where CICS Abend-AID/FX writes dumps of the viewing server address space in case of an error. Valid values are:

##### **SVCDUMP**

Causes dumps of the viewing server address space to be written to the SYS1.DUMPxx datasets. Compuware recommends using this value, which is the default.

##### **class**

Specifies a valid SYSOUT class — for example, \* (asterisk).

#### **SUMMARY\_DUMP\_DATA=YES|no**

Specifies whether to merge SDUMP SUNDUMP records into a region dump when it is viewed through CICS Abend-AID/FX. SUNDUMP records are always included in CICS region dumps. This parameter indicates whether you want to include them when you view the dump through CICS Abend-AID/FX.

The default value is **YES**. Summary data is to be used for all dumps that are analyzed by and viewed with the viewing server.

#### **IPCSPR\_SUFFIX=suffix**

Specifies the suffix of the IPCSPRxx member in SYS1.PARMLIB. This parameter is required only if you are enabling the IPCS command facility for this viewing server, and only if you want CICS Abend-AID/FX to reference a session parameter member name other than IPCSPR00 in SYS1.PARMLIB. The value you specify must be numeric. The default value is **00**.

Refer to “Step 3i. IPCS Specifications” on page 7-20 for more information about how CICS Abend-AID/FX uses IPCSPRxx, and other options that are available to you for specifying a session parameter member.

**MANAGEMENT\_REPORTING=NO|yes**

Specifies whether to enable Abend-AID Fault Manager. Abend-AID Fault Manager is Compuware's fault management tool that captures CICS Abend-AID/FX fault data to a reporting database that users access via Windows NT or 2000, and/or the Internet. If your site is licensed for and has installed this product, specify **YES**. The default is **NO**. If your site plans to use Fault Manager to view CICS Abend-AID/FX diagnostics via the Internet, refer to "Parameters Required to Support the Fault Manager Web Browser Interface" below.

Refer to the Abend-AID Fault Manager installation guide for more information.

**TRACE=size**

Specifies the size of the internal trace buffer in K-bytes. Valid values are 256 through 32768. The default value is 1024.

## Parameters Required to Support the Fault Manager Web Browser Interface

The following parameters are required by CICS Abend-AID/FX to use the Fault Manager web browser interface.

**HTTP\_ENABLE=NO|yes**

Specifies whether HTTP (web) access to the server is required. The default is **NO**.

**HTML\_SUBTASKS=n**

Specifies the number of subtasks to be activated to format information to be displayed on users' web browsers. This parameter applies only if **HTTP\_ENABLE=YES** is specified. Valid values are in the range from 1 to 32. Compuware recommends an initial value of 2. If users are indicating that they're receiving slow response to requests for web pages from the server, then you can increase this value.

**TCP\_HOSTNAME=hostname/IP address**

Specifies the host address portion of the URL constructed by Fault Manager to access a dump on this server. This parameter is used to pass the MVS system's TCP/IP DNS host name or TCP/IP address to Fault Manager when a dump is captured or imported.

**TCP\_HPNS=YES|no**

Specifies whether your system has the High Performance Network Sockets facility installed. Consult your VTAM (TCP/IP) system programmer regarding the availability of this facility at your site. For most current releases of IBM TCP/IP, it will be available.

**TCP\_JOBNAME=xxxxxxxx**

Specifies the job name of the TCP/IP region on this MVS system. Consult your VTAM (TCP/IP) system programmer regarding this job name at your site.

**TCP\_PORT=nnnnn**

Specifies the TCP/IP port number this server should listen on for requests for services from users' web browsers. This number is also passed to Fault Manager for each new dumped processed, and is used in constructing the URL used to access a dump on this server. The value specified must be a valid, currently unused TCP/IP port on your MVS system. Valid values range from 1 to 65535. Consult your VTAM (TCP/IP) system programmer regarding an available port number to use at your site.

---

## Step 3. Modify the Viewing Server JCL (\$13SRVR)

Installation sample library (TKFXSAMP) member \$13SRVR contains sample startup JCL for the viewing server. Review and modify the sample JCL according to the guidelines in this section.

### Step 3a. Modify the JOB or PROC Statements

You can run the viewing server as either a job or a started task. If you want to run the viewing server as a started task, change the JOB statements to PROC statements, and modify the viewing server JCL according to the instructions in the following sections. Then, copy the PROC to a library in your system PROCLIB concatenation.

If you run the viewing server as a job, modify the viewing server JCL according to the instructions in the following sections. Then, submit the viewing server JCL when you want to start the viewing server.

#### Notes:

1. The viewing server JCL is always generated with a TIME=1440 parameter on the execute statement to prevent the viewing server from timing out, regardless of the amount of CPU time it uses. If necessary, modify this parameter to your site's requirements.
2. The viewing server region size defined on the execute statement is 8 megabytes. This is the minimum recommended region size for the viewing server.

### Step 3b. Reorganizing the Dump Information File

The first step in the viewing server JCL performs a reorganization of the dump information file. Although including this step is optional, Compuware strongly recommends you include it to help reduce the impact of the large scale fragmentation to which this file is often subjected. If the dump information file fragments to the point where new dump information cannot be added, the viewing server fails and the file must be manually reorganized.

The reorganization step first allocates a backup copy of the dump information file, then performs an IDCAMS REPRO of the dump information file to the backup copy, resets the dump information file, and then copies the data from the backup copy into the original file, again using IDCAMS REPRO.

**Note:** The original dump information file is not deleted and reallocated as part of the reorganization, so any extents being used by the file are not reclaimed.

If all steps are successful, the backup copy of the dump information file is deleted and viewing server initialization proceeds. If the REPRO to the backup copy fails, the backup copy of the dump information file is deleted and the step finishes with a return code of 8, but the viewing server still initializes. If the restore from the backup to the original file fails, the backup dataset is cataloged, and the viewing server does not initialize.

In addition, the step obtains an enqueue on the dump information file until the reorganization is complete. This enqueue ensures that any requests for automatic region dump import wait until the reorganization is complete.

Review the DD statements in the step and modify them if required. The relevant statements are:

```
//STEPLIB DD DISP=SHR,DSN=compware.kmp510.SKMPLOAD
// DD DISP=SHR,DSN=compware.kfx440.SKFXLOAD
//MFDDINFO DD DISP=SHR,DSN=server.dumpinfo
//MFDDINFB DD DISP=SHR,DSN=server.dumpinfo.BACKUP
//SYSIN DD DISP=SHR,DSN=compware.kfx440.SKFXSAMP(DINFREIN)
```

**Notes:**

1. Target sample library (SKFXSAMP) member DINFREIN contains the IDCAMS control statements required for the step.
2. Review the SPACE parameter to ensure that the backup dump information file allocation is at least as large as the *current* size of your actual dump information file.
3. Ensure that the UNIT reflects a valid DASD name. The value you specified for the non-SMS DASD unit in the installation dialog is the default.

Reorganizing the file adds a small amount of time to the viewing server initialization, but including the step will help minimize the risk of problems with the viewing server. Reorganizing the file is especially critical if you have a high volume of dump activity. If you determine that the additional time is prohibitive, you can comment out the reorganization step. Installation sample library (TKFXSAMP) member DINFREOR contains a copy of the step if you ever need to refer to it.

### Step 3c. Specify the Viewing Server Name

The execute statement in the viewing server JCL contains a parameter value that specifies the name of the viewing server. This is a one- to eight-character name that is used to identify the viewing server on the online customization panels. Therefore, you must specify a *unique* value for the parameter for each viewing server you create. Further, the viewing server name must be different than the CICS APPLID you use for CICS local/remote viewing access. Refer to the Viewing Server field description on page 18-6 for more information.

**Note:** The viewing server name is also used in the SAF resource name generated by CICS Abend-AID/FX when external security is implemented. Refer to “Controlling User Access to Specific Functions” on page 11-11 for more information.

### Step 3d. Verify the CICS Abend-AID/FX Datasets

The ddnames listed below point to dataset names that are tailored according to the values you entered in the installation dialog. Verify them now to ensure that they are correct:

```
//STEPLIB DD DISP=SHR,DSN=compware.kmp510.SKMPAUTH
// DD DISP=SHR,DSN=compware.kfx440.SKFXAUTH
//FDBDRPL DD DISP=SHR,DSN=compware.kmp510.SKMPLOAD
// DD DISP=SHR,DSN=compware.kfx440.SKFXLOAD
// DD DISP=SHR,DSN=compware.lcxnnn.SLCXLOAD
//FDBDCUST DD DISP=SHR,DSN=cicsaafx.cust
//MSDDSECT DD DISP=SHR,DSN=cicsaafx.system.dsect
```

**Note:** Any source listing files you use with CICS Abend-AID/FX are defined to the CICS region, and not to the viewing server. The names of the source files used by a CICS region are saved in CICS Abend-AID/FX transaction dumps, so you do not need to specify any source file names in the viewing server JCL.

## Step 3e. Specify the Viewing Server Parameter Dataset

Ensure that the FDBDPARM DD statement points to the dataset and member containing the parameters that you specified *for this viewing server* in “Step 2. Specify the Viewing Server Configuration Parameters (\$12xxxx)” on page 7-5, as follows:

```
//FDBDPARM DD DISP=SHR,DSN=server.parm.member.location(member)
```

**Note:** The FDBDPARM DD statement generated into the sample viewing server JCL (\$13SRVR) points to the CICS Abend-AID/FX installation sample library (TKFXSAMP) member \$12VTAM.

## Step 3f. Modify the Viewing Server-Owned Datasets

Modify the dataset names associated with the following DD statements to point to the viewing server datasets you allocated for this viewing server in “Step 1. Allocate the Viewing Server Datasets” on page 7-1, as follows:

```
//MFDDINFO DD DISP=SHR,DSN=server.dump.info.file
//MFDCATLG DD DISP=SHR,DSN=server.shared.directory
//FDBDPDSM DD DISP=SHR,DSN=server.pdsm.file
//FDBDWORK DD DISP=SHR,DSN=server.work.file
```

**Note:** Do not include the names of any transaction databases or source listing files in the viewing server JCL.

## Step 3g. Verify the Viewing Server Log Destination

The FDBDLOG DD statement specifies a SYSOUT class that is used to record viewing server informational and error messages. Compuware recommends that you check this output if you experience problems using CICS Abend-AID/FX, since many viewing server-related messages are written there.

The default value is `SYSOUT=*`

## Step 3h. SYSUDUMP and ABNLIGNR DD Statements

The viewing server JCL contains a SYSUDUMP DD statement in case of viewing server abends. It also contains an ABNLIGNR DD DUMMY statement so that Abend-AID MVS does not process CICS Abend-AID/FX viewing server dumps. These statements should not be removed from the viewing server JCL.

## Step 3i. IPCS Specifications

If you want to be able to execute IPCS commands from within CICS Abend-AID/FX, include in your viewing server JCL the DD statements described below.

### Specifying a PARMLIB Session Parameter Member

CICS Abend-AID/FX starts IPCS in the viewing server address space. By default, it uses SYS1.PARMLIB(IPCSPR00) as the IPCS session parameter member. CICS Abend-AID/FX also reads the BLSCECT, BLSCECTX, and all included members from SYS1.PARMLIB.

If you want CICS Abend-AID/FX to access a session parameter member other than IPCSPR00, specify the suffix of the member on the IPCSPR\_SUFFIX viewing server configuration parameter. This parameter is described in “Optional Tuning Parameters” on page 7-14.

To use a session parameter member from a library other than SYS1.PARMLIB, include an IPCSPARM DD statement in the viewing server JCL pointing to the library you choose, as follows:

```
//IPCSPARM DD DISP=SHR,DSN=your.session.parm.dsn
```

### The IPCSDDIR DD Statement

Ensure that the IPCSDDIR DD statement points to the IPCS directory that you allocated in “Step 1b. Allocate the Optional IPCS Directory (\$11IPCS)” on page 7-2.

## The SYSTSIN DD Statement

Ensure that the SYSTSIN DD statement points to the CICS Abend-AID/FX target sample library (SKFXSAMP) member MSDSENDC, as follows:

```
//SYSTSIN DD DISP=SHR,DSN=compware.kfx440.SKFXSAMP(MSDSENDC)
```

## The SYSPROC DD Statement

Ensure that the SYSPROC DD statement points to the CICS Abend-AID/FX target sample library (SKFXSAMP). You can concatenate other libraries to the SYSPROC statement if you want to execute IPCS CLISTs in those libraries from within CICS Abend-AID/FX.

## The SYSTSPRT DD Statement

Ensure that the SYSTSPRT DD statement is assigned to an appropriate JES output class with the following DCB parameters:

```
//SYSTSPRT DD SYSOUT=*,DCB=(RECFM=VBA,LRECL=0,BLKSIZE=140)
```

## The MFDDPxxx DD Statements

The sample viewing server JCL also contains one to six DD statements (MFDDPxxx) that point to the CICS load libraries that contain the DFHPDX (or DFHPDxxx) modules that you included in the installation dialog, where xxx refers to the CICS release. When a CICS Abend-AID/FX user executes the IPCS CICS VERBEXIT (DFHPDX), CICS Abend-AID/FX loads the DFHPDX load module appropriate to the CICS release of the dump from the corresponding CICS load library.

**Note:** If you are not supporting IPCS access from CICS Abend-AID/FX, you can delete or comment out the following DD statements from the viewing server JCL:

```
//IPCSDDIR
//SYSTSIN
//SYSPROC
//SYSTSPRT
//MFDDPxxx
```

## Step 3j. REXX Specifications

If you want to be able to execute REXX EXECs from within CICS Abend-AID/FX, include in your viewing server JCL the following DD statement:

```
//SYSEXEC DD DSN=compware.kfx440.SKFXREXX
```

This dataset contains the CICS Abend-AID/FX-supplied REXX sample, SAMPREXX, and REXX EXECs you write, as described in the *CICS Abend-AID/FX User's Guide*. The SKFXREXX dataset is a fixed block dataset with a logical record length of 80. You can concatenate multiple datasets on this DD, but they all must have the same record format and logical record length.

---

## Step 4. Verify Viewing Server External Security Authority

The viewing server address space runs using the external security authority of the individual who starts the viewing server. Before you start the viewing server, review the information in “Granting Authority to the Viewing Server” on page 11-2 to ensure that you set up the appropriate rules for the viewing server for your external security package.

---

## Step 5. Start the Viewing Server

To start the viewing server, submit the job or start the PROC that you created. Appendix A, “Controlling the CICS Abend-AID/FX Viewing Server and TDCAS” contains more information about starting the viewing server. The *CICS Abend-AID/FX User's Guide* describes logging onto the viewing server.

Next:

**Continue now with Chapter 8, “Transaction Dump Capture Address Space Configuration”.**

## Chapter 8.

# Transaction Dump Capture Address Space Configuration

This chapter describes the steps in creating the CICS Abend-AID/FX transaction dump capture address spaces. A CICS Abend-AID/FX transaction dump capture address space (TDCAS) is an MVS address space that manages transaction dump capture processing. The TDCAS must be active to *take* CICS Abend-AID/FX transaction dumps. Compuware recommends that you run the TDCAS as a started task that is always available.

The first step in the TDCAS JCL is to start a subsystem that CICS Abend-AID/FX uses for communication between the TDCAS and the CICS region. You do *not* need to do anything to start the TDCAS subsystem. If you need to stop it, sample JCL is provided in installation sample library (TKFXSAMP) member \$16TSUB, which is described in “Stopping the Transaction Dump Capture Subsystem” on page 8-8.

### CAUTION:

**The viewing subsystem is not the same as the transaction dump capture subsystem. You cannot share the subsystem between a viewing server and a transaction dump capture address space (TDCAS). Refer to “Parameter Required to Support TSO/ISPF or CICS Viewing Access” on page 7-8 for information about specifying the viewing subsystem name.**

**Your site must have at least one CICS Abend-AID/FX transaction dump capture address space per MVS image on which transaction dumps are to be captured.** You can run multiple TDCASs on a single MVS image, but doing so should not be necessary. You must repeat the steps in this chapter for each TDCAS you want to create. Appendix C, “Site Configuration Examples” provides examples of CICS Abend-AID/FX site configurations.

The following steps are described in this chapter:

1. Specify the transaction dump capture address space configuration parameters (\$15PARM).
2. Modify the transaction dump capture address space JCL (\$16TDCS).
3. Verify transaction dump capture address space external security authority.
4. Start the transaction dump capture address space.

---

## Step 1. Specify the Transaction Dump Capture Address Space Configuration Parameters (\$15PARM)

The parameters that control transaction dump capture address space (TDCAS) configuration are specified in a member or file that is pointed to by the TDCAS JCL FDBDPARM DD statement. The installation sample library (TKFXSAMP) contains the sample TDCAS parameter member (\$15PARM).

**Note:** The TDCAS parameter member does not have to reside in the installation sample library (TKFXSAMP). You can use any PDS member or sequential file for the parameters, provided the dataset has the following attributes:

```

LRECL=80

BLKSIZE=any multiple of 80

RECFM=FB

```

You can also specify the TDCAS configuration parameters as SYSIN in the TDCAS JCL by specifying //FDBDPARM DD \* followed by the parameters.

This section describes specifying the TDCAS parameters, and contains subsections that identify which parameters must be specified for each of the following configurations:

- Required parameters that must always be specified
- Optional tuning parameters.

Specify the parameters discussed in each of the following sections that pertain to your transaction dump capture address space configuration. The following rules apply for all parameters:

1. Begin the parameter name in column one, and code it exactly as indicated. Abbreviations for the parameters are not allowed.
2. Specify only one parameter per line.
3. Immediately follow the parameter name by an equal sign (=), and immediately follow the equal sign by the parameter value. No intervening blanks are allowed. For example:

```
DATASPACE=PARTIAL
```

4. If you do not specify a parameter and there is a default value for the parameter, the default is used.
5. You can specify parameters in any order.
6. Indicate comments by an asterisk (\*) in column one.
7. If a parameter has multiple operands, make sure that you enclose the values you specify in parentheses, as shown in the documentation for the parameter.  
  
You can specify each operand on a separate line. Follow all but the final operand with a comma, and ensure that you put the closing parenthesis after the final operand. Begin the operand on each new line in column one.
8. If you specify a parameter more than once, CICS Abend-AID/FX uses the value specified for the *last* occurrence of the parameter.

When you have specified all applicable parameters, save the parameter member. “Step 2d. Specify the TDCAS Parameter Dataset” on page 8-7 describes identifying the parameter member in the TDCAS JCL.

**Note:** If you add or change a parameter while the TDCAS is active, you must stop and restart the TDCAS for the new value to take effect.

## Required Parameters That Must Always Be Specified

The parameters listed below must always be specified.

**SERVER\_DESCRIPTION=“description”**

Specifies a 1- to 32-character description of the transaction dump capture address space. The description must be enclosed in double quotation marks.

The default value is the name specified for the TDCAS on the parameter value of the TDCAS JCL execute statement (see “Step 2b. Specify the Subsystem and TDCAS Names” on page 8-6).

**DATASPACE=partial|all|no**

Specifies how much transaction dump data is captured to a data space. Because there is no default, you must specify one of the following options:

**PARTIAL**

Indicates that only volatile storage areas are captured to the data space. Volatile areas include common areas and the CICS trace table. The remainder of dump information is written directly to a transaction database. Compuware recommends you specify **PARTIAL**.

**ALL**

Indicates that the entire transaction dump is captured to a data space. While this method is the fastest for dump capture, you must ensure that you have sufficient auxiliary storage to use it. Use the following calculations to determine your auxiliary storage requirements:

To determine the maximum amount of expanded storage required to support the **DATASPACE=ALL** specification, take your average dump size (from a DIRX report listing). Multiply that size by the total number of dumps that can be processed at one time. This number is the total of the transaction dump global option **ABLIMIT** value specified for every CICS region that will have CICS Abend-AID/FX active at the same time.

To determine the average amount of expanded storage required to support the **DATASPACE=ALL** specification, take your average dump size (from a DIRX report listing). Multiply that size by the average number of dumps that you expect to occur at one time.

You can use a monitoring utility to gain additional information about how much expanded storage is used by the CICS Abend-AID/FX TDCAS region.

**Notes:**

1. Compuware recommends **ALL** if you have considerable transaction dump activity.
2. Specifying **ALL** uses more system resources for transaction dump capture than specifying **PARTIAL**, but it's faster.
3. Specify the **L3270=NO** transaction global option if you specify **DATASPACE=ALL** to avoid performance degradation.

**NO**

Indicates that none of the transaction dump is captured to a data space. Instead, the dump information is written directly to a transaction database. Compuware strongly recommends that you do *not* specify this value because of performance implications.

**DATASPACE\_SIZE=(maximum,initial amount,increment size)**

Specifies in blocks the maximum, initial amount, and increment size of the data space(s) allocated by CICS Abend-AID/FX. A block is a unit of 4K.

**MAXIMUM**

Maximum size in blocks of data space(s) allocated by CICS Abend-AID/FX. To calculate the maximum data space you require, determine the size of the largest CICS trace table you'll capture (**TRACE=FULL**) or the maximum size of the task's trace table entries. Then add 20 4K pages to that amount. The default is **1024**. The maximum is 32,768.

**INITIAL AMOUNT**

Initial size in blocks of data space(s) allocated by CICS Abend-AID/FX. To calculate the initial data space size, determine the size of the smallest trace table you'll capture, and add 20% to that amount. The default is **64**. The maximum is 32,768.

**INCREMENT SIZE**

Size in blocks by which the data space(s) are extended, if required. The default is 32. The maximum is 2048.

**Optional Parameters**

The optional parameters listed below are used to tune the transaction dump capture address space processing. If a parameter is not specified, the default value is used.

**MESSAGES=yes|NO**

Specifies whether all transaction dump capture address space informational messages are produced. TDCAS informational messages are written to the TDCAS log file specified by the FDBDLOG DD statement in the TDCAS JCL

The default value is **NO**. Basic TDCAS informational messages are still written to the TDCAS log, but many of the messages are suppressed.

**TP\_SUBTASKS=number**

Specifies the number of transaction processor subtasks available for this transaction dump capture address space. Transaction processor subtasks process *concurrent* dump requests to the TDCAS.

Valid values are 5 through 32. The default value is 32.

The default value should be adequate for most CICS Abend-AID/FX sites. Note that this value affects the amount of virtual storage used by the TDCAS.

**SERVER\_DYNAMIC\_SYSOUT=SVCDUMP|class**

Specifies where CICS Abend-AID/FX writes dumps of the transaction dump capture address space in case of an error. Valid values are:

**SVCDUMP**

Causes dumps of the transaction dump capture address space to be written to the SYS1.DUMPxx datasets. This value is the default.

**class**

Specifies a valid SYSOUT class — for example, \* (asterisk).

**LU2\_APPLID=applid**

Specifies the unique, one- to eight-character VTAM LU 2 APPLID assigned to this TDCAS. This value must be different than the one defined for the viewing server. You need this parameter only if you intend to log onto the TDCAS. Currently, the only reason you might want to log onto the TDCAS is to shut it down. If you don't want the ability to log onto the TDCAS for the purpose of shutting it down, delete this parameter.

Do not specify any parameters on the LU 2 APPLID (that is, the attributes as defined to SYS1.VTAMLST are applid APPL). For example:

```
CFTDCAS  APPL
```

Installation sample library (TKFXSAMP) member SAMPLU2 contains this example. You must also ensure that the VTAM node associated with the APPLID is activated, and the cross-domain resource definitions are correct. The APPLID must be included in SYS1.VTAMLST.

There is no default value for this parameter.

**Note:** If you specify the LU2\_APPLID parameter for VTAM access, you must also specify ENABLE\_IUR=YES.

**ENABLE\_IUR=YES|no**

Indicates whether the interactive user region (IUR) application starts in the transaction dump capture address space. The IUR enables you to log onto the TDCAS to perform basic commands such as shutting down the TDCAS. The default is YES. If you delete the LU2\_APPLID parameter, specify NO for this parameter.

**EXTERNAL\_SECURITY\_ENABLED=NO|yes**

Specifies whether CICS Abend-AID/FX requires a password when a user signs onto the TDCAS.

**NO**

CICS Abend-AID/FX doesn't require a password. This value is the default.

**YES**

CICS Abend-AID/FX external security checking is enabled, and CICS Abend-AID/FX requires users to specify a user ID and password when logging onto the TDCAS.

**MANAGEMENT\_REPORTING=NO|yes**

Specifies whether to enable Abend-AID Fault Manager for the associated CICS region(s). Abend-AID Fault Manager is Compuware's fault management tool that captures CICS Abend-AID/FX fault data to a reporting database that users access via Windows NT or 2000, and/or the Internet. If your site is licensed for and has installed this product, specify YES. The default is NO. If your site plans to use Fault Manager to access CICS Abend-AID/FX diagnostics via the Internet, refer to "Parameters Required to Support the Fault Manager Web Browser Interface" on page 7-16.

Refer to the Abend-AID Fault Manager installation guide for more information.

**TRACE=size**

Specifies the size of the internal trace buffer in K-bytes. Valid values are 256 through 32768. The default value is 1024.

**DFHRPL\_READ=YES|no**

Specifies where CSECT and load module information is processed during transaction dump capture.

**YES**

CSECT and Load Module information is processed in the transaction dump capture address space. This option is accomplished by having the TDCAS allocate and open the datasets containing the load modules. For performance reasons, these datasets remain opened in the TDCAS until the region is shutdown. This value is the default.

**NO**

CSECT and Load Module information is processed in the CICS region. This option was the process used in CICS Abend-AID/FX Release 4.3 and less current.

---

## Step 2. Modify the Transaction Dump Capture Address Space JCL (\$16TDCS)

Installation sample library (TKFXSAMP) member \$16TDCS contains sample startup JCL for the transaction dump capture subsystem and transaction dump capture address space. Review and modify the sample JCL according to the guidelines in this section.

The job has two steps. The first step starts the transaction dump capture subsystem. The second step starts the transaction dump capture address space. You need only one transaction dump capture subsystem regardless of how many TDCASs you run on the MVS image. If the subsystem is already active when you submit this job, the step to start the subsystem is automatically skipped.

## Step 2a. Modify the JOB or PROC Statements

You can run the transaction dump capture address space (TDCAS) as either a job or a started task. If you want to run the TDCAS as a started task, change the JOB statements to PROC statements, and modify the TDCAS JCL according to the instructions in the following sections. Then, copy the PROC to a library in your system PROCLIB concatenation.

**Note:** Compuware strongly recommends that you run the TDCAS as a started task and that you start it at IPL. The TDCAS must be active for CICS Abend-AID/FX to capture transaction dumps.

If you run the transaction dump capture address space as a job, modify the TDCAS JCL according to the instructions in the following sections. Then, submit the TDCAS JCL when you want to start the TDCAS.

### Notes:

1. The TDCAS JCL is always generated with a TIME=1440 parameter on the job card to prevent the TDCAS from timing out, regardless of the amount of CPU time it uses. If necessary, modify this parameter to your site's requirements.
2. The TDCAS region size defined on the job card is 8 megabytes. This is the minimum recommended region size for the TDCAS.

## Step 2b. Specify the Subsystem and TDCAS Names

The TDCAS JCL has two execute statements: one for the transaction dump capture subsystem and one for the transaction dump capture address space:

- The first execute statement contains a parameter value that specifies the name of the transaction dump capture subsystem. This value is a four-character name. The default is TDCS. The parameter is specified PARM='INIT,tdsubsystemname'. The INIT must be included in the parameter. You can specify the same subsystem name for every TDCAS on a single MVS image.
- The second execute statement contains a parameter value that specifies the name of the transaction dump capture address space. This value is a one- to eight-character name that is used to identify the TDCAS to CICS Abend-AID/FX components. Therefore, you must specify a *unique* value for the parameter for each TDCAS you create on this MVS image.

## Step 2c. Verify the CICS Abend-AID/FX Datasets

The ddnames listed below point to dataset names that are tailored according to the values you entered in the installation dialog. Verify them now to ensure that they are correct:

```
//STEPLIB DD DISP=SHR,DSN=compware.kmp510.SKMPAUTH
// DD DISP=SHR,DSN=compware.kfx440.SKFXAUTH
//FDBDRPL DD DISP=SHR,DSN=compware.kmp510.SKMPLOAD
// DD DISP=SHR,DSN=compware.kfx440.SKFXLOAD
// DD DISP=SHR,DSN=compware.lcxnnn.SLCXLOAD
//FDBDCUST DD DISP=SHR,DSN=cicsaafx.cust.file
```

## Step 2d. Specify the TDCAS Parameter Dataset

Ensure that the FDBDPARM DD statement points to the dataset and member containing the parameters that you specified *for this TDCAS* in “Step 1. Specify the Transaction Dump Capture Address Space Configuration Parameters (\$15PARM)” on page 8-1, as follows:

```
//FDBDPARM DD DISP=SHR,DSN=tdcas.parm.member.location(member)
```

**Note:** The FDBDPARM DD statement generated into the sample TDCAS JCL (\$16TDCS) points to the CICS Abend-AID/FX installation sample library (TKFXSAMP) member \$15PARM.

## Step 2e. Verify the TDCAS Log Destination

The FDBDLOG DD statement specifies a SYSOUT class that is used to record TDCAS informational and error messages. Compuware recommends that you check this output if you experience problems using CICS Abend-AID/FX, since many TDCAS-related messages are written there.

The default value is `SYSOUT=*`

## Step 2f. SYSUDUMP and ABNLIGNR DD Statements

The TDCAS JCL contains a SYSUDUMP DD statement in case of transaction dump capture address space abends. It also contains an ABNLIGNR DD DUMMY statement so that Abend-AID MVS does not process CICS Abend-AID/FX TDCAS dumps. These statements should not be removed from the TDCAS JCL.

---

## Step 3. Verify TDCAS External Security Authority

The transaction dump capture address space runs using the external security authority of the individual who starts the TDCAS. Before you start the TDCAS, review the information in “Granting Authority for the Transaction Dump Capture Address Space” on page 11-4 to ensure that you set up the appropriate rules for the TDCAS for your external security package.

---

## Step 4. Start the Transaction Dump Capture Address Space

To start the transaction dump capture address space, submit the job or start the PROC that you created. Appendix A, “Controlling the CICS Abend-AID/FX Viewing Server and TDCAS” contains more information about starting the TDCAS.

**Notes:**

1. The transaction dump capture subsystem must be active for the TDCAS to initialize and for CICS Abend-AID/FX to turn on in the CICS region.
2. The TDCAS always runs non-swappable to allow cross-memory communications with the CICS region.

## Stopping the Transaction Dump Capture Subsystem

If you need to stop the transaction dump capture subsystem, use the sample JCL in installation sample library (TKFXSAMP) member \$16TSUB. Ensure that the EXEC statement reads as follows:

```
//START EXEC PGM=FDBASUBS,REGION=1M,PARM='STOP,tdsubsystemname'
```

The **tdsubsystemname** on the parameter statement must match the name of the transaction dump capture subsystem that you specified in the JCL for the \$16TDCAS member. Ensure that the parameter specifies **STOP**, and not **INIT**, to stop the subsystem.

**Note:** This job stops only the transaction dump capture subsystem, not the transaction dump capture address space. Refer to Appendix A, “Controlling the CICS Abend-AID/FX Viewing Server and TDCAS” for information about stopping the transaction dump capture address space.

Next:

Continue now with Chapter 9, “CICS Updates”.

---

## Tuning the TDCAS

If you experience performance or resource utilization problems with the TDCAS, please try the following tuning suggestions. If these suggestions don't alleviate your problem, please contact CICS Abend-AID/FX Technical Support for further assistance.

### Excessive Dump-Processing Time or Incomplete Dumps

Several TDCAS configuration parameters and transaction dump capture global options affect transaction dump capture tuning. Note that if you modify a TDCAS configuration parameter, you must stop and restart the TDCAS for the new parameter to take effect. If you change a transaction dump global option or transaction dump capture profile, you must turn CICS Abend-AID/FX off and back on in the CICS region.

- Ensure that the TDCAS DATASPACE configuration parameter is set to **ALL** or **PARTIAL**. Specifying **NO** slows dump capture performance.
- The TRACE transaction dump capture global option should be set to **TASK** for maximum performance. Specifying **FULL** adds a great deal of overhead to transaction dump capture, as well as to DASD utilization. Note that you can also override the TRACE global option in the transaction dump capture profiles, so check there as well.
- The L3270 transaction dump capture global options should be **NO** for best performance. L3270 capture adds a significant amount of overhead. As with the TRACE option, you can also override the L3270 global option in the transaction dump capture profiles.

If modifying these three settings doesn't improve CICS Abend-AID/FX performance, try the following additional suggestions.

- Increase the value specified for the ABLIMIT transaction dump global option.
- If your problem is that dumps are taking too long, ensure that the values specified for the ABTIME and DBTIME transaction dump global options are not excessively high and decrease them if they are. Otherwise, if your problem is a lot of incomplete transaction dumps, increase the ABTIME/DBTIME values.

- If you experience a high volume of transaction abends and user terminals are staying locked for an excessive amount of time, decrease the value specified for the ABRETCT transaction dump global option.
- Increase the value specified for the TP\_SUBTASKS TDCAS configuration parameter. Note that increasing the value will increase the amount of virtual storage used by the TDCAS region and slow TDCAS region initialization somewhat.

## Excessive CPU Time

Several TDCAS configuration parameters and transaction dump capture global options can affect how the TDCAS uses system resources. Note that if you modify a TDCAS configuration parameter, you must stop and restart the TDCAS for the new parameter to take effect. If you change a transaction dump global option or transaction dump capture profile, you must turn CICS Abend-AID/FX off and back on in the CICS region.

Set the TRACE transaction dump capture global option to **TASK**. Full trace table processing is CPU-intensive. Note that you can override the TRACE global option in the transaction dump capture profiles, so check there also.

This change alone should help significantly. If you still need further tuning, try the following additional suggestions:

- Decrease the value specified for the ABLIMIT transaction dump global option.
- Decrease the value specified for the TP\_SUBTASKS TDCAS configuration parameter.

If you still aren't seeing the resource utilization improvements you require, try the following additional suggestions:

- Ensure that the TDCAS DATASPACE configuration Parameter is set to **PARTIAL**, instead of **ALL**. **ALL** processes dumps faster, but uses more system resources.
- Check the value you've specified for the initial portion of the DATASPACE\_SIZE TDCAS configuration parameter. The value you specify should not be too large. A good rule of thumb is to take the smallest trace table size you capture, and add 20% to it to determine the initial dataspace size value.

If you still require improvements after you've implemented these suggestions, make sure that the ENABLE\_IUR TDCAS configuration parameter is set to **NO**. When ENABLE\_IUR is **NO**, you can also remove the LU2\_APPLID parameter.

## Terminals in Abend Wait

If your users complain that their terminals lock up in an ABEND WAIT condition, reduce the following transaction dump capture global options:

- ABTIME
- DBTIME
- ABRETCT.

Reducing these values will increase the number of unprocessed transaction dumps (an IBM dump is taken for those dumps not processed by CICS Abend-AID/FX), but doing so will free the users' terminals faster.

Note that you must turn CICS Abend-AID/FX off and back on in the CICS region after you change a transaction dump capture global option.



# Chapter 9.

## CICS Updates

**Note:** If you are adding support for a new CICS version, refer to “Adding Support for New CICS Releases” on page 14-4.

This chapter describes the following updates that you must make to CICS to make CICS Abend-AID/FX functional:

1. Authorize UPDATE authority for files.
2. Modify CICS table entries.
3. Add DB2 table entry if you are licensed for the CICS Abend-AID/FX for DB2 option.
4. Modify the DFHSIT DUMP parameter (CICS/MVS only).
5. Modify CICS startup JCL.
6. Start the CICS Abend-AID/FX dump interfaces.

---

### Step 1. Authorize UPDATE Authority for Files

If you use an external security package, ensure that the owner of the CICS region has UPDATE authority for the following CICS Abend-AID/FX files:

- Shared directory
- Any transaction databases attached to the shared directory.

---

### Step 2. Modify CICS Table Entries

CICS table entries are used to control the following CICS Abend-AID/FX functions:

- Transaction dump interface, which enables the capturing of abend information for transaction dumps.
- Region dump interface, which enables gathering the information necessary to produce the Program Change Summary screen for CICS region dumps. Refer to Appendix B, “Supplied Transaction” for information about manually starting the region dump interface.

**Notes:**

- a. The region dump interface is *not* required to capture region dumps. It is required *only* to capture information about recently changed programs in the DFHRPL concatenation. If this list is captured, you can view it through the CICS Abend-AID/FX region dump display screens. Entering the **CHANGES** fast-path command displays the Program Change Summary.
  - b. Capturing the program change summary information adds a small amount of overhead to the region dump capture process. Usually this amount is insignificant, although some customers have experienced a more severe performance impact. Performance is more degraded if you use the Binder. If you see any performance degradation at dump capture time, you can turn off the region dump interface while still leaving the transaction dump interface active.
- Viewing access from CICS.
  - CICS Abend-AID/FX demonstration transactions.

Adding CICS Abend-AID/FX table entries using Resource Definition Online (RDO) or the system definition file (CSD) utility DFHCSDUP is described in “Using Resource Definition Online (RDO) or the CSD Utility DFHCSDUP” on page 9-4. For CICS 2.1.2, you can also add the table entries using macro definitions, as described in “Using CICS/MVS 2.1.2 Macro Definitions” on page 9-4.

**Note:** You cannot program autoinstall the CICS Abend-AID/FX table entries (applies to CICS/ESA 4.1 and more current only).

## Considerations for Adding PCT Entries

The default transaction IDs for the CICS Abend-AID/FX transactions are as follows, although you can use any valid, unique transaction ID:

- AAON** CICS Abend-AID/FX region and transaction dump interfaces.
- Note:** If you want to start CICS Abend-AID/FX from a sequential terminal, perform the additional steps described in “Starting CICS Abend-AID/FX From a Sequential Terminal” on page B-3.
- AADF** CICS Abend-AID/FX CICS viewing access.
- AADB** DB2 option support.
- AARB** CICS Abend-AID/FX last 3270 screen image capture.
- AADP** CICS Abend-AID/FX PL/I demonstration transaction (for transaction dump support).
- AADM** CICS Abend-AID/FX COBOL demonstration transaction (for transaction dump support).
- ERWV** CICS Abend-AID/FX storage violation demonstration transaction (for region dump support).

## Adding a Profile Definition for the AARB Transaction

The AARB transaction requires a PROFILE option so that if the last 3270 screen image capturing has any extended wait for terminal I/O to complete, the abending task can continue processing after a user-specified length of time. The default profile name is CCAAPROF. You can change the profile name to conform to your site standards, as long as you also change the name in the AARB transaction. If you rename the AARB transaction and the CCAAPROF profile, make sure you change the profile name in the renamed transaction. Do not change the associated program.

The CCAAPROF profile contains the same values for the operands as the IBM-supplied DFHCICST profile. The only optional modification is to the RTIMOUT value, which is currently set to 30 seconds.

The profile definition for CCAAPROF is contained in each RDO or macro definition member in the installation sample library (TKFXSAMP).

## Considerations for Adding FCT Entries

FCT entries are used for CICS Abend-AID/FX transaction abend source support and the transaction abend demonstration program. In addition, you can use an FCT entry to specify the CICS Abend-AID/FX customization file definition.

## Customization File Definition

CICS Abend-AID/FX requires the customization file to determine what processing options apply to CICS transaction dumps. You can define the file in the FCT or by adding a DD statement in the CICS JCL.

To define the file in the FCT, use the appropriate RDO member for your CICS release, as described in “Using Resource Definition Online (RDO) or the CSD Utility DFHCSDUP” on page 9-4. For CICS/MVS, you can also use a macro definition to add the FCT entry, as described in “Using CICS/MVS 2.1.2 Macro Definitions” on page 9-4. With either method, you must modify the DSNNAME operand to point to the customization file for this CICS Abend-AID/FX release.

**Note:** The customization file must be defined as a local file to the CICS region for which CICS Abend-AID/FX processing is required.

See “Step 5. Modify CICS Startup JCL” on page 9-8 for information about adding a DD statement for the customization file to the CICS JCL.

## Source Listing Files

If you are using CICS Abend-AID/FX source support, the source listing information is merged in with CICS Abend-AID/FX diagnostics at view time. To specify default source files to use for a CICS region, you need to define these files to CICS either in the FCT or with DD statements. When a transaction dump is taken, CICS Abend-AID/FX stores these default file names with the transaction dump information so that it knows the names of the default files. As a result, you can specify different file names for different CICS regions.

**Note:** The source listing files must be defined as local files to the CICS region for which CICS Abend-AID/FX processing is required.

### *Adding a Source File After Dump Capture*

If you don't specify source listing file names to CICS, you can specify them from the viewing server using the Source Directory screen, which you can display by entering **SD** or **SRCDIR** as a fast-path command on any CICS Abend-AID/FX screen.

**Note:** Each user must specify the source files in this way if they are not defined to CICS.

Refer to the *CICS Abend-AID/FX User's Guide* for more information about adding source files using the Source Directory.

### *If You Are Using XPEDITER/CICS*

If you are using source files with CICS Abend-AID/FX and you currently have XPEDITER/CICS installed in your CICS regions, no action is required, and CICS Abend-AID/FX uses the files allocated for XPEDITER/CICS. Ensure that the first four characters of the ddname used for the XPEDITER/CICS files match the value specified for the SLSDDN transaction dump global option (see page 18-31). However, to directly access CICS Abend-AID/FX from XPEDITER/CICS, you need to upgrade to XPEDITER/CICS Release 6.6 or more current.

### *If You Are Not Using XPEDITER/CICS*

If you do not have XPEDITER/CICS and you want to specify default files for source support for CICS Abend-AID/FX transaction abends, you can either define an FCT entry for the source files or add a DD statement to the CICS region JCL. Installation sample library (TKFXSAMP) member FXRDOFIL contains the RDO definition for the FCT entry, and member FXFCTOPT contains a macro definition for the entry. “Step 5. Modify CICS Startup JCL” on page 9-8 describes adding a source listing file DD statement to the CICS region JCL.

**Note:** The *Compuware Shared Services User/Reference Guide* contains information about allocating source listing files.

## Demonstration Transactions

If you want to use the CICS Abend-AID/FX COBOL (CCAADEMO) or PL/I (CCAADEMP) transaction abend demonstration program, a file entry is required for the demonstration file. The CCAADEMO or CCAADEMP demonstration file is a VSAM KSDS. Installation sample library (TKFXSAMP) member FXFCTOPT contains the macro version FCT entry for the file, and member FXRDOxxx contains the RDO FCT entry. “Step 1. Set Up the CICS Abend-AID/FX Transaction Abend Demonstration Program” on page 10-1 provides more information on installing and using the demonstration transactions.

## Using Resource Definition Online (RDO) or the CSD Utility DFHCSDUP

You can use a CEDA transaction to add the CICS Abend-AID/FX entries to a CICS system definition file. For CICS 4.1 and more current, you can also use the system definition file (CSD) utility DFHCSDUP to add the definitions in batch.

The Resource Definition Online (RDO) statements for the CICS table entries for CICS Abend-AID/FX are contained in members in the installation sample library (TKFXSAMP). Table 9-1 provides the member names containing the RDO definitions. For CICS 2.1.2, the online RDO commands are provided in the members. For CICS 4.1 and more current, the JCL is also provided in the members.

**Table 9-1.** CICS Abend-AID/FX RDO Entries

Member	Description
FXRDO620	CICS Abend-AID/FX RDO entries and JCL for CICS Transaction Server for z/OS 2.2.0
FXRDO530	CICS Abend-AID/FX RDO entries and JCL for CICS Transaction Server for OS/390 1.3.0
FXRDO520	CICS Abend-AID/FX RDO entries and JCL for CICS Transaction Server for OS/390 1.2.0
FXRDO510	CICS Abend-AID/FX RDO entries and JCL for CICS Transaction Server for OS/390 1.1.0
FXRDO410	CICS Abend-AID/FX RDO entries and JCL for CICS 4.1.0
FXRDO212	CICS Abend-AID/FX RDO entries for CICS 2.1.2. Instead of RDO, you can use macro definitions for the 2.1.2 entries, as described in “Using CICS/MVS 2.1.2 Macro Definitions” on page 9-4.
FXRDOFIL	CICS Abend-AID/FX RDO entries and JCL for the transaction abend source listing files (optional).
FXRDODB	CICS Abend-AID/FX RDO entries for DB2 for CICS Transaction Server 1.1.0 and more current.

## Installing the CICS Abend-AID/FX Group

If you have created a new group for the CICS Abend-AID/FX programs and transactions, you can add the programs and transactions to an active CICS system by entering the following CEDA command:

```
INSTALL GROUP(FXGROUP)
```

Alternatively, add group FXGROUP to one of the lists specified in the CICS startup GRPLIST.

## Using CICS/MVS 2.1.2 Macro Definitions

For CICS/MVS 2.1.2, you can use macro definitions to add table entries instead of using RDO. The macro definitions for CICS/MVS 2.1.2 are contained in members in the installation sample library (TKFXSAMP) as shown in Table 9-2.

**Table 9-2.** CICS Abend-AID/FX Macro Definitions for CICS Version 2.1.2

Member	Macro Table Name	Description
FXPCT	DFHPCT	Macro definition entries for CICS Abend-AID/FX transactions
FXPPT	DFHPPT	Macro definition entries for CICS Abend-AID/FX programs
FXFCT	DFHFCT	Macro definition entries for the CICS Abend-AID/FX customization file.
FXFCTOPT	DFHFCT	Macro definition entries for CICS Abend-AID/FX source listing files and transaction abend demonstration file (optional).

## Adding Table Entries for an ISC/MRO Environment

If you are using Inter System Communication (ISC) or Multiregion Operation (MRO), review the following information that applies to your site.

### If Users Sign onto the AOR

If you are using ISC or MRO and your users directly sign onto the application owning regions (AORs), install CICS Abend-AID/FX in each AOR as described in this chapter. No further action beyond these standard steps is required to enable support for ISC/MRO.

### If Users Sign onto the TOR

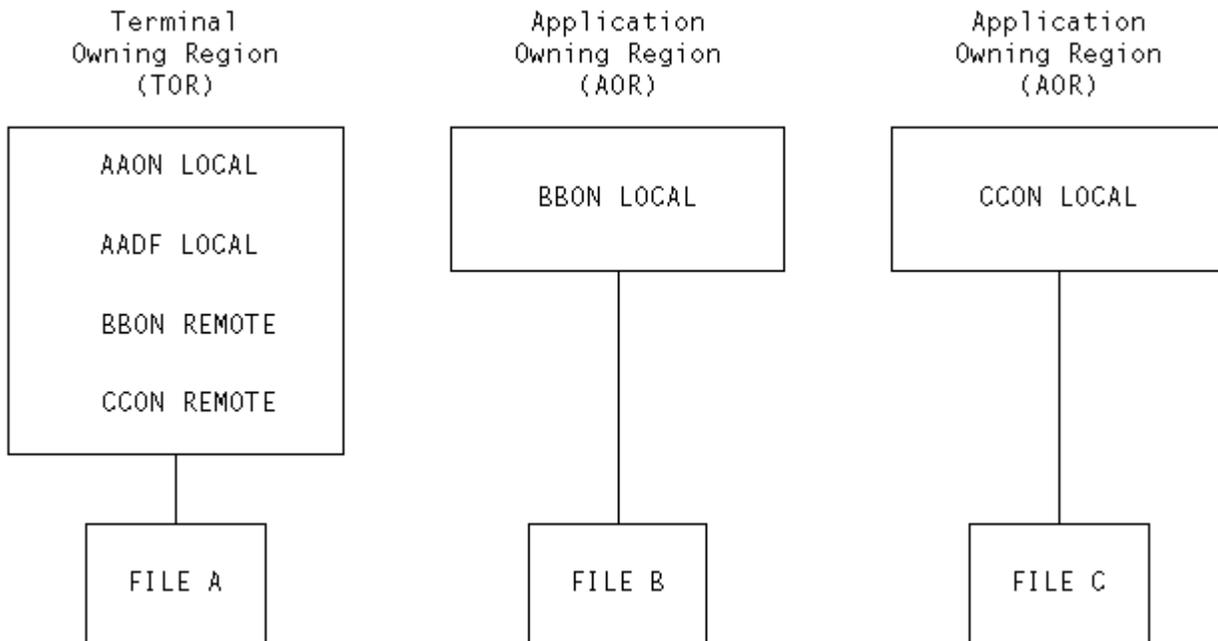
For an ISC or MRO environment, additional PCT entries are required when users sign onto the terminal owning region (TOR) and the CICS Abend-AID/FX transactions are routed to the application owning region (AOR). Define the AAON and AADF transactions as LOCAL in the PCT of the TOR. In each AOR, define a renamed AAON transaction as LOCAL by varying the first two characters of the transaction ID (for example, BBON). The transaction IDs must be different in each region. You do not need to define the AADF transaction to the AORs.

The renamed AOR transaction must be defined as REMOTE in the PCT of the terminal owning region. Refer to Figure 9-1 on page 9-6 for an example of the proper PCT entries.

If you are using RACF and activate the APPL and TERMINAL classes, you may need to define a RACF rule to permit AADF access to the viewing server. The generated terminal name is CICS MRO.

If you are installing the CICS Abend-AID/FX for DB2 option, you must define the AADB transaction as LOCAL to each region.

Figure 9-1. PCT Entries for an ISC/MRO Environment (If Users Sign onto the TOR)



## Adding PLT Entries

To automatically start and stop the transaction dump interface and region dump interface at CICS startup and shutdown, add the CICS Abend-AID/FX control programs to the CICS PLTPI and PLTSD. The PLT statements to automatically control CICS Abend-AID/FX are contained in member FXPLT in the installation sample library (TKFXSAMP).

### Notes:

1. Program CTCCJSTR activates *and* terminates the transaction dump interface. It is required to capture transaction dumps.
2. Program CTCCJRGN activates *and* terminates the region dump interface. It is required only if you want to capture a list of recently changed programs in the CICS DFHRPL concatenation. **CTCCJRGN is not required to capture region dumps.** CICS Abend-AID/FX does not interfere with standard IBM dump routines. It is required *only* to capture information about recently changed programs in the DFHRPL concatenation.
3. If the list of recently changed programs is captured, you can view it through the CICS Abend-AID/FX region dump display screens. Entering the **CHANGES** fast-path command displays the Program Change Summary. Refer to Appendix B, "Supplied Transaction" for information about manually starting the region dump interface.
4. Capturing the program change summary information adds a small amount of overhead to the dump capture process. Usually this amount is insignificant, although some customers have experienced a more severe performance impact. Performance is more degraded if you use the Binder. If you see any performance degradation at dump capture time, you can turn off the region dump interface while still leaving the transaction dump interface active.
5. Compuware strongly recommends that you include the DFHPLTSD table entry for CTCCJSTR to shut down the CICS Abend-AID/FX transaction dump interface prior to CICS termination. If AAON is not turned off before CICS terminates, a system A03 abend occurs in the transaction dump interface.
6. For **CICS Transaction Server** and **CICS/ESA**, place the CICS Abend-AID/FX statements *after* DFHDELIM in the PLTPI and *before* DFHDELIM in the PLTSD.

7. For CICS/MVS, place the CICS Abend-AID/FX statements *before* DFHDELIM in the PLTSD.
8. Ensure that all PLT programs terminate with an EXEC CICS RETURN command because CICS links to each PLT program via a macro-level link. Failure to terminate each PLT program with a RETURN command can mean that EXEC CICS handle condition commands from previous PLT programs may remain active when subsequent PLT programs are run.

This situation may occur with third-party vendor products.

---

## Step 3. Add DB2 RCT/RDO Table Entry

**Note:** This step is required only if you are licensed for the CICS Abend-AID/FX for DB2 option.

To complete the installation of the CICS Abend-AID/FX for DB2 option, add the required entry to the RCT (Resource Control Table)/RDO (Resource Definition Online). Member FXRCTDB/FXRDO in the installation sample library (TKFXSAMP) contains the necessary RCT/RDO entry to install the CICS Abend-AID/FX for DB2 option.

The RCT/RDO entry is not needed if your site plans to use IBM's Dynamic Plan Selection for CICS Abend-AID/FX. Binding with the proper plan name is the only requirement for Dynamic Plan Selection. The plan name generated by the plan selection exit provided by IBM is the DBRM name. For CICS Abend-AID/FX the DBRM name is CWDB225. The plan must be bound with this name or the plan selection exit must be modified to generate the plan name used when the plan was bound. For CICS Abend-AID/FX the plan name in the bind JCL is CCASDB25. If you're running multiple releases of DB2, you must bind a plan for each release. This requirement may be cumbersome to maintain on an on-going basis.

Compuware recommends that you add the RCT/RDO entry for AADB, specifying THRDM/THREADLIMIT=0 and THRDA=0 with TWAIT/THREADWAIT=POOL and PLAN=CCASDB25. This method assigns the proper plan name and then uses the pool threads. The result is the same as using the dynamic selection exit and requires that the plan be bound only once. Maintenance is required only if the plan name changes. Performance is only slightly affected, if at all.

Review the THRDA value specified in the POOL RCT entry. You may need to increase this value to include CICS Abend-AID/FX.

If your site does not plan to use Dynamic Plan Selection, ensure that the PLAN parameter in the RCT/RDO entry matches the one used for the bind JCL. The AUTH/AUTHTYPE parameter of the RCT/RDO entry for the AADB transaction must correspond to the grant specified on the bind. Table 5-1 on page 5-3 describes the possible specifications for the grant.

If you have specified secondary authorization for DB2 and are using RACF, you may have to change the AUTH/AUTHTYPE parameter in the AADB RCT/RDO entry. You may have to use AUTH/AUTHTYPE=SIGNID or AUTH/AUTHTYPE={string} instead of AUTH=TXID/AUTHTYPE(TX). Consult with your security administrator regarding this issue.

If you're using the LIST OF GROUPS option, consider the following. AADB is not a terminal-oriented task and is not signed on. A signon exit must be used to perform a pseudo-signon to specify an authorization ID for the AADB transaction. Consult the IBM DB2 Security and Authorization Extensions Guide and the DB2 Administration Guide for a complete explanation of this process. Because the AADB transaction is not a terminal-oriented task, Compuware recommends you use AUTH/AUTHTYPE=SIGNID or AUTH/AUTHTYPE={string} AND modify the sample signon exit to support this.

If you are not using secondary AUTHIDs, Compuware recommends you use AUTH=TXID/AUTHTYPE(TX).

---

## Step 4. Modify the DFHSIT DUMP Parameter (CICS/MVS Only)

CICS Abend-AID/FX region dump support processes SVC dumps. If you are using CICS/MVS, review the DFHSIT DUMP parameter to ensure that the SIT accommodates this requirement.

To support CICS Abend-AID/FX, specify the SIT DUMP parameter as follows:

```
DUMP=(PARTN,SDUMP)
```

If you also require a formatted dump, Compuware recommends that you specify the SIT DUMP parameter as follows:

```
DUMP=(FULL,SDUMP)
```

---

## Step 5. Modify CICS Startup JCL

**Note:** If you're migrating from a CICS Abend-AID/FX release less current than Release 4.1, you can delete the SLCXLOAD DD from the CICS JCL. However, if you're also running Compuware's XPEDITER/CICS, this DD may still be required. Refer to the XPEDITER/CICS documentation for its specific installation requirements

Add the following DD statements to your CICS region startup JCL:

### DFHRPL DD Statement

Append a DD card for the CICS Abend-AID/FX CICSLIB load library to the library concatenation for the DFHRPL DD statement. For example:

```
//          DD DSN=COMPWARE.KFX440.SKFXCLIB,DISP=SHR
```

### FDBDCUST DD Statement

If you did not add an FCT entry for the CICS Abend-AID/FX customization file, you must include a DD statement for the file in the CICS region JCL. For example:

```
//FDBDCUST DD DSN=COMPWARE.CICSAAFX.CUST,DISP=SHR
```

### SLSF001 DD Statement

If you are using source support, and the CICS Abend-AID/FX source listing file is not defined in the FCT, add a DD statement for it. The statement can be included anywhere in the CICS region's job step. The following DD statement can be used as an example:

```
//SLSF001 DD DSN=COMPWARE.CICSAAFX.LISTING,DISP=SHR
```

### Notes:

- a. Add a DD statement for each source listing file accessible to this CICS region (if there is not an FCT entry for the file).
- b. The DD statement for the first source listing file *must* end in 001 (that is xxxx001), and additional files must use the next sequential number for the DD statement (that is xxxx002, xxxx003, and so forth).

- c. The SLSF001 DD statement can be changed using the SLSDDN transaction dump global option, which is described in “Modifying Transaction Dump Global Options” on page 18-24, provided the DD statement for the first source file ends in 001.
- d. The *Compuware Shared Services User/Reference Guide* contains information about allocating source listing files.

#### SYSDUMP DD Statement

Compuware recommends adding the following DD statement to your CICS region JCL:

```
//SYSDUMP DD DSN=SYSDUMP.FILE,DISP=SHR
```

If the CICS region abends early in initialization processing or late in termination processing and a dump is requested, the dump is routed to the SYSDUMP dataset. When necessary, the SYSDUMP dataset can be imported into CICS Abend-AID/FX.

#### ABNLIGNR DD Statement

If Compuware’s Abend-AID MVS is installed and you do not want an Abend-AID MVS dump taken if your CICS region fails, add the following DD statement to your CICS region JCL:

```
//ABNLIGNR DD DUMMY
```

#### FDBDLOG DD Statement (optional)

CICS Abend-AID/FX writes its diagnostic messages to the dataset or SYSOUT class specified by this DD statement. If you don’t specify an FDBDLOG DD, CICS Abend-AID/FX dynamically writes its messages to SYSOUT=\*. If you want to write these messages to a dataset, add the following DD to your CICS region JCL:

```
//FDBDLOG DD DSN=dataset.name,DISP=SHR
```

---

## Step 6. Start the CICS Abend-AID/FX Dump Interfaces

The AAON CICS transaction starts CICS Abend-AID/FX in the CICS region. If you did not add PLT entries to start CICS Abend-AID/FX, you must manually start it using the AAON transaction. Starting and stopping the AAON transaction is described in Appendix B, “Supplied Transaction”.

You have three options when you start CICS Abend-AID/FX:

- **AAON ON** starts only the transaction dump interface, which must be active for CICS Abend-AID/FX to capture and process CICS transaction dumps.
- **AAON ONR** starts only the region dump interface. The region dump interface is required from CICS Abend-AID/FX to capture the information to produce the Program Change Summary display (a list of recently changed programs). **The region dump interface is not required to capture and process region dumps.**

**Note:** Capturing the program change summary information adds a small amount of overhead to the dump capture process. Usually this amount is insignificant, although some customers have experienced a more severe performance impact. Performance is more degraded if you use the Binder. If you see any performance degradation at dump capture time, you can turn off the region dump interface while still leaving the transaction dump interface active.

- **AAON ONRT** starts both the transaction and region dump interfaces.

**Notes:**

1. The transaction dump capture subsystem must be active before the transaction dump interface is started.
2. When the transaction dump interface is started, an AAON transaction is put in a wait state to capture the last 3270 data at abend time and for DB2 processing. *Do not purge this transaction.*
3. If your site is licensed for the CICS Abend-AID/FX for DB2 option and if CICS Abend-AID/FX is installed in a CICS region where DB2 itself is *not* running, CICS Abend-AID/FX still turns on, even if the table updates for the DB2 option have not been completed. Messages are written to the CSMT log and/or the terminal indicating that DB2 is licensed, but is not active in the CICS region.
4. If your site is licensed for the CICS Abend-AID/FX for DB2 option, and if DB2 itself is running in a region and the DB2 option table updates are not completed, the CICS Abend-AID/FX transaction dump interface will *not* start in that region, regardless of any AAON transaction option that you enter.
5. For support for Geac Enterprise Server (formerly Dun and Bradstreet Software) E Series Applications MSA DCI software, a BLDL and load macros are issued to locate and load the LPCZZNUC MSA module to obtain required MSA information during the CICS Abend-AID/FX initialization process. Once the MSA information is obtained, the delete macro is issued to cancel the outstanding load request for the LPCZZNUC module. If no other requirements exist for the module, the virtual storage occupied by the LPCZZNUC load module is released.

---

## What's Next?

This is the end of the basic CICS Abend-AID/FX installation. The *CICS Abend-AID/FX User's Guide* provides information about logging onto and using CICS Abend-AID/FX. To test CICS Abend-AID/FX, you can continue with the steps described in Chapter 10, "Installing and Using the Demonstration Transactions and DB2 Sample Reports".

Additional chapters in this manual describe customizing CICS Abend-AID/FX and installing optional facilities.

## Chapter 10.

# Installing and Using the Demonstration Transactions and DB2 Sample Reports

The CICS Abend-AID/FX tape contains demonstration transactions that illustrate CICS Abend-AID/FX support for CICS transaction and region abends. It also includes sample DB2 transaction abend reports that you can view from CICS Abend-AID/FX. This chapter describes how to install and use the demonstration transactions and the process for making the DB2 sample reports available for viewing.

---

## Installing and Using the Demonstration Transactions

The demonstration transactions provided on the product tape illustrate CICS Abend-AID/FX support for CICS transaction, DB2 attach, and region abends. The *CICS Abend-AID/FX User's Guide* describes how to use CICS Abend-AID/FX to analyze one of the transaction abend examples, and the region dump example. Running the demonstration transactions also serves as an Installation Verification Procedure (IVP) for the transaction abend, DB2, and region analysis components of CICS Abend-AID/FX.

### Step 1. Set Up the CICS Abend-AID/FX Transaction Abend Demonstration Program

The CICS Abend-AID/FX COBOL (CCAADemo and CFDB2IVP) and PL/I (CCAADemp) demonstration programs illustrate the transaction abend support provided by CICS Abend-AID/FX. They use a small VSAM file that is created by the process described in this step. You can delete the file when you no longer need it for demonstration purposes.

To activate the CCAADemo, CFDB2IVP, or CCAADemp program, complete the following procedure:

1. Allocate and load the demonstration file.

Creating this file allows you to use the CCAADemo, CFDB2IVP, or CCAADemp demonstration program. Modify and run installation sample library (TKFXSAMP) member CCADEFEM to allocate the VSAM KSDS file and load it with five records.

**Note:** A return code of 4 from CCADEFEM is acceptable. If you receive a return code greater than 4, resolve the reason for the return code.

2. Compile and link-edit the test program.

The programs that are used for transaction analysis demonstration are in members CCAADemo, CFDB2IVP, and CCAADemp:

- Compile program CCAADemo with compile/link-edit JCL modified to use the Compuware COBOL language processor to provide source support.
- Compile program CFDB2IVP with precompile/compile/link-edit JCL modified to use the Compuware COBOL language processor. Ensure that the link-edit step has the DB2 load library in its concatenation and that the link step has an INCLUDE DSNCLI statement. This INCLUDE is required for all COBOL programs that access DB2 through CICS.

- Compile program CCAADEMP with compile/link-edit JCL modified to use the Compuware PL/I language processor to provide source support.

Refer to the *Compuware Shared Services User/Reference Guide* for more information about the Compuware COBOL and PL/I language processors.

3. For CFDB2IVP only, do the following:
  - a. Save the DBRM from the above step in a separate DBRM library.
  - b. Run the precompile/compile/link-edit JCL again.
  - c. Use Bind JCL in installation sample library (TKFXSAMP) member CFIVPBND to bind the plan for this test. Modify this JCL to use the DBRM library from the first precompile, specify the DB2 subsystem, and ensure the member name specifies the correct DBRM name.

As an alternative to the above process, you can skip the second precompile/compile/link-edit run and bind using the DBRM distributed in the installation sample library (TKFXSAMP) member CWDB2IVP instead of the DBRM from the current precompile.

Either method causes a -818 SQLCODE to be returned to the test transaction, thereby resulting in the IVPA abend.

- d. Add an RCT entry for the AADM transaction. Use the plan name that was specified in the bind step.

CFDB2IVP attempts to access the SYSIBM.SYSDBRM catalog table. Because it does not use a test table, it can be run without any further DB2 preparation.

#### Notes:

- a. A -805 SQLCODE is returned if the DBRM is bound into a package, instead of a plan.
  - b. Either a -805 or a -818 SQLCODE indicates a timestamp error.
  - c. A +100 or 0 (zero) SQLCODE is returned if the DBRM from the current precompile is bound into the plan.
4. Add a DD statement for the demonstration file to the CICS region JCL, if you did not add an FCT entry for the file when you added the other CICS Abend-AID/FX FCT entries. For example:

```
//CCAAEMPF DD DSN=COMPWARE.CICSAAFX.EMPLOYEE.FILE,DISP=SHR
```

Refer to “Demonstration Transactions” on page 9-4 for information about how to add the demonstration file FCT entry.

You can remove the demonstration file DD statement when the CCAADEMO, CFDB2IVP, and CCAADEMP programs are no longer required for demonstration purposes.

## Step 2. Run the CICS Abend-AID/FX Demonstration Transactions

Compuware supplies four demonstration transactions, three to illustrate CICS Abend-AID/FX transaction abend support and one to illustrate CICS Abend-AID/FX region dump support.

### Transaction Dump Support Demonstration Transactions

The transaction dump support demonstration transactions are AADM, AADP, and AAON with the TOC7 parameter. Using these transactions is described below.

## AADM Transaction

The COBOL AADM transaction uses the VSAM demonstration file that you allocated in “Step 1. Set Up the CICS Abend-AID/FX Transaction Abend Demonstration Program” on page 10-1. To use this transaction, you must have completed all the steps described in that section. In addition, the CFDB2IVP program uses the catalog table SYSDBRM.

AADM creates either an ASRA (S0C7), an AEIP, an AEIM, or an IVPA abend. Refer to Chapter 12, “Analyzing Data Exceptions” of the *CICS Abend-AID/FX User's Guide* for a description of using CICS Abend-AID/FX to analyze the ASRA abend created by the AADM transaction.

## AADP Transaction

The PL/I AADP transaction uses the VSAM demonstration file that you allocated in “Step 1. Set Up the CICS Abend-AID/FX Transaction Abend Demonstration Program” on page 10-1. To use this transaction, you must have completed all the steps described in that section. AADP creates either an ASRA (S0C7), an AEIP, or an AEIM abend.

## AAON T0C7 Transaction

T0C7 is a supported AAON transaction option, but it is not displayed on the AAON Transaction Options Menu. Refer to Appendix B, “Supplied Transaction” for information on the AAON Transaction Options Menu.

Running AAON T0C7 creates an ASRA (S0C7) abend and adds an entry to the CICS Abend-AID/FX Directory display. You can either issue the AAON T0C7 option from CICS, or enter T0C7 in the OPTION field of the AAON Transaction Options Menu.

## Region Dump Demonstration Transaction

The region dump demonstration transaction is ERWV.

To use the demonstration transaction for CICS region dump support, you must have included the appropriate CICS table entries for the demonstration transaction. The CICS table entries are described in “Step 2. Modify CICS Table Entries” on page 9-1.

ERWV causes a storage violation that results in a CICS region dump. Chapter 15, “Analyzing Storage Violations,” of the *CICS Abend-AID/FX User's Guide* describes using CICS Abend-AID/FX to resolve the storage violation.

To use the region dump demonstration transaction, enter the ERWV transaction from CICS.

---

## Installing and Using the DB2 Sample Transaction Reports

CICS Abend-AID/FX provides extended support for DB2 transaction abend analysis as an option. You can view examples of the analysis provided by the CICS Abend-AID/FX for DB2 option, whether or not you are licensed for this support, by following the steps described in this section. Once you complete these steps, you can log onto the CICS Abend-AID/FX viewing server that “owns” the transaction database containing the DB2 examples and view the information provided in the sample reports.

## Step 1. Import the Sample Reports

The CICS Abend-AID/FX installation sample library (TKFXSAMP) contains examples of CICS Abend-AID/FX for DB2 transaction reports for each supported version of CICS. Installation sample library (TKFXSAMP) member DB2SAMPL contains sample JCL to import the DB2 report examples from the installation sample library into an existing transaction database. DB2SAMPL executes the Compuware Shared Services (CSS) CWFXSDUT utility.

Before you submit the JCL in member DB2SAMPL, review it. Ensure the following:

- The REPORT DD statement points to an *existing* CICS Abend-AID/FX transaction database. The transaction database you specify is not created by DB2SAMPL.
- You indicate the CICS versions for which you have installed CICS Abend-AID/FX support. *You must import the reports for your CICS releases, or you will not be able to view the reports.* Review the ABNLPARM DD statement, and delete the IMPORT statements for any releases of CICS for which you have not installed CICS Abend-AID/FX support. The releases are indicated by the FROMDD parameter, as follows:

RPT212D2	CICS/MVS 2.1.2
RPT410D2	CICS/ESA 4.1.0
RPT510D2	CICS Transaction Server for OS/390 1.1.0
RPT520D2	CICS Transaction Server for OS/390 1.2.0
RPT530D2	CICS Transaction Server for OS/390 1.3.0
RPT620D2	CICS Transaction Server for z/OS 2.2.0

## Step 2. Import the DB2 Sample Source Listing

The CICS Abend-AID/FX installation sample library (TKFXSAMP) contains the source listing for the abending DB2 program example. A single source member was used to generate the reports examples for all supported CICS releases. Installation sample library (TKFXSAMP) member DB2SRCE contains sample JCL to import the source listing example into an existing source listing file so you can use source support with the DB2 abend examples. DB2SRCE executes the Compuware Shared Services (CSS) CWDDSUUTL utility.

Before you submit the JCL in member DB2SRCE, review it and ensure that the SOURCE DD statement points to an *existing* CICS Abend-AID/FX source listing file. The source listing file you specify is not created by DB2SRCE.

## Step 3. Add the Source Listing File to the Source Directory

Follow the instructions in the “Source Directory Screen” section in Chapter 10, “Managing Source Files,” of the *CICS Abend-AID/FX User's Guide* to add the source listing file containing the DB2 sample listing to the list of available source listing files.

---

## Part 3.

# Additional Installation Procedures for Optional Facilities and Preventive Service

Part 3 contains the following chapters that describe the procedures for installing CICS Abend-AID/FX optional facilities and preventive service:

### **Chapter 11, External Security Considerations**

Chapter 11 describes external security considerations for CICS Abend-AID/FX servers and how to implement the external security interface for user functions.

### **Chapter 12, Language Environment Considerations**

Chapter 12 describes considerations for activating and using CICS Abend-AID/FX for transactions running under Language Environment.

### **Chapter 13, Configuring Automatic Region Dump Processing**

Chapter 13 describes how to customize the CICS Abend-AID/FX region dump support to automatically import dumps and notify users when region dumps occur.

### **Chapter 14, Enabling Support for Additional Facilities**

Chapter 14 describes how to enable support for the following optional facilities after you have installed CICS Abend-AID/FX:

- The CICS Abend-AID/FX for DB2 option (transaction dumps)
- Source support (transaction dumps)
- IPCS support (region dumps).

Chapter 14 also describes adding CICS Abend-AID/FX support for new releases of CICS and DB2. It also identifies installation sample library (TKFXSAMP) members for reallocating or upgrading your site's customization file.

### **Chapter 15, Installing Preventive Service**

Chapter 15 describes the procedure for installing CICS Abend-AID/FX preventive service.



## Chapter 11.

# External Security Considerations

CICS Abend-AID/FX works with external security packages (RACF, ACF2, and Top Secret) using the RACROUTE interface to provide secure access to authorized CICS Abend-AID/FX resources and functions. This chapter describes the types of RACROUTE requests performed by CICS Abend-AID/FX, and provides additional information about using external security with CICS Abend-AID/FX.

The chapter is organized into two sections. The first describes changes you must make to your site's security rules or parameters if you are using an external security package. *These changes are required, even if you do not enable the CICS Abend-AID/FX external security interface for the viewing server.*

**Note:** For the viewing server, the CICS Abend-AID/FX external security interface is enabled by specifying the EXTERNAL\_SECURITY\_ENABLED=YES viewing server configuration parameter. Additional viewing server configuration parameters further control how the external security interface is utilized. These parameters are described in "Parameters to Enable External Security for CICS Abend-AID/FX Viewing Servers" on page 7-9.

The second section describes additional changes you can make if you want to implement the external security interface for user functions in the viewing server. To enable the external security interface, you must set the appropriate viewing server configuration parameters as described in "Parameters to Enable External Security for CICS Abend-AID/FX Viewing Servers" on page 7-9, and write security rules in the format used by your external security software. Some of these additional changes are required if you enable the external security interface, and others depend on how you want to restrict CICS Abend-AID/FX usage at your site.

---

## External Security Requirements for all Sites

This section describes required action you must take if your site has an external security package installed, regardless of whether you explicitly enable the CICS Abend-AID/FX external security interface through the specification of external security viewing server configuration parameters. The section describes granting authority for the following:

- Default authority for the customization file
- CICS region
- Viewing server
- Transaction dump capture address space (TDCAS)
- Users accessing CICS Abend-AID/FX through TSO/ISPF
- MSDCCOPY procedure.

### Granting Default Authority to the Customization File

You must allow universal READ access to the customization file. This access allows logged-on CICS Abend-AID/FX users and product facilities such as the MVS post-dump exit and SVC 51 interface to obtain site-specific information when required.

**Note:** This step is required if you are using the SVC 51 interface or the MVS post-dump exit, and is strongly suggested even if you are not using these facilities. If you do not complete this step, you must grant READ authority to the customization file to the following:

- CICS regions
- All users using TSO/ISPF viewing access
- All users using the batch CWFXS DUT utility.

## Granting Authority for the CICS Region

Ensure that the owner of the CICS region has the level of authority listed for the CICS Abend-AID/FX files shown in Table 11-1.

**Table 11-1.** Required Authority for the CICS Region

File	Authority
Installation sample library (TKFXSAMP)	READ
CICSLIB load library (SKFXCLIB)	READ
Source listing files	READ

**Note:** If you did not grant universal READ access to the customization file, as described in “Granting Default Authority to the Customization File” on page 11-1, you must grant READ authority to the file to each of your CICS regions.

## Granting Authority to the Viewing Server

The sections below describe the authority you must grant to each CICS Abend-AID/FX viewing server to allow it access to CICS Abend-AID/FX datasets. To provide proper access for the viewing server, you must complete the following procedures, which are described in the sections below:

- Defining a user identifier for the viewing server
- Specifying the user identifier to the viewing server
- Specifying viewing server access to CICS Abend-AID/FX datasets.

### Defining a User Identifier for the Viewing Server

If your CICS Abend-AID/FX or user datasets are defined with external security protection, then you must define a user ID for CICS Abend-AID/FX to your security package. The user ID is used to identify the CICS Abend-AID/FX viewing server address space to the external security package and by CICS Abend-AID/FX to obtain authorization to access the resources it needs.

For additional information about adding a user ID to your security package, consult the security administrator at your site, or refer to the product documentation for your external security package.

### Specifying the User Identifier to the Viewing Server

Depending on whether you start the viewing server as a job or a started task, perform one of the procedures below to specify the user ID to the viewing server.

#### *If You Start the Viewing Server as a Job*

If you start the CICS Abend-AID/FX viewing server as a job, include the parameters USER= and PASSWORD= on the job statement. For example:

```
//CCAAFX JOB.....,USER=CICSAAFX,PASSWORD=password,
```

In the above example, CICSAAFX is the user ID of the CICS Abend-AID/FX viewing server.

### ***If You Start the Viewing Server as a Started Task***

The method you use to define the user identifier to the viewing server differs, depending on what external security package you are using.

#### *With RACF*

For RACF release 2.1 and more current, if you start the CICS Abend-AID/FX viewing server as a started task, define a dynamic started procedure for the viewing server to RACF using the following command:

```
RDEFINE STARTED proclib_member_name.jobname
```

Alternatively, if you run the CICS Abend-AID/FX viewing server as a started task and you use RACF, you can associate the cataloged procedure name of the viewing server with a suitably authorized RACF user through the RACF table, ICHRIN03, which is resident in the link pack area (LPA). RACF supplies a default ICHRIN03 table, which you can modify.

#### *With ACF2*

If you use ACF2 and you start the CICS Abend-AID/FX viewing server as a started task, define the cataloged procedure name of the viewing server as a valid ACF2 user.

#### *With Top Secret*

If you use Top Secret and you start the CICS Abend-AID/FX viewing server as a started task, define the cataloged procedure name of the viewing server to Top Secret using the following command:

```
TSS ADD(STC)....
```

## **Specifying Viewing Server Access to CICS Abend-AID/FX Datasets**

When you have defined a user ID for your CICS Abend-AID/FX viewing server, you must permit that user ID to access the CICS Abend-AID/FX datasets with the necessary authority. The minimum authorization that the CICS Abend-AID/FX viewing server requires for its datasets is shown in Table 11-2.

**Table 11-2.** Required Viewing Server Authority for CICS Abend-AID/FX Datasets

File	ddname	Authority
Dump information file	MFDDINFO	UPDATE
Dump information file backup (for the reorganization step in the viewing server JCL)	MFDDINFB	ALTER
IPCS directory	IPCSDDIR	UPDATE
PDSM (persistent data) file	FBDPDSM	UPDATE
Viewing server work file	FBDWORK	UPDATE
Shared directory	MFDCATLG	UPDATE
Transaction databases attached to the shared directory	n/a	UPDATE
Customization file	FBDUCUST	UPDATE
Target sample library (SKFXSAMP)	SYSIN, SYSTSIN	READ
System DSECT file	MSDDSECT	READ
User DSECT file	MSDDUSER	READ
CICS Abend-AID/FX nonauthorized load library (SKFXLOAD)	FBDRLPL	READ

**Table 11-2.** Required Viewing Server Authority for CICS Abend-AID/FX Datasets

File	ddname	Authority
CICS Abend-AID/FX authorized load library (SKFXAUTH)	STEPLIB	READ
Compuware base services/HCI nonauthorized load library (SKMPLOAD)	FDBDRPL	READ
Compuware base services/HCI authorized load library (SKMPAUTH)	STEPLIB	READ
Source listing files	n/a	UPDATE
SYS1.PARMLIB	n/a	READ

**Notes:**

1. The ddnames shown in Table 11-2 on page 11-3 refer to the ddnames specified for these files in the viewing server JCL.
2. Access to SYS1.PARMLIB and the IPCS directory is required only if your site plans to use IPCS support.
3. If you use VTAM or CICS viewing access and you specify **NO** for the EXTERNAL\_SECURITY\_ENABLED viewing server configuration parameter, the viewing server must have ALTER access to the print work files.

The dataset name prefix of the print work files is based on the value that you specify for the Print dataset prefix for VTAM and CICS access user profile option. If this value is not specified, the user's user ID is used as the dataset prefix. The second node of the dataset name is the literal CICSAAFX, followed by a system-generated date and time stamp as the last two nodes.

See "Specifying the Default Site User Profile" on page 17-3 for more information about the user profile.

## Granting Authority for the Transaction Dump Capture Address Space

Ensure that the owner of the transaction dump capture address space (TDCAS) has the level of authority listed for the CICS Abend-AID/FX files shown in Table 11-3.

**Table 11-3.** Required Authority for the Transaction Dump Capture Address Space

File	Authority
Shared directory	UPDATE
Transaction databases attached to the shared directory	UPDATE
Installation sample library (TKFXSAMP)	READ
CICSLIB load library (SKFXCLIB)	READ
Source listing files	READ

**Note:** The transaction dump capture address space must have UPDATE authority to the customization file.

The sections below describe the authority you must grant to each CICS Abend-AID/FX transaction dump capture address space (TDCAS) to allow it access to CICS Abend-AID/FX datasets. To provide proper access for the TDCAS, you must complete the following procedures, which are described in the sections below:

- Defining a user identifier for the TDCAS
- Specifying the user identifier to the TDCAS
- Specifying the External\_Security\_Enabled parameter.

## Defining a User Identifier for the Transaction Dump Capture Address Space

If your CICS Abend-AID/FX or user datasets are defined with external security protection, then you must define a user ID for CICS Abend-AID/FX to your security package. The user ID is used to identify the CICS Abend-AID/FX transaction dump capture address space (TDCAS) to the external security package and by CICS Abend-AID/FX to obtain authorization to access the resources it needs.

For additional information about adding a user ID to your security package, consult the security administrator at your site, or refer to the product documentation for your external security package.

## Specifying the User Identifier to the Transaction Dump Capture Address Space

Depending on whether you start the transaction dump capture address space (TDCAS) as a job or a started task, perform one of the procedures below to specify the user ID to the TDCAS.

### *If You Start the TDCAS as a Job*

If you start the CICS Abend-AID/FX transaction dump capture address space (TDCAS) as a job, include the parameters USER= and PASSWORD= on the job statement. For example:

```
//TDCAS JOB.....,USER=FXTDCAS,PASSWORD=password,
```

In the above example, FXTDCAS is the user ID of the CICS Abend-AID/FX TDCAS.

### *If You Start the TDCAS as a Started Task*

The method you use to define the user identifier to the transaction dump capture address space (TDCAS) differs, depending on what external security package you are using.

#### *With RACF*

For RACF release 2.1 and more current, if you start the CICS Abend-AID/FX transaction dump capture address space as a started task, define a dynamic started procedure for the TDCAS to RACF using the following command:

```
RDEFINE STARTED proclib_member_name.jobname
```

Alternatively, if you run the CICS Abend-AID/FX transaction dump capture address space as a started task and you use RACF, you can associate the cataloged procedure name of the TDCAS with a suitably authorized RACF user through the RACF table, ICHRIN03, which is resident in the link pack area (LPA). RACF supplies a default ICHRIN03 table, which you can modify.

#### *With ACF2*

If you use ACF2 and you start the CICS Abend-AID/FX transaction dump capture address space as a started task, define the cataloged procedure name of the TDCAS as a valid ACF2 user.

#### *With Top Secret*

If you use Top Secret and you start the CICS Abend-AID/FX transaction dump capture address space as a started task, define the cataloged procedure name of the TDCAS to Top Secret using the following command:

```
TSS ADD(STC)....
```

## Specifying the External\_Security\_Enabled Parameter

Users are required to log onto the TDCAS using a valid user ID and password if you specify YES for the EXTERNAL\_SECURITY\_ENABLED TDCAS configuration parameter.

The function value for the logon function is LOGON.TC.

You must write the appropriate rules for your external security package, based on the following resource name CICS Abend-AID/FX generates for the logon function:

```
prefix.SERVER.LOGON.TC.servername
```

The minimum authority you must grant users for this function is READ.

The user ID that starts the CICS region must also have this authority.

## TSO/ISPF Viewing Access Requirements

TSO/ISPF users must be authorized to access certain CICS Abend-AID/FX datasets. The minimum authorization that CICS Abend-AID/FX requires for its datasets is shown in the Table 11-4. TSO/ISPF authorization requirements differ from VTAM and CICS requirements because the CICS Abend-AID/FX datasets are accessed in the user's TSO address space (with VTAM and CICS access, the datasets are accessed in the *viewing server's* address space).

For TSO/ISPF users, you must grant this authority, even if you specify NO for the EXTERNAL\_SECURITY\_ENABLED viewing server configuration parameter.

**Table 11-4.** Required Authority for TSO/ISPF users

File	Authority
Target sample library (SKFXSAMP)	READ
CICS Abend-AID/FX nonauthorized load library (SKFXLOAD)	READ
Compuware base services/HCI nonauthorized load library (SKMPLOAD)	READ

**Note:** If you did not grant universal READ access to the customization file, as described in "Granting Default Authority to the Customization File" on page 11-1, you must grant READ authority to the file to each TSO/ISPF user ID.

## Authorizing the MSDCCOPY Procedure

If you install the CICS Abend-AID/FX MVS post-dump exit or SVC 51 interface, you must associate the MSDCCOPY procedure name with a suitably authorized user.

Be aware that MSDCCOPY must have authority to create dump-copy datasets whose names are specified in the region dump capture profile options. For example, if MSDCCOPY is associated with user CICSAAFX and the region dump capture profiles specify that all copied dump datasets are copied to datasets beginning with the high-level qualifier SDUMP, then CICSAAFX must be granted authority to create 'SDUMP.nnnn...' datasets.

The MSDCCOPY procedure must have the access levels shown in Table 11-5.

**Table 11-5.** Required Authority for the MSDCCOPY Procedure

Dataset	Authority
Dump dataset	ALTER
Dump information file	UPDATE
CICS Abend-AID/FX nonauthorized load library (SKFXLOAD)	READ

**Table 11-5.** Required Authority for the MSDCCOPY Procedure

Dataset	Authority
CICS Abend-AID/FX authorized load library (SKFXAUTH)	READ
Compuware base services/HCI nonauthorized load library (SKMPLOAD)	READ
Compuware base services/HCI authorized load library (SKMPAUTH)	READ

**Note:** You must also grant universal READ access to the customization file, as described in “Granting Default Authority to the Customization File” on page 11-1.

## With RACF

For RACF release 2.1 and more current, define a dynamic started procedure for MSDCCOPY to RACF using the following command:

```
RDEFINE STARTED MSDCCOPY.MSDCCOPY
```

Alternatively, define the RACF user ID for MSDCCOPY through the RACF table, ICHRIN03, which is resident in the link pack area (LPA). RACF supplies a default ICHRIN03 table, which you can modify.

## With ACF2

If you use ACF2, define the cataloged procedure name of the viewing server as a valid ACF2 user.

## With Top Secret

If you use Top Secret, define the cataloged procedure name of the viewing server to Top Secret using the following command:

```
TSS ADD(STC)...
```

---

# Additional External Security Interface Requirements

This section describes additional procedures you may need to complete if you enable the CICS Abend-AID/FX external security interface for the viewing server. You enable the CICS Abend-AID/FX viewing server external security interface by specifying **YES** for the `EXTERNAL_SECURITY_ENABLED` viewing server configuration parameter. The procedures that are required for your site depend on the specific external security package you are using, and how you want external security utilized to restrict access to CICS Abend-AID/FX resources and functions.

The section describes the following procedures and requirements:

- Enabling RACROUTE under ACF2 and Top Secret
- Viewing access requirements for VTAM and CICS
- Application security (resource class=APPL) requirements
- Controlling user access to specific CICS Abend-AID/FX functions
- Using the Compuware Shared Services Security Exit (CWASSECU).

**Note:** The `EXTERNAL_SECURITY_...` viewing server configuration parameters are described in “Parameters to Enable External Security for CICS Abend-AID/FX Viewing Servers” on page 7-9.

## Enabling RACROUTE under ACF2 and Top Secret

CICS Abend-AID/FX issues standard RACROUTE calls, so it can interface with any external security package using standard SAF functions. For RACF, no special user action is required to ensure that RACROUTE calls can be issued. However, if you are using either ACF2 or Top Secret, ensure that RACROUTE is enabled for CICS Abend-AID/FX by following the appropriate instructions below.

### Enabling RACROUTE under ACF2

To enable RACROUTE under ACF2, write the rules appropriate to your release of ACF2.

#### **ACF2 Release 6.0 and More Current**

ACF2 release 6.0 and more current require SAFDEFs to enable CICS Abend-AID/FX to use the SAF security application programming interface (API). The specific rules you should write are as follows:

```
SAFDEF.aafx1 JOBNAME(fx-) PROGRAM(FDB-) MODE(LOG) -
RACROUTE(REQUEST=AUTH)

SAFDEF.aafx2 JOBNAME(fx-) PROGRAM(FDB-) MODE(LOG) -
RACROUTE(REQUEST=VERIFY)
```

In the above rules, AAFX is a unique qualifier, used to ensure that the rule keys are unique. FX in the JOBNAME parameter is the prefix of the CICS Abend-AID/FX viewing server job(s). The MODE parameter requires a valid SAF option.

#### **ACF2 Release 5.2 and Less Current**

ACF2 release 5.2 and less current require SAFPROT rules to enable CICS Abend-AID/FX to use the SAF security API. The specific rules you should write are shown below. In the examples, AAFX is a unique qualifier, used to ensure that the rule keys are unique. FX in the JOBNAME parameter is the prefix of the CICS Abend-AID/FX viewing server job(s).

```
SYS1 / SAFPROT.aafx CLASSES(-) CNTLPTS(FDB-) SUBSYS(FDB-)
```

As an alternative, you can write the following rules:

```
SYS1 / SAFPROT.aafx01 CLASSES(VERIFY) CNTLPTS(FDB-) SUBSYS(FDB-)
SYS1 / SAFPROT.aafx02 CLASSES(DATASET) CNTLPTS(FDB-) SUBSYS(FDB-)
```

**Note:** If you choose the “alternative” method from the two methods shown above, you need to write a third SAFPROT rule if both of the following are true:

- You are restricting access to CICS Abend-AID/FX functions, as described in “Controlling User Access to Specific Functions” on page 11-11, *and*
- You specify something other than the default value, DATASET, for the EXTERNAL\_SECURITY\_RESOURCE\_CLASS viewing server configuration parameter.

### Enabling RACROUTE under Top Secret

If you use Top Secret, define the viewing server’s user ID as a multi-user facility.

## Viewing Access Requirements

Each viewing access method has different external security requirements. For each viewing access method supported at your site, complete the requirements described in the following sections.

## TSO/ISPF Requirements

If you use TSO/ISPF access, refer to “TSO/ISPF Viewing Access Requirements” on page 11-6.

## VTAM Requirements

If you specified the `EXTERNAL_SECURITY_ENABLED` viewing server configuration parameter and you are using VTAM viewing access, each CICS Abend-AID/FX user must have the following:

- A valid user ID and password to access CICS Abend-AID/FX.
- ALTER access to the print work files.

The dataset name prefix of the print work files is based on the value that you specify for the Print dataset prefix for VTAM and CICS access user profile option. If this value is not specified, the user’s user ID is used as the dataset prefix. The second node of the dataset name is the literal `CICSAAFX`, followed by a system-generated date and time stamp as the last two nodes.

See “Specifying the Default Site User Profile” on page 17-3 for more information about the user profile.

## CICS Requirements

If you specified the `EXTERNAL_SECURITY_ENABLED` viewing server configuration parameter and you are using CICS viewing access, each CICS Abend-AID/FX user must have the following:

- A valid user ID and password to access CICS Abend-AID/FX.
- ALTER access to the print work files.

The dataset name prefix of the print work files is based on the value that you specify for the Print dataset prefix for VTAM and CICS access user profile option. If this value is not specified, the user’s user ID is used as the dataset prefix. The second node of the dataset name is the literal `CICSAAFX`, followed by a system-generated date and time stamp as the last two nodes.

See “Specifying the Default Site User Profile” on page 17-3 for more information about the user profile.

### Notes:

1. Users who log onto CICS with CESN or CSSN are not required to respecify their user ID and password when they access CICS Abend-AID/FX.
2. For CICS/MVS — because viewing server access is secured, if you are accessing CICS Abend-AID/FX from a CICS region that uses CICS security (SNT), then the SNT entry must be a valid user ID defined to your external security package.
3. If your users log onto CICS with a default CICS user ID, that ID is the only one used by CICS Abend-AID/FX, and it must have ALTER access to the print work files.

## If You Have Restricted Application Security (Resource Class=APPL)

If you have restricted application security, be aware that CICS Abend-AID/FX uses the viewing server name, and not the LU 2 or LU 6.2 APPLID associated with the viewing server, when issuing the RACROUTE verification at user logon time. The viewing server name is specified on the execute statement in the server JCL, as described in “Step 3c. Specify the Viewing Server Name” on page 7-18.

Using the viewing server name results in the external security package verifying that the user has access to the viewing server name resource in the APPL resource class. If the user does not have access to this resource, the logon is rejected.

CICS Abend-AID/FX uses the viewing server name instead of the APPLID to provide a consistent resource name, regardless of the user's viewing environment.

## Controlling User Access to CICS Abend-AID/FX Datasets

The sections below describe granting authority to users to the following CICS Abend-AID/FX datasets:

- Region dump datasets
- Transaction databases
- Source listing files.

### Specifying Access to Region Dump Datasets

If you specified **REGION** for the **EXTERNAL\_SECURITY\_DATASET\_CHECK** viewing server configuration parameter, you must grant either specific, generic, or universal **READ** access for users to read region dump datasets.

To allow users to delete region dumps, you must permit **ALTER** access to the dump. To allow users to migrate a region dump, you must permit **UPDATE** access to the dump.

**Note:** You can also restrict the execution of specific CICS Abend-AID/FX Directory line commands. This facility is described in “Region Dumps” on page 11-13.

### Specifying Access to Transaction Databases

You can restrict user access to transaction databases on the dataset level by doing *both* of the following:

- Specifying **TRAN** for the **EXTERNAL\_SECURITY\_DATASET\_CHECK** viewing server configuration parameter. Doing so causes CICS Abend-AID/FX to check a user's authority to access (that is, select, delete, lock and unlock) a transaction dump when access is attempted. The authority is checked on the dataset level — if a user has **READ** or **UPDATE** access to the transaction database, the user is allowed to access *any* dump in that database.
- Writing rules for your external security package to allow only authorized users access to the database(s).

To allow users to delete, lock, or unlock entries in the transaction databases using CICS Abend-AID/FX Directory facilities, you must permit **UPDATE** access to the transaction databases.

**Note:** You can also restrict the execution of specific CICS Abend-AID/FX Directory line commands. This facility is described in “Transaction Dumps” on page 11-13. Further, you can use the Compuware Shared Services security exit (CWASSECU), as described in “Using the CSS Security Exit (CWASSECU)” on page 11-14, to restrict access to individual dumps within a transaction database.

### Specifying Access to Source Listing Files

You can restrict user access to source listing files on the dataset level by doing *both* of the following:

- Specifying **SLS** for the **EXTERNAL\_SECURITY\_DATASET\_CHECK** viewing server configuration parameter. Doing so causes CICS Abend-AID/FX to check a user's authority to access (that is, select, delete, lock and unlock) a source listing file when access is attempted. The authority is checked on the dataset level — if a user has **READ** or **UPDATE** access to the source listing file, the user is allowed to access *any* listing in that file.

- Writing rules for your external security package to allow only authorized users access to the file(s).

To allow users to delete, lock, or unlock entries in the source listing files using CICS Abend-AID/FX facilities, you must permit UPDATE access to the source listing files.

**Note:** You can use the Compuware Shared Services security exit (CWASSECU), as described in “Using the CSS Security Exit (CWASSECU)” on page 11-14, to restrict access to individual listings within a source listing file.

## Controlling User Access to Specific Functions

**Note:** The information in this section applies only if you specify the EXTERNAL\_SECURITY\_FUNCTION\_CHECK viewing server configuration parameter, described in “Parameters to Enable External Security for CICS Abend-AID/FX Viewing Servers” on page 7-9.

CICS Abend-AID/FX checks for security rules at the points indicated by the EXTERNAL\_SECURITY\_FUNCTION\_CHECK subparameters you specify. For example, if you specify the IMPORT subparameter, a user’s authorization to issue the IMPORT function is verified when the user attempts to import a region dump.

CICS Abend-AID/FX uses the resource class you specify on the EXTERNAL\_SECURITY\_RESOURCE\_CLASS viewing server configuration parameter to protect these functions. You must write rules for your external security package against the resource name generated by CICS Abend-AID/FX to control access to these functions. The resource names generated by CICS Abend-AID/FX for each of the function exit points are described in “Function Descriptions” on page 11-12.

## Using the Default Resource Class

By default, CICS Abend-AID/FX uses *dataset class* security to control access to CICS Abend-AID/FX functions, even though the functions are not datasets. Using dataset class security means that you do not have to modify the Class Descriptor Table for your security package.

To accomplish this, CICS Abend-AID/FX builds resource names that correspond to each function. If you use dataset class security, use the resource names generated by CICS Abend-AID/FX as pseudo-dataset names for which you write external security rules, as if the resources being protected were datasets. These datasets do not exist, but CICS Abend-AID/FX allows or denies user access to the functions they represent based on the rules you write for the pseudo-datasets.

## Specifying a Resource Class

If you do not want to use a resource class of *dataset* to restrict access to CICS Abend-AID/FX functions, specify the class you want to use on the EXTERNAL\_SECURITY\_RESOURCE\_CLASS viewing server configuration parameter.

## Resource Names Generated by CICS Abend-AID/FX

Regardless of whether you use the default resource class, DATASET, or specify your own resource class, CICS Abend-AID/FX uses the components listed below to generate resource names used to identify each CICS Abend-AID/FX function. Write rules for your external security package according to the resource class you specify.

The following are the components of each resource name generated by CICS Abend-AID/FX:

- **prefix:** The value specified for the EXTERNAL\_SECURITY\_PREFIX viewing server configuration parameter. The prefix specifies the high-level qualifier CICS Abend-AID/FX uses to generate the resource names. You must write rules for your external security package against the resource names that CICS Abend-AID/FX generates.
- **function:** The CICS Abend-AID/FX function for which you are writing the security rule. Valid functions are described in “Function Descriptions”.
- **servername:** The name of the viewing server specified as a parameter on the execute statement of the viewing server JCL. See “Step 3c. Specify the Viewing Server Name” on page 7-18 for more information.

For example, to set up a security rule to check for authority to use the IMPORT function, using the prefix COMPWARE and the servername PRODSERV, you would write rules for the resource name

```
COMPWARE.SERVER.IMPORT.PRODSERV
```

**Note:** The word SERVER as the second node in the resource name is a constant that must be specified as shown. This is a convention for most of the functions, so make sure that you include SERVER if it is shown in the resource name for a function.

## Function Descriptions

The sections below describe each of the CICS Abend-AID/FX functions that you can control using this method, and indicate the resource name for which you should write rules to restrict access to the function.

### ***Logging onto CICS Abend-AID/FX***

Users are required to log onto CICS Abend-AID/FX using a valid user ID and password if you specify YES for the EXTERNAL\_SECURITY\_ENABLED viewing server configuration parameter.

The function value for the logon function is **LOGON.FD**.

You must write the appropriate rules for your external security package, based on the following resource name CICS Abend-AID/FX generates for the logon function:

```
prefix.SERVER.LOGON.FD.servername
```

The minimum authority you must grant users for this function is READ.

### ***Accessing the Online Customization Function***

To restrict access to the online customization function, you must specify the CUSTOM subparameter of the EXTERNAL\_SECURITY\_FUNCTION\_CHECK viewing server configuration parameter.

The function value for the online customization function is **LOGON.IC**. You must write the appropriate rules for your external security package based on the following resource name CICS Abend-AID/FX generates for the online customization function:

```
prefix.SERVER.LOGON.IC.servername
```

The minimum authority you must grant users for this function is READ.

### ***Issuing CICS Abend-AID/FX Directory Line Commands***

To control the line commands that users can issue on the CICS Abend-AID/FX Directory display, you must specify the DIRCMD5 subparameter of the EXTERNAL\_SECURITY\_FUNCTION\_CHECK viewing server configuration parameter.

You must also write the appropriate rules for your external security package, based on the resource names CICS Abend-AID/FX generates for the directory line commands function. Unique resource names are generated for transaction dumps and for region dumps, as described below.

### **Transaction Dumps**

Using this method, you can control access to specific entries (dumps/reports) in transaction databases without requiring dataset-level access to the file. In addition to specifying the DIRCMDS subparameter for the EXTERNAL\_SECURITY\_FUNCTION\_CHECK viewing server configuration parameter, you must specify **SAF** for the EXTERNAL\_SECURITY\_DDIO\_METHOD viewing server configuration parameter.

The function value for dump directory line commands against *transaction* dump entries is **DDIRTx**. CICS Abend-AID/FX generates the following resource names based on this function:

```
prefix.DDIRTx.servername.applid_of_CICS_region.tranid_of_entry_in_directory
```

where **x** is the one-character command identifier associated with the line command (for example, **D** for the Delete line command).

The minimum authority you must grant users for this function is **READ**.

### **Region Dumps**

The function value for dump directory line commands against *region* dump entries is **DDIRsx**. CICS Abend-AID/FX generates the following resource names based on this function:

```
prefix.DDIRSx.servername.jobname_of_address_space_in_dump
```

where **x** is the one-character command identifier associated with the line command (for example, **D** for the Delete line command).

**Note:** The `jobname_of_address_space_in_dump` value is **INFO** if the CICS Abend-AID/FX directory entry describes an **INFO** entry instead of a dump dataset.

The minimum authority you must grant users for this function is **READ**.

### **Importing Region Dumps**

To control user access to the **IMPORT** function, you must specify the **IMPORT** subparameter of the EXTERNAL\_SECURITY\_FUNCTION\_CHECK viewing server configuration parameter.

The function value for the import function is **IMPORT**. You must write the appropriate rules for your external security package, based on the following resource name CICS Abend-AID/FX generates for the import function:

```
prefix.SERVER.IMPORT.servername
```

The minimum authority you must grant users for this function is **READ**. In addition, users must have a minimum of **READ** access to the dataset that they want to import.

### **Issuing IPCS Commands against Region Dumps**

To control user access to the IPCS Command Facility function, you must specify the **IPCS** subparameter of the EXTERNAL\_SECURITY\_FUNCTION\_CHECK viewing server configuration parameter.

The function value for the IPCS command facility is IPCSCMD. You must write the appropriate rules for your external security package, based on the following resource name CICS Abend-AID/FX generates for the IPCS command facility function:

```
prefix.SERVER.IPCSCMD.servername
```

The minimum authority you must grant users for this function is READ.

### ***Issuing the SHUTDOWN Command***

To restrict access to the viewing server or transaction dump capture address space SHUTDOWN command, you must specify the SHUT subparameter of the EXTERNAL\_SECURITY\_FUNCTION\_CHECK viewing server configuration parameter.

**Note:** The SHUTDOWN command is described in “Stopping the Viewing Server or TDCAS” on page A-2.

The function value for the SHUTDOWN command is CONTROL. You must write the appropriate rules for your external security package, based on the following resource name CICS Abend-AID/FX generates for this function:

```
prefix.SERVER.CONTROL.servername
```

The minimum authority you must grant users for this function is READ.

### ***Invoking the REXX API***

To control user access to the CICS Abend-AID/FX REXX application program interface (API) function, you must specify the REXX subparameter of the EXTERNAL\_SECURITY\_FUNCTION\_CHECK viewing server configuration parameter.

The function value for the REXX API is REXXAPI. You must write the appropriate rules for your external security package, based on the following resource name CICS Abend-AID/FX generates for the REXX API function:

```
prefix.SERVER.REXXAPI.servername
```

The minimum authority you must grant users for this function is READ.

## **Using the CSS Security Exit (CWASSECU)**

**Note:** This information was provided for users migrating to CICS Abend-AID/FX from its predecessor product, CICS Abend-AID. The method is *not* recommended unless you transitioned to CICS Abend-AID/FX from the prior product. Users who converted to CICS Abend-AID/FX from CICS Abend-AID can use their CICS Abend-AID security exit with CICS Abend-AID/FX.

The *Compuware Shared Services User/Reference Guide* contains a chapter describing the Compuware Shared Services (CSS) Security Exit program. This user-coded program allows you to restrict access to some of the CICS Abend-AID/FX Directory functions for transaction databases and source listing files. For example, you can use the CSS Security Exit program to restrict access to individual reports or listings within these files.

The CSS Security Exit is enabled for use by CICS Abend-AID/FX by specifying CSS for the EXTERNAL\_SECURITY\_DDIO\_METHOD viewing server configuration parameter. If this value is specified, CICS Abend-AID/FX calls the CSS security module, CWASSECU, at exit points supported by the CSS Security Exit program. CICS Abend-AID/FX restricts or allows access to the requested function as specified by the exit module.

You can use external security in conjunction with the CSS Security Exit program to control access to functions that are not supported by the CSS exit program.

To use the CSS Security Exit program, do the following:

- Specify CSS for the EXTERNAL\_SECURITY\_DDIO\_METHOD viewing server configuration parameter.
- Follow the instructions for coding module CWASSECU provided in the *Compuware Shared Services User/Reference Guide*.
- Include module CWASSECU in a library in the CICS Abend-AID/FX viewing server's FDBDRPL concatenation.

**Note:** The current user ID on entry to CWASSECU is the user logged onto the viewing server, and not the viewing server itself.



## Chapter 12.

# Language Environment Considerations

This chapter describes using CICS Abend-AID/FX with transactions running under IBM's Language Environment (LE). It also provides some installation information and answers to commonly asked questions. Because this chapter does not duplicate information provided by IBM, refer to the appropriate IBM documentation for more detailed information about LE.

---

## LE Support

CICS Abend-AID/FX provides two types of support for COBOL programs:

- Basic support for obsolete releases of Language Environment such as LE for MVS and VM Versions 1.4.0 and less current
- Extended support for more recent releases such as LE for MVS and VM Version 1.5.0, and OS/390 Versions 1.2 Language Environment and more current.

Compuware's objective is to provide the same CICS Abend-AID/FX support for COBOL programs running under Language Environment as for similar COBOL programs not running under LE. This support includes COBOL II programs, which may run either with or without LE; and COBOL for MVS and VM and COBOL for OS/390 and VM, which require LE. In addition, selected LE control blocks and areas are shown on the Control Blocks/Storage screen.

---

## Activating CICS Abend-AID/FX under LE

No special installation instructions are required to use CICS Abend-AID/FX with Language Environment. Once your environment has been set up to allow CICS to take transaction dumps, simply activate CICS Abend-AID/FX using the AAON transaction.

If you have problems getting CICS Abend-AID/FX to take transaction dumps, first confirm that the environment is correctly set up. Turn off CICS Abend-AID/FX using AAON OFF and check that IBM CICS transaction dumps are correctly taken. Once you verify that the environment is correct, you can then activate CICS Abend-AID/FX using AAON ON. Refer to Appendix B, "Supplied Transaction" for more information about using this transaction.

Abends occurring for CICS transactions under LE cause a transaction dump to be taken *only* for CICS-detected errors — for example, ASRA and AEIx. To cause a transaction dump for COBOL software-raised conditions (1nnn), refer to "Transaction Dumps for Software-Raised Conditions" on page 12-2.

---

## LE Information in the CICS Abend-AID/FX Report

The following areas are displayed on the CICS Abend-AID/FX Control Blocks/Storage screen for abends executing COBOL programs under Language Environment:

- **CEECAA:** LE common anchor area
- **CEECIB:** LE condition information block
- **CEEMIB:** LE message insert block(s).

The CEECIB contains the message prefix (CEE, IGZ, among others) and message number (for example, 006) for the condition causing the failure. The CEEMIB(s) contain the variable message insert(s) inserted into the message by Language Environment before the message was displayed. The message is normally sent to the CESE transient data queue and is no longer available to CICS Abend-AID/FX. By referring to the appropriate messages and codes manual and plugging in the values from the CEEMIB(s) displayed by CICS Abend-AID/FX, users can reconstruct the exact message.

---

## CICS Abend-AID/FX Processing of Abends

For COBOL software-raised conditions for which LE issues the IGZxxxxS message to the CESE transient data queue, the LE abend code is converted to the appropriate COBOL abend code by adding 1000 to the condition code. For selected codes including 1006, 1007, 1011, 1058, 1074, 1096, the diagnostic information is extracted and shown on the CICS Abend-AID/FX Diagnostic Summary screen. For others, a standard description is shown. With LE for MVS and VM Versions 1.5.0 and more current, some errors shown in previous releases of Language Environment cannot occur, so IBM reassigned the message numbers. For these, the correct meaning is shown dependent upon the LE release.

For Language Environment abends for which LE issues the CEExxxxS message, the message number is used as the abend code, and the diagnostic displays the appropriate text boilerplate.

For COBOL for MVS and VM and COBOL for OS/390 and VM, the Local Storage and DSA are dumped out and are selectable from the COBOL Storage Areas menu. Source support is available for the Local Storage Section. The DSA and Local Storage cells are shown on the Control Blocks/Storage screen.

---

## Transaction Dumps for Software-Raised Conditions

With Language Environment, one of the following three methods can be used to cause a transaction dump to occur for COBOL software-raised conditions (1nnn):

- Install the IBM-supplied condition handler for CICS, CEEWUCHA. Compuware recommends this method.
- Install the IBM-supplied abnormal termination exit CEECDATX (or SAMPDAT2).
- Specify the LE run-time option TERMTHDACT(UADUMP).

For a comparison of the three methods and Compuware's recommendations, refer to "Compuware's Recommendations" on page 12-3.

### Installing CEEWUCHA

The IBM-supplied condition handler for CICS, CEEWUCHA, was introduced by IBM's PTFs for APAR PN89393 and is used to convert all unhandled COBOL run-time detected errors to the corresponding user 1nnn abend issued by VS COBOL II.

**Note:** Compuware recommends using the CEEWUCHA condition handler.

To activate CEEWUCHA, do the following:

1. Assemble and link-edit CEEWUCHA to a CICS DFHRPL library. IBM supplies the sample condition handler in the LE SCEESAMP library as CEEWUCHA, and the SMP/E USERMOD to link-edit this condition handler is CEEWUCHA in the LE SCEESAMP library.
2. Create a PPT definition for CEEWUCHA defined as assembler.
3. To use this condition handler under CICS, specify **USRHDLR=(CEEWUCHA)** in your CEECOPT or CEEUOPT LE run-time options.

More detailed information is available in the LE SCEESAMP member CEEWUCHA. For instance, this condition handler can also be used to handle PL/I conditions in a CICS environment. Review the instructions detailed in CEEWUCHA. Further, IBM recommends applying the PTFs for APAR PQ11014 for revisions to CEEWUCHA to handle the PL/I conditions.

## Installing CEECDATX (or SAMPDAT2)

The IBM-supplied abnormal termination exit for CICS, CEECDATX (also known as SAMPDAT2), causes a transaction dump to be taken for an unhandled condition of severity 2 or higher. This exit causes a transaction dump by issuing an EXEC CICS DUMP TRANSACTION DUMPCODE('4039') TASK. If you use CEECDATX, Compuware also recommends issuing an EXEC CICS IGNORE CONDITION SUPPRESSED prior to the EXEC CICS DUMP TRANSACTION to avoid an AEXW abend (LE shows as a 4087 abend) when suppressing IBM transaction dumps

To activate CEECDATX, do the following

1. Assemble and link-edit CEECDATX to a CICS DFHRPL library. IBM supplies a sample LE abnormal termination exit in the LE SCEESAMP library only for LE/370 Version 1.3 as CEECDATX. IBM also provides it in the *COBOL for OS/390 Compiler and Run-Time Migration Guide* as SAMPDAT2. SAMPDAT2 is shown as a figure in the documentation that you can copy and paste. CEECDATX and SAMPDAT2 are identical exits provided by IBM.
2. Create a PPT definition for CEECDATX defined as assembler.
3. Define the CEECDATX program in the CEECXTAN abnormal termination exit list. CEECXTAN is available in the LE SCEESAMP library. You can use the IBM-supplied sample SMP/E USERMOD, CEEWCEXT, to update CEECXTAN. CEECXTAN is part of load module CEECCICS. CEECCICS is required on both the CICS STEPLIB and the CICS DFHRPL load libraries.

For information about using an LE abnormal termination exit, refer to the following IBM documents:

- For OS/390: *Language Environment for OS/390 Customization*
- For MVS: *Language Environment Installation and Customization*.

## Specifying TERMTHDACT(UADUMP)

Specify the LE run-time option TERMTHDACT(UADUMP) in the installation LE options member CEECOPT or the user LE options member CEEUOPT.

## Compuware's Recommendations

Compuware recommends installing the CEEWUCHA condition handler as the preferred method for these reasons:

- Using the CEEWUCHA condition handler requires less overhead.
- The CICS Abend-AID/FX transaction dump global option LESUPPORT=Y is not required. (LESUPPORT=N is the default.) For CICS-detected errors such as ASRA, this condition handler does not cause a second CICS transaction dump to be issued as it does for the CEECDATX exit or the TERMTHDACT(UADUMP) option.
- LE does not convert the abend code to a 4039 but keeps it as a 1nnn abend.

The use of the CEECDATX exit or the TERMTHDACT(UADUMP) option can cause multiple transaction entries for a single occurrence of an abend for CICS-detected errors. The CICS Abend-AID/FX transaction dump global option LESUPPORT=Y is required to suppress the duplicate CICS Abend-AID/FX transaction entry.

Compuware does *not* recommend using TERMTHDACT(UADUMP) in a CICS production region. It causes an LE dump to be written to the CESE transient data queue, which adds some overhead to CICS. Specifying the LESUPPORT=Y transaction dump global option eliminates most of the CESE trace entries from the captured report, thus saving space on the CICS Abend-AID/FX transaction database. However, CICS still suffers the overhead of generating and writing out these entries. Refer to the description of the LESUPPORT transaction dump global option on page 18-30 for more information.

---

## LE Assembler User Exit

LE allows the definition of an Assembler user exit. It gets invoked at five processing points:

- First enclave initialization
- First enclave termination
- Nested enclave initialization
- Nested enclave termination
- PROCESS termination (LE termination)

Because this exit does not get invoked for unhandled error conditions, it is of no value for generating transaction dumps, and is not required for CICS Abend-AID/FX.

## Chapter 13.

# Configuring Automatic Region Dump Processing

This chapter describes how to customize CICS Abend-AID/FX region dump support to automatically import dumps, and to notify users when region dumps occur.

---

## Specifying Required SDATA Parameters for SDUMPs

When CICS issues an SDUMP request, it passes the required dump parameters to the SDUMP macro. Therefore, under normal circumstances you don't need to modify any SDATA parameters for CICS Abend-AID/FX processing.

However, if you specify the override (OVER) option on a CHNGDUMP command, the areas you specify on the CHNGDUMP command will override those being passed by CICS when it requests an SDUMP. The resulting dump may have important areas missing and, consequently, some CICS Abend-AID/FX displays may be missing. You can either enter the CHNGDUMP command on the console or set it automatically at IPL in SYS1.PARMLIB(IEACMDxx).

If you specify override on a CHNGDUMP command, ensure that it includes at least the following areas:

```
SDATA=(ALLPSA,SQA,SUMDUMP,NUC,RGN,LPA,TRT,CSA,GRSQ)
```

---

## Manually Importing Dumps

CICS Abend-AID/FX can process any standard system dump — SVC dump (console, SDUMP, SLIP), or SYSDUMP. With a default CICS Abend-AID/FX installation, all region dumps must be manually imported into CICS Abend-AID/FX, using the product's Dataset Import function. If manual region dump import is all that you require, you do not need to install the MVS post-dump exit or SVC 51 interface, unless you intend to use the notification facility for region dumps.

CICS Abend-AID/FX also supports a console MODIFY command to the viewing server address space to import dumps. You can use the MODIFY command in conjunction with automatic operations software you may have installed at your site, as described in "Using Automated Operations Facilities" on page 13-4.

**Note:** You cannot import SYS1.DUMPxx datasets directly into CICS Abend-AID/FX because CICS Abend-AID/FX requires the dump dataset to be available on DASD while you are viewing it, and SYS1.DUMPxx datasets are likely to be cleared and reused very quickly. Instead, copy the SYS1.DUMPxx dataset to another dataset, and import the copy.

---

## Automatically Importing Dumps

You can customize CICS Abend-AID/FX to *automatically* import the types of region dumps described below. Automatic import requires either the MVS post-dump exit or the SVC 51 interface, or both, depending on the type of dumps you are taking

You can also specify whether dump analysis is run against dumps when they are automatically imported. Dump analysis can be run only for CICS address spaces. If a dump dataset contains multiple address spaces, automatic analysis can be started only if there is a single CICS address space in the dump.

You may want to specify that analysis is *not* automatically run in order to save time and overhead when a dump is automatically imported. You can manually analyze a dump after it is imported by using the CICS Abend-AID/FX Directory A (Analyze) line command. Refer to “Modifying Region Dump Profiles” on page 18-11 for more information.

## Dumps Taken to SYS1.DUMPxx Datasets

CICS Abend-AID/FX does not automatically import dumps directly from SYS1.DUMPxx datasets. Instead, it allocates another dataset, copies the contents of the SYS1.DUMPxx dataset into the new dataset, and then imports the copied dataset.

For this process to occur, you must do the following:

1. Install the MVS post-dump exit, as described in “MVS Post-Dump Exit” on page 13-4.
2. Modify your region dump capture profiles to indicate which CICS region dumps are to be taken to SYS1.DUMPxx datasets, copied, automatically imported and analyzed. Make sure you also specify a dataset naming pattern for the dump copy datasets. Region dump capture profiles are described in “Modifying Region Dump Profiles” on page 18-11.
3. If you specify anything other than asterisk (\*) in the CICS Job Name field on the CICS Region Configuration screen, you must also install the SVC 51 interface. The SVC 51 interface is required because the CICS job name is not reliably available to CICS Abend-AID/FX through the MVS post-dump exit, but is available through the SVC 51 interface.

Installing the SVC 51 interface is described in “SVC 51 Interface” on page 13-7, and the CICS Region Configuration screen is described in “Configuring CICS Regions” on page 18-2.

## Automatically Allocated Dump Datasets (MVS/ESA Version 5, OS/390, and z/OS)

MVS/ESA version 5, OS/390, and z/OS provide a facility to take SDUMPs directly to user-defined datasets, bypassing SYS1.DUMPxx. CICS Abend-AID/FX can be customized to automatically import and analyze these “automatically allocated” dump datasets.

For this support, you must do the following:

1. Install the MVS post-dump exit, as described in “MVS Post-Dump Exit” on page 13-4.
2. Modify your region dump capture profiles to indicate which CICS region dumps are to be taken to automatically allocated datasets, imported, and analyzed. Region dump capture profiles are described in “Modifying Region Dump Profiles” on page 18-11.

**Note:** On the Region Dump Profile screen, specify a dump type of SYS1 for automatically allocated dump datasets. CICS Abend-AID/FX recognizes that SYS1.DUMPxx has actually been bypassed, determines the name of the automatically allocated dataset, and imports it.

3. If you specify anything other than asterisk (\*) in the CICS Job Name field on the CICS Region Configuration screen, you must also install the SVC 51 interface. This is because the CICS job name is not reliably available to CICS Abend-AID/FX through the MVS post-dump exit, but is available through the SVC 51 interface.

Installing the SVC 51 interface is described in “SVC 51 Interface” on page 13-7, and the CICS Region Configuration screen is described in “Configuring CICS Regions” on page 18-2.

## SDUMPs to CICS Abend-AID/FX User-Defined Datasets

CICS Abend-AID/FX provides its own mechanism to take SDUMPs to user-defined datasets, bypassing SYS1.DUMPxx. This is useful for sites who are not yet running MVS/ESA version 5, OS/390, or z/OS

To take SDUMPs to user-defined datasets, you must do the following:

1. Install the SVC 51 interface, as described in “SVC 51 Interface” on page 13-7.
2. Modify your region dump capture profiles to indicate which CICS region dumps are to be taken to CICS Abend-AID/FX user-defined SDUMP datasets automatically imported, and analyzed. Make sure you also specify a dataset name pattern for the datasets. Region dump capture profiles are described in “Modifying Region Dump Profiles” on page 18-11.

## Console Dumps

To invoke automatic import for a console dump for CICS Transaction Server for z/OS, CICS Transaction Server for OS/390, or CICS/ESA, do the following:

1. Install the MVS post-dump exit, as described in “MVS Post-Dump Exit” on page 13-4.
2. Use one of the following MVS system commands to invoke the console dump:

- For *CICS Transaction Server for z/OS*, *CICS Transaction Server for OS/390*, or *CICS/ESA*:

```
DUMP COMM=(CICS DUMP: SYSTEM=cicssys,JOB=jjjjjjjj)
```

The dump title must be at least CICS DUMP: SYSTEM=cicssys. The CICS DUMP portion of the title is sufficient to cause the MVS post-dump exit to start the automatic import procedure. For CICS Abend-AID/FX to find a matching region dump profile entry, the SYSTEM=cicssys portion must be provided, where cicssys is the APPLID of a CICS system. You must also specify the job name as part of the dump title

- For *CICS/MVS*:

```
DUMP COMM=(CICS DUMP - ID = cicsid,JOB=jjjjjjjj)
```

The dump title must be at least CICS DUMP - ID = cicsid. The CICS DUMP portion of the title is sufficient to cause the MVS post-dump exit to start the automatic import procedure. For CICS Abend-AID/FX to find a matching region dump profile entry, the ID=cicsid portion must be provided, where cicsid is the APPLID of a CICS system. You must also specify the job name as part of the dump title.

### Notes:

1. You do not need to install the SVC51 interface for automatic import of console dumps.
2. The CICS program change summary information is not available for console dumps.

---

## Using Automated Operations Facilities

If you are using an automated operations facility to copy SYS1.DUMPxx datasets after dumps are written to them, and you want to automatically import those copied datasets, the MVS post-dump exit is not required. You can import copied dumps using the MVS MODIFY command with the CICS Abend-AID/FX IMPORT keyword. The automated operations tool can issue this command. For a complete description of the MVS MODIFY command for the viewing server, refer to “Viewing Server and TDCAS MODIFY Commands” on page A-3.

If you install the MVS post-dump exit and want your automated operations package to recognize actions taken against region dumps by the post-dump exit, you can use the following CICS Abend-AID/FX messages to determine the status of dump processing:

- **MSDSD3045I:** Dataset-name has been copied successfully.
- **MSDSD3046I:** Dataset-name has been scheduled for automatic import.

---

## Duplicate Dump Suppression

CICS Abend-AID/FX does not provide a facility to suppress duplicate region dumps. Instead, Compuware recommends that you use either the CICS System Dump Table or the MVS Dump Analysis and Elimination (DAE) facility to suppress or eliminate duplicate CICS region dumps.

However, CICS Abend-AID/FX does provide a facility to suppress duplicate transaction dumps. Refer to “Modifying Transaction Dump Global Options” on page 18-24 and “Modifying Permanent Transaction Dump Profiles” on page 18-17 for information on enabling duplicate transaction dump suppression.

---

## CICS Abend-AID/FX and the Coupling Facility

For MVS 5.2, OS/390 and z/OS, if you have specified the SYS1.PARMLIST(IEACMDxx) COUPLE SDATA parameter, the coupling facility address space (XCFAS) is dumped in the same dump dataset when SDUMPs are taken. This dump appears on the CICS Abend-AID/FX Directory as a separate entry, but has the same entry number as every other ASID in the dump dataset. The job name associated with the entry is XCFAS.

Consult with the MVS system programmer at your site if you need more information.

---

## MVS Post-Dump Exit

### Notes:

1. You may require the assistance of your MVS system programmer to install the MVS post-dump exit.
2. If you install the CICS Abend-AID/FX MVS post-dump exit and you leave the default entry on the CICS Region Configuration screen, CICS Abend-AID/FX also processes non-CICS system dumps. Refer to “Configuring CICS Regions” on page 18-2 for information about preventing CICS Abend-AID/FX from capturing all SVC dumps if the MVS post-dump exit is installed.

The MVS post-dump exit supports the following functions for region dumps:

- Copying a dump originally taken to a SYS1.DUMPxx dataset to another dataset and, optionally, initiating the subsequent automatic import of the copied dataset.

- For MVS/ESA version 5, OS/390, and z/OS, automatically importing dumps taken to automatically allocated datasets.
- For CICS region dumps, notifying a designated user when an SDUMP to a SYS1.DUMPxx or an automatically allocated (MVS version 5, OS/390, and z/OS) dataset occurs. A standard CICS Abend-AID/FX installation supports transaction dump notification, without requiring the MVS post-dump exit.

**Note:** If you specify anything other than asterisk (\*) in the CICS Job Name field on the CICS Region Configuration screen, you must also install the SVC 51 interface. The SVC 51 interface is required because the CICS job name is not reliably available to CICS Abend-AID/FX through the post-dump exit, but is available through the SVC 51 interface. **Compuware recommends that you use APPLID to uniquely identify your CICS region.**

## Functional Description

MVS post-dump processing is performed under the control of the DUMPSRV address space. The DUMPSRV address space loads the CICS Abend-AID/FX post-dump module, MSDMPDEX, at DUMPSRV initialization. Control is passed to each post-dump exit module in the order found in the post-dump exit list (SYS1.LINKLIB member IEAVTSEL). Control is returned to DUMPSRV at the end of each post-dump exit and passed to the next module in the list unless overridden by processing options.

DUMPSRV processing starts after the dump has been successfully taken by the SVC. The message IEA911E is displayed after the dump has been written to DASD. After the message displays, the post-dump exits are driven.

Each time a region dump is taken, the MSDCCOPY procedure is started to determine the name of the CICS Abend-AID/FX customization file. MSDCCOPY executes program MSDMCS1D, which determines if the dump dataset needs to be copied and/or automatically imported (based on the job name, APPLID, and MVS SYSID and the specifications you make in your region dump capture profiles). If processing of this dataset is not required, the MSDCCOPY procedure terminates.

If a copy is required, MSDMCS1D allocates the IBM SVC formatted dump dataset and the user-specified copy dataset. IEBGENER is then invoked to copy the IBM SVC formatted dump dataset to the user-specified dataset. If automatic import was specified, the user-specified dataset is added to the automatic import list that is used by the viewing server. The viewing server then starts the automatic import process. If dump analysis is indicated, it is initiated immediately after the import.

For MVS version 5, OS/390, and z/OS, if the IBM SVC formatted dump was written to an automatically allocated (that is, a non-SYS1.DUMPxx) dataset, then the copy is skipped and only automatic import processing applies. That processing is the same as described above.

## Installing the MVS Post-Dump Exit

Complete the following steps to install the MVS post-dump exit on each required MVS image.

### Step 1. Add a DDDEF to CICS Abend-AID/FX for an MVS Link List Library

**Note:** If you have already installed the CICS Abend-AID/FX SVC 51 interface, you do not need to complete this step.

Member SMPEDDEF in the installation sample library (TKFXSAMP) contains SMP/E UCLIN statements to add a DDDEF to the CICS Abend-AID/FX target zone for an MVS system link list library. Specify the name of an *authorized* system link list library for the DA (DATASET) parameter. Module MSDMPDEX is moved into the link list library you specify when you install the CICS Abend-AID/FX post-dump exit USERMOD, KFXPDEX, as described in “Step 2. Receive and Apply the Post-Dump Exit USERMOD”.

## Step 2. Receive and Apply the Post-Dump Exit USERMOD

Member PDEXUMOD in the installation sample library (TKFXSAMP) contains a job to receive and apply USERMOD KFXPDEX. This USERMOD moves module MSDMPDEX from the CICS Abend-AID/FX authorized load library (SKFXAUTH) to the MVS authorized system link list library specified in “Step 1. Add a DDDEF to CICS Abend-AID/FX for an MVS Link List Library”.

Member PDEXUMOD first receives the USERMOD, then performs an APPLY CHECK (the JCL that is generated contains the CHECK parameter on the APPLY statement). Compuware recommends you initially run the job using the CHECK parameter. When you are ready to apply the USERMOD, make the following changes and then rerun the job:

1. Remove the following statements after the SMP\_CNTL DD \* statement:

```
SET BOUNDARY (GLOBAL) .
RECEIVE SYSMODS SELECT(KFXPDEX) .
```

2. Remove the CHECK parameter from the APPLY statement.

**Note:** Message GIM39701W is normal for the apply and can be ignored.

## Step 3. Add MSDMPDEX to SYS1.LINKLIB(IEAVTSEL)

Add module name MSDMPDEX to SYS1.LINKLIB(IEAVTSEL). Be sure to add the name in the order in which you want the module to execute. The placement of the CICS Abend-AID/FX exit in the list of programs that use the MVS post-dump exit is not important to CICS Abend-AID/FX. However, if the CICS Abend-AID/FX exit is not the first program in the list, make sure that no previous program terminates the exit.

In addition, the flag bit in the IEAVTSEL entry used to define the CICS Abend-AID/FX post-dump exit should be set to 0 (zero), indicating that the exit should receive control if Dump Analysis and Elimination (DAE) has *not* suppressed the dump. The flag bit is the high-order bit of the 4-byte flag field. This field begins in byte 8 of the entry in IEAVTSEL used to define the CICS Abend-AID/FX post-dump exit.

For more information on updating IEAVTSEL, see the user exit or installation exit manual appropriate for your release of MVS/ESA, OS/390, or z/OS.

## Step 4. Modify and Copy the MSDCCOPY Procedure

**Note:** If you have already installed the CICS Abend-AID/FX SVC 51 interface, you do not need to complete this step.

Modify the procedure contained in installation sample library (TKFXSAMP) member MSDCCOPY and copy it to a system PROCLIB. Ensure that:

- The STEPLIB DD statement points to your CICS Abend-AID/FX authorized load library (SKFXAUTH).
- The FDBDCUST DD statement points to the customization file for this CICS Abend-AID/FX release.

**Note:** If you are using an external security package, perform the security functions described in “Authorizing the MSDCCOPY Procedure” on page 11-6.

## Step 5. Enable the Post-Dump Exit

To enable the post-dump exit before you perform an IPL, refresh the link list via an LLA REFRESH console command and cycle DUMPSRV via a CANCEL DUMPSRV console command. DUMPSRV is immediately automatically restarted by MVS.

## Step 6. Modify the Region Dump Profile screen

After you complete the previous steps, use the Region Dump Profile screen to indicate which CICS region dumps are to be automatically copied and imported into CICS Abend-AID/FX. The Region Dump Profile screen is described in “Modifying Region Dump Profiles” on page 18-11.

If you want to use the notification facility for region SDUMPs, create appropriate notification definitions, as described in Chapter 19, “Specifying Action Definitions”.

---

# SVC 51 Interface

### Notes:

1. You may require the assistance of your MVS system programmer to install the SVC 51 interface.
2. If you install the CICS Abend-AID/FX SVC 51 interface and you leave the default entry on the CICS Region Configuration screen, CICS Abend-AID/FX also processes non-CICS system dumps. Refer to “Configuring CICS Regions” on page 18-2 for information about preventing CICS Abend-AID/FX from capturing all SVC dumps if the SVC 51 interface is installed.

The SVC 51 interface supports the following functions for region dumps:

- Taking *region* SDUMPs to a user-defined (that is, other than a SYS1.DUMPxx) dataset.
- For CICS region SDUMPs taken to user-defined datasets, notifying a designated user when a dump occurs. A standard CICS Abend-AID/FX installation supports transaction dump notification, without requiring the SVC 51 interface.
- Obtaining the job name of a region dump, if you specify anything other than an asterisk (\*) in the CICS Job Name field on the CICS Region Configuration screen. See “Configuring CICS Regions” on page 18-2 for more information.
- Copy of a SYS1.DUMPxx dataset to a CICS Abend-AID/FX dump dataset using the job name symbolic qualifier. Refer to “Dataset Name” on page 18-15 for more information.

## Functional Description

The SVC 51 interface is used to front-end the standard processing provided by IBM-supplied SVC 51 routines in order to provide processing required for optional features of CICS Abend-AID/FX. These features include taking SDUMPs to user-defined datasets, notifying users when they occur, and obtaining the job name.

When the SVC 51 interface is installed using the MSDMINST program, the entry for SVC 51 in the MVS SVC table is modified to contain the address of the CICS Abend-AID/FX SVC 51 front-end program. Updating of the SVC table is performed using a standard IBM programming interface.

When a program issues an SDUMP macro instruction, the CICS Abend-AID/FX front-end program receives control and determines whether processing is required for the dump based on parameters supplied in the CICS Abend-AID/FX customization file. If processing is required for the dump, it is performed. Then, control is returned to the system, and no further SVC 51 processing (IBM or other vendor) is performed.

If processing is not required, then control is passed to the routine that was replaced by CICS Abend-AID/FX when the SVC 51 interface was installed. The replaced routine may be the IBM-supplied SVC 51 routine or another vendor product's SVC 51 interface.

The MSDMINST utility is used to start and stop the SVC 51 interface. Member JCLINSTL in the installation sample library (TKFXSAMP) contains a sample job to execute the MSDMINST utility. "SVC 51 Interface Installation Utility (MSDMINST)" on page 20-1 documents the MSDMINST utility.

## Installing the SVC 51 Interface

Complete the following steps to install the SVC 51 interface on each required MVS image.

### Step 1. Add a DDDEF to CICS Abend-AID/FX for an MVS Link List Library

**Note:** If you have already installed the CICS Abend-AID/FX MVS post-dump exit, you do not need to complete this step.

Member SMPEDDEF in the installation sample library (TKFXSAMP) contains SMP/E UCLIN statements to add a DDDEF to the CICS Abend-AID/FX target zone for an MVS system link list library. Specify the name of an *authorized* system link list library for the DA (DATASET) parameter. Several CICS Abend-AID/FX modules are moved into the link list library you specify when you install the CICS Abend-AID/FX SVC 51 interface USERMOD, KFXSV51, as described in "Step 2. Receive and Apply the SVC 51 Interface USERMOD".

### Step 2. Receive and Apply the SVC 51 Interface USERMOD

Member SVC51UMD in the installation sample library (TKFXSAMP) contains a job to receive and apply USERMOD KFXSV51. This USERMOD moves the following modules from the CICS Abend-AID/FX authorized load library (SKFXAUTH) to the MVS authorized system link list library specified in "Step 1. Add a DDDEF to CICS Abend-AID/FX for an MVS Link List Library":

- MSDMACOM
- MSDMDUMP
- MSDMFSTD.

Member SVC51UMD first receives the USERMOD, and then performs an APPLY CHECK (the JCL that is generated contains the CHECK parameter on the APPLY statement). Compuware recommends you initially run the job using the CHECK parameter. When you are ready to apply the USERMOD, make the following changes and then rerun the job:

1. Remove the following statements after the SMP\_CNTL DD \* statement:

```
SET BOUNDARY (GLOBAL) .
RECEIVE SYSMODS SELECT(KFXSV51) .
```

2. Remove the CHECK parameter from the APPLY statement.

**Note:** Message GIM39701W is normal for the apply and can be ignored.

### Step 3. Modify and Copy the MSDCCOPY Procedure

**Note:** If you have already installed the CICS Abend-AID/FX post-dump exit, you do not need to complete this step.

Modify the procedure contained in installation sample library (TKFXSAMP) member MSDCCOPY *and copy it to a system PROCLIB*. Ensure that:

- The STEPLIB DD statement points to your CICS Abend-AID/FX authorized load library (SKFXAUTH).
- The FDBDCUST DD statement points to the customization file for this CICS Abend-AID/FX release.

**Note:** If you are using an external security package, perform the security functions described in “Authorizing the MSDCCOPY Procedure” on page 11-6.

### Step 4. Execute the MSDMINST Utility

The MSDMINST utility is used to start and stop the SVC 51 interface. The JCL required to execute the MSDMINST utility is in CICS Abend-AID/FX installation sample library (TKFXSAMP) member JCLINSTL. Before you execute JCLINSTL, review and modify it. Ensure that:

- The STEPLIB and SYSLIB DD statements point to the CICS Abend-AID/FX authorized load library (SKFXAUTH).
- The FDBDCUST DD statement points to the CICS Abend-AID/FX customization file.

**Note:** The MSDMINST utility is not LPA-eligible.

Executing MSDMINST without specifying a parameter invokes the default installation function, which installs the SVC 51 interface for all system users. Specify the appropriate parameter enclosed in single quotes. Only one parameter at a time can be entered. Messages generated from this utility appear in the job log.

For more information about the parameters for the MSDMINST utility, refer to Chapter 20, “SVC 51 Interface Utility”.

### Step 5. Enable the SVC 51 Interface

To enable the SVC 51 interface before you perform an IPL, refresh the link list via an LLA REFRESH console command.

To automatically install the SVC 51 interface after every system IPL, add a START command for JCLINSTL to SYS1.PARMLIB(COMMNDxx). You must modify JCLINSTL to be a procedure, and it must reside in a system PROC library.

### Step 6. Modify the Region Dump Capture Profile Screen

After you complete the previous steps, use the Region Dump Profile screen to indicate which CICS region dumps are to take SDUMPs to a user-defined SDUMP dataset. The Region Dump Profile screen is described in “Modifying Region Dump Profiles” on page 18-11.

If you want to use the notification facility for SDUMPs taken to user-defined datasets, create appropriate action definitions, as described in Chapter 19, “Specifying Action Definitions”.

## **Bypassing CICS Abend-AID/FX SVC 51 Interface Dump Processing**

To temporarily bypass CICS Abend-AID/FX SVC 51 interface processing for a job, include a CICS Abend-AID/FX ignore DD statement (FXIGNR DD DUMMY) in the JCL for that job.

## Chapter 14.

# Enabling Support for Additional Facilities

**Note:** Before installing this release of CICS Abend-AID/FX, check the date on the tape label. If the tape is more than 45 days old, call CICS Abend-AID/FX Technical Support for any required maintenance, or download the current maintenance files from Compuware's Internet site, <http://frontline.compuware.com>. If the tape is more than one year old, it is no longer valid and you must call CICS Abend-AID/FX Technical Support for a new tape, or request it from the Internet.

This chapter describes the procedure for adding the following facilities if you did not enable them when you installed CICS Abend-AID/FX:

- CICS Abend-AID/FX for DB2 option (transaction dumps)
- Source support (transaction dumps)
- IPCS support (region dumps)
- REXX application program interface (API).

It also describes how to add CICS Abend-AID/FX support for a new release of CICS or DB2. Finally, it describes the sample JCL provided for reallocating or upgrading the CICS Abend-AID/FX customization file.

---

## Adding the CICS Abend-AID/FX for DB2 Option

CICS Abend-AID/FX for DB2 is an available option. If you were not licensed for the option when you initially installed CICS Abend-AID/FX but subsequently became licensed, you can add the support it provides by completing the procedure described in Chapter 5, "Installing DB2 Support".

---

## Adding Source Support

Source support is available for COBOL and PL/I programs involved in transaction abends. COBOL source support is provided at no additional charge, and beginning with CICS Abend-AID/FX Release 4.2, PL/I source support is offered as an extra-cost option.

Source support greatly simplifies debugging COBOL and PL/I programs. With the support, CICS Abend-AID/FX identifies source statements in error rather than providing displacements, formats working storage, and makes the source listing available for display from within CICS Abend-AID/FX.

If you use Compuware's XPEDITER/CICS product, CICS Abend-AID/FX can share source listing files you already have created. However, you must install XPEDITER/CICS Release 6.6 or more current.

If you did not implement source support when you initially installed CICS Abend-AID/FX, complete the procedure described in this section.

### Step 1. Complete CSS Steps

Refer to the *Compuware Shared Services User/Reference Guide* for information about allocating and formatting source listing files, and how to modify your compile JCL to run the Compuware COBOL language processor and/or the Compuware PL/I language processor.

## Step 2. Update the FCT or CICS JCL

To identify the source listing file(s) allocated in “Step 1. Complete CSS Steps” on page 14-1 to your CICS regions, you can either add an FCT entry(ies) for the file(s), *or* add a DD statement(s) to your CICS region JCL.

“Considerations for Adding PCT Entries” on page 9-2, and “Step 5. Modify CICS Startup JCL” on page 9-8 describe the requirements for each of these options.

## Step 3. Stop and Restart CICS Abend-AID/FX

To enable source support, you must stop and then restart CICS Abend-AID/FX in your CICS region. See Appendix B, “Supplied Transaction” for information about stopping and starting CICS Abend-AID/FX.

---

## Adding IPCS Support

The IPCS Command Facility allows you to issue IPCS commands against region dumps from within CICS Abend-AID/FX. This support is enabled per viewing server. Complete the steps below for each viewing server from which you want to issue IPCS commands.

### Step 1. Allocate the IPCS Directory

The IPCS directory used by CICS Abend-AID/FX is a standard IPCS directory. There is one IPCS directory per CICS Abend-AID/FX viewing server, and you cannot share IPCS directories between viewing servers. Further, do not access the viewing server’s IPCS directory outside of CICS Abend-AID/FX.

Member \$11IPCS in the installation sample library (TKFXSAMP) contains a job to allocate the IPCS directory using IDCAMS. The job then initializes the file using a CICS Abend-AID/FX utility. Before you run \$11IPCS, make the following modifications:

1. Change the IPCS directory dataset name to the name you choose for the file. The dataset name is specified four times in the job.
2. Verify that the volume serial number or SMS storage and management class conform to your site standard.
3. Verify that the STEPLIB DD statement points to a concatenation of your Compuware base services/HCI and CICS Abend-AID/FX target nonauthorized load libraries (SKMPLOAD and SKFXLOAD), in that order.

### Step 2. Modify the Viewing Server JCL

Make the following modifications to the viewing server JCL to enable IPCS support.

#### Step 2a. Specify a PARMLIB Session Parameter Member

CICS Abend-AID/FX starts IPCS in the viewing server address space. By default, it uses SYS1.PARMLIB(IPCSPR00) as the IPCS session parameter member. CICS Abend-AID/FX also reads the BLSCECT, BLSCECTX, and all included members from SYS1.PARMLIB.

If you want CICS Abend-AID/FX to access a session parameter member other than IPCSPR00, specify the suffix of the member on the IPCSPR\_SUFFIX viewing server configuration parameter. This parameter is described in “Optional Tuning Parameters” on page 7-14.

To use a session parameter member from a library other than SYS1.PARMLIB, include an IPCSPARM DD statement in the viewing server JCL pointing to the library you choose, as follows:

```
//IPCSPARM DD DISP=SHR,DSN=your.session.parm.dsn
```

## Step 2b. Specify the IPCSDDIR DD Statement

Add a DD statement to the viewing server JCL to point to the IPCS directory, as follows:

```
//IPCSDDIR DD DSN=ipcs.directory.dsn,DISP=SHR
```

## Step 2c. Specify the SYSTSIN DD Statement

Ensure that the SYSTSIN DD statement points to the CICS Abend-AID/FX target sample library (SKFXSAMP) member MSDSEND, as follows:

```
//SYSTSIN DD DISP=SHR,DSN=compware.kfx430.SKFXSAMP(MSDSEND)
```

## Step 2d. Specify the SYSPROC DD Statement

Ensure that the SYSPROC DD statement points to the CICS Abend-AID/FX target sample library (SKFXSAMP). You can concatenate other libraries to the SYSPROC statement if you want to execute IPCS CLISTs in those libraries from within CICS Abend-AID/FX.

## Step 2e. Specify the SYSTSPRT DD Statement

Add the following SYSTSPRT DD statement to your viewing server JCL:

```
//SYSTSPRT DD SYSOUT=*,DCB=(RECFM=VBA,LRECL=0,BLKSIZE=145)
```

## Step 2f. Specify the MFDDPxxx DD Statements

If you want to be able to execute the CICS IPCS VERBEXT (DFHPDX) using the IPCS Command Facility, you must include a DD statement for each release of CICS at your site, as follows:

```
//MFDDPxxx DD DSN=cics.load.library.name,DISP=SHR
```

**Note:** CICS Transaction Server for z/OS 2.20 and CICS Transaction Server for OS/390 1.3.0, 1.2.0, and 1.1.0 are represented in CICS Abend-AID/FX ddnames and member names as *620*, *530*, *520*, and *510*, respectively.

Ensure that the xxx in the ddname reflects the release of CICS for which you are adding support, and that the DD statement points to the CICS load library for this release of CICS that contains module DFHPDxxx, where xxx is the CICS release. When a CICS Abend-AID/FX user executes the IPCS CICS VERBEXIT (DFHPDX), CICS Abend-AID/FX loads the DFHPDX load module appropriate to the CICS release of the dump from the corresponding CICS load library.

## Step 3. Stop and Restart the Viewing Server

After you complete the two previous steps, you must stop and then restart the viewing server.

**Note:** You can restrict access to the IPCS Command Facility by coding the IPCS subparameter of the EXTERNAL\_SECURITY\_FUNCTION\_CHECK viewing server configuration parameter. Refer to “Parameters to Enable External Security for CICS Abend-AID/FX Viewing Servers” on page 7-9 for more information.

---

## Implementing the REXX API

The CICS Abend-AID/FX REXX application program interface (API) lets you process REXX EXECs against both region and transaction dumps. You load EXECs from the SYSEXEC DD specified in the CICS Abend-AID/FX viewing server JCL.

### Step 1. Modify Viewing Server JCL

If you want to be able to execute REXX EXECs from within CICS Abend-AID/FX, include in your viewing server JCL the following DD statement:

```
//SYSEXEC DD DSN=compware.kfx430.SKFXREXX
```

This dataset contains the CICS Abend-AID/FX-supplied REXX sample, SAMPREXX, and the REXX EXECs you write, as described in the *CICS Abend-AID/FX User's Guide*. The SKFXREXX dataset is a fixed block dataset with a logical record length of 80. You can concatenate multiple datasets on this DD, but they all must have the same record format and logical record length.

### Step 2. Stop and Restart the Viewing Server

After you complete the previous step, you must stop and then restart the viewing server.

**Note:** You can restrict access to the REXX API by coding the REXX subparameter of the EXTERNAL\_SECURITY\_FUNCTION\_CHECK viewing server configuration parameter. Refer to “Parameters to Enable External Security for CICS Abend-AID/FX Viewing Servers” on page 7-9 for more information.

---

## Adding Support for New CICS Releases

This section describes how to install support for an additional release of CICS. You can add CICS Abend-AID/FX support for any release of CICS that is supported by this release of CICS Abend-AID/FX. If this release of CICS Abend-AID/FX does not support a release of CICS for which you require support, contact Compuware Technical Support.

The CICS Abend-AID/FX installation sample library (TKFXSAMP) contains five sample jobs for each release of CICS, as follows:

- **CxxxRECV:** SMP/E receive the CICS Abend-AID/FX FMID and preventive service to support the indicated CICS release.
- **CxxxAPLY:** SMP/E apply the CICS Abend-AID/FX FMID and preventive service to support the indicated CICS release.
- **CxxxACPT:** SMP/E accept the CICS Abend-AID/FX FMID and preventive service to support the indicated CICS release.
- **CxxxLTRC:** Links the trace formatting module for the indicated CICS release.
- **CxxxSYSD:** Add the DSECT images for the indicated CICS release to the CICS Abend-AID/FX system DSECT file.

The xxx in each member name corresponds to the release of CICS. Run each job for the release of CICS, as described below.

**Notes:**

1. CICS Transaction Server for z/OS 2.2.0 and CICS Transaction Server for OS/390 1.3.0, 1.2.0, and 1.1.0 are represented in CICS Abend-AID/FX ddnames and member names as 620, 530, 520, and 510, respectively.

2. Adding CICS Abend-AID/FX support for a new CICS release has no specific Compuware Shared Services (CSS) considerations. However, if you have not recently installed CSS maintenance, contact CSS Technical Support for a current CSS preventive service cumulative maintenance tape.

## Step 1. SMP/E Receive the CICS Abend-AID/FX FMID

Installation sample library (TKFXSAMP) member CxxxRECV contains sample JCL to SMP/E receive the CICS Abend-AID/FX FMID for the level of CICS support you are installing. It also receives all CICS Abend-AID/FX preventive service that was available for CICS Abend-AID/FX as of the day your tape was created. If the label on the tape indicates the tape is more than 45 days old, please call CICS Abend-AID/FX Technical Support for any additional required maintenance, or download the current maintenance files from Compuware's Internet site, <http://frontline.compuware.com>.

The CxxxRECV job, where xxx is the CICS release, has two steps. The first step receives the CICS Abend-AID/FX FMID for the level of CICS support you are installing. The second step receives the preventive service on the tape for the FMID, using the SMP/E FORFMID keyword.

### Notes:

1. Run CxxxRECV in a job class suitable for long-running tape jobs.
2. The second step in CxxxRECV returns message **GIM24801W No SYSMODS satisfied the operands specified on the receive command** if there is no preventive service available for the specified FMID(s).

## Step 2. SMP/E Receive Preventive Service for the CICS Abend-AID/FX FMID

If you have installed any CICS Abend-AID/FX preventive service (maintenance) tapes since you initially installed CICS Abend-AID/FX, you should install preventive service for the new FMID you received in "Step 1. SMP/E Receive the CICS Abend-AID/FX FMID" on page 14-5 above. Use installation sample library (TKFXSAMP) member CUMLRECV to receive maintenance for the new FMID from your *most recent* CICS Abend-AID/FX cumulative maintenance tape. Because CICS Abend-AID/FX maintenance tapes are cumulative, you need to receive PTFs only from the most recent tape you have installed.

**Note:** CICS Abend-AID/FX cumulative maintenance tapes are updated approximately once per month. If your most recent tape is several months old, contact CICS Abend-AID/FX Technical Support at Compuware to order a new cumulative maintenance tape, or download the current maintenance files from Compuware's Internet site, <http://frontline.compuware.com>.

## Step 3. SMP/E Apply the CICS Abend-AID/FX FMID and Preventive Service

Installation sample library (TKFXSAMP) member CxxxAPLY contains sample JCL to SMP/E apply the CICS Abend-AID/FX FMID and preventive service for the level of CICS support you are installing. Before you submit CxxxAPLY, verify that the APPLY SELECT statement is applying the correct FMID.

### Notes:

1. It is advisable to run an APPLY CHECK before applying the FMID.
2. Run CxxxAPLY in a job class suitable for long-running batch jobs.

## Step 4. SMP/E Accept the CICS Abend-AID/FX FMID

Installation sample library (TKFXSAMP) member CxxxACPT contains sample JCL to SMP/E accept the CICS Abend-AID/FX FMID for the level of CICS support you are installing. Before you submit CxxxACPT, verify that the ACCEPT SELECT statement is accepting the correct FMID.

### Notes:

1. Preventive service is not accepted by default. Compuware recommends that you thoroughly test any PTFs before you accept them.
2. It is advisable to run an ACCEPT CHECK before accepting the FMID.
3. Run CxxxACPT in a job class suitable for long-running batch jobs.

## Step 5. Link the Trace Formatting Module

Installation sample library member CxxxLTRC contains sample JCL to link a copy of the CICS trace formatting module for the CICS release. Review, modify, and submit this JCL. Ensure that:

- The TLIB DD statement points to your CICS load library for this release of CICS.
- The SYSLMOD DD statement points to the CICS Abend-AID/FX nonauthorized load library.

### Notes:

1. Message IEW2646W is normal, and can be ignored.
2. **If you apply IBM maintenance to the CICS trace formatting module, you must run CxxxLTRC again.**
3. CICS Transaction Server for z/OS and CICS Transaction Server for OS/390 users must place modules DFHTTxxx, where xxx is the CICS release, in a system link list library. Failure to do so results in messages CSV003I, CSV031I, and IEW4009I when viewing CICS Abend-AID/FX trace displays.

## Step 6. Load the System DSECT File

Installation sample library (TKFXSAMP) CxxxSYSD contains sample JCL to add the CICS DSECT images for the new CICS release to the CICS Abend-AID/FX system DSECT file. Review, modify, and submit this JCL. Ensure that:

- The STEPLIB DD statement points to a concatenation of the following libraries:
  - Compuware base services/HCI target nonauthorized load library (SKMPLOAD)
  - CICS Abend-AID/FX target nonauthorized load library (SKFXLOAD)
  - CSS load library (SLCXLOAD).
- The MSDCCNTL DD statement points to the CICS Abend-AID/FX DSECT images input distribution library (AKFXDSCT).
- The MSDDSECT DD statement points to your current system DSECT file. This file is the system DSECT file you allocated when you initially installed CICS Abend-AID/FX (see “Step 14. Allocate and Load the System DSECT File (\$07DSCT)” on page 4-12).

## Step 7. Stop and Restart the Viewing Server

After you complete the six previous steps, you must stop and then restart the viewing server to enable support for the new release of CICS.

**Notes:**

1. CICS Transaction Server for z/OS 2.2.0 and CICS Transaction Server for OS/390 1.3.0, 1.2.0, and 1.1.0 are represented in CICS Abend-AID/FX ddnames and member names as *620*, *530*, *520*, and *510*, respectively.
2. If you are using IPCS support in a viewing server, add a MFDDPxxx DD statement to the viewing server JCL, where xxx is the CICS release. Ensure that the DD statement points to the CICS load library for the CICS release that contains module DFHPDxxx, where xxx is the CICS release. Adding the statement allows you to use the CICS IPCS VERBEXIT (DFHPDX) from within CICS Abend-AID/FX.

## Step 8. Perform Updates to CICS

Review **Chapter 9, “CICS Updates”**, and make the required CICS table and JCL updates for your CICS regions.

## Step 9. Stop and Restart the CICS Abend-AID/FX TDCAS

To enable support for the new release of CICS, you must stop and then restart the CICS Abend-AID/FX transaction dump capture address space (TDCAS). Refer to Appendix A, “Controlling the CICS Abend-AID/FX Viewing Server and TDCAS” for information about stopping and starting CICS Abend-AID/FX.

---

## Adding Support for a New Release of DB2

If you already have the CICS Abend-AID/FX for DB2 option installed, but you want to add support for a new release of DB2, you must perform the DB2 bind for the new DB2 release. Refer to Chapter 5, “Installing DB2 Support” to create the JCL to install the support for the new DB2 release.

---

## Reallocating or Upgrading the Customization File

The CICS Abend-AID/FX installation sample library (TKFXSAMP) contains sample JCL members to allocate or upgrade a customization file in case you need to do either of these tasks after you install CICS Abend-AID/FX.

The two installation sample library (TKFXSAMP) members are as follows:

- **CUSTALLC:** Sample JCL to *allocate* a customization file
- **CUSTUPGR:** Sample JCL to *upgrade* a customization file.

Before you run either job, review the sample member carefully. The customization file contains all of your site-specific values that control how CICS Abend-AID/FX functions in your environment, so exercise caution if you run either of these jobs.



## Chapter 15.

# Installing Preventive Service

**Note:** Before installing this release of CICS Abend-AID/FX, check the date on the tape label. If the tape is more than 45 days old, call CICS Abend-AID/FX Technical Support for any required maintenance, or download the current maintenance files from Compuware's Internet site, <http://frontline.compuware.com>. If the tape is more than one year old, it is no longer valid and you must call CICS Abend-AID/FX Technical Support for a new tape, or request it from the Internet.

This chapter describes the procedure for installing CICS Abend-AID/FX preventive service. Your CICS Abend-AID/FX release tape includes all service available as of the day the tape was created. You can request a separate cumulative maintenance tape from Compuware Technical Support that contains the latest preventive service for CICS Abend-AID/FX. You may also obtain individual PTFs from Compuware to address specific problems you report.

CICS Abend-AID/FX preventive service is installed using SMP/E. The installation sample library (TKFXSAMP) contains three sample jobs to install a CICS Abend-AID/FX cumulative maintenance tape:

- CUMLRECV performs an SMP/E receive of CICS Abend-AID/FX service
- CUMLAPLY performs an SMP/E apply of CICS Abend-AID/FX service
- CUMLACPT performs an SMP/E accept of CICS Abend-AID/FX service.

As distributed, these sample jobs receive, apply, and accept all PTFs on a CICS Abend-AID/FX cumulative maintenance tape for all CICS Abend-AID/FX FMIDs. To install a CICS Abend-AID/FX cumulative maintenance tape, complete the steps described below.

You can modify these jobs to install selected PTFs by changing the RECEIVE, APPLY, and ACCEPT statements to affect only the required SYSMODS. Alternatively, you can use the SMP/E ISPF dialogs to install CICS Abend-AID/FX cumulative maintenance tapes or individual PTFs.

For more information about using SMP/E, consult the *SMP/E Reference* or *SMP/E User's Guide* for the release of SMP/E you are using.

---

## Step 1. Unload the PTF Directory

The first file on the cumulative maintenance tape contains a PTF directory that briefly describes each PTF on the tape. Installation sample library (TKFXSAMP) member CUMLDIR contains sample JCL to unload the PTF directory. Review the JCL and ensure that you add the correct tape volume serial number before you submit the JCL.

---

## Step 2. SMP/E Receive the PTFs

Installation sample library (TKFXSAMP) member CUMLRECV contains sample JCL to receive PTFs for every CICS Abend-AID/FX FMID. Review this JCL, and make the following modifications:

- Specify the volser of the cumulative maintenance tape on the SMPPTFIN DD statement.

- Delete any FMIDs that you don't have installed at your site from the RECEIVE SYSMODS FORFMID statement. If you don't, you may receive message GIM3901 No Applicable ++VER. You can ignore these messages if they're issued for FMIDs you don't have installed.

**Notes:**

1. Run CUMLRECV in a job class suitable for long-running tape jobs.
2. SMP/E returns message GIM24801W No SYSMODS satisfied the operands specified on the receive command if there is no preventive service applicable for the specified FMID(s).

---

## Step 3. Review HOLDDATA

At times, installing CICS Abend-AID/FX preventive service requires additional actions that must be performed after a PTF(s) is applied. In these cases, the PTF is identified as an exception SYSMOD (HOLD) and the PTF HOLDDATA contains information on the additional actions you must perform to completely implement the change.

It is very important that you perform any HOLDDATA action. Failure to do so can cause unpredictable results, including incorrect data, abends in the CICS Abend-AID/FX viewing server, and potential integrity exposures to your CICS regions.

---

## Step 4. SMP/E Apply the PTFs

Installation sample library (TKFXSAMP) member CUMLAPLY contains sample JCL to apply the CICS Abend-AID/FX PTFs. Review this JCL, and delete any FMIDs that you do not have installed at your site from the APPLY SYSMODS FORFMID statement.

**Notes:**

1. Do not apply maintenance to the libraries CICS Abend-AID/FX is executing from. If you execute CICS Abend-AID/FX from the target libraries, stop the CICS Abend-AID/FX viewing server and TDCAS, and turn CICS Abend-AID/FX off in the CICS region before running the apply.
2. You may be required to SMP/E restore a USERMOD prior to applying a PTF to a module. SMP/E messages inform you when this action is necessary. Once the PTF is applied, you must then reapply the USERMOD.
3. It is advisable to run an APPLY CHECK before applying the PTFs.
4. Run CUMLAPLY in a job class suitable for long-running batch jobs.

---

## Step 5. Stop and Restart CICS Abend-AID/FX

After you complete the previous steps, do the following to enable the new maintenance:

1. Shut down all CICS Abend-AID/FX viewing servers if you haven't already done so.
2. Shut down all CICS Abend-AID/FX transaction dump capture address spaces (TDCASs) if you haven't already done so.
3. If the maintenance affects the SVC 51 interface, make sure you complete the HOLDDATA instructions regarding the SVC 51 interface.
4. If the maintenance affects the MVS post-dump exit, make sure you complete the HOLDDATA instructions regarding the post-dump exit.

5. If you're licensed for and have installed the CICS Abend-AID/FX for DB2 option and the maintenance affects the DB2 option, make sure you complete the HOLDDATA instructions regarding the DB2 DBRM or plan/package.
6. Restart the CICS Abend-AID/FX viewing servers.
7. Restart the CICS Abend-AID/FX TDCASs.

---

## Step 6. SMP/E Accept the PTFs

**Note:** Compuware strongly recommends that you do not accept any PTFs until they are thoroughly tested at your site.

Installation sample library (TKFXSAMP) member CUMLACPT contains sample JCL to accept the CICS Abend-AID/FX PTFs. Review this JCL, and delete any FMIDs that you do not have installed at your site from the ACCEPT SYSMODS FORFMID statement.

**Notes:**

1. It is advisable to run an ACCEPT CHECK before accepting the PTFs.
2. Run CUMLACPT in a job class suitable for long-running batch jobs.
3. The following message is normal and can be ignored:

```
GIM23903W LINK-EDIT PROCESSING FOR SYSMOD aaaaaaa WAS SUCCESSFUL FOR
          MODULE bbbbbbbb IN LMOD ccccccc in the ddddddd LIBRARY. THE
          RETURN CODE WAS 04. DATE yy.ddd - TIME hh:mm:ss - SEQUENCE
          NUMBER nnnnnn.
```



---

# Part 4. Online Customization

Part 4 contains the following chapters that describe the steps involved in customizing CICS Abend-AID/FX:

**Chapter 16, Accessing Site Customization Options**

Chapter 16 describes how to access the CICS Abend-AID/FX site customization options.

**Chapter 17, Setting Site Defaults**

Chapter 17 describes how to set the site defaults for screen print output, the user profile, and screen attributes.

**Chapter 18, Customizing Dump Capture and Processing Options**

Chapter 18 describes the steps for modifying the CICS Abend-AID/FX dump capture support to your site's requirements.

**Chapter 19, Specifying Action Definitions**

Chapter 19 describes the steps for specifying action definitions that control user notification of transaction and region dumps, execute procedures for transaction dumps, and provide contact information when transaction and region dumps occur.



## Chapter 16.

# Accessing the Site Customization Options

This chapter explains how to access the CICS Abend-AID/FX site customization options.

---

## Accessing the User Controls Menu

The CICS Abend-AID/FX site customization options are available as a selection on the User Controls menu. Display the User Controls menu, shown in Figure 16-1, using one of the following methods:

- If you do not currently have a dump selected, type **USER** in the COMMAND field of the CICS Abend-AID/FX Summary or CICS Abend-AID/FX Directory display, and then press Enter.
- If you currently have a dump selected, use one of two methods:
  - Tab to User Control Facility on any CICS Abend-AID/FX Primary Options menu, and then press Enter, or
  - Type **USER** or **=U** in the COMMAND (or OPTION) field on any screen and press Enter.

**Figure 16-1.** User Controls Menu

```

CICS Abend-AID/FX ----- User Controls -----
OPTION ==>

      1  PROF      User Profile
      2  LIST      Print Output Options
      3  ATTRIBUTE Screen Attributes
      4  KEYS      PF Key Customization
      5  CUSTOM    Site Customization Options
  
```

---

## Accessing the Customization Options Menu

**Note:** You can restrict access to the customization screens by specifying the CUSTOM subparameter of the EXTERNAL\_SECURITY\_FUNCTION\_CHECK viewing server configuration parameter, as described in “Parameters to Enable External Security for CICS Abend-AID/FX Viewing Servers” on page 7-9. You must also write the appropriate rules for your external security package, as described in “Controlling User Access to Specific Functions” on page 11-11.

Display the Customization Options menu, shown in Figure 16-2, using one of two methods:

- Tab to Site Customization Options on the User Controls menu, and then press Enter.
- Type **CUSTOM** or **USER.5** in the COMMAND (or OPTION) field on any screen and press Enter. You can also type **=U.5** if you currently have a dump selected.

**Figure 16-2.** Customization Options Menu

```

Customization ----- Customization Options -----
COMMAND ==>

      1  DEFAULTS  Site Default Options
      2  CAPTURE  Modify Dump Capture and Processing Options
      3  ACTIONS  Notify Users and Execute Scripts

```

**Note:** You cannot execute non-customization fast-path commands from the customization screens. For example, you cannot execute the DIAG fast-path command from the customization screens. Further, you cannot execute customization fast-path commands from the CICS Abend-AID/FX dump analysis screens.

From this menu, you can access the customization screens from the following menus:

- **Site Default Options Menu**  
Use this menu to access the customization screens for setting your site defaults for screen print output, user profile, and screen attributes, as described in Chapter 17, “Setting Site Defaults”.
- **Dump Capture and Processing Menu**  
Use this menu to access the customization screens for setting your site defaults for CICS region configuration, dump capture profiles, transaction dump global options, and dump notification, as described in Chapter 18, “Customizing Dump Capture and Processing Options”.
- **Notify Users and Execute Scripts**  
Use this menu to access the customization screens for setting your site defaults for creating job cards for action definitions, transaction dump action definitions, and region dump action definitions, as described in Chapter 19, “Specifying Action Definitions”.

## Chapter 17.

# Setting Site Defaults

This chapter describes how to set your site defaults for screen print output, user profile, and screen attributes.

---

## Accessing the Site Default Options

Display the Site Default Options menu, shown in Figure 17-1, using one of two methods:

- Tab to Site Defaults Options on the Customization Options menu and press Enter. “Accessing the Customization Options Menu” on page 16-1 describes accessing the Customization Options menu.
- Type **DEFAULTS** or **=1** on any *customization* screen and press Enter. You cannot use these fast-path commands unless you have accessed the customization facility.

**Figure 17-1.** Site Default Options Menu

```

Customization ----- Site Default Options -----
OPTION  ==>

      1  PRTOPTS  Create/Maintain Site Print Options
      2  USERPROF Create/Maintain Site User Profile
      3  SCRATTR  Create/Maintain Site Screen Attributes
      4  PFKEYS  Create/Maintain Site PF Key Options
  
```

---

## Specifying the Default Site Print Output Options

This function is used to set the default CICS Abend-AID/FX screen print output options for all users at your site. If you don't modify any of the default print options, the Compuware-supplied defaults are used

**Note:** A pattern job card is supplied as a default. Review the job card because you probably need to modify it for your site.

Individual users can override the values you set here when they sign onto CICS Abend-AID/FX. The print function is documented in the *CICS Abend-AID/FX User's Guide*.

To set the site print output options, complete the following procedure:

1. Display the Site Print Options screen, shown in Figure 17-2, using one of two methods:
  - Tab to Create/Maintain Site Print Options on the Site Default Options menu, shown in Figure 17-1 on page 17-1, and then press Enter.
  - Type **PRTOPTS** or **=1.1** in the COMMAND (or OPTION) field on any *customization* screen and press Enter. You cannot use these fast-path commands unless you have accessed the customization facility.

**Figure 17-2.** Site Print Options Screen

```

Customization ----- Site Print Options -----
COMMAND ==>

To change a displayed value, overwrite it.
-----

Print Option..... KN      PD - Print dataset and delete
                          D - Delete dataset without printing
                          KN - Keep dataset and continue with new dataset

Print Output Options:
SYSOUT Class..... A          Page Width (Characters)... 132
Destination..... LOCAL      Page Length (Lines)..... 60
Print Uppercase Only..... N

Jobcard Information:
1... //JOBNAME JOB ('ACCOUNTING.INFO'),'PROGRAMMER.NAME',
2... //          CLASS=A,MSGCLASS=A
3... //*
4... //*
5... //*
6... //*

```

2. Complete the fields listed on the screen, overtyping any listed defaults as necessary. For specifics about any field, place the cursor in the field and press the HELP (PF1) key.

The Site Print Options screen displays the following input fields:

#### Print Option

Controls the disposition of the print dataset. The action specified occurs when users enter the GO primary command on the Print Options and Initiation screen, or when they exit CICS Abend-AID/FX. Valid values are:

- PD:** Print the dataset and delete.
- D:** Delete the dataset without printing.
- KN:** Default. Keep the dataset and continue with a new dataset.

#### SYSOUT Class

Specifies the JES sysout class for the print dataset. Valid values are:

- A-Z:** Alpha. The default is **A**.
- 0-9:** Numeric
- \***: Asterisk

**Page Width**

Specifies the width in characters of the print output lines. Valid values are a numeric value from 80 to 255, inclusive. The default is **132**.

**Destination**

Specifies the JES SYSOUT destination for the print dataset. You can specify any valid JES defined destination. The default is **LOCAL**.

**Page Length**

Specifies the length in lines of the print output page. Valid values are a numeric value from 50 to 99, inclusive. The default is **60**.

**Print Uppercase Only**

Specifies whether to convert print output to all uppercase. Valid values are:

- N:** Default. Do not convert to uppercase.
- Y:** Convert to uppercase.

**Jobcards 1 through 6**

Specifies the job card statements used to build the batch job stream for printing/deleting the print dataset.

3. Press the END (PF3) key to save your changes, or type **CANCEL** to ignore them. To restore the Compuware-supplied defaults, type **DEFAULTS**.

---

## Specifying the Default Site User Profile

This function is used to set the default CICS Abend-AID/FX user profile values for all users at your site. If you don't modify any of the default profile values, the Compuware-supplied defaults are used. Individual users can override the values you set here when they sign onto CICS Abend-AID/FX. The user profile function is documented in the *CICS Abend-AID/FX User's Guide*.

To set the site user profile, complete the following procedure:

1. Display the Site User Profile screen, shown in Figure 17-3 on page 17-4, using one of two methods:
  - Tab to the Create/Maintain Site User Profile option on the Site Default Options menu, and then press Enter.
  - Type **USERPROF** or **=1.2** in the COMMAND (or OPTION) field on any *customization* screen and press Enter. You cannot use these fast-path commands unless you have accessed the customization facility.

Figure 17-3. Site User Profile Screen

```

Customization ----- Site User Profile ----- Row 000001 of 000017
COMMAND ==> SCROLL ==> DATA

To change a displayed value, overtype it. Type DEFAULTS to reset all values
to their defaults.

-----

Prompt for confirmation when exiting the product..... N
Display instructional text on screens..... Y
Display line commands on screens..... Y
Display screen borders..... Y
Automatically reselect last dump viewed..... N
Confirm FX Directory delete requests..... Y
Default SDUMP dataset disposition for delete requests..... K
Default region dump Diagnostic Summary format..... F
Use source for transaction dump viewing..... Y
Enable Source Support Instructional Window..... Y
Print dataset prefix for VTAM and CICS access.....
Automatically restore FX Directory sort and mask parameters..... N
Automatically restore Source Program Directory sort and mask parms. N
Default FIND command line limit..... 2500
Default national language..... ENG
Default region dump MATCH command length (1-26 bytes)..... 4
***** BOTTOM OF DATA *****

```

2. Complete the fields listed on the screen, overtyping any listed defaults as necessary. For specifics about any field, place the cursor in the field and press the HELP (PF1) key.

The Site User Profile screen displays the following input fields:

#### Prompt for confirmation when exiting the product

Controls display of a prompt for confirmation prior to exiting CICS Abend-AID/FX. Valid values are:

- Y: Display the confirmation prompt.
- N: Default. Do not display the confirmation prompt.

#### Display instructional text on screens

Controls the display of instructional text on CICS Abend-AID/FX screens. Valid values are:

- Y: Default. Display instructional text.
- N: Do not display instructional text.

The setting for this option applies to the current and all subsequent sessions. To alter this option for the current session only, use the INSTRUCT command.

#### Display line commands on screens

Controls the display of line command descriptions on CICS Abend-AID/FX screens. Valid values are:

- Y: Default. Display line command descriptions.
- N: Do not display line command descriptions.

The setting for this option applies to the current and all subsequent sessions. To alter this option for the current session only, use the LINECMDS command.

#### Display screen borders

Controls the display of borders on CICS Abend-AID/FX screens. Valid values are:

- Y:** Default. Display all borders.
- N:** Do not display either bottom or side borders.
- B:** Display only top and bottom borders.
- S:** Display only top and side borders.

The setting for this option applies to the current and all subsequent sessions. To alter this option for the current session only, use the BORDERS primary command, which is described in the online help and the *CICS Abend-AID/FX User's Guide*. Note that the top border of the screen is always displayed and cannot be removed.

#### Automatically reselect last dump viewed

Controls whether the last dump selected during a previous session is automatically reselected when you reaccess CICS Abend-AID/FX. Valid values are:

- Y:** Automatically reselect the last dump viewed when you reaccess CICS Abend-AID/FX from VTAM or ISPF. The Primary Options menu for the dump is displayed.

**Note:** This option is not valid if you are using CICS local or remote viewing access.

- N:** Default. Do not automatically reselect the last dump viewed. The CICS Abend-AID/FX Summary is displayed.

#### Confirm FX Directory delete request

Controls the display of a confirmation window when you delete a CICS Abend-AID/FX Directory entry. Valid values are:

- Y:** Default. Display the delete confirmation window when you issue the CICS Abend-AID/FX Directory D (Delete) line command.
- N:** Do not display the confirmation window.

#### Default SDUMP dataset disposition for delete requests

Valid only for region dumps and if you specify N for the Confirm FX Directory delete requests option. This option controls the default disposition of the SDUMP dataset when you delete a region dump entry using the CICS Abend-AID/FX Directory D (Delete) line command. Valid values are:

- K:** Default. Keep the SDUMP dataset on DASD.
- M:** Migrate the SDUMP dataset to ML1 (Migration Level One).
- D:** Delete the SDUMP dataset from DASD.

With all three values, the CICS Abend-AID/FX Directory entry and all analysis information pertaining to the dump are deleted.

**Default region dump Diagnostic Summary format**

Controls the default format of the Diagnostic Summary for region dumps. Valid values are:

- F:** Default. Display the region dump Diagnostic Summary in full format.
- A:** Display the region dump Diagnostic Summary in abbreviated format.

**Use source for transaction dump viewing**

Controls whether source listings are used when viewing transaction dumps. Valid values are:

- Y:** Default. Use source listings when viewing transaction dumps.
- N:** Do not use source listings when viewing transaction dumps.

The setting for this option applies to the current and all subsequent sessions. To alter this option for the current session only, use the SOURCE primary command, which is described in the online help and the *CICS Abend-AID/FX User's Guide*.

**Enable Source Support Instructional Window**

Controls whether source support instructional information is displayed. This information can assist in enabling source support for transaction dumps. Valid values are:

- Y:** Default. Display the source support instructional window.
- N:** Do not display the source support instructional window.

The setting for this option applies to the current and all subsequent sessions. To alter this option for the current session only, use the SRCINST primary command, which is described in the online help and the *CICS Abend-AID/FX User's Guide*.

**Print dataset prefix for VTAM and CICS access**

For CICS and VTAM access only, specifies the one- to eight-character dataset name prefix to be used when allocating print datasets. The user ID of the user issuing the PRINT or LPRINT command is used as the second qualifier of the print dataset. If this option is not specified for CICS or VTAM users, the default dataset name prefix is the user ID of the user.

**Note:** This option is not valid for an ISPF session. For ISPF sessions the TSO PROFILE PREFIX(prefix) is used to allocate print datasets.

**Automatically restore FX Directory sort and mask parameters**

Controls whether the last sort and mask parameters from the user's previous session are automatically restored on the CICS Abend-AID/FX Directory. Valid values are:

- Y:** Automatically restore the last sort and mask parameters.
- N:** Default. Do not automatically restore the last sort and mask parameters.

**Automatically restore Source Program Directory sort and mask parms**

Controls whether the last sort and mask parameters from the user's previous session are automatically restored on the Source Program Directory. Valid values are:

**Y:** Automatically restore the last sort and mask parameters.

**N:** Default. Do not automatically restore the last sort and mask parameters.

**Default FIND command line limit**

Controls the default FIND command search line limit. Valid values are a numeric value from 1000 to 32767, inclusive. The default is **2500**.

**Default national language**

Controls the default national language to be used when displaying CICS Abend-AID/FX product screens. Valid values are:

**ENG:** Default. English

**JPN:** Japanese

The setting for this option applies to all subsequent sessions.

**Notes:**

1. To display CICS Abend-AID/FX screens in Japanese, you must install the CICS Abend-AID/FX Japanese support via the installation dialog. Refer to "Step 6. Use the Installation Dialog" on page 4-6 for more information.
2. The Japanese language support requires that the terminal support the double byte character set (DBCS). If the terminal does not support DBCS, product screens are displayed in English.
3. ISPF users must specify an ISPF terminal type that supports katakana, such as 3277KN or 3278KN.
4. The CICS Abend-AID/FX region dump support screens are not translated into Japanese.

**Default region dump MATCH command length (1-26 bytes)**

Controls the default region dump MATCH command length. Valid values are a numeric value from 1 to 26, inclusive. The default is **4**. Refer to the online help or the *CICS Abend-AID/FX User's Guide* for more information about the MATCH primary command.

3. Press the END (PF3) key to save your changes, or type CANCEL to ignore them. To restore the Compuware-supplied defaults, type **DEFAULTS**.

---

## Specifying the Default Site Screen Attributes

This function is used to set the default CICS Abend-AID/FX screen attributes for all users at your site. If you don't modify any of the default screen attribute values, the Compuware-supplied defaults are used. Individual users can override the values you set here when they sign onto CICS Abend-AID/FX. The screen attributes function is documented in the *CICS Abend-AID/FX User's Guide*.

**Note:** Changes you make on this screen do not affect the customization screens.

To set the site screen attributes, complete the following procedure:

1. Display the Site Screen Attributes screen, shown in Figure 17-4 using one of two methods:
  - Tab to the Create/Maintain Site Screen Attributes option on the Site Default Options menu, and then press Enter.
  - Type **SCRATTR** or **=1.3** in the COMMAND (or OPTION) field on any *customization* screen and press Enter. You cannot use these fast-path commands unless you have accessed the customization facility.

**Figure 17-4.** Site Screen Attributes Screen

```

Customization ----- Site Screen Attributes -----
COMMAND ==>

To change a displayed value, overtype it.  Type DEFAULTs to reset all values
to their defaults.

-----

W - White      T - Turquoise    R - Red      G - Green    Y - Yellow    B - Blue
Screen Area
Borders                T      N      R
Tab-selectable Data   G      N      N
Input Data             R      H      U
Available Fast-path Commands on Menus G      N      R
Unavailable Fast-path Commands on Menus T      N      R
Field Descriptions, Normal T      N      N
Field Descriptions, Emphasized Y      H      N
Field Data, Normal     W      H      N
Field Data, Emphasized Y      H      N
Field Data, Errors     Y      H      N
Column Headings       W      H      R
Group Headings, Normal W      H      R
Group Headings, Emphasized Y      H      N

```

2. Complete the fields listed on the screen, overtyping any listed defaults as necessary. For specifics about any field, place the cursor in the field and press the HELP (PF1) key.

For each CICS Abend-AID/FX screen area (borders, tab-selectable data, input data, and so forth), you can change the default color, intensity, and highlighting as described below:

#### Color

Valid values are:

**W:** White

**T:** Turquoise

**R:** Red

**G:** Green

**Y:** Yellow

**B:** Blue

With ISPF viewing, the color chosen may be overridden by the ISPF color settings.

**Intensity**

Valid values are:

- N:** Normal intensity
- H:** High intensity

**Highlighting**

Valid values are:

- N:** No extended highlighting attributes
- B:** Blinking attribute
- R:** Reverse video attribute
- U:** Underscore attribute

3. Press the END (PF3) key to save your changes, or type CANCEL to ignore them. To restore the Compuware-supplied defaults, type DEFAULTS.

---

## Specifying Global PF Key Settings

This function is used to set the global PF key settings for all users at your site. If you don't modify any of the default PF key settings, the Compuware-supplied defaults are used. Individual users can override the values you set here when they sign onto CICS Abend-AID/FX. The PF key definitions function is documented in the *CICS Abend-AID/FX User's Guide*.

**Note:** You can assign multiple commands to a PF key by using the semicolon (;) as a delimiter between commands.

To change the default PF key settings, complete the following procedure:

1. Display the Site PF Keys screen, shown in Figure 17-5 on page 17-10 using one of two methods:
  - Tab to Create/Maintain Site PF Key Options on the Site Default Options menu, and then press Enter.
  - Type **PFKEYS** or **=1.4** in the COMMAND (or OPTION) field on any *customization* screen and press Enter. You cannot use these fast-path commands unless you have accessed the customization facility.

Figure 17-5. Site PF Keys Screen

```

Customization ----- Site PF Keys - Primary -----
COMMAND ==>

Press Enter to display the alternate keys. Type End command (PF3) to save,
Cancel to exit without saving, or DEFAULTS to reset the values.

-----
PF13 Definition... HELP
PF14 Definition... SPLIT
PF15 Definition... END
PF16 Definition... RETURN
PF17 Definition... DISASM
PF18 Definition... HEXD
PF19 Definition... DSECT
PF20 Definition... INFO
PF21 Definition... WHO
PF22 Definition... MATCH
PF23 Definition... LPRINT
PF24 Definition... ASSIST

PF13 Label...      PF14 Label...      PF15 Label...
PF16 Label...      PF17 Label...      PF18 Label...
PF19 Label...      PF20 Label...      PF21 Label...
PF22 Label...      PF23 Label...      PF24 Label...

```

2. Press Enter to display the alternate keys.
3. Type the new value or function for the associated PF key in the area directly following the key name. Refer to Figure 17-5 for the default PF key function names.
4. Press Enter. The Site PF Keys screen displays the new PF key values.
5. When modifications are complete, press the END PF key to exit the screen and save your changes. (PF3 and PF15 are the defaults.) Or, enter CANCEL to exit the screen without saving your changes.
6. To restore the site-defined defaults if you saved your changes, enter **DEFAULTS** as a primary command.

## Chapter 18.

# Customizing Dump Capture and Processing Options

This chapter describes the steps for modifying the CICS Abend-AID/FX dump capture component, which gives you a great deal of flexibility regarding dump capture and processing. Using a combination of job name, APPLID, and MVS SYSID, you can indicate what type of region dump to take ( SYS1.DUMPxx; SDUMP to an automatically allocated dataset for MVS version 5, OS/390, or z/OS; or an SDUMP to a user-defined dataset). Using the same criteria (job name, APPLID, and MVS SYSID), as well as transaction, program name, and abend code, you can indicate what type of transaction dump to take (CICS Abend-AID/FX or IBM dump), and whether to suppress duplicate transaction dumps. You can also request notification through the action definition facility when a region or transaction dump is taken, as described in Chapter 19, “Specifying Action Definitions”.

The CICS Abend-AID/FX dump capture and processing options function has four main components, the first three of which are highly interrelated, and are described in this chapter:

- **CICS region configurations** — The CICS Region Configuration screen is used to specify the following information for your CICS regions (CICS regions are identified by job name, APPLID, and MVS SYSID):
  - The region dump capture profile to use
  - The transaction dump capture profile to use
  - The transaction dump global options member to use
  - Which CICS Abend-AID/FX viewing server is to process dumps from this region
  - Which transaction dump capture address space (TDCAS) is processing dumps for this region
  - An optional region description. The region description is used on the CICS Abend-AID/FX Summary display to group dumps into categories. You create the categories using the region descriptions.
- **Dump capture profiles (transaction and region)** — The options you specify for region and transaction dump capture and processing are stored in named members called dump capture profiles. Compuware supplies two default profile members, one for transaction dumps and one for region dumps, and you can create new profile members with unique names and content.

On the CICS Region Configuration screen (option 1 on the Dump Capture and Processing menu), you assign CICS regions (using job name, APPLID, and MVS SYSID as qualifiers) to use the dump capture profiles you create. Multiple CICS regions and groups of regions can use the same profile. If you don't specify a profile, the default is used.

- **Transaction dump global options** — You have several options that globally control how CICS Abend-AID/FX processes transaction dumps for a CICS region. These include how much of the CICS trace table is captured with dumps, and internal performance processing options.

As with dump capture profiles, transaction dump global options are specified in named members. Compuware supplies a default transaction dump global options member, and you can create additional members.

Transaction dump global option members are assigned to CICS regions and groups of regions in the same way as dump capture profiles. Multiple CICS regions can use the same profile. If you don't specify a profile, the default is used.

Dump capture options allow you to indicate what actions to perform when a CICS transaction or region dump is taken. There are several steps involved in specifying dump capture options. These options are available from the Dump Capture and Processing Menu, shown in Figure 18-1, and are described below.

---

## Accessing the Dump Capture Options

Display the Dump Capture and Processing Menu, shown in Figure 18-1, using one of two methods:

- Tab to the Modify Dump Capture and Processing Options option on the Customization Options menu, and then press Enter. "Accessing the Customization Options Menu" on page 16-1 describes accessing the Customization Options menu.
- Type **CAPTURE** or **=2** in the **COMMAND** (or **OPTION**) field on any *customization* screen and press Enter. You cannot use these fast-path commands unless you have accessed the customization facility.

**Figure 18-1.** Dump Capture and Processing Menu

```

Customization ----- Dump Capture and Processing Menu -----
OPTION  ==>

      1  REGIONS  CICS Region Configuration
      2  DMPPROF  Region and Tran Dump Capture Profiles
      3  TRANGBL  Transaction Dump Global Options

```

---

## Configuring CICS Regions

On the CICS Region Configuration screen, you assign CICS Abend-AID/FX viewing servers and, optionally, transaction dump capture address spaces (TDCASs) to process dumps for specific CICS regions. A combination of job name, APPLID, and MVS SYSID is used to identify each region. By default, all dumps are processed by the very first viewing server ever started at your site and the first TDCAS on the MVS image where a given CICS region is running. If you have multiple TDCASs and want to assign specific CICS regions to them, use this screen. If you have only one TDCAS per image, you don't have to assign a TDCAS name here. The CICS Region Configuration screen supports a maximum of 8,322 entries.

**Note:** If you install the CICS Abend-AID/FX SVC 51 interface and you leave the default entry on the CICS Region Configuration screen, CICS Abend-AID/FX also processes non-CICS system dumps. Refer to Note d. on page 18-4 for information about preventing CICS Abend-AID/FX from capturing all SVC dumps if the SVC 51 interface is installed.

You can also indicate which region dump profile, transaction dump profile, and transaction dump global options member you want each CICS region to use. By default, all CICS regions (qualified by job name, APPLID, and MVS SYSID) use the \$DEFAULT members for transaction dump profiles, region dump profiles, and transaction global options. If you want any CICS regions to use values other than these defaults, you must use the CICS region configuration function.

**Note:** Compuware recommends using the default region dump profile, transaction dump profile, and transaction dump global options when you are initially installing CICS Abend-AID/FX. After you become more familiar with CICS Abend-AID/FX processing, you may want to create your own dump profile and transaction dump global options members.

A single asterisk (\*) is a wildcard character for the Job Name, APPLID, and MVS SYSID fields. For example, you can specify CICS\* in the Job Name field to indicate that all jobs beginning with CICS are to use the transaction dump global options member, region and transaction profile members, viewing server, and transaction dump capture address space listed in their corresponding fields. This can remove the need to enter the job name of each CICS region at your site.

**Note:** The wildcard character can be specified only at the end of a string, and not at the beginning or in the middle.

Optionally, you can also use the CICS Region Configuration screen to assign transaction databases to CICS regions. By default, a CICS region can write to all transaction databases assigned to the viewing server that is processing dumps for the CICS region. You can restrict which transaction databases a CICS region can write to using the function described in “Assigning Transaction Databases to CICS Regions” on page 18-8.

To specify CICS region configurations, complete the following procedure:

1. Display the CICS Region Configuration screen, shown in Figure 18-2 on page 18-4, using one of two methods:
  - Tab to the CICS Region Configuration option on the Dump Capture and Processing Menu, shown in Figure 18-1 on page 18-2, and then press Enter.
  - Type **REGIONS** or **=2.1** in the COMMAND (or OPTION) field on any *customization* screen and press Enter. You cannot use these fast-path commands unless you have accessed the customization facility.

Figure 18-2. CICS Region Configuration, Left Screen

```

Customization ----- CICS Region Configuration ----- Row 00001 of 00013
COMMAND ==>                                           SCROLL ==> PAGE
                                                    ==>

Enter your values in the appropriate fields. This list is processed in a
top-down order. CICS Abend-AID/FX can also capture non-CICS dumps. Press
HELP (PF1) for more information.

-----

I Insert      R Replicate      D Delete      A Assign Tran Databases

Job Name CICS   MVS   Rgn Dump  Tran Dump  Tran Dump  Viewing  Tran Dump
***** APPLID SYSID Profile  Profile  Globals  Server  Capture AS
*      *      *      $DEFAULT  $DEFAULT  $DEFAULT  SERVER1
*****
***** BOTTOM OF DATA *****

```

The CICS Region Configuration screen, as shown in Figure 18-2, initially displays the wildcard character (\*) in the Job Name, CICS APPLID, and MVS SYSID fields, and \$DEFAULT in the Region Dump Profile, Tran Dump Profile, and Tran Dump Globals fields. This is the default entry, and means that all CICS regions — regardless of job name, APPLID, or SYSID — are processed using the \$DEFAULT members by the first viewing server you ever start at your site and the first TDCAS started on the MVS image where the CICS region is running.

2. Use the **I** (Insert) line command to insert a new line or the **R** (Replicate) line command to replicate an existing line to use as a starting point for each new entry.

**Notes:**

- a. The CICS region configurations list is processed in a **top-down** order. Both region and transaction dumps are processed according to the *first* configuration entry matched in the list. Keep this in mind when you are inserting or replicating statements, or if you are using the wildcard character (\*).
- b. **There is no line command to move an entry**, so if you put an entry in the wrong place, you must delete it and then insert it in the correct place.
- c. CICS Abend-AID/FX warns you if you attempt to save the CICS region configuration list and the default is *not* the last entry. Because all job name/APPLID/SYSID combinations will match the default entry, any entries you make that are after the default in the list are ignored.
- d. If you install the CICS Abend-AID/FX SVC 51 interface or the MVS post-dump exit and you leave the default entry on the CICS Region Configuration screen, CICS Abend-AID/FX also processes non-CICS system dumps. To prevent this, remove the default entry, and then ensure that your other definition statements are specific enough to cover all of your CICS regions. Alternatively, you can leave the default entry if the region dump profile associated with the entry specifies Dump Type=SYS1 and Copy SYS1.DUMP=N, which are the defaults.
- e. You cannot save duplicate entries. CICS Abend-AID/FX highlights duplicate entries when you attempt to save the list. You must delete or modify one of the entries.
- f. Use the ? (question mark) line command to display the viewing server name and the shared directory dataset name for an entry.

3. Enter your configuration values in the appropriate columns. A single asterisk (\*) can be used at the end of a string as a wildcard character to partially qualify any job name, CICS APPLID, or MVS SYSID. An asterisk entered as a full qualifier means that *all* job names, APPLIDs, or SYSIDs are processed using the profile members and viewing server assigned to the entry.

**Note:** The asterisk can be used only at the end of a partial field value, and not at the beginning or in the middle. Or, it can be used in place of the value to indicate that *all* values qualify for the condition set.

The CICS Region Configuration screen displays the following input fields:

#### **Job Name**

Specifies the name of the MVS address space. You can use the wildcard character (\*) to create a generic job name for multiple regions.

If you specify anything other than asterisk (\*) in this field, then you *must* install the SVC 51 interface. The SVC 51 interface is required because the job name is not readily available to CICS Abend-AID/FX except through the SVC 51 interface.

Chapter 13, “Configuring Automatic Region Dump Processing” contains information on the choices that are available to you for processing region dumps, and “SVC 51 Interface” on page 13-7 describes the procedure for installing the SVC 51 interface.

#### **CICS APPLID**

Specifies the CICS APPLID for this region. You can use the wildcard character (\*) to create a generic APPLID.

In a non-XRF environment, CICS APPLID is the generic APPLID for both region and transaction dumps. In an XRF environment, for transaction dumps, the APPLID is the generic CICS APPLID. For region dumps, it is the specific APPLID.

#### **MVS SYSID**

Specifies the MVS SYSID of the executing CICS region. You can use the wildcard character (\*) to create a generic SYSID.

#### **Rgn Dump Profile**

Specifies the region dump capture profile for this entry. This profile indicates automatic processing choices for region dumps. Refer to Chapter 13, “Configuring Automatic Region Dump Processing” for more information. “Modifying Region Dump Profiles” on page 18-11 describes creating your own profile members. \$DEFAULT indicates the Compuware-supplied defaults are used.

#### **Tran Dump Profile**

Specifies the transaction dump capture profile for this entry. This profile indicates automatic processing choices for transaction dumps. Refer to “Modifying Permanent Transaction Dump Profiles” on page 18-17 for more information. “Modifying Permanent Transaction Dump Profiles” on page 18-17 describes creating your own profile members. \$DEFAULT indicates the Compuware-supplied defaults are used.

#### **Tran Dump Globals**

Specifies the transaction dump global options member for this entry. This profile indicates global processing choices for transaction dumps. Refer to “Modifying Transaction Dump Global Options” on page 18-24 for more information. \$DEFAULT indicates the Compuware-supplied defaults are used.

### Viewing Server

Specifies the name of the viewing server that processes dumps matching this entry. By default, the name of the first viewing server ever started at your site is displayed in this field. To use a different viewing server, type over the displayed name with the new viewing server name. To identify the viewing server name(s), defined for your site, refer to “Step 3c. Specify the Viewing Server Name” on page 7-18.

### Tran Dump Capture AS

Specifies the name of the transaction dump capture address space (TDCAS) that processes dumps matching this entry. If you have only one TDCAS per MVS image, you can leave this field blank, and CICS Abend-AID/FX automatically uses the TDCAS on the image where this region is running. You need to complete this field only if you have multiple TDCASs on an image and want to assign a CICS region to a specific TDCAS. To identify the TDCAS name(s) defined for your site, refer to “Step 2b. Specify the Subsystem and TDCAS Names” on page 8-6.

**Note:** CICS Abend-AID/FX does not display in the field the name of the default TDCAS that it automatically uses.

### Region Description

Specifies a description for the CICS Region. This description is used to categorize entries on the CICS Abend-AID/FX Summary screen.

If you want to assign a CICS region to a description (name) for grouping on the CICS Abend-AID/FX Summary screen, scroll right. The right side of the CICS Region Configuration screen, shown in Figure 18-4 on page 18-8, is displayed. Enter an identical region description for all CICS regions you want to group under the same name.

The CICS Abend-AID/FX Summary summarizes the type and number of transaction and region dumps available for each CICS region or region “group” to which you have assigned a name. Refer to the *CICS Abend-AID/FX User’s Guide* for a description of the CICS Abend-AID/FX Summary.

**Note:** Entering a region description is optional. CICS regions are grouped on the CICS Abend-AID/FX Summary display by job name, *unless* you enter a region description here.

4. Press the END (PF3) key to save your changes or enter CANCEL to erase them.

## Example

The CICS region configuration shown in Figure 18-3 on page 18-7 displays four configuration statements. The first statement specifies that any CICS region whose job name begins with CICSP, regardless of the APPLID or MVS SYSID of the region, is processed using members called PROD for the region dump profile, transaction dump profile, and transaction dump global options. SERVER2, and the first transaction dump capture address space (TDCAS) on the MVS image(s) where regions meeting the specified criteria are running, process dumps for this configuration.

The second statement specifies that any CICS region whose job name begins with CICST1, regardless of the APPLID or MVS SYSID of the region, is processed using members called TEST1 for the region dump profile, transaction dump profile, and transaction dump global options. SERVER1, and the first TDCAS on the MVS image(s) where regions meeting the specified criteria are running, process dumps for this configuration.





Figure 18-5. Assign Tran Databases to Regions Screen

```

Customization ----- Assign Tran Databases to Regions -- Row 000001 of 000003
COMMAND ==>                                           SCROLL ==> PAGE

CICS Job Name... CICS*      CICS APPLID... *      MVS SYSID..... *

To assign all transaction databases select  ASSIGN
To unassign all transaction databases select UNASSIGN

A Assign      U Unassign

Transaction Report File Name                Status
*****
- COMPWARE.CICSAAFX.TRANDB01                Assigned
- COMPWARE.CICSAAFX.TRANDB02                Assigned
- COMPWARE.CICSAAFX.TRANDB03                Assigned
- COMPWARE.CICSAAFX.TRANDB04                Unassigned
- COMPWARE.CICSAAFX.TRANDB05                Unassigned
***** BOTTOM OF DATA *****

```

The Assign Tran Databases to Regions screen lists all transaction databases that are attached to the shared directory/viewing server that is processing dumps for the selected CICS region (that is, all candidate transaction databases).

Transaction databases are allocated and attached to a shared directory when you allocate them, as described in “Step 1e. Allocate a Transaction Database (\$11TRPT)” on page 7-4.

3. To assign only a subset of the available transaction databases to this CICS job name/CICS APPLID/MVS SYSID, position your cursor on the UNASSIGN selection and press Enter. Then, enter A next to each transaction database that the selected CICS region can use.

To unassign a transaction database, enter U next to the file name.

When you have made your file assignments, press the END (PF3) key to save your changes, or enter CANCEL to erase them.

**Note:** Any transaction database assignments or unassignments you make do not take effect until CICS Abend-AID/FX is stopped and restarted in the CICS region.

---

## Modifying Dump Capture Profiles

### IMPORTANT

If you don't modify the dump capture options, CICS Abend-AID/FX uses default processing for CICS region and transaction dumps. Default processing means that:

- CICS Abend-AID/FX does not become involved in taking or automatically processing CICS *region* dumps. Region dumps continue to be taken as they normally are at your site (usually to SYS1.DUMPxx datasets), and you must manually import a copy of region dumps into CICS Abend-AID/FX.
- CICS Abend-AID/FX processes *all* transaction dumps for all CICS regions in which CICS Abend-AID/FX is enabled. Enabling CICS Abend-AID/FX in a CICS region is described in **Chapter 9, “CICS Updates”**.

In addition to capturing CICS Abend-AID/FX abend analysis information to the transaction databases assigned to the CICS region, an IBM dump is also taken for each transaction abend. Processing is performed according to the Compuware-supplied transaction global options, which are described in “Modifying Transaction Dump Global Options” on page 18-24.

The dump capture profiles contain the actions that CICS Abend-AID/FX is to take when a transaction or region dump is about to be taken. Compuware provides two default dump capture profiles — one for transaction dumps and one for region dumps.

On the CICS Region Configuration screen (option 1 on the Dump Capture and Processing Menu), you assign CICS regions (using job name, APPLID, and MVS SYSID as qualifiers), to use the dump capture profiles you create. Multiple CICS regions can use the same profile and, if you don’t specify a profile, the default profile is used. You can update the Compuware-supplied default profiles, but you cannot delete them.

To modify a dump capture profile, complete the following procedure:

1. Display the Dump Capture Profiles screen, shown in Figure 18-6, using one of two methods:
  - Tab to the Region and Tran Dump Capture Profiles option on the Dump Capture and Processing Menu, and then press Enter.
  - Type **DMPPROF** or **=2.2** in the COMMAND (or OPTION) field on any *customization* screen and press Enter. You cannot use these fast-path commands unless you have accessed the customization facility.

**Figure 18-6.** Dump Capture Profiles Screen

```

Customization ----- Dump Capture Profiles ----- Row 00001 of 00039
COMMAND ==>                                     SCROLL ==> PAGE

      S Select      R Replicate      D Delete

Profile  Type      Description
*****  *
- $DEFAULT REGION  DEFAULT REGION DUMP PROFILE
- $DEFAULT TRAN    DEFAULT TRANSACTION DUMP PROFILE
*****  *
*****  * BOTTOM OF DATA *****  *

```

The Dump Capture Profiles screen lists both region and transaction dump profiles. When you initially access the screen, there are two \$DEFAULT profiles displayed, one for region dumps and one for transaction dumps. These members contain the default profile values supplied by Compuware, and can be used as templates for profiles you create. If the Compuware defaults are acceptable, you don’t have to do anything, and CICS Abend-AID/FX uses the default region and transaction dump capture profiles. The Dump Capture Profiles screen supports a maximum of 65,535 entries.

2. The profile names are displayed in alphabetical order. Select a profile member to create, modify, or delete, as follows:

- If you want to create a new profile member, enter **R** next to an existing member. This replicates the definitions of the existing member to use as a starting point for the new member. Then, complete the profile definition, as described in “Modifying Region Dump Profiles” on page 18-11 or “Modifying Permanent Transaction Dump Profiles” on page 18-17, depending on what type of profile member you are creating.
- If you want to modify an existing profile member, enter **S** next to the member. Then, complete the profile definition, as described in “Modifying Region Dump Profiles” on page 18-11 or “Modifying Permanent Transaction Dump Profiles” on page 18-17, depending on what type of profile member you are creating.
- If you want to delete a profile member, enter **D** next to the member.

**Note:** You cannot directly rename a member. To rename a profile member, replicate an existing member, save it under a new name, and then delete the old member.

## Modifying Region Dump Profiles

The Region Dump Profile screen supports a maximum of 65,535 entries. Region dump profiles specify the following information:

- The type of dump to take (SYS1.DUMPxx or SDUMP to a user-defined dataset, and the naming convention and attributes of the user-defined SDUMP dataset). Refer to Chapter 13, “Configuring Automatic Region Dump Processing” for a description of the dump types.

Taking SDUMPs to a user-defined dump dataset is supported only if you install the SVC 51 interface, as described in “SVC 51 Interface” on page 13-7.

- Whether dumps taken to SYS1.DUMPxx datasets are to be automatically copied to another SDUMP dataset, and the naming convention and attributes of the dataset.

Automatically copying SYS1.DUMPxx datasets is supported only if you install the MVS post-dump exit, as described in “MVS Post-Dump Exit” on page 13-4.

- Whether to automatically import the dump.

For dumps taken to SYS1.DUMPxx datasets, this option is available only if CICS Abend-AID/FX first copies the dump from the SYS1.DUMPxx dataset to another dataset.

With MVS/ESA version 5, OS/390, or z/OS dumps taken to an automatically allocated dump dataset, this option is available only if you install the MVS post-dump exit, as described in “MVS Post-Dump Exit” on page 13-4.

- Whether to automatically analyze the dump.

### Notes:

1. These specifications can be made per abend code; that is, you can take different dump actions for different abend codes.
2. A single asterisk (\*) is a wildcard character for the abend code. The asterisk can be used only at the end of a partial abend code, and not at the beginning or in the middle. Or, it can be used in place of the abend code, to indicate that *all* abend codes qualify for the condition set. For example, you can specify separate statements for ASRA and ASRB, or you can specify ASR\* to use the same statement for all ASRx abends.
3. The region dump profile is processed in a top-down order. A region dump is processed according to the first statement it matches in the profile member. Keep this in mind when you are inserting and replicating statements, or if you are using the wildcard (\*) character.

If no profile records match a region dump taken at your site, the dump is taken to SYS1.DUMPxx or, optionally, to an automatically allocated dataset if you're using MVS version 5, OS/390, or z/OS.

- If you specify anything other than asterisk (\*) in the CICS Job Name field on the CICS Region Configuration screen, then you **must** install the SVC 51 interface. The SVC 51 interface is required because the job name is not readily available to CICS Abend-AID/FX except through the SVC 51 interface.

Refer to "SVC 51 Interface" on page 13-7 for a description of the procedure for installing the SVC 51 interface.

To modify a region dump profile member, complete the following procedure:

- Display the Region Dump Profile screen, shown in Figure 18-7, by selecting or replicating a region profile member name on the Dump Capture Profiles screen (Figure 18-6 on page 18-10).

**Figure 18-7.** Region Dump Profile Screen

```

Customization ----- Region Dump Profile ----- Row 000001 of 000001
COMMAND ==>                                     SCROLL ==> PAGE

To change a displayed value, overtyp e it.

-----
Profile name.. $DEFAULT      Description... DEFAULT REGION DUMP PROFILE

To access the dataset information screen, select DATASET

  I Insert      R Replicate      D Delete

Abend   Dump   Auto   Copy   Optimized SDUMP
Code   Type   Import  SYS1.DUMP parameters for FX
*****  ****  *      *      *
- *      SYS1  N      N
*****
***** BOTTOM OF DATA *****

```

If you displayed the Region Dump Profile screen by replicating a member on the Dump Profile Selection screen, enter a unique name in the Profile Name field and overtype the Description field with a unique name and description.

Enter **I** to insert a new statement in the profile or **R** to replicate an existing statement to use as a starting point for the new statement, and then press Enter. (Or, proceed to the next step if you are simply modifying an existing statement.) The Region Dump Profile screen is refreshed and displays the inserted or replicated line.

**Note:** Make sure that you are inserting or replicating the line in an appropriate place, taking into consideration that the statements are processed in a top-down order from the table. There is no line command to move a statement, so if you put a statement in the wrong place, you must delete it and then insert or replicate it in the correct place.

- Overtyp e the inserted or replicated line with the new values. Press the HELP (PF1) key on any field for specific information.

The Region Dump Profile screen displays the following input fields:

**Abend Code**

Specifies the abend code for this dump capture entry. You can use the wildcard character (\*) at the end of a partial abend code. An asterisk (\*) can be used in place of an abend code, to indicate ALL abend codes qualify for the condition to be set. The default is \*.

**Dump Type**

Specifies the type of dump to be generated for conditions matching this entry.

Valid values are:

**SYS1:** Default. The dump is written to a SYS1.DUMPxx dataset. The dump must be copied for CICS Abend-AID/FX to automatically import it.

If you're using MVS version 5, OS/390, or z/OS automatically allocated datasets, specify **SYS1** as the dump type. Dumps taken to automatically allocated datasets can be automatically imported without first copying them.

Refer to "Dumps Taken to SYS1.DUMPxx Datasets" on page 13-2 and "Automatically Allocated Dump Datasets (MVS/ESA Version 5, OS/390, and z/OS)" on page 13-2 for more information.

**USER:** SDUMPs are written to user-specified datasets, bypassing SYS1.DUMPxx. Refer to "SDUMPs to CICS Abend-AID/FX User-Defined Datasets" on page 13-3 for more information. You must specify a dataset naming pattern for this value. Refer to "Specifying a Dataset Naming Pattern" on page 18-14 for more information.

**Notes:**

1. Compuware does not recommend this option because it is considerably slower than the SYS1 option.
2. Do not confuse a *user-specified* dataset with an *MVS automatically allocated* dataset. User-specified datasets are a facility of CICS Abend-AID/FX, while automatically allocated datasets are a feature of MVS version 5, OS/390, and z/OS. If you're using these automatically allocated datasets, specify a dump type of **SYS1** rather than **USER**.

**Auto Import**

Specifies whether to automatically import dumps that match this entry into CICS Abend-AID/FX and whether to automatically run dump analysis at the time the dumps are imported. Refer to Chapter 13, "Configuring Automatic Region Dump Processing" for additional requirements for implementing the auto import function. Valid values are:

**Y:** Automatically import the dump and automatically run dump analysis when the dump is imported.

**N:** Default. Do not automatically import the dump.

**B:** Bypass running dump analysis, but automatically import the dump. These dump entries are displayed on the CICS Abend-AID/FX Directory screen with a status of SELECT. You can manually schedule dump analysis for these dumps on an as-needed basis by using the CICS Abend-AID/FX Directory A (Analyze) line command.

**blank:** Do not automatically import the dump.

#### Copy SYS1.DUMP

Specifies whether to automatically copy dumps that match this entry from a SYS1.DUMPxx dataset to another dataset because CICS Abend-AID/FX cannot automatically import dumps directly from SYS1.DUMPxx datasets. You must specify a dataset naming pattern for the copy dataset. Refer to “Specifying a Dataset Naming Pattern” on page 18-14 for more information. Valid values are:

**Y:** Automatically copy the dump.

**N:** Default. Do not automatically copy the dump. *Specify this value if you're using MVS version 5, OS/390, or z/OS automatically allocated datasets.*

**blank:** Do not automatically copy the dump.

#### Optimized SDUMP parameters for FX

Specifies whether to produce an SDUMP tailored to the needs of the CICS programmer without affecting non-CICS SDUMP requests. Typically, enabling this option means a smaller SDUMP is produced. The CICS region regains control faster. This dump contains everything CICS Abend-AID/FX needs to analyze the dump and assist with problem resolution. Valid values are:

**Y:** Use optimized SDUMP parameters for FX. The optimized SDUMP parameters for FX turn off LSQA, SWA, ALLNUC, GRS, XCFAS, and XESDATA and turn on NODEFAULT and RGN parameters. This option closely mimics the output that was produced by the now obsolete Fast dump option.

**N:** Use site default SDUMP parameters.

**blank:** Default. Use site default.

3. Press the END (PF3) key on the Region Dump Profile screen to save your changes, or enter CANCEL to erase them.
4. If you added or changed a profile name, update the CICS region configurations for any CICS region that uses the profile. See “Configuring CICS Regions” on page 18-2 for more information.
5. If you need to specify a dataset naming pattern because of your specific requirements, continue with “Specifying a Dataset Naming Pattern” on page 18-14.

## Specifying a Dataset Naming Pattern

You may have to modify the Region Dump Dataset Information screen. This screen is used to specify a dataset naming pattern for region dump datasets allocated by CICS Abend-AID/FX. You need to specify a pattern if:

- You entered **USER** (SDUMP to a user-defined dataset) in the Dump Type field for any of your region dump profile statements. The dataset naming pattern you specify is used when CICS Abend-AID/FX allocates user SDUMP datasets.

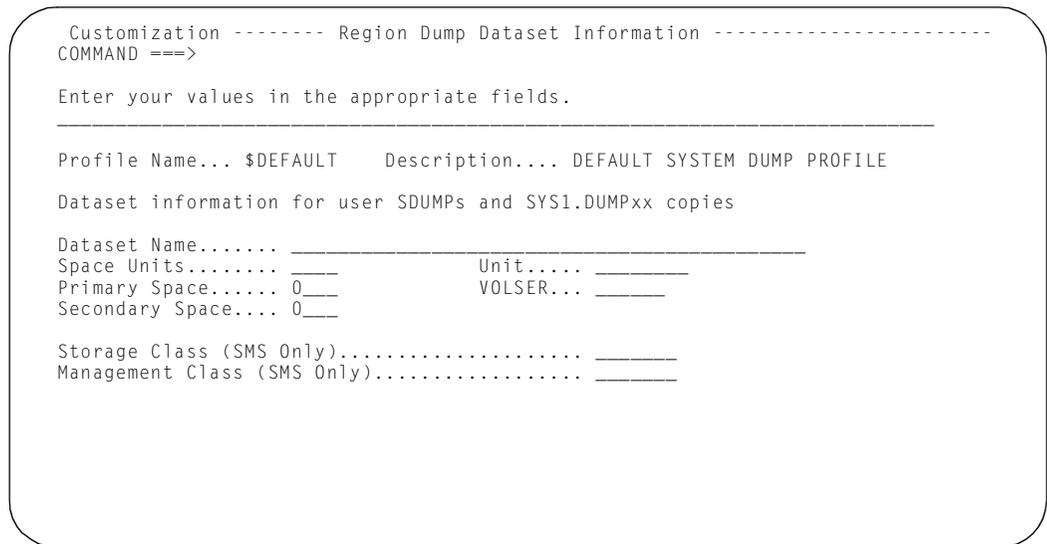
- You entered **Y** in the Copy SYS1.DUMP field. CICS Abend-AID/FX allocates a dataset name using this pattern when it copies dumps from a SYS1.DUMPxx dataset.

**Note:** If the SYS1.DUMPxx dataset copy fails, CICS Abend-AID/FX writes an error message that displays when you enter the **I (INFO)** line command next to the entry in the CICS Abend-AID/FX Directory. You can also access this information using the **INFO** primary command on any CICS Abend-AID/FX screen.

1. To specify a naming pattern for these datasets, place the cursor on the tab-selectable **DATASET** field on the Region Dump Profile screen, and press **Enter**. The Region Dump Dataset Information screen, shown in Figure 18-8, is displayed.

**Note:** There is only one Region Dump Dataset Information screen per region dump capture profile, so the pattern you specify here is used for all SDUMPs to a user-defined dataset or SYS1.DUMPxx copies required by this profile.

**Figure 18-8.** Region Dump Dataset Information Screen



2. On the Region Dump Dataset Information screen, specify the naming pattern and attributes for the region dump datasets. Press the **HELP (PF1)** key on any field for specific information.

The Region Dump Dataset Information screen displays the following input fields:

**Dataset Name**

Specifies the dataset naming pattern. You have three choices in the type of dataset name you specify. Valid types of dataset names include:

- A GDG (Generation Data Group). Make sure that a GDG index is created and that you specify **(+1)** after the dataset name.
- A partially qualified dataset name, using the CICS Abend-AID/FX symbolic qualifiers. The symbolic qualifiers available are:

**/JOBNAME:** Job name of the CICS region

**Note:** You must install the SVC 51 interface to use the /JOBNAME symbolic qualifier. Refer to “SVC 51 Interface” on page 13-7 for information about installing the SVC 51 interface.

- /APPLID:** APPLID of the CICS region
- /DATE:** Dump date, in Julian date format (YYDDD). When the dataset is allocated, the letter **D** is inserted before the date (that is, DYYDDD).
- /TIME:** Dump time, in HHMMSS format (hours, minutes, seconds). When the dataset is allocated, the letter **T** is inserted before the time (that is, THHMMSS).

If you use any of the symbolic qualifiers, the slash (/) is required. Separate them by using a period (.). For example:

```
SYS2.CICS./JOBNAME./DATE./TIME
```

You can combine symbolic qualifiers with hard-coded qualifiers. In the above example, there are two hard-coded qualifiers — SYS2 and CICS. The actual job name, date, and time values are substituted for the symbolic qualifiers when the dataset is allocated. For example, the dataset above can be allocated as follows:

```
SYS2.CICS.CICSPROD.D94188.T094207
```

**Notes:**

- a. You cannot use a symbolic qualifier as the first qualifier of a dataset name.
  - b. If you use job name and/or APPLID as qualifiers and CICS Abend-AID/FX is unable to determine this information, UNKNOWN is substituted in the dataset name for the appropriate qualifier.
- A fully qualified dataset name. This type is *not* recommended because dumps copied or written to this single dataset can be easily overlaid.

**Space Units**

Specify the unit of space allocation to be used for this dataset. Valid values are:

- BLKS:** Blocks
- CYLS:** Cylinders
- RECS:** Records
- TRKS:** Tracks

**Unit**

Specifies the one- to eight-character esoteric DASD unit name on which to allocate the dump dataset. This field is required for non-SMS datasets.

**Primary Space**

Specifies the primary space allocation for this dataset.

**Note:** For dumps taken to a user-defined dataset, the space allocation must be contiguous. Only the primary allocation is used.

**VOLSER**

Specifies the volume serial number on which to allocate the dump dataset. If you do not specify a volume serial number, the dataset is allocated based only on the unit you specify.

**Secondary Space**

Specifies the secondary space allocation for this dataset. This field is not valid for dumps taken to user-defined datasets.

**Storage Class (SMS Only)**

Specifies the SMS storage class for this dataset allocation.

**Management Class (SMS Only)**

Specifies the SMS management class for this dataset allocation.

3. When you have made your changes, press the END (PF3) key to save your changes and return to the Region Dump Profile screen, or enter CANCEL to erase them.

## Modifying Permanent Transaction Dump Profiles

Both transaction dump profiles and transaction dump global options (described in “Modifying Transaction Dump Global Options” on page 18-24) control the actions that CICS Abend-AID/FX takes when transaction abends occur. Transaction dump global options specify actions that are taken for *all* transaction abends in the CICS region. Transaction dump profiles can override certain transaction dump global option specifications for individual abend codes, transactions, programs, terminals, network names, operator IDs, user IDs, APPLIDs, or MVS SYSIDs, so that you have more control over exception conditions in your CICS regions.

There are two types of transaction dump profiles — permanent and temporary. Permanent transaction dump profiles are loaded by the CICS regions to which they are assigned when CICS Abend-AID/FX is initiated in the CICS region. Permanent transaction dump profiles are created and maintained using the online customization procedure, and are described below.

Temporary transaction dump profiles override any specifications made in permanent transaction dump profiles. They are created and maintained from CICS using a CICS transaction, and are active only for the life of the CICS region in which they are created, or until you stop CICS Abend-AID/FX. Temporary transaction dump profiles are described in the *CICS Abend-AID/FX User's Guide*.

Specifications made in the transaction dump profiles (both temporary and permanent) control:

- Suppressing duplicate dumps.
- Capturing an IBM dump in addition to, or instead of, a CICS Abend-AID/FX dump. You can also choose to just write a directory entry for the dump, but not capture it.
- Capturing the last 3270 screen image associated with the abend.
- The extent of the CICS trace captured (complete, abending task only, or none).

These specifications can be made using a variety of criteria, including abend code, program name, transaction, terminal, NETNAME, operator ID, user ID, APPLID, MVS SYSID, or a combination of criteria.

**Notes:**

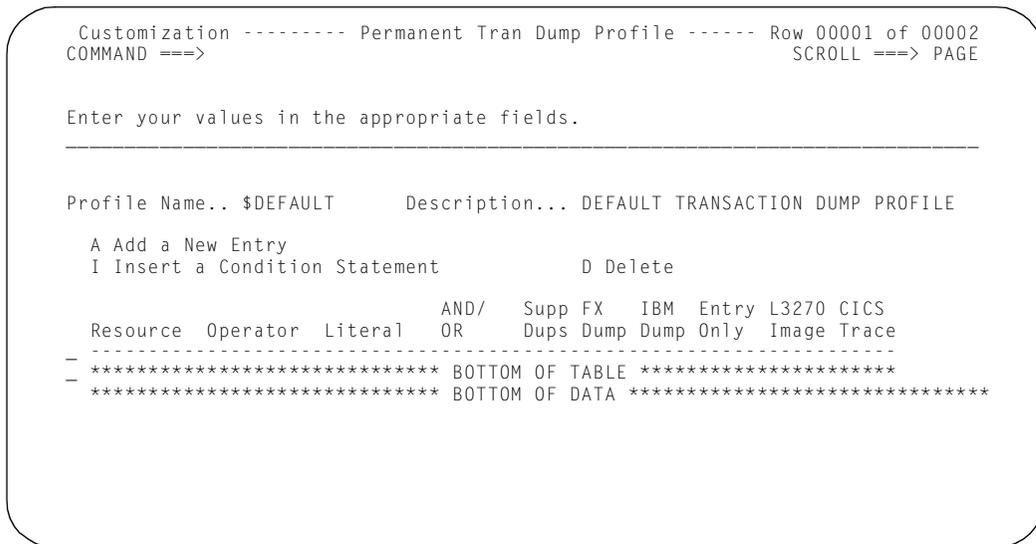
1. Several of the actions controlled by transaction dump profiles have corresponding transaction dump global options. If a transaction dump profile option contradicts a transaction dump global option, the transaction dump profile option overrides the transaction dump global option.

2. Specifying No in the IBM Dump field of the transaction dump profile does not take effect for the following situations:
  - If CICS Abend-AID/FX is reinitiated to process a transaction abend for a task for which CICS Abend-AID/FX is already processing a transaction abend.
  - If a FORCEPURGE command is used against a transaction abend for which CICS Abend-AID/FX is currently processing a transaction abend.

In both of these situations, an IBM dump is produced because CICS Abend-AID/FX may not process the transaction abend or the CICS Abend-AID/FX transaction entry may be incomplete.

A sample Permanent Tran Dump Profile screen is shown in Figure 18-9. The default transaction dump profile entry that you'll see when you initially access the screen is blank. This means that, by default, nothing is considered an exception condition, and transaction dumps are processed for all abends according to the options specified in the transaction dump global options member assigned to each CICS region.

**Figure 18-9.** Permanent Tran Dump Profile Screen



A distinction is made between a profile condition statement and a profile entry. A profile *condition statement* is a single line in the scrollable area of the Permanent Tran Dump Profile screen. A profile *entry* is one or more condition statements that comprise a single action (entry). Profile entries are delimited by a dashed line.

When multiple condition statements are grouped together in a single entry, include a comparison operator (AND or OR) on the first statement in the entry. The comparison operator is propagated to *all* statements in the entry, so you cannot mix AND and OR comparisons within an entry. AND is the default comparison operator.

Further, the Supp(ress) Dups, FX Dump, IBM Dump, Entry Only, L3270 Image, and CICS Trace options apply to *all* condition statements within a single profile entry, but are specified only on the *first* condition statement in the entry. The Permanent Tran Dump Profile screen supports a combined total of 175 profile entries and condition statements.

**Notes:**

1. CICS Abend-AID/FX must be stopped and restarted in a CICS region for any changes to a permanent transaction dump profile to take effect.

2. The default transaction dump profile entry is blank. This means that, by default, nothing is considered an exception condition, and transaction dumps are processed for all abends according to the options specified in the transaction dump global options member assigned to each CICS region.
3. The permanent transaction dump profile is processed in a top-down order. A transaction dump is processed according to the first statement it matches in the profile member. Keep this in mind when you are inserting and replicating statements, or if you are using the wildcard (\*) character.

To modify a permanent transaction dump profile member, complete the following procedure:

1. Display the Permanent Tran Dump Profile screen, shown in Figure 18-9 on page 18-18 by selecting or replicating a transaction profile member name on the Dump Capture Profiles screen (Figure 18-6 on page 18-10).
2. If you displayed the Permanent Tran Dump Profile screen by replicating a member on the Dump Capture Profiles screen, enter a unique name in the Profile Name field and overwrite the Description field with a unique name and description. Press the HELP (PF1) key on any field for specific information.
3. Create or modify condition statements or entries, as follows:
  - To modify existing information, simply type over the information with the new values, then press Enter. The screen is refreshed with your new values.
  - To create a new profile *condition statement*:
    - a. Enter **I** next to the statement after which the new statement is to be inserted, and then press Enter. The Permanent Tran Dump Profile screen is refreshed and displays the inserted line.

**Note:** Make sure that you are inserting the statement into an appropriate place, taking into consideration that the statements are processed in a top-down order from the table. There is no line command to move a statement, so if you put a statement in the wrong place, you must delete it and then insert it in the correct place.

- b. Overtyping the inserted line with the new values. Press the HELP (PF1) key on any field for specific information.

Repeat this process to add an additional condition statement to the entry. Remember that the AND or OR comparison operator and the dump processing options (Supp(ress) Dups, FX Dump, and so forth) are specified only on the first condition statement of a multiple-condition statement entry.

- To create a new profile *entry*:
  - a. Enter **A** next to the line after which you want the new entry inserted, and then press Enter. The Permanent Tran Dump Profile screen is refreshed and displays the inserted line, showing the Compuware default values.

**Note:** Make sure that you are inserting the entry into an appropriate place, taking into consideration that the entries are processed in a top-down order from the table. There is no line command to move an entry, so if you put an entry in the wrong place, you must delete it and then add it in the correct place.

- b. Overtyping the inserted line with the new values. Press the HELP (PF1) key on any field for specific information.

- c. To add additional condition statements to an entry, enter the I line command next to the condition statement after which the new statement is to be added. Overtyping the values displayed with the new values. Remember that the AND or OR comparison operator and the dump processing options (Supp(ress) Dups, FX Dump, and so forth) are specified only on the first condition statement of a multiple-condition statement entry.

The Permanent Tran Dump Profile screen displays the following input fields:

#### Resource

Specifies the item to be tested to determine whether these dump options apply. The item specified is tested against the literal each time an abend occurs, and if the condition is met, then the options specified are taken. Valid values are:

<b>ABCODE:</b>	CICS transaction abend code (ASRA, AEIM, etc.).
<b>APPLID:</b>	APPLID of the system on which the transaction executed.
<b>NETNAME:</b>	Logical unit name of the terminal in the VTAM network.
<b>OPID:</b>	Three-character OPID from the TCTTE.
<b>PROGRAM:</b>	Program ID in control at abend.
<b>SYSID:</b>	Name of the local CICS on which the transaction executed.
<b>TERM:</b>	Terminal ID at abend.
<b>TRAN:</b>	CICS transaction code at abend.
<b>USERID:</b>	User ID signed onto the terminal.

#### Operator

Specifies the Boolean operator to be used to evaluate the resource for this dump entry. Valid values are:

<b>EQ:</b>	Resource equal to literal.
<b>NE:</b>	Resource not equal to literal.
<b>LT:</b>	Resource less than literal.
<b>GT:</b>	Resource greater than literal.
<b>LE:</b>	Resource less than or equal to literal.
<b>GE:</b>	Resource greater than or equal to literal.

#### Literal

Specifies the alphanumeric field to be used in the comparison to the resource to determine whether to apply these options. The string is automatically padded to the right with blanks to achieve the comparison length implied by the resource parameter. You can specify a generic value by using a single asterisk (\*) as the last character, in which case the length of the comparison will be the string length without the asterisk.

The asterisk can be used only at the end of a partial field value, and not at the beginning or in the middle. Or, it can be used in place of the resource value, to indicate that *all* values qualify for the condition set. For example, ASR\* could be used with ABCODE to mean any ASRx abend code.

#### AND/OR

Specifies the conditional operator for this dump entry. Valid values are:

**AND:** Default. All comparisons must match.

**OR:** Any comparison can match.

#### Supp Dups

Specifies whether to suppress duplicate dumps (or directory entries when Entry Only is set to Y) for reports which meet the criteria. The original dump is kept on the transaction database, but all subsequent duplicate dumps are suppressed until the duplicate dump expiration interval expires. History information for the 100 most recent duplicates is kept when this field is set to Y, A, or S. Valid values are:

**Y:** Default. Suppress all duplicate dumps.

**N:** Do not suppress duplicate dumps.

**A:** Suppress only duplicate ABEND dumps.

**S:** Suppress only duplicate SNAP dumps issued by EXEC CICS DUMP commands.

#### Notes:

- a. A duplicate transaction dump is one that has the same abend code, abending program name, abending program offset and transaction ID. You can also include APPLID and/or job name as criteria for identifying duplicate dumps if you set their corresponding global options to Y.
- b. You can specify an expiration interval after which a new dump will be taken by specifying the DUPEXPIR transaction dump global option as described in “Modifying Transaction Dump Global Options” on page 18-24.
- c. CICS Abend-AID/FX continues to suppress duplicates until you delete the original dump, or it is automatically deleted by CICS Abend-AID/FX if the transaction database fills, or the expiration interval expires.
- d. Refer to “Duplicate Dump Suppression Processing” on page 18-33 for a more detailed description of the CICS Abend-AID/FX duplicate dump suppression process.

#### FX Dump

Specifies whether to take a CICS Abend-AID/FX dump. Valid values are:

**Y:** CICS Abend-AID/FX dumps are taken.

**N:** CICS Abend-AID/FX dumps are not taken.

#### IBM Dump

Specifies whether to take an IBM dump. Valid values are:

**Y:** IBM transaction dumps are taken.

**N:** IBM transaction dumps are not taken.

**Entry Only**

Specifies whether to bypass the CICS Abend-AID/FX dump and only make an entry for the dump in the CICS Abend-AID/FX directory. Valid values are:

- Y:** CICS Abend-AID/FX makes an entry for this abend in the directory, but a CICS Abend-AID/FX dump is not taken. This option implies that N is also specified for the FX DUMP and L3270 Image options, and NONE for the CICS Trace option.
- N:** Default. Do not write only a directory entry for this abend. This value is ignored if the FX Dump option is set to Y, which is the default.

**L3270 Image**

Specifies whether to capture the last 3270 screen displayed to the user. Valid values are:

- Y:** The last 3270 screen is captured if available.
- N:** The last 3270 screen is not captured.

**Notes:**

- a. Capturing the L3270 image significantly increases the amount of time and resources required to capture a transaction dump.
- b. If you specify the DATASPACE=ALL TDCAS configuration parameter, you should specify L3270=N.
- c. CICS Abend-AID/FX issues a READ BUFFER to capture the last 3270 screen image. For terminal definitions indicating extended data stream support, an extended READ BUFFER is issued. If the terminal does not support extended data streams, a recursive abend results.

For terminal definitions indicating no extended data stream support, a normal READ BUFFER is issued. If the terminal does not support extended data streams, the last 3270 image captured by CICS Abend-AID/FX does not contain the extended attributes, such as reverse video.

Verify that the EXTENDEDDES value in the TCT definition reflects the correct terminal data stream capabilities.

**CICS Trace**

Specifies the extent of CICS trace entries to capture when processing an abend. Valid values are:

- NONE:** No CICS trace entries are captured.
- TASK:** Only CICS trace entries for the abending task are captured.
- FULL:** All CICS trace entries are captured.

**Notes:**

- a. The FULL option is not recommended, especially for CICS release 4.1 and more current, because of the substantial DASD overhead to store the entries, and CPU cycles to process the entries.

If you specify FULL, review the information in "Managing the Dump Information File" on page 1-5.

- b. If you specify TRACE=FULL and DATASPACE=NO, trace entries are written last during dump capture. During the intervening time between abend and CICS Abend-AID/FX transaction dump capture completion, the trace table is still being updated by CICS, and important entries may be overwritten by the time CICS Abend-AID/FX captures the trace table. If you specify TRACE=TASK and DATASPACE=PARTIAL or ALL, trace entries are captured first during CICS Abend-AID/FX processing, avoiding this problem.
- 4. Press the END (PF3) key on the Permanent Tran Dump Profile screen to save your changes, or enter CANCEL to erase them.
- 5. If you added or changed a profile name, update the CICS region configurations for any CICS region that uses the profile. See “Configuring CICS Regions” on page 18-2 for more information.

**Note:** Remember that any changes you’ve made to permanent transaction dump profile members do not take effect until CICS Abend-AID/FX is stopped and restarted in the CICS region.

### Example

The sample Permanent Tran Dump Profile screen in Figure 18-10 shows three profile entries: the first with two condition statements, and the second and third with one condition statement each.

**Figure 18-10.** Permanent Tran Dump Profile Screen

```

Customization ----- Permanent Tran Dump Profile ----- Row 00001 of 00009
COMMAND ==>                                           SCROLL ==> PAGE

Enter your values in the appropriate fields.

-----
Profile Name.. $DEFAULT      Description... DEFAULT TRANSACTION DUMP PROFILE

A Add a New Entry
I Insert a Condition Statement          D Delete

Resource  Operator  Literal  AND/  Supp  FX  IBM  Entry  L3270  CICS
-----  -  -  -  -  -  -  -  -  -  -
- ABCODE   EQ       ASRA    AND   Y    Y   N   N     Y     NONE
- PROGRAM  NE       MYPGM
-----
- PROGRAM  EQ       MYPGM          N   Y   Y   N     N     TASK
-----
- ABCODE   EQ       AEI*          Y   Y   N   N     Y     FULL
-----
- ***** BOTTOM OF TABLE *****
- ***** BOTTOM OF DATA *****
    
```

The first entry in the profile is:

```

(Implied IF) ABCODE EQ ASRA AND
              PROGRAM NE MYPGM
    
```

This entry means that **IF** CICS is about to take an ASRA dump for any program except one called MYPGM, (because the condition specifies PROGRAM is not equal to MYPGM), **THEN** CICS Abend-AID/FX is to do the following:

- Suppress the dump if it is a duplicate of one that has already been processed by CICS Abend-AID/FX.

**Note:** Refer to “Duplicate Dump Suppression Processing” on page 18-33 for a more detailed description of the CICS Abend-AID/FX duplicate dump suppression process.

- Capture dump information and perform CICS Abend-AID/FX analysis.
- Do not take an IBM dump.
- Do not write only a directory entry to the CICS Abend-AID/FX Directory (without capturing the dump information).

**Note:** Because the FX Dump is set to Y, this option would be ignored.

- Capture the last 3270 screen image.
- Do not capture any trace table entries.

The other two condition statements indicate what actions are taken **IF** a program called MYPGM is going to take any kind of a dump, and **IF** any abend code that begins with AEI is about to be taken.

---

## Modifying Transaction Dump Global Options

Transaction dump global options control CICS Abend-AID/FX functionality in a CICS region on a global basis. The transaction dump global options are maintained in named members that you assign to CICS regions on the CICS Region Configuration screen (see “Configuring CICS Regions” on page 18-2).

Compuware supplies a default transaction dump global options member that provides recommended settings for the global options. The default settings should be sufficient for most sites.

To specify the transaction dump global options, complete the following procedure:

1. Display the Transaction Dump Global List screen, shown in Figure 18-11 on page 18-25, using one of two methods:
  - Tab to the Transaction Dump Global Options option on the Dump Capture and Processing Menu, and then press Enter.
  - Type `TRANGBL` or `=2.3` in the COMMAND (or OPTION) field on any *customization* screen and press Enter. You cannot use these fast-path commands unless you have accessed the customization facility.

Figure 18-11. Transaction Dump Global List Screen

```

Customization ----- Transaction Dump Global List ----- ROW 00001 OF 00001
COMMAND ==>                                           SCROLL ==> PAGE

S Select          R Replicate          D Delete

Global Options  Description
*****
- $DEFAULT      GLOBAL OPTIONS DEFAULT VALUES
*****
*****          BOTTOM OF DATA *****

```

The Transaction Dump Global List screen displays all transaction dump global options members. When you initially access the screen, a \$DEFAULT member is displayed. This member contains the default global option values supplied by Compuware, and can be used as a template for the members you create. If the Compuware defaults are acceptable to you, you don't have to do anything, and CICS Abend-AID/FX uses the default global options member.

2. If you want to create a new global options member, enter **R** next to an existing member. This replicates the definition of the existing member to use as a template for the new member. If you want to modify an existing profile member, enter **S** next to the member. For either selection, the Transaction Dump Global Options screen, shown in Figure 18-12 on page 18-26, displays.

To delete a global options member, enter **D** next to the member.

**Note:** You cannot directly rename a member. To rename a global options member, replicate an existing member, save it under a new name, and then delete the old member.

**Figure 18-12.** Transaction Dump Global Options Screen

```

Customization ----- Transaction Dump Global Options -----
COMMAND ==>

To change a displayed value, otype it.

-----
Global Name..... $DEFAULT      Description.. GLOBAL OPTIONS DEFAULT VALUES
AAMSG..... N          DCFAILMSG. N          NBRSLs.... 8
ABLIMIT... 5          DMPITRACE. N         QUERTRY... 3
ABRETCT... 10         DUPABLIMT. N         QUETIME... 100
ABRETRY... Y          DUPDMPS... N         SEGLN.... 64
ABTIME.... 120        DUPEXPIR.. 0         SLSDDN.... SLSF001
APPLID.... N          IGRMSGs... Y         SNAP..... ALL
BLLMAX.... 0          JOBNAME... N         TERMDEF... QUERY
CICSACCESS LOCAL      LESUPPORT. N         TRACE..... TASK
CONNECTION CCFX       L3270..... Y
DBTIME.... 240        L3270WAIT. 0

```

- Overtyping any values you want to change with the new values. If you accessed the Transaction Dump Global Options screen by replicating a member on the Transaction Dump Global List screen, enter a unique name in the Global Name field and overtype the Description field.

The Transaction Dump Global Options screen displays the following options. For more information about any option, including the valid values for the option, press the HELP (PF1) key on the option field.

#### AAMSG

Controls automatic online access to CICS Abend-AID/FX information by displaying a message at the user's terminal when an abend occurs. Valid values are:

- N:** Default. Do not display the message.
- Y:** Display the message.

**Note:** No message is displayed if the transaction abends in a remote CICS region.

#### ABLIMIT

Controls the number of transaction abends that can be concurrently processed by CICS Abend-AID/FX. Any transactions dumps occurring simultaneously that exceed this number will wait, and terminal users will see an ABEND WAIT. If this number is reached, CICS Abend-AID/FX checks the ABRETCT value to determine how long to wait before the requested dump is canceled.

During CICS Abend-AID/FX initialization in the CICS address space for each abend indicated by this parameter, 500 bytes above the 16 megabyte line and 400 bytes below the 16 megabyte line are allocated. This storage is freed when CICS Abend-AID/FX is turned off. Additionally for each abend, 6K is allocated above the line to capture the last 3270 screen. The last 3270 screen buffer is allocated and freed at the time the transaction dump is captured. Valid values are 1 through 100. The default is 5.

#### ABRETCT

Specifies the number of seconds to wait before canceling this CICS Abend-AID/FX dump if the ABLIMIT option is at the maximum. An IBM dump is taken instead. This option is ignored if the ABRETRY option is set to N. Valid values are 1 through 10. The default is 10.

#### ABRETRY

Specifies whether to retry CICS Abend-AID/FX processing when a new abend occurs and the ABLIMIT has been reached. If ABRETRY=N, ABRETCT is not used. Valid values are:

**Y:** Default. Retry processing.

**N:** Do not retry processing.

#### ABTIME

Specifies the time limit in wall clock seconds for data capture required for the CICS Abend-AID/FX transaction dump, excluding DB2 information. If this time limit is reached before data capture finishes, the CICS Abend-AID/FX report may be incomplete. If a DB2 abend is being processed, the DBTIME value is added to this value, and the sum is used as the total time limit for report data capture. Valid values are 10 through 300. The default is 120.

#### APPLID

Specifies whether the CICS APPLID is used as a criterion in duplicate dump suppression. Valid values are:

**Y:** APPLID is used as a criterion.

**N:** Default. APPLID is not used as a criterion.

The criteria in effect are saved with the dump. Therefore, changing the APPLID value may result in another dump being taken because that dump would not be considered a duplicate. Subsequent dumps matching the criteria are suppressed.

#### BLLMAX

Specifies a limit on the number of BLL cells, per program, that are to be written to the transaction database. If you enter **zero**, the limit of 9,999 is assumed.

Valid entries are 0 to 9999. The default is 0.

#### CICSACCESS

Specifies the type of access made to the viewing server from CICS when CICS Abend-AID/FX viewing is invoked using the AADF transaction. Valid values are:

**LOCAL:** Default. Cross-memory services are used to provide viewing access from the CICS region only if the CICS region and the viewing server region are running on the same MVS image.

**REMOTE:** LU 6.2 communication is used to provide viewing access from the CICS region. The CICS region and the viewing server region may be running on the same or on different MVS images.

If you select LOCAL viewing and it fails for some reason, a message is issued and REMOTE viewing is attempted if it has been configured. Earlier versions of CICS Abend-AID/FX provided only remote viewing. Local viewing is now recommended if the CICS region and the viewing server region run on the same MVS image because the configuration is much easier.

#### CONNECTION

Specifies the CICS APPC connection name used to communicate with the CICS Abend-AID/FX viewing server for CICS remote viewing. You must also define the connection ID to each CICS region from which you are using CICS remote viewing access, as described in “Step 3. Review CICS Transaction Dump Global Options” on page 6-7. Valid values are any one- to four-character name that is defined to CICS. The default is CCFX.

#### DBTIME

Specifies the time limit in wall clock seconds for capturing DB2 information. The time measured is elapsed time. This parameter imposes restrictions on the amount of time CICS Abend-AID/FX spends reading DB2 catalog tables. When this parameter is used, dump capture is terminated prematurely if the time limit is reached, and dump capture (including DB2) is not complete. Valid values are 1 through 1200. The default is 240.

#### DCFAILMSG

Specifies whether the message that states that dump capture has failed (TC4233) is displayed only in the FDBDLOG, or is displayed both in the FDBDLOG and on the system console. Valid values are:

**N:** Default. Display message TC4233 in the FDBDLOG only.

**Y:** Display message TC4233 in the FDBDLOG and also on the system console.

#### DMPITRACE

Specifies whether the internal trace buffers are written to the transaction database after the dump is processed. Valid values are:

**N:** Default. Do not dump the internal trace.

**Y:** Dump the internal trace.

#### DUPABLIMT

Specifies whether you want to have CICS Abend-AID/FX force duplicate dump suppression when the CICS region exceeds the limit of dumps being processed concurrently. This limit is set in the ABLIMIT global option. Duplicate dump suppression is reset back to its original value when the number of dumps being processed concurrently falls below 50 percent of the ABLIMIT value. Valid values are:

**N:** Default. Do not allow CICS Abend-AID/FX to force duplicate dump suppression when the ABLIMIT is reached.

**Y:** Allow CICS Abend-AID/FX to force duplicate dump suppression when the ABLIMIT is reached.

**Note:** Refer to “DUPDMPS” on page 18-29 for more information about specifying duplicate dump suppression.

**DUPDMPS**

Indicates if dumps having the same abend code, program name, program offset, and transaction ID are suppressed. The original dump is kept on the transaction database, but all subsequent duplicate dumps are suppressed until the duplicate dump expiration interval expires. History information for the 100 most recent duplicates is kept when this field is set to Y, A, or S. Valid values are:

- Y:** Suppress all duplicate dumps.
- N:** Default. Do not suppress duplicate dumps.
- A:** Suppress only duplicate ABEND dumps.
- S:** Suppress only duplicate SNAP dumps issued by EXEC CICS DUMP commands.

**Notes:**

- a. APPLID and job name are used as criteria for identifying duplicate dumps only if their corresponding global options are set to Y at the time each dump is taken.
- b. You can specify an expiration interval after which a new dump will be taken by specifying the DUPEXPIR transaction dump global option as described below.
- c. CICS Abend-AID/FX continues to suppress duplicates until you delete the original dump, or it is automatically deleted by CICS Abend-AID/FX if the transaction database fills, or the expiration interval expires.
- d. Refer to “DUPABLIMT” on page 18-28 for information regarding dynamic duplicate dump suppression.
- e. Refer to “Duplicate Dump Suppression Processing” on page 18-33 for a more detailed description of the CICS Abend-AID/FX duplicate dump suppression process.

**DUPEXPIR**

Specifies the expiration interval in days of duplicate dumps. This parameter controls how many days are to elapse before a new dump is taken for a duplicate abend when duplicate dump suppression is active. If this value is set to 0, duplicate dumps never expire.

**Note:** A *day* expiration interval equals 24 hours, not a calendar day.

This option makes it easier to identify abends that are recurring while still suppressing most duplicates. For example, if this value is set to 7, duplicates are suppressed for a week. If a duplicate abend occurs after that time, one new dump is taken, and then suppression resumes for another week. History information for subsequent duplicates is reported with this new dump. Valid values are 0 through 999. The default is 0.

**IGNRMSG**

Specifies whether to write a message to CSMT destination if an abend is ignored by CICS Abend-AID/FX because, for example, it is a suppressed duplicate dump or because of some condition in the transaction dump capture profile. Valid values are:

- Y:** Default. Write the message.
- N:** Do not write the message.

**JOBNAME**

Specifies whether the CICS job name is used as a criterion in duplicate dump suppression. Valid values are:

- Y:** Job name is used as a criterion.
- N:** Default. Job name is not used as a criterion.

The criteria in effect are saved with the dump. Therefore, changing the JOBNAME value may result in another dump being taken because that dump would not be considered a duplicate. Subsequent dumps matching the criteria are suppressed.

**LESUPPORT**

Specifies whether CICS Abend-AID/FX provides optional features for CICS transaction abends executing under Language Environment (LE).

- N:** Default. Do not provide optional LE support.
- Y:** Optional LE support is provided.

This option controls the LE optional support for the entire CICS region. Refer to Chapter 12, “Language Environment Considerations” for information to help you determine when to set this option to Y.

Optional LE support provides the following features for a CICS transaction abend when executing under Language Environment:

- **Discard subsequent dumps:** Causes subsequent abends that are identical to a previous one with the same abend code, program, and offset for the same task number to be discarded. These abends are normally caused by LE, although they can be caused by application errors or by issuing the EXEC CICS DUMP command more than once from the same point in a program.

When you code the LE option TERMTHDACT(UADUMP) or use an LE abnormal termination exit to force a CICS transaction dump for software-raised conditions, duplicate dumps normally occur for the same instance of an abend for common CICS abends such as ASRA and AEIX. The LESUPPORT global option eliminates these duplicate reports even if you don't use the DUPDMPS global option or the Supp Dups transaction dump profile option to enable duplicate dump suppression. When these abends are discarded, no history information is maintained and duplicate abend counts are not increased.

- **Discard CESE trace entries:** When you code the LE option TERMTHDACT(UADUMP) to force a CICS transaction dump for software-raised conditions, LE dumps are normally written to the CESE transient data queue. These dumps create a large number of trace table entries that use a lot of space on the CICS Abend-AID/FX transaction databases, but are not needed by users. If you set the TRACE global option to TASK, the LESUPPORT option eliminates from the report many of the trace table entries related to writing the CESE entries.

**L3270**

Specifies whether CICS Abend-AID/FX captures the last 3270 screen image when a transaction abends at a terminal.

- Y:** Default. Capture the last 3270 screen image.
- N:** Do not capture the last 3270 screen image.

This option controls the last 3270 processing for the entire CICS region, but you can override it for individual conditions using permanent or temporary transaction dump profiles.

**Notes:**

- a. Capturing the L3270 image significantly increases the amount of time and resources required to capture a transaction dump.
- b. If you specify the DATASPACE=ALL TDCAS configuration parameter, you should specify L3270=N.
- c. CICS Abend-AID/FX issues a READ BUFFER to capture the last 3270 screen image. For terminal definitions indicating extended data stream support, an extended READ BUFFER is issued. If the terminal does not support extended data streams, a recursive abend results.

For terminal definitions indicating no extended data stream support, a normal READ BUFFER is issued. If the terminal does not support extended data streams, the last 3270 image captured by CICS Abend-AID/FX does not contain the extended attributes, such as reverse video.

Verify that the EXTENDEDDES value in the TCT definition reflects the correct terminal data stream capabilities.

**L3270WAIT**

Specifies the time limit in seconds that CICS Abend-AID/FX is to wait for an outstanding terminal wait before capturing the last 3270 screen image when a transaction abends at a terminal. CICS Abend-AID/FX checks once every second until either the write is complete or the time limit is reached. Valid entries are 0 to 120. The default is 0.

**NBRSL5**

Specifies the maximum number of source listing files to search for a program listing. Valid values are 1 through 88. The default is 8.

**QUERTRY**

Specifies the quiescing retry count, which is the number of times CICS Abend-AID/FX retries normal transaction dump processing shutdown before forcing shutdown. Valid values are 1 through 100. The default is 3.

**QUETIME**

Specifies the amount of time (HHMMSS) for CICS Abend-AID/FX to wait between retries before forcing CICS Abend-AID/FX transaction dump processing shutdown. Valid values are 0 through 30000. The default is 100 (one minute).

**SEGLN**

Specifies the maximum length in kilobytes of user storage segment(s) to be dumped. Valid values are 0 through 9999. The default is 64.

Entering 9999 results in the dumping of all available storage. Compuware does *not* recommend overriding the default. Overriding the default may result in the creation of very large transaction entries in the transaction database. The dump may take longer to process, and DDIO file usage will increase. Natural program abends, in particular, dump large amounts of storage that result in increased DASD usage. Refer to the Compuware Shared Services user/reference guide for DDIO file allocation size recommendations.

**SLSDDN**

Specifies a seven-character file ID for the first CICS Abend-AID/FX source listing file to substitute for SLSF001 (the default source listing file ID). CICS Abend-AID/FX determines additional source file ddnames by adding 1 to this ddname.

By default, the first file is SLSF001; the second file is SLSF002; the third file is SLSF003; and so on until the maximum number of files specified in NBRSL is reached.

Each source listing file must have either a separate DD statement in the startup JCL or an FCT entry.

If you want to share source listing files with XPEDITER/CICS, this option and XPEDITER/CICS's SLSDDN option must be set to the same value. The default is SLSF001 for both.

#### SNAP

Specifies whether CICS Abend-AID/FX intercepts embedded DUMP requests. Optionally, CICS Abend-AID/FX can also intercept any dump requests made by the command-level EXEC CICS DUMP or the macro-level DFHDC call. Valid values are:

**AB:** Generates a report only for dump requests made from a SETXIT or HANDLE ABEND routine. All other requests are bypassed by CICS Abend-AID/FX and passed on to IBM dump control. To issue an ABEND request from the EXIT program, an EXEC CICS DUMP or DFHDC macro must be issued before the ABEND request in order to obtain the correct information about the original abend.

**ALL:** Default. Generates a CICS Abend-AID/FX report for all dump requests.

**Note:** CICS Abend-AID/FX for DB2 users should specify SNAP=ALL so that CICS Abend-AID/FX output is produced for all non-zero SQL codes and DSNB transaction dumps.

**NO:** Passes all embedded dump requests to IBM dump control with no intervention and no CICS Abend-AID/FX output.

#### TERMDEF

Specifies the method used to determine whether a terminal supports extended data streams when CICS Abend-AID/FX captures the last 3270 screen image. If the terminal supports extended data streams, the last 3270 image is captured in extended data stream mode. Valid values are:

**QUERY:** Default. The 3270 device query function is used to determine whether the terminal supports extended data streams.

**ASSIGN:** The EXEC CICS ASSIGN command is used to determine whether the terminal supports extended data streams. Correct terminal characteristics must be coded in the TCTTE.

**NONE:** CICS Abend-AID/FX assumes the terminal does not support extended data streams.

#### TRACE

Specifies the scope of trace table entries captured by CICS Abend-AID/FX. Valid values are:

**TASK:** Default. Capture only the abending task's trace entries.

**FULL:** Capture trace entries for all tasks in the region.

**NONE:** Do not capture any trace entries.

**FAST:** Capture only the abending task's trace entries.

**Notes:**

- a. The FULL option is not recommended, especially for CICS release 4.1 and more current, because of the substantial DASD overhead to store the entries, and CPU cycles to process the entries.

If you specify FULL, review the information in “Managing the Dump Information File” on page 1-5.

- b. If you specify TRACE=FULL and DATASPACE=NO, trace entries are written last during dump capture. During the intervening time between abend and CICS Abend-AID/FX transaction dump capture completion, the trace table is still being updated by CICS, and important entries may be overwritten by the time CICS Abend-AID/FX captures the trace table. If you specify TRACE=TASK and DATASPACE=PARTIAL or ALL, trace entries are captured first during CICS Abend-AID/FX processing, avoiding this problem.

- c. The FAST option captures trace entries prior to identifying a transaction as a duplicate. Sites suppressing duplicates need to weigh the need for trace against additional processing being expended on duplicates.

Contact Compuware Technical Support if you need further assistance.

4. Press the END (PF3) key on the Transaction Dump Global Options screen to save your changes, or enter CANCEL to erase them.
5. If you added or changed a member name, update the CICS region configurations for any CICS region that uses the global options member. See “Configuring CICS Regions” on page 18-2 for more information.
6. You must stop and restart CICS Abend-AID/FX in each CICS region that uses this global options member for changes to take effect. Refer to Appendix B, “Supplied Transaction” for more information.

---

## Duplicate Dump Suppression Processing

When a transaction abend occurs, CICS Abend-AID/FX makes a request to Compuware Shared Services (CSS) to determine whether the dump should be suppressed, using the criteria described below. CSS does the following:

- Determines if duplicate dump suppression is enabled through the SUPP DUPS transaction dump profile option and/or the DUPDMPS transaction dump global option. If duplicate dump suppression is not enabled, a new dump is always taken.
- Determines if the abend is indeed a duplicate of an existing abend. If the entry does not already exist, CSS returns a dump number assigned to this new entry. If the entry is *not* a duplicate, a dump is taken.
- Determines if the abend is in the group of transaction database associated with the CICS region taking the abend. CICS Abend-AID/FX sites can assign specific transaction databases to be used by a CICS region. The set of transaction databases can be unique to the CICS region or can be shared by other CICS region. By default, a CICS region uses the entire set of transaction databases attached to the shared directory associated with the CICS region.

When the request is made to create a new dump entry and CSS has determined that the abend is a duplicate, CSS then determines if the existing entry exists in a transaction database that has been associated with the region experiencing the abend. If the existing abend is in a transaction database that is not in the set of transaction databases associated with the CICS region, then the abend is *not* suppressed and a new dump is taken. When this situation occurs, duplicate entries can exist in the same shared directory.

- Determines if the duplicate entry is *complete*. When a new entry is created, the entry is initially marked *incomplete*. During the request, if duplicate dump suppression is enabled and a duplicate entry exists that is already in the set of transaction databases configured for the CICS region experiencing the abend, CSS suppresses any duplicates and gathers history that they are occurring simultaneously to the first dump. Within a Compuware-specified time interval, a call is made to CSS to mark the abend entry *complete*. If it is, CSS continues to suppress duplicates. However, if after that time interval the first abend is *not* complete, CSS displays it as *incomplete* on the CICS Abend-AID/FX directory, and an IBM dump is produced. The next occurrence of the abend is *not* suppressed, and a new dump is taken and processed.
- Determines if the existing abend has expired. If CICS Abend-AID/FX specified an expiration date on the dump creation request, CSS determines if the already existing abend entry has expired. If the elapsed time exceeds the expiration interval, then the abend is *not* suppressed and a new dump is taken.
- Suppresses the abend. At this point, CSS has determined to suppress the duplicate abend and update the existing abend history information. CSS then returns to CICS Abend-AID/FX a code indicating that the abend is a duplicate and that it should not be processed.

## Chapter 19.

# Specifying Action Definitions

This chapter describes the procedure for customizing CICS Abend-AID/FX to enable CICS region and transaction dump notification, to execute a procedure when a transaction dump occurs, and to specify contact information regarding dumps.

---

## Creating Action Definitions

**Note:** With Release 4.1, the CICS Abend-AID/FX dump notification facility was enhanced and renamed the *action definition* facility. Any notification definitions you created with previous CICS Abend-AID/FX releases are still valid, and you can modify them to include contact information, as described in “Specifying Contact Information” on page 19-10. If you haven’t already created notification definitions or if you don’t modify the action definitions, CICS Abend-AID/FX takes no action to notify users regarding CICS region or transaction dumps, to execute a procedure for transaction dumps, or to provide contact information regarding dumps.

You can customize CICS Abend-AID/FX so that one or more TSO users are notified when a CICS region or transaction dump is taken. In addition, you can specify a procedure to be executed when a transaction dump occurs. CICS Abend-AID/FX submits a batch job that uses the MVS SEND command to notify TSO users. If your security system has the OPERCMDS class activated, you may need to authorize access to the SEND command.

### Notes:

1. The CICS Abend-AID/FX MVS post-dump exit is required to use TSO notification for *region* dumps taken to a SYS1.DUMPxx or an MVS version 5, OS/390, or z/OS automatically allocated dataset. “MVS Post-Dump Exit” on page 13-4 describes installing the MVS post-dump exit. The MVS post-dump exit is *not* required to use notification for transaction dumps.
2. The CICS Abend-AID/FX SVC 51 interface is required to use TSO notification for *region* dumps taken to a user-defined SDUMP dataset. “SVC 51 Interface” on page 13-7 describes installing the SVC 51 interface. The SVC 51 interface is *not* required to use notification for transaction dumps.
3. CICS Abend-AID/FX module MSDMCS1D must reside in an authorized library on each MVS SYSID on which dumps are either taken or users receive notification of dumps. Copying module MSDMCS1D to authorized libraries is described in “Copying Module MSDMCS1D to an Authorized Library” on page 19-12.
4. CICS Abend-AID/FX uses a dynamically allocated internal reader in the Transaction dump capture address space (TDCAS) to perform TSO notifications for transaction dumps. If multiple dumps occur at the same time, multiple readers may be allocated. The number of readers allocated depends upon the number of CICS regions connected to the TDCAS and the number you specify for the ABLIMIT transaction dump global option (the default is 10). For a TDCAS that has 5 CICS regions connected and the ABLIMIT set to 10, up to 50 internal readers may be allocated at a given time.

To use the CICS Abend-AID/FX action definition facility, you must create a job card for *each* MVS SYSID on which dumps are either taken or users receive notification of dumps. A function is provided in the action definition facility where you can enter job cards.

Further, you must create entries that specify who is notified about transaction or region dumps. There are two screens provided in the action definition facility to create action definition entries — one for transaction dumps and one for region dumps. On each of these screens, the C (Contact) line command lets you access the Contact Information screen, where you can specify identifying information about a primary and secondary person that users can contact about the dump. Users access this information from the CICS Abend-AID/FX Directory when an abend occurs that matches the criteria specified in the action definition facility.

The action definition functions are options on the Action Definition Menu, which is accessed from the Customization Options menu, shown in Figure 19-1. Access the Customization Options menu as described in “Accessing the Customization Options Menu” on page 16-1.

**Figure 19-1.** Customization Options Menu

```
Customization ----- Customization Options -----  
COMMAND ==>  
  
    1  DEFAULTS Site Default Options  
    2  CAPTURE  Modify Dump Capture and Processing Options  
    3  ACTIONS  Notify Users and Execute Scripts
```

To display the Action Definition menu, shown in Figure 19-2, use one of two methods:

- Tab to the Notify Users and Execute Scripts option on the Customization Options menu, and then press Enter.
- Type **ACTIONS** or **=3** in the COMMAND (or OPTION) field on any *customization* screen and press Enter. You cannot use these fast-path commands unless you have accessed the customization facility.

Figure 19-2. Action Definition Menu

```

Customization ----- Action Definition Menu -----
OPTION ==>

      1  JOBCARD  Create Job Cards for Action Definitions
      2  ACTTRANS Transaction Dump Action Definitions
      3  ACTREGN  Region Dump Action Definitions
    
```

## Creating Job Cards for Action Definitions

Valid job cards must be provided for each MVS SYSID on which dumps are either taken or users receive notification of dumps. To create job cards for action definitions, complete the following procedure:

1. Display the Create Job Cards for Action Definitions screen, shown in Figure 19-3, using one of two methods:
  - Tab to the Create Job Cards for Action Definitions option on the Action Definition Menu, and then press Enter.
  - Type JOBCARD or =3.1 in the COMMAND (or OPTION) field on any *customization* screen and press Enter. You cannot use these fast-path commands unless you have accessed the customization facility.

Figure 19-3. Create Action Job Cards Screen

```

Customization ----- Create Action Job Cards ----- ROW 00001 OF 00001
COMMAND ==>                                           SCROLL ==> PAGE

You must create one job card for each SYSID on which dumps will be taken
and/or on which users will be notified that a dump has been taken.
-----

S Select      I Insert      R Replicate   D Delete

MVS SYSID
****
- $DEF
***** BOTTOM OF DATA *****
    
```

The Create Action Job Cards screen lists the names of all job cards that have been created. When you initially access this screen, \$DEF (default) is the only job card listed. You can use this sample job card as a template to create job cards for each MVS SYSID at your site on which dumps are either taken or users are notified of those dumps.

2. Use the I or R line command to insert a default job card definition or replicate an existing job card definition to use as a template. The Job Card Creation screen, shown in Figure 19-4, displays.

**Figure 19-4.** Job Card Creation Screen

```

Customization ----- Job Card Creation -----
COMMAND ==>

Type over the SYSID name and enter the job card statements below. JCL syntax
verification is not performed.
-----

MVS SYSID..... $DEF

Job Card for notification:

1... //JOBNAME JOB ('ACCOUNTING.INFO'),'PROGRAMMER.NAME',_____
2... //_____CLASS=A,MSGCLASS=A_____
3... //*_____
4... //*_____
5... //*_____
6... //*_____

```

Enter the MVS SYSID to which the job card applies in the MVS SYSID field. You must have a job card defined for each MVS SYSID on which dumps are either taken or users receive notification of dumps.

Enter a valid job card for the MVS SYSID. **No syntax verification is performed for the job card.**

You must include a JOBLIB card for the authorized library that contains CICS Abend-AID/FX module MSDMCS1D for this MVS system. This is not necessary if the module is in a system linklist library. See “Copying Module MSDMCS1D to an Authorized Library” on page 19-12 for more information about module MSDMCS1D.

3. Press the END (PF3) key to save your changes or type CANCEL to erase them.

## Creating Transaction Dump Action Definition Entries

Transaction dump action definition entries specify which TSO user or users are notified, what procedure is to be executed, and what contact information is provided when transaction dumps occur. The Transaction Action Definitions screen supports a maximum of 6,013 entries. To create transaction dump action definition entries, complete the following procedure:

1. Display the Transaction Action Definitions screen, shown in Figure 19-5, using one of two methods:
  - Tab to the Transaction Dump Action Definitions option on the Action Definition Menu, and then press Enter.



**MVS SYSID**

Specifies the MVS SYSID of the CICS region for which the user is to receive notifications.

**Abend Code**

Specifies the abend code of the failing transaction for which the user is to receive notifications.

**Tran**

Specifies the failing transaction identifier for which the user is to receive notifications.

**Program**

Specifies the failing program name for which the user is to receive notifications.

**TSO ID**

Specifies the TSO user ID to notify when a dump matches this notification entry.

**Note:** The TSO user ID and user-defined procedures are not related. In other words, the TSO user ID is not passed to the procedure.

**Proc Name**

Specifies the name of a user-defined procedure to be executed when an abend occurs.

If you specify a Proc Name, the specified procedure, located in a system PROCLIB, is executed when the notification criteria are matched. A parameter list containing information about the abend is generated as a part of the execute statement. Members CCATRANA and CCATRANC in the CICS Abend-AID/FX installation sample library (TKFXSAMP) contain the Assembler and COBOL layouts for this parameter list.

Use the symbolic parameter INFO to specify parameter data in your procedure.

**Note:** The TSO user ID and user-defined procedures are not related. In other words, the TSO user ID is not passed to the procedure.

**Remote SYSID**

Specifies the name of the job card for a remote MVS SYSID. This field is required to notify a user who is located on a different system from the one where the abend occurred.

If the TSO user is not on the same MVS SYSID as the CICS region for which the indicated dumps are taken, specify the MVS SYSID to which the TSO user is logged on in the Remote SYSID field. You should have created this job card for the remote SYSID as described in "Creating Job Cards for Action Definitions" on page 19-3. If the TSO user is on the same MVS SYSID as the CICS region, leave the Remote SYSID field blank.

**Notify Dups**

Specifies whether to notify the user of duplicate dumps. Valid values are:

**N:** Default. Do not notify regarding duplicate dumps.

**Y:** Notify regarding duplicate dumps.



## Creating Region Dump Action Definition Entries

Region dump action definition entries specify which TSO user or users are notified and what contact information is provided when region dumps occur. The Region Action Definitions screen supports a maximum of 8,298 entries.

**Notes:**

1. The CICS Abend-AID/FX MVS post-dump exit is required to use TSO notification for *region* dumps taken to a SYS1.DUMPxx or an MVS version 5, OS/390, or z/OS automatically allocated dataset. “MVS Post-Dump Exit” on page 13-4 describes installing the MVS post-dump exit.
2. The CICS Abend-AID/FX SVC 51 interface is required to use TSO notification for *region* dumps taken to a user-defined SDUMP dataset. “SVC 51 Interface” on page 13-7 describes installing the SVC 51 interface.

To create region dump action definition entries, complete the following procedure:

1. Display the Region Action Definitions screen, shown in Figure 19-7, using one of two methods:
  - Tab to the Region Dump Action Definitions option on the Action Definition menu, and then press Enter.
  - Type ACTREGN or =3.3 in the COMMAND (or OPTION) field on any *customization* screen and press Enter. You cannot use these fast-path commands unless you have accessed the customization facility.

**Figure 19-7.** Region Action Definitions Screen

```

Customization ----- Region Action Definitions ----- Row 00001 of 00001
COMMAND ==>                                           SCROLL ==> PAGE

Enter your values in the appropriate fields.
-----
I Insert      R Replicate      C Contact Information      D Delete
CICS Job     CICS      MVS      Abend      Logon      TSO ID      Remote
Name        APPLID    SYSID    Code       *         *         *
*****     *         *         *         *         *         *
*           *         *         *         N         *         *
-----
***** BOTTOM OF DATA *****
    
```

The Region Action Definitions screen initially displays the wildcard character (\*) in the CICS Job Name, CICS APPLID, MVS SYSID, and Abend Code fields. These fields are used to qualify the dumps for which you want notification.

2. Enter your configuration values in the appropriate columns.

**Notes:**

- a. A single asterisk (\*) can be used as a wildcard character to partially qualify any CICS job name, CICS APPLID, MVS SYSID, or abend code. An asterisk entered as a full qualifier means that the user indicated in the TSO ID field is notified of dumps for *all* matching job names, APPLIDs, and so forth.

- b. To notify multiple users of a single dump occurrence, create an action definition entry for each user.

The Region Action Definitions screen displays the following input fields.

**CICS Job Name**

Specifies the job name of the CICS region for which the user is to receive notifications.

**CICS APPLID**

Specifies the specific APPLID of the CICS region for which the user is to receive notifications.

**MVS SYSID**

Specifies the MVS SYSID of the CICS region for which the user is to receive notifications.

**Abend Code**

Specifies the abend code of the failing region for which the user is to receive notifications.

**Logon**

Specifies whether to add the LOGON parameter to the MVS SEND used for the notify request. Valid values are:

- N:** Default. Do not add the LOGON parameter to the SEND command. Notify the user only if he or she is logged onto the system at the time the dump is taken.
- Y:** Save the notification in the SYS1.BROADCAST dataset and notify the user the next time he or she logs onto the system.

The default value for the Logon field specifies that the notification is not saved in the SYS1.BROADCAST if the user is not logged onto TSO when the notification is sent.

**TSO ID**

Specifies the TSO user ID to notify when a dump matches this dump notification entry.

**Remote SYSID**

Specifies the name of the job card for a remote MVS SYSID. This field is required to notify a user who is located on a different system from the one where the abend occurred.

If the TSO user is not on the same MVS SYSID as the CICS region for which the indicated dumps are taken, specify the MVS SYSID to which the TSO user is logged on in the Remote SYSID field. You should have created this job card for the remote SYSID as described in “Creating Job Cards for Action Definitions” on page 19-3. If the TSO user is on the same MVS SYSID as the CICS region, leave the Remote SYSID field blank.

3. Press the END (PF3) key on the Region Action Definitions screen to save your changes, or type CANCEL to erase them.

## Example

Figure 19-8 shows three sample action definition entries for region dumps.



Figure 19-9. Contact Information Screen

```

Customization ----- Contact Information -----
COMMAND ==>

Enter contact information for this condition.  Display contact information for
abends matching this definition from the CICS Abend-AID/FX Directory.

-----

Contact Name..... _____
Phone Number..... _____
Email Address..... _____
Title..... _____
Department..... _____
Location..... _____
Back-up Name..... _____
Back-up Phone Number... _____
Back-up Email Address... _____
Special Instructions... _____
_____
_____
_____

```

The Contact Information screen displays the following input fields.

**Contact Name**

Name of the person that users can contact regarding this dump.

**Phone Number**

Phone number of the person that users can contact regarding this dump.

**Email Address**

E-mail address of the person that users can contact regarding this dump.

**Title**

Job title of the person that users can contact regarding this dump.

**Department**

Name of the department where the person works that users can contact regarding this dump.

**Location**

Location of the department where the person works that users can contact regarding this dump.

**Back-up Name**

Name of a secondary, alternate person that users can contact regarding this dump.

**Back-up Phone Number**

Phone number of the secondary, alternate person that users can contact regarding this dump.

**Back-up Email Address**

E-mail address of the secondary, alternate person that users can contact regarding this dump.

**Special Instructions**

Other information/comments regarding this dump that would be helpful to users.

---

## Copying Module MSDMCS1D to an Authorized Library

**Note:** A copy of MSDMCS1D is required on every MVS image on which you intend to use the remote notification function, but where the CICS Abend-AID/FX authorized load library (SKFXAUTH) is *not* accessible.

It is not required on systems where the CICS Abend-AID/FX authorized load library *is* accessible, because MSDMCS1D resides in the CICS Abend-AID/FX authorized library.

When you configure your action definitions, as described in “Creating Action Definitions” on page 19-1, you must create a job card for each MVS SYSID on which either dumps can be taken or users notified of those dumps. A JOBLIB DD card must be included for the authorized library containing module MSDMCS1D on that MVS system, unless the module is copied to an authorized system linklist library.

---

# Part 5. Utilities

Part 5 contains the following chapters that describe the CICS Abend-AID/FX utilities:

**Chapter 20, SVC 51 Interface Utility**

Chapter 20 describes the SVC interface installation utility used if you install the optional SVC 51 interface.

**Chapter 21, User-Defined Diagnostics**

Chapter 21 describes how to code text modules for site-specific program abends.

**Chapter 22, User-Defined DSECTs**

Chapter 22 describes the steps for using CICS Abend-AID/FX with user DSECT files.

**Chapter 23, Working with the Viewing Server Communication Driver**

Chapter 23 describes the following aspects of working with the viewing server communication driver:

- Allocating journal datasets and adding them to the viewing server JCL.
- Printing journal datasets.
- Using the console MODIFY command to change the operation of the communication driver.
- Specifying optional communication driver viewing server configuration parameters.



## Chapter 20.

# SVC 51 Interface Utility

This chapter describes the MSDMINST SVC 51 interface utility.

---

## SVC 51 Interface Installation Utility (MSDMINST)

The MSDMINST utility is used to start and stop the SVC 51 interface. You can control this utility by specifying parameter values using the PARM field of the execution statement. The JCL required to execute the MSDMINST utility is in member JCLINSTL in the CICS Abend-AID/FX installation sample library (TKFXSAMP). The MSDMINST utility is not LPA-eligible.

Executing MSDMINST without specifying a parameter invokes the default installation function, which installs the SVC 51 interface for all system users. Specify the appropriate parameter enclosed in single quotes. Only one parameter at a time can be entered. Messages generated from this utility appear in the job log.

To automatically install the SVC 51 interface after every system IPL, add a START command for JCLINSTL to SYS1.PARMLIB(COMMNDxx). You must modify JCLINSTL to be a procedure, and it must reside in a system PROC library.

### MSDMINST syntax

```
[ 'LIST' ]
[ 'STOP' ]
[ 'TEST,jobname...' ]
[ 'STOP,*' ]
[ 'AJOB,jobname...' ]
[ 'DJOB,jobname...' ]
```

## LIST

Print the status of SVC 51 interface installation, such as if it is installed, if it was dynamically installed, and what release of the SVC 51 interface is installed.

## STOP

Remove the dynamic SVC 51 interface from the system.

## TEST,jobname

Install the SVC 51 interface for all jobs that have a job name beginning with the string specified by jobname. A string of multiple job names separated by commas can be entered. Do not use special characters or wildcard characters in job name masks. A string of job names can be 1 to 95 characters. The current production CICS Abend-AID/FX does not need to be stopped and reinstalled to start the test SVC 51 interface. Examples of job names are:

- PARM='TEST,ABC'

All job names that begin with the characters ABC will activate the test SVC 51 interface. For example, job names ABC123, ABC, or ABCDE will activate the SVC 51 interface.

- PARM='TEST,ABC,FX111TST'

All job names that begin with the characters ABC, or jobs that have a job name of FX111TST will activate the test SVC 51 interface.

- PARM='TEST,ABC\*'

Wildcard characters such as the asterisk (\*) are not used by MSDMINST and are not valid job name characters. No job names will activate the SVC 51 interface in this example.

**Note:** To continue a string of multiple job names onto another statement, enclose the expression in parentheses. End each statement with a comma after a complete job name.

```
//FXINSTL EXEC PGM=MSDMINST,PARM=(TEST,ABC,DEF,GHI,
// XYZ)
```

## STOP,\*

Removes the dynamic SVC 51 interface that was installed with the TEST,jobname parameter.

## AJOB,jobname

Add the specified job name(s) to a currently active test CICS Abend-AID/FX SVC 51 interface.

## DJOB,jobname

Delete the specified job name(s) from a currently active test CICS Abend-AID/FX SVC 51 interface. (Use STOP,\* to stop the test CICS Abend-AID/FX SVC 51 interface and all job names.)

**Note:** If the load library containing MSDMINST and MSDMAAFX is authorized only because it is on the link list and not in the APF list, authorization is lost if the load library is accessed via a JOBLIB, STEPLIB, or SYSLIB DD statement.

If a STEPLIB DD statement is used, the specified library must be APF-authorized. If a SYSLIB DD statement is coded, the library named must be APF-authorized and contain the MSDMAAFX load module. If a SYSLIB DD statement is not coded, CICS Abend-AID/FX searches for the MSDMAAFX libraries, respectively. If a dump occurs while running the MSDMINST utility, contact CICS Abend-AID/FX Technical Support.

## Bypassing CICS Abend-AID/FX SVC 51 Interface Dump Processing

To temporarily bypass CICS Abend-AID/FX SVC 51 interface processing for a job, include a CICS Abend-AID/FX ignore DD statement (FXIGNR DD DUMMY) in the JCL for that job.

## Chapter 21.

# User-Defined Diagnostics

CICS Abend-AID/FX includes a facility for you to provide your own diagnostic text modules for transaction abends. This facility is designed to support transaction abend codes that are not normally recognized by CICS Abend-AID/FX, including those for applications developed in-house and vendor packages used at your site. The text you provide displays on the CICS Abend-AID/FX Diagnostic Summary when a transaction dump occurs for that abend code.

### Notes:

1. The user-defined diagnostic facility supports only transaction abend codes; it does not support region dumps.
2. The facility cannot be used to replace diagnostic text for standard abend codes recognized by CICS Abend-AID/FX.

---

## Adding New User-Defined Diagnostic Text

Adding user-defined diagnostic text is a two-step process that you must perform for each text module you want to add. The process involves:

1. Coding the text module.
2. Assembling, link-editing, loading the text module into the CICS Abend-AID/FX customization file.

These steps are described in detail in the following sections.

### Step 1. Code the Text Module

Installation sample library (TKFXSAMP) member DIAGSAMP contains the assembler macro definition used to create a user-defined diagnostic text module. The macro creates a complete diagnostic text module, including the necessary CSECT and END cards.

The macro statement at the bottom of the macro definition contains a sample diagnostic text. Modify the sample as follows:

- Ensure that the CODE parameter reflects the transaction abend code for which you are customizing the diagnostic text.
- Code the text of the diagnostic, containing 1—n text lines, with the following restrictions:
  - Each line must begin in column 16.
  - Each line can be a maximum of 54 characters long.
  - Enclose each text line in single quotation marks.
  - If you code multiple text lines, end each line to be continued with a comma, and place a continuation mark (shown as X in the example) in column 72.

## Step 2. Assemble and Link-Edit the Text Module

Installation sample library (TKFXSAMP) DIAGCRTE contains the JCL to assemble and link-edit the macro definition you coded in “Step 1. Code the Text Module” on page 21-1, and load the text module into the CICS Abend-AID/FX customization file. Review, modify, and submit this JCL. Ensure that:

- The SYSIN DD statement points to the sample diagnostic text macro definition that you created in “Step 1. Code the Text Module” on page 21-1.
- The NAME card at the end of the LINKCICS step reflects the name of the diagnostic module in the form CCAExxxx, where xxxx is the abend code with which this text is associated. You must use this naming convention.
- The FDBDCUST DD statement points to your CICS Abend-AID/FX customization file.
- The STEPLIB DD statement points to a concatenation of the Compuware base services/HCI nonauthorized load (SKMPLOAD) and CICS Abend-AID/FX nonauthorized load (SKFXLOAD) libraries, in that order.

---

## Considerations for XPEDITER/CICS

Review the following section if you are using Compuware XPEDITER/CICS.

### XPEDITER/CICS Considerations

If you are using XPEDITER/CICS, Compuware recommends that you complete the steps in the section “Install the XPEDITER/CICS Diagnostic Modules (Optional)” described in the XPEDITER/CICS installation guide. This procedure ensures that you receive detailed CICS Abend-AID/FX diagnostic information relevant to XPEDITER/CICS.

## Chapter 22.

# User-Defined DSECTS

CICS Abend-AID/FX supplies DSECT images for the CICS versions it supports. You can define additional DSECT images to CICS Abend-AID/FX using the user DSECT functions, including DSECTS for other third-party packages or MVS.

This chapter describes the following steps involved in supporting user-defined DSECTS:

- Allocating a user DSECT file
- Adding the user DSECT file to the viewing server JCL or procedure
- Creating DSECT images.

**Note:** You must use the MAPD command with the “USER” keyword to display user-defined DSECTS. For information about this command, refer to Chapter 18, “Primary Commands” in the *CICS Abend-AID/FX User's Guide*.

---

## Step 1. Allocate and Initialize the User DSECT File

The user DSECT file is a VSAM RRDS that contains the data required to format user-defined DSECT displays. It is allocated and formatted using the Compuware Shared Services (CSS) utility, CWDDSUTL, and is accessed using the CSS DDIO access method. You must allocate this file if you intend to define your own site-specific DSECT formats to CICS Abend-AID/FX. Installation sample library (TKFXSAMP) member USERALLC contains JCL that performs an IDCAMS DEFINE for the user DSECT file.

**Note:** You can allocate more than one user DSECT file, but each viewing server can access only one file.

To allocate the user DSECT file, review, modify, and submit USERALLC. Ensure that:

- You specify the user DSECT file name in three places in the JCL (twice on the IDCAMS DEFINE, and once for the ABNLDFIL DD statement).
- The STEPLIB DD statement points to the CSS load library (SLCXLOAD).

You can also change the size of the file, but Compuware strongly recommends that you do not change any other DEFINE parameters. Refer to the *Compuware Shared Services User/Reference Guide* for more information about DDIO files and the CWDDSUTL utility.

---

## Step 2. Modify the Viewing Server JCL

Add the following DD statement for the user DSECT file allocated in “Step 1. Allocate and Initialize the User DSECT File”:

```
//MSDDUSER DD DSN=user.dsect.dsn,DISP=SHR
```

---

## Step 3. Stop and Restart the Viewing Server

After you complete the two previous steps, you must stop and then restart the viewing server.

## Step 4. Creating DSECT Images

User DSECT images are created using the Compuware Shared Services (CSS) Assembler language processor. The CICS Abend-AID/FX installation sample library (TKFXSAMP) contains three sample members that illustrate how you can create DSECT images:

- USERMVSD: Defines DSECT images for MVS control blocks
- USERSAMP and USERDSCT: Create site-specific DSECT images.

### Defining MVS DSECT Images

Installation sample library (TKFXSAMP) member USERMVSD contains a sample procedure that executes the Assembler language processor to assemble and post-process the MVS task control block (TCB) and load the output into the user DSECT file. You can modify this sample and use it to define any MVS system DSECT to CICS Abend-AID/FX.

Before executing the USERMVSD PROC, make the following changes:

1. Change the DISK variable to specify an esoteric DASD unit name for temporary datasets.
2. Change the MACL variable to specify the system macro library that contains the MVS control block definitions. As distributed by IBM, this is SYS1.MACLIB.
3. Change the CSSL variable to the load library that contains the CSS Assembler language processor.
4. Change the USER variable to the user DSECT file in which the DSECT will be stored.
5. Change the PSTEP001.SYSIN DD \* input to the name of the member you want to assemble. Sample member USERMVSD contains IKJTTCB, the MVS TCB control block.
6. Change the value after the PROGRAM-NAME in the PSTEP002.CWPPRM0 DD \* statements to reflect the name by which you want this DSECT to be known to CICS Abend-AID/FX. This is the name you will use with the MAPD command to map storage into the DSECT format. Sample member USERMVSD uses TCB51.

#### Notes:

1. Compuware suggests you define a DSECT for each release of MVS you are running at your site, and that you name the DSECTs to include the release level for easy reference. For example, the sample calls the DSECT TCB51, for use with MVS 5.1. If you are also running MVS release 5.2, you can create a second DSECT called TCB52, so you have the correct versions of the control blocks available at all times.
2. The DSECT must include a DSECT card.
3. The PSTEP001 step ends with a return code of 4 if the END statement is missing.

For more information about the Assembler language processor, refer to the *Compuware Shared Services User/Reference Guide*.

### Creating Site-Specific DSECT Images

Installation sample library (TKFXSAMP) member USERSAMP contains a sample user DSECT, and installation sample library (TKFXSAMP) member USERDSCT contains a sample procedure that executes the Assembler language processor to assemble and post-process the sample and load the output into the user DSECT file.

Before executing the USERDSCT PROC, make the following changes:

1. Change the DISK variable to specify an esoteric DASD unit name for temporary datasets.

2. Change the SRCM variable to the member name containing the DSECT in the source library (as distributed, this points to the USERSAMP sample DSECT member in the installation sample library).
3. Change the SRCL variable to the library that contains the assembler DSECT source to be processed.
4. Change the MACL variable to the libraries that contain assembler macros or copy books required to assemble the DSECT.
5. Change the CSSL variable to the load library that contains the CSS Assembler language processor.
6. Change the USER variable to the user DSECT file in which the DSECT will be stored.
7. Change the MYDSECT program name to your DSECT name.

**Notes:**

1. The DSECT must include a DSECT card.
2. The PSTEP001 step ends with a return code of 4. Ignore this assembler warning for a missing end statement.

For more information about the Assembler language processor, refer to the *Compuware Shared Services User/Reference Guide*.



## Chapter 23.

# Working with the Viewing Server Communication Driver

The viewing server communication driver supports the communication between a viewing server and either the CICS or ISPF viewing access interface, and between CICS Abend-AID/FX viewing servers. The function provided by the communication driver is functionally similar to APPC/MVS.

The viewing server communication driver is enabled on a viewing server if you specify the `MVS_SUBSYSTEM` viewing server configuration parameter for the viewing server. This is a true MVS subsystem that handles task and address space termination to ensure proper session outage notification.

A standard CICS Abend-AID/FX viewing server configuration, as described in Chapter 7, “Viewing Server Configuration”, should prove sufficient for most CICS Abend-AID/FX customers. The information in this chapter is useful if you have additional requirements for the viewing server or problems with the communication driver. In both situations, work with Compuware Technical Support to address your particular issues.

This chapter describes the following aspects of working with the viewing server communication driver:

- Allocating journal datasets and adding them to the viewing server JCL.
- Using the console `MODIFY` command to change the operation of the communication driver.
- Specifying optional communication driver viewing server configuration parameters.

---

## Allocating and Assigning Journal Datasets to a Viewing Server

CICS Abend-AID/FX viewing servers do not run with journaling enabled by default. If you experience problems with the communication driver portion of a viewing server, Compuware Technical Support may instruct you to allocate journal datasets. Adding DD cards for the datasets to the viewing server JCL, then stopping and restarting the viewing server, enables journaling.

### Step 1. Allocate Journal Datasets

Member `JRNLLC` in the CICS Abend-AID/FX installation sample library (`TKFXSAMP`) contains sample IDCAMS `DEFINE` JCL to allocate a VSAM journal dataset. Before you run this JCL, review the dataset name. Compuware recommends that you follow the dataset naming convention you established for the viewing server when you defined the viewing server, and that the low-level qualifier of the dataset reflect the sequential number of the journal (for example, `JOURNAL1`).

You can have up to nine communication driver journal datasets per viewing server. The viewing server writes to a journal dataset until the dataset fills, and then begins writing to the next journal dataset. When each has been filled sequentially, the viewing server begins writing over the first dataset. For this reason, Compuware recommends that you allocate at least two journal datasets.

## Step 2. Update the Viewing Server Configuration Parameters

The viewing server parameter member must contain the following configuration parameter to enable writing journal records:

```
TP_JOURNAL_MASK=FFFFFFFFFFFFFFFF
```

The TP\_JOURNAL\_MASK viewing server configuration parameter is described in “Viewing Server Configuration Parameters for the Communication Driver” on page 23-4.

## Step 3. Modify the Viewing Server JCL

Add a DD statement to the viewing server JCL for *each* journal dataset you allocated. The DD statements are in the form:

```
//JOURNALx DD DSN=server.journal.dsn,DISP=SHR
```

The x in the ddname is the sequential number of the journal dataset. The following rules apply:

1. The first JOURNALx DD statement must be JOURNAL1.
2. Subsequent JOURNALx DD statements must increment the number (that is, JOURNAL2, JOURNAL3, and so forth).
3. You cannot skip numbers.

## Step 4. Stop and Restart the Viewing Server

After you complete the three previous steps, you must stop and then restart the viewing server. When the viewing server restarts, it begins journaling.

---

# Using the Viewing Server MODIFY Command with the Communication Driver

You can use an MVS MODIFY command to control the user of journal datasets, as well as to activate and deactivate the VTAM ACBs used by the viewing server.

## Modifying Journal Datasets

You can use an MVS MODIFY command to open, close, and swap journal datasets.

### Journal Dataset OPEN Command

The OPEN command directs the communication driver to allocate and open the next journal dataset and begin journaling.

The syntax of the OPEN command is:

```
►►F—jobname—, —OPEN————►►
```

**jobname**

The viewing server job name.

## Journal Dataset CLOSE Command

The CLOSE command directs the communication driver to close and deallocate the current journal dataset and refrain from any further journaling.

The syntax of the CLOSE command is:

```
▶▶F—jobname—, —CLOSE——▶▶
```

### **jobname**

The viewing server job name.

## Journal Dataset SWAP Command

The SWAP command directs the communication driver to close and deallocate the current journal dataset and allocate and open the next journal dataset.

The syntax of the SWAP command is:

```
▶▶F—jobname—, —SWAP——▶▶
```

### **jobname**

The viewing server job name.

## Controlling VTAM ACBs

You can use an MVS MODIFY command to activate and deactivate VTAM ACBs.

### ACTIVATE ACB Command

The ACTIVATE command directs the communication driver to start the specified VTAM ACB.

The syntax of the ACTIVATE command is:

```
▶▶F—jobname—, —ACTive—acbname——▶▶
```

### **jobname**

The viewing server job name.

### **acbname**

The name of the ACB to start.

### DEACTIVATE ACB Command

The DEACTIVATE command directs the communication driver to stop the specified VTAM ACB.

The syntax of the DEACTIVATE command is:

►F—*jobname*—, —DEACTive—*acbname*—◄

**jobname**

The viewing server job name.

**acbname**

The name of the ACB to stop.

---

## Viewing Server Configuration Parameters for the Communication Driver

The viewing server configuration parameters described below are in addition to those described in “Step 2. Specify the Viewing Server Configuration Parameters (\$12xxxx)” on page 7-5. These parameters control the communication driver component of the viewing server. They are documented separately because the default values for these parameters are usually adequate, and Compuware does not recommend changing them unless you are advised to do so by a Compuware CICS Abend-AID/FX technical support representative.

**TP\_ACB\_RETRY\_RATE=seconds**

Specifies the number of seconds between attempts to open a VTAM ACB name when an attempt fails. This value must be greater than the value specified for the TP\_CLEANUP\_RATE parameter, and must be a multiple of the value specified for that parameter.

Valid entries are 5 through 1440. The default is 30.

**TP\_CLEANUP\_RATE=seconds**

Specifies the number of seconds between main time interval processing events. Each time this duration elapses, the viewing server scans its control blocks looking for requests to clean up terminated conversations, destinations, and so forth. Therefore, if this value is too small, the viewing server incurs excessive overhead.

Valid entries are 10 through 1440. The default is 15.

**TP\_DYNAMIC\_SYSOUT=class**

Specifies the SYSOUT class used to write viewing server communication driver dumps in case of an error. The default value is \* (asterisk).

**TP\_JOURNAL\_MASK=mask**

Specifies exactly 16 hexadecimal digits (0–9, A–F), that represent the 8-byte mask used by the viewing server journal task to determine whether a given journal record is to be written. The default value is 0000000000000000 (16 hexadecimal zeros), which means that no journal records are written.

**Note:** If a problem occurs with the viewing server communication driver, specify FFFFFFFFFFFFFFFF for this parameter, then stop and restart the viewing server and re-create the problem to capture journal entries.

**TP\_MAX\_CONCURRENT\_CONVERSATIONS=number**

Specifies the maximum number of different conversations that this viewing server supports simultaneously. When this value is reached, additional requests to start new conversations are not allowed.

Valid entries are 1 through 32768. The default is 250.

**TP\_MAX\_CONCURRENT\_DESTINATIONS=number**

Specifies the maximum number of different destinations with which this viewing server maintains sessions. A destination equates to a partner LU. When this value is reached, additional requests to start new sessions are not allowed.

Valid entries are 1 through 32768. The default is 250.

**TP\_MAX\_CONCURRENT\_USER=number**

Specifies the maximum number of different users that can simultaneously communicate with this viewing server. This value represents the total number of users across all viewing server address spaces. When this value is reached, additional requests to register users in any region are not allowed.

Valid entries are 1 through 32768. The default is 64.

**TP\_MAX\_USER\_REGIONS=number**

Specifies the maximum number of MVS regions that can simultaneously communicate with this viewing server. When this value is reached, additional requests to register users in new regions are not allowed.

Valid entries are 1 through 32768. The default is 32.



---

# Part 6.

## Appendixes

Part 6 consists of the following four chapters:

### **Appendix A, Controlling the CICS Abend-AID/FX Viewing Server and TDCAS**

Appendix A describes how to start and stop a CICS Abend-AID/FX viewing server and transaction dump capture address space (TDCAS). It also explains how to display information about the viewing server and TDCAS.

### **Appendix B, Supplied Transaction**

Appendix B describes manually controlling the CICS Abend-AID/FX transaction and region dump interface components using the AAON transaction.

### **Appendix C, Site Configuration Examples**

Appendix C provides examples of CICS Abend-AID/FX configurations, illustrating the differences between using one CICS Abend-AID/FX viewing server and more than one viewing server.

### **Appendix D, User Abend Codes**

Appendix D lists the user abend codes that may occur at CICS Abend-AID/FX startup processing in the viewing server, TDCAS, or the CICS region and that are not preceded by an error message.



## Appendix A.

# Controlling the CICS Abend-AID/FX Viewing Server and TDCAS

This appendix describes starting and stopping CICS Abend-AID/FX viewing servers and transaction dump capture address spaces (TDCASs) and closing/reopening their FDBDLOG files. It also describes how to display information about a viewing server or TDCAS.

---

## Starting the Viewing Server or TDCAS

You can start a viewing server or transaction dump capture address space (TDCAS) in one of two ways, depending on the way you configured your viewing server or TDCAS JCL:

- Submit the viewing server or TDCAS job
- Start the PROC that initiates the viewing server or TDCAS.

If the viewing server or transaction dump capture address space was generated as a PROC, Compuware recommends that you add a START command for the viewing server or TDCAS to SYS1.PARMLIB(COMMNDxx) so that the viewing server or TDCAS is automatically started and available after a system IPL.

### Notes:

1. The transaction dump capture subsystem must be active before you can start the TDCAS.
2. If you run the viewing server or transaction dump capture address space as a job and a user is logged onto it when the viewing server or TDCAS stops or is shutdown, you may get one of the following messages:

```
IEF355A  INITIATOR TERMINATED, RESTART INITIATOR.
IEF352I  ADDRESS SPACE UNAVAILABLE.
```

This condition is normal and occurs because the viewing server or transaction dump capture address space is using cross-memory services. Running the viewing server or TDCAS as a started task avoids this condition.

---

## Displaying Information about a Viewing Server or TDCAS

To display general information about a viewing server or transaction dump capture address space, enter the **SERVINFO** command in the COMMAND (or OPTION) field on any CICS Abend-AID/FX screen and press Enter. The Server Information screen displays, listing users currently logged onto the viewing server or the user ID assigned to the CICS regions attached to the transaction dump capture address space, as well as CICS Abend-AID/FX release information.

## Stopping the Viewing Server or TDCAS

You can use three different commands to stop a viewing server or transaction dump capture address space. With each method, the viewing server or TDCAS waits at least 30 seconds before it terminates to allow current users to exit and for the transaction load to be closed down.

Viewing servers and transaction dump capture address spaces can be stopped using the following methods:

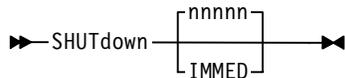
- CICS Abend-AID/FX SHUTDOWN command
- MVS STOP command
- MVS MODIFY command (refer to “Stopping the Viewing Server or TDCAS” on page A-3).

**Note:** The transaction dump capture subsystem cannot be shut down using these methods. Refer to “Stopping the Transaction Dump Capture Subsystem” on page 8-8 for more information.

### CICS Abend-AID/FX SHUTDOWN Command

To stop the viewing server or transaction dump capture address space from within CICS Abend-AID/FX, type **SHUT** in the COMMAND (or OPTION) field on any CICS Abend-AID/FX screen and press Enter. If the viewing server or TDCAS was started as a job, you will get either message IEF355A or IEF352I.

**Note:** For viewing servers only, you can restrict access to this command by coding the SHUTDOWN subparameter of the EXTERNAL\_SECURITY\_FUNCTION\_CHECK viewing server configuration parameter. Refer to “Parameters to Enable External Security for CICS Abend-AID/FX Viewing Servers” on page 7-9 for more information.



#### **nnnnn**

Timer value that specifies the number of seconds to elapse before the viewing server or transaction dump capture address space stops. The default is 30 seconds.

#### **IMMED**

Timer value that specifies that the viewing server or transaction dump capture address space is to stop immediately.

### MVS STOP Command

To stop CICS Abend-AID/FX from the MVS console, type **P *jobname*** where *jobname* is the job name of the viewing server or transaction dump capture address space.

## Closing and Reopening the FDBDLOG File

The CICS Abend-AID/FX LOGSPOOL command allows you to close and reopen the viewing server or TDCAS FDBDLOG file. The next time you issue the LOGSPOOL command, you can print, delete, or offload the closed file. Executing this command can reduce the amount of spool space consumed by the viewing server or TDCAS in continuous operation environments.

### Notes:

1. For viewing servers only, you can restrict access to this command by coding the LOGSPOOL subparameter of the EXTERNAL\_SECURITY\_FUNCTION\_CHECK viewing server configuration parameter. Refer to “Parameters to Enable External Security for CICS Abend-AID/FX Viewing Servers” on page 7-9 for more information.
2. To free the initial FDBDLOG file, stop the viewing server or TDCAS. Modify the FDBDLOG DD statement to indicate a specific SYSOUT class other than \* and to include the FREE=CLOSE parameter. Restart the viewing server or TDCAS.

►—LOGSpool—◄

## Viewing Server and TDCAS MODIFY Commands

The MVS MODIFY command allows you to perform the following functions:

- Stop the viewing server or transaction dump capture address space
- Import a dump
- Display viewing server or TDCAS information
- Close and reopen the viewing server or TDCAS FDBDLOG file.

### Stopping the Viewing Server or TDCAS

The MVS MODIFY command stops the viewing server or transaction dump capture address space from the MVS console.

The following syntax is valid for the MODIFY command:

►—F—*jobname*—, —SHUt—  

{
nnnn
}

[
IMMED
]
→

#### **jobname**

The viewing server or transaction dump capture address space job name.

#### **nnnn**

Timer value that specifies the number of seconds to elapse before the current user and transaction load close down. The default value is 60 seconds.

#### **IMMED**

Timer value that specifies that the viewing server or transaction dump capture address space is to stop immediately.

**Note:** In some situations, use of the IMMED parameter may prevent completion of normal shutdown processing and may cause an abend in the viewing server.

## Importing a Dump

**Note:** This keyword is valid for viewing servers only.

You can import dumps directly into a CICS Abend-AID/FX viewing server from the MVS console, using the MVS MODIFY command and its IMPORT keyword. Further, if the dump being imported contains one and only one CICS address space, CICS Abend-AID/FX automatically starts dump analysis once it has imported the dump if the Auto Import field for the region dump profile member that matches the dump is set to Y. Refer to “Modifying Region Dump Profiles” on page 18-11 for more information about the region dump profile.

**Note:** You can also use the CICS Abend-AID/FX Dataset Import function, the post-dump exit, or the SVC 51 interface to import dumps.

The following syntax is valid for the MODIFY command:

```
►► F—jobname—, —IMPORT— datasetname—►►
```

### jobname

The viewing server job name.

### datasetname

The name of the dataset to import into CICS Abend-AID/FX. You can specify the dataset name with or without quotation marks.

## Displaying Viewing Server or TDCAS Information

The MVS MODIFY command allows you to display information about the viewing server or transaction dump capture address space.

The following syntax is valid for the MODIFY command:

```
►► F—jobname—, —Display=— Users —►►
    |
    |—Storage—
    |—CB—
    |—Comm—
    |—Journal—
```

### jobname

The viewing server or transaction dump capture address space job name.

### Users

Displays all users logged onto the viewing server or the user ID assigned to the CICS regions attached to the transaction dump capture address space.

**Note:** The following parameters are valid for viewing servers only.

**Storage**

Displays information about current viewing server communication driver storage utilization.

**CB**

Displays information about viewing server communication driver control block utilization.

**Comm**

Displays viewing server communication driver status fields.

**Journal**

Displays viewing server communication driver journaling status.

## Closing and Reopening the FDBDLOG File

The MVS MODIFY command allows you to close and reopen the viewing server or TDCAS FDBDLOG file. The next time you issue the LOGSPOOL command, you can print, delete, or offload the closed file. Executing this command can reduce the amount of spool space consumed by the viewing server or TDCAS in continuous operation environments. You can also execute the MVS MODIFY command through an automated operations facility.

**Note:** To free the initial FDBDLOG file, stop the viewing server or TDCAS. Modify the FDBDLOG DD statement to indicate a specific SYSOUT class other than \* and to include the FREE=CLOSE parameter. Restart the viewing server or TDCAS.

The following syntax is valid for the MODIFY command:

►►F—*jobname*—, —LOGSpool—◄◄

**jobname**

The viewing server or transaction dump capture address space job name.



## Appendix B. Supplied Transaction

This appendix describes how to *manually* control transaction and region dump interfaces using the CICS AAON transaction supplied with CICS Abend-AID/FX. For information about how to *automatically* control CICS dump interfaces, refer to “Adding PLT Entries” on page 9-6.

**Note:** Before you can use the supplied transaction, you must have already defined to CICS the CICS Abend-AID/FX dump interface control program for the version of CICS you are using. This procedure is normally completed during installation, as described in “Step 2. Modify CICS Table Entries” on page 9-1.

---

### Controlling the Dump Interface Manually

To control the dump interface manually:

1. Display the AAON Transaction Options Menu, as shown in Figure 23-1, by typing AAON and pressing Enter from a cleared CICS screen.

**Figure 23-1.** AAON Transaction Options Menu

```

CICS Abend-AID/FX ----- AAON Transaction Options Menu -----
Option ==>

Tab-select an AAON option, or type the name of the option in the OPTION
field. Press PF3 to return to CICS.

  ON      Start transaction dump interface
  ONR     Start region dump interface
  ONRT    Start transaction and region dump interfaces
  OFF     Stop transaction dump interface
  OFFX    Cancel transaction dump interface
  OFFR    Stop region dump interface
  OFFRT   Stop transaction and region dump interfaces
  EXCP    Display temporary transaction dump capture profile
  DB2ON   Enable DB2 option
  DB2OFF  Disable DB2 option

Status:

CICS Applid..... H01AC011          Version..... 04.04.00
Transaction Dump Interface... STARTED    Viewing Server... CIMSCF01
Region Dump Interface..... STOPPED      Dump Capture AS.. FXTDCAS

```

The AAON Transaction Options Menu displays AAON options that start, stop, or cancel a transaction or region dump interface (or a combination of the two interfaces). You may also display the temporary transaction dump capture option table from this screen. The current status of each dump interface is displayed below the list of AAON options.

2. Select an AAON option using one of two methods:
  - Tab to the option you want to select and press Enter.

- Type the name of the option in the OPTION field and press Enter. If you accidentally enter an invalid option, the system redisplay the AAON Transaction Options Menu.

Once you make a selection, the status of the appropriate dump interface changes accordingly.

3. Press Enter to return to the AAON Transaction Options Menu, or press Clear Screen to return to CICS.

You may also control the transaction and region dump interfaces directly from CICS using a combination of the AAON transaction ID and an AAON option. For example:

```
AAON ON
AAON OFFR
```

Press Enter to process the command from CICS.

## Transaction Dump Interface

The transaction dump interface must be started for CICS Abend-AID/FX to process any transaction dumps, or if you want to view dumps from CICS (with the AADF transaction). To start the transaction dump interface, select AAON ON, AAON ONRT, or AAON DB2ON. Also note the following conditions that affect starting the transaction dump interface:

- The transaction dump capture subsystem must be active before you start the transaction dump interface.
- If your site is licensed for the CICS Abend-AID/FX for DB2 extra-cost option or if CICS Abend-AID/FX is installed in a CICS region where DB2 itself is *not* running, the transaction dump interface still turns on, even if the table updates for the DB2 option have not been completed. Messages are written to the CSMT log and/or the terminal indicating that DB2 is licensed, but is not active in the CICS region.
- If your site is licensed for the CICS Abend-AID/FX for DB2 extra-cost option, and if DB2 itself *is* running in a region and the DB2 option table updates are not completed, the transaction dump interface will *not* start in that region, regardless of which AAON option you select.

An additional AAON option is available, but not displayed on the AAON Transaction Options Menu. The AAON T0C7 option creates a transaction ASRA abend (S0C7), which displays as an entry on the CICS Abend-AID/FX Directory. The AAON T0C7 option can be issued from CICS with the AAON transaction ID, or from the OPTION field of the AAON Transaction Options Menu.

## Region Dump Interface

The region dump interface is *not* required to capture CICS region dumps. It is required only if you want to capture a list of recently changed programs from the CICS RPL concatenation. If this list is captured, you can view it through the CICS Abend-AID/FX region dump display screens. Entering the CHANGES fast-path command displays the Program Change Summary screen.

If you want to use the optional region dump interface, use the CICS Abend-AID/FX AAON ONR or AAON ONRT CICS transaction. For PLT processing, the program name associated with the region dump interface is CTCCJRGN. Note that you may experience some overhead and increased dump capture time when you enable the region dump interface. Usually this amount is insignificant, but if you see any performance degradation at dump capture time, you can turn off only the region dump interface, while still leaving the transaction dump interface active.

## Starting CICS Abend-AID/FX From a Sequential Terminal

If you want to start CICS Abend-AID/FX from a sequential terminal, complete the steps described below for each CICS region from which you want this support.

### Step 1. Add the Sequential Terminal Definitions to your TCT

Add the appropriate definitions for a sequential terminal to your TCT. The sample library distributed with CICS contains a sample TCT definition for sequential terminals in member DFH\$TCTS. The CICS/MVS 2.1.2 version of this definition is shown in Figure 23-2.

Figure 23-2. Sample TCT Definitions for CICS/MVS 2.1.2

```

TITLE 'DFH$TCTS - COPYBOOK OF TCT ENTRIES FOR SEQUENTIAL (CRLPX
) TERMINAL'
DFHTCT TYPE=SDSCI, X
      DEVICE=2540, X
      DSCNAME=CARDIN
*
DFHTCT TYPE=SDSCI, X
      DEVICE=1403, X
      DSCNAME=PRINTER
*
DFHTCT TYPE=LINE, X
      ACCMETH=BSAM, X
      TRMTYPE=CRLP, X
      INAREAL=80, X
      ISADSCN=CARDIN, X
      OSADSCN=PRINTER
*
DFHTCT TYPE=TERMINAL, X
      TRMIDNT=SAMA, X
      LPLEN=80, X
      ERRATT=NO, X
      TRMSTAT=TRANSACTION

```

### Step 2. Ensure the TCT Supports Non-VTAM Devices

Ensure that the CICS DFHTCT TYPE=INITIAL macro specifies the ACCMETH=NONVTAM parameter. For example:

```
DFHTCT TYPE=INITIAL,SUFFIX=21,ACCMETH=(NONVTAM,VTAM)
```

### Step 3. Verify the DFHSIT EODI Parameter

The EODI SIT parameter specifies a hexadecimal value that indicates the end of a sequential terminal input card. The default is E0 (hexadecimal E0), which is a character backslash (\). The value you specify must be added to the end of each transaction in the sequential input reader.

### Step 4. Add DD Statements to the CICS JCL

Add the following statements to the CICS JCL:

```

//CARDIN DD *
AAON ON\
CESF GOODNIGHT\
/*
//PRINTER DD SYSOUT=*,DCB=BLKSIZE=132

```



## Appendix C.

# Site Configuration Examples

This appendix provides examples of CICS Abend-AID/FX configurations that you can use as a reference when establishing the CICS Abend-AID/FX environment that best suits your site's needs. Completing the basic CICS Abend-AID/FX installation procedure configures CICS Abend-AID/FX with a single viewing server and a single transaction dump capture address space (TDCAS) on a single MVS image. The following additional sample scenarios are described in this appendix:

- Configuring CICS Abend-AID/FX with multiple servers on a single MVS image — with either a single TDCAS or multiple TDCASs.
- Configuring CICS Abend-AID/FX on multiple MVS images — both in a coupled multiprocessor and parallel sysplex configuration.
- Sharing the CICS Abend-AID/FX viewing subsystem between viewing servers on a single MVS image.

These examples provide a good starting point for any configuration variation you may require. If you have a special situation that doesn't fit easily into one of these categories, contact Compuware CICS Abend-AID/FX Technical Support to discuss your requirements.

---

## Why Configure Additional Viewing Servers or TDCASs?

The basic CICS Abend-AID/FX installation of a single viewing server and a single transaction dump capture address space (TDCAS) on a single MVS image does not suit the requirements of all sites. This section describes reasons you might want to configure additional viewing servers and/or TDCASs.

### Running with Multiple Viewing Servers

One CICS Abend-AID/FX viewing server can support many CICS regions on many different MVS images, provided the CICS Abend-AID/FX customization file and some of the viewing server datasets (dump information file, shared directory, and transaction databases) are allocated on shared DASD that is accessible to all images. There is no physical limitation to the number of CICS regions a single viewing server can support, although there may be a practical or a performance limitation. For example, if you begin experiencing poor response time in an environment where a single viewing server is supporting many CICS regions, you might consider creating a second viewing server and splitting the workload.

The decision of how many viewing servers to configure depends largely on how your site organizes and supports its CICS regions. For example, for security reasons you might choose to define one viewing server to support production CICS regions and a second viewing server to support CICS development regions. A service bureau might configure a separate viewing server to support each of their customers, to facilitate charging customers for services. In both of these examples, segregation of information and processing is the reason for having multiple viewing servers.

Smaller data centers usually configure only one viewing server that supports all CICS regions in the complex. This is the easiest CICS Abend-AID/FX environment to install and maintain. It adequately accommodates most smaller sites, unless there is an organizational reason for segregating CICS region information (for example, production from test).

Customers supporting large operations tend to choose one of two basic configurations, depending on how the site normally manages software migration (in particular, how CICS is managed). The two basic multiple-MVS image configurations are:

- Running one CICS Abend-AID/FX viewing server per MVS image, with each viewing server configured to support all of the CICS regions running on that image. Sites that use this setup usually configure their MVS images as identically as possible for ease of support and migration of new software throughout their environment. “Multiple Viewing Servers Sharing Files Across MVS Images” on page C-8 illustrates this type of configuration.

Some of these customers run multiple viewing servers on each MVS image for performance reasons, or to segregate dump information for their CICS regions (for example, production from test). The common thread is that they do not share viewing servers across MVS images.

- Running one “central” viewing server that supports several (or all) MVS images. These sites require a central point of control for all of their MVS images. “One Viewing Server Supporting Multiple MVS Images” on page C-11 illustrates this type of configuration.

## Running with Multiple TDCASs on a Single MVS Image

One CICS Abend-AID/FX transaction dump capture address space (TDCAS) is required on every MVS image on which you will capture CICS transaction dumps. Although only one TDCAS is required per MVS image, you can run more than one if it better fits into the way your site manages CICS Abend-AID/FX. For example, if you require completely segregated CICS Abend-AID/FX environments to support certain CICS regions, you will probably want to create additional TDCASs.

Some customers may want to create a new TDCAS when they migrate to a new release of CICS Abend-AID/FX. This should not normally be necessary, as the TDCAS is designed to be downward compatible. The recommended procedure when upgrading to a new CICS Abend-AID/FX release is to stop your current TDCAS, update the TDCAS JCL to point to the libraries for your new release of CICS Abend-AID/FX, and restart the TDCAS. All CICS regions, even those you have not yet upgraded to the new CICS Abend-AID/FX release, will use the upgraded TDCAS. If you are not comfortable with this migration path, you need to create a second TDCAS to support the new CICS Abend-AID/FX release.

If you decide you require multiple TDCASs on an MVS image, you need to specify which CICS regions should be processed by each TDCAS. Use the CICS Region Configuration screen, described in “Configuring CICS Regions” on page 18-2, to perform this function.

---

## Configuration Examples for a Single MVS Image

The basic CICS Abend-AID/FX installation configures CICS Abend-AID/FX on a single MVS image with one viewing server and one TDCAS. This section describes the following additional scenarios for configuring CICS Abend-AID/FX on a single MVS image:

- Two viewing servers and one TDCAS
- Two viewing servers and two TDCASs.

### Two Viewing Servers and One TDCAS

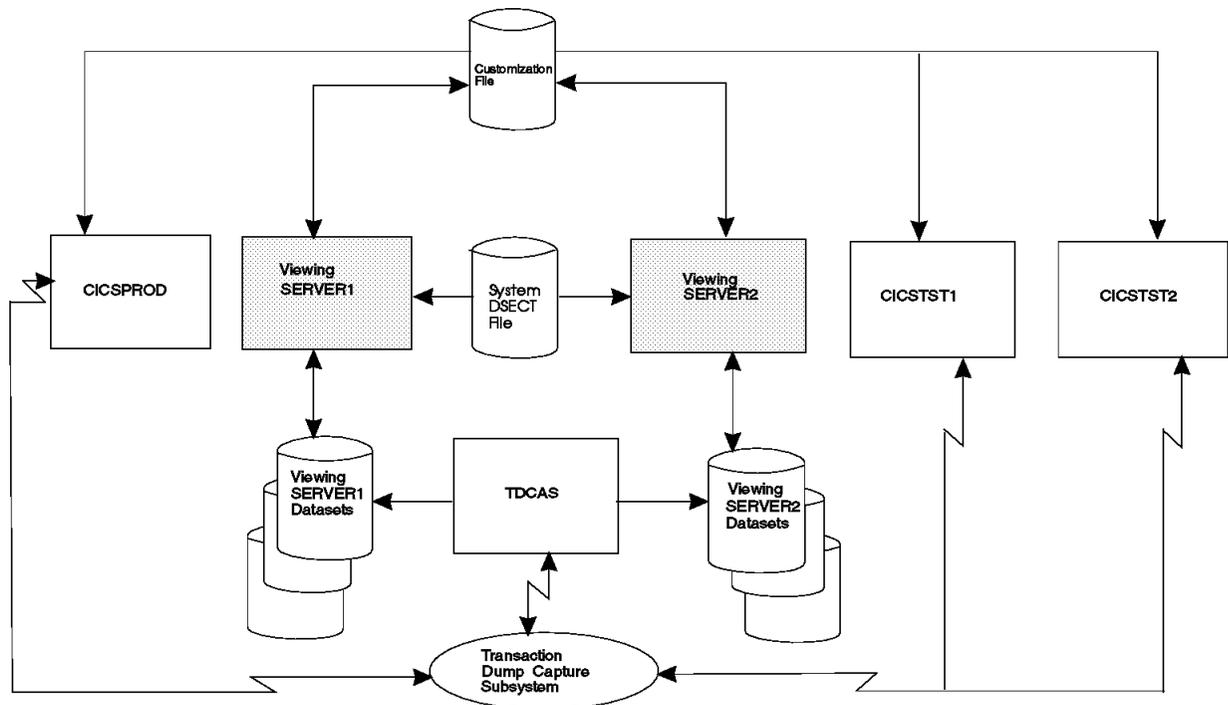
This section provides a configuration example of two viewing servers, but only one TDCAS, on a single MVS image. It first describes the datasets used by the viewing servers and TDCAS, and then provides a viewing access configuration example. The information in this section is useful in the following situations:

- If you have only one MVS image but want to configure more than one CICS Abend-AID/FX viewing server, and you don't have a requirement for more than one TDCAS.
- If you have multiple MVS images, but want to use one customization file per image. If you want to share a common customization file across MVS images, refer to "Multiple Viewing Servers Sharing Files Across MVS Images" on page C-8.

After you create your first viewing server, you can easily configure additional ones by repeating the steps described in Chapter 7, "Viewing Server Configuration".

Figure 23-3 illustrates the dataset usage of two viewing servers, SERVER1 and SERVER2, on a single MVS image. Only one TDCAS is configured for the image.

**Figure 23-3.** Dataset Usage of Two Viewing Servers and One TDCAS on a Single MVS Image



Notes for Figure 23-3:

1. SERVER1 and SERVER2 share the customization file and the system DSECT file. You can have only one customization file per MVS image<sup>1</sup>, so the viewing servers must share this file. The system DSECT file is shared to save DASD. Alternatively, each viewing server can have its own copy of the system DSECT file.  
The user DSECT file and source listing files are not shown. If you are using these facilities, these files can be shared between viewing servers, or each viewing server can have a copy of these files.
2. Each viewing server has its own set of the following "viewing server-owned datasets":
  - Dump information file
  - IPCS directory (optional)
  - PDSM file
  - Viewing server work file
  - Shared directory

1. You can have only one customization file per MVS image. If you are using automatic region dump import facilities (the MVS post-dump exit or the SVC 51 interface). If you are not using these features, you can have multiple customization files on an MVS image.

- Transaction database. Compuware recommends that you allocate at least two transaction databases per viewing server.

Allocating these datasets is described in “Step 1. Allocate the Viewing Server Datasets” on page 7-1. In addition, each viewing server must have its own copy of the viewing server configuration parameters — you cannot specify the same parameter dataset in more than one viewing server’s JCL or procedure. The viewing server configuration parameters are described in “Step 2. Specify the Viewing Server Configuration Parameters (\$12xxxx)” on page 7-5.

All other CICS Abend-AID/FX libraries — the CICS Abend-AID/FX authorized and nonauthorized load libraries (SKFXAUTH and SKFXLOAD); the CICSLIB library (SKFXCLIB); and the Compuware base services/HCI authorized and nonauthorized load libraries (SKMPAUTH and SKMPLOAD), and Compuware Shared Services load library (SLCXLOAD) — can be shared by all the viewing servers on the MVS image.

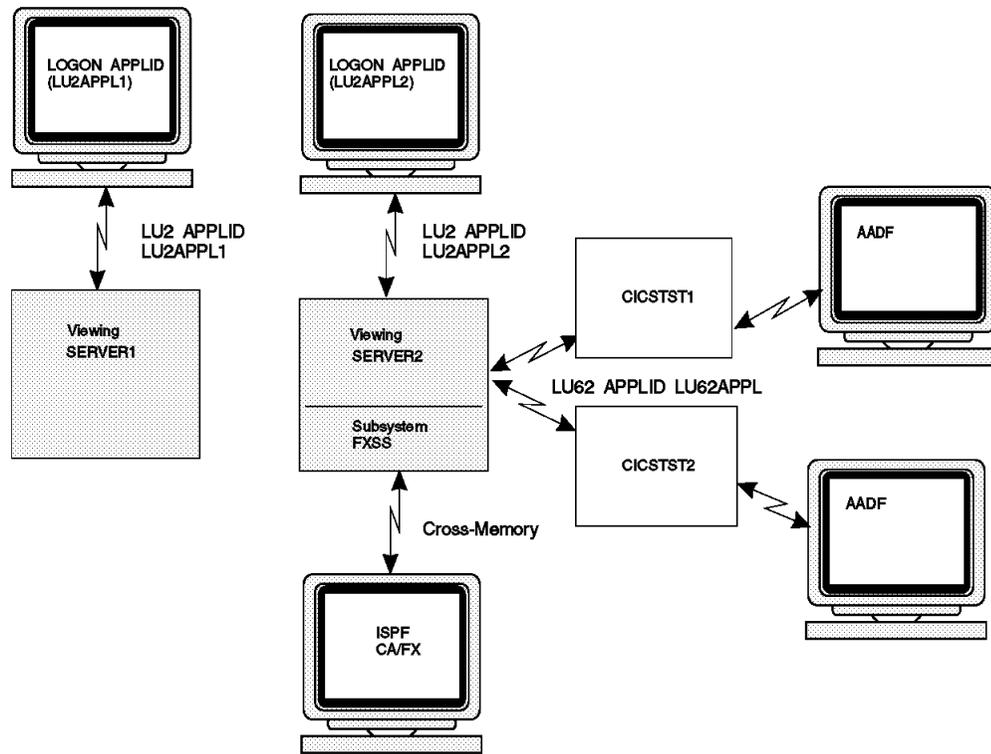
3. SERVER1 is processing dumps for CICS region CICSPROD, and SERVER2 is processing dumps for CICS regions CICSTST1 and CICSTST2.
4. The TDCAS is managing transaction dump capture for all CICS regions on the image. These dumps are written to the correct shared directory and transaction database based on the information specified on the CICS Region Configuration customization screen. This information is stored in the CICS Abend-AID/FX customization file. When CICS Abend-AID/FX initializes in the CICS region, it reads and retains information from the customization file. The TDCAS references this information when a transaction dump is invoked. See “Configuring CICS Regions” on page 18-2 for more information about the CICS Region Configuration screen.

**Notes:**

- a. The TDCAS writes to only the shared directory and transaction databases. It does not read from or write to the other viewing server-owned datasets.
- b. One TDCAS can write to multiple shared directories. By contrast, a viewing server can read from only one shared directory.

Figure 23-4 on page C-5 shows an example of how the two viewing servers can be configured for viewing access.

Figure 23-4. Viewing Access Configuration of Two Viewing Servers on a Single MVS Image



Notes for Figure 23-4:

1. The TDCAS is not referenced in Figure 23-4 because it is not involved in dump viewing.
2. SERVER1 is configured for only VTAM viewing access. The LU2\_APPLID=LU2APPL1 viewing server configuration parameter is specified in this viewing server's parameter dataset, and the LU 2 APPLID LU2APPL1 is defined in SYS1.VTAMLST.

When a user logs onto SERVER1 through VTAM, only dumps for region CICSPROD are available because SERVER1 is processing dumps for only that region (see Figure 23-3 on page C-3).

**Note:** CICS region CICSPROD is not shown in Figure 23-4 because it is not involved in viewing access.

3. SERVER2 is configured for VTAM, TSO/ISPF, and CICS local and remote viewing access. The viewing server configuration parameter dataset for this viewing server contains the following specifications:

```
LU2_APPLID=LU2APPL2
LU62_APPLID=LU62APPL
LOGMODE=FXLOGM
MVS_SUBSYSTEM=(FXSS, OWNER)
```

VTAM APPLIDs LU2APPL2 and LU62APPL are defined in SYS1.VTAMLST, and the assembled and link-edited logon mode table entry FXLOGM is contained in SYS1.VTAMLIB.

The viewing server subsystem name (FXSS) must be unique on this MVS image. Because the CICS Abend-AID/FX viewing server dynamically starts the viewing server subsystem, no further configuration for the subsystem is required.

Users logging onto SERVER2 from CICS can view dumps only for the CICS region from which they entered the AADF transaction. Users logging onto SERVER2 through either VTAM or TSO/ISPF can see dumps from both CICSTST1 and CICSTST2.

## Two Viewing Servers and Two TDCASs

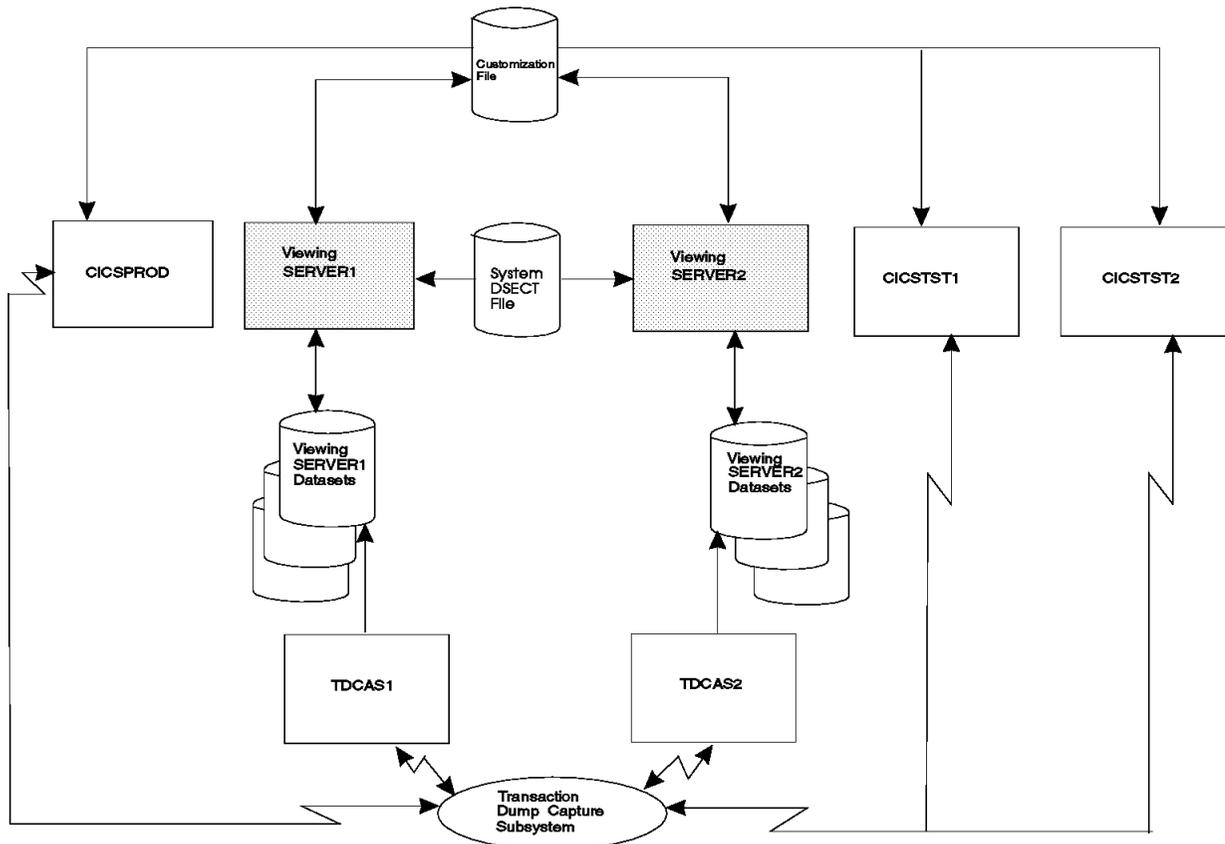
This section provides a configuration example of two viewing servers and two TDCASs on a single MVS image. It describes the datasets used by the viewing servers and TDCASs. It does not provide a viewing access configuration example since the number of TDCASs does not affect viewing access configuration. Refer to Figure 23-4 on page C-5 for an illustration of viewing access configuration.

The information in this section is useful if you have only one MVS image but want to configure more than one CICS Abend-AID/FX viewing server, and you have a requirement for more than one TDCAS.

After you create your first viewing server, you can easily configure additional ones by repeating the steps described in Chapter 7, "Viewing Server Configuration". Create a second TDCAS by repeating the steps described in Chapter 8, "Transaction Dump Capture Address Space Configuration".

Figure 23-5 illustrates the dataset usage of two viewing servers, SERVER1 and SERVER2, on a single MVS image. Two TDCASs are configured for the image.

Figure 23-5. Dataset Usage of Two Viewing Servers and two TDCASs on a Single MVS Image



Notes for Figure 23-5:

1. SERVER1 and SERVER2 share the customization file and the system DSECT file. You can have only one customization file per MVS image<sup>1</sup>, so the viewing servers must share this file. The system DSECT file is shared to save DASD. Alternatively, each viewing server can have its own copy of the system DSECT file.

The user DSECT file and source listing files are not shown. If you are using these facilities, these files can be shared between viewing servers, or each viewing server can have a copy of these files.

2. Each viewing server has its own set of the following “viewing server-owned datasets”:
  - Dump information file
  - IPCS directory (optional)
  - PDSM file
  - Viewing server work file
  - Shared directory
  - Transaction databases. Compuware recommends that you allocate at least two transaction databases per viewing server.

Allocating these datasets is described in “Step 1. Allocate the Viewing Server Datasets” on page 7-1. In addition, each viewing server must have its own copy of the viewing server configuration parameters — you cannot specify the same parameter dataset in more than one viewing server’s JCL or procedure. The viewing server configuration parameters are described in “Step 2. Specify the Viewing Server Configuration Parameters (\$12xxxx)” on page 7-5.

All other CICS Abend-AID/FX libraries — the CICS Abend-AID/FX authorized and nonauthorized load libraries (SKFXAUTH and SKFXLOAD); the CICSLIB library (SKFXCLIB); and the Compuware base services/HCI authorized and nonauthorized load libraries (SKMPAUTH and SKMPLOAD), and Compuware Shared Services load library (SLCXLOAD) — can be shared by all the viewing servers on the MVS image.

3. SERVER1 is processing dumps for CICS region CICSPROD, and SERVER2 is processing dumps for CICS regions CICSTST1 and CICSTST2.
4. TDCAS1 is managing transaction dump capture for CICS region CICSPROD. TDCAS2 is managing transaction dump capture for CICS regions CICSTST1 and CICSTST2. This specification is made on the CICS Region Configuration customization screen and stored in the CICS Abend-AID/FX customization file. When CICS Abend-AID/FX initializes in the CICS region, it reads and retains information from the customization file. The TDCAS references this information when a transaction dump is invoked. See “Configuring CICS Regions” on page 18-2 for more information about the CICS Region Configuration screen.

**Notes:**

- a. The TDCAS writes to only the shared directory and transaction databases. It does not read from or write to the other viewing server-owned datasets.
- b. One TDCAS can write to multiple shared directories. By contrast, a viewing server can read from only one shared directory.

Only one transaction dump capture subsystem can be active on an MVS image. The transaction dump capture subsystem is started automatically by the first TDCAS started on the MVS image. When the second TDCAS is started, it verifies that the transaction dump capture subsystem is active, and then “registers” its name with the subsystem.

---

1. You can have only one customization file per MVS image. If you are using automatic region dump import facilities (the MVS post-dump exit or the SVC 51 interface). If you are not using these features, you can have multiple customization files on an MVS image.

---

## Configuring CICS Abend-AID/FX on Multiple MVS Images

This section documents two basic configurations supporting CICS Abend-AID/FX on multiple MVS images — both in a coupled multiprocessor and parallel sysplex configuration:

- Multiple viewing servers sharing a single customization file across MVS images.
- One viewing server supporting multiple MVS images.

In both of these configurations, shared DASD is a requirement. In addition, you need to use Global Resource Serialization (GRS) or an equivalent product to protect the integrity of CICS Abend-AID/FX files shared across MVS images. Refer to “GRS Considerations” on page 2-12 for more information.

**Note:** CICS Abend-AID/FX does not use the MVS coupling facility for data sharing and locking in a parallel sysplex. However, CICS Abend-AID/FX uses shared DASD and GRS to provide data sharing and locking.

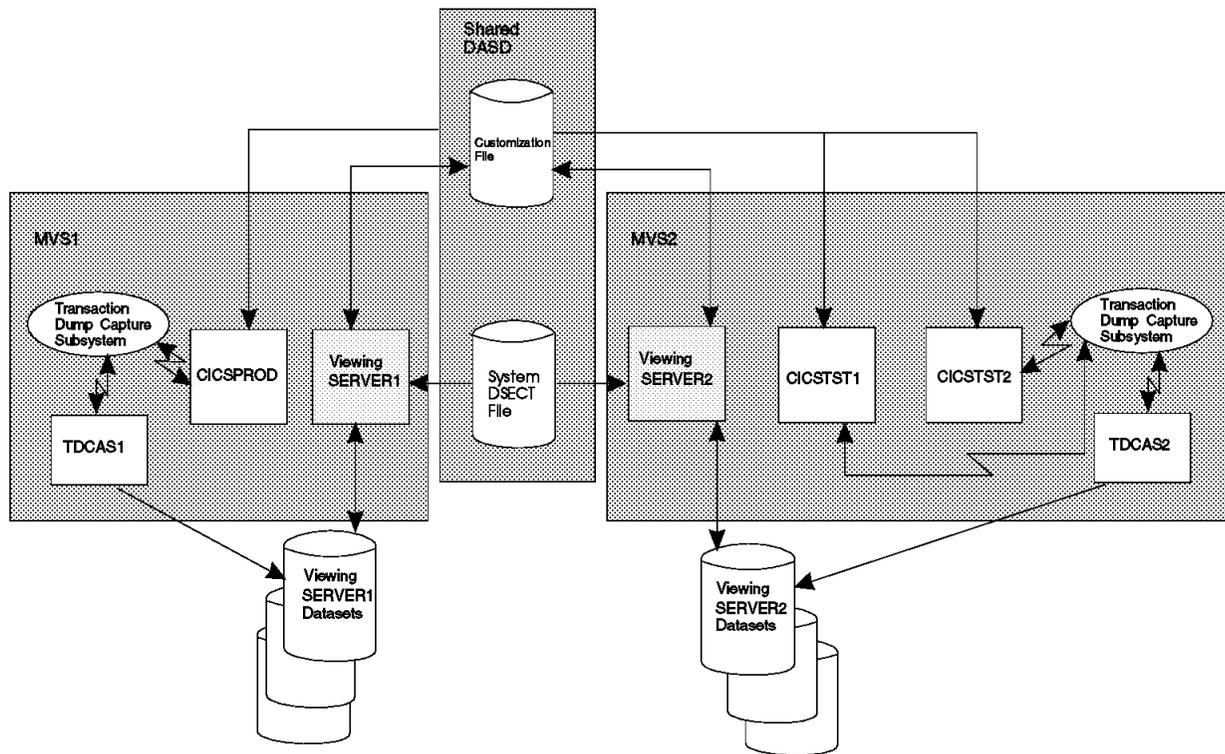
### Multiple Viewing Servers Sharing Files Across MVS Images

This section provides a configuration example of two viewing servers on each of two MVS images. It first describes the datasets used by the viewing servers, and then provides an example of viewing access configuration. The information in this section is useful for sites that have multiple MVS images, and want to share a single customization file between images. If you have multiple MVS images but want to define one customization file per MVS image, refer to the example provided in “Two Viewing Servers and One TDCAS” on page C-2 or “Two Viewing Servers and Two TDCASs” on page C-6.

After you create your first viewing server, you can easily configure additional viewing servers by repeating the steps described in Chapter 7, “Viewing Server Configuration”.

Figure 23-6 illustrates the dataset usage of a CICS Abend-AID/FX configuration for SERVER1 running on MVS1, and SERVER2 running on MVS2.

Figure 23-6. Dataset Usage of Two Viewing Servers on Two MVS Images



Notes for Figure 23-6:

1. The customization file and system DSECT file are allocated on shared DASD, and are used by both SERVER1 and SERVER2.

**Note:** Ensure that these files are part of a GRS ring to protect their integrity. Refer to “GRS Considerations” on page 2-12.

The user DSECT file and source listing files are not shown. If you are using these facilities, these files can be shared by both viewing servers (if they are allocated on shared DASD), or each viewing server can have its own copy of the files.

2. Each viewing server has its own set of the following “viewing server-owned datasets”:
  - Dump information file
  - IPCS directory (optional)
  - PDSM file
  - Viewing Server work file
  - Shared directory
  - Transaction databases. Compuware recommends that you allocate at least two transaction databases per viewing server.

Allocating these datasets is described in “Step 1. Allocate the Viewing Server Datasets” on page 7-1. These files do not need to be allocated on shared DASD, since they are associated with a specific viewing server. In addition, each viewing server must have its own copy of the viewing server configuration parameters — you cannot specify the same parameter dataset in more than one viewing server’s JCL or procedure. The viewing server configuration parameters are described in “Step 2. Specify the Viewing Server Configuration Parameters (\$12xxxx)” on page 7-5.

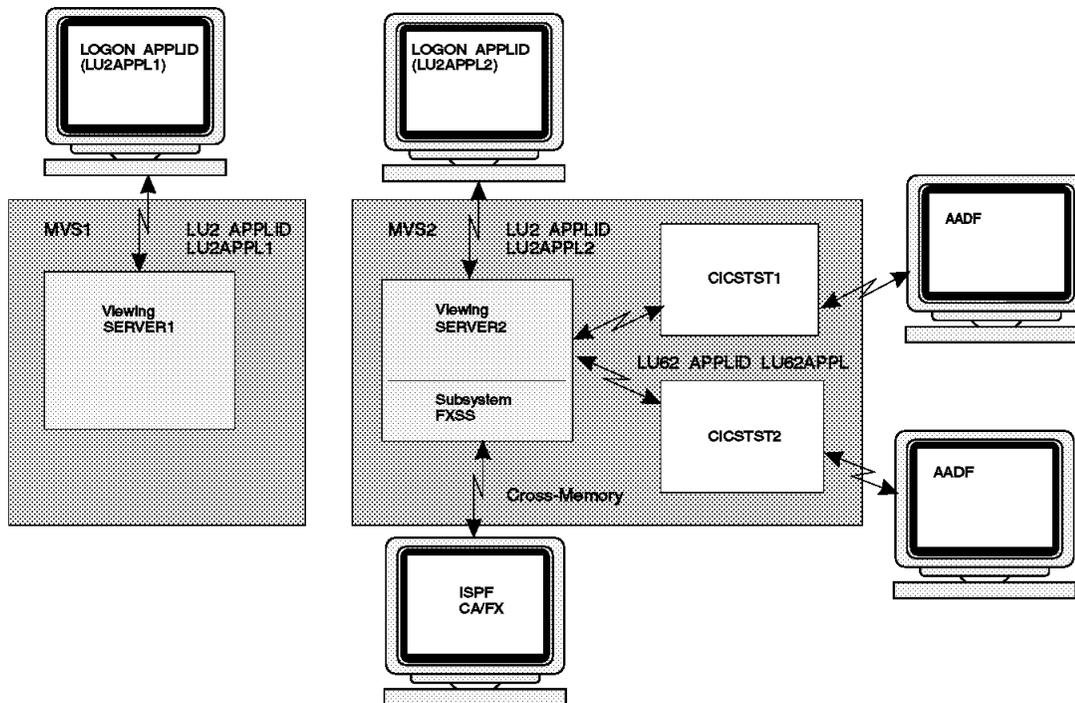
All other CICS Abend-AID/FX libraries — the CICS Abend-AID/FX authorized and nonauthorized load libraries (SKFXAUTH and SKFXLOAD); the CICS LIB library (SKFXCLIB); and the Compuware base services/HCI authorized and nonauthorized load libraries (SKMPAUTH and SKMPLOAD), and Compuware Shared Services load library (SLCXLOAD) — can be shared by all the viewing servers on the MVS image.

3. SERVER1 is processing dumps for CICS region CICSPROD, and SERVER2 is processing dumps for regions CICSTST1 and CICSTST2. These CICS regions are running on the same MVS image as the viewing servers that are processing their dumps.
4. There is a TDCAS running on each MVS image. You cannot share a TDCAS across MVS images. If you want to run more than one TDCAS per image, refer to “Two Viewing Servers and Two TDCASs” on page C-6.

**Note:** The TDCAS writes to only the shared directory and transaction databases. It does not read from or write to the other viewing server-owned datasets.

Figure 23-7 shows an example of how the two viewing servers can be configured for viewing access.

**Figure 23-7.** Viewing Access Configuration of Two Viewing Servers on Two MVS Images



Notes for Figure 23-7:

1. The TDCASs are not referenced in Figure 23-7 because they are not involved in dump viewing.
2. SERVER1 is configured for only VTAM viewing access. The LU2\_APPLID=LU2APPL1 server configuration parameter is specified in this viewing server's parameter dataset, and the LU 2 APPLID LU2APPL1 is defined in SYS1.VTAMLST.

When a user logs onto SERVER1 through VTAM, only dumps for region CICSPROD are available because SERVER1 is processing dumps only for that region (see Figure 23-6 on page C-9).

**Notes:**

- a. Users attached to MVS2 can access SERVER1 as a VTAM application, if APPLID LU2APPL1 is defined as a cross-domain resource.
  - b. CICS region CICSPROD is not shown in Figure 23-7 on page C-10 because it is not involved in viewing access.
3. SERVER2 is configured for VTAM, TSO/ISPF, and CICS local and remote viewing access. The viewing server configuration parameter dataset for this viewing server contains the following specifications:

```
LU2_APPLID=LU2APPL2
LU62_APPLID=LU62APPL
LOGMODE=FXLOGM
MVS_SUBSYSTEM=(FXSS,OWNER)
```

VTAM APPLIDs LU2APPL2 and LU62APPL are defined in SYS1.VTAMLST, and the assembled and link-edited logon mode table entry FXLOGM is contained in SYS1.VTAMLIB.

The viewing subsystem name (FXSS) must be unique on this MVS image. Because the CICS Abend-AID/FX viewing server dynamically starts the viewing subsystem, no further configuration for the viewing subsystem is required.

Users logging onto SERVER2 from CICS can view dumps only for the CICS region from which they entered the AADF transaction. Users logging onto SERVER2 through either VTAM or TSO/ISPF can see dumps from both CICSTST1 and CICSTST2.

**Note:** Users attached to MVS1 can access SERVER2 as a VTAM application if APPLID LU2APPL2 is defined as a cross-domain resource.

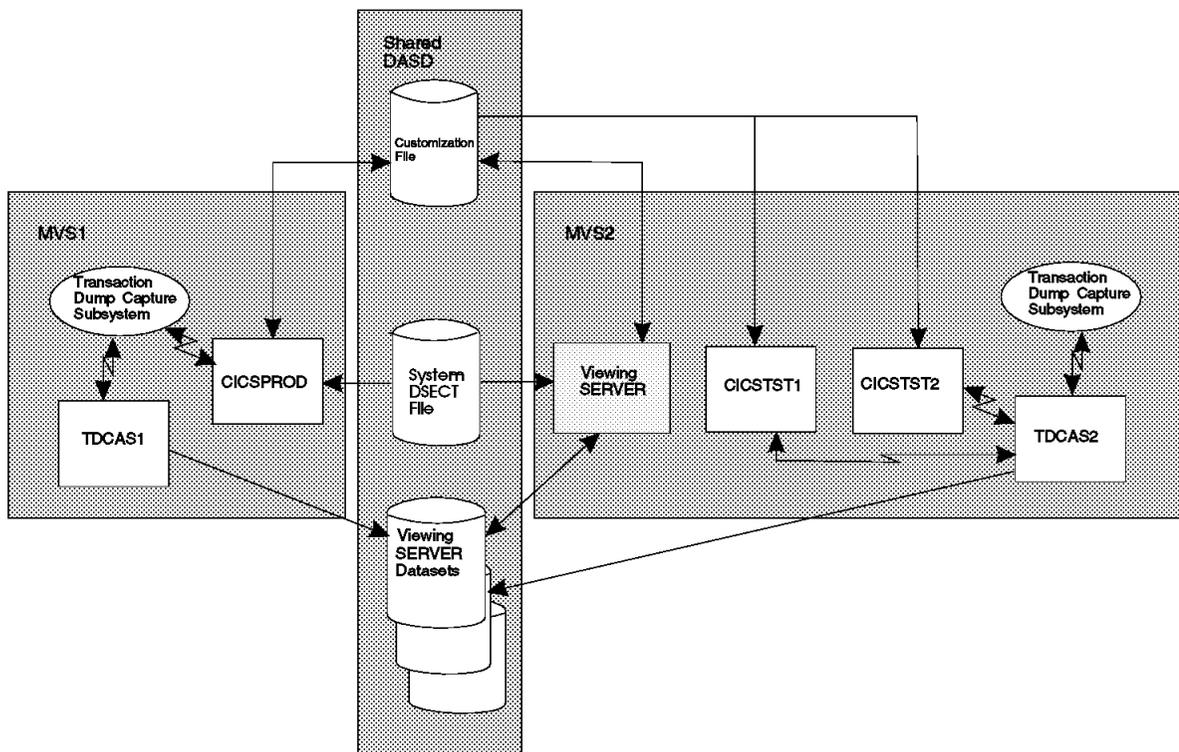
## One Viewing Server Supporting Multiple MVS Images

This section provides an example of a single viewing server supporting CICS regions on two MVS images. It first describes the datasets used by the viewing servers, and then provides an example of viewing access configuration. The information in this section is useful for sites that have multiple MVS images, but want to manage dumps for their CICS regions from a single point of control (that is, one viewing server).

After you create your first viewing server, you can easily configure additional viewing servers by repeating the steps described in Chapter 7, “Viewing Server Configuration”.

Figure 23-8 on page C-12 illustrates the dataset usage of an CICS Abend-AID/FX configuration with a single viewing server, SERVER, supporting two MVS images, MVS1 and MVS2.

Figure 23-8. Dataset Usage of One Viewing Server Supporting Two MVS Images



Notes for Figure 23-8:

1. A single viewing server, SERVER, is running on MVS2. CICS regions CICSTST1 and CICSTST2 are also running on MVS2. CICS region CICSPROD is running on MVS1. SERVER is supporting all 3 CICS regions, even though it is not running on the same MVS image as CICSPROD.
2. The customization file, and the following “viewing server-owned” datasets, are allocated on shared DASD:
  - Shared directory
  - Transaction databases. Compuware recommends that you allocate at least two transaction databases per viewing server.
  - Dump information file.

**Notes:**

- a. Ensure that these files are part of a GRS ring to protect their integrity. Refer to “GRS Considerations” on page 2-12.
- b. Even though the dump information file, shared directory, and transaction databases are “viewing server-owned” datasets, they must be accessible to the CICS region running on MVS1. Therefore, they must be allocated on shared DASD.

All other CICS Abend-AID/FX libraries — the CICS Abend-AID/FX authorized and nonauthorized load libraries (SKFXAUTH and SKFXLOAD); the CICSLIB library (SKFXCLIB); the Compuware base services/HCI authorized and nonauthorized load libraries (SKMPAUTH and SKMPLOAD), and Compuware Shared Services load library (SLCXLOAD) — can be shared by all the viewing servers on the MVS image.

3. The following files can be allocated on DASD that is only available to MVS2:
  - System DSECT file
  - PDSM file

- Viewing Server work file
- IPCS directory (optional).

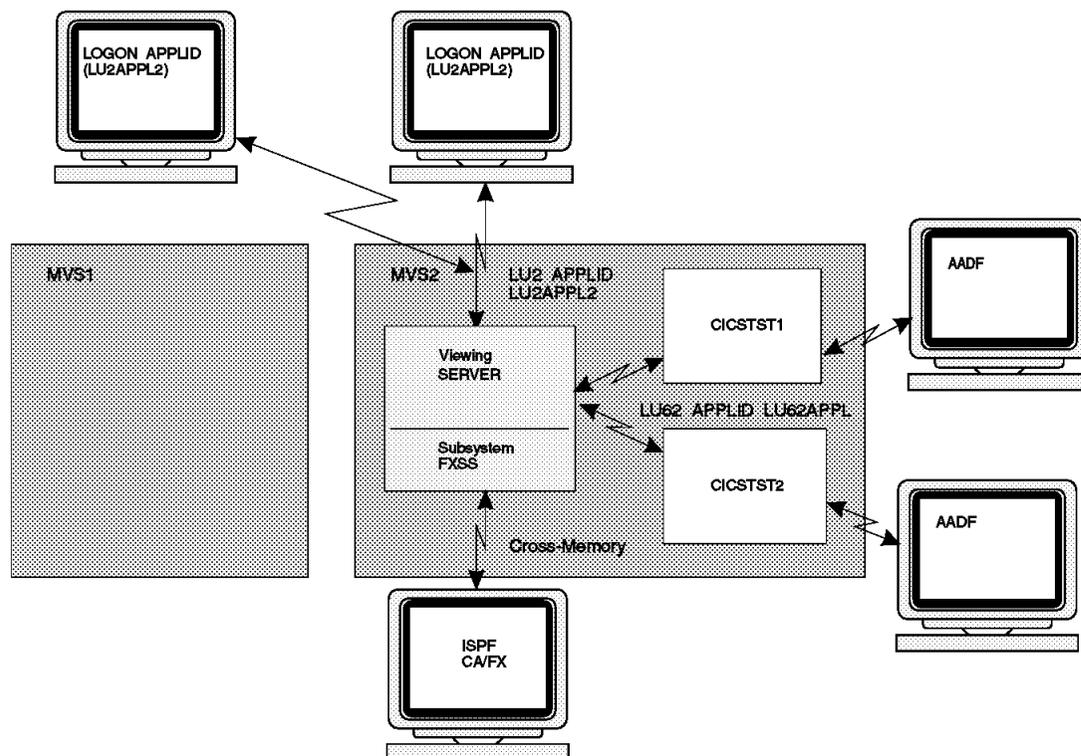
The user DSECT file and source listing files are not shown. If you are using these facilities, these files can also be allocated on DASD that is only available to MVS2.

4. There is a TDCAS running on each MVS image. You cannot share a TDCAS across MVS images. If you want to run more than one TDCAS per image, refer to “Two Viewing Servers and Two TDCASs” on page C-6.

**Note:** The TDCAS writes to only the shared directory and transaction databases. It does not read from or write to the other viewing server-owned datasets.

Figure 23-9 shows an example of how the two viewing servers can be configured for viewing access.

**Figure 23-9.** Viewing Access Setup of One Viewing Server Supporting Two MVS Images



Notes for Figure 23-9:

1. The TDCASs are not referenced in Figure 23-9 because they are not involved in dump viewing.
2. SERVER is configured for VTAM, TSO/ISPF, and CICS local and remote viewing access from MVS2. From MVS1, only VTAM access is supported (APPLID LU2APPL is defined as a cross-domain resource).

The viewing server configuration parameter dataset for this viewing server contains the following specifications:

```
LU2_APPLID=LU2APPL2
LU62_APPLID=LU62APPL
LOGMODE=FXLOGM
MVS_SUBSYSTEM=(FXSS, OWNER)
```

VTAM APPLIDs LU2APPL2 and LU62APPL are defined in SYS1.VTAMLST, and the assembled and link-edited logon mode table entry FXLOGM is contained in SYS1.VTAMLIB.

The viewing subsystem name (FXSS) must be unique on MVS2. Because the CICS Abend-AID/FX viewing server dynamically starts the viewing subsystem, no further configuration for the viewing subsystem is required.

3. Users logging onto SERVER from CICS can view dumps only for the CICS region (CICSTST1 or CICSTST2) from which they entered the AADF transaction. Users logging on through either VTAM or TSO/ISPF can see dumps from CICSTST1, CICSTST2, and CICSPROD (refer Figure 23-9 on page C-13 to see how CICSPROD is available to SERVER).
4. Users attached to MVS1 accessing SERVER as a VTAM application can also view dumps for CICSTST1, CICSTST2, and CICSPROD.

---

## Sharing a CICS Abend-AID/FX MVS Viewing Subsystem Between Viewing Servers

**Note:** This section discusses the *viewing* subsystem, and not the *transaction dump capture* subsystem.

The CICS Abend-AID/FX MVS viewing subsystem is required if you configure a viewing server to use either CICS or TSO/ISPF viewing access. CICS Abend-AID/FX uses the viewing subsystem to handle task and address space termination to ensure proper session outage notification.

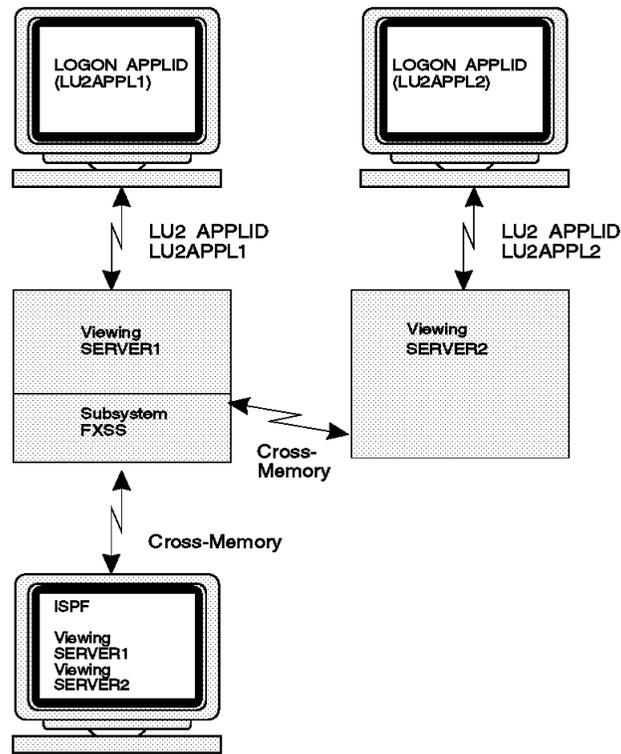
CICS Abend-AID/FX requires only one MVS viewing subsystem per MVS image, regardless of how many viewing servers you run on the image. To share a single viewing subsystem, one viewing server must be defined as the subsystem “owner” and the other viewing servers on the image are defined as “users” of the subsystem.

The following rules apply to sharing an MVS viewing subsystem between servers:

- All viewing servers sharing the subsystem must be running on the same MVS image — you cannot share a viewing subsystem across MVS images.
- The viewing server that “owns” the viewing subsystem must be active to process communication requests for viewing servers that are “users” of the subsystem.
- You must specify the same viewing subsystem name for all viewing servers sharing the subsystem, and the name you specify must not be used by any non-CICS Abend-AID/FX subsystem on the MVS image, or by any TDCAS on the MVS image.

Figure 23-10 on page C-15 shows an example of two viewing servers, SERVER1 and SERVER2, both running on the same MVS image.

Figure 23-10. Viewing Access Setup of Two Viewing Servers Sharing an MVS Subsystem



Notes for Figure 23-10:

1. The TDCAS is not referenced in Figure 23-9 on page C-13 because it is not involved in dump viewing.
2. The MVS viewing subsystem name is FXSS. SERVER1 is defined as the “owner” of the subsystem, and SERVER2 is a “user” of the subsystem.

The viewing server configuration parameter dataset for SERVER1 contains the specification: MVS\_SUBSYSTEM=(FXSS,OWNER). SERVER2’s viewing server configuration parameter dataset contains the specification: MVS\_SUBSYSTEM=(FXSS,USER).

The viewing subsystem name (FXSS) must be unique on this MVS image. Because SERVER1 dynamically starts the subsystem, no further configuration for the subsystem is required.

3. Users logging onto CICS Abend-AID/FX through TSO/ISPF can access dumps processed by both SERVER1 and SERVER2. Because SERVER1 is the owner of the viewing subsystem used by SERVER2, SERVER1 must be active for users to view dumps processed by SERVER2.

**Note:** This situation would also apply if SERVER2 were configured for CICS viewing access.

4. Both viewing servers are also configured for VTAM viewing access. However, because VTAM viewing access does not use the MVS subsystem, SERVER1 is not required to view dumps processed by SERVER2 from VTAM. Users log directly onto SERVER2 to view dumps processed by SERVER2.



## Appendix D. User Abend Codes

This appendix describes user abend codes that you may receive early in CICS Abend-AID/FX startup processing in the viewing server, TDCAS, or the CICS region and that are not preceded by a message. All other abends issued in the viewing server region, TDCAS, or CICS region are preceded by a critical error level message. The last three digits of the message number match the abend code.

In the viewing server region or TDCAS, you may receive any of seven abend codes that are not preceded by a message. These abends may occur very early in CICS Abend-AID/FX startup processing. Table 23-1 shows the seven user abends in the viewing server or TDCAS that are not preceded by a message.

**Table 23-1.** User Abend Codes in the Viewing Server or TDCAS

Abend Code	Reason
User 1	Unable to load MPDS initialization module FDBMMPDS
User 2	Unable to get storage for MPDS (app. 32K 24 bit local)
User 3	MVS release prior to XA
User 4	Error loading authorized services module FDBMRAUT
User 5	Can't open FDBDRPL library
User 6	Can't open FDBDLOG
User 7	Can't load service module (R5=pointer to module)

In the CICS region, you may receive any of six user abend codes that are not preceded by a message. These abends may occur very early in CICS Abend-AID/FX startup processing in the CICS region. Table 23-2 shows the six abends in the CICS region that are not preceded by a message.

**Table 23-2.** User Abend Codes in the CICS Region

Abend Code	Reason
User 1	Unable to load CMC initialization module CTCCJCMC
User 2	Unable to get storage for CMCB (app. 8K 24 bit local)
User 3	Can't determine job/started task name of CICS region
User 4	Error loading a service module (R6=pointer to module name)
User 5	Can't find or allocate FDBDLOG
User 6	Can't open FDBDLOG



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