

CA-View™

System Reference Guide

Release 2.0

MVS

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About This Guide

Welcome to CA-View!

Welcome to CA-View, a SYSOUT archival and retrieval system that stores computer output on either DASD or tape and retrieves that output upon demand.

Who Should Read This Guide?

This guide is designed as a reference for system programmers, administrators, and CA-View end users.

This guide assumes you are familiar with CA-View and IBM computer system terms and concepts. You should also have a working knowledge of MVS online facilities, such as ISPF, since the CA-View panels behave in a similar fashion.

What's in This Guide?

The *CA-View System Reference Guide* is organized as follows:

- | | |
|-----------|--|
| Chapter 1 | "Introducing CA-View" outlines the documentation, presents an overview of CA-View, and provides general processing information. |
| Chapter 2 | "Initialization Parameters" explains how to set and change initialization parameters and expanded retention parameters. |
| Chapter 3 | "Configuring CA-View" details the configurable components of CA-View. |
| Chapter 4 | "Online Interface Administration" provides information about the various online retrieval systems. |
| Chapter 5 | "Archival" provides information about the archival of SYSOUT, AFP, and Xerox reports, and covers exceptional condition checking. |
| Chapter 6 | "Expanded Retention Option" explains ERO table statements, assigning SYSOUT IDs, and tape consolidation of reports. |

Chapter 7	"Database Utilities" details each of the CA-View database utilities.
Chapter 8	"Backing Up and Recovering the Database" explains how to back up and recover the database, minimize non-archival time, recover from media and integrity problems, and use forward recovery data.
Chapter 9	"Batch Processing" discusses the SARBCH program, which performs batch retrieval functions.
Chapter 10	"Using the Optical Disk Interface" discusses the optical disk drivers, page-level access to optical disk, and database maintenance.
Chapter 11	"User Exits" details the user exits that allow you to customize CA-View.
Chapter 12	"Diagnostic and Error Messages" documents the messages generated by CA-View.
Appendix A	"Data Sets and Environmental Considerations" discusses the CA-View database, the tape archival data sets, and the other data sets used by CA-View.
Appendix B	"Troubleshooting and Technical Support" explains how to diagnose software problems and contact Computer Associates Technical Support.

Product Documentation

The following publications are supplied with CA-View:

- *CA-View Online User's Guide*
- *CA-View System Reference Guide*
- *CA-View Installation Guide*

Contacting Technical Support

Refer to Appendix B, "Troubleshooting and Technical Support," for information about contacting Computer Associates Technical Support.

Conventions Used in This Guide

This section explains the conventions used to present information in this guide. We recommend that you take the time to familiarize yourself with these conventions.

Commands and Parameters

Commands and parameters are shown in **this font**. You enter these examples in CA-View exactly as shown.

Variables

Italic text shown with a command indicates a user-defined variable. For example, in place of the variable *printer-id.data*, you might enter VPS.JESDS.

Commands

Commands you can issue are presented in uppercase letters. For example:

- HELP
- SELECT

The word ENTER in uppercase represents the following keys on your keyboard:

- ENTER, Enter, or enter
- RETURN, Return, or return
- ↵

PF Keys

Programmable function keys, or PF keys, are represented by the uppercase letters PF, followed by one or two digits, as shown in the examples below:

- PF 1
- PF 12

Note: On most keyboards, PF keys are located either at the top or to the right side of the main part of the keyboard. PF keys are usually marked PF or simply F followed by a digit (for example, PF 1 or F1).

CA-View: Learning About Past and Present Releases

The following sections provide you with a “history” of CA-View, starting with the current release and working backward to SAR 6.5. Each section includes a list and an overview of the new features and enhancements that appeared when that iteration of the product was released. Information is presented for:

- CA-View 2.0
- CA-View 1.7
- Prevail/XP—View 1.6.7
- SAR 6.5

CA-View 2.0 - New Features and Enhancements

The new features in CA-View Release 2.0 include: the CA LMP authorization system, year 2000 support, browse ANNOTATE, BOOKMARK, and GOTO commands, private logical views, and global views across many reports.

Enhancements have been made to: expanded access server for tape and robotics functionality, the SARDBASE restore, logical views, and indexing.

Overview of CA-View 2.0 Modifications

This section presents an overview of each of the new features, commands, and enhancements in CA-View Release 2.0.

New Parameters for Expanded Access Servers for Tape and Robotics

The parameters added to CA-View in this release functionally replace the EASTNAME initialization parameter, as follows:

- EASTNAM1 to EASTNAM3

The EASTNAM1 to EASTNAME3 initialization parameters allow the reference of up to three Expanded Access Servers for Tape and Robotics systems when accessing report data that resides on tape or tape emulation optical disks.

These new parameters additionally allow the specification of unit names referenced in the storage group (STORGRP x) parameters that are to be accessed specifically by that Expanded Access Server.

- EROOPT

This new parameter allows you to specify whether the Expanded Retention Option is being used for a new or existing database. You can indicate YES to retain Expanded Retention Initialization parameters, or NO to delete references to all Expanded Retention Initialization parameters.

- EXPDT

This parameter was enhanced to allow a second form of tape expiration date, *yyyymmdd* (in addition to *yyddd*), to conform to IBM's expiration date specifications.

Use of the new form of expiration date will require a supportable level of the IBM operating system and a tape management product, if applicable.

CA LMP

This is the first release of CA-View that requires the use of the CA LMP authorization code system. CA LMP replaces the PRODCOD1 and PRODCOD2 initialization parameters, which have been removed.

CA90s must be installed before you can use CA-View.

Year 2000 Support

Year 2000 support has been added to the new release of CA-View. The product uses a date window to conform to year 2000 compliance. Years 00 to 69 represent the years 2000 to 2069, and years 70 to 99 represent years 1970 to 1999. Year 2000 is recognized as a leap year. Where applicable, years 00 through 69 will be sorted sequentially after years 70 to 99.

Browse ANNOTATE and BOOKMARK Commands

The ANNOTATE and BOOKMARK browse commands, abbreviated A and B, can be used to create or attach comments or labels to the report data. Annotations contain text; bookmarks contain no text, and are used to mark report sections for easy access.

The annotations and bookmarks can be attached to any line of a report. The ANNOTATE command will display previously-attached annotation text and allow input of new annotation text. The newly-added annotation text can be marked as private (viewable by end users only) or public (viewable by all users).

For information about using annotations and bookmarks, refer to Chapter 5, "Browsing Output," in the *CA-View Online User's Guide*.

Browse GOTO Command

This command allows you to display the Annotation/Bookmark Selection list in browse mode, where you can browse the annotations and bookmarks that have been created for a report.

SARDBASE Restore

The SARDBASE RESTORE process has been enhanced for performance and end-user friendliness.

When a SARDBASE RESTORE is performed without specifying the "from" (damaged) CA-View database, restored reports will no longer show PERM or DISK online status, but rather a PTAP or TAPE status. These reports will be immediately accessible by the Expanded Access Server for Tape and Robotics. SARRSP can still be used to restore the reports that were in PERM or DISK status to disk.

Private Logical Views

This new feature allows you to create a private logical view of a report for your own use. Other users cannot access your private view.

You can create a private view if you are defined to the system as a non-restricted user; that is, you have access to the native (unsecured) view of a report.

For more information about using private views, refer to Chapter 5, "Browsing Output," in the *CA-View Online User's Guide*.

Increased Number of Logical Views

The limit of logical views of a report has been increased from 9 to 255. This limit applies to the current public views, new private logical views, and new global logical views. The View Selection panel has been changed to a scrollable selection list.

Indexing

Indexing for private and global views is done as in the logical view definition for public views. For private views, the index defined must match the index definition in a public or global view.

To avoid overloading the system with individual user's indexes, private logical views can only be used to create new page indexes if their index definitions match an existing public or global view index definition.

Global Views Across Many Reports

This new feature allows you to define global logical views across many reports.

When you define a view, you can specify which reports can be formatted with that view definition by specifying a generic Report ID in the definition (for example, PAY*).

Only users with master authority specified by the DEF USER statement can create global logical views.

For more information about using global views, refer to Chapter 5, "Browsing Output," in the *CA-View Online User's Guide*.

Panels Modified for Logical View Enhancements

- The Logical View Selection panel has been changed from a static display containing a maximum of nine logical views to a standard scrollable selection list.
- The Logical View Definition panel has a new field which permits the user to identify the view as private or public. Defining a logical view can now be done via a new command line command, DEF VIEW (rather than only through the browse function). Report ID will be accepted to accommodate the concept of global views (one view definition applies to many reports).
- The SYSOUT (or Report) Selection List has been modified. The Selection column has been changed to accommodate the longer view numbers that can be entered when the user wants to go directly into a desired view via the *Vnnn* selection code.

CA-View 1.7 - New Features and Enhancements

This section presents an overview of the features, commands, and enhancements new in CA-View Release 1.7.

Overview of CA-View 1.7 Modifications

The new features in CA-View 1.7 included: SMP/E installation; ACIF and Xerox cross-report indexing; Xerox Metacode and LCDS PC viewing; a new SAREAS parameter; new SARINIT parameters; and new user exits. Enhancements have been made to index selection, SARDBASE parameters, and SARTDR TADD.

SMP/E Installation

The System Modification Program/Extended (SMP/E) is used to install, tailor, and maintain CA-View 1.7. SMP/E provides the ability to control these activities in a consistent manner.

ACIF and XEROX Cross-Report Indexing

Cross-report indexing can now include ACIF and DVS XEROX reports.

Xerox Metacode and LCDS PC Viewing

CA-View works with a mainframe component called the Document Viewing Services (DVS) Printer Emulator, available from Document Sciences (a Xerox subsidiary).

The Printer Emulator provides Metacode and LCDS conversion and indexing. CA-View is integrated with the Printer Emulator in a functional subsystem which archives the Xerox documents, their indices, and their resources into the CA-View database, where they are available for viewing on the PC through CA-View Workstation and Document Sciences' CompuView Navigator.

New SAREAS Parm MOUNT=DEFER/REPLY

MOUNT=DEFER (the default) means that the tape mounts occur during an OPEN; the operator has no opportunity to reply to the mount request, but mounts can occur in parallel.

The MOUNT=REPLY enhancement allows the operator to reply to the tape mount request, which occurs during dynamic allocation; all mounts are serialized.

New SARINIT Parameters

- EASTDPLX=YES/NO

The default is EASTDPLX=NO, which means that SAREAS will access only the primary volume. EASTDPLX=YES allows SAREAS to access a duplex volume in the event that the primary volume is not cataloged. EASTDPLX=YES would normally be used in a disaster recovery situation where the primary volumes no longer exist or are inaccessible.

- EASTMAXW=*nm*

The default is '00' minutes, indicating no time-outs are to occur for online requests to the SAREAS tape server. A value of 1 to 99 causes CA-View to time-out a request to SAREAS after '*nm*' minutes, thus freeing the user for other work.

- UNITSPEC=*unit1,unit2*

This parameter was created mainly for customers using tape-emulation optical; it allows the administrator to cause CA-View to use the given esoteric unit name in all allocations. It prevents confusion for when devices are defined as the same type, but their media are actually different (cartridges and optical platters, for example). It is also useful for MVS images with physically separate groups of identical devices.

- STORGRX0-9

These extensions of STORGRP allow for the specification of a duplex Volser range, and a maximum number of blocks to be written to a volume for that storage group.

- NGENI

Created for retaining the master index separately from NGENT, all storage group 0's tapes within NGENI are kept. All other storage groups' tapes are kept only if there are reports on them.

New User Exits

The SARACFUX, SARDVSUX, SAREASUX, and SARTPOUX user exits have been added to CA-View Release 1.7 to provide the following functionality:

- SARACFUX

This exit allows SARSTCUX-like processing for ACIF reports archived through SARFSS.

- SARDVSUX

This exit allows SARSTCUX-like processing for XEROX reports.

- SAREASUX

This exit provides for a performance improvement for tape-emulation optical using SAREAS.

- SARTPOUX

This exit provides for EOV processing when a Volser range is used, and is mainly for tape-emulation optical.

Index Selection Enhancement

The main panel now accepts an asterisk (*) as a trailing character for an index value, which provides some wildcard capability. A new SELECT BY option (IL) will position the index selection list to the nearest matching value if no exact match is made.

Performance Improvements in SARDBASE

The stand-alone SARDBASE REORG, used to rebuild the master index, can now run in as little as 15 percent of its pre-CA-View 1.7 execution time. SARDBASE COPY and SARDBASE LOAD have also had some performance improvements.

SARTDR TADD Builds Alternate Index Entries

There is no longer a need to run SARDBASE VERIFY after SARTDR TADD. SARTDR TADD now automatically updates the alternate index so that date selection can be performed immediately.

Prevail/XP—View 1.6.7 - New Features and Enhancements

This section presents an overview of the features, commands, and enhancements new in Prevail/XP—View Release 1.6.7.

Overview of Prevail/XP—View 1.6.7 Modifications

The new features in Prevail/XP—View 1.6.7 included: cross-report indexing; multi-level page indexing; use of expanded access server for tape and robotics; 3480 block ID tape processing; compressed format tape backup; tape storage groups; AFP report viewing and printing; cross-memory drivers for ISPF, TSO, and CA-Roscoe; an interface to GSS REXX; download of AFP resources and files to the PC; DBCS support; and new initialization and ERO parameters.

Enhancements were made to: the backup cycle, optical migration, online viewing and retrieval, ERO, logical viewing, data integrity, language support, page indexing, and printing. Some initialization parameters were enhanced, and others were incorporated into other parameters.

Cross-Report Indexing

You can now assign names to page indexes, and apply the name across multiple reports. For example, you can define:

- A page index called EMPLNAME for report PAYROLL
- A page index called EMPLNAME for report QUARTER (separate index location if necessary)

Online retrieval now gives you the ability to specify page index names, and/or page index values found in reports, in addition to SYSOUT ID. From the VIEW primary panel, some possible selection criteria are:

- Select all reports with the SYSOUT ID PAYROLL
- Select all reports with the SYSOUT ID PAYROLL and page index EMPLNAME
- Select all reports (any SYSOUT ID) with the value "BILL JONES" found for the page index EMPLNAME

You can limit the number of reports linked to a page index in two ways, as follows:

- The primary disk database is searched for online retrieval, so the page index must be on the primary disk database to be considered for display in a selection list. Page indexes can now reside on disk even after their reports have expired. Separate retention can be assigned with the new IRETPD ERO table parameter.
- As part of the logical view specification, you can specify whether a logical view (and its page indexes) will participate in cross-report indexing. This allows you to limit searching as a VIEW database gets larger.

Expanded Access Server for Tape and Robotics

You can now view reports directly from tape, without loading back to disk. This means that you will use less DASD space for temporarily loaded reports and require fewer tape mounts for tapes being accessed by more than one user.

The Expanded Access Server for Tape/Robotics has many parameters that you can customize, including:

- Total number of tape drives that may be accessed at one time (none are dedicated exclusively to the server)
- Number of buffers to allocate for reading data from tape into memory, and number of blocks to read ahead
- Number of minutes a tape is idle before its drive is automatically freed

You can also designate particular reports to not be accessible by the Expanded Access Server, with the new VIEW TAPE ERO table parameter.

Multi-Level Page Indexing

You can now sub-index a page index. For example, a primary index might be *division number*, with a sub-index to that *region*, and a sub-index to that *account name*.

A properly indexed report can reduce system resource demands. You can specify that a report is to reside on tape or optical, but its page index stays on primary disk. For example, to verify that a particular account number is in the system, you can obtain this information from the page index without having to access the report itself. Up to eight levels of page indexing can be created.

3480 Block ID Tape Processing

You can now create backup tapes using 3480 block ID tape. 3480 processing improves performance for all tape processes, such as:

- LOAD from tape to disk
- RESTORE from tape to disk
- PRINT from tape
- Consolidate backup tapes with SARPAC

Backup Tapes: Compressed Format Option

When VIEW archives to primary disk, it compresses the data. You now have the option of creating backup tapes in compressed format, in addition to regular, non-compressed format. Also, a new improved compression algorithm has been implemented.

Backup Tapes: Storage Groups

You can now specify up to nine separate storage groups for tape, in addition to a default group. Tape storage groups allow you to:

- Separate reports into groups by viewing frequency
This feature can be used to maximize performance of the Expanded Access Server, which allows you to view from tape without loading to disk.
- Separate reports into groups by their retention requirements
This feature reduces the need for tape consolidation.

Backup Cycle Enhanced

The VIEW backup cycle has been changed from four phases to two, which results in an improvement in overall performance.

Optical Migration Enhanced

Optical migration has been enhanced to provide more flexibility: there is now a separate optical migration subtask of the VIEW started task. Now you can:

- Have VIEW migrate to optical at predefined intervals (up to four)
- Delete the tape copy when the report goes to optical
- Only allow migration by the administrator bringing up the subtask (allow no automatic migration)
- Allow migration via a batch job
- Have the backup cycle perform all optical migration (SAR 6.5 and previous releases work this way)

More Reporting on Tape Backup and Optical Migration

Two new reports can be generated, as follows:

- **SARBKLST**

The started task produces this informational report when it completes a backup cycle. This report is created by specifying a SARBKLST DD statement in the started task JCL. In addition to listing reports written to tape, SARBKLST now lists all reports that were deleted, and any tapes that were uncataloged.

- **SARD2LST**

This report only provides information on optical migration. This report is created by adding a SARD2LST DD statement in the VIEW started task JCL.

AFP Report Viewing/Printing

AFP reports can now be viewed on any 3270 terminal (text only) and on any GDDM terminal (BrowseMaster composed report).

BrowseMaster composed versions of AFP reports can also be **printed** from GDDM terminals.

Online Retrieval: New Commands

The following new selection list commands have been added:

- **DI**
Deletes the space on primary disk for the page index of a report
Note that if a report's page indexes are not on primary disk, that report does not participate in cross report indexing.
- **LI**
Loads the page indexes for the report from either tape or optical to disk
Note that a report's page indexes must be on primary disk for it to participate in cross- report indexing.
- **LT**
Loads the report, and all of its page indexes, from tape **only** to disk; this command can be used to bypass LOADING from optical disk.
- **LX**
Loads the page indexes for the report from tape **only** to disk; this command can be used to bypass LOADING from optical disk.

Cross-Memory Drivers for ISPF, TSO, and CA-Roscoe

New interfaces have been created that allow you to access TSO, ISPF, or CA-Roscoe via cross-memory services; this provides the following advantages:

- The operator interface to the cross-memory started task allows you to cancel users, specify a TIMEOUT interval, etc.
- No authorization is necessary from TSO, ISPF, or CA-Roscoe (cross-memory provides the authorization).
- Multiple online interfaces can run concurrently.
- Multiple versions of VIEW can run simultaneously making migration easier.

Asynchronous SARTDR: Reload to Disk

The SARTDR utility no longer requires exclusive access to the database. It can run while other database activities, such as archive or backup, are occurring. SARTDR is used to load reports from tape to disk.

Color and Highlighting

The VIEW online panel system now supports the color and highlight attributes blink and reverse video.

Filters: Online Viewing Enhanced

You can define filters, and view online reports through those filters. Filters allow you to assign color and highlighting to areas of a report based on:

- Boolean logic (AND, OR, NOT)
- Multiple comparisons
- Nested filter rules

As an example, you could have a filter that instructs VIEW to:

- Highlight every third line of the report (to improve online readability)
- Color all accounts over 60 days YELLOW
- Color all accounts over 90 days RED
- Apply reverse video to accounts that are over 80 days, but under 90 days

Filter results can be printed, and filters can be either saved in the database, or defined "on the fly" for a single browsing session.

New Retention (ERO) Flexibility

Enhancements to ERO allow you to:

- Establish the ERO table as the single point of retention control, so that all reports are deleted when they expire from ERO, instead of going to NGEND or NGENT control (PRETAIN initialization parameter)
- Delete a report from the DASD database if has not been browsed for *nn* days (LRETPD ERO table parameter)
- Make the ERO table retroactive—that is, request that ERO consider every archived SYSOUT for expanded retention, in addition to those archived since the last backup (EROPRO initialization parameter)
- Set separate retention periods for a report and its page index or indexes (IRETPD ERO table parameter)

This is particularly useful with the new cross-report indexing feature, because an index must reside on DASD to participate in cross-indexing.

- Delete the tape copy of a report when the report is migrated to optical disk (DSK2NOTP ERO table parameter)

Logical Viewing: Color

Logical viewing now supports color assignments to columns and headings.

Data Integrity

- **Tape Scratching**

The new SARTCHK utility ensures that you do not allow any active VIEW tapes to be scratched (uncataloged) by your tape management system, and then overwritten. SARTCHK creates a list of any active VIEW tapes that have been uncataloged.

- **Lost or Damaged Tapes**

The SARTSLST utility can be run against the disk database to see what reports were on a tape, if a backup tape is lost, or damaged and unreadable. You can code a DD statement to have VIEW automatically backup those reports again, or delete them.

GSS: REXX Interface

You can now code REXX routines to cause other GSS (Global Subsystem) products to invoke the VIEW batch program SARBCH; you can use SARBCH to perform several administrative functions, such as:

- Add, delete, or modify user definitions
- Produce a listing of users or reports
- Print reports

For example, you can have a report printed whenever a particular job completes successfully.

Unattended Download

You can now request unattended download of files from VIEW to an NJE node on the LAN that is serving PCs running VIEW Workstation. CA-Connect is required.

AFP - Download Resources Separately

AFP resources can now be downloaded from the mainframe to VIEW Workstations independently from the reports that use them. Thus, all necessary resources can be downloaded at one time, and each time a VIEW Workstation user views an AFP report, the resource will already have been downloaded to the PC.

Language Support Enhanced

Support of translation tables for non-display or non-printing characters is now more flexible. With the CODEPAGE initialization parameter, you can point to any translation table. VIEW is supplied with tables for English and Kanji.

Page Indexing Enhanced

You can now index a report that is already archived to the VIEW database. For example, this allows you to change the page index criteria on an already archived report, and view the old report with the new index criteria.

More Granularity in Backups

You can use the SARBKTUX user exit to indicate that certain reports are not to be backed up to tape. Possible uses are:

- If a report was rerun, and its condition code was greater than 16, do not back it up.
- Do not back up a particular job class (for example, dumps, etc.).
- Do not back up CICS started task output.

Print While Browsing

In addition to printing from VIEW's report selection lists, you can now print from the browse panel, while looking at a report. Both online (PRT) and batch (JPRT) printing are supported.

DBCS Support

All VIEW online interfaces (TSO, IMS, etc.) except that VM now supports the display of double-byte character set characters.

New Initialization Parameters and ERO Parameters

- **ACIFRES**
Specifies whether VIEW should reprint AFP reports with embedded resources

This allows VIEW to manage the resources associated with a report. Even if a resource on your system has been updated since the report was archived, VIEW will use the appropriate older resource at reprint time.
- **BCHMAXRC**
Specifies the maximum return code which the SARBCH program will issue
- **CODEPAGE**
Specifies which translation table (also called a codepage) VIEW is to use

The table is used to map non-display characters, or characters needed for a particular language.
- **DIRALLOC**
Specifies the number of blocks allocated for Prevail/XP—Deliver (formerly Express Delivery) direct-to-VIEW archival
- **EASTNAME**
Specifies the subsystem name of the Expanded Access Server for Tape and Robotics
- **EROPRO**
Allows you to make the ERO table retroactive—that is, to request that ERO consider every archived SYSOUT for expanded retention

With SAR 6.5 and previous releases, only the SYSOUTs archived since the last backup were considered for expanded retention.
- **EXPOPRV**
Specifies whether reprints requested in Express Operator (EXPO) mode will go to the user requesting the reprint, or to the entire distribution list for the report
- **JES3ID**
Specifies an alternate subsystem ID for JES3
- **LGNRETRY**
Specifies the number of logon failures permitted before a user is forced off line
- **NEWPASS**
Specifies whether a new password must be entered twice to verify its accuracy

- **PRTASA**
Specifies whether VIEW reprints should be in ASA or machine control characters
- **ROUTBKP**
Specifies a route code for the informational VIEW backup messages, SARBKT61 through SARBKT63
- **SELPNLS**
Specifies the number of selection panels to be used in the left/right scrolling report selection lists
- **TAPEOPT**
Specifies options for tape processing, including use of 3420 or 3480/3490 block ID processing and use of hardware and software compaction
- **TP054**
Specifies whether message SARTP054 (tape requires file protect ring) is to be displayed for the remounting of archival tapes

New ERO Initialization Parameters:

- **DSK2INTV**
Specifies the intervals during which the optical migration subtask will operate

This parameter works in conjunction with the DSK2MIGD and DSK2TIME parameters to schedule automatic optical migration.
- **DSK2MIGD**
Specifies what optical migration will be allowed each day of the week

The four options are A (automatic), M (manually by the administrator), B (by the backup cycle), and N (no migration to optical).
- **DSK2TIME**
Specifies the time intervals during which optical migration will automatically occur—up to four ranges can be specified
- **PRETAIN**
Specifies that a report is to be deleted when it expires from ERO (do not let it default to NGEND or NGENT global control)

Modified Initialization Parameters

FINDLIM=value,maxvalue

FINDLIM limits the number of records searched before VIEW requires the user to re-invoke the online FIND command.

This parameter is a default for the LIMIT online command, and may be overridden by that command. This new form of the FINDLIM parameter sets the maximum override value to maxvalue. For example, a system can have a default FINDLIM of 1,000 records, and allow users to override this, but not allow them to exceed a FINDLIM of 3,000.

Removed Initialization Parameters

- FINDMAX

This parameter was available via PTF; it set a maximum value for the FINDLIM override via the online LIMIT command.

FINDMAX has been incorporated into the FINDLIM parameter.

- MAXGENT

This parameter has been incorporated into the new STORGRP0 parameter and the STORGRP1 through STORGRP9 ERO parameters.

- TAPEIDX

This parameter has been incorporated into the new STORGRP0 parameter and the STORGRP1 through STORGRP9 ERO parameters.

- TCOMPACT

This parameter has been incorporated into the new TAPEOPT parameter as the subparameter HARD|NOHARD.

- TVSER1 and TVSER2

These parameters have been incorporated into the new STORGPPO parameter and the STORGRP1 through STORGRP9 ERO parameters.

- UNITT

This parameter has been incorporated into the new STORGRP0 parameter and the STORGRP1 through STORGRP9 ERO parameters.

SAR 6.5 - New Features and Enhancements

This section presents an overview of the features, commands, and enhancements new in SAR Release 6.5.

Overview of SAR 6.5 Modifications

The new features in SAR 6.5 include: archival of AFP reports; archival to IBM DASD emulation optical devices; SMS support for database allocation; user-defined exceptional condition checking; VM/XA support; the M(igrate) command which permits migration to optical disk; ESCON DASD support; and the ability to change the attributes of archived SYSOUTs.

Enhancements include: asynchronous database REORG; right-scrolling capabilities from primary selection lists; online database statistics; automatic selection list refresh; VTAM interface and error recovery capabilities; cleanup processing in SARBCH LOAD and non-shared JES environments; flexible reprinting in Express Delivery; page index access; retention on optical disk; and the addition of the LOCATE field in the logical view selection panel.

Improved Performance

The internal memory management algorithm has been modified which results in a general performance improvement in all aspects of the product.

AFP Reports: Archival

You can now archive AFP data with the SAR ACIF interface. Note that you can use the SARPC product (Version 3.0 or higher) to view those AFP reports.

New Optical Disk Driver

The new SARD2DOO optical disk driver allows you to archive to IBM DASD emulation optical devices (including the ESA/370 and ESA/390 3995 model 151 Optical Library Dataserver) with page level access.

Asynchronous Database REORG

The REORG function of the SARDBASE utility no longer requires exclusive access to the database; it can run while other database activities, such as archiving or backing up, are occurring. Additionally, I/O performance has been enhanced significantly because the number of I/O operations that occur has been reduced.

SMS Support for Database Allocation

The SAR database can now be allocated under the control of IBM's data management system, SMS. New keywords for the ADDDS statement of the SARDBASE utility are available to identify storage class, etc.

Scrollable Selection Lists: More Information Fields

You can now scroll to the right from the primary selection lists for many new information fields, including:

- A new user comment field
- ERO (Expanded Retention Option) information

Online Database Statistics

A new online command displays a panel showing the number of lines on DASD, the DASD usage, and the number of reports both on DASD and contained in the database.

User Defined Exceptional Condition Checking

You can now specify character strings to identify exceptional conditions.

Once recognized, these conditions are processed in the same way as the system exception checking, via table SARXCTAB. A new user exit, SARXCTUX, has been added to provide further user control of exceptional condition processing.

Automatic Selection List Refresh

You can now configure SAR so that whenever you press ENTER, the selection list is re-evaluated as though you had entered the REDISP command. This can be controlled at the system-wide level by the REDISP initialization parameter, or at the user level by the REDISP line command.

VTAM Interface

The VTAM online interface has been enhanced, as follows:

- The VTAM interface has been installed into the cross-memory region; this allows one region to support CICS, IMS, and VTAM users at the same time.
- AR cross-memory operator commands, including those that list and cancel users, now also apply to the VTAM interface. Additional operator commands are also available.
- The VTAM interface now supports the LONGWAIT and CANCEL parameters so users who exceed a specified period of inactivity may be automatically canceled.
- Multiple VTAM interface regions are now supported.
- Dynamic logmode support has been enhanced.

The interface supports SNA QLTERY logmode commands, with both SAA and non-SAA terminals supported.

- SYSPRINT message log support has been enhanced.

Messages generated by cross-memory (SARXMS) can be written to a SYSPRINT file with time stamps.

- User CICS menu transaction selection list has been enhanced.

The CICS menu transaction list has been extended to allow the automatic access of a SYSOUT selection list when SAR is first brought up.

Improved VTAM Error Recovery

The VTAM online interface error recovery capability has been enhanced, as follows:

- The following events now cause a CANCEL operator command to be issued:
 - LONGWAIT parameter exceeded and CANCEL parameter is set to YES
 - CICS TIMEOUT is exceeded
 - Various VTAM I/O errors
 - Control block errors
- Application error messages (such as JOB SUBN=D, SAR database errors, etc.) are now reported in the output message log.
- ATTN key interrupts, unexpected VTAM asynch errors, and logon screen sizes that can be determined with an SNA QUERY are reported. (ATTN key interrupts and VTAM asynch errors are then ignored).

- VTAM temporary errors are ignored and not reported. If the SYSREQ or TEST keys are pressed, the last screen is redisplayed when you switch the terminal back to application mode.
- If there is a terminal power failure, or COAX cable loss, the screen is redisplayed once per second for 2 minutes. If the terminal error is not cleared by then, the session is canceled.
- VTAM error codes are converted to text before being issued to the log.

Cleanup Processing: SARBCH LOAD

SARBCH LOAD program now has enhanced cleanup processing. If a LOAD job is canceled by the operator, or any other abend occurs, the SYSOUT that was being LOADED goes back to TAPE status.

Cleanup Processing: Non-Shared JES Environments

If you run in a non-shared JES environment, the SAR backup cycle cannot verify the OPEN status of an Express Delivery direct-to-SAR report. CLEAN, a new initialization parameter, allows you specify whether the SAR backup cycle should process these reports. If CLEAN=NO is specified, you can invoke cleanup processing manually with the online C command, or the F SARSTC, CLEAN operator command.

VM/XA Support

SAR running under VM can now run in XA mode.

Express Delivery Report Reprinting: Flexible Copies

For an Express Delivery report, the flexible number of copies ("*" for copies in the Distribution Identifier panel) is honored. The asterisk indicates that the number of copies specified in the JCL that originally created the report is to be used.

Page Index Accessing Enhanced

The page separation indexing information can now be randomly accessed. It is no longer necessary to read in the entire index when a SYSOUT is selected for browsing or printing.

This change eliminates the delay experienced when selecting a very large indexed SYSOUT for browsing or printing from optical disk. In addition, storage allocation is decreased, since the page separation index is no longer read into memory.

An existing SYSOUT group, archived prior to this release, will have been stored in the old format. When selected for browsing or printing, it will therefore still require the reading of its entire page separation index into memory.

Expanded Retention on Optical Disk Enhanced

Now you can specify retention periods by SYSOUT ID for reports archived to optical disk. The DSK2DAYS parameter still sets the default retention for all reports archived to optical disk.

Migrate Command: Optical Disk Archival

The M(igrate) command, a new line command, has been added to the selection lists. A SYSOUT is migrated to optical disk with the next SAR backup cycle when an M command is issued against it.

LOCATE Field in Logical View Panel

The logical view selection panel now contains LOCATE, a new input field. When selecting a logical view that contains a page separation index, you can enter an initial LOCATE value for the page separation index selection. LOCATE works as follows:

- If an exact match occurs between the initial LOCATE value and a page separation index value, the SYSOUT is displayed directly; the page separation selection list is skipped; otherwise, the page separation selection list is presented and positioned as if you had entered a LOCATE command with the value.
- If you specify an initial locate value for a logical view that does not contain a page separation index, the LOCATE value is ignored.

ESCON DASD Support

SAR now exploits Enterprise Systems Connection (ESCON) DASD architecture.

Changing the Attributes of Archived SYSOUTs

You can now use the new `SARBCH CHANGE` control statement to change the attributes of SYSOUTs that have already been archived to the SAR database. You can change print attributes, backup status, and user fields.

Chapter 1

Introducing CA-View

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Chapter 1

Introducing CA-View

In This Chapter

This chapter presents an overview of CA-View processing and features.

Overview of CA-View

CA-View is a facility that archives and retrieves computer output (SYSOUT). Any SYSOUT can be specified for archiving. In a production environment, CA-View is especially well-suited to the management of the following classes of data:

- Production JCL listings and messages
- Production reports
- SYSLOG data

SYSLOG data is archived whenever it is queued for output. The automatic command facility can be used to queue SYSLOG data at regular intervals. Production reports can be automatically archived and printed. Should a report get lost or need to be reprinted, the retrieval system reprints it from archival, eliminating the need for reruns. Large reports can be archived directly to tape to minimize disk requirements.

When a job, started task, or time-sharing session has output queued for processing, any output meeting the archival criteria is written to the current disk generation (or tape, if specified). At a specified time (or at specified intervals), the current generation on disk is backed up to tape. A new disk generation is created, and archiving continues with this new generation.

Exceptional Condition Checking

Using CA-View, production JCL listings and messages can be automatically archived and retained for as long as you want. You can optionally specify the action to take whenever an exceptional condition is encountered; actions include issuing a message to the operator and printing the SYSOUT for the job.

CA-View checks for the following exceptional conditions:

- Non-zero condition code
- System or user abend
- JCL error
- Data set cataloging error
- Data set not deleted error
- Operator cancel of allocation request
- User-specified condition

The conditions can be modified as needed by using control statement inputs to the CA-View started task (SARSTC).

Retention and Retrieval

Compilation listings, production reports, and SYSOUT can be retained on a long-term basis on disk or tape as a feature of the Expanded Retention Option.

You can retrieve SYSOUT easily from an online terminal using the online retrieval facility. You can select one or all generations of archived SYSOUT. You are presented with a selection list of the SYSOUT groups (a group of data sets having the same job name) to which you are authorized access.

You can select a SYSOUT group for browsing or printing and can scroll through the SYSOUTs using the CA-View Browse facility's SYSOUT indexing and logical view features, which allow you to automatically display only the portion of a SYSOUT that you need. You can also search for specific character strings with the FIND command.

Full batch retrieval capability is also provided with the SARBCH utility.

Downloading and Printing

With CA-View, you can do the following:

- Transmit and download SYSOUT data to a personal computer running CA-DocView (formerly CA-View Workstation), a separate product that runs on a PC with Windows 95 or Windows NT
- Print to VTAM printers via the CA-View VTAM Print option and CA-Spool
- Print to other external printing products with the External Printing Interface

General Processing Information

SYSOUT Groups

SYSOUT is archived in units called *SYSOUT groups*. A SYSOUT group is comprised of all SYSOUT data sets for a job having the same characteristics (for example, the same SYSOUT ID, the same SYSOUT class, the same forms name, and the same FCB).

Each individual SYSOUT group is assigned a 1- to 12-character name referred to as the SYSOUT ID. The default ID assigned to a SYSOUT group is its job name. You can override the default ID for a SYSOUT group by coding another name as the second positional parameter of the SYSOUT parameter on its DD statement. The ID is coded as a 1- to 8-character program name conforming to standard JCL syntax rules.

Syntax

SYSOUT=(class, id, form)

Specifying a dollar sign as the first character of the program name indicates that the remaining characters of the name are to be appended to the job name to form the SYSOUT ID. If the resulting ID is longer than 12 characters, it is truncated on the right.

Two other national characters—the at sign (@) and pound sign (#)—are reserved by CA-View, and should not be used as the first character of the program name.

Record Length

The logical record for reports processed by CA-View cannot exceed 32752 for fixed-length records or 32756 for variable-length records. This includes the carriage control character.

Example of SYSOUT ID Assignments

The following example assumes the following DD statements are contained in a job named PRODJOB:

```
//DD1 DD SYSOUT=A
//DD2 DD SYSOUT=(A,REPORT1)
//DD3 DD SYSOUT=(A,$R1)
//DD4 DD SYSOUT=(A,$TOOLONG)
```

The SYSOUT IDs that are assigned to data sets are:

DD name	SYSOUT ID
DD1	PRODJOB
DD2	REPORT1
DD3	PRODJOBR1
DD4	PRODJOBTOOLO

Other Features

- User Exits** CA-View provides a number of user exits that allow you to tailor the product to meet your site's requirements. These user exits are links to the CA-View source code.
- Alternate Date Format** The default date format for all dates is *mm/dd/yy* (month, day, year). You can set an alternate format of *dd/mm/yy*. The *mm/dd/yy* format is used throughout the CA-View documentation.
- CA-View Printing Capabilities** The printing capabilities provided by CA-View include the ability to specify variables that range from lines-printed and pages-printed limits to multiple printer systems. CA-View allows you to print to standard printers and VTAM printers; it also allows you to print through CA-Spool. An External Printing interface is also provided to print to other products.

PC Transmission

Support is provided for transmitting (or downloading) SYSOUT data to CA-DocView (formerly CA-View Workstation), a product that runs on a PC under Windows 95 or Windows NT.

A SYSOUT group is queued for transmission to your PC session by printing it in batch mode or online via the J or P SYSOUT selection code. From the Print Attribute Panels that are displayed by these options, you specify a destination of PC as follows:

```
DEST ==> pc
```

To queue a SYSOUT group for transmission to another user's PC session, you append a period and the user's ID to the destination PC. For example, to queue a SYSOUT group to user TOM, specify:

```
DEST ==> pc.tom
```

Alternatively, you can use a device synonym as specified using the Define Device command.

As with printing a SYSOUT group, you can modify the page format by specifying a logical view, and you can limit the data that is transmitted by specifying ranges of pages or records.

Double-Byte Character Sets (DBCS)

CA-View provides support for DBCS characters such as Chinese, Japanese, or Korean. For CA-View to recognize and process DBCS data, you must ensure the following:

- DBCS data is enclosed by shift out (X'0E')/shift-in (X'0F') characters
- Shift-out/shift-in pairing is completed in each logical record
- PRMODE=SOSI1 or PRMODE=SOSI2 is specified for the data set in its //OUTPUT statement (an IBM requirement for printing to a 3800 printer)

Note: For JES3, the PRMODE parameter is only available to CA-View when a data set is archived by the automatic report archival feature of CA-View system extensions, or by the direct-to-CA-View archival feature of CA-Deliver.

You can view DBCS data only on a workstation that provides DBCS input/output capability such as 3270 information display. Currently, only the ISPF and Native TSO online retrieval options support the viewing of DBCS data.

To reprint a SYSOUT group containing DBCS data, you can use selection code J from online retrieval or the batch retrieval print function. The printer to which the output is directed must be controlled by the Print Services Facility (PSF).



Chapter 2

Initialization Parameters

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Chapter 2

Initialization Parameters

In This Chapter

This chapter explains how to:

- Set and change initialization parameters, which control the CA-View customization options
- Set and change the expanded retention initialization parameters

Setting and Changing Initialization Parameters

The SARINIT program sets or changes initialization parameters in the CA-View database. Using these parameters, you can modify the CA-View customization options.

Job Control Statements

The following job control statements are required to execute SARINIT:

Statement	Description
JOB	Initiates the job
EXEC	Specifies the program name (PGM=SARINIT) and, optionally, the high-level name of the CA-View database as the PARM parameter (PARM=dbname)
STEPLIB DD	Defines the load library containing SARINIT If the program resides in a link list library, omit this statement.
SYSPRINT DD	Defines the sequential output data set used for listing the statements and messages If this is not a SYSOUT data set, DCB=BLKSIZE=nnn must be coded, where nnn is a multiple of 121.

Continued

Continued

Statement	Description
SYSIN DD	Defines a card image data set containing the parameter statements

Initialization Parameter Descriptions

The SARINIT program reads a set of parameter statements. For a new database, it initializes a new Master Control Record (MCR) and writes it out to the master index. If a statement for one of the parameters is omitted, default values are used.

For an existing database, SARINIT updates the existing MCR. Any parameter for which a statement is provided is set to the value supplied. If a parameter statement is supplied without a value, the parameter is set to its default value. Any parameter for which no statement is supplied remains unchanged.

The archival started task (SARSTC) must be stopped before changing any parameters in its master index.

Format of SARINIT Statements

Parameter statements are coded as card images and have the following format:

parameter=value

- The parameter must begin in column 1, followed by an equal sign and the value to be assigned to the parameter.
- No blanks can be coded between the parameter and the equal sign nor between the equal sign and the value.
- Only one parameter can be coded per card image.
- Comments can be included within the parameter statements by coding an asterisk in column 1 of the card image containing the comment.

CA-ACF2

This parameter specifies whether CA-View performs CA-ACF2 security checking when retrieving individual SYSOUT groups. This parameter supplies the high-level index used to define the SYSOUT group to CA-ACF2 and is mutually exclusive with the RACF parameter.

Syntax:

ACF2=#####

There is no default.

ACF2SCC

This parameter specifies the number of the CA-ACF2 validate security interface SVC. This parameter has no meaning unless the CA-ACF2 parameter is specified.

Syntax: **ACF2SVC=nnn**

The default is 255.

ACIFRES

This parameter specifies whether CA-View should reprint AFP reports with embedded resources, allowing CA-View to manage the resources associated with a report.

Syntax: **ACIFRES=YES | NO**

The default is YES.

YES Reprints AFP reports with embedded resources, even if a resource on your system has been updated since the report was archived

CA-View will use the appropriate older resource at reprint time.

NO CA-View reprints AFP reports without embedded resources.

ANNOTATE

on
This parameter sets default annotation on/off mode.

Syntax: **ANNOTATE=ON | OFF**

The default is OFF.

Values are as follows:

ON Displays reports with annotation on

OFF Displays reports with annotation off

You can use the ANNOTATE command when you are browsing reports.

ARCHMSG

This parameter specifies whether the SARSTC22 archival message is issued.

Syntax: **ARCHMSG=YES | NO**

The default is NO.

ARCHSWAP

This parameter specifies whether the CA-View started task is swappable.

Syntax: **ARCHSWAP=YES | NO**

The default is NO.

Values are as follows:

YES Marks the started task as swappable

NO Marks the started task as non-swappable

BCHMAXRC

This parameter specifies the maximum return code that the SARBCH program will issue.

Syntax: **BCHMAXRC=nnn**

The maximum is 255.

CCONDISP

This parameter specifies CA-View's system-wide default value that controls the viewing of carriage control characters in online logical viewing.

Syntax: **CCONDISP=YES | NO**

The default is YES.

Values are as follows:

YES Sets the carriage control character viewing default to YES for online viewing.

NO Sets the carriage control character viewing default to NO for online viewing.

CLEAN

This parameter specifies whether the CA-View backup cycle will invoke cleanup processing of CA-Deliver direct-to-CA-View reports with OPEN status.

Syntax *yes*

CLEAN=YES | NO

The default is YES.

Values are as follows:

YES Specifies cleanup processing

NO Specifies no cleanup processing

Sites that run in a non-shared JES environment should set CLEAN=NO, because CA-View cannot determine if the report was left in OPEN status or if it is actually being processed.

Note: If CLEAN=NO, cleanup must be done manually with the online C command, or with the following operator command:

F SARSTC, CLEAN

CLSL

This parameter specifies a list of 1 to 8 SYSOUT classes used to select SYSOUT for archival. When CLSL is specified, NEWCLSL should also be specified to prevent a print-archival-print loop. If neither CLSL, DEST, nor FORM is specified, all SYSOUT is archived.

Syntax

CLSL=xxxxxxxx

The default is ALL CLASSES.

CMAMAX

This parameter specifies the maximum number of lines that can be printed when using CA-Spool.

Syntax

CMAMAX=nnnn

The default is 5000.

The minimum value is 1; the maximum value is 16770000.

CMASPOOL

This parameter specifies the name of the CA-Spool subsystem and corresponds to the CA-Spool SUBID configuration parameter located in member ESFPARM. CMASPOOL is used when printing using CA-Spool.

Syntax: **CMASPOOL=*subsys***

There is no default.

CODEPAGE

This parameter specifies which translation table (or codepage) CA-View is to use. The table is used to map non-display characters, or characters needed for a particular language.

Syntax: **CODEPAGE=*xxx***

The default is 037.

The tables are named EBCCP*xxx* with the *xxx* characters being unique for different tables. The translation tables supplied on the CA-View distribution tape are shown after the default value for this parameter.

DAYS

This parameter specifies a string of seven characters with each character corresponding to one day of the week from Monday through Sunday. Each of the characters is specified as either Y or N.

Syntax: **DAYS=*YYYYYYY***

The default is YYYYYYY.

- Y Specifies that the backup cycle can be automatically initiated by CA-View on that day of the week.
- N Suppresses the automatic backup cycle on that day of the week.

See the TIME command later in this chapter for more information.

DBMSGFRQ

This parameter specifies the frequency or interval (from 1 to 65535) in number of records at which console messages are produced with the SARDBASE utility.

Syntax **DBMSGFRQ=nnnn**

The default is 5000.

Following are the console messages produced with the SARDBASE utility:

```
SARBKT63 STANDARD|INTERIM PHASE n PROCESSING rrrrrr,
          ARCHIVED ON date AT time
SARDBG05 REORGANIZING jobname, GEN=gen, ARCHIVED ON
          date AT time
SARDBR03 ATTEMPT TO COPY SYSOUT GROUP FROM OLD DATA
          BASE - ID=id, GEN=gen, SEQ=seq
SARDBR20 SYSOUT GROUP ADDED TO INDEX - ID=id,
          GEN=gen, SEQ=seq
SARDBV11 INDEX VERIFICATION FOR ID=id, GEN=gen, SEQ=seq
```

DBTHRESH

This parameter specifies a threshold percentage of database capacity.

Syntax **DBTHRESH=nn**

The default is 80.

When the threshold is reached, the following message displays:

```
SARDBI23 XXXXXXXX DATABASE IS AT nn% UTILIZATION
```

DEFMODE

This parameter specifies the system default user mode used for new users. This default user mode applies to new users who have not been predefined to the CA-View system by the DEF USER command.

Syntax **DEFMODE=abcde**

The default is YNNNN.

Each position is specified as follows:

- Y The user can enter a specific online operating mode
- N The user cannot enter a specific online operating mode
- D The default mode for a first-time user

If there are multiple Ds, the first one is used. If there is no D, the first Y is used to indicate the initial mode for a first-time user.

If DEFMODE=NNNNN is specified, no new users will be permitted. The following table explains the values for *a*, *b*, *c*, *d*, *e* in the parameter statement:

Reference Letter	Mode	Values
<i>a</i>	ALL	Y N D
<i>b</i>	Express operations	Y N D
<i>c</i>	Express	Y N D
<i>d</i>	SAR operations	Y N D
<i>e</i>	SAR	Y N D

For example, DEFMODE=YNNNN means Yes for ALL mode and No for the remainder of the modes.

DELETE

This parameter specifies whether SYSOUT groups can be deleted by online users.

Syntax

DELETE=YES|NO

The default is NO.

DESC

This parameter specifies the descriptor code used for exceptional condition messages (message ID SARSTC99).

Syntax

DESC=*nn*

The default value is 2.

The default value highlights the messages and prevents them from rolling off a console in roll-delete mode. A value of 7 allows the messages to roll off and be deleted. See the ROUT command later in this chapter for more information.

DEST

This parameter specifies the destination (remote name) used to select SYSOUT for archival.

Syntax

DEST=*xxxxxxxx*

The default is ALL DESTINATIONS.

When DEST is specified, NEWDEST should also be specified to prevent a print-archival-print loop. If neither CLSL, DEST, nor FORM is specified, all SYSOUT is archived.

DIRALLOC

This parameter specifies the number of blocks allocated for CA-Deliver-direct-to-CA-View archival.

Syntax

DIRALLOC=nnnn

The default is 50.

The larger the value, the fewer the number of times large reports archived via CA-Deliver direct-to CA-View archival will have to request additional blocks. The lower the value, the greater the chance of archiving into a database which is near capacity.

EASTDPLX

This parameter specifies whether SAREAS will try to access a duplex volume if the primary volume is not cataloged. EASTDPLX=YES is normally used in a disaster recovery situation, where the primary volumes no longer exist or are inaccessible.

Syntax

EASTDPLX=YES | NO

The default is NO.

EASTMAXW

This parameter specifies the length of time to wait (in minutes) before time-outs are to occur for online requests to the SAREAS tape server.

Syntax

EASTMAXW=nn

The default, EASTMAXW=00, indicates no time-outs are to occur.

EASTNAM1 to EASTNAM3

These parameters allow reference to a maximum of three expanded access servers for tape and robotics when accessing report data that resides on tape or tape emulation optical (see Chapter 3, "Configuring CA-View," for more information). The EASTNAM n parameters specify the subsystem names of the expanded access servers and related unit names used by the expanded access server. The syntax is as follows:

Syntax **EASTNAM n =*eas-name/eas-unit1, eas-unit2***

where:

- n Specifies a number (from 1 to 3) used to reference up to three expanded access servers
- eas-name* Specifies the four-character subsystem name of the expanded access server
- eas-unit1* Specifies the optional unit name referenced in a STORGRP n parameter that can be accessed by the expanded access server
- eas-unit2* Specifies the optional second unit name referenced in a STORGRP n parameter that can be accessed by the expanded access server

If both *eas-unit1* and *eas-unit2* are omitted in a EASTNAM n parameter, all unit names not specifically identified by another EASTNAM n parameter can be accessed by this expanded access server subsystem.

The EASTNAM n parameter fields must be specified in full. Individual parameter field updates are not supported.

You can nullify or remove an EASTNAM n parameter by specifying no parameters. For example:

EASTNAM2=

There is no default expanded access server subsystem.

EXPDT

This parameter specifies the expiration date (mutually exclusive with the RETPD parameter) used for allocating a new tape data set. The most recently entered option (EXPDT or RETPD) takes precedence over the other.

Syntax **EXPDT=*yyddd***
EXPDT=*yyyyddd*

Two forms of the expiration date are provided for compatibility with IBM expiration date specifications. Use of the *yyyyddd* form requires a level of the MVS operating system that provides Year 2000 support. A comparable level of your tape management product may also be needed.

Some tape management products apply special meaning to certain expiration date specifications. For example, an expiration date of 99000 is used by many tape management products to indicate catalog retention (retain the tape as long as it is catalogued). Catalog retention is recommended, since all backup tapes are catalogued while under the control of CA-View.

There is no default expiration date; the suggested value is 99000.

EXPOPRV

This parameter specifies whether reprints requested in Express Operator (EXPO) mode go to only the user requesting the reprint, or to the entire distribution list for the report.

Syntax: **EXPOPRV=YES|NO**

The default is NO.

EXPRESS

This parameter specifies the high-level name of the CA-Deliver database.

Syntax: **EXPRESS=index**

There is no default.

EXTPRTn

This parameter specifies the interface and attributes for printing or routing SYSOUT to an external printing product.

Syntax:

EXTPRTn=printer-id/JESDS/class/destination/form/writer
EXTPRTn=printer-id/PGM/program-name/parameter-data

There is no default.

The second parameter (JESDS or PGM) determines which interface you use—JES data set or dynamic program. Refer to External Printing in Chapter 3, “Configuring CA-View,” for further details.

In addition to specifying a 1- to 3-character identifier for the printing product, each EXTPRTn parameter contains attributes for defining the communication mechanism. Attributes are also specified by the online DEFINE DEVICE command.

The EXTPRTn parameters are as follows:

<i>n</i>	Specifies either 1, 2, or 3
<i>printer-id</i>	Specifies the 1- to 3-character identifier for the external print product
<i>program-name</i>	Specifies the 8-character name of the interface program to be called
<i>class</i>	Specifies the 1-character SYSOUT class to be used to route the external print record
<i>destination</i>	Specifies the 8-character SYSOUT destination to be used to route the external print record
<i>form</i>	Specifies the 4-character SYSOUT forms name to be used to route the external print record
<i>writer</i>	Specifies the 8-character SYSOUT writer name to be used to route the external print record

<i>parameter-data</i>	Specifies up to 14 characters of parameter data to be passed to the interface program
JESDS	For the JESDS parameter specification, one or more of the EXTPRT <i>n</i> options can be specified as an asterisk (*) to indicate that they are to be supplied online by the user when printing a SYSOUT group. These options are: <i>class</i> <i>dest</i> <i>form</i> <i>writer</i>

FINDLAST

This parameter specifies whether CA-View users can use the LAST operand with the FIND command during an online session.

Syntax: **FINDLAST=YES|NO**

The default is YES.

FINDLIM

This parameter limits the number of records searched before CA-View requires the user to re-invoke the online FIND command. A user can use the LIMIT online command to set his/her own FINDLIM, and the online LIMIT overrides the FINDLIM parameter.

Syntax: **FINDLIM=nnn,max-*nnn***

The default is 0.

The maximum override allowed by any user is set with the *max-*nnn** value. A FINDLIM of 0 permits unlimited searches. The maximum value is 65535.

For example, you can have a default FINDLIM of 1,000 records and allow users to override this, but not to exceed a FINDLIM of 3,000 by specifying FINDLIM=1000,3000.

FINDPREV

This parameter specifies whether CA-View users can use the PREV operand with the FIND command during an online session.

Syntax: **FINDPREV=YES | NO**

The default is YES.

FORM

This parameter specifies the forms name used to select SYSOUT for archival. When FORM is specified, NEWFORM should also be specified to prevent a print-archival-print loop. If neither CLSL, DEST, nor FORM is specified, all SYSOUT is archived.

Syntax: **FORM=~~XXXX~~**

The default is ALL SYSOUT FORMS.

FREEPRT

This parameter specifies whether CA-View uses FREE=CLOSE during dynamic allocation of the SYSOUT data set for the print function of SARBCH.

Syntax: **FREEPRT=YES | NO**

The default is YES.

Values are as follows:

YES Specifies FREE=CLOSE

NO Does not specify FREE=CLOSE

With FREEPRT=YES, each report is explicitly freed and is immediately available to be printed. With FREEPRT=NO, each report is held until the entire SARBCH job completes.

GEN

This parameter specifies the starting generation number to be established for a new database.

Syntax: **GEN=nnnn**

The default is 1.

The minimum value is 1; the maximum value is 32767.

Warning! You should modify this parameter **only** with the direction of a Computer Associates Technical Support representative.

GRPUSER

This parameter specifies whether the GCRUSER field should be used as a parameter when CA-View checks for a new SYSOUT group.

Syntax: **GRPUSER=YES | NO**

The default is NO.

Values are as follows:

- YES Use the GCRUSER field in addition to all other criteria
 If the GCRUSER field changes within a SYSOUT group, the CA-View started task will split it into a new entry in the CA-View database.
- NO Do not use the GCRUSER field

HOLDTEMP

This parameter specifies the number of backup cycles a SYSOUT is held (after a load/restore) before it is deleted from disk. This is a temporary data set hold. Both primary and interim backups are included.

Syntax: **HOLDTEMP=nnn**

The default is 0.

INTERVAL

This parameter specifies the time interval in hours and minutes after which the backup cycle is automatically initiated.

Syntax: **INTERVAL=*hhmm***

The default is 2400.

Values are as follows:

hh: Specifies the hour, based on a 24-hour clock.

mm: Specifies the minutes

See the TIME command later in this chapter for more information.

JCLASS

This parameter determines the SYSOUT class to appear on the Print Attribute panel when a SYSOUT is printed with the online J selection code.

Syntax: **JCLASS=***

The default is TSOCLS/NEWCLSL.

You do one of the following:

- Specify an asterisk (JCLASS=*) to use the MSGCLASS from the original SYSOUT job
- Leave the field blank to default to the TSOCLS initialization parameter specification.

If TSOCLS is left blank, then the NEWCLSL initialization parameter specification is the default.

JES2LVL

This parameter specifies the level of JES2 with which CA-View is interfacing.

Syntax: **JES2LVL=*n***

The default is 2.

The valid level numbers are as follows:

Level Number	JES2 Release
0	User assembled
1	4.1 NJE to SP 1.3.2
2	SP 1.3.3 to SP 2.2.0
3	SP 3.1.1
4	SP 3.1.3
5	SP 4.0 to SP 5.1

For sites that have modified the JES2 system so that the JES2 control blocks are not IBM-supplied (specifically the SDB and PDDDB JES2 control blocks), you can specify JES2LVL=0. In this case, assemble user exit SARJS2UX with your JES2 source library.

Note: If you run JES3, you do not need to specify this parameter.

JES3ID

This parameter specifies an alternate subsystem ID for JES3. You should specify this parameter only when the JES3 subsystem is used and the subsystem ID is not JES3.

Syntax

JES3ID=name

The default is JES3.

LANGUAGE

This parameter specifies the system default language to be used when displaying online panels and messages.

Syntax

LANGUAGE=x

The default is R.

Values are as follows:

R (or blank)	English
C	Canadian French
D	Danish
G	German

LGNRETRY

This parameter specifies the number of logon failures before a user is forced offline.

Syntax: **LGNRETRY=nnnn**

The default is 3.

LOGO

This parameter specifies whether the initial CA-View logo panel is displayed when the user first enters the CA-View system.

Syntax: **LOGO=YES | NO**

The default is YES.

MASTER

This parameter specifies the user ID of the CA-View user who will have *master authority*. Master authority allows you to issue the DEF USER command, and to define access authority for all CA-View users.

Syntax: **MASTER=userid/ALL**

The default is MASTER=ALL.

MASTER=ALL indicates no restrictions, so that all users have master authority. A user with master authority can assign master authority to any other user, with the DEF USER command.

See the section on the Define User command in the System Administration chapter of the *CA-View Online User's Guide* for more information.

MAXLINES

This parameter specifies the maximum number of lines to be archived per SYSOUT group.

Syntax

MAXLINES=nnn, BYPASS, xxxx

The default is 0.

Values are as follows:

- | | |
|---------------|---|
| <i>nnn</i> | Specifies the maximum amount of lines to be archived per SYSOUT group

Valid values are 1 to 16777216. A value of 0 indicates that there is no limit for the reports. |
| BYPASS | Specifies (as an optional parameter) that any lines in excess of the number (nnn) in a SYSOUT group will be deleted without archival

If left blank, the lines in excess of nnn are passed to the user exit SARSTCUX for processing. |
| <i>xxxx</i> | Specifies for the direct-to-CA-View archival feature of CA-Deliver, the maximum number of lines to be archived per report

Valid values are 1 to 16777216. A value of 0 indicates that there is no limit for the reports. Records in excess of the specified limit are discarded. |

Omitted values (as in MAXLINES=,,50000) are set to the default values, not to the value set in the previous run.

MOUNT

This parameter specifies whether online tape mounts are allowed.

Syntax

MOUNT=YES | NO

The default is YES.

Values are as follows:

- | | |
|------------|--|
| YES | Allows online tape mounts

For native TSO and SPF/ISPF, when you specify this option, the user attributes (UADS) for the user determines whether online tape mounts will be allowed. |
| NO | Prevents online tape mounts |

MSORT1 to MSORT5

This parameter specifies the name of the first field to be sorted by the microfiche format program.

Syntax

```
MSORT1=xxxxxxx
MSORT2=xxxxxxx
MSORT3=xxxxxxx
MSORT4=xxxxxxx
MSORT5=xxxxxxx
```

Additional fields to be sorted are specified by MSORT2, MSORT3, MSORT4, and MSORT5. These parameters determine the order in which SYSOUT is output to microfiche. The field is sorted in ascending order.

To have the microfiche program sort the field in descending order, precede the name by a minus sign (for example, MSORT1=-JNAME). The field names you can specify are shown in the following table.

Note: If no sort parameters are specified, the microfiche format program will output SYSOUT in ascending order by SYSOUT identification, and then descending order of date and time of archival.

Valid field names for xxxxxxx are as follows:

Field Name	Contents
ATDTE	Date and time of archival
CLASS	SYSOUT class
DEST	SYSOUT destination
FORMS	SYSOUT forms name
ID	SYSOUT identification
JID	Subsystem job identifier
JNAME	Job name
WTR	External writer name

Continued

Continued

Field Name	Contents
XCODE	Exception code
<i>Umm:nn</i>	User accounting data supplied by either the SARACTUX or SARSTCUX user exits (up to 20 characters of user data) The beginning and ending positions in the user data are specified by <i>mm</i> and <i>nn</i> , respectively. If <i>mm</i> is omitted, 1 is assumed for the beginning position. If <i>nn</i> is omitted, 20 is assumed for the ending position. If <i>nn</i> is omitted, the colon can also be omitted.

NAME

This parameter specifies the high-level name of the CA-View database.

Syntax

NAME=index

If omitted, the high-level name specified as the PARM parameter on the EXEC SARINIT JCL statement, if any, is used.

NARCCLSL

This parameter specifies a list of 1 to 8 SYSOUT classes that CA-View will not archive. Any SYSOUT originally output to one of the classes is selected and processed by CA-View but is not archived. In general, the classes should also be specified for automatic printing, or the SYSOUT will be deleted by CA-View.

Syntax

NARCCLSL=XXXXXXXX

There is no default.

NBACKUP

This parameter specifies the number of interim backups done during the time specified with the INTERVAL initialization parameter. These backups do not cause the generation number to be incremented. The backups are executed evenly spaced within this time.

Syntax

NBACKUP=nnn

There is no default.

To determine the time spacing between interim backups, add one to the NBACKUP number and then divide that number into the INTERVAL number.

NEWCLSL

This parameter specifies a list of 1 to 8 SYSOUT classes used by CA-View to print archived SYSOUT, both online and in batch.

Syntax **NEWCLSL=xxxxxxxx**

The classes in the list correspond to those specified by the CLSL parameter. The default is the original class. For example, if CLSL=AB and NEWCLSL=CD are specified as parameters, any class A SYSOUT is printed by CA-View as class C, and any class B SYSOUT is printed by CA-View as class D. If no corresponding class is specified by using the NEWCLSL parameter, CA-View prints SYSOUT using the original class under which it was created.

Note: The TSOCLS parameter (online printing from TSO) and the JCLASS parameter (batch printing), if specified, override this parameter.

NEWDEST

This parameter specifies the destination used by CA-View to print archived SYSOUT. If NEWDEST is not specified, CA-View prints SYSOUT using the original destination under which it was created.

Syntax **NEWDEST=xxxxxxxx**

There is no default.

Note that the TSODEST parameter, if specified, overrides the parameter for online retrieval printing.

NEWFORM

This parameter specifies the forms name used by CA-View to print archived SYSOUT. If NEWFORM is not specified, CA-View prints SYSOUT using the original forms name under which it was created.

Syntax **NEWFORM=xxxx**

There is no default.

Note that the TSOFORM parameter, if specified, overrides this parameter for online retrieval printing.

NEWPASS

This parameter specifies whether a new password must be entered twice to verify its accuracy.

Syntax **NEWPASS=VERIFY | NOVERIFY**

The default is NOVERIFY.

NGEND

This parameter specifies the number of generations maintained on disk.

Syntax **NGEND=nnn**

The default is 3.

The smallest allowable value is NGEND=1, which keeps only the current archival generation on disk.

NGENI

This parameter specifies the number of master indexes maintained on storage group 0. All storage group 0 tapes containing generations within the last NGENI generations are kept. Other storage group tapes are kept only if they contain reports that are kept.

Syntax **NGENI=nnn**

The default is the value of NGENT.

NGENT

This parameter specifies the number of total generations to be maintained on tape.

Syntax **NGENT=nnn**

The default is 90.

PAGEMARK

This parameter specifies whether pages are identified and numbered when archived.

Syntax **PAGEMARK=~~xxxx~~**

The default is YES.

PRTALL

This parameter specifies, for the EXPO mode of CA-View, an initial default value used in CA-Deliver reprints. PRTALL determines whether the distribution identifier's OUT indicator is used during a reprint.

Syntax **PRTALL=YES|NO**

YES Specifies that the distribution identifier's OUT indicator is ignored

NO Specifies that the distribution identifier's OUT indicator is used

The default is YES.

PRTASA

This parameter specifies whether CA-View reprints should be in ASA or machine control characters.

Syntax **PRTASA=YES|NO**

The default is NO.

PRTCLSL

This parameter specifies a list of 1 to 8 SYSOUT classes, so that any SYSOUT originally output to one of the classes is automatically printed by CA-View when it is archived. See the CLSL initialization parameter.

Syntax **PRTCLSL=~~xxxxxxxx~~**

There is no default.

Refer to the section on Printing SYSOUT in Chapter 9, "Batch Processing," for more information.

Note: For this initialization parameter to work properly, the JES2 initialization statement STCCLASS must specify OUTPUT=YES.

PWBATCH

This parameter specifies a password used to verify that a background job to retrieve a SYSOUT group was submitted by online retrieval.

Syntax

PWBATCH=XXXXXXXX

There is no default.

The password is placed on the control card by online retrieval and checked by the batch retrieval program. If the passwords match, retrieval is allowed. If the passwords do not match or no password has been defined, the security user exit is invoked or RACF checking is done to determine authorization.

PWBATCH is used to eliminate the overhead involved in performing security checking both online and then a second time in batch.

RACF

This parameter specifies whether RACF checking is done by CA-View when retrieving individual SYSOUT groups and supplies the high-level index and volume serial number to be used to define the SYSOUT group to RACF.

Syntax

RACF=XXXXXXXX

There is no default.

This parameter must not be specified with the CA-ACF2 parameter, because the two parameters are mutually exclusive.

RCVPRIM

This parameter specifies the primary space allocation for the forward recovery data sets. This is required for forward recovery to be activated.

Syntax

RCVPRIM=XXXX

There is no default.

RCVSEC

This parameter specifies the secondary space allocation for the forward recovery data sets. This optional parameter is used when the primary space allocation is exhausted.

Syntax: **RCVSEC=~~xxxx~~**

There is no default.

RCVSPACE

This parameter specifies whether the space allocation for the forward recovery data sets is to be obtained in tracks (TRKS) or cylinders (CYLS).

Syntax: **RCVSPACE=TRKS | CYLS**

The default is TRKS.

This parameter is optional.

RCVUNIT

This parameter specifies the unit name or unit type where the forward recovery data sets are to be allocated. This is required for forward recovery to be activated.

Syntax: **RCVUNIT=*unit***

There is no default.

REDISP

This parameter specifies whether the ENTER key will invoke the REDISP function, which causes a refresh/update of SYSOUT and report selection lists.

Syntax: **REDISP=YES | NO**

The default is NO.

RETPD

This parameter specifies the number of days maintained on tape (mutually exclusive with EXPDT). This is the retention period for allocating a new tape data set. The most recently-entered option (RETPD or EXPDT) takes precedence.

Syntax: **RETPD=nnn**

There is no default.

ROUT

This parameter specifies the route code to be used for routing exceptional condition messages (message ID SARSTC99). The text for the exceptional condition message is extracted during the exceptional condition checking process or produced by the SARSTCUX user exit.

Syntax: **ROUT=nn**

The default is 0.

Specify a route code of 1 to 16 for the WTO that issues the messages. A route code of 0 suppresses the messages.

ROUTBKP

This parameter specifies a route code for the informational CA-View backup messages SARBKT61 through SARBKT63.

Syntax: **ROUTBKP=nn**

The default is **ROUTBKP=1**.

The default value sends the messages to the master console.

SELPNLS

This parameter specifies the number of selection panels to be used in the left/right scrolling selection lists.

Syntax: **SELPNLS=nn**

The default is 5.

SETPAGE

This parameter specifies either YES or NO as to whether to set PRMODE to PAGE when PAGEDEF and/or FORMDEF are specified.

Syntax **SETPAGE=YES | NO**

The default is YES.

Values are as follows:

YES Sets PRMODE to PAGE when PAGEDEF and/or
 FORMDEF are specified

NO Leaves PRMODE as is

SMF

This parameter specifies whether the archival task is to create special type-6 SMF records when it prints a SYSOUT group.

Syntax **SMF=YES | NO**

The default is NO.

STACKBU

This parameter specifies whether stacked backup cycles should be processed normally or ignored. Stacked backup cycles occur when the archival task becomes suspended during a backup cycle (before the cycle is completed) due to the initiation of a second backup cycle. This condition is indicated with the SARBKU03 message.

Syntax **STACKBU=YES | NO**

The default is NO.

Values are as follows:

YES Processes stacked backup cycles

NO Ignores stacked backup cycles

START

This parameter specifies the name of the microfiche start procedure that is started after the current archival generation is completed and backed up to tape.

Syntax: **START=xxxxxxxx**

The default is no procedure.

STORGRP0

This parameter specifies the default tape storage group. With ERO (Expanded Retention Option), you can define up to nine additional tape storage groups. See STORGRP1 to STORGRP9 later in this chapter.

You must run a standard or interim backup cycle to assign reports to tape storage groups specifying appropriate storage group subparameters.

Syntax: **STORGRP0=*storage-group-name*/*tape-index*/*maxgent-value*/*unit1-name*,*unit2-name*/*tvser1*,*tvser2***

where:

<i>storage-group-name</i>	<p>Not considered for STORGRP0, the default storage group</p> <p>If you define any additional storage groups (STORGRP1 to STORGRP9), you must assign each one a group-name of up to eight alpha-numeric characters. The name DEFAULT is reserved for use by the SARPAC tape consolidation program, and therefore cannot be specified.</p> <p>Reports are assigned to tape storage groups by the ERO table statement <i>STORGRP=storage-group-name</i>.</p>
<i>tape-index</i>	<p>Specifies an alternate naming prefix (up to 17 characters) for your backup tapes</p> <p>If this parameter is changed, tapes previously produced by CA-View will still be accessible. If omitted, the high-level name of the database is used.</p> <p>There is no default.</p>
<i>maxgent-value</i>	<p>Specifies the maximum number of generations that can be written to one tape volume</p> <p>The default is 10.</p>

unit1-name, unit2-name *unit1* Specifies the tape unit name allocated for backup tape archival generations

unit2 Activates tape duplexing, and specifies its tape unit name

When duplexing is activated, two tapes are mounted during the backup cycle. The first tape is for the primary backup tape, and the second tape is for the duplex tape.

The default is TAPE.

When retrieving output from tape, CA-View always uses the primary backup tape. Should an error occur on the primary backup tape and a duplex of it exists, CA-View automatically attempts to recover from the error by switching to the duplex tape.

tvser1, tvser2 Specifies a range of tape volume serial numbers used for the backup archival generations

The default is any scratch tape.

Volume serial numbers must be the same length, end with 1 or more numeric digits, and have matching beginning alphanumeric characters. Whenever a new tape is required to back up a generation, the next tape in the range is used. When the end of the range is reached, the first tape in the range is used.

Two different tape storage groups can specify the exact same range of tapes, or completely distinct ranges, but no partial overlap is allowed between groups.

STORGRX0

This parameter specifies additional attributes (extensions) for the tape storage groups. If you use tape duplexing, you can specify a volume serial range for the duplex tapes here. If you use tape duplexing, (indicated by the *unit2-name* in the STORGRP parameter), and the STORGRX parameter is specified without any values for *dtvser1* and *dtvser2*, a scratch pool will be used for the duplex volumes.

If the database is versioned up from a release prior to 1.7, the initial values for *dtvser1* and *dtvser2* will be the same as for *tvser1* and *tvser2* (the primary range).

Syntax **STORGRX0=dtvser1, dtvser2|mxblks**

where:

dtvser1, dtvser2 Specifies a range of tape volume serial numbers used for the duplex backup archival generations
 The default is any scratch tape.
 Volume serial numbers must be the same length, end with one or more numeric digits, and have matching beginning alphanumeric characters. Whenever a new tape is required to back up a generation, the next tape in the range is used. When the end of the range is reached, the first tape in the range is used.

mxblks Specifies the maximum number of storage blocks to which to write the primary and duplex volumes (the primary and duplex volumes are mirror images)
 A value of 0 means to write to end-of-volume.

Two different tape storage groups can specify the exact same range of tapes, or completely distinct ranges, but no partial overlap is allowed between groups.

TAPEOPT

This parameter specifies the options for tape processing.

Syntax **TAPEOPT=3420|3480|EAST, HARD|NOHARD, SOFT|NOSOFT**

The default is 3480,HARD,NOSOFT.

Values are as follows:

3420|3480|EAST Specifies whether archival tapes are written using 3480 (includes 3490) data block location processing, or 3420 processing
 3480 tape processing has superior performance to 3420 tape processing, but requires 3480 or 3490 tape drives.
 3480/3490 tape processing is a requirement for the expanded access server for tape and robotics. EAST is the same as 3480 tape processing; however, the Expanded Access Server for Tape/Robotics will be used, whenever possible, to access reports from tape.

- HARD|NOHARD** Specifies whether the hardware compaction feature is to be used for compacting data for a tape device enabled for hardware compaction.
- HARD** specifies that the hardware compaction feature is to be used, and **NOHARD** specifies that the hardware compaction feature is not to be used. If you use 3490E tape drives, you must specify **HARD**.
- SOFT|NOSOFT** Specifies whether CA-View is to compress data when creating backup tapes.
- SOFT** specifies that software compression is to be used, and **NOSOFT** specifies that software compression is not to be used.

TAPECLSL

This parameter specifies a list of 1 to 8 SYSOUT classes, so that any SYSOUT originally output to one of the classes is directly archived to tape, and no archival is done to disk. If any class is specified for TAPECLSL, a tape drive is allocated for the duration of the archival task.

Syntax

TAPECLSL=xxxxxxxx

There is no default.

Note: This parameter is a secondary criterion—that is, output must first satisfy the primary criteria of CLSL, DEST, and FORM before it is considered for application of this parameter.

TAPESEQ

This parameter specifies the starting tape sequence number established in a new database.

Syntax

TAPESEQ=nnnn

The default is 1.

Warning! This parameter is to be modified only at the direction of a Computer Associates Technical Support representative.

TBACKUP

This parameter specifies backup options.

Syntax

TBACKUP=YES|NO|IDX

The default is YES.

Values are as follows:

- | | |
|-----|--|
| YES | Both the SYSOUT groups archived to the current disk generation and the master index are written to tape as part of the backup cycle. |
| NO | Neither the SYSOUT groups archived to the current disk generation nor the master index is written to tape as part of the backup cycle. |
| IDX | Only the master index is written to tape as part of the backup cycle. |

Warning! Specifying either NO or IDX for the TBACKUP parameter can prevent future recovery of data if there is a media failure or other type of failure.

TIME

This parameter specifies the time at which the first backup cycle is automatically initiated by CA-View.

Syntax

TIME=*hhmm*

The default is 0.

The value is based on a 24-hour clock, where *hh* is the hour, and *mm* is the minute. Subsequent backup cycles are automatically initiated at regular intervals specified with the INTERVAL parameter. Automatic backup cycles are suppressed on those days identified by an N in the DAYS parameter. The default value (0) suppresses all automatic backup cycles.

TPO54

This parameter specifies whether message SARTPO54 (TAPE TO BE MOUNTED NEEDS FILE PROTECT RING IN) is to be displayed for the remounting of archival tapes.

Syntax: **TPO54=YES|NO**

The default is YES.

TSOCLS

This parameter specifies the SYSOUT class to appear on the Print Attribute panel when a SYSOUT is printed with the online P selection code from the TSO online retrieval facility.

Syntax: **TSOCLS=x**

The default is NEWCLS/original

Specify an asterisk (TSOCLS=*) to have the TSO online retrieval session class used as the CLASS. The default is the NEWCLSL initialization parameter, and, if NEWCLSL is not specified, the CLSL from the original SYSOUT job.

TSODEST

This parameter specifies a valid SYSOUT destination used to print SYSOUT with the TSO online retrieval feature. Specify an asterisk to use the system default SYSOUT destination.

Syntax: **TSODEST=xxxxxxxx**

The default is original/NEWDEST.

TSOFORM

This parameter specifies a SYSOUT forms name used to print SYSOUT with the online retrieval feature.

Syntax: **TSOFORM=xxxx**

The default is the original/NEWFORM forms name.

Specify an asterisk to use the system default forms name for the online session.

TSOSCHED

This parameter schedules background SYSOUT retrieval.

Syntax: **TSOSCHED=SUBMIT | INTRDR**

The default is SUBMIT.

Values are as follows:

SUBMIT	Uses the TSO SUBMIT command processor to schedule background SYSOUT retrieval from a foreground session
INTRDR	Directly allocates an internal reader to schedule background SYSOUT retrieval from a foreground session

This parameter is used for the ISPF and TSO online interfaces, **not** the ISPF/cross-memory or TSO/cross-memory interface.

UNITSPEC

This parameter is used if there is the possibility of a conflict of units during dynamic allocation of backup media. CA-View uses the MVS catalog device types to allocate backup media. If necessary, use this parameter to specify the esoteric names of up to two backup media units (tape, optical, etc.) which have the same device type as other devices in the system.

Syntax: **UNITSPEC=unit1, unit2**

There is no default.

For example, if you have a pool of 3480-type tape drives, and a pool of 3480-type optical drives, you could specify:

UNITSPEC=optname

where *optname* is the esoteric name of the optical drives.

UNLOAD

This parameter identifies whether the tape will be unloaded and the drive freed during direct-to-tape archival.

Syntax: **UNLOAD=NO | YES | NOWORK**

The default is NO.

Values are as follows:

- | | |
|--------|--|
| YES | Specifies to unload the tape after the SYSOUT group is archived direct-to-tape |
| NO | Specifies to leave the tape mounted after the SYSOUT group is archived direct-to-tape |
| NOWORK | Specifies that the tape is to remain mounted until there are no more SYSOUT groups to be direct-to-tape archived, even if the remaining groups are going to disk |

USERLVL

This parameter determines whether users will get the Beginning or Advanced Primary Selection Menu in the online modes EXP and EXPO. This parameter affects only the Primary Selection Menu.

Syntax: **USERLVL=BEGINNER|ADVANCED**

The default is BEGINNER.

VPRTAPPL

This parameter specifies the first four characters of the VTAM APPLIDs to be used by the CA-View VTAM Print Option (VPO). These characters are coupled with a number, from 000 to 9999, to form the actual VTAM APPLID.

Syntax: **VPRTAPPL=cccc**

Note: A value for this number (if provided in the application program definition tables, usually located in SYS1.VTAMLST) is used.

VPRTMAXO

This parameter specifies the maximum number of lines that can be printed from an online session by using the P print selection code and is used by the CA-View VTAM Print Option (VPO).

Syntax: **VPRTMAXO=nnnn**

The minimum value is 1; the maximum value is 65535.

The default is UNLIMITED.

VPRTONL

This parameter specifies whether users can print from an online session using the P (print) selection code used by the CA-View VTAM Print Option (VPO).

Syntax **VPRTONL=YES | NO**

The default is YES.

Note: The user's terminal is locked for the duration of the printing.

VPRTPRINT

This parameter specifies the interval in seconds between attempts to establish contact with a printer and is used by the CA-View VTAM Print Option (VPO).

Syntax **VPRTPRINT=nnn**

If VPRTAPPL is specified as SARV, and SYS1.VTAMLST contains SARV0000–SARV0009, CA-View attempts to contact the designated printer using SARV0001, SARV0002...SARV0009.

The minimum value is 1; the maximum value is 65535.

The default is 60.

VPRTTRY

This parameter specifies the number of times CA-View tries to re-establish contact to a printer and is used by the CA-View VTAM Print Option (VPO).

Syntax **VPRTTRY=nnn**

If VPRTAPPL is specified as SARV, and SYS1.VTAMLST contains SARV0001–SARV0009, CA-View attempts to contact the designated printer using SARV0001, then SARV0002,...SARV0009. The minimum value is 1; the maximum value is 255.

The default is 10.

WAIT

This parameter specifies whether the archival task waits for SYSOUT to archive or terminates, when there is no more SYSOUT available from JES.

Syntax: **WAIT=YES | NO**

The default is YES.

Most sites use the default value.

XPRINT

This parameter specifies whether CA-View automatically prints any SYSOUT in which an exceptional condition occurs. Exceptional conditions are determined during the exceptional condition checking process or are determined by user code in the SARSTCUX user exit.

Syntax: **XPRINT=YES | NO**

The default is YES.

Expanded Retention Initialization Parameters

The expanded retention initialization parameter statements follow the same syntax and restrictions as the initialization parameter statements. Several of these initialization parameters work in conjunction with parameters specified in the Expanded Retention table. See Appendix A for details.

The Expanded Retention Option must be installed and operational to use the following parameter statements.

DSK2DAYS

This parameter is used by secondary storage device drivers such as optical disks. This parameter is documented in Chapter 10, "Using the Optical Disk Interface."

Syntax: **DSK2DAYS=nnn**

The default is 999.

DSK2DRVR

This parameter is used by secondary storage device drivers such as optical disks. This parameter is documented in Chapter 10, "Using the Optical Disk Interface."

Syntax **DSK2DRVR=*driver***

There is no default.

DSK2INTV

This parameter is used by secondary storage device drivers such as optical disks. This parameter is documented in Chapter 10, "Using the Optical Disk Interface."

Syntax **DSK2INTV=*nnnn***

There is no default.

DSK2MIGD

This parameter is used by secondary storage device drivers such as optical disks. This parameter is documented in Chapter 10, "Using the Optical Disk Interface."

Syntax **DSK2MIGD=~~*xxxxxxxx*~~**

The default is BBBBBBBB.

DSK2PARM

This parameter is used by secondary storage device drivers such as optical disks. This parameter is documented in Chapter 10, "Using the Optical Disk Interface."

Syntax **DSK2PARM=~~*xxxxxxxxxxxx*~~**

There is no default.

DSK2TIME

This parameter is used by secondary storage device drivers such as optical disks. This parameter is documented in Chapter 10, "Using the Optical Disk Interface."

Syntax **DSK2TIME=*nnnn-nnnn, nnnn-nnnn, nnnn-nnnn, nnnn-nnnn***

There is no default.

DSK2XXX

Refer to Chapter 10, "Using the Optical Disk Interface," for information about the optical disk parameters.

EROOPT

This parameter specifies whether the Expanded Retention Option is being used. Indicate YES to retain expanded retention initialization parameters, or NO to delete reference to all expanded retention initialization parameters.

Syntax: **EROOPT=YES | NO**

For an existing CA-View database, EROOPT defaults to YES if Expanded Retention Initialization Parameters exist or new expanded retention initialization parameters are being set; otherwise, this parameter defaults to NO.

For a new CA-View database, EROOPT defaults to YES if expanded retention initialization parameters are specified; otherwise, this parameter defaults to NO.

EROPRO

This parameter specifies whether all archived SYSOUTs, or only newly-archived SYSOUTs, will be considered for expanded retention. This allows you to make the ERO table retroactive—that is, to request that CA-View consider every archived SYSOUT for expanded retention, not just newly archived SYSOUTs.

Syntax: **EROPRO=NEW | ALL | YES**

The default is NEW.

Values are as follows:

NEW	Recommended for better performance
YES	Specifies that ALL SYSOUTs are considered, and the parameter is not reset to NEW at the end of the backup cycle
ALL	A one-time request to Reset to reconsider the entire database This is reset to NEW at the end of the backup cycle.

PCOPIES

This parameter specifies the number of copies of each SYSOUT that are maintained for each unique SYSOUT identifier.

Syntax **PCOPIES=xxx**

The default is 2.

PMXTAPES

This parameter specifies the maximum number of tapes that can be consolidated in any one execution of the SARPAC tape consolidation program.

Syntax **PMXTAPES=nnnnn**

The default is 20.

PMXYEARS

This parameter specifies the maximum number of years data can reside on a tape and is used by the SARPAC tape consolidation program. When the creation date for the tape exceeds this value, the tape is selected for consolidation.

Syntax **PMXYEARS=nnnnn**

The default is 3.

Specifying a maximum number of years is important, because tapes tend to have I/O problems as they age.

POPT

This parameter specifies how SYSOUT is to be given expanded retention.

Syntax **POPT=M|L|A**

The default is M.

Values are as follows:

- M Specifies that only SYSOUT marked from the online or batch facility is given expanded retention
- L Specifies that the last (most recent) SYSOUT for each unique SYSOUT identifier in the current generation is given expanded retention
If you specify L, and SYSOUT for a SYSOUT identifier is marked online for expanded retention, the marked SYSOUT is given expanded retention instead of the last (most recent) SYSOUT.
- A Specifies that all SYSOUT from the current generation is given expanded retention

PRETAIN

This parameter specifies the expiration parameters of ERO (Expanded Retention Option) reports.

Syntax

PRETAIN=INIT | TABLE

The default is INIT.

Retention is as follows:

PRETAIN=TABLE Ignores INIT parms and uses ERO table only

PRETAIN=INIT Uses the INIT parms

We recommend that you set **PRETAIN=TABLE**; this makes the ERO table statements the single point of control for the retention of ERO reports. With **PRETAIN=TABLE**, when a report has satisfied the ERO table statement that controls it, it is deleted.

PTEXT1 to PTEXT5

This parameter specifies unique text used for scanning archival data to locate the SYSOUT identifier used to name the SYSOUT group. See Chapter 6, "Expanded Retention Option," for more details.

Syntax

PTEXT1=XXXXXXXXXX
PTEXT2=XXXXXXXXXX
PTEXT3=XXXXXXXXXX
PTEXT4=XXXXXXXXXX
PTEXT5=XXXXXXXXXX

There is no default.

PTHRESH

This parameter specifies the percentage of active SYSOUT groups on a tape as a threshold value and is used by the SARPAC tape consolidation program to determine whether to consolidate a tape. When the percentage of active SYSOUT groups on a tape is less than this threshold value, the tape is selected for consolidation.

Syntax **PTHRESH=nnnnn**

The default is 50.

PXCOND

This parameter specifies whether exceptional conditions are included in the expanded retention process.

Syntax **PXCOND=YES|NO**

The default is YES.

STORGRP1 to STORGRP9

STORGRP1 through STORGRP9 allow you to define up to nine tape storage groups in addition to the default group, STORGRP0. See the description of STORGRP0 earlier in this chapter.

Creating STORGRP1 through STORGRP9 in addition to the default, STORGRP0, allows you to do the following:

- Separate reports into groups by how often they are viewed
This organization can be used to maximize performance of the Expanded Access Server, which allows you to view from tape without loading to disk.
- Separate reports into groups by their retention requirements
This organization lessens the need for tape consolidation.
- Use tape duplexing on some reports, not on others
- Use an alternate high-level index for certain tapes
- Use a different number of generations written to different tapes
- Use separate ranges of tape volumes used for the backup tapes

New storage groups inherit their initial values from STORGRP0 for parameters that are not specified.

To delete a storage group, specify it without parameters. For example:

STORGRP3=

deletes STORGRP3.

The `STORGRP=group-name` ERO table parameter assigns reports to storage groups. See Tape Location: STORGRP in Chapter 6, "Expanded Retention Option."

If you define tape storage groups, you should assign the group containing the most reports as STORGRP1 to enhance backup cycle performance.

STORGRX1 to STORGRX9

STORGRX1 through STORGRX9 allow you to define up to nine tape storage group EXTENSIONS. See the STORGRX0 command earlier in this chapter.

To delete a storage group extension, specify it without parameters. For example:

STORGRX3=

deletes STORGRX3.

The `STORGRP=group-name` ERO table parameter assigns reports to storage groups. (See Tape Location: STORGRP in Chapter 6, "Expanded Retention Option.")

Storage group extension STORGRX n is valid only if the corresponding STORGRP n parameter is defined.

Initialization Parameter Examples

The following sample jobs process initialization parameters.

Example 1

A new database has its initialization parameters set for an archival and retrieval system with the following characteristics:

- The database has been created with the SARDBASE utility under the name VIEW.SYSTEM1.
- For classes P and Q, all SYSOUT is archived.
- Archival is to disk, and the backup cycle is automatically initiated every day except Sunday.
- The expiration date for tapes is 99000.
- 5 generations can be backed up to the same tape.

- All SYSOUT (both classes P and Q) is printed as class A.
- 4 generations are maintained on disk.
- 100 generations are maintained on tape.
- Exceptional condition messages are assigned routing code 14.
- The backup cycle is initiated at 5:00 P.M.
- The SYSOUT is automatically printed if an exceptional condition occurs.
- Scratch tapes are used.
- Defaults are used for everything else.

The following job is run to set the initialization parameters:

```
//EXAMPLE1 JOB ACCOUNT, PROGRAMMER
//INIT      EXEC PGM=SARINIT
//STEPLIB DD DSN=CAI.CAILIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSIN     DD *
NAME=VIEW.SYSTEM1
CLSL=PQ
DAYS=YYYYYN
EXPDT=99000
MAXGENT=5
NEWCLSL=AA
NGEND=4
NGENT=100
ROUT=14
TIME=1700
XPRINT=YES
//
```

Example 2

The current generation of SYSOUT is automatically microfiched by start procedure SARMFP after backup to tape. The SYSOUT groups are sorted as follows:

- Descending order by user accounting data, positions 11 to 20
- Descending order by user accounting data, positions 1 to 10
- Ascending order by job name
- Ascending order by job ID

The following job is run to modify the initialization parameters:

```
//EXAMPLE2 JOB ACCOUNT, PROGRAMMER
//INIT      EXEC PGM=SARINIT
//STEPLIB DD DSN=CAI.CAILIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSIN     DD *
NAME=VIEW.SYSTEM1
MSORT1=-U11:20
MSORT2=-U1:10
MSORT3=JNAME
MSORT4=JID
START=SARMFP
//
```

Example 3

Expanded retention parameters are set to retain five copies of all marked SYSOUT and to define special text for determining SYSOUT identifiers:

```
//EXAMPLE3 JOB ACCOUNT, PROGRAMMER
//INIT EXEC PGM=SARINIT
//STEPLIB DD DSN=CAI.CALLIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
NAME=VIEW.SYSTEM1
POPT=M
PCOPIES=5
PTEXT1='PROGRAM-ID.'
PTEXT2='-':'. 'PROCEDURE'. 'MAIN'
PTEXT3='***ID='
PTEXT4='SYSLMOD'. 'DSN='. 'LIB('
//
```

Example 4

An existing index file has its parameters displayed:

```
//EXAMPLE4 JOB ACCOUNT, PROGRAMMER
//INIT EXEC PGM=SARINIT
//STEPLIB DD DSN=CAI.CALLIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
NAME=VIEW.SYSTEM1
//
```


Chapter 3

Configuring CA-View

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Chapter 3

Configuring CA-View

In This Chapter

This chapter details the configurable components of CA-View, and includes the following topics:

- The date format in displays and reports
- Using the expanded access server for tape and robotics
- Optimizing the performance of the expanded access server
- Job accounting
- Microfiche processing with SARMFP
- External printing
- 3800 printer attributes
- The recovery data set
- Security
- System extensions (SARXTD)

Date Format in Displays and Reports

The date is displayed in the following format in all displays and batch reports:

MMDDYY

The date format is set by modifying CA-View with the IBM AMASPZAP utility.

DDMMYY Format

To change the date format to:

DDMMYY

execute the following job:

```
//DATEZAP JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=AMASPZAP
//SYSPRINT DD SYSOUT=*
//SYSLIB DD DSN=CAI.CALLIB, DISP=SHR
//SYSIN DD *
NAME SARDFMT SARDFMT
VER 00 00
REP 00 FF
/*
```

Change the data set name on the SYSLIB DD statement to the name of the library containing the CA-View load modules.

YYMMDD Format

To change the date format to:

```
YYMMDD
```

execute the job shown in the preceding section, changing the statement

```
REP 00 FF
```

to

```
REP 00 F1
```

Change the data set name on the SYSLIB DD statement to the name of the library containing the CA-View load modules.

Expanded Access Server for Tape and Robotics

The expanded access server for tape and robotics allows you to browse a report that resides only on tape, without having to load the report back to disk.

Using the server instead loading back to disk gives you the following benefits:

- You don't need to wait for a LOAD batch job, which will have to wait for a tape mount.
- You don't need extra DASD space in the disk database to accommodate reports temporarily loaded from tape.

The printing functions, both online (P command) and batch (J command), and the LOAD from tape to disk function, use the server, and benefit from centralized tape mounts and caching.

There are no tape drives dedicated to the tape server. The server is allowed to access as many drives as you specify. Drives are automatically freed after a specified idle time (MAXIDLE).

Requirements

You must be using 3480 tape processing. The initialization parameter TAPEOPT specifies what processing CA-View will use to create backup tapes.

The expanded access server is not available under the VM/CMS online interface or CICS Conversational online interface (CICS Pseudo-Conversational is supported).

Only one expanded access server is required for multiple CA-View databases.

Internal Operation

The server receives requests for data blocks on tape to be printed or browsed. The requested data blocks are handled as follows:

- If the data blocks are already cached in memory, the server transfers those blocks via cross memory.
- If the data blocks are already in memory, the server reads the tape if it is already mounted, or mounts the tape.

If there is no drive available to the server, the least recently-referenced tape, which has also been mounted for at least a minimum amount of time (MINIDLE parameter) is dismounted.

If a tape has been idle for a maximum amount of time (MAXIDLE parameter), it will be dismounted automatically to free the drive for CA-View or any other application, as drives are not dedicated to the server.

Memory Management: Reading Ahead

When the server accesses requested blocks, it also retrieves additional adjacent blocks (NREAD parameter). These data blocks are buffered into memory in anticipation of being needed as a user scrolls forward while browsing a report, or issues a FIND command, etc.

Re-Using Buffers

When the tape server has accessed all buffers allocated to it and needs to re-use a buffer, it does the following:

1. Accesses the least recently-accessed buffer.
2. Reads ahead NREAD number of blocks, but adjusted down so it does not re-read an already buffered block.
3. Frees previous blocks when a forward search is detected to prevent forward search users from taking over all buffers.

Order of Media Access

When a user selects a report for browsing (selection code S in an online report selection list), the following is the order of media access:

- If the report is on the CA-View DASD database (including a TEMP DASD copy that was loaded back to disk), it is accessed from DASD.
- If the report is not on DASD, but is on optical disk, it is accessed from optical disk.
- If the report is not on DASD or optical disk, it is accessed by the expanded access server.
- If the report is not on DASD or optical disk, and the expanded access server is not active, the tape is mounted and the report temporarily LOADED to disk, assuming there is mount authority.

LOAD jobs should execute on the system with the primary server; otherwise, all the data must be transmitted across systems using XCF or LSERV.

Implementing the Expanded Access Server

The expanded access server is a started task. The following is a sample start procedure. JCL would be added as member SAREAS to one of the procedure libraries defined to JES (for example SYS1.PROCLIB).

```
//SAREAS PROC
//SAREAS EXEC PGM=SAREAS, TIME=1440, PARM=('parm1', 'parm2', ...)
//STEPLIB DD DSN=CAI.CALLIB, DISP=SHR
//SYSUDUMP DD SYSOUT=A
```

Initialization parameters specified in the PARM= field consist of a keyword and value separated by an equals sign. Omitting the value specifies the default value. Keywords and selectable values can be shortened to any non-ambiguous form so the parameters can fit within the 100 character length limit of the parameter field.

The parameter field contains the following initialization parameters, separated by commas:

COMM=LSERV|XCF The communication mechanism to be used by the primary and secondary servers
 LSERV specifies the Computer Associates Server Utility.
 XCF specifies the MVS Cross-System Coupling Facility.

Note: The Computer Associates Server Utility has XCF communications capability within it. All servers must use the same communication mechanism. The parameter is meaningless for a TYPE=ONLY server. The default is LSERV.

COMM=LSESV XCF	<p>When using LSESV for the communication mechanism, ensure that the LSESV communications task is defined with MAXSENDSIZE of 33 (K) or larger and LCOMM of YES.</p> <p>When using XCF for the communication mechanism, the group name is the value for EASTNAME, and the member name is PRIMARY for the primary server, and the member name is the CPU ID for the secondary server.</p>
DFQIDLE= <i>n</i>	<p>The time in seconds to wait for requests for the same optical volume to accumulate before switching to a new optical volume (tape emulation optical only)</p> <p>This parameter works in conjunction with exit SAREASU1 to improve performance. Typical values are 1 to 5 seconds.</p>
EASTNAME= <i>xxxx</i>	<p>The subsystem name of the expanded access server for tape and robotics</p> <p>For primary and secondary servers, this is also the L-SERV or XCF group name. The default is LEAS.</p>
LSESVNAME= <i>xxxx</i>	<p>The subsystem name of the Computer Associates Server Utility</p> <p>The parameter only has meaning for a primary or secondary server using the Computer Associates Server Utility as its communication mechanism. The default is LSRV.</p>
MAXIDLE= <i>n</i>	<p>The maximum time in seconds that a tape (or platter in the case of tape emulation optical) can remain un-accessed before it will be un-allocated for the primary or TYPE=ONLY server</p> <p>The parameter is meaningless for a secondary server. The default is 10 minutes (600).</p> <p>Note that for the primary or for a TYPE=ONLY server, the maximum idle time will be adjusted upwards to a minimum of MINIDLE.</p>
MINIDLE= <i>n</i>	<p>The minimum time in seconds that a tape (or platter in the case of tape emulation optical) must be mounted without being accessed before its tape processing thread can be used to process another tape volume for the primary or TYPE=ONLY server</p> <p>The parameter is meaningless for a secondary server. The default is 15 seconds.</p>

MOUNT=DEFER REPLY	<p>Specifies whether the tape mounts occur during OPEN, or during dynamic allocation</p> <p>MOUNT=REPLY gives the operator a mount request s/he can reply to.</p> <p>The default is DEFER, which gives the operator no opportunity to reply to the mount request, though mounts can occur in parallel.</p>
NBUF= <i>n</i>	<p>The total number of buffers to allocate</p> <p>Each buffer requires 32 K bytes of virtual, 31-bit addressable storage. It is recommended that you set NBUF as high as paging and real storage constraints will allow. The default is 50.</p> <p>Note that for the primary or only server, the number of buffers will be adjusted upwards to a minimum of (NTHREADS) * (NREAD).</p>
NREAD= <i>n</i>	<p>The number of 32K tape blocks to read in at a time, for the primary or only server, in anticipation of their subsequent use</p> <p>The parameter is meaningless for a secondary server. The default is 4; the maximum is 16.</p>
NREQ= <i>n</i>	<p>The number of process request entries to pre-allocate; one process request entry is needed for each tape request that is active within the server</p> <p>If more entries are needed at any given time than have been pre-allocated, additional entries will be allocated and freed on demand. When the server is stopped, message SAREA04I is produced to display the "high water mark" for process request entries. The default is 200.</p>
NTHREADS= <i>n</i>	<p>The number of tape processing threads for the primary or only server</p> <p>The parameter is meaningless for a secondary server. Each tape processing thread can allocate one tape drive; therefore, specify the maximum number of tape drives you would like to be available to the server. The default is 4.</p>

TYPE=PRIMARY|
SECONDARY|ONLY

The type of server

PRIMARY specifies that this server is to perform the tape mounts and input and that secondary servers will be making requests from it via L-SERV or XCF.

SECONDARY specifies that this server does **not** perform any tape mounts or input; instead, requests for tape blocks are made via L-SERV or XCF to the primary server.

ONLY specifies that this is the one and only server; it will perform all of its own tape input, and no L-SERV or XCF communications will be established.

The default is ONLY.

Example

The following example start procedure JCL could be used to start the expanded access server for tape and robotics:

```
//SAREAS      PROC TYPE=ONLY
//SAREAS      EXEC PGM=SAREAS,TIME=1440,
// PARM=('T=&TYPE',   TYPE is ONLY by default, changeable at
//                  startup
// 'E=LEAS',         EASTNAME is LEAS
// 'C=XCF',          COMM is XCF
// 'MA=1800',        MAXIDLE is 30 minutes
// 'MI=10',          MINIDLE is 10 seconds
// 'NB=200',         NBUF is 200 buffers
// 'NREA=5',         NREAD is 5 reads at a time
// 'NREQ=300',       NREQ is 300 process request entries
// 'NT=12'),         NTHREADS is 12 tape threads (drives)
//STEPLIB     DD    DSN=CAI.CAILEB,DISP=SHR
//SYSUDUMP    DD    SYSOUT=A
```

Optimizing Performance of the Expanded Access Server

The following parameters should be examined from time to time to optimize performance for your site's particular needs:

MAXIDLE
MINIDLE
NBUF
NREAD
NREQ
NTHREADS

See Server Start-Up Parameters later in this chapter for explanations.

Excluding Reports
From Expanded
Access

You may want to exclude particular reports from being accessed by the expanded access server, for performance or security reasons. There is an ERO parameter, VIEWTAPE, to exclude reports from access by the expanded access server. See the section Tape Online Access: VIEWTAPE in Chapter 6, "Expanded Retention Option."

Compression and
Maximum
Generations

More reports on tape means fewer tapes, and fewer necessary tape mounts. You can specify that CA-View create backup tapes utilizing hardware and/or software compression. See the initialization parameter TAPEOPT in Chapter 2, "Initialization Parameters."

Initialization parameter MAXGENT specifies the maximum number of generations of a report to write to tape, and therefore limits the number of reports written to any one tape. You can want to increase MAXGENT for tape storage groups that contain reports that are browsed from tape frequently. MAXGENT is a subparameter of the STORGRP0 and STORGRP1-STORGRP9 initialization parameters.

Tape Storage Groups

You can group reports on tape based on how frequently they are browsed from tape. This way, when the server is invoked, it is more often reading a subset of your backup tapes. For reports that will not migrate to optical disk, consider how frequently they will be browsed after they expire from primary disk when you are assigning tape storage groups.

Alternatively, you can group reports based on their retention requirements. One tape storage group could be all the 30-day reports, another the 90-day reports, etc. This lessens the need for tape consolidation.

For information about tape storage groups, see STORGRP0 and STORGRP1-STORGRP9 in Chapter 2, "Initialization Parameters."

Operating the Expanded Access Server Task

The following operator commands are available for the expanded access server started task. The start procedure for the task must first be installed. These examples assume the JCL from the preceding example.

- To start the server as a stand-alone-only server, issue the following operator command:
S SAREAS
- To start the server as the primary server, issue the following operator command:
S SAREAS, TYPE=PRIMARY
- To start the server as a secondary server, issue the following operator command:
S SAREAS, TYPE=SECONDARY
- To stop the server, issue either of the following operator commands:
P SAREAS
F SAREAS, STOP

- If a communications problem occurs (for example, L-SERV is shut down and restarted) you can reset communications for a primary or secondary server by issuing the following operator command:

F SAREAS, COMMRESET

Note that all requests awaiting a response from the server will be canceled.

All tapes currently allocated by the server can be immediately unloaded by issuing the following operator command:

F SAREAS, UNLOAD

Immediate unload can be useful if the CA-View backup cycle or the SARPAC tape consolidation program requires a tape that is currently mounted by the server.

Job Accounting

CA-View maintains information about the resources used by each archived SYSOUT group. The information includes:

- The number of fixed-length, 3476-byte blocks written on disk.
- The number of lines archived.
- The number of pages archived.

In addition, CA-View keeps up to 20 bytes of user accounting data for each SYSOUT group.

Accounting Report Program (SARACT)

An accounting report program, SARACT, is supplied with CA-View. The program produces a listing of the resources described in the previous section used by the archived SYSOUT groups in order of account number. Due to the varied accounting requirements of CA-View users, the program is supplied in source form. The program is written in both COBOL and assembler and is easily modified. The source for the program is in VIEW.SOURCE. You must compile and link-edit the program before executing it.

The COBOL version of this program requires the use of IBM's COBOL VS I compiler. You can modify the source module to adhere to the COBOL VS II compiler standards.

Input to the SARACT program is a sequential copy of the master index. You must use the IDXOUT function of the SARDBASE program to create the sequential copy of the master index.

JCL to Execute Accounting

Once SARACT has been compiled and link-edited, the following JCL executes the accounting report program:

```
//SARACT  JOB ACCOUNT, PROGRAMMER
//*
//*      EXECUTE SARDBASE TO COPY THE MASTER
//*      INDEX TO &&IDX
//*
//IDXOUT  EXEC PGM=SARDBASE
//STEPLIB DD DSN=CAI.CAILIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SARIOUT DD DSN=&&IDX, DISP=(, PASS),
//        UNIT=SYSDA, SPACE=(CYL, (1,1))
//SYSIN   DD *
NAME VIEW.SYSTEM1
IDXOUT
//*
//*      EXECUTE SARACT TO PROCESS FILE &&IDX
//*
//SARACT  EXEC PGM=SARACT
//STEPLIB DD DSN=CAI.CAILIB, DISP=SHR
//SARIDX  DD DSN=&&IDX, DISP=(OLD, DELETE)
//PRINT   DD SYSOUT=*
//SYSOUT  DD SYSOUT=*
//SORTWK01 DD UNIT=SYSDA, SPACE=(CYL, (1,1))
//SORTWK02 DD UNIT=SYSDA, SPACE=(CYL, (1,1))
//SORTWK03 DD UNIT=SYSDA, SPACE=(CYL, (1,1))
```

- If the load modules are link-edited into a library other than one of the link list libraries, change the data set name on the STEPLIB DD statements, if necessary.
- If the load modules are link-edited into a link list library, remove the STEPLIB DD statements.
- Change the high-level name on the NAME control statement to the name of your database.
- The SYSOUT DD statement defines the SORT messages and can be dummied out if desired.
- The PRINT DD statement must define a sequential output file to contain the report.

Capturing Accounting Data From the JOB Statement

By the time a job's SYSOUT is queued for output processing and passed to the archival started task, its accounting data is no longer available using the standard subsystem interface. To get around this problem, the accounting data for a job, or time-sharing session, is written to a CA-View accounting file at job initiation time via CA-View system extensions. This accounting file is then made available to the archival started task.

If job accounting data is required by your site, the accounting file must be allocated to DD name SARACT in the SARXTD system extensions and SARSTC archival task procedures. CA-View system extensions must be established on each processor at your site that executes any job or time-sharing session that produces SYSOUT for archival. Also, you must create and format the CA-View accounting file. See System Extensions (SARXTD) later in this chapter, and in Appendix A, "Data Sets and Environmental Considerations," for a description of the accounting file.

JCL Errors and TYPRUN=SCAN

Because accounting data is not captured until job initiation, no accounting data is provided for SYSOUT for a job having a syntax JCL error or for a job for which TYPRUN=SCAN was specified on the JOB statement.

User Exits

A user exit, SARACTUX, is provided to extract accounting data from the type-20 SMF records. The standard user exit supplied with CA-View extracts the first 10 bytes of the first accounting field and the first 10 bytes of the second accounting field, for a total of 20 bytes. If either field is shorter than 10 bytes, it is padded on the right with blanks. See Chapter 11, "User Exits," for information about modifying the user exit.

When the direct-to-CA-View archival feature of CA-Deliver is used, accounting data is extracted and formatted by the CA-Deliver RMORRQUX user exit.

SMF Type-6 Records

CA-View produces special type-6 SMF records for any SYSOUT groups automatically printed by the archival started task when initialization parameter SMF=YES has been specified.

The format of the type-6 SMF records is as follows:

Offset (dec.)	Name	Length (chars.)	Contents
0	SMF6LEN	2	Record length in binary
2	SMF6SEG	2	Segment descriptor
4	SMF6FLG	1	System indicator for VS2 (X'02')

Continued

Continued

Offset (dec.)	Name	Length (chars.)	Contents
5	SMF6RTY	1	Record type (X'06')
6	SMF6TME	4	Time in binary, in hundredths of a second, that the record was moved to SMF buffer
10	SMF6DTE	4	Date that the record was moved to SMF buffer, in the form 00YYDDDF where F is the sign
14	SMF6SID	4	System identification (taken from SID parameter)
18	SMF6JBN	8	Job name
26	SMF6RST	4	Time in binary, in hundredths of a second, that the reader recognized the job card for this job
30	SMF6RSD	4	Date that the reader recognized the job card for this job, in the form 00YYDDDF where F is the sign
34	SMF6UIF	8	User identification
42	SMF6OWC	1	SYSOUT class
43	SMF6WST	4	Start time in binary, in hundredths of a second, that CA-View printed the SYSOUT
47	SMF6WSD	4	Date that CA-View printed the SYSOUT, in the form 00YYDDDF where F is the sign
51	SMF6NLR	4	Number of lines, in binary, printed for all copies
55	SMF6IOE	1	X'00'
56	SMF6NDS	1	Number of copies printed
57	SMF6FMN	4	Form number
61	SMF6PAD1	1	Section indicator (X'80'-3800 Printing Subsystem section present)
62	SMF6SBS	2	Subsystem identification (C'ES')

Continued

Continued

Offset (dec.)	Name	Length (chars.)	Contents
64	SMF6LN1	2	Length of rest of record, including this field, but not including any additional sections indicated by the SMF6PAD1 field
66	SMF6DCI	2	X'0000'
68	SMF6JNM	4	Job number
72	SMF6OUT	8	SYSOUT destination
80	SMF6FCB	4	FCB image identification
84	SMF6UCS	4	UCS image identification
88	SMF6PGE	4	Number of pages, in binary, printed for all copies
92	SMF6DFE	2	X'0000'
94	SMF6OPR	2	X'0000'
96	SMF6GRP	8	X'0000000000000000'
104	SMF6RSVJ	8	First 8 characters of SYSOUT ID
112	SMF6RSVU	4	Last 4 characters of SYSOUT ID

SMF Type-6 Record for 3800 Printers

The format of the type-6 SMF record for the 3800 printer subsystems sections is as follows:

Offset (dec.)	Name	Length (chars.)	Contents
0	SMF6LN2	2	Length of 3800 Printing Subsystem section, including this field
2	SMF6CPS	8	Number of copies printed in each group Each byte represents, in binary, one copy group; the sum of the 8 bytes is the total number of copies printed.
10	SMF6CHR	16	Names of the character arrangement tables that define the characters used in printing Each name is 4 bytes long, with a maximum of 4 names.

Continued

Continued

Offset (dec.)	Name	Length (chars.)	Contents
26	SMF6MID	4	Name of copy modification module used to modify the data.
30	SMF6FLI	4	Name of the forms overlay printed on the copies
34	SMF6FLC	1	Number of copies, in binary on which the forms overlay is printed
35	SMF6BID	1	Options indicator: X'80' Output is to be burst into sheets by the Burster-Trimmer-Stacker X'40' DCB subparameter OPTCD=J was specified

Formatting the CA-View Accounting File

The SARINACT program formats the CA-View accounting file. The accounting file is only required if job accounting is desired as a CA-View extension.

The following job control statements are required:

Statement	Description
JOB	Initiates the job
EXEC	Specifies the program name (for example, PGM=SARINACT)
STEPLIB DD	Defines the load library containing SARINACT If the program resides in a link list library, omit this statement.
SYSPRINT DD	Defines the sequential output data set (normally SYSOUT) used for listing the statements and messages If not a SYSOUT data set, DCB=BLKSIZE= <i>nnnn</i> must be coded, where <i>nnnn</i> is a multiple of 121.
SARACT DD	Defines the accounting file The data set must be allocated as one contiguous extent with sufficient disk space to contain 32768 28-byte accounting records. The default and recommended block size is 2800 (100 accounting records per block).

Example

The following job creates and initializes the CA-View accounting file, VIEW.SARACT:

```
//ACTINIT JOB ACCOUNT, PROGRAMMER
//SARINACT EXEC PGM=SARINACT
//STEPLIB DD DSN=CAI.CALLIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SARACT DD DSN=VIEW.SARACT, DISP=(,CATLG),
// UNIT=SYSDA, VOL=SER=nnnnnn,
// SPACE=(2800,328,,CONTIG)
```

Microfiche Processing with SARMFP

The SARMFP program creates a sequential output file in a format suitable for microfiche processing. The output file can be processed by a microfiche reformat utility to produce a COM-ready tape or can be microfiched directly by an intelligent microfiche processor.

Only SYSOUT groups archived on disk can be microfiched. SYSOUT groups archived directly to tape or those having cycled off their disk generations are skipped over by the program.

Initialization parameters MSORT1, MSORT2, etc., specify the order in which the SYSOUT groups residing in disk archival data sets are sorted for output.

Separator Record

The archived SYSOUT groups are written sequentially to the output file. A special separator record precedes each group. Data from the separator record can be used to:

- Identify the SYSOUT
- Create an index for the fiche
- Produce understandable titles

The special separator record is formatted as follows:

Position	Length	Contents
1	1	Record identifier constant X'73'
2	3	Record identifier constant 'SAR'
5	12	SYSOUT ID

Continued

Continued

Position	Length	Contents
17	8	Job name
25	8	Job ID
33	8	Archival date (<i>mm/dd/yy</i>)
41	8	Archival time (<i>hh:mm:ss</i>)
49	8	Lines archived
57	8	Pages archived
65	6	Exceptional condition

User Exit for Formatting Output

A user exit, SARMFPUX, is available for special formatting of the output file.

The SARMFP program must run as a started task. It is executed with the following command:

```
S SARMFP [,OPT='generation']
```

where *generation* is the absolute (unsigned number) or relative (negative number) generation number to be output to microfiche. To output the current generation to microfiche, the OPT parameter can be completely omitted from the command, or the generation could be specified as -0.

SARMFP Examples

The following examples invoke the microfiche task for different sets of SYSOUT generations.

Example 1

```
S SARMFP,OPT='-1'
```

Specifies that CA-View is to invoke the microfiche facility for SYSOUT in the previous archival generation.

Example 2

```
S SARMFP,OPT='23'
```

Specifies that CA-View is to invoke the microfiche facility for SYSOUT in the archival generation 23.

Example 3.

```
S SARMFP
```

Specifies that CA-View is to invoke the microfiche facility for SYSOUT in the current archival generation.

Batch Job Execution of the Microfiche Task

Although the microfiche program is distributed for execution as a started task, it is possible to run this program as batch job after first modifying it with the IBM AMASPZAP utility.

To modify the microfiche program so that it can be run as a batch job, execute the following job:

```
//FICHEZAP JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=AMASPZAP
//SYSPRINT DD SYSOUT=*
//SYSLIB DD DSN=CA1.CAILIB, DISP=SHR
//SYSIN DD *
NAME SARMFP SARMFP
VER 06 00
REP 06 FF
/*
```

Change the data set name on the SYSLIB DD statement to the name of the library containing the CA-View load modules.

External Printing

The external print interface is a direct interface between CA-View and any printing product that might be used to reprint a SYSOUT or report. CA-View communicates directly with these external printing products via initialization parameters and online specifications.

Printing to External Devices

You identify a SYSOUT group and all of its attributes for printing with an external print record (XPR). You specify these attributes with the EXTPRT n initialization parameters. You can identify up to three separate attributes with the EXTPRT1, EXTPRT2, and EXTPRT3 initialization parameters.

Each EXTPRT initialization parameter contains a 1- to 3-character identifier for the printing product, and can contain attributes for defining the communication mechanism.

Interfaces for External Printing

There are two interfaces for use by CA-View to pass the External Print Record (XPR) to the external printing product. They are:

- The JES data set interface
- The dynamic program call interface

The format of EXTPRT*n* parameters determines which of the two CA-View external printing interfaces will be invoked.

The currently-available external printing interface is to VPS Print, using the JES data set interface. If you would like Computer Associates to develop an interface to another product, you can fill out a Demand Analysis Request (DAR) form, available from Computer Associates Technical Support.

The external print interface may require a special maintenance or release level of the vendor printing product. Please contact the vendor for details.

Defining an EXTERNAL Device

To simplify specification at reprint time, you can define an EXTERNAL printing device with the online DEFINE DEVICE (DEF DEV) command. Your system administrator can use the online DEF DEV command to assign a printer alias name (such as PRINTR1) to simplify specifying an external printer. See the "System Administration" chapter of the *CA-View Online User's Guide* for information on defining output devices with DEF DEV.

JES Data Set Interface

With this interface, CA-View dynamically creates a single-record JES data set containing an external print control record. The record is written as a fixed-length record without any carriage control. The data set is routed to the external print product based upon a combination of class, destination, forms name, and writer name as determined from the EXTPRT*n* initialization parameter and the destination specified by the user on the print request.

EXTPRT*n* Parameters

For the JES data set interface, the EXTPRT*n* initialization parameter has the following format:

EXTPRT*n*=printer-id/JESDS/class/destination/form/writer

where:

<i>n</i>	Specifies either 1, 2, or 3
<i>printer-id</i>	Specifies the 1- to 3-character identifier for the external print product
<i>class</i>	Specifies the 1-character SYSOUT class to be used to route the external print record
<i>destination</i>	Specifies the 8-character SYSOUT destination to be used to route the external print record
<i>form</i>	Specifies the 4-character SYSOUT forms name to be used to route the external print record
<i>writer</i>	Specifies the 8-character SYSOUT writer name to be used to route the external print record

EXTPRTn Parameters and Online Print Specifications

One or more of the following EXTPRTn parameters can be specified as an asterisk to indicate that they are to be supplied online by the user when printing a SYSOUT group:

```
class
destination
form
writer
```

Example

Assume you want to print to an external device using the JES data set interface. Also assume the following:

- The printer ID is VPS
- The class is V
- The destination is LOCAL
- You want the writer name to be supplied online when the print request is made

You would define the following initialization parameter:

```
EXTPRT1=VPS/JESDS/V/LOCAL/**
```

For the online print request you would specify the following destination:

```
DEST ===> >VPS.RMT5
```

CA-View would dynamically create a SYSOUT data set to contain the XPR record. The attributes for the data set would correspond to the following JCL statement:

```
//ddname DD SYSOUT=(V,RMT5),DEST=LOCAL
```

Notice the use of the asterisk in the EXTPRT parameter in the writer position to indicate that the user will supply the writer name online at the time of the print request.

EXTERNAL Printing-Dynamic Program Call Interface

With the dynamic program call interface, CA-View dynamically loads and calls a program to handle the print request. The external print record (XPR) is passed to the program as well as the parameter data specified in the EXTPRT n initialization parameter and in the destination specified by the user on the print request.

EXTPRT n Parameters

For the dynamic program call interface, the EXTPRT n initialization parameter has the format:

EXTPRT n =printer-id/PGM/program-name/parameter-data

where:

n	Is either 1, 2, or 3
<i>printer-id</i>	Specifies the 1- to 3-character identifier for the external print product
<i>program-name</i>	Specifies the 8-character name of the interface program to be called
<i>parameter-data</i>	Specifies up to 14 characters of parameter data to be passed to the interface program

Example

Assume you want to print to an external device using the dynamic program call interface. Also assume the following:

- The printer ID is ANA.
- The program to be called is ANAEP.
- The characters NOBANNER are to be passed to the program.

You would define the following initialization parameter:

EXTPRT2=ANA/PGM/ANAEP/NOBANNER

For the online print request, you would supply the following destination:

DEST ===> >ANA.INDEX

CA-View would dynamically load and call the program ANAEP. The parameter list to the program would contain the addresses and lengths of the following:

- The character string NOBANNER
- The character string INDEX
- The XPR record

3800 Printer Attributes

CA-View captures and archives information on the 3800 printer attributes for SYSOUT produced under the JES2 job entry subsystem; however, under the JES3 job entry subsystem, this information is not readily available to CA-View and is not archived with the SYSOUT.

When printing SYSOUT under the MVS/SP 1.3.2 (or a later release) operating system, CA-View uses the 3800 printer attributes originally archived with the SYSOUT, along with any other overrides specified with the online or batch request, to print the SYSOUT. For earlier releases of MVS, dynamic allocation does not support the 3800 attributes, so CA-View ignores the attributes when printing SYSOUT.

Also, in order for CA-View to use any of the 3800 printer attributes (for example, BURST, CHARS, or MODIFY) when printing reports, the operating system must be at release level MVS/SP 1.3.2 or later. The reason for this requirement is that CA-View uses the dynamic allocation facilities of the operating system, and earlier releases of MVS do not support 3800 printer attributes for dynamic allocation.

/*OUTPUT JES2 Control Statement

The /*OUTPUT JES2 control statement is not supported directly by CA-View because the parameters on the statement are kept on the JES2 spool volume and are not available to CA-View. Instead, CA-View obtains the print attributes for a report from the internal representation of the DD and OUTPUT JCL statements (that is, from the JFCB, SIOT, and SWB control blocks).

Note that since CA-View does not use the /*OUTPUT control statement, JES2 can still apply the statement to a report DD statement dynamically allocated by CA-View. Specifically, JES2 applies a /*OUTPUT statement when the DD statement dynamically allocated by CA-View contains a forms name equal to the code identifier on the /*OUTPUT control statement. When applying the /*OUTPUT statement, parameters are added to or replace those on the DD statement.

/FORMAT JES3 Control Statement**

The **/**FORMAT JES3** control statement is not supported directly by CA-View because the parameters on the statement are kept on the JES3 spool volume and are not available to CA-View. Instead, CA-View obtains the print attributes for a report from the internal representation of the DD and OUTPUT JCL statements (that is, from the JFCB, SIOT, and SWB control blocks).

Note that although CA-View does not use the **/**FORMAT** control statement, JES3 can still apply the statement to a report DD statement dynamically allocated by CA-View. Any non-specific **/**FORMAT** statement (for example, the **/**FORMAT** statement contains DDNAME=) is applied; however, only those parameters not specified by CA-View to dynamically allocate the DD statement are used. It is unlikely, however, that any specific **/**FORMAT** statement (for example, the **/**FORMAT** statement contains DDNAME=*ddname*) is applied, since the DDNAME of the dynamically-allocated DD statement is generated by the operating system.

//OUTPUT JCL Statement

CA-View extracts print attributes from **//OUTPUT** statements and dynamically creates **//OUTPUT** statements as necessary to produce reports, following the same rules used by the operating system for overrides. Note that if a SYSOUT DD statement references more than one **//OUTPUT** statement, CA-View only uses the first statement to obtain the print attributes; the other statements are ignored.

Specifically, CA-View extracts print attributes for the following **//OUTPUT** parameters:

BURST
CHARS
CLASS
COPIES
DEST
FCB
FLASH
FORMDEF
FORMS
LINECT
MODIFY
PAGEDEF
PRMODE
UCS
WRITER

Note: CA-View extracts **//OUTPUT** attributes **only** for reports archived through the Automatic Report Archival feature of CA-View Systems Extensions.

Recovery Data Set

The CA-View recovery data set is used by the archival started task and during the recovery process to maintain and obtain information on the tapes used in the backup process. This data set is referenced by the SARRECV DD statement in the started task JCL for the archival task and in the batch JCL for the SARDBASE and SARRECOV utilities.

Note: The data set must reside on a direct access volume. Since the data set is used to recover the CA-View database, you should not place the recovery data set on the same volumes containing data sets for the CA-View database.

The data set must not be allocated with DCB attributes. Only one track can be allocated for this data set.

Example

The following job is submitted to create the recovery data set:

```
//CREATE    JOB ACCOUNT, PROGRAMMER
//IEFBR14   EXEC PGM=IEFBR14
//DD1      DD DSN=VIEW.SARRECV, DISP=(,CATLG),
//          UNIT=SYSDA, VOL=SER=VOL380, SPACE=(TRK,1)
```

Security

CA-View provides the following security features:

- Logon user exits
- Internal security user exit (SARSECUX)
- External security (RACF, CA-CA-ACF2, etc.) via SAF user exit calls
- Batch password protection
- Data set security

You can select one or more of these features as necessary.

Logon Security

CA-View logon security is controlled by the SARUSxUX user exits. See Chapter 11, "User Exits," for details about implementation.

Internal Security User Exit: SARSECUX

You can use user exit SARSECUX to restrict access to archived SYSOUT groups. For the online retrieval facility, this exit is invoked for each entry to be displayed in the SYSOUT selection list. It is invoked again whenever an entry in the SYSOUT selection list is selected for processing. By setting a return code indicating whether you are authorized to access the SYSOUT group, the exit either allows the entry to be displayed or prevents it from being displayed in the list.

For the batch retrieval program, SARSECUX is invoked for each entry to be listed as a result of the LIST function. This exit is also invoked whenever a SYSOUT group is selected by the PRINT or LOAD functions. By setting a return code indicating whether the job is authorized to access the SYSOUT group, the function is either allowed or failed, as appropriate.

CA-View also provides security at the report level via user modes and private report viewing. See the *CA-View Online User's Guide* for details.

External Security Interface

External security packages are invoked by calling SAF. See RACF and Online Interfaces later in this chapter for a list of the exits that make SAF calls to interface to external security.

Batch Password Protection

For background jobs submitted by the online retrieval facility, complete security checking is done before the job is ever submitted. In this case, there is no need for the batch retrieval program to perform security checking, provided that the background job was submitted by the online retrieval feature.

You use the PWBATCH initialization parameter to eliminate the need for the batch retrieval program to perform security checking. When you specify the PWBATCH parameter, the online retrieval feature adds the password to each background function requested. The batch retrieval program then verifies that the password matches the one specified with the PWBATCH initialization parameter. If the password matches, no further security checking is done.

Data Set Security

CA-View provides full security over its data sets as a CA-View system extension. Full security means that no programs other than CA-View programs (unless authorized to bypass password protection) can access the data sets.

RACF Protection

RACF protection is available to restrict access to individual SYSOUT groups using the RACF option. When you specify the RACF option, CA-View issues a RACHECK for a SYSOUT group before allowing access to it. To browse a SYSOUT group or load it to disk, you or the job must have READ access to it; to print a SYSOUT group, you or the job must have UPDATE access to it; to delete a SYSOUT group, you must have ALTER access to it.

The entity for which CA-View does a RACHECK is a "pseudo" data set that has a name in the following form:

index.id

(if the SYSOUT ID is 1 to 8 characters)

or

index.subid-1.\$subid-2

(if the SYSOUT ID exceeds 8 characters)

where:

<i>index</i>	Specifies the value specified with the RACF option.
<i>id</i>	Specifies the full SYSOUT ID.
<i>subid-1</i>	Specifies characters 1 through 8 of the SYSOUT ID.
<i>subid-2</i>	Specifies the remaining characters of the SYSOUT ID beginning with the ninth character.

The volume serial number used for the RACHECK is the value specified with the RACF option. It is a "dummy" serial number and need not represent an actual volume.

RACF Example

Assuming the option RACF=SAR has been specified, the following data sets are RACHECKed by CA-View whenever access to the specified SYSOUT groups is requested:

SYSOUT ID	Data Set Name	Volser
REPORTX	VIEW.REPORTX	SAR
PRODJOBR275	VIEW.PRODJOBR.\$275	SAR

To restrict access to a SYSOUT group, the site must add a data set descriptor for it to the RACF data set. The ADDSD TSO command is used to perform this function.

The syntax of the ADDSD command as applicable to CA-View is:

```
ADDSD 'data-set-name' VOLUME(volser) UNIT(X) NOSET
```

where:

data-set-name Specifies the "pseudo" data set name for the SYSOUT group
volser Specifies the value of the RACF option

Note: The UNIT operand is required on the command; however, its value is meaningless since the NOSET operand is also specified.

Once access to a SYSOUT group has been restricted with the ADDSD TSO command, access to it can be given to specific users or groups with the PERMIT TSO command.

PERMIT Command and RACF

The syntax of the PERMIT command as applicable to CA-View is:

```
PERMIT 'data-set-name' ID(user) ACC(type)
```

where:

data-set-name Specifies the "pseudo" data set name for the SYSOUT group
user Specifies the name of the user or group to which access is to be granted
type Specifies the type of access to be given: READ or UPDATE

RACF Example Using PERMIT

Assume access to SYSOUT group PRODJOB275 is restricted to all users except the following:

- User APPLUSR is allowed to only browse the SYSOUT group.
- User OPERUSR is allowed full access to the data set (for example, browse, print, and load).
- User AUTHUSR is allowed full access to the data set (for example, browse, print, and load).

Also, option RACF=SAR has been specified.

The following TSO commands are issued:

```
ADDS 'VIEW.PRODJOBR.$275' VOLUME(SAR) UNIT(X) NOSET
PERMIT 'VIEW.PRODJOBR.$275' ID(APPLUSR) ACC(READ)
PERMIT 'VIEW.PRODJOBR.$275' ID(OPERUSR) ACC(UPDATE)
PERMIT 'VIEW.PRODJOBR.$275' ID(AUTHUSR) ACC(ALTER)
```

RACF and Online Interfaces

To activate the RACF interface, you must specify a value for the RACF initialization parameter, then refer to this table. Custom tailoring of security requirements can be implemented by modifying of the appropriate user exits:

Online Interface	Default Exits Provide Full RACF Interface, Via SAF	Exits Used
Native TSO	YES	SARUSTUX SARSECUX
TSO/cross-memory services	YES RACF is activated by the cross-memory parameter LGNSEC. Default exits copy TSO user signon and logon from the SARXMS interface.	E22TSOUX SARUSXUX SARSECUX
ISPF	YES	SARUSTUX SARSECUX
ISPF/cross-memory services	YES RACF is activated by the cross-memory parameter LGNSEC. Default exits copy ISPF user signon and logon from the SARXMS interface.	E22SPFUX SARUSXUX SARSECUX
VM/CMS	NO	SARUSVUX SARSECUX
CA-Roscoe	NO	SARSECUX SARUSRUX
CA-Roscoe/cross-memory	NO RACF is activated by the cross-memory parameter LGNSEC. Default exits copy CA-Roscoe user signon and logon from the SARXMS interface.	E22ROSUX SARUSXUX SARSECUX

Continued

Continued

Online Interface	Default Exits Provide Full RACF Interface, Via SAF	Exits Used
CICS	YES RACF is activated by the cross-memory parameter LGNSEC. Default exits copy CICS user signon and logon from the SARXMS interface.	XMSCICUX SARUSXUX SARSECUX
Native VTAM	YES RACF is activated by the cross-memory parameter LGNSEC.	SARUSAUX SARSECUX
IMS	YES	XMSCIUX

Bypassing Password Verification

For the following online interfaces, you can bypass password specification, and allow a user to log onto a CA-View database once that user is logged onto the online interface:

CICS pseudo-conversational
IMS
ISPF/cross memory
TSO/cross memory
ROSCOE/cross memory

To implement this functionality, you must do the following:

1. Specify LGNSEC=YES for the cross-memory region startup parameter.
2. Define the SARXMS region to RACF, using the ICHRIN03 MVS table.

After setting up the SARXMS region definition and assembling it into the linklist libraries, the following RACF commands should be executed on TSO/RACF:

```
AG (PROCGRP) OWNER(SYS1) SUPGROUP(SYS1)
AU (SAR60) PASSWORD(PASS) OWNER(PROCGRP) DFLTGRP (PROCGRP)
```

You must IPL to implement these changes.

See the *CA-View Installation Guide* for information about the LGNSEC parameter.

CA-ACF2 Protection

CA-ACF2 protection is available to restrict access to individual SYSOUT groups using the CA-ACF2 option. When the CA-ACF2 option is specified, CA-View issues the CA-ACF2 security interface SVC for a SYSOUT group before allowing access to it. To browse a SYSOUT group or load it to disk, you or the job must have input authority for it; to print a SYSOUT group, you must have update authority for it; and to delete a SYSOUT group, you must have scratch authority for it.

As with RACF protection, the entity for which the CA-ACF2 security check is made is a "pseudo" data set having a name of the form:

index.id

(if the SYSOUT ID is 1 to 8 characters)

or

index.subid-1.\$subid-2

(if the SYSOUT ID exceeds 8 characters)

where:

<i>index</i>	Specifies the value specified with the CA-ACF2 option.
<i>id</i>	Specifies the full SYSOUT ID.
<i>subid-1</i>	Specifies characters 1 through 8 of the SYSOUT ID.
<i>subid-2</i>	Specifies the remaining characters of the SYSOUT ID beginning with the ninth character.

The CA-ACF2 security check is done by data set name only, meaning no volume serial number is used.

CA-ACF2 Example

Assuming the initialization parameter ACF2=SAR has been specified, the following data sets are security-checked by CA-View whenever access to the specified SYSOUT groups is requested.

SYSOUT ID	Data Set Name
REPORTX	VIEW.REPORTX
PRODJOB275	VIEW.PRODJOB275

Appropriate data set access rules must be established by the site for CA-ACF2 to control access.

CA-ACF2 and Online Interfaces

To activate the CA-ACF2 interface you must specify a value for the CA-ACF2 initialization parameter, then refer to this table. Custom tailoring of security requirements can be implemented by modifying the appropriate user exits:

Online Interface	Defaults Exits Provide Full CA-ACF2 Interface, Via SAF	Exits Used
Native TSO	YES	SARUSTUX SARSECUX
TSO/cross-memory services	YES CA-ACF2 is activated by the cross-memory parameter LGNSEC. Default exits copy TSO user signon and logon from the SARXMS interface.	E22TSOUX SARUSXUX SARSECUX
ISPF	YES	SARUSTUX SARSECUX
ISPF/cross-memory services	YES CA-ACF2 is activated by the cross-memory parameter LGNSEC. Default exits copy ISPF user signon and logon from the SARXMS interface.	E22SPFUX SARUSXUX SARSECUX
VM/CMS	NO	SARUSVUX SARSECUX
CA-Roscoe	NO	SARSECUX SARUSRUX
CA-Roscoe/cross-memory services	NO CA-ACF2 is activated by the cross-memory parameter LGNSEC. Default exits copy CA-Roscoe user signon and logon from the SARXMS interface.	E22ROSUX SARUSXUX SARSECUX
CICS	YES CA-ACF2 is activated by the cross-memory parameter LGNSEC. Default exits copy CICS user signon and logon from the SARXMS interface.	XMSCICUX SARUSXUX SARSECUX

Continued

Continued

Online Interface	Defaults Exits Provide Full CA-ACF2 Interface, Via SAF	Exits Used
Native VTAM	YES CA-ACF2 is activated by the cross-memory parameter LGNSEC.	SARUSAUX SARSECUX
IMS	YES CA-ACF2 is activated by the cross-memory parameter LGNSEC. Default exits copy IMS user signon and logon from the SARXMS interface.	XMSCIUX SARSECUX SARUSXUX

Bypassing Password Verification

For the following online interfaces, you can bypass password specification, and allow a user to log onto a CA-View database once that user is logged onto the online interface:

CICS: pseudo-conversational
IMS
ISPF/cross memory
TSO/cross memory
ROSCOE/cross memory

To implement this functionality, you must do the following:

1. Specify LGNSEC=YES for the cross-memory region startup parameter.
2. Specify the appropriate SAFPROT rules for CA-ACF2.

See the *CA-View Installation Guide* for information about the LGNSEC parameter; see the following for sample SAFPROT rules for CA-ACF2 (additional modification may be required due to site requirements):

For the ISPF interface:

```
SAFPROT.SAR1 CLASSES(DATA SET) CNTLPTS(SARSPF) SUBSYS(SVC019)
SAFPROT.SAR2 CLASSES(DATA SET) CNTLPTS(SARSPF) SUBSYS(SARSPF)
```

For the VTAM/XMEM interface:

```
SAFPROT.SAR3 CLASSES(DATA SET) CNTLPTS(E22XMDRV) SUBSYS(SVC019)
SAFPROT.SAR4 CLASSES(DATA SET) CNTLPTS(E22VTDRV) SUBSYS(SVC019)
SAFPROT.SAR5 CLASSES(DATA SET) CNTLPTS(E22XMDRV) SUBSYS(E22XMDRV)
SAFPROT.SAR6 CLASSES(DATA SET) CNTLPTS(E22VTDRV) SUBSYS(E22VTDRV)
```

System Extensions (SARXTD)

CA-View has been designed to function without any modifications to operating system code; however, there are features that are so closely tied to the operating system that they could not be implemented if the policy of no system modifications were strictly adhered to. These features are available through CA-View system extensions.

To implement a system extensions feature, CA-View “front ends” the appropriate operating system function by dynamically interfacing to the running system (for example, changing an address in the SVC table). Since the change is dynamic, no permanent change is ever made to operating system code. There are two major benefits in choosing to implement the features in this manner:

- The features can be activated or deactivated at will.
- The application of operating system maintenance is not affected by CA-View.

Currently there are only three features that require implementation via CA-View system extensions:

- Security of CA-View data sets
- Automatic report archival
- Capture of job accounting data

If you require any of these features, you must activate CA-View system extensions on each processor at your site.

The system extension task is not a continuously-running task. It only executes long enough to dynamically interface to the system, then it terminates.

If the data set security feature of system extensions restricts access to the CA-View LOAD library, the CA-View LOAD library cannot be used in a STEPLIB or JOBLIB DD statement of any executable job.

Neither the CHKPT macro nor the CHKPT=EOV JCL statement can be used with SARXTD alone. They must be used in conjunction with CA-Deliver. See the section Automatic Report Archival in Chapter 5, “Archival,” for more information.

Activating System Extensions

To activate the system extensions on a processor (or to reactivate those features that have been deactivated), issue the following command:

```
S: SARXTD [, PARM='parameters']
```

where *parameters* specifies one or more optional parameters used to override those in the start procedure JCL. See System Extensions Parameters later in this chapter.

Please note the following:

- You should add the S SARXTD command to member COMMND xx of SYS1.PARMLIB to start the system extensions task automatically at each IPL.
- The data set security feature is activated only when its parameter is specified in the parameter field used to start CA-View system extensions.
- The automatic report archival feature is activated only when its parameters are specified in the parameter field used to start CA-View system extensions.
- The accounting data capture feature is activated only when the SARACT DD statement for the accounting file is included in the JCL procedure used to start CA-View system extensions.
- You can use the following dummy DD statements in conjunction with the SARXTD program:

```
//NOSVC99 DD DUMMY
```

Dynamic deallocation (SVC 99) of SYSOUT data sets is bypassed during subsystem close processing. This causes the SYSOUT data sets produced by automatic report archival to be unavailable to the CA-View started task until job termination. If this DD statement is not present, each report is available when it is closed, potentially causing a separate entry for it in the CA-View database.

```
//NOTERM DD DUMMY
```

The SARXTD started task remains active and responds to MODIFY commands as they are received through the operator console. Note that the started task terminates, regardless of whether or not this DD statement is present, when all system extensions have been deactivated.

```
//SUBSYS $n$  DD DUMMY
```

More than one set of system extensions can be implemented concurrently by specifying a unique subsystem identifier (n) in this DD statement.

If you want to use multiple SARXTDs, you must be aware of the following:

- If job accounting is to be used in a single CPU environment, accounting should be done in only one SARXTD. If more than one SARXTD is used, accounting data is double posted.
- If job accounting is to be used in a multiple-CPU environment, the accounting data set can be shared only across systems within the same multi-access spool complex. Furthermore, SARXTD will record accounting data only for jobs run on a CPU on which you have requested SARXTD accounting. Therefore, to record accounting data on all CPUs, you must run SARXTD accounting on all CPUs.

- For automatic report archival, processing is performed based on the alphanumeric order of the subsystem identifier. This means that if SUBSYS2 and SUBSYS6 request automatic archival for the same SYSOUT, only the SUBSYS2 request is honored—even if SUBSYS2 was started after SUBSYS6.

Deactivating System Extensions

Occasionally, you may need perform maintenance on a CA-View data set (for example, to reformat the accounting file). In this instance, one or more or all of the features of the system extensions can be deactivated on a processor.

Be sure that security is not compromised when the security feature is deactivated on a processor. Also, be aware that when the accounting feature is deactivated on a processor, no accounting data is captured for jobs beginning execution on that processor.

The following commands deactivate CA-View system extensions:

S SARXTD, PARM=OFF	Deactivates all features
S SARXTD, PARM=OFFSEC	Deactivates only the data set security feature
S SARXTD, PARM=OFFARA	Deactivates only the automatic report archival feature
S SARXTD, PARM=OFFACT	Deactivates only the job accounting capture feature

System Extensions Parameters

The parameter field on the EXEC statement in the start procedure JCL (or specified as an override on the start command for starting CA-View system extensions) passes parameters for the data set security and automatic report archival features of the system extensions.

The format of the parameter field is:

PARM=' *index*, *jobclass*/*sysclass*/*archclass*/*archdest*/*archform*/*archmedia*,'

where:

index Specifies the high-level index (one or more qualifiers separated by periods with a maximum length of 17 characters) of the CA-View data sets for which data set security is to be activated

If you do not want to activate the data set security feature, you must omit the index from the parameter field (note that index is positional and its absence must be indicated by coding the comma that follows).

Once the data set security feature is activated, any program (other than CA-View) that has not been marked in the program properties table to bypass password protection is restricted from accessing any data set whose name begins with the specified high-level index.

where:

jobclass/sysclass/archclass/archdest/archform/archmedia

Specifies a set of specifications used to select and archive reports for the automatic archival feature. You can code up to four sets of specifications in the parameter field (indicated by the ellipses). A set of specifications is comprised of six elements, each of which is separated from the next by a slash "/." The meaning of each element is described as follows:

<i>jobclass</i>	Specifies 1 to 8 job execution classes for which reports are automatically archived. You can specify an asterisk to indicate all job classes.
<i>sysclass</i>	Specifies 1 to 8 SYSOUT classes for which reports are to be automatically archived. You can specify an asterisk to indicate all SYSOUT classes.
<i>archclass</i>	You can use the SYSOUT class to create an additional SYSOUT data set for the report that is spun-off for archival. You can omit the element or specify an asterisk to indicate that the default SYSOUT class (MSGCLASS for the job) is used to create the spin-off data set.
<i>archdest</i>	Specifies the destination used to create an additional SYSOUT data set for the report that is spun-off for archival. You can omit the element or specify an asterisk to use the system default destination.
<i>archform</i>	You can use the forms name to create an additional SYSOUT data set for the report that is spun-off for archival. You can omit the element or specify as an asterisk to use the system default forms name.

archmedia Specifies the media used to archive the SYSOUT
Specify D to archive the SYSOUT to disk, or T to
archive the SYSOUT directly to tape.
If omitted, the SYSOUT is archived to disk.

Note: You must specify the combination of *archclass*, *archdest*, and *archform* on the SARINIT parameter CLSL=, DEST=, and FORM= to implement automatic report archival. For examples of coding the automatic report archival specifications, see the section Automatic Report Archival in Chapter 5, "Archival."

Chapter 4

Online Interface Administration

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Chapter 4

Online Interface Administration

In This Chapter

This chapter provides information about the various online retrieval systems from which CA-View can run including:

- Bringing up CA-View under a particular online system
- CA-View security and online systems

This chapter also includes a section about the operation of the CA-View cross-memory task, which controls the following:

- CICS pseudo-conversational option
- VTAM online retrieval
- IMS online retrieval
- ISPF/cross-memory
- TSO/cross-memory
- CA-Roscoe/cross-memory

Online Retrieval Specifications

You can access the online retrieval facility of CA-View from many different terminal management systems (such as TSO, ISPF, CICS, and VM/CMS) as separate options.

The display screens, input commands, and selection codes used by CA-View online retrieval are consistent under all online management systems. Exceptions are presented in the following sections. In addition, these sections describe the methods for invoking the various online retrieval options and implementation of security.

You can display the CA-View logo when entering the CA-View system using the LOGO initialization parameter.

- To access the CA-View Primary Selection panel from the CA-View logo screen, press ENTER.

Native TSO

You invoke the native TSO online retrieval facility using the following command:

```
SARTSO high-level-name
```

where *high-level-name* specifies the high-level name of the CA-View database.

For example:

```
SARTSO VIEW.SYSTEM1
```

To simplify the invocation, you can create a CLIST containing the SARTSO command.

See the section Logon Security in Chapter 3, "Configuring CA-View," for details about implementation of internal and external security.

TSO/Cross-Memory Services Interface

You invoke the TSO/cross-memory services online retrieval facility using the following command:

```
E22XMTSO high-level-name
```

where *high-level-name* specifies the high-level name of the CA-View database.

For example:

```
E22XMTSO VIEW.SYSTEM1
```

To simplify the invocation, you can create a CLIST containing the E22XMTSO command.

ISPF

In general, you install the ISPF online retrieval feature so that entering a selection code in one of the option panels invokes CA-View online retrieval. The installation instructions explain how to set up a selection code for CA-View.

As an alternative, you can invoke the ISPF online retrieval facility from TSO with the following command:

From ISPF:

```
ISPSTART PGM(SARSPF) PARM(high-level-name) NEWAPPL(SAR)
```

where *high-level-name* specifies the high-level name of the CA-View database.

For example:

```
ISPSTART PGM(SARSPF) PARM(VIEW.SYSTEM1) NEWAPPL(SAR)
```

To simplify the invocation, you can create a CLIST containing the ISPF or ISPSTART command.

Note: If you are in CA-View split-screen mode, the CA-View session **must** be in the top half of the split screen and at least four lines **must** be visible.

ISPF/Cross-Memory Services

In general, you install the ISPF/cross-memory services online retrieval feature so that entering a selection code in one of the option panels invokes CA-View online retrieval. The installation instructions explain how to set up a selection code for CA-View.

As an alternative, you can invoke the ISPF/cross-memory services online retrieval facility from TSO with the following commands:

- From SPF:

```
ISPFG PGM(E22XMSPF) PARM(high-level-name)
```

- From ISPF:

```
ISPSTART PGM(E22XMSPF) PARM(high-level-name) NEWAPPL(SAR)
```

where *high-level-name* specifies the high-level name of the CA-View database.

For example:

```
ISPSTART PGM(E22XMSPF) PARM(VIEW.SYSTEM1) NEWAPPL(SAR)
```

To simplify the invocation, you can create a CLIST containing the ISPF or ISPSTART command.

- From VM/CMS:

You invoke the VM/CMS online retrieval facility directly from CMS with the following command:

```
SARCMS fn ft fm
```

where:

- fn* Specifies the file name of the parameter file
The parameter file is created and initialized as part of the installation procedure. If omitted, file name defaults to SARIDX.
- ft* Specifies the file type of the parameter file
If omitted, file type defaults to FILE.
- fm* Specifies the file mode of the parameter file
If omitted, all disks for the user are searched for the file.

For example:

```
SARCMS SARIDX FILE A
```

To simplify the invocation, you can create an EXEC containing the SARCMS command.

CMS and VTAM Printing and CA-Spool

The CA-View VTAM Print and CA-Spool Print commands are not valid through CMS.

CA-Roscoe

You invoke the CA-Roscoe online retrieval facility directly from CA-Roscoe with the following command:

```
CALL SARROS 'high-level-name'
```

where *high-level-name* specifies the high-level name of the CA-View database.

For example:

```
CALL SARROS 'VIEW.SYSTEM1'
```

To simplify the invocation, you can create an RPF containing the CALL command.

CA-Roscoe/Cross-Memory Services

You invoke the CA-Roscoe online retrieval facility directly from CA-Roscoe with the following command:

```
CALL E22XMROS 'high-level-name'
```

where *high-level-name* specifies the high-level name of the CA-View database.

For example:

```
CALL E22XMROS 'VIEW.SYSTEM1'
```

To simplify the invocation, you can create an RPF containing the CALL command.

CICS (Cross-Memory)

You invoke the CICS online retrieval facility from CICS by entering a predefined transaction identifier. The transaction identifier is established as part of the installation instructions.

Alternatively, you can invoke CA-View from a user-written CICS menu system. See the section Installing the CICS Pseudo-Conversational Option in the *CA-View Installation Guide* for more information.

Native VTAM

In general, you install the native VTAM online retrieval feature so that it requires only a one-word command to log onto CA-View online retrieval. The installation instructions explain how to set up this command to VTAM. Alternatively, you can use the standard VTAM LOGON command to invoke CA-View online retrieval as follows:

```
LOGON APPLID(SARVTAM) DATA(high-level-name)
```

where *high-level-name* specifies the high-level name of the CA-View database.

For example:

```
LOGON APPLID(SARVTAM) DATA(VIEW.SYSTEM1)
```

With the logon format cross-memory parameter (LGNFMT), you can specify the logon data that you expect. See the *CA-View Installation Guide* for more information about the parameter.

IMS Online Interface Transaction Specification

Start SARXMS (a cross-memory service task). The IMS/DC transaction program is conversational and starts when you enter the IMS/DC transaction and terminal type.

Use the following table:

Transaction	Terminal Type
M2	3278-224 x 80 Default screen size
M2H	3278-224 x 80 Highlighting
M2X	3279-224 x 80 COLOR Highlighting
M2C	3279-224 x 80 COLOR
M3	3278-332 x 80
M3H	3278-332 x 80 Highlighting
M3X	3279-332 x 80 COLOR Highlighting
M3C	3279-332 x 80 COLOR
M4	3278-443 x 80 Highlighting
M4H	3278-443 x 80 Highlighting
M4X	3279-443 x 80 COLOR Highlighting
M4C	3279-443 x 80 COLOR
M5	3278-527 x 132
M5H	3278-527 x 132 Highlighting
M5X	3279-527 x 132 COLOR Highlighting
M5C	3279-527 x 132 COLOR
M6	329062 x 80
M6H	329062 x 80 Highlighting
M7	329031 x 160
M7H	329031 x 160 Highlighting
M8	329062 x 160
M8	329062 x 160 Highlighting

CA-View VTAM print is not valid through IMS Online.

Operating the Cross-Memory Task

The cross-memory task executes as the application for the cross-memory online retrieval option and is used for the following:

- The CICS pseudo-conversational option
- VTAM online retrieval
- IMS online retrieval
- ISPF/cross-memory
- TSO/cross-memory
- CA-Roscoe/cross-memory

The standard procedure for the cross-memory task is located in CAI.PPOPTION.

Starting the Cross-Memory Task (START)

The cross-memory task is started with the following operator command:

S SARXMS

The PARM field in the SARXMS PROC specifies an eight-character internal name for the system, the maximum number of users allowed, the transaction timeout limit, and a Cancel Connection field.

Immediate Termination (SHUTDOWN)

The cross-memory task is immediately terminated with the operator command:

F SARXMS, SHUTDOWN

This command immediately terminates all active user sessions.

Normal Termination (QUIESCE)

A QUIESCE command causes termination of the cross-memory task when the last user ends his or her session. If no users are in session when the cross-memory online task is quiesced, the task terminates immediately.

The cross-memory task is quiesced with the operator command:

F SARXMS, QUIESCE

or

P SARXMS

Canceling Users (CANCEL)

Users are canceled from the cross-memory task by the operator command:

```
F SARXMS, CANCEL  [ALL]
                   [CONID=]
                   [UID#=]
                   [USERID=]
                   [SARDB=]
                   [RMOB=]
                   [INBDB=]
```

where:

CANCEL ALL	Cancels all users
CANCEL CONID='connectid1', 'connectid2', ..., connectidN' <	Cancels a specific user using the 20-character connect-ID A user's connect-ID is displayed with the LIST command.
CANCEL UID#=nnn,nnn,nnn	Cancels a specific user using control block number A user's control block number is listed with the LIST command.
CANCEL USERID=userid1, userid2,userid3	Cancels a specific user by CA-View user ID
CANCEL SARDB=database.name	Cancels all users accessing this CA-View database
CANCEL RMOB=database.name	Cancels all users accessing this CA-Deliver database
CANCEL INBDB=lseroid	Cancels all users accessing this CA-Balancing database

Suspending Additional Logons (SUSPEND)

Additional user logons are suspended from cross-memory tasks using the operator command:

```
F SARKMS, SUSPEND: {ALL | SARVTAM | RMOVTAM | XMS | VTAM | SARDB=
                    RMODB= | INBDB=}
```

You can SUSPEND ALL, SARVTAM, RMOVTAM, XMS, or VTAM (both SARVTAM and RMOVTAM) tasks.

If the VTAMPASS initialization parameter is set to YES, the VTAM interface attempts to pass the user to another task.

You can also stop logons to a particular CA-View, CA-Deliver, or CA-Balancing database with the SARDB=, RMODB=, and INBDB= parameters. If no users are logged on to the database, it is de-allocated from the cross-memory region.

Resuming Acceptance of New Logons (RESUME)

The acceptance of new logons to the cross-memory task is resumed by the operator command:

```
F SARKMS, RESUME: {ALL | SARVTAM | RMOVTAM | INBVTAM | XMS | VTAM
                  SARDB= | RMODB= | INBDB=}
```

You can RESUME ALL, SARVTAM, RMOVTAM, INBVTAM, VTAM (all VTAMs), or XMS tasks.

You can also resume acceptance of logons to a particular CA-View, CA-Deliver, or CA-Balancing database with the SARDB=, RMODB=, and INBDB= parameters.

Closing Cross-Memory Tasks (CLOSE)

The CLOSE command closes the VTAM ACB and users are immediately terminated. Logons are not accepted until an OPEN command is issued, re-opening the VTAM ACB. CLOSE overrides the VTAMPASS parameter in that users attempting to sign on are not passed to another cross-memory task. The command is:

```
F SARKMS, CLOSE: {ALL | SARVTAM | RMOVTAM | INBVTAM | VTAM}
```

You can CLOSE ALL, SARVTAM, RMOVTAM, INBVTAM, VTAM (all VTAMs), or XMS tasks.

Reopening Cross-Memory Tasks (OPEN)

The OPEN command re-opens the ACB for the VTAM interface after a CLOSE command has been issued. The command is:

```
F SARXMS, OPEN {ALL | SARVTAM | RMOVTAM | INBVTAM | VTAM}
```

You can OPEN ALL, SARVTAM, RMOVTAM, INBVTAM, VTAM (all VTAMs), or XMS tasks.

Listing Statistics (LIST)

A listing of information relating to the cross-memory sessions is obtained by the operator command:

```
F SARXMS, LIST
      [DATABASE]
      [STATUS]
      [USERS]
      [USERID=]
      [UID#=]
      [CONID=]
      [SARDB=]
      [RMODB=]
      [INBDB=]
```

where:

LIST DATABASE{,ALL}	Displays the cross-memory system status and active databases for this task; ALL for all tasks
LIST STATUS{,ALL}	Displays the cross-memory system status of this task; ALL for all tasks
LIST USERS{,ALL ,ACTIVE ,INACTIVE}	Displays the status of ALL, ACTIVE, or INACTIVE users The default is ACTIVE.
LIST USERID='userid1', 'userid2', 'userid3'	Displays the status of a specific user; identified by CA-View user ID
LIST UID#=nnn,nnn,nnn	Displays the status of a specific user; identified by control block number
LIST CONID='connectid1', 'connectid2', 'connectid3'	Displays the status of a specific user; identified by the 20-character connect-ID
LIST SARDB=databasename	Displays all user sessions using the specified CA-View database
LIST RMODB=databasename	Displays all user sessions using the specified CA-Deliver database
LIST INBDB=lservid	Displays all user sessions using the specified CA-Balancing database

Changing Cross-Memory Parameters Online (CHANGE)

You can use the CHANGE command to modify the following cross-memory initialization parameters online:

CANCEL
LONGWAIT
USERMAX
VTAMPASS

Important! You cannot increase USERMAX above the value it had when SARXMS was started, or set VTAMPASS from NO to YES; the region *must* be recycled.

- To change the USERMAX parameter, enter the following:

```
F SARXMS, CHANGE USERMAX=nnn
```

Defining Multiple VTAM Cross-Memory Regions

The *CA-View Installation Guide* contains the steps you need to follow to install the cross-memory task. (VTAM online retrieval runs under the cross-memory task.) The following guidelines define multiple VTAM/Cross-memory regions.

Regions Grouped by MVS Subsystem Name

Multiple VTAM regions are grouped under a four-character MVS subsystem name. The SUBSYS= cross-memory parameter specifies the subsystem name at the startup time of the cross-memory region. Unless you specifically want to define separate multiple groups of VTAM regions, you should use the default SUBSYS parameter. If you specify SUBSYS=, all VTAM regions grouped under the same SUBSYS *must* be started with the same release/PTF level of the CA-View loadlibs.

Warning! If you change your release of CA-View and you specified a value in SUBSYS=, you must change the SUBSYS= cross-memory parameter and IPL to prevent CSA damage. The control block sizes for CA-View are release dependent and can cause serious problems if you don't specify the correct release. If you use the default parameter for SUBSYS you won't have this problem because each release of CA-View defaults to the appropriate SUBSYS name.

Regions Separated by REGIONIDs and APPLID

Each separate VTAM region attached to a SUBSYS **must** have a unique REGIONID. You must specify the REGIONID as the first parameter of the PARM= statement in the start procedure JCL for the cross-memory online retrieval task. A region doesn't start if another region with the same REGIONID is already running for the same SUBSYS.

Each separate VTAM region attached to a SUBSYS **must** have a unique VTAM APPLID. The USSTAB (defined in Step 2 of Installing the VTAM Online Retrieval Option in the *CA-View Installation Guide*) or your session manager should pass all VTAM logon requests to the Primary VTAM APPLID. CA-View re-routes requests to other regions if the Primary is full or marked as unavailable. Each VTAM APPLID **must** have AUTH=(ACQ,PASS) and you must specify the cross-memory parameter VTAMPASS=YES for all of the regions.

Checking the Status of Multiple Regions

You can enter the LIST STATUS operator command with the ALL parameter to display the status of all regions in the same SUBSYS group. The command is as follows:

```
F SARKMS,LIST STATUS,ALL
```

Specifying the Parameters: SYSIN Statements

You should specify as many of the parameters as possible with SYSIN statements to easily manage multiple regions.

The REGION parameter is positional and must be specified in the PARM= statement of the cross-memory task JCL. You should specify the following parameters in the PARM= statement:

```
SUBSYS=  
SARAPPL=  
XMS=
```

You can specify the rest of the parameters with SYSIN DD statements. If you place the SYSIN statements in a PDS member, you can alter the parameters without shutting down the cross-memory region; however, the parameters do not take effect until the next time the region is shut down and restarted.

Chapter 5

Archival

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Chapter 5

Archival

In This Chapter

This chapter provides information about the following:

- SYSOUT archival
- AFP and Xerox (XPDS) report archival
- Exceptional condition checking
- Operating the archival task
- Operating the optical migration subtask
- Running multiple archival tasks
- Automatic report archival
- Batch job execution of the archival task

Archival of SYSOUT Using the SARSTC Started Task

Archival of SYSOUT is performed by the started task SARSTC. SARSTC is normally started at system IPL time and remains active until the operating system is brought down. SARSTC uses the standard subsystem interface to JES2 or JES3 to request SYSOUT for archival, and it remains in a wait state during the periods when no SYSOUT is available for archival.

Archival Selection Criteria

The initialization parameters shown in the following table are available for specifying the criteria used for selecting SYSOUT for archival.

Parameter	Description
CLSL	A character string made up of one to eight SYSOUT classes
DEST	Destination
FORM	Forms name

You can specify each parameter. If you specify more than one parameter, the SYSOUT **must** meet all the specifications for it to be archived.

For example, suppose you specify MSGCLASS=P on the job statements for all production jobs at your site, and the reports produced by the jobs are output to SYSOUT classes C, D, E, F, and G. To archive the production JCL listings, you would specify:

CLSL=P

To archive the production reports, you would specify:

CLSL=CDEFG

If you wanted to archive only production reports destined to be printed at remote 10, you would specify:

CLSL=CDEFG
DEST=RMT10

CA-View receives its SYSOUT from JES similar to that of a printer. If a printer is set with the same attributes as CA-View's archival criteria, the printer and CA-View compete for SYSOUT from JES. Therefore, you **must** ensure that none of your printers is set to CA-View's archival criteria; otherwise, some of your SYSOUT will be printed directly, rather than passed to CA-View for archival.

Record Length

Logical records for reports processed by CA-View cannot exceed 32752 for fixed-length records or 32756 for variable-length records. This includes the carriage control character.

Method of Operation and the Backup Cycle

The CA-View archival started task receives SYSOUT from the job entry subsystem using the process SYSOUT interface. This method is the same as that used by an external writer to obtain SYSOUT. CA-View receives SYSOUT from JES, writes it out as its current disk generation to its database, and records its location and characteristics in a master index which also resides in its database. At specified intervals it automatically performs a backup cycle while continuing to archive SYSOUT. Two types of backup cycles can be performed:

- Standard backup
- Interim backup

The *standard backup cycle* causes the current generation number to be incremented by one, so that archival of SYSOUT continues to a new generation.

The *interim backup cycle* does not increment the generation number or start the microfiche task. After an interim backup, archival of SYSOUT continues to the same generation.

Both types of backup cycles are asynchronous, that is, the backup cycle executes concurrently with archival of SYSOUT.

The backup cycle consists of the following:

- Creating a new current generation (standard backup only)
- Backing up SYSOUT not currently on tape media
- Purging entries for "old" SYSOUT from the master index
- Cleaning up and recovering space for SYSOUT groups that are migrating to tape status, were temporarily loaded to disk, or were actively being created prior to a system crash or abend
- Backing up the master index to tape
- Updating the CA-View recovery file
- Un-cataloging tape data sets no longer required
- Starting the microfiche task (standard backup only)

In addition to the automatic initiation of the backup cycle by CA-View, you can initiate a backup cycle at any time using the operator commands.

CA-View Reports

The SRBKLST DD statement prompts CA-View to automatically create a report listing of all backed up files after each archival of the primary disk.

The following is an example of a SARBKLIST report:

SARBKLIST													CA-VIEW (2.0) - SYSTEM ARCHIVAL TASK		PAGE
02/28/96 18:37:46 SEQ=00047 VOL=428119 DPLX=*NONE* BACKUP LIST SGP=DEFAULT DSN=VIEW.SYSTEM1.SARTAPE.0000047															1
ID	JOB NAME	JOBID	GEN	SEQ	ARC DATE	ARC TIME	LOC	LINES	PAGES	DASD BLKS	XCODE	FILE	TIME		
REPORT1	COOCH03B	JOB01396	25	12	02/28/96	17:29:42	DISK	12600	200	265			1	18:37:46	
REPORT1	COOCH03B	JOB01395	25	11	02/28/96	17:29:39	DISK	12600	200	265			2	18:37:48	
REPORT1	COOCH03B	JOB01394	25	10	02/28/96	17:29:35	DISK	12600	200	265			3	18:37:49	
REPORT1	COOCH03B	JOB01392	25	9	02/28/96	17:29:32	DISK	12600	200	265			4	18:37:51	
REPORT1	COOCH03B	JOB01391	25	8	02/28/96	17:29:28	DISK	12600	200	265			5	18:37:52	
REPORT1	COOCH03B	JOB01187	25	3	02/17/96	16:17:45	DISK	12600	200	265			6	18:37:54	
TOTAL REPORTS BACKED UP TO TAPE =													6		
SARBKLIST													CA-VIEW (2.0) - SYSTEM ARCHIVAL TASK		PAGE
02/28/96 18:37:56 REPORTS AND RESOURCE GROUPS DELETED DURING STANDARD BACKUP OF GEN													26		2
ID	JOB NAME	JOBID	GEN	SEQ	ARC DATE	ARC TIME	LOC	LINES	PAGES	DASD BLKS	XCODE	FILE	TIME		
D68D50AE	SARFSSCC	STC01203	*DVS	RSRC*	02/17/96	17:44:11		227	70				1	18:37:56	
F268B50C	SARFSSCC	STC03326	*DVS	RSRC*	02/20/96	15:57:30		157	47				2	18:37:56	
779AA128	SARFSSCC	STC01181	*DVS	RSRC*	02/17/96	15:58:42		100	23				1	18:37:56	
TOTAL REPORTS AND RESOURCE GROUPS DELETED =													3		
SARBKLIST													CA-VIEW (2.0) - SYSTEM ARCHIVAL TASK		PAGE
02/28/96 18:37:56 SEQ=00047 VOL=428119 DPLX=*NONE* BACKUP LIST SGP=DEFAULT DSN=VIEW.SYSTEM1.SARTAPE.0000047															3
MASTER INDEX BACKED UP AT FILE													7	ON VOL 428119	
SARBKLIST													CA-VIEW (2.0) - SYSTEM ARCHIVAL TASK		PAGE
02/28/96 18:37:59 TAPES UNCATALOGUED DURING STANDARD BACKUP OF GEN													26		4
TAPE DATASET NAME													VOLSER		
VIEW.SYSTEM1.SARTAPE.T0000021													434675		
VIEW.SYSTEM1.SARTAPE.T0000022													410838		
VIEW.SYSTEM1.SARTAPE.T0000023													434804		
VIEW.SYSTEM1.SARTAPE.T0000025													413175		
VIEW.SYSTEM1.SARTAPE.T0000026													433066		
VIEW.SYSTEM1.SARTAPE.T0000027													425245		
VIEW.SYSTEM1.SARTAPE.T0000031													483693		
VIEW.SYSTEM1.SARTAPE.T0000032													484218		
VIEW.SYSTEM1.SARTAPE.T0000033													482487		
VIEW.SYSTEM1.SARTAPE.T0000034													482060		
VIEW.SYSTEM1.SARTAPE.T0000039													460308		
VIEW.SYSTEM1.SARTAPE.T0000040													478871		

Archival and Database Space

If CA-View runs out of space in its database while archiving SYSOUT, it prompts the operator for a recovery option. The operator can:

- Add additional space to the CA-View database while the archival task waits, then request the archival task to retry
- Request the archival task to perform its standard backup cycle and then retry
- Request the archival task to terminate

Archival Generations

The time interval during which CA-View logically archives SYSOUT in a group for reference purposes is defined as a generation. A generation can also be defined as the period of time from one standard backup cycle to the next, since it is the backup cycle that creates a new generation. The site has complete control over the beginning and length of time of the generation with the TIME and INTERVAL initialization parameters. For most sites, the interval is 24 hours and comprises the site's daily production cycle.

Note: You can perform interim backups by specifying the NBACKUP initialization parameter. Automatic interim backups are dependent on the standard backup. If no standard backup is performed, TBACKUP=NO, or DAYS=NNNNNN, no interim backups are performed.

You can suppress a backup cycle for any day of the week with the DAYS initialization parameter. For example, assume that the site is "closed" on Sundays, with no operator on hand to mount tapes for the backup cycle. In this case, the site suppresses the automatic backup cycle on Sundays by setting DAYS=YYYYYYN.

You use the NGEND and NGENT initialization parameters, respectively, to specify the number of generations of SYSOUT maintained on disk and the number maintained on tape. For example, to keep three generations of SYSOUT on disk and 90 generations on tape, specify:

```
NGEND=3  
NGENT=90
```

In this example, 90 total generations are retained by CA-View. Immediately after a job runs, three generations of the job are on disk. The most recent generation resides on disk only and the next two generations reside both on disk and tape. The remaining 87 generations reside on tape only. Immediately after a standard backup cycle, only the two most recent generations reside on disk and tape; the remaining 87 generations reside on tape only. The NGENT value includes the NGEND value.

Direct-to-Tape Archival

For large reports, or other SYSOUT for which the site does not require immediate access but for which archival is desired, the site can define from one to eight classes to be archived directly to tape. The initialization parameter used to define direct-to-tape archival classes is TAPECLSL.

For example, if you want to archive all SYSOUT with a form name of VIEW and, of the SYSOUT that is archived, you want any class T or U SYSOUT archived directly to tape with no disk storage being used, you would specify the following parameters:

```
FORM=VIEW  
TAPECLSL=TU
```

Due to the sequential nature of tape, some restrictions exist for SYSOUT archived directly to tape. These restrictions are:

- Exceptional conditions do not cause the automatic printing of the SYSOUT
- The SYSOUT is not processed by the microfiche started task

For performance reasons, once a SYSOUT data set is selected for archival, a tape drive is allocated and remains allocated through the next backup cycle or until the archival task is stopped. Alternatively, you can specify the UNLOAD initialization parameter to cause the tape drive to be unloaded and freed after each SYSOUT group is archived to tape.

Note: If SYSOUT is being archived to tape when a backup cycle is initiated, archiving is suspended until the backup has been completed.

All direct-to-tape SYSOUT is written to STORGRP0, the default tape storage group. If you specify a group other than STORGRP0 for the SYSOUT, that group is honored by the consolidation program SARPAC when it processes the tape.

No Archival Option

CA-View can process SYSOUT without actually archiving it to any disk or tape file. A site can choose to use this facility for certain classes of SYSOUT in order to take advantage of the user exits available with CA-View. For example, if a site desires to create special banner pages for its SYSOUT with CA-View, even SYSOUT for which no archival is desired could still have the special banner pages produced.

The site can specify from one to eight SYSOUT classes for which no archival is done with the NARCCLSL initialization parameter. The same two restrictions listed for direct-to-tape archival also apply to the no archival option.

Exceptional Condition Processing

During SYSOUT processing, CA-View scans for exceptional conditions. The type of conditions that are treated as exceptions are specified in a table of control statements to the archival started task. This table can be updated and refreshed while CA-View is executing through an operator command. User exit SARSTCUX can also be used to specify exceptional conditions.

The ROUT, DESC, and XPRINT parameters specify the action CA-View takes whenever an exceptional condition occurs. CA-View issues a message to the operator identifying the exceptional condition when a non-zero route code is specified. The ROUT and DESC operands specify the route and descriptor codes, respectively.

XPRINT=YES causes the SYSOUT to automatically print whenever an exceptional condition occurs. CA-View dynamically allocates a SYSOUT data set.

The default exceptional conditions for which CA-View checks are:

- Non-zero condition code
- System or user abend
- JCL error
- Data set cataloging error
- Data set not deleted error
- Operator cancel of allocation request

CA-View may also check for a user-specified text string as an exceptional condition in the SYSOUT.

The conditions can be modified using control statements specified earlier in this section.

Printing SYSOUT

You can specify one to eight classes of SYSOUT for automatic printing at time of archival using the PRTCLSL initialization parameter. Any SYSOUT group that is being archived whose class matches one of the classes specified with the PRTCLSL initialization parameter is written back out to SYSOUT by CA-View.

When printing SYSOUT, either because its class matches one of the PRTCLSL classes or because XPRINT=YES is specified and an exceptional condition occurs, CA-View dynamically allocates a SYSOUT data set and writes the archived SYSOUT to it. The original class, destination, and form attributes can be overridden by NEWCLSL, NEWDEST, and NEWFORM parameters, respectively. All other attributes remain the same.

Archival of JCL Listings

The key to archiving JCL listings (including the job log and allocation messages) is in separating the JCL listing SYSOUT from the report SYSOUT produced by a job based on one or more of the following archival selection criteria: class, destination, and forms name.

This separation can be accomplished in several ways, including:

- Assigning a different SYSOUT class in the MSGCLASS JOB statement parameter from those classes specified in the SYSOUT DD statements for the jobs
- Assigning a special forms name or destination to the JCL listings for a job with the “/*OUTPUT SYS” JES2 control statement
- Assigning a special forms name or destination to the JCL listings for a job with the “/*FORMAT PR” JES3 control statement for DD names: SYSMMSG, JESJCL, and JESMSG
- Assigning a special forms name, destination, or SYSOUT class to the JCL listings for a job with the “// name OUTPUT JESDS=ALL” JCL statement

If you want to archive some or all of the report SYSOUT for a job and its JCL listing, ensure that the SYSOUT attributes of the DD statements you want to archive match those of the JCL listing.

Archival of Report SYSOUT

This guide refers to any SYSOUT produced for a job using DD statements (both those contained in the JCL and those dynamically allocated) is called report SYSOUT. Report SYSOUT can be handled directly by CA-View as with the JCL listings, or indirectly by archiving a copy of the report SYSOUT that has been produced by the automatic report archival feature of CA-View system extensions. Whether you choose to archive reports directly with CA-View or indirectly using the automatic report archival feature depends primarily on your need to print the reports and/or track the reports under JES.

Direct archival of reports with CA-View is the easiest and most straightforward approach. You specify the archival selection criteria to CA-View. The reports can be automatically reprinted by CA-View with the PRTCLSL initialization parameter. Since the reports are actually reprinted by CA-View, they are identified to JES under the name of the archival started task and not under the name of the creating job. When reports are printed they contain banner pages produced by CA-View, identifying the creating job.

Alternatively, with the automatic report archival feature, reports are printed directly by JES and are identified to it under the name of the creating job; a duplicate of the reports is produced by the automatic report archival feature for “spin-off” to CA-View.

The last line of any page of a report should not have a channel skip statement. If a report has a channel skip statement at the bottom of a page, you must follow it with a blank line; otherwise the channel skipping is not honored. For more information about the automatic report archival feature, see the section Automatic Report Archival later in this chapter.

Archival of SYSLOG Data

You can select SYSLOG data for archival by SYSOUT class. When SYSLOG data is queued for print using the WRITELOG operator command or at IPL time, it can be archived by CA-View. Therefore, if you want to archive SYSLOG data, you need to have your SYSLOG data queued for print at regular intervals. The length of the interval determines the age of the most current archival group of SYSLOG data.

You can use the automatic command facility to queue SYSLOG data at regular intervals. For example, to queue SYSLOG data on an hourly basis for archival to CA-View, establish the following automatic command as part of your IPL procedure:

```
$TA,I=3600,'$VS''W'''
```

You should coordinate the process of implementing archival of SYSLOG data with your systems programming staff.

AFP Report Archival

CA-View allows you to archive AFP reports with a CA-View ACIF (AFP Conversion and Indexing Facility) archiver.

An ACIF archiver is defined as a functional subsystem application (FSA) that runs under a separate address space called a Functional Subsystem (FSS). A Functional Subsystem Interface (FSI) maintains communication between the FSS and the JES global address space. AFP Conversion and Indexing Facility (ACIF) is a utility that is part of the IBM PSF/MVS product.

For CA-Deliver clients, AFP data **cannot** be archived via CA-Deliver direct to CA-View archival; it must be archived from JES.

Starting and Stopping ACIF Archival

Under JES2, an ACIF archiver FSA can be started in one of the following ways:

- An operator can enter the START DEVICE JES2 command
- When JES2 is brought up, ACIF archival starts automatically if the PRT n statement for the printer FSA contains the START parameter

Under JES3, an ACIF archiver FSA can be started in one of the following ways:

- An operator can enter the START WRITER JES3 command
- ACIF archival is started by JES3 when printing is scheduled for a printer FSA

If you do not want archival to stop after each job, you can define the FSS as a JES3 "hot writer," keeping the address space active.

The ACIF archival FSA differs from normal printers in that it can only be started and stopped. Positioning commands, such as those to interrupt a printer, forward space, or back space the printer, cannot be used.

Installing a CA-View ACIF Archiver

For information about installing a CA-View ACIF archiver, see the *CA-View Installation Guide*.

Viewing AFP Reports

You have several options for viewing AFP reports through CA-View online. You can:

- View the report exactly as it will be printed, with the CA-View Workstation product (version 1.4.0 or higher)
- View the text portions of the report on a 3270 terminal, by simply selecting the report
- View (and/or print) a GDQF composed version of the report on a 3270 GDDM terminal (IBM product GDQF required)

Indexing AFP Reports

For each SYSOUT data set to be processed by a CA-View ACIF archiver, a set of control statements can be used to define indexing criteria and provide other attributes for archival.

These control statements are created as members of the SARINDEX PDS, specified in the CA-View ACIF start procedure. The name of the member is coded on the GROUPID parameter of the //OUTPUT JCL statement for the SYSOUT data set. If the GROUPID parameter is not coded, the name of the member defaults to the job name. For JES3 sites, the GROUPID parameter is supported in version 4.2 and above of JES3.

See CA-View ACIF Interface in the *CA-View Installation Guide* for information about installing a CA-View ACIF archiver.

IBM ACIF Control Statements

The following IBM ACIF control statements can be coded for a CA-View ACIF archiver:

CPGID
FIELDn
GROUPNAME
IMAGEOUT (default changed to **ASIS**)
INDEXn
RESTYPE (default changed to **ALL**)
TRIGGERn
INDEXOBJ (default changed to **ALL**)

For more information about ACIF control statements, see the IBM manual *AFP Conversion and Indexing Facility: Application Programming Guide, G544-3824*.

CA-View ACIF Control Statements

In addition to the IBM ACIF control statements, you can code the following CA-View ACIF archival control statements:

DOWNLOAD

DOWNLOAD specifies up to 256 user IDs to which the archived SYSOUT will be queued for downloading to CA-DocView (formerly CA-View Workstation).

REPORTID

REPORTID specifies a one- to twelve-character name under which the report is to be archived. If omitted, the job name is used, except for CA-Deliver, which uses its **REPORTID**.

USERDATA

USERDATA specifies one to twenty bytes of user data to be stored in the **GCRUSER** field.

AFP Report Archival Example

The following is an example of implementing the CA-View ACIF archival interface to archive an AFP report. Detailed installation instructions are provided in the *CA-View Installation Guide*.

Suppose you have defined a CA-View ACIF archiver to JES2 as device PRT18. JES2 is to select any data set for this archiver with a processing mode of ACIF. The name of the start procedure is SARFSS.

JES2 Control
Statements

The JES2 control statements to be coded for this example are:

```
FSSDEF(FSSSAR) PROC=SARFSS
PRT18 FSS=FSSSAR,
      MODE=FSS,
      NOSEP,
      NOSEPDS,
      PRMODE=(ACIF),
      WS=(PRM)
```

Start Procedure for
SARFSS

The start procedure for SARFSS is as follows:

```
//SARFSS PROC
//SARFSS EXEC PGM=SARFSS,TIME=1440,
// REGION=2M
//STEPLIB DD DSN=CAI.CALLIB,DISP=SHR
// DD DSN=ACIF.LOAD,DISP=SHR
//SYSUDUMP DD SYSOUT=A
//SARINDEX DD DSN=VIEW.SARINDEX,DISP=SHR
//PRT18 DD DSN=CAI.PPOPTION(PRT18),DISP=SHR
//SARLOG DD SYSOUT=A
```

Device Control
Statements for PRT DD
Statement

The following are the JES2 device control statements for PRT18 of our example:

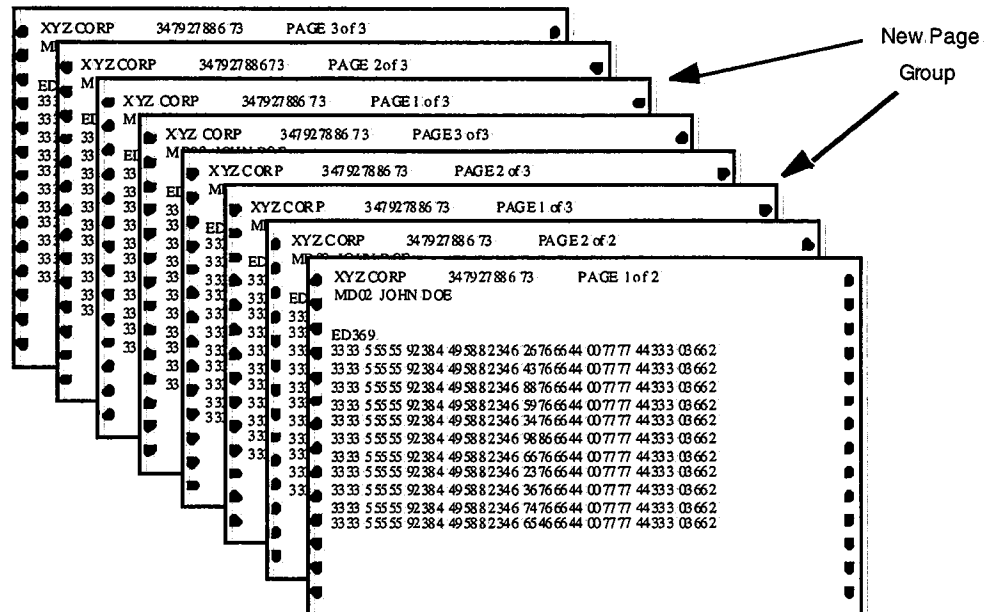
```
TYPE=ACIF
ARCHMSG=YES
CHARS=(GT15,GX15)
FDEFLIB=SYS1.FDEFLIB
FONTLIB=SYS1.FONTLIB,
      SYS1.FONTLIBB,
      GSF.USERFONT
PDEFLIB=SYS1.PDEFLIB
OVLVLIB=SYS1.OVLVLIB
PSEGLIB=SYS1.PSEGLIB
FORMDEF=A10110
PAGEDEF=V06683
NEWPRMOD=PAGE
```

Sample Application
Job

The following is a sample application job that generates SYSOUT to be indexed by CA-View ACIF, and archived:

```
//SAMPJOB JOB ACCOUNT,PROGRAMMER
//O1 OUTPUT GROUPID=S10056,PRMODE=ACIF,
// PAGEDEF=A18D,FORMDEF=A18D1,
// USERLIB=SAMPLE.USERLIB
//STEP1 EXEC PGM=MYAPPL
//REPORT DD SYSOUT=A,OUTPUT=*.O1,
// DCB=(RECFM=FA,BLKSIZE=133)
```

Following is the report generated by the application MYAPPL:



ACIF Control
Statements

The following ACIF control statements are in member S10056 of the SARINDEX PDS. For information about coding the ACIF control statements, see the IBM manual *AFP Conversion and Indexing Facility: Application Programming Guide, G544-3824*:

```

TRIGGER1=*,1,'1' /*SELECT page group by skipping to channel 1
TRIGGER2=0,120,'PAGE 1' /* and text string 1
FIELD1=2,9,24 /* Data field containing customer name
FIELD2=2,40,8 /* Data field containing account number
FIELD3=0,16,10 /* Data field containing division name
FIELD4='A10-' /* constant
INDEX1='Customer name',FIELD1
INDEX2='Account Number',FIELD4, FIELD2
INDEX3='Division',FIELD3
REPORTID=PHONEBILLS
DOWNLOAD=JOHNB,
MARYK,
JIMT

```

Important! You should index reports appropriately to minimize the size of page groups because you can view AFP reports using CA-View Workstation Release 1.6 or CA-DocView 2.0 on a PC. In this example, we used the characters "PAGE 1" as the TRIGGER to signify a new page group, then indexed on the CUSTOMER NAME and ACCOUNT NUMBER.

Archiving Xerox Reports (XPDS)

CA-View allows you to archive Xerox reports with a CA-View DVS archiver. DVS is the Document Viewing Service, software developed by Document Sciences Corp.

A DVS archiver is defined as a functional subsystem application (FSA) that runs under a separate address space called a Functional Subsystem (FSS). A Functional Subsystem Interface (FSI) maintains communication between the FSS and the JES global address space.

For CA-Deliver customers, XPDS data **cannot** be archived via CA-Deliver direct-to-CA-View archival; it must be archived from JES.

You can only view XPDS reports via CA-DocView (formerly CA-View Workstation).

Starting and Stopping DVS Archiver

Under JES2, a DVS archiver FSA can be started in one of the following ways:

- An operator can enter the START DEVICE JES2 command
- When JES2 is brought up, DVS archival starts automatically if the PRT n command statement for the printer FSA contains the START parameter. Under JES3, a DVS archiver FSA can be started in one of the following ways:
 - An operator can enter the START WRITER JES3 command.
 - DVS archival is started by JES3 when printing is scheduled for a printer FSA.

If you don't want archival to stop after each job, you can define the FSS as a JES3 hot writer, keeping the address space active.

The DVS archival FSA differs from other printers because it can only be started and stopped. Positioning commands such as commands that interrupt a printer, like forward space or back space the printer, cannot be used.

Installing a CA-View DVS Archiver

See information about installing a CA-View DVS archiver in the *CA-View Installation Guide*.

Indexing Xerox (XPDS) Reports

For processing of each SYSOUT data set by a CA-View DVS archiver, you can use a set of control statements to define indexing criteria and provide other attributes for archival.

These control statements are created as members of the SARINDEX PDS, specified in the CA-View DVS start procedure. The name of the member is coded on the GROUPID parameter of the //OUTPUT JCL statement for the SYSOUT data set. If the GROUPID parameter is not coded, the name of the member defaults to the job name. For JES3 sites, the GROUPID parameter is supported in JES3 version 4.2 and higher.

See CA-View DVS Interface in the *CA-View Installation Guide* for information about installing a CA-View DVS archiver.

For information about DVS, see the Document Sciences manual *Document Viewing Service, DVS Programmer's Guide, DVS-PRTEMU*.

CA-View DVS Control Statements

You can code the following CA-View override DVS archival control statements to enhance or override the control statements in the PRT n m data sets.

Control Statement	Description
DOWNLOAD=	Specifies up to 256 user IDs to which the archived SYSOUT will be queued for downloading to the CA-View Workstation (CA-DocView)
DOBFORMS=YES NO	Specifies whether to process Bforms by the printer emulator and add to the output CCIF If NO is specified, any pages containing Bforms will not appear in the output CCIF.
DOBLNKPG=YES NO	Specifies whether the emulator should create blank pages in the output CCIF for blank pages in the input XPDS
INDXLANG=ASCII EBCDIC	Specifies whether to generate the text in index lists in ASCII or EBCDIC
JDINAME=	Specifies the name of the JDI member of the printer resource CCIF to use for controlling index list generation Omit this statement if you don't want to perform indexing. Do not specify the .JDL suffix. The maximum name length is six characters.

Continued

Continued

Control Statement	Description
LOGFILE=	Specifies the DDname of a file to which the emulator writes logging information, X-Y text dumps, and missing resource error messages
ONLANSI=YES NO	Forces the printer emulator to accept ANSI-style print carriage control for online jobs instead of IBM 3211 print carriage control
PPRHITE=	Specifies the paper height in either dots or xdots
PPRUNITS= DOTS XDOTS	Specifies the units in which PPRHITE and PPRWIDTH are specified There are 300 dots per inch and 600 xdots per inch.
PPRWIDTH=	Specifies the paper width in either dots or xdots
RDBCCIF=	Specifies the data set name of the default CCIF that contains the printer resource data.
REPORTID=	Specifies a one- to twelve-character REPORTID for the archive report If omitted, the job name is used, except for CA-Deliver, which uses its REPORTID.
STARTJDL=	Specifies the startup JDL Do not specify the .JDL extension. The maximum STARTJDL length is six characters.
STARTJDE=	Specifies the startup JDE Maximum STARTJDE length is six characters.
UNIQIMSGS=YES NO	Specifies whether different download IMGs (images) in the XPDS have different names If YES is specified, downloaded IMGs in the XPDS have unique names. If two separate IMGs have the same name, they are assumed to be the same IMG. If NO is specified, the XPDS can have two or more IMGs with the same name, although the contents can be different.
USERDATA=	Specifies one to twenty bytes of user data to be stored in the GCRUSER field
XYDUMP=YES NO	Indicates whether to create and write a diagnostic X-Y-text dump of the XPDS to the logfile data set

Xerox (XPDS) Report Archival Example

The following example describes implementation of the CA-View DVS archival interface to archive an XPDS report. Detailed installation instructions are in the *CA-View Installation Guide*.

Note: You must pre-load the indexing statements in this example as member PHONE.JSI of PHONE.RESOURCE.CCIF and compiled as member PHONE.JDL. See the Document Sciences manual *Document Viewing Service, DVS Programmer's Guide, DVS-PRTEMU*, for information about coding the .JSI member.

Example

Let's assume you have defined a CA-View DVS archiver to JES2 as device PRT18. You want JES2 to select any data set for this archiver with a processing mode of DVS. The name of the start procedure is SARFSS.

Code the following JES2 control statements as follows:

```
FSSDEF (FSSAR) PROC=SARFSS
PRT18 FSS=FSSAR,
      MODE=FSS,
      NOSEP,
      NOSEPDS,
      PRMODE=(DVS),
      WS=(PRM)
```

The start procedure for SARFSS is as follows:

```
//SARFSS PROC
//SARFSS EXEC PGM=SARFSS, TIME=1440,
// REGION=2M
//STEPLIB DD DSN=CAI.CALLIB, DISP=SHR
// DD DSN=DVS.LOAD, DISP=SHR
//SYSUDUMP DD SYSOUT=A
//SARINDEX DD DSN=VIEW.SARINDEX, DISP=SHR
//PRT18 DD DSN=CAI.PPOPTION(PRT18), DISP=SHR
//SARLOG DD SYSOUT=A
//SYSPRINT DD SYSOUT=A
//TMP18 DD UNIT=SYSDA, SPACE=(CYL,10),
// DCB=(RECFM=FBS, LRECL=8192, BLKSIZE=8192)
//IDX18 DD UNIT=SYSDA, SPACE=(CYL,10),
// DCB=(RECFM=FBS, LRECL=8192, BLKSIZE=8192)
//RES18 DD UNIT=SYSDA, SPACE=(CYL,10),
// DCB=(RECFM=FBS, LRECL=8192, BLKSIZE=8192)
//DOC13 DD UNIT=SYSDA, SPACE=(CYL,10),
// DCB=(RECFM=FBS, LRECL=8192, BLKSIZE=8192)
```

All temporary CCIFs should be blocked with the indicated JCL. Use UNIT=V10 if possible.

The following are the JES2 device control statements for PRT DD Statement PRT18 of this example:

```
TYPE=DVS
ARCHMSG=YES
DOBLNKPG=YES
PPRHTE=3300
PPRUNITS=DOTS
PPRWIDTH=2550
RDBCCIF=SYS1.DVS.RESOURCE
TMPDDN=TMP18
IDXDDN=IDX18
RESDDN=RES18
DOCDDN=DOC18
NAME=VIEW.SYSEM1
STARTJDE=STD
STARTJDL=STD
NEWPRMOD=PAGE
```

Sample Application Job

The following is a sample application job that generates SYSOUT to be indexed by CA-View DVS, and archived:

```
//SAMPJOB JOB ACCOUNT,PROGRAMMER
//01 OUTPUT GROUPID=S10056,PRMODE=DVS,
//STEP1 EXEC PGM=MYAPPL
//REPORT DD SYSOUT=A,OUTPUT=* .01,
// DCB=(RECFM=FA,BLKSIZE=133)
```

DVS Control Statements

The following DVS control statements are in member S10056 of the SARINDEX PDS:

```
STARTJDL=PHONE
STARTJDE=ONLINE
RDBCCIF=PHONE.RESOURCE.CCIF
JDINAME=PHONE
REPORTID=PHONEBILLS
DOWNLOAD=JOHNE,
        MARYK,
        JIMT
```

Important! You should index the reports appropriately, to minimize the size of the page groups, since the XPDS report is downloaded from mainframe storage to the PC to be viewed with CA-DocView (formerly CA-View Workstation). Avoid downloading any unnecessary pages.

Exceptional Condition Checking (System and User-Specified Conditions)

When archiving SYSOUT, CA-View scans each record for exceptional conditions. You can have CA-View check for an IEF system code, such as IEF142I, or you can specify any string of text to search as a *user-specified* condition.

You specify the exception conditions with control statements to the archival started task SARSTC. Each control statement applies to one or more jobs by specific or wildcard job names.

For completion codes and abends, the control statement can be further qualified to a specific step and/or procedure step. A default control statement is provided to override one or all of the system defaults.

To enable editing of the exceptional condition table while the started task is active, the table must be established as a member of a PDS rather than a sequential data set.

System Exceptional Conditions

CA-View checks the following elements to set exceptional conditions:

- Identifier of the associated error message
- Control statement parameters associated with that message ID
- System default parameter

System Conditions

The corresponding exception code is stored in the group control record (GCR) for the SYSOUT group. The table below lists the system conditions CA-View will check:

Condition	Message ID	Parameters	System Default	Exception Code
Condition code	IEF142I	CC CC>nnnn CCnnnn NOCC NOCCnnnn	CC	nnnn (Condition code)
Data set not deleted	IEF283I	NDEL NONDEL	NDEL	NOTDEL
Data set not cataloged	IEF287I	NCAT NONCAT	NCAT	NOTCAT

Continued

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Condition	Message ID	Parameters	System Default	Exception Code
Data set not re-cataloged	IEF287I	RCAT NORCAT	RCAT	NTRCAT
Data set not un-cataloged	IEF287I	UCAT NOUCAT	UCAT	NTUCAT
JCL error	IEF452I IEF453I	JCL NOJCL	JCL	JCLERR
Operator cancel	IEF251I	OCNCL NOOCNCL	OCNCL	OCNCL
System abend	IEF472I	SYS SYSxxx NOSYS NOSYSxxx	SYS	Sxxx (abend code)
User abend	IEF472I	USER USERnnnn NOUSER NOUSERnnnn	USER	Unnnn (abend code)

FIRST and LAST Specifications

The parameters FIRST and LAST are provided to specify whether the exception code for the first or last exception condition for the SYSOUT group should be retained in the group control record. LAST is the system default.

Control Statements for System Conditions

Control statements are input to the archival started task using the SARXCTAB DD statement and the following general structure:

/ID parameters

The slash is coded in column 1 and is immediately followed by the job name. One or more blanks must follow the ID and separate it from the parameters. Individual parameters are separated by one or more blanks and/or commas. A statement that exceeds 71 characters must be continued on additional cards. When continuing a statement, interrupt the statement **only** between complete parameters.

The ID identifies the job to which the statement applies. The statement is as follows:

***jobname*(*.stepname*(*.procstepname*))**

where:

- | | |
|---------------------|--|
| <i>jobname</i> | Specifies the name of the job to which the statement applies

You can specify a generic job name by appending an asterisk to the generic name. For example, a job name of PROD* specifies that the statement applies to any job having the first four characters of its name being PROD. |
| <i>stepname</i> | Specifies the name of the job step to which the statement applies

<i>stepname</i> is optional and can only be coded for completion code and/or abend exceptions. If omitted, the statement will apply to all job steps. |
| <i>procstepname</i> | Specifies the name of the procedure step to which the statement applies

<i>procstepname</i> is optional and can only be coded for completion code and/or abend exceptions. If omitted, the statement applies to all procedure steps. |

Because qualification by job and procedure step names only applies to completion code and abend exceptions, multiple control statements may be required for the same job. One statement specifies only the job name without further qualification.

Parameters in the Control Statements

All parameters applicable to the entire job are coded. Additional statements, qualified to a particular job and procedure steps, are also used. Only the completion code, system parameters, and user abend parameters are coded on these additional statements. You can code the following parameters:

Parameter	Description
CC	Specifies the following: <ul style="list-style-type: none"> ■ A condition code message for a non-zero condition code is treated as an exceptional condition ■ A condition code message for a zero (0) condition code is not treated as an exceptional condition
NOCC	Specifies that there are no condition code exception conditions

Continued

Continued

Parameter	Description
CC>nnnn	<p>Specifies that a condition code message with a condition code greater than <i>nnnn</i> is treated as an exceptional condition unless:</p> <ul style="list-style-type: none"> ■ A NOCCnnnn parameter is also specified for the condition code and that a condition code message with a condition code less than or equal to <i>nnnn</i> is not treated as an exceptional condition ■ A CCnnnn parameter is also specified for the condition code
CCnnnn	<p>Specifies the following:</p> <ul style="list-style-type: none"> ■ A condition code message with a condition code equal to <i>nnnn</i> is treated as an exceptional condition ■ A condition code message with a condition code not equal to <i>nnnn</i> is not treated as an exceptional condition unless specifically identified as an exceptional condition by another CCnnnn or CC>nnnn parameter
NOCCnnnn	<p>Specifies the following:</p> <ul style="list-style-type: none"> ■ A condition code message with a condition code equal to <i>nnnn</i> is not treated as an exceptional condition ■ A condition code message with a condition code not equal to <i>nnnn</i> is treated as an exceptional condition unless specifically identified as not being an exceptional condition by another NOCCnnnn or CC>nnnn parameter <p>0000 specifies that when multiple exceptions occur for a SYSOUT group, the first exception code for the group is retained in the group control record.</p> <p>000 specifies that a JCL error message is treated as an exceptional condition.</p>
NOJCL	Specifies that there are no JCL exception conditions
LAST	Specifies that when multiple exceptions occur for a SYSOUT group, the last exception code for the group is retained in the group control record
NCAT	Specifies that a NOT CATALOGED message is treated as an exceptional condition
NONCAT	Specifies that a NOT CATALOGED message is not treated as an exceptional condition
NDEL	Specifies that a NOT DELETED message is treated as an exceptional condition

Continued

Continued

Parameter	Description
NONDEL	Specifies that a NOT DELETED message is not treated as an exceptional condition
OCNCL	Specifies that an OPERATOR CENCL IN ALLOCATION RECOVERY message is treated as an exceptional condition
NOOCNCL	Specifies that an operator cancel in allocation recovery message is not treated as an exceptional condition
RCAT	Specifies that a NOT RECATALOGED message is treated as an exceptional condition
NORCAT	Specifies that a NOT RECATALOGED message is not treated as an exceptional condition
SYS	Specifies that a system abend code message for any abend code is treated as an exceptional condition
NOSYS	Specifies that a system abend code message for any abend code is not treated as an exceptional condition
SYSxxx	Specifies that a system abend code message for abend code xxx is treated as an exceptional condition and that a message for any abend code other than xxx is not treated as an exceptional condition unless specifically identified as an exceptional condition by another SYSxxx parameter
NOSYSxxx	Specifies that a system abend code message for abend code xxx is not treated as an exceptional condition and that a message for any abend code other than xxx is treated as an exceptional condition unless specifically identified as not being an exceptional condition by another NOSYSxxx parameter
UCAT	Specifies that a NOT UNCATALOGED message is treated as an exceptional condition
NOUCAT	Specifies that a NOT UNCATALOGED message is not treated as an exceptional condition
USER	Specifies that a user abend code message for any abend code is treated as an exceptional condition
NOUSER	Specifies that a user abend code message for any abend code is not treated as an exceptional condition
USERnnnn	Specifies that a user abend code message for abend code nnnn is treated as an exceptional condition and that a message for any abend code other than nnnn is not treated as an exceptional condition unless specifically identified as an exceptional condition by another USERnnnn parameter

Continued

Continued

Parameter	Description
NOUSER <i>nnnn</i>	Specifies that a user abend code message for abend code <i>nnnn</i> is not treated as an exceptional condition and that a message for any abend code other than <i>nnnn</i> is treated as an exceptional condition unless specifically identified as not being an exceptional condition by another NOUSER <i>nnnn</i> parameter

Default Control Statement

You can override one or more of the system default specifications for exception code checking on the default control statement. The default control statement must be the first statement specified and its ID must be DEFAULT.

The following is an example where exceptional condition checking is required:

- Only condition codes greater than 7 are treated as exceptional conditions
- User abend code 2000 and not re-cataloged messages are ignored (not treated as exceptional conditions)
- Jobs P27XY1, P28A05, and P30R16 normally end with user abend code 1000, so user abend code 1000 is not treated as an exceptional condition for these jobs
- STEP2 of all jobs whose names start with SYS normally terminate with user abend code 16

This abend is not treated as an exceptional condition.

- All other conditions are exceptions (the system defaults)

You code control statements as follows:

```
/DEFAULT CC>7 NOUSER2000 NORCAT
/P27XY1 NOUSER1000 NOUSER2000
/P28A05 NOUSER1000 NOUSER2000
/P30R16 NOUSER1000 NOUSER2000
/SYS*.STEP2 NOUSER16
```

User-Specified Conditions

Control statements are input to the archival started task using the SARXCTAB DD statement. For each statement, the percent sign is coded in column 1 and is immediately followed by the ID. One or more blanks must follow the ID and separate it from the parameters. Individual parameters are separated by one or more blanks and/or commas. A statement that exceeds 71 characters must be continued on additional cards. When continuing a statement, interrupt the statement only between complete parameters.

The control statements have the following general structure:

Syntax: `%ID 'string' COL(bbbbb:eeee) LINE(bbbbb:eeee) XCODE(xxxxx) STOP EXC(job1,job2,...)`

where:

- %** Specifies that this is a user-specified condition.
For each statement, the % sign is coded in column 1 and is immediately followed by the ID.
- ID** Specifies the job name of the SYSOUT job containing the user-defined string.
You can specify a generic job name by appending an asterisk to the generic name. For example, a job name of PROD* specifies that the statement applies to any job having the first four characters of its name being PROD. A statement beginning with %* would include all jobs.
- 'string'** Specifies the string of alphanumeric data to be found in the SYSOUT that signifies the exceptional condition.
Enclose the string in single quotes.
- COL(UMN)** COL(UMN) specifies the column number (bbbb) or range (bbbb:eeee) where the string begins in the SYSOUT record.
The default is COL(1) where the string begins in column 1. COLUMN includes the assumed carriage control in the column position. This is not sensitive to the CCONDISP initialization parameter which controls the viewing of carriage control characters in online logical viewing. COLUMN can be abbreviated as COL.
- LINE** LINE specifies the beginning line number (bbbb) or range of lines (bbbb:eeee) to include in the search for the string.
The default is LINE(1:999999) which specifies that the entire SYSOUT group is searched. LINE does not include the assumed carriage control—it operates on the printed line, not the actual line.
- XCODE** Specifies the 1- to 6-character exception code to be stored in the GCRXCODE field when the string is matched.
The EXCLUDE statement overrides XCODE. The default is CODE() to blank out the XCODE.

- STOP** STOP specifies to the archiving task to freeze the XCODE for the SYSOUT group after a string match.
- Exceptional conditions are bypassed for the remainder of the group except for updates to GCRXCODE by a customized SARSTCUX or SARXCTUX exit. This parameter is optional.
- EXCLUDE()** EXCLUDE() specifies to exclude specific jobs when a generic name (with wildcard, *) is present in the ID field
- This parameter can be repeated on additional cards if required. EXCLUDE overrides the XCODE statement, if it is specified. EXCLUDE() can be abbreviated EXC(). The parenthesis are required.

The following is an example where exceptional condition checking is required:

- System abends 122 and 222 are not considered exceptions
- For job JOB1, condition codes lower than 8 are ignored
- For job names starting with PAY, except for PAY11 and PAY22, store CANCEL as the XCODE for system message IEF251I and bypass any other exceptions

The control statements are coded as follows:

```

/DEFAULT NOSYS122 NOSYS222
/JOB1 CC>7
%PAY* 'IEF251I' COL(1) XCODE(CANCEL) STOP
      EXC(PAY11 PAY22)
    
```

SARSTCUX and
Exception
Specification

You can also identify additional exception conditions by customizing the SARSTCUX exit.

Refreshing the
Exception Parameters

The exceptional condition-checking parameters are established when the archival task is started; however, they can be changed and the SARXCTAB DD statement re-opened to refresh the exceptional conditions parameters at any time, without stopping to restart the archival task. See Refreshing Exceptional Condition Checking later in this chapter for specific information about this process.

Operating the Archival Task

The following sections describe the commands, parameters, and procedures necessary to operate the archival task.

Starting the Archival Task

You start SARSTC with one of the following operator commands:

```
S: SARSTC
S: SARSTC, OPT=DUMP
S: SARSTC, OPT=NEW
S: SARSTC, OPT=CLEAN
S: SARSTC, OPT=IDUMP
S: SARSTC, OPT=INEW
```

where:

- | | |
|-----------|--|
| OPT=NEW | Specifies that the archival task initiates its backup cycle immediately following initialization and prior to archiving any SYSOUT

The new tape generation resides on a new tape. |
| OPT=CLEAN | Specifies that the archival task performs a cleanup of its database to recover space for any SYSOUT groups that are created or loaded to disk when a system crash or abend of the archival task occurs

The archival task automatically performs a cleanup operation as part of its backup cycle. |
| OPT=IDUMP | Specifies that an interim backup cycle is initiated immediately following initialization and prior to archiving any SYSOUT

This backup resides on the same tape as the previous backup provided there is room on the tape because the archival generation number is not incremented. (There is also an initialization parameter, MAXGENT, which specifies the maximum number of generations to be written to one tape.) |
| OPT=INEW | Specifies that the archival task initiates an interim backup cycle immediately following initialization and prior to archiving any SYSOUT

The archival generation number is not incremented; however, this backup resides on a new tape. |

Tip: We recommend that you add command S SARSTC to member COMMNDxx of SYS1.PARMLIB to start the archival task automatically at each IPL.

Stopping the Archival Task

SARSTC is terminated with the following operator command:

```
P SARSTC
```

Initiating the Backup Cycle

Backup to tape and the creation of a new disk generation are normally performed automatically at a site-defined time and at site-defined intervals thereafter; however, tape backups can be initiated at any time with one of the following operator commands:

```
F SARSTC, DUMP
F SARSTC, NEW
F SARSTC, IDUMP
F SARSTC, INEW
```

where:

- | | |
|-------|---|
| DUMP | Specifies that the new tape generation resides on the same tape as the previous generation, provided there is room on the tape and the maximum number of generations per tape (MAXGENT initialization parameter) is not exceeded |
| NEW | Specifies that the new tape generation resides on a new tape |
| IDUMP | Specifies that an interim backup cycle is initiated
This backup resides on the same tape as the previous backup, provided there is room on the tape, because the archival generation number is not incremented. (There is also an initialization parameter, MAXGENT, which specifies the maximum number of generations to be written to one tape.) |
| INEW | Specifies that an interim backup cycle is initiated
The archival generation number is not incremented; however, this backup resides on a new tape. |

Unloading the Archival Tape

When archiving directly to tape, the archival tape remains allocated and in use through the next backup cycle. The following operator command causes CA-View to unload and unallocate the archival tape immediately:

Syntax: **F SARSTC, UNLOAD**

The tape is allocated again by CA-View the next time it requires the tape.

Deleting SARSTC99 Messages

When CA-View encounters an exceptional condition and a routing code other than zero is specified (as defined by site initialization parameter ROUT), SARSTC99 operator messages are produced for each exceptional condition. You can delete these operator messages from the operator console by entering the following operator command:

Syntax: **F SARSTC, DOM**

Manually Requesting Cleanup

If the CA-View archival task terminates abnormally due to a system crash or an abend, the last SYSOUT group that archived can be left in an incomplete condition (OPEN status). The same condition can occur for a SYSOUT group being reloaded to disk from tape by a user (LOAD status). You can request a cleanup of these incomplete SYSOUT groups by the following operator command:

Syntax: **F SARSTC, CLEAN**

A manual request for cleanup is only necessary after system crashes, because the archival started task normally performs a cleanup operation as part of its backup cycle.

To recover the space occupied by a SYSOUT group left in OPEN or LOAD status, you must issue two cleanup commands at least four hours apart.

Refreshing Exceptional Condition Checking

You can change the exceptional condition checking parameters established when the archival task was started, and you can refresh the conditional parameters with the following operator command:

Syntax: **F SARSTC, RESET**

This command causes the currently defined parameters to be cleared and the SARXCTAB DD statement to be re-read.

The exceptional conditions parameters are refreshed from the indicated control statements. See the section Exceptional Condition Checking earlier in this chapter for more information.

Operating the Optical Migration Subtask

To allow flexibility in scheduling optical migration, you can use a separate subtask under the CA-View started task to control migration of reports to optical disk. See Operating the Optical Migration Subtask in Chapter 10, "Using the Optical Disk Interface," for details.

Running Multiple Archival Tasks

Multiple archival tasks can be run at the same time; however, each task must use a different database. The archival task ENQs on the high-level qualifiers of the database name insure that a different database is used.

Warning! For sites that have more than one processor, be sure that multiple archival tasks with the same database do not run at the same time on different processors; otherwise you can do permanent damage to the database. CA-View prompts the operator for verification when it appears that another task with the same database is already executing on another processor.

You must meet the following requirements when running multiple archival tasks:

- A different database must be defined and used for each task.
- A different recovery file, if used, must be defined and used for each task.

Automatic Report Archival

The automatic report archival extension allows a site to create a copy of its reports for archival purposes. The original reports continue to print as usual. With this feature, a site can back up all reports or a specified subset of reports. If a report is lost, it can be easily reprinted from CA-View.

The word *report* in the previous paragraph applies to any SYSOUT data set for which normal open and close processing is performed.

The automatic report archival feature is activated by specifying one or more sets of specifications in the CA-View extension parameter field. The sets of specifications identify the reports for automatic archival by job class and SYSOUT class and specify the SYSOUT class, destination, and forms name used to create copies of the reports for archiving.

Non-Eligible Output

Normal open and close processing is not performed by JES for the job log, JCL listing, and job message data sets. Therefore, the job log, the JCL listing, and the job message data sets are not eligible for automatic archival.

CHKPT Restrictions

The CHKPT macro and the CHKPT=EOV JCL statement must be used with direct-to-CA-View report archival in conjunction with CA-Deliver, and cannot be used with SARXTD alone. Furthermore, to use CHKPT, reports must be set up as bundles in this CA-Deliver-to-CA-View environment.

Example 1

This example assumes that CA-View is set to archive all SYSOUT with a destination of remote, (the master index file is initialized with parameter DEST=99). You want to produce and archive to tape a copy of all production reports and those test reports written to SYSOUT classes J and K. Production jobs are defined as those jobs with classes P, Q, R, and S. Test jobs are defined as all jobs with classes T, U, V, and W.

The following parameter field starts the CA-View system extensions:

```
PARM=' , PQRS/**/R99//T, TUVW/JK//R99//T'
```

Example 2

This example assumes that CA-View is set to archive all SYSOUT for class S (the master index file is initialized with parameter CLSL=S). You want to produce and archive to disk a copy of all reports written to SYSOUT classes A and B, and to produce and archive directly to tape all other reports.

The following parameter field starts the CA-View system extensions:

```
PARM=' , */AB/S///D, */*/S///T'
```

Batch Job Execution of the Archival Task

Although the archival program is distributed for execution as a started task, it is possible to run it as a batch job after first modifying it with the IBM AMASPZAP utility.

***Important!** You can ensure the integrity of the archived data since the programs are only executed by an operator; however, after modification to run as a batch job, the integrity of the archived data can no longer be assured, since any user could execute the program. If batch execution is essential to your operation, you must provide for data integrity in other ways, such as placing the load modules in a password-protected library.*

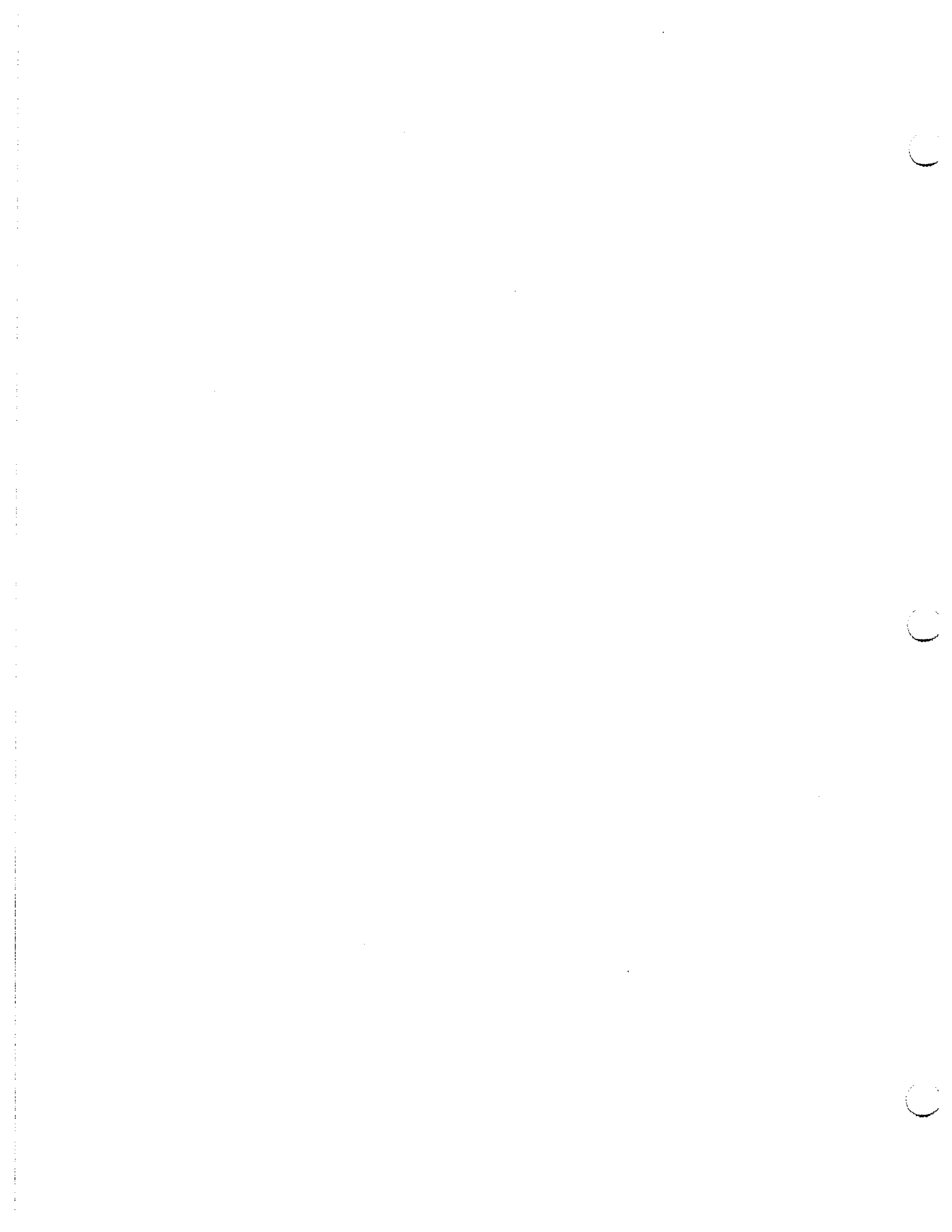
To modify the archival program to run as a batch job, execute the following job:

```
//ARCHZAP JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=AMASPZAP
//SYSPRINT DD SYSOUT=*
//SYSLIB DD DSN=CAI.CALLIB, DISP=SHR
//SYSIN DD *
NAME SARSTC SARSTC
VER 06 00
REP 06 FF
/*
```

Note: Change the data set name on the SYSLIB DD statement to the name of the library containing the CA-View load modules.

The following is an example of a SARBKLIST report:

SARBKLIST											CA-VIEW (2.0) - SYSTEM ARCHIVAL TASK			PAGE
02/28/96 18:37:46 SEQ=00047 VOL=428119 DPLX=*NONE* BACKUP LIST SGP=DEFAULT DSN=VIEW.SYSTEM1.SARTAPE.0000047														1
ID	JOB NAME	JOBID	GEN	SEQ	ARC DATE	ARC TIME	LOC	LINES	PAGES	DASD BLKS	XCODE	FILE	TIME	
REPORT1	COOCH03B	JOB01396	25	12	02/28/96	17:29:42	DISK	12600	200	265			1 18:37:46	
REPORT1	COOCH03B	JOB01395	25	11	02/28/96	17:29:39	DISK	12600	200	265			2 18:37:48	
REPORT1	COOCH03B	JOB01394	25	10	02/28/96	17:29:35	DISK	12600	200	265			3 18:37:49	
REPORT1	COOCH03B	JOB01392	25	9	02/28/96	17:29:32	DISK	12600	200	265			4 18:37:51	
REPORT1	COOCH03B	JOB01391	25	8	02/28/96	17:29:28	DISK	12600	200	265			5 18:37:52	
REPORT1	COOCH03B	JOB01187	25	3	02/17/96	16:17:45	DISK	12600	200	265			6 18:37:54	
TOTAL REPORTS BACKED UP TO TAPE =													6	
SARBKLIST											CA-VIEW (2.0) - SYSTEM ARCHIVAL TASK			PAGE
02/28/96 18:37:56 REPORTS AND RESOURCE GROUPS DELETED DURING STANDARD BACKUP OF GEN											26			2
ID	JOB NAME	JOBID	GEN	SEQ	ARC DATE	ARC TIME	LOC	LINES	PAGES	DASD BLKS	XCODE	FILE	TIME	
D68D50AE	SARFSSCC	STC01203	*DVS	RSRC*	02/17/96	17:44:11		227	70				1 18:37:56	
F268B50C	SARFSSCC	STC03326	*DVS	RSRC*	02/20/96	15:57:30		157	47				2 18:37:56	
779AA128	SARFSSCC	STC01181	*DVS	RSRC*	02/17/96	15:58:42		100	23				1 18:37:56	
TOTAL REPORTS AND RESOURCE GROUPS DELETED =													3	
SARBKLIST											CA-VIEW (2.0) - SYSTEM ARCHIVAL TASK			PAGE
02/28/96 18:37:56 SEQ=00047 VOL=428119 DPLX=*NONE* BACKUP LIST SGP=DEFAULT DSN=VIEW.SYSTEM1.SARTAPE.0000047														3
MASTER INDEX BACKED UP AT FILE											7 ON VOL 428119			
SARBKLIST											CA-VIEW (2.0) - SYSTEM ARCHIVAL TASK			PAGE
02/28/96 18:37:59 TAPES UNCATALOGUED DURING STANDARD BACKUP OF GEN											26			4
TAPE DATASET NAME											VOLSER			
VIEW.SYSTEM1.SARTAPE.T0000021											434675			
VIEW.SYSTEM1.SARTAPE.T0000022											410838			
VIEW.SYSTEM1.SARTAPE.T0000023											434804			
VIEW.SYSTEM1.SARTAPE.T0000025											413175			
VIEW.SYSTEM1.SARTAPE.T0000026											433066			
VIEW.SYSTEM1.SARTAPE.T0000027											425245			
VIEW.SYSTEM1.SARTAPE.T0000031											483693			
VIEW.SYSTEM1.SARTAPE.T0000032											484218			
VIEW.SYSTEM1.SARTAPE.T0000033											482487			
VIEW.SYSTEM1.SARTAPE.T0000034											482060			
VIEW.SYSTEM1.SARTAPE.T0000039											460308			
VIEW.SYSTEM1.SARTAPE.T0000040											478871			



Chapter 6

Expanded Retention Option

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Chapter 6

Expanded Retention Option

In This Chapter

This chapter includes information about Expanded Retention Option (ERO) table statements, assigning SYSOUT IDs based on embedded text, tape consolidation of reports (SARPAC), SARPAC reports, and running SARPAC.

Overview

The CA-View initialization parameters NGEND and NGENT specify how many generations of each SYSOUT remain on disk and tape.

The ERO allows you to specify particular SYSOUTs as having expanded retention. These SYSOUTs can be given separate retention criteria.

When a SYSOUT has expanded retention, you can specify how long to keep the SYSOUT in the database (the retention period) by the number of generations to be kept, the number of copies to be kept, or the number of days the SYSOUT is to remain on the database. By appropriately setting your NGEND and NGENT parameters, then assigning selected SYSOUT to have expanded retention, you can set up a minimum archival retention period for all SYSOUT, and then selectively archive desired SYSOUT for longer periods of time.

The ERO gives you the added flexibility of assigning, at archival time, SYSOUT IDs based on text strings found within the SYSOUT (PTEXT*n* parameters).

The SARPAC utility is part of the ERO. SARPAC consolidates backup tapes, copying only current reports to new tapes.

The ERO Table

SYSOUTs are given expanded retention status with entries in what is referred to as the *expanded retention table*, or ERO table. Expanded retention table entries are defined to CA-View via the SARPATAB DD statement in the CA-View started task JCL, and in the SARDSK2B batch job for optical migration.

You can use wildcards in the expanded retention table statements, to identify all SYSOUT IDs that contain a particular character string. You can specify wildcards at any location in the SYSOUT ID. ABC* and AB*C*D are valid SYSOUT ID entries in the table.

The terms *expanded retention* and *permanent status* are synonymous.

Expiration of Retention

Note: When the TOTAL retention criteria has expired, the SYSOUT ID is no longer in expanded retention status; even if the disk retention criteria haven't expired, total retention must be greater than, or equal to, the disk retention.

If no-ERO TOTAL retention is specified (COPIES, RETPD, GENS), the INIT parm PCOPIES is used as the default. If conflicts occur, the greater retention prevails.

TOTAL retention and tape retention are nearly the same because the backup cycle copies a report to tape according to the interval settings.

You can use the SARBKTUX (user exit) to target specific reports that should **not** be backed up to tape.

ERO Table Statements

Expanded retention table entries are input to the CA-View started task using the SARPATAB DD statement. Expanded retention table statements are written as follows:

```
/sysout-id parameter {value}
```

Single Point-of-Control

We recommend that you set the initialization parameter PRETAIN=TABLE. With PRETAIN=TABLE, all reports are deleted when they expire from ERO, rather than going to NGEND or NGENT initialization parameter control. This way, the ERO table is the single point-of-control for retention of ERO reports.

Table Updates (PDS Member)

Maintaining the ERO table as a PDS member allows concurrent updates to take place while the SARSTC archival task is active. Because the ERO table is reprocessed during every standard backup cycle, any updates would automatically take effect for the next standard backup cycle following the update.

When Do the ERO Table Statements Take Effect?

The expanded retention table statements in the SARPATAB DD statement of the CA-View started task JCL go into effect after a standard backup of the CA-View database. Interim backups, specified via the NBACKUP initialization parameter, do not evaluate SYSOUTs for expanded retention.

Warning! Do not specify **FREE=CLOSE** in the SARPATAB DD statement because the ERO table would be freed during the first backup cycle, and subsequent backups would not access it.

When re-establishing your product code, always verify that the ERO parameters appear on the OPTIONS IN EFFECT listing of the SARINIT program.

Writing ERO Table Statements

ERO table statements are made up of SYSOUT IDs (including wildcards), parameters, and the values you set for those parameters.

Expanded retention table entries are input to the CA-View started task using the SARPATAB DD statement. Expanded retention table statements are written as follows:

```
/sysout-id {ALL|MARK|LAST}
            RETPD=nnnnn  GENSG=nnnnn  COPIES=nnnnn
            DRETPD=nnnnn DGENSG=nnnnn DCOPIES=nnnnn
            IRETPD=nnnnn LRETPD=nnnnn
            STORGRP=storage-group-name
            DSK2DAYS=nnnnn
            DSK2NOTP
            VIEWTAPE={YES|NO}
            XCOND={YES|NO}
            EXCLUDE
            DELETE
```

- The slash is coded in column 1 and is immediately followed by the SYSOUT ID.
- One or more blanks must follow the SYSOUT ID and separate it from the ERO table parameters.
- Parameters are separated by one or more blanks and/or commas, and can be specified in any order.
- A statement that exceeds 71 characters must be continued on additional cards. When continuing a statement, interrupt the statement between complete parameters only, and omit the slash on the continuation card.
- An asterisk in column 1 indicates a comment line.

Sysout ID Guidelines

The SYSOUT ID is the first parameter in the statement. The wildcard character (*) can be specified at any position in the ID to indicate that any single character can match in that position (for example, **AB**D***, is a valid SYSOUT ID entry).

You should list SYSOUT IDs from the most specific to the most general because ERO evaluation is triggered from the first matching entry found, searching from the top of the table.

The following is an example of specific-to-general listing statements:

```
/ABCD* SPECIFICATION2
/ABC* SPECIFICATION1
```

Note: We recommend that you end the table with a /* entry. This entry governs any reports that were selected for ERO processing, and did not match any previous entry in the table. You should to use this “catch-all” entry to specify retention for MARKed copies. A typical statement is:

```
/* MARK DRETPD=5 RETPD=30
```

This statement indicates that if a report is MARKed online or in batch with SARBCH for expanded retention, and no other entry in the table matched the report, it will stay on disk for 5 days, and on tape for 30. If you don't specify this entry and a SYSOUT is selected for retention (online K command or SARBCH /PERM statement), the PCOPIES initialization parameter is used as the default value for tape and disk retention, assuming POPT=M.

Selection Parameters

If the ALL, LAST, or MARK parameter is not specified, the initialization parameter POPT is used as a default. We recommend that you specify MARK, ALL, or LAST in each statement, to understand and verify the effects of the statements in your expanded retention table.

Parameter Description

ALL	<p>Specifies that all reports for the SYSOUT ID from the current generation are evaluated for ERO processing</p> <p>If you also set the initialization parameter EROPRO=ALL, the entire database is considered for the next backup cycle, not just the current generation. If EXCLUDE is also specified, then all SYSOUT groups are excluded, and are governed by NGEND and NGENT. If ALL is specified, MARK and LAST must not be specified.</p>
-----	---

Continued

Continued

Parameter	Description
LAST	<p>Specifies that the last (most recent) report for the SYSOUT ID from the current generation is evaluated for ERO processing</p> <p>LAST is typically used for program compilation listings. If you also set the initialization parameter EROPRO=ALL, the last SYSOUT from every generation is considered, not just the current generation. If LAST is specified, MARK and ALL must not be specified.</p>
MARK	<p>Specifies that all reports for the SYSOUT ID for the current generation are evaluated for ERO processing, only if marked manually</p> <p>Manual marking for ERO selection is done with the online K (KEEP) command, and in batch with the PERM statement of the SARBCH utility. If MARK is specified, LAST and ALL must not be specified.</p>

Primary Disk Retention

The following are parameters used to define disk retention.

Parameter	Description
DCOPIES= <i>nnnnn</i>	<p>Specifies the number of copies of the report (0 to 32767) to be retained on disk for the SYSOUT ID</p> <p>DCOPIES is intended to be specified with COPIES to limit the number retained on disk.</p>
DRETPD= <i>nnnnn</i>	<p>Specifies the number of days (0 to 32767) that a report for the SYSOUT ID is retained on disk</p> <p>DRETPD is intended to be specified with RETPD to limit the number retained on disk.</p> <p>The DSK2DAYS parameters (initialization parameter, and ERO table parameter) should not be greater than DRETPD, because if a report is deleted from primary disk, it won't be available for migration to optical disk.</p>
DGENS= <i>nnnnn</i>	<p>Specifies the number of generations (0 to 32767) of the CA-View report for the SYSOUT ID that is retained on disk</p> <p>DGENS is intended to be specified with GENS to limit the number retained on disk.</p>
IRETPD= <i>nnnnn</i>	<p>Specifies the number of days (0 to 32767) that any page indexes defined for the reports are retained on disk</p>

Continued

Continued

Parameter	Description
LRETPD= <i>nnnnn</i>	<p>Specifies the number of days (0 to 32767) since the report was last accessed, before it is deleted from primary disk.</p> <p>The DSK2DAYS parameters (initialization parameter and ERO table parameter) should not be greater than LRETPD; because if a report is deleted from primary disk, it won't be available for migration to optical disk.</p> <p>LRETPD overrides the HOLDTEMP initialization parameter. HOLDTEMP sets a global default for the number of backup cycles to occur before a temporary disk report (loaded from tape to disk) is deleted.</p>

Disk Retention Parameter Guidelines

Specifying the amount of retention in days with the DRETPD parameter for disk and RETPD parameter for tape clarifies the effect of the ERO table on a report's retention—it will be kept for *nn* days. Specifying the DRETPD parameter is the most efficient processing method, because CA-View can use a simple arithmetic calculation on the archival date.

We recommend that you specify the following disk parameters with the corresponding tape retention:

Disk Retention Parameter	Tape Retention Parameter
DRETPD	RETPD
DCOPIES	COPIES
DGENS	GENS

Note: If you do not specify a disk retention parameter, disk retention is the same as the tape retention. If you specify disk retention, but not tape retention, the PCOPIES initialization parameter is used as the tape retention.

Tape Retention Parameters

We recommend that you specify only one tape retention parameter per ERO table statement.

Tape Retention Parameter	Description
COPIES= <i>nnnnn</i>	Specifies the total number of unique copies of a report (0 to 32767) that are retained on tape for the SYSOUT ID
RETPD= <i>nnnnn</i>	Specifies the total number of days (0 to 32767) that a report with the SYSOUT ID is retained on tape
GENS= <i>nnnnn</i>	Specifies the total number of CA-View generations (0 to 32767) that a report with the SYSOUT ID is retained on tape

Tape Retention Parameter Guidelines

We recommend that you use only one tape retention parameter per entry; however, if you use more than one parameter, each parameter must be satisfied before a SYSOUT no longer has expanded retention (PERM) status. For example, suppose you have COPIES=3 and RETPD=30 for a SYSOUT that is created daily. All copies are kept for 30 days. The most recent three copies are kept indefinitely.

When the tape retention criteria are satisfied, the SYSOUT ID is no longer in expanded status, even if the disk retention criteria isn't satisfied.

Note: If no ERO tape retention is specified (COPIES, RETPD, GENS), then the initialization parameter PCOPIES is used as the default.

Tape Location (STORGRP*x*)

STORGRP*x* specifies the tape storage group for SYSOUT. These group names can be esoteric—they are linked to STORGRP1 through STORGRP9. See STORGRP1 – STORGRP9 in Chapter 2, “Initialization Parameters.”

Syntax

STORGRP*x*=*group-name*

If you use the expanded access server for tape and robotics, you should consider grouping reports based on how frequently they are accessed to minimize tape mounts and improve performance. You can also choose to group reports by their retention requirements, so the distribution of expired reports on tape is less fragmented, lessening the need for tape consolidation.

We recommend that you assign STORGRP1 the group-name with the largest number of reports to enhance backup cycle performance. You use the SARINIT initialization parameter STORGRP1 to assign the group, for example:

STORGRP1=*largest-group-name*

Tape Online Access: VIEWTAPE

VIEWTAPE specifies whether the SYSOUT can be viewed if it resides **only** on tape.

Syntax **VIEWTAPE=YES | NO**

Optical Disk Migration: DSK2DAYS

DSK2DAYS specifies the number of days (1 to 998) a report remains on primary disk before it is migrated to optical (secondary) disk.

Syntax **DSK2DAYS=*nnn***

Setting the value to 0 specifies that SYSOUT groups be migrated to optical disk with the next CA-View backup cycle, scheduled run of the optical migration subtask, or optical migration batch job. Setting the value to 999 specifies that SYSOUT groups will **never** be migrated to optical disk.

There is also a DSK2DAYS initialization parameter that sets a global default value.

Optical Disk Retention: DSK2NOTP

The DSK2NOTP parameter specifies that once a report resides on optical disk (if a tape backup exists) is deleted from the tape backup.

Syntax **DSK2NOTP**

If you do not specify this parameter, tape backups are still maintained. If you specify:

**DSK2DAYS=0
DSK2NOTP**

and a report recently archived to the CA-View database migrates to optical before the next backup cycle, no tape backup is ever created.

Exceptional Condition Processing

The XCOND keyword is for reports containing JCL MSGCLASS data.

Syntax **XCOND={YES|NO}**

XCOND allows you to specify whether CA-View should consider SYSOUTs that had exceptional conditions, for example, JCL errors, ABENDS, etc., for ERO evaluation.

YES Specifies that the report is selected even though an exception is present

NO Specifies that the report is bypassed for ERO processing when an exception is present

You can set the ERO initialization parameter PXCOND=NO to bypass JCL reports containing exceptional conditions for the entire database. You can set the ERO table parameter XCOND=NO for any individual table entry, and any reports governed by that entry will be bypassed if exceptional.

Conditional selection for ERO processing can be further refined by creating user-defined exceptional conditions. See the section Exceptional Condition Checking in Chapter 1, "Introducing CA-View."

Excluding Reports

EXCLUDE specifies that reports matching sysout-id-spec on this entry are bypassed for selection for ERO processing.

Syntax **EXCLUDE**

The Keyword DELETE

DELETE specifies that when the ERO retention TOTAL criteria expires, the report is deleted (instead of reverting to the control of the CA-View initialization parameters NGENT).

Syntax **DELETE**

If PRETAIN=TABLE, DELETE is not required. DELETE does not affect disk retention. (When disk retention criteria expire, the SYSOUT goes to initialization parameter NGENT control, unless PRETAIN=TABLE.)

If you set the initialization parameter `PRETAIN=TABLE`, reports are deleted when they expire from the table, and the `DELETE` parameter is not necessary. We recommend that you specify `PRETAIN=TABLE` to make the ERO table a single point-of-control.

If you specify `MARK`, (or `POPT=M`), marked reports will be assigned the retention specified in the ERO Table entry. Un-marked reports are considered expired; therefore, they are deleted during the first standard backup cycle following their archival to CA-View.

If you specify `LAST` (or `POPT=L`), the last report in the generations being processed will be assigned the retention specified in the ERO table entry. The copies that precede the last copy in the generations being processed are considered expired; therefore, they are deleted during the first standard backup cycle following their archival to CA-View.

ERO Table Examples

Example 1

This example allows you to keep two generations of all CA-View reports on disk, and three on tape. Note that `NGENT` also governs master index backups. Additionally, you can keep reports beginning with the characters `ABC` on tape for 90 days, but limited to 30 days on disk.

Set the following initialization parameters:

```
NGEND=2
NGENT=3
```

Specify the following ERO table:

```
/ABC* ALL RETPD=90 DRETPD=30
*
* ALL APPLICATION 'ABC' REPORTS ARE
* ON DISK 30 DAYS, ON TAPE 90 DAYS
```

Example 2

This example allows you to keep all reports beginning with `ABCD` on disk for 7 days and on tape for one year. You can also keep reports beginning with just `ABC` on disk for 7 days, and on tape for 90 days.

Set the following initialization parameters:

```
/ABCD* ALL RETPD=366 DRETPD=7
/ABC* ALL RETPD=90 DRETPD=7
*
* ABCD REPORTS ARE REQUIRED ON TAPE
* FOR ONE YEAR FOR LEGAL PURPOSES
*
```

Note: ERO uses the first match it finds. If these entries were in reverse, order the `ABCD*` entry would never be used.

Example 3 This example allows you to keep report ABCDE contains JCL MSGCLASS data. It is created multiple times during the production cycle. You want the last report in each generation that ran without an exceptional condition to be kept. At most, 10 copies will be kept on tape, 5 of which are also on disk.

Specify the following ERO table:

```
/ABCDE LAST COPIES=10 DCOPIES=5 XCOND=NO
```

Example 4 This example allows you to keep disk utilization to an absolute minimum. All JCL reports beginning with the characters AUDIT—including runs that had exceptional conditions, will be kept on tape for seven years. No copies will be kept on disk past the current generation.

Set the following initialization parameters:

```
PRETAIN=TABLE  
NGEND=1
```

Specify the following ERO table:

```
/AUDIT* ALL RETPD=2557 DRETPD=0 XCOND=YES
```

Example 5 This example allows you to keep disk utilization to an absolute minimum. Reports beginning with the characters TEST are excluded from ERO processing. A user-defined retention of 3 days is established for all reports that are marked (K online command, SARBCH /PERM statement), even if they run with an exceptional condition.

Set the following initialization parameters:

```
NGEND=1
```

Specify the following ERO table:

```
/TEST* EXCLUDE  
/* MARK RETPD=3 XCOND=YES
```

Assigning SYSOUT IDs Based on Embedded Text

It is possible to have ERO assign SYSOUT IDs based on text within a report itself. As an example, you could give compilation listings of a production program a SYSOUT ID that is the name of the program. To do this you specify a text string to be found in the report. When the string is found, the preceding or following characters are extracted by ERO and assigned to the report as the SYSOUT ID. The text comprising that string must all be on one line of the report.

You can define up to five separate text strings, which you specify as initialization parameters PTEXT1 through PTEXT5.

CA-Deliver reports have a fixed report ID. You cannot use PTEXT n to change the SYSOUT ID for a CA-Deliver report.

Text Extraction (+ and -)

Prefix the PTEXT text string with a plus or minus sign to indicate if the SYSOUT ID is to be the characters to the right of the PTEXT (specified with a +) or to the left (specified with a -). If you do not specify plus or minus, the default is plus.

The characters following or preceding the PTEXT string are searched for the first non-blank valid SYSOUT ID character. Characters are extracted until an invalid character is encountered or 12 characters are obtained.

```
PTEXT1='LOADLIB('
```

The report could be a JCL listing containing the following:

```
//SYSLMOD DD DSN=PROD.LOADLIB(DEVWORK),DISP=SHR
```

The extracted SYSOUT ID is DEVWORK.

Segmented PTEXT Strings

You can specify a series of text strings separated by periods, referred to as *segmented text strings*. If segmented text is specified:

- The report is scanned until the first segment of PTEXT text is located, then it is scanned for the next segment, and so on, until the last segment is found.
- Each text segment should be enclosed in single quotation marks. Each PTEXT specification can be a total of 40 characters, including the periods that separate the segmented text strings. Quotation marks that enclose the text string are not included in the 40 characters.

For the specification

```
PTEXT1='SYSLMOD'. 'LOAD('
```

when the following JCL is scanned:

```
//LKED.SYSLMOD DD DSN=PROD.LOAD(PGMA130),DISP=SHR
```

the extracted SYSOUT ID would be the member name, PGMA130. Notice that the text segments SYSLMOD and LOAD are enclosed in single quotation marks, to show that the period is a segment delimiter.

Special Characters

If you want to search for a period or a single quote mark, use double quotation marks as the delimiter. For example:

```
PTEXT3="GRP.HTE'TRP'"
```

CA-View checks the PTEXT entry first for a single or double quotation mark. Whichever it finds first is taken as the delimiter.

The report is a compile listing containing:

```
-PROGRAM-ID. PROGRAM1-
```

The specification:

```
PTEXT1="PROGRAM-ID."
```

causes PROGRAM1 to be the extracted SYSOUT ID.

PTEXT in the SYSOUT ID Hierarchy

The following list shows the hierarchy used by CA-View and ERO to determine the SYSOUT ID for a report other than a CA-Deliver report:

- If the started task user exit (SARSTCUX) is coded to assign a SYSOUT ID not equal to the job name, that SYSOUT ID is used, and it overrides all of the following items in this list.
- If SYSOUT DD statement has an external writer name not equal to the job name, the writer name is assigned as the SYSOUT ID. If a dollar sign precedes the writer name, the writer name (excluding the dollar sign) is appended to the job name, and the result is assigned as the SYSOUT ID. This overrides all of the following items in this list.
- If the text specified in the PTEXT1 through PTEXT5 ERO initialization parameters is found in the report data, the SYSOUT ID is assigned based on characters extracted from the data.
- If none of the above is found, the job name of the job that creates the report is the SYSOUT ID.

Tape Consolidation of Reports (SARPAC)

With ERO processing it is possible that CA-View backup tapes contain reports that expire at different times. For any particular tape, there can be one report that has ERO retention criteria of seven years, but other reports on the tape may have expired. The space occupied by these reports should be reused.

The SARPAC tape consolidation utility is provided with ERO to consolidate backup tapes. SARPAC copies current reports (still retained by CA-View) and bypasses expired reports. The first CA-View backup cycle (standard or interim) following a SARPAC consolidation uncatalogs the input tapes that are no longer needed.

You can use SYSIN DD statements to process the following:

- All backup tapes for the database
- A particular backup tape (by CA-View tape sequence number)
- A range of tapes
- A particular tape storage group

You can use storage groups to put reports with the same retention on the same tape, there by minimizing the need for consolidation. For information about tape storage groups, see STORGRP0 and STORGRP1–STORGRP9 in Chapter 2, “Initialization Parameters.”

Operation

The ERO initialization parameters PTHRESH, PMXTAPES, and PMXYEARS control which tapes will be consolidated by SARPAC. The following table provides a description of each of these parameters:

ERO Initialization Parameter	Description
PTHRESH	Allows you to specify a threshold value (for example, only consolidate tapes that are 55 percent unused)
PMXTAPES	Allows you to limit the SARPAC run by specifying the number of tapes that will be processed
PMXYEARS	Allows you to specify how long a tape can exist before it is automatically consolidated (which is important because tapes tend to have I/O problems as they age)

The SYSIN statements can also specify which tapes to use for input. Additionally, you can modify the SARPACUX user exit to select input tapes based on user-defined criteria.

SARPAC does not use the expanded access server for tape and robotics to mount input tapes; SARPAC mounts its input tapes directly.

SARPAC Reports

SARPAC produces two reports. The first report lists the status of all tapes in the database, and can help you determine which tapes need to be consolidated. The second report is created when SARPAC actually performs consolidation, and it lists the copied SYSOUT groups.

Creating the Tape Status Report Without Running Consolidation

The keyword REPORT can be coded as the second subparameter of the PARM field on the EXEC statement:

```
PARM='VIEW.SYSTEM1,REPORT'
```

This keyword indicates that only the tape status report is produced and that no actual tape consolidation is performed.

SARPAC Tape Status List

The following is a sample of the SARPAC Tape Status List:

02/29/96 14:30:08		CA-VIEW (2.0)										PAGE	1
SARPAC		EXPANDED RETENTION OPTION (ERO) TAPE CONSOLIDATION - TAPE STATUS LIST											
TSEQ	DATA SET NAME	VOLSER	TOTAL	USED	PER-	CREATE	YRS	DPLX	TOTAL	PROCESSED?	REMARKS		
			GRPS	GRPS	CENT				LINES	YES/NO			
24	VIEW.SYSTEM1.SARTAPE.T0000024	461079	22	1	4	02/07/96	1	YES	11600	Y	BELOW PTHRESH		
28	VIEW.SYSTEM1.SARTAPE.T0000028	486037	4	3	75	02/15/96	1		151200	Y	BELOW PTHRESH		
29	VIEW.SYSTEM1.SARTAPE.T0000029	486158	1	1	100	02/15/96	1		126000	Y	CONTINUATION TAPE		
30	VIEW.SYSTEM1.SARTAPE.T0000030	486035	3	2	66	02/15/96	1	YES	25200	Y	BELOW PTHRESH		
35	VIEW.SYSTEM1.SARTAPE.T0000035	484885	2	2	100	02/15/96	1	YES	499747	N	ABOVE PTHRESH		
36	VIEW.SYSTEM1.SARTAPE.T0000036	484351	1	1	100	02/16/96	1	YES	487147	N	CONTINUATION TAPE		
37	VIEW.SYSTEM1.SARTAPE.T0000037	486050	1	1	100	02/16/96	1	YES	487147	N	CONTINUATION TAPE		
38	VIEW.SYSTEM1.SARTAPE.T0000038	484426	4	3	75	02/16/96	1	YES	511347	Y	BELOW PTHRESH		
41	VIEW.SYSTEM1.SARTAPE.T0000041	468007	2	0	0	02/28/96	1		0	N	NO USED GROUPS		
42	VIEW.SYSTEM1.SARTAPE.T0000042	479554	1	0	0	02/28/96	1		0	N	NO USED GROUPS		
43	VIEW.SYSTEM1.SARTAPE.T0000043	474440	1	0	0	02/28/96	1		0	N	NO USED GROUPS		
44	VIEW.SYSTEM1.SARTAPE.T0000044	479202	1	0	0	02/28/96	1		0	N	NO USED GROUPS		
45	VIEW.SYSTEM1.SARTAPE.T0000045	427576	1	0	0	02/28/96	1		0	N	NO USED GROUPS		
46	VIEW.SYSTEM1.SARTAPE.T0000046	428393	0	0		02/28/96	1		0	N	NO USED GROUPS		
47	VIEW.SYSTEM1.SARTAPE.T0000047	428119	7	6	85	02/28/96	1		75600	N	CURRENT BACKUP		

SARPAC Tape Status List: Fields

The following fields are provided in the report:

- Tape sequence numbers by which CA-View references the tapes
- Data set name
- Volume serial number
- Total SYSOUT groups that have been archived
- Number of SYSOUT groups still in use
- Percentage of the SYSOUT groups still in use

- Creation date
- Number of years (rounded up) since the tape was created
- Whether a duplex tape exists
- Total number of lines for the SYSOUT group
- Whether the tape was processed by SARPAC and the corresponding remarks

Remarks Field of Tape Status List

The following list explains the remarks in the PROCESSED YES/NO, REMARKS field of the Tape Status List:

Remark	Description
Y, BELOW PTHRESH %	Indicates the below PTHRESH initialization parameter percentage
Y, CONTINUATION TAPE	Indicates that the tape will be mounted only to retrieve the remaining part of a continued report
Y, EXCEEDS PMXYEARS	Indicates that the PMXYEARS initialization parameter was exceeded
Y, EXIT SELECTED	Indicates that the tape was marked for selection by the user exit SARPACUX
Y, MERGED DATABASE	Indicates that the tape belongs to a merged database
Y, SYSIN INCLUDED	Indicates that the tape has been selected for processing and that the tape sequence number is within the range specified
N, ABOVE PTHRESH %	Indicates the above PTHRESH initialization parameter percentage
N, CURRENT BACKUP	Indicates that the current tape is never processed
N, EXCEEDS PMXTAPES	Indicates that the PMXTAPES initialization parameter was exceeded
N, EXIT EXCLUDED	Indicates that the tape was marked for exclusion by exit SARPACUX
N, NO USED GROUPS	Indicates that there are no reports on the tape to copy

Continued

Continued

Remark	Description
N, CONTINUATION TAPE	Indicates that the tape only contains a report that is continued from a previous tape, and that the tape is not being processed.
N, SYSIN EXCLUDED	Indicates that the tape sequence number was not within the specified range.

SARPAC Copied SYSOUT Groups Report

The second report lists the copied SYSOUT groups. The following is a sample of the SARPAC Copied SYSOUT Groups Report:

02/29/96 14:30:11		CA-VIEW (2.0)										PAGE		1
SARPAC ID	JOBNAME	JOBID	EXPANDED GEN	RETENTION SEQ	OPTION ARC	(ERO) DATE/TIME	TAPE XCODE	CONSOLIDATION LOC	LINES	COPIED PAGES	SYSOUT BLOCKS	GROUPS TVSER	DUPLEX	TSEQ
REPORT1	COOCH03A	JOB03282	21	12	02/13/96	17:03	PTAP	11600	200	8	428029		48	
REPORT1	COOCH03A	JOB05650	23	6	02/15/96	19:25	PTAP	12600	200	33	428029		48	
REPORT1	COOCH03A	JOB05651	23	7	02/15/96	19:30	PTAP	12600	200	33	428029		48	
REPORT1	COOCH03A	JOB05649	23	8	02/15/96	19:30	PTAP	126000	2000	319	428029		48	
REPORT1	COOCH03A	JOB05747	23	9	02/15/96	21:28	PTAP	12600	200	33	428029		48	
REPORT1	COOCH03A	JOB05748	23	10	02/15/96	21:33	PTAP	12600	200	33	427770		49	
REPORT1	COOCH03B	JOB05783	23	12	02/15/96	22:00	PTAP	12600	200	33	427770		49	
REPORT1	COOCH03A	JOB03455	23	1	02/13/96	21:23	PTAP	11600	200	8	427770		49	
SARPAC11	0000008	SYSOUT GROUPS COPIED												

SARPAC Copied SYSOUT Groups Report: Fields

The following fields are provided in the report.

- SYSOUT identifiers
- Name of the job that created the SYSOUT
- JOBID of the job that created the SYSOUT
- Archival generation number
- SYSOUT sequence number for the generation
- Archival date and time
- Last print date and time
- Location of the SYSOUT group
- Number of lines
- Number of pages
- Number of blocks on tape for the report, any indices it may have, and mapping information.

- Exception condition
- Volume serial numbers of the output tape, if duplexing is being done
- Tape sequence number by which CA-View references the output tape

Running SARPAC

This section explains how to execute SARPAC and provides examples for setting initialization parameters, consolidating the tape storage group, and consolidating one tape for a tape storage group.

Job Control Statements

The following job control statements are required to execute SARPAC:

Control Statement	Description
JOB	Initiates the job
EXEC	Specifies the program name (PGM=SARPAC) and the high-level name of the CA-View database as the PARM parameter (PARM='VIEW.SYSTEM1')
STEPLIB DD	Defines the load library containing SARPAC If the program resides in a link list library, omit this statement.
SYSPRINT DD	Defines the sequential output data set (normally SYSOUT) used for listing the consolidation report If there is no SYSOUT data set, DCB=BLKSIZE=nnnn must be coded where nnnn is a multiple of 121.
SYSIN DD	Optional, specifies input See the following section, Input to SARPAC, for details.

Input to SARPAC

You can specify the following as input to SARPAC:

- A single tape by its CA-View tape sequence number
TAPESEQ=nnnnn
- A range of tapes by their CA-View tape sequence numbers
TAPESEQ=nnnnn-nnnnn

- A tape storage group by its name

STORGRP=storage-group-name

The keyword DEFAULT is the name of the default storage group.

When only one storage group is specified, the initialization parameters PTHRESH, PMXTAPES, and PMXYEARS are used.

When only one tape sequence number (or range) is specified, the tape is processed whether it meets PTHRESH or PMXTAPES requirements.

When both a storage group and tape sequence number (or range) are specified, only reports that belong to the tape storage group, and are within the tape sequence range, are processed.

You can specify only one of each type of SYSIN statement (STORGRP and TAPESEQ).

Concurrent With Archival

It is not necessary to stop the SARSTC archival task to run the SARPAC utility. Consolidation can occur concurrently with report archival and the CA-View backup cycle.

Canceling SARPAC

If you have a tape management system and you cancel SARPAC, CA-View's tape retention criteria may be overridden by your tape management system; therefore, you should always allow SARPAC to run to completion.

If you must cancel SARPAC, any output tapes it created must be excluded from a scratch and clean run, because CA-View still controls those tapes. You may run the SARTCHK utility to determine if any tapes were uncataloged that are still required by CA-View.

Consolidating Tape Storage Groups

If you use tape storage groups, we recommend that you consolidate one tape storage group at a time to decrease the number of tape mounts needed by issuing the following SYSIN DD statement:

STORGRP=storage-group-name

Note: You must run a standard or interim backup cycle to assign reports to tape storage groups. Storage groups are only in effect for reports residing on the CA-View database since the last backup cycle.

For information about tape storage groups, see STORGRP0 and STORGRP1 to STORGRP9 in Chapter 2, "Initialization Parameters."

Example 1: Using Initialization Parameter Settings

All eligible tapes (given the values for PTHRESH, PMXTAPES, and PMXYEARS) are consolidated for database VIEW.SYSTEM1:

```
//EXAMPLE JOB ACCOUNT, PROGRAMMER
//SARPAC EXEC PGM=SARPAC, PARM='VIEW.SYSTEM1'
//STEPLIB DD DSN=CAI.CALLIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//*SYSIN DD *
```

Example 2: Consolidating a Tape Storage Group

The SYSIN DD consolidates only the tape storage group PAYROLL for database VIEW.SYSTEM1:

```
//EXAMPLE JOB ACCOUNT, PROGRAMMER
//SARPAC EXEC PGM=SARPAC, PARM='VIEW.SYSTEM1'
//STEPLIB DD DSN=CAI.CALLIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
STORGRP=PAYROLL
/*
```

Example 3: Consolidating One Tape of a Tape Storage Group

The SYSIN DD consolidates only tape number 1156 for the tape storage group PAYROLL for database VIEW.SYSTEM1:

```
//EXAMPLE JOB ACCOUNT, PROGRAMMER
//SARPAC EXEC PGM=SARPAC, PARM='VIEW.SYSTEM1'
//STEPLIB DD DSN=CAI.CALLIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
STORGRP=PAYROLL
TAPESEQ=1156
/*
```

Chapter 7

Database Utilities

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Chapter 7

Database Utilities

In This Chapter

This chapter describes, in detail, each of the CA-View database utilities summarized in the following section.

Summary of Utilities

Creation and maintenance functions are performed using the SARDBASE, SARRCOV (for recovery), and SARRSP utilities.

- SARDBASE performs database maintenance such as adding space to a database and creating and deleting a database.
- SARRCOV creates a recovery file that includes data such as tape volume serial number and data set name.
- SARRSP restores panels, messages, and SYSOUTs to a disk database from tape backups.

Tape maintenance functions are performed using the SARTCP, SARTCHK, SARTDR, and SARTSLST utilities.

- SARTCP maps, copies, or salvages SYSOUTs on backup tapes.
- SARTCHK verifies that every active CA-View backup tape is still cataloged, and lists any uncataloged active tapes.
- SARTDR re-creates and re-loads archival disk generations from tape.
- SARTSLST checks the disk database and lists the reports that were on that tape when a tape is lost or damaged.

The SARSAM utility allows user-defined programs to directly retrieve index, SYSOUT, and panel data from the CA-View database.

Database Maintenance With SARDBASE

The SARDBASE utility defines and maintains the CA-View database. This utility performs the following functions:

- Defines a new database
- Adds additional space to a database
- Copies a database
- Renames a database
- Deletes a database
- Provides usage statistics on a database
- Loads the online library to a database
- Produces a sequential copy of a master index
- Recovers a database
- Unloads a database to a sequential data set
- Loads a database from a sequential data set
- Reorganizes the index in a database
- Verifies data in and corrects problems with a database
- Defines and maintains a lock file
- Merges unloaded databases
- Sets the version number of a database

Lock File

A *lock file* is a mechanism that CA-View provides that can ensure database serialization in environments where hardware reserve/releases cannot be used.

One example of an environment where a lock file can be used to ensure database serialization is in a situation where multiple CPUs are running under VM.

Job Control Statements

The following job control statements are required to execute SARDBASE:

Control Statement	Description
JOB	Initiates the job
EXEC	Specifies the program name (PGM=SARDBASE) and optionally, the high-level name of the CA-View database as the PARM parameter (PARM='VIEW.SYSTEM1')
STEPLIB DD	Defines the load library containing SARDBASE If the program resides in a link list library, omit this statement.
SYSPRINT DD	Defines the sequential output data set (normally SYSOUT) used for listing the control statements and messages If not a SYSOUT data set, DCB=BLKSIZE= <i>nnn</i> must be coded where <i>nnn</i> is a multiple of 121.
SARIOUT DD	Defines a sequential output data set into which the master index is unloaded The attributes of the data set will be set to RECFM=VB, LRECL=1028, and BLKSIZE=6133. The DD statement is only required for an IDXOUT operation.
SAROLIB DD	Defines the online library containing the panel, message, and skeleton JCL members to be loaded to the database The DD statement is only required for an OLOAD operation.
SARRECV DD	Defines the recovery file This statement is only used for a RESTORE operation. While this DD statement is optional, it should be included for a more efficient RESTORE operation.

Continued

Continued

Control Statement	Description
SARTAPE DD	Defines the tape containing the backup of the master index. This statement is only used for a RESTORE operation. For a RESTORE operation, the DD statement is optional and is only used when there is no recovery data set or the SARRECV DD statement is missing. When used, the file sequence number of the LABEL parameter must specify the position number of the master index backup on the tape. The position of the backup can be obtained by mapping the tape with the SARTCP program.
SARLOAD DD	Defines the device containing the unloaded database. This statement is only used for a LOAD operation.
SARUNLD DD	Defines the device to which the database is unloaded. This statement is only used for an UNLOAD operation.
SARMERG n DD	Defines the unloaded databases to be merged together. Replace n with a number from 1–9 so that each unloaded database is defined with a unique DD statement. These statements are only used for a MERGE operation.
SYSIN DD	Defines a card image data set containing the control statements to be input.

SARDBASE Control Statements

Control statements have the following general syntax:

Syntax:

OPERATION operands

- A control statement must be coded on a single card image between columns 1 and 71. The operation can begin in column 1 or may be preceded by one or more blanks.
- The operation and the first operand as well as individual operands are separated by one or more blanks.
- Comments can be included in the control statements by coding an asterisk in column 1 of the card image containing the comment.

ADDDS

The ADDDS control statement is used to create a new database or to add additional space to an existing database. Space is added by creating a new data set and formatting it with fixed-length blocks.

The high-level name of the database must have previously been defined with the NAME control statement (or the PARM parameter of the EXEC JCL statement).

Syntax

```
ADDDS: BLKSIZE=  
        CYLINDER=  
        DATACLAS=  
        MGMTCLAS=  
        STORCLAS=  
        UNIT=  
        VOLSER=
```

where:

BLKSIZE=	Specifies the block size to be used in the data sets The minimum is 3476 (the default); the maximum is 16383. The block size for an existing database cannot be changed, so this operand is only valid when you create a new database. After a database has been created, any subsequent use of the block size parameter is ignored. See the section Estimating DASD Requirements For a Database later in this chapter for information about determining the block size you should use.
CYLINDER=	Specifies the number of contiguous cylinders to allocate to the data set
DATACLAS=	Specifies the data class of an SMS data set
MGMTCLAS=	Specifies the management class of an SMS data set
STORCLAS=	Specifies the storage class of an SMS data set
UNIT=	Specifies the unit name to be used to dynamically allocate a new data set
VOLSER=	Specifies the volume serial number on which to allocate the new data set

All of the ADDDS keywords can be abbreviated to the fewest number of characters that makes them unique.

SMS and Non-SMS:
Specifying
Parameters

The following table summarizes the interdependency of the ADDDS parameters for SMS and non-SMS data sets:

Parameter	Non-SMS Data Set	SMS Data Set
BLKSIZE	Optional	Optional
CYLINDER	Required	Required
DATACLAS	Omit	Optional
MGMTCLAS	Omit	Optional
STORCLAS	Omit	Optional
UNIT	Optional	Omit
VOLSER	Optional	Omit

Estimating DASD
Requirements for a
Database

There is no way to know the exact amount of space that will be required for a database. The following can be used to approximate the space needed (for this approximation, a block size of 3476 is used):

- CA-View writes fixed-length blocks of 3476 bytes to its database. (This is the default. You can specify a block size between 3476 and 16383.)
- 190 blocks are contained in one cylinder of a 3390, 180 blocks are contained in one cylinder of a 3380, and 150 blocks are contained in one 3350 cylinder.
- Repetitive characters are compressed, giving, on the average, a 60 to 70 percent reduction in space requirements.
- The space required for the master index is minimal compared to the space required for the SYSOUT data; a minimum of one cylinder is required for the master index.

Using the previous information, the amount of space required for your database can be approximated using the following steps:

1. Take the maximum lines archived to disk in one generation (that is, one day).
2. Multiply the number of lines by the average line length.
3. Divide by 3 (for compression).
4. Divide by 3476 to get number of blocks.
5. Divide by 190 (for a 3390) or 180 (for a 3380) or 150 (for a 3350) to get number of cylinders.

6. Multiply the result by the number of generations to be retained on disk.
7. To allow for growth, add 10 percent to the result.

For example, assume that a site produces 1,000,000 lines of SYSOUT in one day to be archived on disk. The average line length of the SYSOUT is 121 bytes, and they will keep 3 days worth of SYSOUT on disk.

Using the method described on the previous page, their space requirements can be approximated as follows:

- 1,000,000 lines (per generation)
- 1,000,000 lines * 121 bytes/line = 121,000,000 bytes
- 121,000,000 bytes / 3 = 40,333,333 bytes (compressed)
- 40,333,333 bytes / 3476 bytes/block = 11,603 blocks

A block size of 3476 is assumed for this example. Consult your DASD administrator to choose an optimal block size.

- 11,603 blocks / 180 3380-cylinders = 64 3380-cylinders
- 64 3380-cylinders * 3 generations = 192 3380-cylinders
- 192 3380-cylinders + 19 3380-cylinders (10%) = 211 3380-cylinders

ADDLOCK

The ADDLOCK control statement is used to create and format the one-track lock data set (lock file) which will be used to serialize CA-View database access.

CA-View performs a considerable amount of I/O to the CA-View database; it is critical to the integrity of the database that all concurrent output operations be synchronized. The MVS hardware reserve/release is normally used to synchronize access, but in certain environments (such as a multi-CPU VM site) this is not insured. The lock data set, in these cases, will function as a substitute for a hardware reserve/release mechanism.

The high-level-name of the database must have been defined with the NAME control statement (or the PARM parameter of the EXEC JCL statement). The database must also have been created via the ADDDS control statement.

Syntax

ADDLOCK *unit volume*

where:

- | | |
|---------------|--|
| <i>unit</i> | Specifies the unit name where the lock data set is created |
| <i>volume</i> | Specifies the volume serial where the lock data set is created |

All operands for the ADDLOCK control statement are required.

Warning! Serialization via the lock data set can degrade performance of the CA-View database.

COPY

The COPY control statement is used to copy a database. The output database should be a newly created, empty database.

The high-level name of the output database must have been defined with the NAME control statement (or the PARM parameter of the EXEC JCL statement).

Syntax:

COPY from-name reserve-option buffer-option

where:

- | | |
|-----------------------|--|
| <i>from-name</i> | Specifies the high-level name of the database to be copied.
This operand is required. |
| <i>reserve-option</i> | Specifies either RESERVE to place a reserve on the output database for the duration of the copy operation or NORESERVE to not place a reserve on the output database.

Specify NORESERVE only if you can be certain that no one else is updating the output database while the COPY operation is proceeding. If omitted, RESERVE is assumed. |
| <i>buffer-option</i> | Specifies either BUFFER, to buffer records written to the output database which improves performance and reduces I/O time, or NOBUFFER to eliminate buffering.

If omitted, NOBUFFER is assumed. |

Warning! When using the COPY control statement, adhere to the following:

1. The CA-View archival started task should be inactive.
2. The destination database should be new and unused.
3. When using BUFFER, an unsuccessful completion could corrupt the output database.

DELETE

The DELETE control statement deletes a database.

The high-level name of the database must have been defined with the NAME control statement (or the PARM parameter of the EXEC JCL statement).

Syntax: **DELETE [LOCK]**

Optionally, LOCK can be specified to delete the database lock data set and resume normal MVS Reserve/Release access to the database.

Note: The DELETE control statement, without the LOCK parameter, deletes and uncatalogs all data sets for the database as well as the lock data set if it exists.

IDXOUT

The IDXOUT control statement is used to write the master index for the database to a sequential data set. The sequential output data set is defined by DD statement SARIOUT.

The high-level name of the database must have been defined with the NAME control statement (or the PARM parameter of the EXEC JCL statement).

Syntax: **IDXOUT**

LOAD

The LOAD control statement is used for recovery purposes to load the CA-View database from a sequential, previously unloaded file. The input, unloaded copy of the database is defined with the SARLOAD DD statement.

The high-level name of the database must have been defined with the NAME control statement (or the PARM parameter of the EXEC JCL statement). If the database is an existing database containing data, the records will be added to the records already contained in the database, duplicate records will be replaced.

Syntax: **LOAD [BUFFER | NOBUFFER]**

BUFFER specifies whether to buffer records written to the output database, which improves performance and reduces I/O time. NOBUFFER is the default.

Warning! When using the LOAD control statement, adhere to the following:

1. The CA-View archival started task should be inactive.
2. The destination database should be new and unused.
3. When using BUFFER, an unsuccessful completion could corrupt the output database.

MERGE

Because the SARPAC tape consolidation utility is required to complete the merge process, you must have installed the Expanded Retention Option (ERO).

The MERGE control statement is used to merge 1–9 existing CA-View databases together into one new database. Logic is included to reset generation and tape sequence numbers to eliminate any conflicts between the input databases. The output database should be a newly-created, empty database.

The high-level name of the output database must have previously been defined with the NAME control statement (or the PARM parameter of the EXEC JCL statement).

Syntax

MERGE *tape-index driver parameters*

where:

tape-index Specifies the high-level naming prefix to be set for the TAPEIDX initialization parameter

If omitted, TAPEIDX is set to the high-level name of the output database.

To prevent conflicts with any existing archival tapes, MERGE requires that this high-level naming prefix for tapes be different from those for any tapes defined in the input databases.

driver Specifies the name of the secondary disk storage driver and must be the same as the DSK2DRVR initialization parameter

You should use *driver* only if you have purchased an optical disk secondary storage driver. For more information, see Chapter 10, "Using the Optical Disk Interface."

parameters Specifies the identifiers for the secondary disk storage driver as defined by the DSK2PARM initialization parameter

Use parameters only if you have an optical disk secondary storage driver. These parameters vary according to type of optical disk driver. For the proper identifiers, see Chapter 10, "Using the Optical Disk Interface." Parameters are required when you specify a driver name.

Specifying Database Names	Unloaded copies of the databases that are merged are defined in the JCL with DD statements named SARMERG n , where n specifies a number from 1–9. The first unloaded database that is merged is defined with the DD statement SARMERG1, the second with DD statement SARMERG2, and so on. When only one database is merged, the operation functions as a reset operation to reset generation and tape sequence numbers.
Merge Process	<p>When performing a merge operation, the following steps must be performed in the following order:</p> <ol style="list-style-type: none">1. Terminate all activity against the databases to be merged. Be sure to stop all direct-to-CA-View archival activity from the CA-Deliver product.2. Unload the databases using the UNLOAD function of this utility.3. Define a new CA-View database (large enough to hold all the data from the input databases) using the ADDDS function of this utility.4. Perform the merge function. The input unloaded databases are processed twice. The first time, they are scanned to determine how the reset of generation and tape sequence numbers is done; the second time, they are actually loaded to the new, output database.5. Verify the successful completion of the merge function.6. Run SARINIT to review add/or change any initialization parameters in the merged database.7. Run the SARPAC tape consolidation utility as many times as necessary to copy all the archival tapes to new tapes owned by the merged database. <p>After you complete Step 6, the newly-created, merged database can be used in production. Step 7 can be run while the database is being used in production.</p>
Common Information Between Databases	<p>The following actions occur with a MERGE:</p> <ul style="list-style-type: none">■ For any common definitions in the input database (such as options and panel definitions), only the definition from the last database to be merged is used.■ Multiple Define SYSOUT definitions for the same SYSOUT identifiers are merged.■ Multiple Define DISTRIBUTION definitions for the same SYSOUT identifiers are merged.■ All PC-transmitted queue entries are deleted from the output, merged database.
Why You Must Run SARPAC	Although definitions of the archival tapes from the input databases are copied to the output merged database, ownership of the tapes remains with the input databases. Therefore, SARPAC tape consolidations must be run to copy the tape archival data to new tapes owned by the new, merged database.

After the archival tape data has been copied using the SARPAC utility, references to the original tapes are removed from the merged database at the next backup or clean cycle. Only the references to the tapes are removed from the database; the tapes are not uncataloged since the merged database does not actually own them.

Optical Disk:
Considerations

Additional consideration must be given when merging databases containing SYSOUT archived to secondary (optical) disk storage. For more information, Chapter 10, "Using the Optical Disk Interface."

Generation Numbers

The resulting generation numbers in the output merged database are computed from the archival dates of the SYSOUT groups. The numbers are based upon a 24-hour generation beginning at the time of day specified in the TIME initialization parameter in the last database to be merged. The current generation number in the output merged database is one more than that of the most recently archived SYSOUT group.

NAME

The NAME control statement is used to specify the high-level name of the CA-View database. If omitted, the high-level name specified as the PARM parameter on the EXEC JCL statement is used. The NAME control statement applies to all control statements following it until another NAME control statement is encountered or changed by the RENAME control statement.

Syntax

NAME *high-level-name*

where *high-level-name* specifies the high-level name for the CA-View database. *high-level-name* is comprised of one or more qualifiers separated by periods. The maximum length of the name is 17 characters. This operand is required.

OLOAD

The OLOAD control statement is used to load the panel, message, and skeleton JCL members in the online library to the database. The online library is defined with DD statement SAROLIB.

The high-level name of the database must have previously been defined with the NAME control statement (or the PARM parameter of the EXEC JCL statement).

Syntax

OLOAD

RENAME

The RENAME control statement renames a database. The RENAME control statement renames all data sets for the database as well as the lock data set if it exists.

The high-level name of the database to be renamed must have previously been defined with the NAME control statement (or the PARM parameter of the EXEC JCL statement).

Syntax

```
RENAME new-name
```

where *new-name* specifies the high-level name to which the database is renamed. The maximum length of the name is 17 characters. This operand is required.

After completion of the rename operation, the high-level name of the database that is used by subsequent operations is set to the new name of the database. For example, the following statement:

```
RENAME VIEW.NEWSYS1
```

is identical to the following two statements:

```
RENAME VIEW.NEWSYS1  
NAME VIEW.NEWSYS1
```

REORG

The REORG control statement performs maintenance functions on the database; it can be run in asynchronous or non-asynchronous mode.

A REORG of a database does the following:

- Defragments the index
- Builds a queue of empty, reusable index blocks
- Incorporates the empty blocks from the queue again
- Rebuilds the alternate index (used for online selection by DATE)

The high-level name of the database to be reorganized must have been defined with the NAME control statement (or the PARM parameter of the EXEC JCL statement).

Syntax

REORG option

where *option* specifies one of the following:

- RESERVE** A stand-alone reorganization of the index file is to be performed with the database reserved for the duration of the reorganization. This is the default.
- NORESERVE** A stand alone reorganization of the index file is to be performed without placing a reserve on database. Specify **NORESERVE** only if you can be certain that no one else could be updating the database while the **REORG** operation is proceeding.
- ASYNCH** An asynchronous reorganization of the index file is to be performed. The database can be actively used by others during the reorganization; however, the less database activity there is, the faster the **REORG** will run.

The standard and asynchronous **REORG** can be prematurely terminated with a stop MVS operator command.

Syntax

P jobname, STOP

OR

F jobname, STOP

The job name on the stop command references the MVS job name executing the SARDBASE utility.

When the standard **REORG** is stopped, the full reorganization process is aborted, and the database is reset to the pre-reorganization state. The asynchronous **REORG**, however, will be stopped in a manner that will leave the previous reorganization activity intact.

The SARDBASE **REORG** facility also supports a status command via the modify MVS operator command:

F jobname, STATUS

The status command issues messages to the operator console, describing the state and location of reorganization process.

RESTORE

The RESTORE control statement is used to recover a database that has been destroyed (for example, from a media failure of the disk containing one of the database data sets).

The SARDBASE program performs the following for a restore operation:

- Copies the backup of the master index from tape to the database
- Loads whatever SYSOUT it can to the new database from the old database

The SYSOUT groups in the old database are located based on the information in the backup of the master index and not on the actual master index in the old database since the master index in the old database is probably destroyed. It is imperative that the old database (as it was defined at the time of the backup) be used, and not a copy of the old database. The SYSOUT groups in a copy of the old database would be rearranged and would not match the location information in the backup of the master index.

The database into which the restore is done must be a newly created empty database and its high-level name must have been defined with the NAME control statement (or the PARM parameter of the EXEC JCL statement).

To use the restore operation, a tape backup of the master index must exist. RESTORE rebuilds the index from the tape backup copy. Either the SARRECV or SARTAPE DD statement must be included in the JCL for the RESTORE job. In general, a site that is concerned with recovery is already doing regular database backups. In such an environment, the SARRECV DD statement is included and the SARTAPE DD statement is excluded, allowing SARDBASE to use the information in the recovery data set to dynamically allocate the correct backup tape.

Syntax

RESTORE *old-name relative-backup*

where:

<i>old-name</i>	Specifies the high-level name of the old database that is being restored
	If the old database has been completely lost, this operand must be omitted; if it is omitted, only the database index is restored. The operand must be specified in order to specify a relative backup.

Warning! Specify the old database if any of it still exists, so that SARDBASE RESTORE can copy whatever SYSOUT data it can access to the new database. (You can alternatively use the SARRSP utility to load SYSOUT data from backup tapes or an UNLOAD tape.) Unless forward recovery data sets were in use, all SYSOUT data archived since the last backup (or UNLOAD) is lost.

relative-backup Specifies the signed relative number of the backup to be used. The most recent backup is specified as +0 or -0. The previous backup is specified as -1. If *relative-backup* is omitted, +0 is assumed. The value is ignored when the JCL contains a DD statement for SARTAPE. Following a database RESTORE operation the online panels, messages, and skeleton JCL must be reloaded using OLOAD.

SET

The SET control statement is used to initialize the database for online viewing of database statistics.

For information about online database status viewing, see the *CA-View Online User's Guide*.

The high-level name of the database must have been defined with the NAME control statement (or the PARM parameter of the EXEC JCL statement).

Syntax:

SET option

where *option* specifies STATS to initialize the database statistics so they may be viewed online, via the Database Status panel.

Warning! When using the SET control statement, the CA-View archival started task should be inactive.

STATUS

The STATUS control statement is used to display usage statistics about the CA-View database. These usage statistics are as follows:

- Total blocks
- Total blocks used
- Percentage of utilization

- Lock data set status (if one exists)
- Cylinders, blocks, used blocks, and error blocks for each data set in the database
- Number of empty blocks (without data) in the database index

You can view a partial set of these statistics. For more information, see the chapter, "System Administration" in the *CA-View Online User's Guide*.

The high-level name of the database must have been defined with the NAME control statement (or the PARM parameter of the EXEC JCL statement).

Syntax:

STATUS *display-option* *reserve-option*

where:

- display-option* Specifies FULL to print complete statistics for the database, master index, and data sets, or INDEX to print statistics for the database and master index only
- If the parameter is omitted, statistics for the database and data sets are printed.
- reserve-option* Specifies either RESERVE to place a reserve on the database for the duration of the index evaluation process or NORESERVE to not place a reserve on the database
- This option is only applicable when specified with the *display-option*. Because the master index is updated by many tasks, jobs, or online sessions, the master index data can change during the evaluation process, causing inconsistent statistics. The RESERVE option delays external updates to the database for the purpose of obtaining consistent statistics. If *reserve-option* is omitted, NORESERVE is assumed.

To compile index statistics information, the entire master index must be read. Depending on the size of the database, this process can take a considerable amount of time.

Messages Resulting
From STATUS

The STATUS statement causes the SARDBA09 messages to be displayed. The meaning of the index statistics displayed in the SARDBA09 messages are as follows:

SARDBA09 Message	Description
Index levels	Specifies the number of levels or hierarchies in the master index
Index records	Specifies the total number of records in the master index
Index allocations	Specifies the total number of control areas or segments that comprise the master index
Index blocks	Specifies the total number of database blocks that comprise the master index These index blocks can be pointer blocks, data blocks, or free blocks.
Index used blocks	Specifies the total number of database blocks currently being used in the master index This value includes the index pointer block, the index data blocks, and the index empty blocks.
Index pointer blocks	Specifies the total number of higher level hierarchical index blocks that reference lower level index blocks
Index data blocks	Specifies the total number of database blocks that comprise the lowest level of the master index, and that contain the physical index data
Index empty blocks	Specifies the total number of index data blocks that do not contain any index records When index records are deleted from the master index, the index data is removed from the index data block. When all index records have been removed from the index data block, the index data block is considered empty but available for subsequent use in the same key range. REORG or UNLOAD/LOAD functions of the SARDBASE utility are recommended for a database with a high percentage of empty blocks.

UNLOAD

The UNLOAD control statement is used to unload the CA-View database to a sequential output file for backup purposes. The records in the database are written in ascending key sequence order to the SARUNLD data set as variable-length blocked records.

The high-level name of the database must have been defined with the NAME control statement (or PARM in the EXEC JCL statement).

Syntax

UNLOAD [SECOND|NOSECOND]

The SECOND/NOSECOND parameter is for use when you have archival data in secondary (optical disk) storage and are planning to use the MERGE function. Do not use these parameters if you are going to use the LOAD function. The LOAD function copies the index information about the SYSOUT groups on secondary disk storage—that is, LOAD transfers ownership of the secondary disk storage data that is already archived, while MERGE actually reloads the data to another optical disk data set.

The SECOND/NOSECOND parameter has a default value of NOSECOND. Specifying SECOND can substantially increase the time required to perform the UNLOAD function.

UNLOCK

The UNLOCK control statement unlocks or releases a lock held by a user or job on the lock data set.

The lock data set cannot be released if a CA-View user, CA-View archival task, or CA-View utility holds a lock or reserve on the lock data set while updating the CA-View data set and the user, archival task, or utility is canceled or abends, or a system crash occurs. Subsequently, all output operations to the CA-View database will wait. The STATUS control statement can be used to interrogate the status of the lock data set, and optionally, the UNLOCK control statement can be used to release that lock.

The high-level name of the database must have been defined with NAME control statement (or the PARM parameter of the EXEC JCL statement).

Syntax

UNLOCK

Warning! If a lock is released from a valid CA-View user, the CA-View archival task, or a CA-View utility, a user 0730 abend occurs. In addition, this condition could corrupt the CA-View database.

VERIFY

The VERIFY control statement is used to logically verify the structure and allocation of the data in the CA-View database and to correct any problems found in the process.

The high-level name of the database must have been defined with the NAME control statement (or the PARM parameter of the EXEC JCL statement).

Syntax

VERIFY

Note: The VERIFY process may not be able to recover all records in the database. Inconsistencies can appear in the records created and used by the DEFINE SYS and DEFINE DIST functions. These inconsistencies can only be corrected by redefining the missing component.

Warning! When using the SET control statement, be sure that the CA-View archival started task is inactive.

VERSION

The VERSION control statement is used to set the database version.

The high-level-name of the database must have been defined with the NAME control statement (or the PARM parameter of the EXEC JCL statement). Also, the database must have been created via the ADDDS control statement.

Syntax

VERSION *releasenumbr*

where *releasenumbr* specifies the number of the CA-View release to which the database is to be set. If not specified, this parameter defaults to the current release.

Valid values are 5.0, 6.0, 6.1, 6.5, 1.6, and 1.7, and 2.0.

If you need to set the version of a CA-View 2.0 database back to CA-View 1.7, STEPLIB to the 2.0 load library for the SARDBASE job. Then use the 1.7 load library for the SARSTC started task and online access.

After running SARDBASE VERSION, SARINIT should be run to set the initialization parameters.

SARDBASE Examples

The following examples demonstrate the facilities available with SARDBASE database maintenance.

Example 1: Creating a Database

In this example, a new database is created with a high-level name of VIEW.SYSTEM1; it is allocated 50 cylinders on 3380 volume SAR001.

```
//EXAMPLE1 JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=SARDBASE
//STEPLIB DD DSN=CAI.CALLIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
NAME VIEW.SYSTEM1
ADDS UNIT=3380 VOL=SAR001 CYL=50
/*
```

Example 2: Adding Space

In this example, the database defined in the previous example is out of space and an additional 100 cylinders is added to the database on 3380 volume SAR002. Statistics on the database after the addition of the space are displayed.

```
//EXAMPLE2 JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=SARDBASE
//STEPLIB DD DSN=CAI.CALLIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
NAME VIEW.SYSTEM1
ADDS UNIT=3380 VOL=SAR002 CYL=100
STATUS
/*
```

Example 3: Changing Online Members

In this example, when changes are made to the online library, the library is reloaded to database VIEW.SYSTEM1.

```
//EXAMPLE3 JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=SARDBASE, PARM='VIEW.SYSTEM1'
//STEPLIB DD DSN=CAI.CALLIB, DISP=SHR
//SAROLIB DD DSN=VIEW.OLIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
OLOAD
/*
```

Example 4: Copying a Database

In this example, database VIEW.SYSTEM1 continually grows in size with the addition of many data sets. For performance reasons, it is copied to a new large database. The old database is to be kept under the name of VIEW.OLDSYS1.

```
//EXAMPLE4 JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=SARDBASE
//STEPLIB DD DSN=CAI.CAILIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
NAME VIEW.SYSTEM1
RENAME VIEW.OLDSYS1
NAME VIEW.SYSTEM1
ADDDS UNIT=3380 VOL=SAR001 CYL=600
COPY VIEW.OLDSYS1
/*
```

Example 5: Deleting a Database

In this example, database VIEW.OLDSYS1 is no longer being used and is deleted.

```
//EXAMPLE5 JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=SARDBASE
//STEPLIB DD DSN=CAI.CAILIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
NAME VIEW.OLDSYS1
DELETE
/*
```

Example 6: Sequential Copy of the Index

In this example, a sequential copy of the master index for database VIEW.SYSTEM1 is written out.

```
//EXAMPLE6 JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=SARDBASE
//STEPLIB DD DSN=CAI.CAILIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SARIOUT DD DSN=USER.DATA SET, DISP=(,CATLG),
// UNIT=SYSDA, SPACE=(CYL,(1,1))
//SYSIN DD *
NAME VIEW.SYSTEM1
IDXOUT
/*
```

Example 7: Restore

In this example, the CA-View database is restored from the most recent backup, as indicated in the recovery data set maintained by SARSTC. The old database is named VIEW.SYSTEM1 and a new database named VIEW.NEWSYS1 is created. The following job recovers the database:

```
//RESTORE JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=SARDBASE
//STEPLIB DD DSN=CAI.CALLIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SARRECV DD DSN=VIEW.SARRECV, DISP=SHR
//SYSIN DD *
NAME VIEW.NEWSYS1
ADDS UNIT=3380 VOL=SAR001 CYL=600
RESTORE VIEW.SYSTEM1
/*
```

Example 8a: Tape Map/Restore (Tape Map)

In this example, the CA-View database is recovered from the most recent backup and the recovery data set is not available. The old database is named VIEW.SYSTEM1 and a new database named VIEW.NEWSYS1 is created. When the recovery data set is not available to identify the most recent backup, SARTCP must be run to map the current archival tape to locate the position of the master index backup.

The following job maps the archival tape:

```
//TAPEMAP JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=SARTCP
//STEPLIB DD DSN=CAI.CALLIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//TAPEIN DD DSN=VIEW.SYSTEM1.SARTAPE.T000156,
// DISP=OLD
//SYSIN DD DUMMY
```

To view a sample report, see the section SARTCP: Tape Recovery Example later in this chapter.

Example 8b: Tape Map/Restore (Restore)

Assume the map of the archival tape shows master index backups in positions 50 and 1370 of the tape. This means position 1370 contains the most recent backup. To restore the most recent backup, you could use the following JCL.

Note: This example does not support a master index that spans two reels. If you have a master index that spans two reels, a RESTORE with SARRECV DD statement is the recommended method.

The following job is executed to restore the database:

```
//RESTORE JOB ACCOUNT, PROGRAMMER:
//STEP1 EXEC PGM=SARDBASE
//STEPLIB DD DSN=CAI.CAILIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SARTAPE DD DSN=VIEW.SYSTEM1.SARTAPE.T0000156,
// DISP=OLD, LABEL=1370
//SYSIN DD *
NAME VIEW.NEWSYS1
ADDDS UNIT=3380 VOL=SAR001 CYL=600
RESTORE VIEW.SYSTEM1
/*
```

Example 9: Sequential Copy of the Entire Database

In this example, the CA-View database is unloaded for backup purposes. The unloaded backup is a sequential data set on tape.

The following job unloads the database:

```
//UNLOAD JOB ACCOUNT, PROGRAMMER:
//STEP1 EXEC PGM=SARDBASE
//STEPLIB DD DSN=CAI.CAILIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SARUNLD DD DSN=VIEW.UNLOAD, DISP=NEW,
// UNIT=TAPE, DCB=(RECFM=VB,
// LRECL=32756, BLKSIZE=32760)
//SYSIN DD *
NAME VIEW.SYSTEM1
UNLOAD
/*
```

Example 10: Recover Unloaded Backup

In this example, the CA-View database is recovered from a previous, unloaded backup (see the previous example). Statistics on the database following the load are displayed.

The following job reloads the database:

```
//LOAD JOB ACCOUNT, PROGRAMMER:
//STEP1 EXEC PGM=SARDBASE, PARM='VIEW.SYSTEM1'
//STEPLIB DD DSN=CAI.CAILIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SARLOAD DD DSN=VIEW.UNLOAD, DISP=OLD,
// UNIT=TAPE, DCB=(RECFM=VB,
// LRECL=32756, BLKSIZE=32760)
//SYSIN DD *
LOAD
STATUS
/*
```


Recovery File Utility Program: SARRCOV

The Recovery File Utility program (SARRCOV) creates a recovery file with data such as tape volume serial number, data set name, DSN number, DSN count, and file sequence number. This program also allows limited editing of the recovery file and prints a formatted listing of it.

This utility program can be helpful when:

- No recovery file has been created but one is needed
- An existing recovery file has been damaged and must be recreated.

Job Control Statements

The following job control statements are required to execute SARRCOV:

Control Statement	Description
JOB	Initiates the job
EXEC	Specifies the program name (PGM=SARRCOV) and optionally, the high-level name of the CA-View database as the PARM parameter (PARM='VIEW.SYSTEM1')
STEPLIB DD	Defines the load library containing SARRCOV If the program resides in a link list library, omit this statement.
SYSUDUMP DD	Defines the output data set (normally SYSOUT) used for listing the system memory contents at the time of an abend
SARRECV DD	Defines a user-maintained sequential data set used as the recovery file
SYSIN DD	Defines a card image data set containing the control statements to be input

SARRCOV Control Statements

Two control statements, FILESEQ and DATA SET NAME/VOLSER are used with the Recovery File Utility program. They are covered in detail on the following pages.

FILESEQ

The FILESEQ control statement specifies the file sequence of the master index on the backup tape. To determine the file sequence number of the master index backup, use the mapping feature of the SARTCP program. If the backup tape is mapped with bypass label processing (LABEL=(,BLP)), do not include the file containing the standard labels in the counting for the FILESEQ parameter.

Syntax:

FILESEQ=nnnnn

where *nnnn* specifies the file sequence of the master index on the backup tape. This value cannot exceed 32767.

For an example using FILESEQ, see SARRCOV Initialization on the following pages.

DATA SET NAME/VOLSER

The DATA SET NAME/VOLSER control statement specifies the data set name and the VOLSER of the backup tapes.

Syntax

data-set-name, volser

where:

data-set-name Specifies the data set name of the backup tape

volser Specifies the VOLSER of the backup tape

Recovery Data Set
Guidelines

The data set must reside on a direct access volume. Since the data set is used to recover the CA-View database, it should not be placed on the same volumes containing data sets for the CA-View database. The data set must not be allocated with DCB attributes. Only one track can be allocated for this data set.

SARRCOV Initialization

SARRCOV Example 1 The following JCL will update a recovery file and indicate that the most current backup of the master index is on file 99 of tape data set VIEW.SYSTEM1.SARTAPE.T0000009 and continues onto the following two backup tapes.

```
//EXAMPLE1 JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=SARRCOV
//STEPLIB DD DSN=CAI.CALLIB, DISP=SHR
//REPORT DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//SARRECV DSN=VIEW.SARRECV, DISP=OLD
//SYSIN DD *
FILESEQ=99
VIEW.SYSTEM1.SARTAPE.T0000009,00100
VIEW.SYSTEM1.SARTAPE.T0000010,00101
VIEW.SYSTEM1.SARTAPE.T0000011,00102
//
```

SARRCOV Example 2 The following JCL initializes a recovery file, and lists an existing recovery file.

```
//EXAMPLE2 JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=SARRCOV
//STEPLIB DD DSN=CAI.CALLIB, DISP=SHR
//REPORT DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//SARRECV DD DSN=VIEW.SARRECV, DISP=OLD
//SYSIN DD DUMMY
//
```

Note: This process does not initialize the recovery data set. If the SYSIN data set is empty (as in this case) SARRCOV will only list the entries in the existing recovery data set. CA-View Database Restore (SARRSP).

Use the SARRSP utility program to restore to the database all panels, messages, and/or SYSOUT groups that reside in disk status from either SARDBASE UNLOAD tapes or CA-View backup tapes. This utility must be executed after the normal restore process provided with the SARDBASE utility (RESTORE control statement).

In certain situation, the restore function provided with the SARDBASE utility cannot fully restore the contents of the CA-View database.

The SARDBASE restoration process attempts to copy panels, messages, and SYSOUT groups from the old database, if specified, to repopulate the database. When the old database is seriously damaged or does not exist, panels, messages, and SYSOUT groups that are unsuccessfully copied occupy an empty file. In this case, the SARTDR utility (tape dump restore utility) is normally used to reload entire tapes or generations back to the database. However, with the expanded retention options capability of maintaining SYSOUT on disk for long periods of time, this process requires a vast amount of disk space for the database to hold SYSOUT that didn't previously reside on disk.

The SARRSP utility attempts to restore any panel data, message data, or non-resident SYSOUT group from a CA-View unload tape (if the SARLOAD DD statement is specified) or dynamically from the CA-View backup tape. The CA-View backup tapes are dynamically allocated, if needed, by tape sequence number. In cases where the backup tape is damaged or unusable, the respective SYSOUT groups are removed from disk status.

Note: It may be necessary to reload the online library (panels and messages) to the database with the SARDBASE utility (OLOAD control statement) after the restore process if all panel and message data is not completely restored.

Job Control Statements

The following job control statements are required to execute SARRSP:

Control Statement	Description
JOB	Initiates the job
EXEC	Specifies the program name (PGM=SARRSP) and the high-level name of the CA-View database as the PARM parameter (PARM='VIEW.SYSTEM1')
STEPLIB DD	Defines the load library containing SARRSP If the program resides in a link list library, omit this statement.
SYSPRINT DD	Defines a sequential output data set (normally SYSOUT) used for messages If not a SYSOUT data set, data set must be coded with RECFM=FBA, LRECL=121, and BLKSIZE=1210.

Continued

Continued

Control Statement	Description
SARLOAD DD	<p>Defines an CA-View unload tape created by the SARDBASE utility (UNLOAD control statement) from which panels, messages, and SYSOUT groups can be restored.</p> <p>FREE=CLOSE can be coded on the DD statement to dismount the tape at the end of the SORT input phase as opposed to step termination. This DD statement is optional and should only be specified when a CA-View unload tape exists.</p>
SORTLIB DD	<p>Defines the load library that contains the SORT program library.</p> <p>This DD statement may not be needed if the sort program library is moved to LPA.</p>
SYSOUT DD	Defines a sequential output data set (normally SYSOUT) to which SORT messages are written.
SORTWK nn DD	<p>Defines temporary sort work disk space where nn represents a numeric number.</p> <p>Normally a minimum of three sort work DD statements are specified.</p>

Example

To restore panels, messages, and SYSOUT to the VIEW.SYSTEM1 database, the following JCL is used:

```
//SARRSP   JOB ACCOUNT, PROGRAMMER
//STEP1   EXEC PGM=SARRSP, PARM='VIEW.SYSTEM1'
//STEPLIB DD DSN=CAI.CALLIB, DISP=SHR
//SARLOAD DD DSN=VIEW.SYSTEM1.UNLOAD(0),
//         DISP=SHR, FREE=CLOSE
//SYSPRINT DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//SYSOUT  DD SYSOUT=*
//SORTLIB DD DSN=SYS1.SORTLIB, DISP=SHR
//SORTWK01 DD UNIT=SYSDA,
//         SPACE=(CYL,(10),,CONTIG)
//SORTWK02 DD UNIT=SYSDA,
//         SPACE=(CYL,(10),,CONTIG)
//SORTWK03 DD UNIT=SYSDA,
//         SPACE=(CYL,(10),,CONTIG)
```

Tape Copy Utility (SARTCP)

The tape copy utility SARTCP can be used to map, copy, or salvage SYSOUT on an archival tape.

Control Statements

Two control statements are provided to skip over damaged files. They are NULL and SKIP. The NULL statement inserts a null SYSOUT group to restore correct positioning after a SKIPPed group.

Related Utilities

If you use 3480/3490 processing (via the TAPEOPT initialization parameter) and you use SARTCP on a backup tape, then you should also run SARTDR TADD on the tape. SARTDR TADD adds/updates the disk database group control records (GCRs). The new GCRs will have the updated 3480/3490 block ID information. If you **do not** run SARTDR TADD, the reports will be accessed without the benefit of 3480 block ID processing.

If you have the expanded access server, then you must also run SARPAC on the tape to make it available to the server.

Recovering a Tape: No Duplex Available

The following steps describe the actions you need to take to recover a tape when no duplex is available.

1. Map the contents of the backup tape by using the SARTCP program.
You may have to use bypass label processing (BLP) in the JCL to have SARTCP start at a point in the tape that is read-able.
2. Run SARTCP to copy the backup tape to a new tape.
You must use the SKIP control cards in order to bypass the unreadable portions of the input tape.
Each SKIP statement should have a corresponding NULL statement to maintain proper positioning on the output tape.
3. Uncatalog the old (damaged) backup tape, then catalog the new backup tape.
You can do this in Step 2, in the JCL.

Recovering a Tape: Duplex Tape Available

The following steps describe the actions you need to take to recover a tape when a duplex tape is available.

1. Uncatalog the damaged backup tape, but set it aside, in case the duplex tape cannot be located or is damaged.
2. Use SARTCP to copy the duplex tape to a new tape with the same data set name as the original backup tape.

Note: The new tape must be large enough to contain the full contents of the duplex tape.

3. Catalog the new backup tape.

You can do this in Step 2, in the JCL.

Tape Map Reports

SARTCP produces a report listing of the SYSOUT groups and master index backups that are on the archival tape. The following is a list of the contents of the archival tape:

Field	Contents
Input position	The position of the entry on the input tape
Output position	The position the entry has on the output tape (if created, with the TAPEOUT DD statement)
Recorded position	The position as indicated in the GCR (Group Control Record) for the SYSOUT group or master index backup
Jobname	The name of the job that originally created the SYSOUT group
JobID	The JES identifier of the job that originally created the SYSOUT group
Generation number	The archival generation of the SYSOUT group
Sequence number	The sequence number of the SYSOUT group in the generation
Blocks	The number of data blocks used for the SYSOUT group
Continuation Indicator	An indicator as to whether the SYSOUT group or master index is continued from a previous backup tape

Continued

Continued

Field	Contents
SYSOUT ID	The ID of the SYSOUT group or one of the following special identifiers: *** INDX *** Represents a backup of the master index *** UNKN *** The identity of the SYSOUT group cannot be determined because the first record of the group is not a control record For all but the first SYSOUT group on the tape, this identification indicates a problem with the group. For the first SYSOUT group on the tape, this identification is normal when the SYSOUT group is a continuation of the group from the previous tape. *** NULL *** The entry represents a null SYSOUT group (that is, two consecutive tape marks) A null entry is created on an archival tape by the NULL control statement. *** SKIP *** The SYSOUT group or master index backup represented by the entry is skipped over as requested by a SKIP control statement

Job Control Statements

The following job control statements are necessary to execute SARTCP:

Control Statement	Description
JOB	Initiates the job
EXEC	Specifies the program name (PGM=SARTCP)
STEPLIB DD	Defines the load library containing SARTCP. If the program resides in a link list library, omit this statement
SYSPRINT DD	Defines the sequential output data set (normally SYSOUT) into which the mapping report is written. If not a SYSOUT data set, DCB=BLKSIZE= <i>nnn</i> must be coded, where <i>nnn</i> is a multiple of 121.

Continued

Continued

Control Statement	Description
TAPEIN DD	Defines the input tape Generally, the tape should be defined with standard labels; however, if the tape has been damaged, bypass label processing can be used.
TAPEOUT DD	Defines the output tape This statement is optional; if omitted, no tape copy is performed.
SYSIN DD	Defines a card image data set containing the control statements

SARTCP Control Statements

Two control statements, NULL and SKIP, are used with the tape copy utility program.

NULL

The NULL control statement is used to write a null SYSOUT group to the output tape. For example, assume an I/O error exists on an archival tape causing the relative positions of the SYSOUT groups on the tape to be thrown off. The NULL statement can be used to insert a null SYSOUT group to restore correct positioning.

Syntax: **NULL *position-number***

where *position-number* specifies the desired position of the null group. It may be one position, or a range of positions (for example, 10-30).

There is a maximum of 32K NULL statements per job.

SKIP

The SKIP control statement is used to skip over a SYSOUT group on the input tape. It has the effect of deleting the group or groups from the output.

Syntax: **SKIP *position-number***

where *position-number* specifies the position of the SYSOUT group to be skipped. It may be one position represented by a single number, or a range of positions represented by a range of numbers (for example, 10-30).

There is a maximum of 32K SKIP statements per job.

SARTCP Example

Suppose an archival tape is inadvertently mounted as a scratch tape for a job and the beginning of the tape is overwritten. In order to recover the remaining SYSOUT archived on the tape, do the following:

1. Run the following job to map the tape:

```
//TAPEMAP JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=SARTCP
//STEPLIB DD DSN=CAI.CALLIB, DISP=SHR
//SYSPRINT DD SYSOUT=A, DCB=BLKSIZE=121
//TAPEIN DD DSN=VIEW.SARTAPE.T0000087, DISP=OLD
//SYSIN DD DUMMY
```

The following mapping report is produced:

IN POS	OUTPOS	REC POS	ID	JOB NAME	JOB ID	GEN	SEQ	BLOCKS	CONT
	1		*** UNKN ***					3	
	2		*** UNKN ***					17	
	3		*** UNKN ***					3	
	4		*** NULL ***					0	
SARTCP10	INPUT TAPE I/O ERROR, ECB-41, BLOCK -0000000001, SENSE-2500								
	5		*** UNKN ***					6	
	6	8	A06125ME	A06125ME	JOB09362	128	12	2	
	7	9	A06128ME	A06128ME	JOB09368	128	12	2	
	8	10	A21100R	A21100R	JOB09500	128	12	2	
	9	11	A22110R	A22110R	JOB09701	128	12	2	
	10	12	*** INDX ***						
			*** EOF ***						
SARTCP16 PROCESSING SUCCESSFULLY COMPLETED									

From the preceding report, you can see that the first seven SYSOUT groups on the tape have been destroyed, since the first valid SYSOUT group has a recorded position of 8.

2. To recover the remaining SYSOUT groups, run the following job:

```
//TAPECOPY JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=SARTCP
//STEPLIB DD DSN=CA1.CALLIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//TAPEIN DD DSN=VIEW.SARTAPE.T0000087,
// DISP=(OLD, UNCATLG)
//TAPEOUT DD DSN=VIEW.SARTAPE.T0000087,
// DISP=(, CATLG), UNIT=TAPE, LABEL=EXPDT=99000
//SYSIN DD *
SKIP 1
SKIP 2
SKIP 3
SKIP 4
SKIP 5
NULL 1
NULL 2
NULL 3
NULL 4
NULL 5
NULL 6
NULL 7
/*
```

Tape Management Scratch and Clean Utility (SARTCHK)

The tape management scratch and clean utility (SARTCHK) should be added at the end of your tape management system's scratch and clean procedure. SARTCHK verifies that every active tape in the CA-View database is still cataloged under MVS.

If any tapes have been uncataloged, a list of the missing tapes is generated, and a condition code of 16 is set, indicating that your tape management system has scratched tapes still required by CA-View. The tape librarian can use this report to prevent the tapes from being overwritten, and data being lost.

Code one step for each CA-View database to be checked.

Job Control Statements

The following job control statements are necessary to execute SARTCHK.

Control Statement	Description
JOB	Initiates the job
EXEC	Specifies the program name (PGM=SARTCHK) and the high-level name of the CA-View database as the PARM parameter (PARM='VIEW.SYSTEM1')
STEPLIB DD	Defines the load library containing SARTCHK If the program resides in a link list library, omit this statement.
SYSPRINT DD	Defines the sequential output data set (normally SYSOUT) into which the listing of uncataloged tapes is written If not a SYSOUT data set, DCB=BLKSIZE= <i>nnn</i> must be coded, where <i>nnn</i> is a multiple of 133.
SYSUDUMP	Defines a file for MVS dump output

Restoring a Complete Disk Archival Generation (SARTDR)

The SARTDR utility can be used to recreate and reload an entire archival disk generation from tape. In addition, the utility will re-add tape archival information to the master index.

The utility can be used to recover one or more generations of SYSOUT data that have been lost due to one of the following conditions (provided error-free archival tapes exist for the generations):

- Accidental deletion of a database data set
- Hardware error resulting in the loss of a database data set
- Accidental or intentional cycling out of a tape or disk generation from within CA-View

The SARTDR utility does not require exclusive access to the database; it can run while other database activities such as archiving or backing up are occurring.

Job Control Statements

The following job control statements are necessary to execute SARTDR.

Control Statement	Description
JOB	Initiates the job
EXEC	Specifies the program name (PGM=SARTDR) and the high-level name of the CA-View database as the PARM parameter (PARM='VIEW.SYSTEM1')
STEPLIB DD	Defines the load library containing SARTDR If the program resides in a link list library, omit this statement.
SYSPRINT DD	Defines the sequential output data set (normally SYSOUT) used for listing the statements and messages If not a SYSOUT data set, DCB=BLKSIZE= <i>nnnn</i> must be coded, where <i>nnnn</i> is a multiple of 121.
<i>anyname</i> DD	Defines one archival tape to be re-added to the master index file The DDname must match the one that is specified on the TADD control statement. A DD statement must be included for each archival tape to be re-added. Omit this DD statement if no archival tapes are to be re-added.
SYSIN DD	Defines the card image data set containing the control statements

SARTDR Control Statements

Control statements have the following general structure:

/function parameters

- The slash is coded in column 1 and is immediately followed by the name of the function to be performed.
- One or more blanks must follow the function name and separate the function name from the parameters. Individual parameters are separated by one or more blanks and/or commas.

- A statement that exceeds 71 characters must be continued on additional cards. When continuing a statement, interrupt the statement only between complete parameters or subparameters.
- Comments can be included in the control statements by coding an asterisk in column 1 of the card image containing the comment.

TADD

The TADD control statement is used to specify an archival tape that is to be re-added to the master index. This function would be used to re-add an archival tape that has cycled out of CA-View.

For example, assume that you thought you were keeping 100 generations of SYSOUT on tape but in actuality you were only keeping 90 (NGENT=90). Any tapes containing SYSOUT data older than 90 generations ago could be re-added to the master index with this function, provided that the tapes had not been overwritten since they had been cycled out of CA-View. Note that it is even possible to re-add an overwritten tape by salvaging it first with the SARTCP utility.

Syntax

```
/TADD DDNAME=XXXXXXXX
```

where *xxxxxxxx* specifies the name of the DD statement used to define the archival tape to be added to the master index.

After SARTDR TADD has run, you should:

- Run SARDBASE VERIFY to build the alternate index, used for date selection.
- If you have ERO, set the SARINIT initialization parameter EROPRO to YES and run a standard backup.

This will assign the appropriate ERO status to reports from previous generations. For more information, see DSK2XXX in Chapter 2, "Initialization Parameters."

- If you have the Expanded Access Server and you recovered the tape with SARTCP SKIP and NULL statements, run SARPAC on the recovered tape.

In this example, Tape VIEW.SYSTEM1.SARTAPE.T000011 is to be re-added to the master index. The name of the database is VIEW.SYSTEM1.

The following job is run:

```
//EXAMPLE JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=SARTDR, PARM='VIEW.SYSTEM1'
//STEPLIB DD DSN=CAI.CALLIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//TAPEIN DD VOL=SER=T00033, UNIT=TAPE,
// DSN=VIEW.SYSTEM1.SARTAPE.T0000011,
// DISP=SHR
//SYSIN DD *
/TADD DDNAME=TAPEIN
```

TLOAD

The TLOAD control statement is used to re-load an entire disk archival generation from tape, or the entire contents of a tape. Note that only SYSOUT groups originally archived to disk are reloaded.

Before reloading a disk archival generation with this function, you must ensure that:

- All archival tapes required for the generation are known to CA-View. Any tapes not known to CA-View can be re-added with the SARTDR TADD control statement.
- All archival tapes required for the generation are available and error free. The SARTCP utility can be used to salvage an archival tape containing errors.

Syntax

```
/TLOAD GEN=nnnnn TAPESEQ=sssss
```

where:

nnnnn Specifies the absolute number of the generation for which SYSOUT is to be reloaded to disk.

sssss Specifies the tape sequence number of the backup tape for which SYSOUTs are to be reloaded to disk.

If the last SYSOUT on the requested tape spans multiple tapes, SARTDR will request additional tape mounts to reload the entire SYSOUT.

If both generation number and tape sequence number are specified, SYSOUTS for the specified generation that reside on the specified tape will be reloaded to disk.

Example 1

In this example, suppose generation 1221 is to be loaded back to disk from the archival tapes. The name of the database is VIEW.SYSTEM1.

The following job is run:

```
//EXAMPLE JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=SARTDR, PARM='VIEW.SYSTEM1'
//STEPLIB DD DSN=CAI.CALLIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
/TLOAD GEN=1221
/*
```

Example 2

In this example, CA-View backup tape VIEW.SYSTEM1.SARTAPE.T0000143 is to be loaded back to disk. The name of the database is VIEW.SYSTEM1.

The following job is run:

```
//EXAMPLE JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=SARTDR, PARM='VIEW.SYSTEM1'
//STEPLIB DD DSN=CAI.CALLIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
/TLOAD TAPESEQ=143
/*
```

SYSOUTs on Tape Utility (SARTSLST)

SARTSLST creates a list of SYSOUTs that are still active on a specific tape or a range of tapes. SARTSLST reads the disk database, it does not mount any tapes. It lists the active SYSOUTs by CA-View's tape sequence number.

If a tape is unreadable or lost, you can use this utility to determine any active SYSOUTs that were on the tape.

Automatic Re-Backup or Delete

You can code the CTLCARDS DD statement with the SARTSLST job to have SARTSLST automatically generate SARBCH input control cards to clean up a lost tape from the database.

Be aware of the following:

- If the SYSOUT still has an active primary disk copy, a SARBCH CHANGE statement will be created to mark the SYSOUT as not backed up, and the next backup cycle will make a new backup.
- If the SYSOUT has no active primary disk copy, a SARBCH DELETE statement will be created to delete the SYSOUT from the database.

Note: Do not use SARTSLST if you use tape duplexing, and a duplex tape is available and readable. If the duplex tape was created with 3420 processing, the SARTCP utility can be used to re-create a primary from the duplex tape, and no database recovery is needed.

Job Control Statements

The following job control statements are necessary to execute SARTSLST:

Control Statement	Description
JOB	Initiates the job
EXEC	Specifies the program name (PGM=SARTSLST) The PARM parameter specifies the high-level name of the CA-View database, and the tape sequence number to look up (for example, PARM=VIEW.SYSTEM1,14).
STEPLIB DD	Defines the load library containing SARTSLST If the program resides in a link list library, omit this statement.
SYSPRINT DD	Defines the sequential output data set (normally SYSOUT) into which the listing of uncataloged tapes is written. If not a SYSOUT data set, DCB=BLKSIZE= <i>nnn</i> must be coded, where <i>nnn</i> is a multiple of 121.
SYSUDUMP	Defines a file for MVS dump output
CTL CARDS	Specifies creation of SARBCH statements to take action on the SYSOUT: either back it up again or delete it if there is no disk copy

CA-View Standard Database Access Method (SARSAM)

User-defined programs running under MVS can access the CA-View database to retrieve index, SYSOUT, and/or panel data via the CA-View database access method (SARSAM).

The subroutines provided to access the CA-View database are as follows:

Subroutine	Description
SAMOPEN	Open database
SAMCLOSE	Close database
SAMGET	Get index record
SAMINVL	Invalidate buffers
SAMMSG	Return error message
SAMSOPEN	Open subfile
SAMSGET	Get subfile record
SAMSCLS	Close subfile
SARSAM	Perform SARSAM access method request

These routines can be called from any programming language (such as ASSEMBLER, COBOL, or PLI) using standard calling conventions. The address of a parameter-list is placed in general register 1, the return address is placed in general register 14, and the entry point address is placed in general register 15. In addition, a return-code is placed in general register 15 on exit from each routine.

The SARSAM routine provides an alternate, centralized method for calling the subroutines. The name of the subroutine is passed as the first parameter to the subroutine named SARSAM.

The high-order bit of the last parameter address pointed to by general register 1 must be set to one (if the called routine has parameters). This calling convention is automatically supported by COBOL and PLI. With Assembler, the CALL macro must be explicitly coded with the VL parameter.

The SARSAM module is distributed in the CAI.CAILIB data set with aliases for entry points to each of the above routines. The SARSAM module can be included in the user defined program during the link-edit phase. Any program link-edited with SARSAM would have to be re link-edited when a new version of CA-View is installed. As an alternative, SARSAM can be automatically loaded during the execution phase. For COBOL, this is accomplished by specifying DYNAM during compilation.

Mapping macros (record definitions) for all index records for ASSEMBLER and COBOL programs are provided in the VIEW.SOURCE distribution library.

SARSAM Routines

The following section includes complete information about all of the SARSAM routines used to access the database.

SAMOPEN

The SAMOPEN routine opens the specified database and establishes all the necessary components to access the index and subfile (SYSOUT and/or panel) data. Only one database can be accessed at one time. Any database that was subsequently opened is automatically closed before opening the new database.

Calling Parameters

- Address of a 17-byte database identifier
- Address of open type (optional)

Return Codes

Output Return Codes (general register 15):

- 0 Database successfully opened
- 4 Not used
- 8 Error in allocating/opening the database

Calling Example: Assembler

The following is an example using Assembler:

```

      .
      .
      .
      CALL  SAMOPEN, (DATABASE), VL  OPEN DATABASE
      LTR   15, 15                     CHECK RETURN CODE
      BNZ   DBERR
      .
      .
      .
      DATABASE DC....CL17'VIEW.SYSTEM1'   SAR DATABASE
  
```

Calling Example: COBOL

The following is an example using COBOL:

```

      .
      .
      .
      77  DATA-BASE-NAME                PIC X(17) VALUE 'VIEW.SYSTEM1'.

      CALL 'SAMOPEN' USING DATA-BASE-NAME.
      IF RETURN-CODE NOT = ZERO
      GO TO DBERR.
  
```

SAMCLOSE

The SAMCLOSE routine closes a previously-opened database, frees all buffers, and frees all storage obtained to process data in the CA-View database.

Calling Parameters None

Return Codes Output Return Codes (general register 15):

0 Database successfully closed
4 Not used
8 Error in closing the database

Calling Example:
Assembler The following is an example using Assembler:

```
      .  
      .  
      .  
      CALL  SAMCLOSE          CLOSE DATABASE  
      LTR   15,15            CHECK RETURN CODE  
      BNZ  DBERR  
      .
```

Calling Example:
COBOL The following is an example using COBOL:

```
      .  
      .  
      .  
      CALL 'SAMCLOSE'.  
      IF RETURN-CODE NOT = ZERO  
      GO TO DBERR.
```

SAMGET

The SAMGET routine searches the CA-View database for a qualifying index record and returns it into user storage.

Calling Parameters ■ Address of record key and record area
 ■ Address of two-byte (halfword) record area length

Calling Example:
Assembler

The following is an example using assembler:

```

      .
      .
      .
      CALL  SAMINVL          INVALIDATE BUFFERS
      LTR   15,15           CHECK RETURN CODE
      BNZ   DBERR

```

Calling Example:
COBOL

The following is an example using COBOL:

```

      .
      .
      .
      CALL 'SAMINVL'.
      IF RETURN-CODE NOT = ZERO
      GO TO DBERR.

```

SAMMSG

The SAMMSG routine returns an informational or error message to user storage describing the result of the previously-invoked SAM routine. If the previously-invoked SAM routine had a successful return code, the message returned is blanks.

Calling Parameters

- Address of a message area
- Address of two-byte (halfword) message area length

Return Codes

Output Return Codes (general register 15):

- 0 Successful completion

Calling Example:
Assembler

The following is an example using Assembler:

```

      .
      .
      .
      DBERR: CALL  SAMMSG, (MSG, MSGL), VL  GET ERROR MESSAGE
      .
      .
      .
      MSG   DC   CL100' '           MESSAGE AREA
      MSGL  DC   Y(100)           MESSAGE LENGTH

```

Calling Example:
COBOL

The following is an example using COBOL:

```

      .
      .
      .
77  ERR-MSG          PIC X(100) VALUE SPACES.
77  ERR-LEN          PIC S9(4)  COMP VALUE +100.
      .
      .
      .
DBERR.
      CALL 'SAMMSG' USING ERR-MSG, ERR-LEN.

```

SAMSOPN

The SAMSOPN routine opens a subfile for processing. A subfile is data that is chained off the index record (SYSOUT data or panel data). Any subfile that was subsequently opened is automatically closed before opening the new subfile.

Calling Parameters ■ Address of GCR (Group Control Record) or OCR (Online Control Record)

Return Codes Output Return Codes (general register 15):

```

0        Subfile successfully opened.
4        No sub-file for record.
8        Subfile not opened.

```

Calling Example:
Assembler

The following is an example using Assembler:

```

      .
      .
      .
      CALL  SAMSOPN, (GREC), VL.        OPEN SUBFILE
      LTR   15, 15                      CHECK RETURN CODE
      BNZ   DBERR.
      .
      .
      .
GREC    DC    CL(GCRLEN)                GCR RECORD AREA
GRECL   DC    Y(GCRLEN)                GCR RECORD LENGTH

```


Calling Example:
COBOL

The following is an example using COBOL:

```

      .
      .
77  GRECL                PIC S9(4) COMP VALUE +248.
01  GREC.
    05  GREC-KEY         PIC X(16).
    05  GREC-DATA       PIC X(232).
      .
      .
      CALL 'SAMSOPN' USING GREC.
      IF RETURN-CODE NOT = ZERO
      GO TO DBERR.

```

SAMSGET

The SAMSGET routine reads and returns the next subfile record into user storage.

Calling Parameters

- Address of a record area
- Address of two-byte (halfword) record area length
- Address of two-byte (halfword) area to return the actual length of record (optional)

Return Codes

Output Return Codes (general register 15):

- 0 Record successful read
- 4 End of file
- 8 Database error

Calling Example:
Assembler

The following is an example using Assembler:

```

      .
      .
SFGET  CALL  SAMSGET,(REC,RECL,RETL),VL  GET SUB-FILE RECORD
      CH  15,=H'4'          CHECK RETURN CODE
      BH  DBERR             ERROR
      BE  DBEOF             END OF FILE
      .
      .      Process record
      .
      B   SFGET
      .
      .

```

Continued

Continued

REC	DC	CL255' "	RECORD AREA
RECL	DC	Y(255)	RECORD LENGTH
RETL	DS	H	RETURN RECORD LENGTH

Calling Example:
COBOL

The following is an example using COBOL:

```

      .
      .
77  RTNCODE          PIC S9(8) COMP.
77  REC-AREA        PIC X(255) VALUE SPACES.
77  REC-LEN         PIC S9(4) COMP VALUE +255.
77  RET-LEN         PIC S9(4) COMP.
      .
      .
SFGET.
  CALL 'SAMSGET' USING REC-AREA, REC-LEN, RET-LEN.
  MOVE RETURN-CODE TO RTNCODE.
  IF RTNCODE > 4
    GO TO DBERR.
  IF RTNCODE = 4
    GO TO DBEOF.
      .
      .
  GO TO SFGET.

```

SAMSCLS

The SAMSCLS routine completes processing of the subfile data, frees all buffers, and frees all storage related to processing of the subfile.

Calling Parameters None:

Return Codes Output return codes (general register 15):

0	Subfile successfully closed.
4	Not used.
8	Error closing subfile

Calling Example:
Assembler

The following is an example using Assembler:

```

      .
      .
CALL SAMSCLS          CLOSE SUB-FILE
LTR 15,15            CHECK RETURN CODE
BNZ DBERR

```

Calling Example:
COBOL

The following is an example using COBOL:

```

      .
      .
      .
      CALL 'SAMSCLS'.
      IF RETURN-CODE NOT = ZERO
      GO TO DBERR.

```

SARSAM

The SARSAM routine provides an alternate, centralized method for calling the subroutines supported by the SARSAM access method. The SARSAM routine itself simply invokes the appropriate subroutine.

Calling Parameters

Address of request type:

SAMOPEN	Open database
SAMCLOSE	Close database
SAMGET	Get index record
SAMINVL	Invalidate buffers
SAMMSG	Return error message
SAMSGET	Open subfile
SAMSCLS	Close subfile

The parameter list consists of the address of the request type followed by the parameters required by the routine. As an example, SAMOPEN supports two calling parameters: the address of a 17-byte database identifier, and the address of an OPEN type. These two calling parameter addresses should follow the address of the character string SAMOPEN.

Return Codes

Output return codes are dependent on the routine being requested. Refer to the appropriate routine for information.

Calling Example:
Assembler

The following is an example using Assembler:

```

      .
      .
      .
      CALL SARSAM, (OPENREQ, DATABASE), VL   OPEN DATABASE
      LTR  R15, R15                          CHECK RETURN CODE
      BN2  ERROR
      .
      .
      MVC  GREC(16), =CL16''                BEGIN WITH FIRST GCR
*
      GETREC: GET NEXT RECORD
      CALL SARSAM, (GETREQ, GREC, GRECL, GTYPE, GRETL), VL
      CH   R15, =H'4''
      BE   EOF
      BH   ERROR
      .
      . Process GCR record
      .
      B    GETREC
      ERROR: CALL SARSAM, (MSGREQ, MSG, MSGL), VL   GET MESSAGE
      .
      . PRINT ERROR MESSAGE
      .
      EOF:  CALL SARSAM, (CLOSEREQ), VL          CLOSE DATABASE
      .
      . Terminate Processing
      .
      OPENREQ DC C'SAMOPEN'                  OPEN REQUEST ROUTINE NAME
      GETREQ  DC C'SAMGET'                   GET REQUEST ROUTINE NAME
      MSGREQ  DC C'SAMMSG'                   MESSAGE REQUEST ROUTINE NAME
      CLOSEREQ DC C'SAMCLOSE'                CLOSE REQUEST ROUTINE NAME
      DATABASE DC CL17'VIEW.SYSTEM1'        DATABASE NAME
      GREC    DS CL(GCRLEN)                  STORAGE FOR GCR
      GRECL   DC Y(GCRLEN)                   LENGTH OF GCR
      GRETL   DS H                            RETURN LENGTH OF GCR
      GTYPE   DC C'GT'                       GET GREATER THAN
      MSG     DS CL100                        MESSAGE AREA
      MSGL    DC H'100'                      LENGTH OF MESSAGE AREA

```

Calling Example:
COBOL

The following is an example using COBOL:

```

      .
      .
      .
      77 RTNCODE          PIC S9(8) COMP.
      77 OPENREC         PIC X(7) VALUE 'SAMOPEN'.
      77 GETREQ          PIC X(6) VALUE 'SAMGET'.
      77 MSGREQ          PIC X(6) VALUE 'SAMMSG'.
      77 CLOSEREQ        PIC X(8) VALUE 'SAMCLOSE'.
      77 DATABASE        PIC X(17) VALUE 'VIEW.SYSTEM1'.
      77 GRECL           PIC S9(4) VALUE +248.
      77 GRETL           PIC S9(4) COMP.
      77 GTYPE           PIC X(2) VALUE 'GT'.
      77 MSG             PIC X(100) VALUE SPACES.
      77 MSGL            PIC S9(4) COMP VALUE +100.

```

Continued

Continued

```
01 GREC.
   05 GREC-KEY          PIC X(16).
   05 GREC-DATA        PIC X(232).
   .
   .
   .
   CALL 'SARSAM' USING OPENREQ, DATABASE.
   MOVE RETURN-CODE TO RTNCODE.
   IF RTNCODE NOT = 0
     GO TO ERROR.
   .
   .
   .
   MOVE SPACE TO GREC-KEY.
GETREC.
   CALL 'SARSAM' USING GETREQ, GREC, GRECL, GTYPE, GRETL.
   MOVE RETURN-CODE TO RTNCODE.
   IF RTNCODE > 4
     GO TO ERROR.
   IF RTNCODE = 4
     GO TO EOF.
   .
   . Process GCR record
   .
   GO TO GETREC.
GETREC.
   CALL 'SARSAM' USING MSGREQ, MSG, MSGL.
   .
   . Print Message
   .
EOF.
   CALL 'SARSAM' USING CLOSREQ.
   .
   . Final Processing
   .
   STOP RUN.
```



Chapter 8

Backing Up and Recovering the Database

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Chapter 8

Backing Up and Recovering the Database

In This Chapter

This chapter covers the following topics:

- Backup and recovery concepts and procedures
- Minimizing non-archival time
- Using third party backups
- Recovery from media and integrity problems
- SARDBASE RESTORE with and without forward recovery data

Backup and Recovery

To assist your site with backup and recovery, CA-View provides the following features:

- Automatic backup of the current disk archival generation of SYSOUT and the master index during the CA-View backup cycle
- Interim backups to minimize the period of time for which no backup exists on tape
- Restoration of a corrupted database with the SARDBASE RESTORE and SARRSP programs
- Restoration of a complete generation of SYSOUT data from tape to disk with the SARTDR program
- Tape mapping, copying, and salvaging with the SARTCP program
- Forward recovery, which provides recovery of SYSOUTs that were archived after the last backup of the database

During tape backup, the tape is cataloged when the tape is opened.

Backing Up the CA-View Database

As part of its backup cycle, CA-View optionally backs up to tape the current disk archive generation of SYSOUT, along with the master index. The TBACKUP initialization parameter determines whether backups are done.

CA-View also allows you to produce a duplicate of its backup tapes. A subparameter of the STORGRP n parameters (unit2-name) determines whether tape duplexing is done.

If you define tape storage groups with the STORGRP n initialization parameters, we recommend that you make STORGRP1 the largest group, to enhance the performance of the backup cycle.

The master index contains the location and attributes of all archived SYSOUT; therefore, we strongly recommend that CA-View be allowed to automatically back up the master index. The master index is always backed up to the tape storage group defined by the initialization parameter STORGRP0.

Annotation Backup

All annotations will automatically be backed up to tape during the normal backup cycle. Like resources for AFP and Xerox reports, the annotations will remain on disk until the report is deleted from the system either manually or due to migration rules.

If a report is deleted from the system, annotations cannot be recovered with the tape utility.

Using Other Backup Products

If you use another vendor's backup product (such as FDR, DFDSS, etc.) to back up the CA-View database, you must ensure that the database is **not** updated during the backup, and that the entire database is backed up.

If a database spans multiple volumes, full volume backups must be performed. If the database needs to be restored, all data sets comprising the database must be restored from the same backup. If, for example, a volume containing part of the database crashes, and updates have occurred since the backup, you cannot restore only that volume.

Warning! If a tape management system is installed, ensure that CA-View's tape retention criteria cannot be overridden by the tape management system with respect to abnormal termination (ABENDS).

Backup and Recovery Guidelines

Forward Recovery and Interim Backups	If you have not activated forward recovery data set (RDS), all SYSOUT that was archived after the most recent standard or interim backup cannot be recovered; therefore, if you do not use forward recovery data set, it is important that interim backups be performed.
Damaged and Missing Tapes	The SARTCP utility can be used to salvage SYSOUT from a damaged tape. The utility maps the contents of copies, and reconstructs a backup archival tape. STARTSLST can be used to delete references to a missing tape.
Reloading From Ttape	The SARTDR utility can be used to recreate and reload an entire disk archival generation from tape. Facilities are also available with the utility to re-add tape archival information back to the master index.
Recovery and Archival Resumption	<p>CA-View automatically backs up the master index to tape as part of its backup cycle and maintains information on the backups in the recovery data set. In case of loss or destruction of the master index, the database can be restored from one of the backups using the RESTORE function of the SARDBASE program.</p> <p>The SARDBASE RESTORE function does the following:</p> <ul style="list-style-type: none"> ■ Restores the master index from the appropriate backup tape ■ Optionally copies the archived SYSOUT from the old database <p>SYSOUT archival cannot occur during the SARDBASE RESTORE preliminary phase (master index restore), but archival can be resumed during the data restore phase. The SARDBR17 console message notifies you when the preliminary phase has completed and informs you that you can bring up the CA-View started task to resume archival.</p> <p>Alternatively, you can have SARDBASE RESTORE restore only the master index; then you can use SARRSP to restore SYSOUTs from tape. Archival can resume while SARRSP is running.</p>

Forward Recovery

With forward recovery data set activated, all SYSOUT data archived by the CA-View started task is also stored in forward recovery data sets. If a database needs to be restored, you can recover the SYSOUT data that was archived by the CA-View started task **after** the last backup. (Forward recovery does not include SYSOUT written to the database by CA-Deliver direct-to-CA-View archival.)

You activate forward recovery data set with initialization parameters (RCVPRIM, RCVSEC, RCVSPACE, and RCVUNIT).

When you specify values for these parameters and run SARINIT, the next CA-View backup cycle allocates the forward recovery data sets. Subsequent backups delete old forward recovery data sets and allocate new ones.

If you need to restore the CA-View database from backup tapes, the SYSOUTs residing in the forward recovery data sets are automatically written to the restored CA-View database.

If you do not have values for the forward recovery data set parameters, forward recovery data set is inactive.

Forward Recovery Data Set Format

The forward recovery data sets are compressed, manageable by SMS, and have a record format of U (undefined length records), a block size of 32760, and a DSORG of PS (physical sequential). The data set naming convention is:

high-level-prefix.SARFRDS.Dnnnnnnn

where:

nnnnnnn is a sequentially-incremented number that starts at 1.

Forward Recovery Data Set Operation

The forward recovery data set (RDS) stores the SYSOUT data that is archived during and after a backup cycle (standard or interim). It also stores the master control records (MCR), tape control records (TCR), and group control records (GCR) of the database.

If an RDS becomes full, a new RDS with the next sequential number is automatically created by the CA-View archival task. The starting and ending RDS numbers are tracked in the CA-View database.

When a CA-View backup begins, a new RDS with the next sequential number is automatically created. When the backup has successfully completed, the RDSs that contain data from before the current backup are deleted.

When SARDBASE RESTORE runs, it determines if there are any active RDSs. If active RDSs are found, RESTORE copies the SYSOUT data from the RDSs to the database it has restored automatically.

Forward recovery enables successful recovery from an unlimited number of nested failures, including failures which can occur during the recovery process.

Each RDS begins with control information. Because a SYSOUT group can consist of multiple JES data sets, the control information includes a pointer to the end of the last successfully stored JES data set.

If the CA-View started task is interrupted and must be started again, the forward recovery data set storage process resumes with the next data set presented by JES. If the interruption occurred while CA-View was processing a JES data set in the middle of a SYSOUT group, JES presents that same "middle" data set to the CA-View archival started task, and the forward recovery data set storage process correctly appends that data set to the data sets that preceded it.

Forward Recovery Messages

Information messages and error messages about the forward recovery data sets are written via WTO to the master console (ROUTCDE=1, DESC=7). Information messages identify the creation and deletion of the RDSs, and error messages identify any unusual conditions that arise during access of the RDSs.

Activating Forward Recovery

The space allocation (primary, secondary, and type) and unit name of the forward recovery data sets are defined and enabled with the following initialization parameters:

Initialization Parameter	Description
RCVPRIM=nnnn	Specifies the primary space allocation for the forward recovery data sets This parameter activates the forward recovery data set; with the next backup cycle, forward recovery data sets will be created.
RCVSEC=nnnn	Specifies the secondary space allocation for the forward recovery data sets This optional parameter is used when the primary space allocation is exhausted.
RCVSPACE= TRKS CYLS	Specifies whether the space allocation for the forward recovery data sets are to be obtained in tracks (TRKS) or cylinders (CYLS) The default space allocations is tracks. This parameter is optional.

Continued

Continued

Initialization Parameter	Description
RCVUNIT=<i>unit</i>	<p>Specifies the unit name or unit type where the forward recovery data sets are to be allocated.</p> <p>This parameter is required for the forward recovery data set to be activated. You should verify that the forward recovery data sets are not allocated on the same volumes on which the CA-View database resides.</p>

Backup Cycle Consideration

If a backup cycle was **in progress** when the started task was last executing, and if you restored the database using the forward recovery data set, resuming the started task will result in an immediate backup cycle.

If no archival occurred since the last backup cycle, the MCR in the forward recovery data set indicates that a backup cycle was in progress. Resuming the started task will result in an immediate backup cycle. If this is a primary backup, the generation number will increment.

Database Recovery Utilities

CA-View provides several database utilities to facilitate the recovery process.

SARDBASE Utility

In the SARDBASE utility:

- The VERIFY control statement verifies and corrects the database (including broken pointer chains).
- The COPY control statement copies a database.
- The UNLOAD control statement unloads a database to tape.
- The LOAD control statement reloads a database from tape.
- The MERGE control statement merges one or more databases. (This requires the Expanded Retention Option.)
- The RESTORE control statement restores the database master index from tape (and optionally copies SYSOUT data from the old database).

SARRCOV Utility

The SARRCOV utility enables you to list or recreate the recovery data set.

The recovery data set is used by the RESTORE control statement to properly process a CA-View database master index which spans multiple tape volumes.

SARRSP Utility

The SARRSP utility enables you to repopulate the database from tape.

SARTDR Utility

The SARTDR utility enables you to restore specific generations from tape.

SARTDR can also restore index information from tape.

STARTSLST Utility

The STARTSLST utility enables you to eliminate references to destroyed backup tapes.

Recovery Procedures

You can recover a CA-View database in the following situations:

- Recovery from media problems
- Recovery from integrity problems
- Restoring the entire database with SARDBASE RESTORE
- Recovery using forward recovery data set data

See Chapter 7, "Database Utilities," for complete descriptions of the utilities used in all of these recovery procedures.

Note: If you use CA-Deliver direct-to-CA-View archival, you can temporarily re-route the reports to the JES spool via the CA-Deliver ARCH n parameters. When the CA-View archival task is restarted, it will archive those reports from JES.

Minimizing Non-Archival Time

Certain database recovery processes can take a considerable amount of time, depending on the size of the database. You can minimize non-archival time during database recovery by restoring the database in phases. After the first phase (master index restore), you can resume archival.

If a SARDBASE RESTORE is required for a database you can:

- Initially RESTORE only the master index (substantially less time than restoring all data)
- Use the TLOAD control statement of the SARTDR to restore the number of generations you require for production
- Resume operation of the CA-View archival task, archiving to the newly-restored database
- Use SARRSP to restore the rest of the corrupted database to the newly-restored database

This can be done during archival.

Using Third-Party Backups

If the database was backed up with a third-party product, do the following to recover the database:

1. Restore the database from a valid backup.
A valid backup requires that all data sets comprising the database were backed up, and the database was not updated during the backup.
2. Use SARTDR TADD to add CA-View backup tapes created since the backup used for Step 1.
3. Use SARTDR TLOAD to load generations needed for production.
4. After SARTDR TLOAD has run, do the following:
 - Run SARDBASE VERIFY to build the alternate index used for date selection.
 - Set CA-View initialization parameter EROPRO to ALL prior to the standard backup cycle.
5. Restart the CA-View archival task and resume operation.

COPY Disk-to-Disk

Perform the following procedure to recover the database from a media problem:

1. Run the SARDBASE utility ADDDS function to create a new database on alternate DASD.
2. Run the SARDBASE utility COPY function to copy the data from the old (damaged) database into the new database.

You can choose to run SARBCH LIST on the old and new databases, to account for any data that may have been lost in the process.

3. If necessary, you can restore lost data from backup tapes using SARTDR TADD.

The output from SARBCH LIST shows the tape sequence number for each SYSOUT. The tape sequence number is part of the last qualifier of the tape data set name, used by SARTDR TADD.

Note: If many SYSOUTs are missing, you can save time by using SARDBASE RESTORE as an alternative to SARTDR TADD.

See the sections Minimizing Non-Archival Time (earlier in this chapter), SARDBASE RESTORE Using Forward Recovery Data (later in this chapter), and SARDBASE RESTORE Without Forward Recovery Data (later in this chapter).

4. After SARTDR TADD has run, you should do the following:
 - Run SARDBASE VERIFY to build the alternate index, used for date selection.
 - Set CA-View initialization parameter EROPRO to ALL prior to the standard backup cycle.
5. Restart the CA-View archival task and resume operation.

Recovery From Media Problems

The following error message indicates possible media corruption:

```
SARDBI02 PHYSICAL I/O ERROR - ECB=XXXXXXXX
```

You can resolve this media error without using SARDBASE RESTORE to restore the database. Instead, you can use either SARDBASE COPY or SARDBASE UNLOAD and LOAD. In most cases, these processes involve minimal data loss.

If you determine that there is not a media problem, continue with the instructions in the section Recovery From Integrity Problems later in this chapter.

UNLOAD to Tape and LOAD Back

If the database encountered a media problem, do the following to recover the database:

1. Run the SARDBASE utility UNLOAD function to unload the database to tape.

You may choose to run SARBCH LIST before the UNLOAD and after the LOAD, to account for any data that may have been lost in the process.

2. Run the SARDBASE utility ADDDS function to create a new database on alternate DASD.
3. Run the SARDBASE utility LOAD function to reload the data from tape (from the UNLOAD) to the new database.
4. If necessary, you can restore lost data from backup tapes using SARTDR TADD.

The output from SARBCH LIST shows the tape sequence number for each SYSOUT. The tape sequence number is part of the last qualifier of the tape data set name, used by SARTDR TADD.

Note: If many SYSOUTs are missing, you can save time by using SARDBASE RESTORE as an alternative to SARTDR TADD.

See the sections Minimizing Non-Archival Time (earlier in this chapter), SARDBASE RESTORE Using Forward Recovery Data (later in this chapter), and SARDBASE RESTORE Without Forward Recovery Data (later in this chapter).

5. After SARTDR TADD has run, do the following:
 - Run SARDBASE VERIFY to build the alternate index used for date selection.
 - Set the EROPRO initialization parameter to ALL prior to the standard backup cycle.
6. Restart the CA-View archival task and resume operation.

COPY Disk-to-Disk

If the database encountered a media problem, do the following to recover the database:

1. Run the SARDBASE utility ADDDS function to create a new database on alternate DASD.
2. Run the SARDBASE utility COPY function to copy the data from the old (damaged) database into the new database.

You may choose to run SARBCH LIST on the old and new databases, to account for any data that may have been lost in the process.

3. If necessary, you can restore lost data from backup tapes using SARTDR TADD.

The output from SARBCH LIST shows the tape sequence number for each SYSOUT. The tape sequence number is part of the last qualifier of the tape data set name, used by SARTDR TADD.

Note: If many SYSOUTs are missing, you can save time by using SARDBASE RESTORE as an alternative to SARTDR TADD.

See the sections Minimizing Non-Archival Time (later in this chapter), SARDBASE RESTORE Using Forward Recovery Data (later in this chapter), and SARDBASE RESTORE Without Forward Recovery Data (later in this chapter).

4. After SARTDR TADD has run, you should do the following:
 - Run SARDBASE VERIFY to build the alternate index, used for date selection.
 - Set the EROPRO initialization parameter to ALL prior to the standard backup cycle.
5. Restart the CA-View archival task and resume operation.

Recovery From Integrity Problems

The following error messages indicate record corruption:

```
SARDBI03 DATASET NUMBER OUT OF RANGE - DCCB=XXXXXXXXX  
SARDBI09 LOGICAL I/O ERROR
```

These errors can be resolved without using SARDBASE RESTORE to restore the database. These can be solved with either SARDBASE VERIFY, COPY, or UNLOAD and LOAD. In most cases, these processes involve minimal data loss.

The following problems may indicate database corruption that should be resolved if you use this recovery procedure:

- Date selection problems
- Loop in the SYSOUT Selection List panel
- Loop during the CA-View archival task backup cycle
- Loop while executing database utilities
- Difficulty deleting SYSOUT groups

Recovery Steps

If your database encountered the previously-mentioned errors or symptoms, do the following to recover the database:

1. Run the SARDBASE utility VERIFY function to verify and correct the database.

You may choose to run SARBCH LIST before and after the VERIFY, to account for any data that may have been lost in the process.

2. If necessary, you can restore lost data from backup tapes using SARTDR TADD.

The output from SARBCH LIST shows the tape sequence number for each SYSOUT. The tape sequence number is part of the last qualifier of the tape data set name used by SARTDR TADD.

Note: If many SYSOUTs are missing, you can save time by using SARDBASE RESTORE as an alternative to SARTDR TADD.

See the sections Minimizing Non-Archival Time (earlier in this chapter), SARDBASE RESTORE Using Forward Recovery Data (later in this chapter), and SARDBASE RESTORE Without Forward Recovery Data (later in this chapter).

3. After SARTDR TADD has run, do the following:
 - Run SARDBASE VERIFY again, to build the alternate index used for data selection.
 - Set the EROPRO initialization parameter to ALL prior to the standard backup cycle.
4. Restart the CA-View archival task and resume operation.

If additional errors remain after the VERIFY, see Recovery From Media Problems, earlier in this chapter.

SARDBASE RESTORE Using Forward Recovery Data

If you have implemented forward recovery data set, you can add any data written to the forward recovery data sets to your newly restored database.

1. Use SARDBASE RENAME to rename the damaged CA-View database to a new name.

Note: The RDSs do not get renamed, so they can be used in the SARDBASE RESTORE.

2. Use SARDBASE ADDDS to create a new target CA-View database with the original name.

The high-level prefix name of the RDSs must correspond to the high-level prefix name of the target CA-View database.

3. Use SARDBASE RESTORE to restore the CA-View database index to the new target CA-View database (forward recovery data sets will only be accessed if the most current backup is used); the following occurs:
 - The MCR, TCR, PCR, ECR, and UCR are restored from the backup tape.
 - The MCR and TCR are restored from the RDS.
 - The MCR is marked so that no backups can occur and a new RDS will be created.
 - Message SARDBR17 informs you that the index has been restored, and you can start the CA-View archival started task. When you start the task, the new RDS will be created.
4. Run SARDBASE OLOAD to get panels into the new database. Online viewing can now resume and the following occurs:
 - SYSOUTs which are intact from the damaged CA-View database are copied to the new target CA-View database and each GCR is restored followed by its SYSOUT data.
 - SYSOUTs are copied from the RDSs to the new target CA-View database and each GCR is restored followed by its SYSOUT data.

When all RDSs have been processed, the MCR is marked so that normal backups can occur.
5. Use the SARRSP recovery utility program to copy any SYSOUTs still missing from the new target CA-View disk database from backup tapes.

SARDBASE RESTORE Without Forward Recovery Data

If the database is lost or damaged, and all attempts to recover it have failed, it can be recovered from backup tapes as follows:

1. Run the SARDBASE utility ADDDS function to create a new database.

In cases where the old database has to be deleted due to insufficient disk requirements for the new database, provide an alternate means of backup for the database, such as FDR or DFDSS.

2. Run the SARDBASE RESTORE function.

The SARDBR17 console message notifies you when the preliminary phase has completed and informs you that you can bring up the CA-View started task to resume archival. An alternative is to restore only the master index, and then use SARRSP and/or SARTDR TLOAD to restore the SYSOUT data.

The SARDBASE RESTORE JCL must specify a SARRECV or SARTAPE DD statement for purposes of locating the backup tapes.

Note: The RESTORE operation must be performed against a newly created, empty database. It is not necessary to reinstate any initialization parameters because these parameters are recovered during the restore process.

3. Run the SARDBASE utility OLOAD function to load all online members to the new database.
4. If the old database was not used in the restore process, run either SARRSP or SARTDR TLOAD to load the SYSOUT data; you can:
 - Use SARTDR TLOAD to load one or two generations of data.
 - Restart the CA-View archival task and resume operation.
 - Run SARRSP to restore the remaining data.

Chapter 9

Batch Processing

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Chapter 9

Batch Processing

In This Chapter

This chapter discusses the SARBCH program, which performs batch retrieval functions.

Batch Retrieval With SARBCH

CA-View provides batch retrieval facilities with its SARBCH program. SARBCH performs the following functions in batch, each of which is explained later in this chapter:

SARBCH Function	Description
BPRINT	Reprints an archived CA-Deliver bundle
CHANGE	Changes the backup, print, and user attributes of an archived SYSOUT
DBASE	Specifies the CA-View database to be used
DEFDIST	Creates or modifies the SYSOUT IDs for a DIST ID
DEFSYS	Creates or modifies the DIST IDs for SYSOUT IDs
DEFUSER	Adds or modifies user IDs
DELETE	Deletes a SYSOUT, a user ID, or a logical view
EPRINT	Prints reports archived directly from CA-Deliver
EXTRACT	Marks a report to have data extracted by the Computer Associates balancing product, CA-Balancing
INDEX	Produces a page index for an archived SYSOUT
LIST	Produces a listing of SYSOUTs or user IDs
LOAD	Loads a SYSOUT from tape to disk
PERM	Sets a SYSOUT group to permanent status, or removes that status
PRINT	Prints a SYSOUT

SARBCH GSS Interface

CA-View interfaces to Computer Associates CA-GSS (Global Subsystem) products. This interface allows you to code REXX routines to have other CA-GSS products invoke SARBCH.

Possible uses of the CA-GSS interface for CA-View are:

- Each time a new user is defined to the system, s/he is automatically defined to the CA-View database.
- Each time a user is deleted from the system, he or she is automatically deleted from the CA-View database.

Installation

GSS must be installed at your site. Information about installing CA-GSS and the GREXX commands is contained in the CA-GSS documentation.

For information about installing CA-View into the CA-GSS, see the "Online Interface" chapter of the *CA-View Installation Guide*.

CA-GSS/REXX Interface

SARBCH includes the CA-View host command environment to CA-GSS. This host command environment is accessed by the ADDRESS CA-View GREXX instruction.

The commands processed by the CA-View host command environment are the same as those that can be specified on the SYSIN control cards that are processed by SARBCH.

The report listing and messages issued by the command environment are queued for processing by the GREXX exec. The messages issued are the same messages that are issued by SARBCH. The report listings produced are the same as the report listings produced by SARBCH, except that report headings and page breaks are not printed or placed on the queue.

GREXX Variables

The following GREXX variables are used:

Variable	Description																														
XPVIEW.DBASE	<p>Specifies the CA-View database prefix that would normally be specified on the /DBASE NAME=xxxxxx control card</p> <p>This variable must be specified before any XPVIEW commands are issued. As with SARBCH, this length of this prefix must be less than or equal to seventeen.</p>																														
RC	<p>A variable that is set by the XPVIEW host command environment upon completion of the requested command</p> <p>This variable contains the return code from the requested command as follows:</p> <table border="1"> <thead> <tr> <th>Return Code</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>-3</td> <td>Command not found</td> </tr> <tr> <td>-2</td> <td>Not enough memory to perform command</td> </tr> <tr> <td>-1</td> <td>Unable to access shared variable pool</td> </tr> <tr> <td>0</td> <td>OK</td> </tr> <tr> <td>4</td> <td>Warning message issued; message text on stack</td> </tr> <tr> <td>8</td> <td>Error message issued; message text on stack</td> </tr> <tr> <td>9</td> <td>XPVIEW.DBASE not set</td> </tr> <tr> <td>10</td> <td>XPVIEW.DBASE string too long</td> </tr> <tr> <td>12</td> <td>Severe error message issued; message text on stack</td> </tr> <tr> <td>16</td> <td>Fatal error message issued; message text on stack</td> </tr> <tr> <td>28</td> <td>Language processor environment could not be found</td> </tr> <tr> <td></td> <td>Probable CA-GSS installation problem.</td> </tr> <tr> <td>32</td> <td>Internal error</td> </tr> <tr> <td>other</td> <td>Internal error</td> </tr> </tbody> </table>	Return Code	Description	-3	Command not found	-2	Not enough memory to perform command	-1	Unable to access shared variable pool	0	OK	4	Warning message issued; message text on stack	8	Error message issued; message text on stack	9	XPVIEW.DBASE not set	10	XPVIEW.DBASE string too long	12	Severe error message issued; message text on stack	16	Fatal error message issued; message text on stack	28	Language processor environment could not be found		Probable CA-GSS installation problem.	32	Internal error	other	Internal error
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other	Internal error																														

Example

The following is a sample REXX exec that demonstrates the use of the CA-View host command environment. This sample is supplied on the distribution tape, in file CA1.CAICLIB.

```

/* REXX */
/*
Sample XPVIEW/ISERVE GREXX exec
This exec will look at the users in the CA-View
database and change the banner to PRODBAN for those users
whose banner is currently set to TESTBAN.
*/
Address XPVIEW                               /*Set the host command env */
/*-----+-----1-----5---*/ /*Must be <= 17 characters */
XPView.DBase = 'VIEW.SYSTEM1'               /*Set the XPVIEW database */
'/list user='                               /*List the users in dbase */
If RC <> 0 Then Do                            /*Was there an error? */
    Say 'List users failed, RC='||RC         /*Print an error message */
    Exit 1                                    /*Exit with an error */
End
Else Do                                       /*Process the user records */
    NumRecs = Queued()                       /* Get the number of records*/
    UserData.0 = 0                           /* Initialize the User list */
    Do i = 1 to NumRecs                      /* Pull each record */
        Parse Pull Record                   /* off of the queue */
        If SubStr(Record,2,5) <> 'SARBC' Then Do /* Skip messages
*/
            UserData.i.UserId = SubStr(Record,2,8)
            UserData.i.Password = SubStr(Record,12,8)
            UserData.i.Master = SubStr(Record,22,1)
            UserData.i.Mask = SubStr(Record,25,8)
            UserData.i.DistId = SubStr(Record,35,8)
            UserData.i.Acc = SubStr(Record,45,5)
            UserData.i.Mode = SubStr(Record,52,4)
            UserData.i.Banner = SubStr(Record,58,8)
            UserData.i.Language = SubStr(Record,70,1)
            UserData.0 = UserData.0 + 1
        End
    End
    /*
We now have the UserData records parsed out.
Process them here.
*/
    Do i = 1 to UserData.0
        If UserData.i.Banner = 'TESTBAN ' Then Do
            '/defuser user='||Userdata.i.UserId||' Banner=PRODBAN '
            Num = Queued()
            Do Num
                Parse Pull Message
                Say Message
            End
        End
    End
End
End
End

```

SARBCH JCL Statements

The following job control statements are required to execute SARBCH:

JCL Statement	Description
JOB	Initiates the job
EXEC	Specifies the program name (PGM=SARBCH) and, optionally, the high-level name of the CA-View database as the PARM parameter (PARM='VIEW.SYSTEM1')
STEPLIB DD	Defines the load library containing SARBCH If the program resides in a link list library, omit this statement.
SYSPRINT DD	Defines the sequential output data set (normally SYSOUT) used for listing the control statements and messages If this is not a SYSOUT data set, you must code DCB=BLKSIZE= <i>nnn</i> , where <i>nnn</i> is a multiple of 121.
REPORT DD	Defines an output data set (normally SYSOUT) into which SYSOUT listing from the LIST function is written This statement can be omitted if no LIST control statements are input to the program. If this is not a SYSOUT data set, you must code DCB=BLKSIZE= <i>nnn</i> , where <i>nnn</i> is a multiple of 121.
SARLOAD DD	Defines a user-maintained, sequential data set into which the LOAD function is to load the SYSOUT This statement is optional. If omitted, CA-View temporarily loads the SYSOUT to the CA-View database. Multiple SARLOAD DD statements with the FREE=CLOSE parameter can be used to load multiple SYSOUT groups to different user-defined data sets.
SYSDIN DD	Defines a card image data set containing the control statements to be input
DDNAME DD	Defines a data set to which a SYSOUT group can be written. See the LOAD and PRINT SARBCH control statements.

SARBCH Control Statements

Control statements have the following general structure:

/function parameters

- The slash is coded in column 1 and is immediately followed by the name of the function to be performed.
- One or more blanks must follow the function name and separate the function name from the parameters.
- Individual parameters are separated by one or more blanks and/or commas.
- A statement that exceeds 71 characters must be continued on additional cards. When continuing a statement, interrupt the statement only between complete parameters or subparameters.
- Quoted parameters that flow onto additional cards can be continued in column 2 of subsequent cards.
- Comments can be included within the control statements by coding an asterisk in column 1 of the card image containing the comment.

The following sections explain each of the SARBCH control statements in detail.

BPRINT

The BPRINT control statement reprints a CA-Deliver bundle which has been archived to the CA-View database.

Syntax

```
/BPRINT BANNER=(bundle-banner, dist-banner, report-banner)  
BCONT=(dist-id, ((report-id, gen, seq), ...), ...)  
BDIST=dist-id  
BID=bundle-id  
PASSWORD=xxxxxxxx
```

where:

BANNER=
(bundle-banner,
dist-banner,
report-banner)

Specifies the model banner page names of the bundle, distribution, and report banner pages

The model banner page name can be omitted. If omitted, the model banner page name defined to the bundle in the CA-Deliver database is used. An asterisk suppresses the printing of the model banner page.

This parameter is optional.

BCONT=(<i>dist-id</i> , (<i>report-id,gen,seq</i>), ...),...)	<p>Specifies the distribution identifiers and archived reports that comprise the bundle</p> <p>The bundle print will be produced in the exact sequence as specified in this parameter. One or more distribution identifiers can be specified, each followed by a complete list of report identifiers, generation number, and sequence number. The generation number and sequence number can be specified as an absolute or a relative number.</p> <p>If omitted, the most recently archived report will be used.</p>
BDIST= <i>x</i>	<p>This parameter is required.</p> <p>Specifies the distribution identifier from which the distribution banner-page instructions are to be taken</p> <p>If omitted, the bundle distribution identifier defined to the bundle in the CA-Deliver database will be used. If the bundle distribution identifier in the CA-Deliver database is omitted, the first identifier defined in the BCONT parameter will be used.</p>
BID= <i>bundle-id</i>	<p>Specifies the name of the bundle to be printed</p> <p>This parameter is required.</p>
PASSWORD= <i>xxxxxxxx</i>	<p>Specifies the same password as the one specified with the PWBATCH initialization parameter</p> <p>If specified, and the password matches the one specified with the PWBATCH initialization parameter, no further security checking is done, and the requested SYSOUT group is printed.</p> <p>If omitted, or the password does not match the one specified with the PWBATCH initialization parameter, the security user exit is invoked to determine whether the user is authorized to print the SYSOUT group.</p>

CHANGE

The CHANGE control statement changes various attributes of a SYSOUT group that has already been archived to the CA-View database.

You can use this statement if a SYSOUT was archived with inappropriate print attributes, or if the tape it was backed up to has been destroyed, and its internal status must be changed to NOT BACKED UP.

You can modify the following attributes with SARBCH CHANGE:

- All PRINT attributes
- BACKUP
Specifies whether the SYSOUT has been backed up to tape from disk.
- USERDATA
Contains a 20-byte user data field, typically accounting data.
- USERFLD
Contains any user comments to be displayed with the SYSOUT in the CA-View selection lists.

Syntax:

```

/CHANGE BACKUP=OFF
BURST=x
CHARS=(xxxx xxxx xxxx xxxx)
CLASS=x
COPIES=nnn
COPYG=(nnn nnn nnn nnn nnn nnn nnn nnn)
DEST=xxxxxxxx
FCB=xxxx
FLASH=(xxxx nnn)
FORM=xxxx
FORMDEF=xxxxxxxx
GEN=nnn
ID=xxxxxxxxxxxx
LINECT=nnnn
MODIFY=(xxxx n)
OPTCDJ=Y|N
PAGEDEF=xxxxxxxx
PASSWORD=xxxxxxxx
PRMODE=xxxxxxxx
PRTY=xxxxxxxx
SEQ=nnn
UCS=xxxx
USERDATA=n
USERFLD=n
    
```

where:

- BACKUP=OFF Specifies that the backup indicator for the SYSOUT is to be turned off

The indicator is turned on when a SYSOUT is backed up. If a SYSOUT has been backed up to tape, and that tape is lost or destroyed, you must specify BACKUP=OFF, so the CA-View backup cycle will backup the SYSOUT again.
- BURST=x Specifies a burst value for the 3800 printer for the SYSOUT

Valid values are Y or N.

CHARS=(xxxx xxxx xxxx xxxx)	Specifies a set of character arrangement table names for the 3800 printer for the SYSOUT You can specify a value of 1 to 4 names separated by one or more blanks and/or commas and enclosed in parentheses.
CLASS=x	Specifies a class for the SYSOUT
COPIES=nnn	Specifies a number of copies to override the one used to print the SYSOUT A range of 1 to 255 can be specified.
COPYG=(nnn nnn nnn nnn nnn nnn nnn nnn)	Specifies an optional set of copy groups for the 3800 printer to override those used to print the SYSOUT You can specify a range of 1 to 8 copy groups separated by one or more blanks and/or commas and enclosed in parentheses. Each copy group value must be in the range of 1 to 255.
DEST=xxxxxxxx	Specifies an optional destination to override the one used to print the SYSOUT The destination can be a synonym created via the online DEFine DEvice command.
FCB=xxxx	Specifies an optional forms control image to override the one used to print the SYSOUT
FLASH=(xxxx nnn)	Specifies an optional forms flash overlay name and flash count for the 3800 printer to override those used to print the SYSOUT The forms flash overlay name and copy count are separated by one or more blanks and/or commas and are enclosed in parentheses.
FORM=xxxx	Specifies an optional forms name to override the one used to print the SYSOUT
FORMDEF=xxxx xxx	Specifies a library member containing statements to control printing of the SYSOUT data on the 3800 printer The statements can specify overlay forms, page location for overlays, and page format suppressions that can be activated.
GEN=nnn	Specifies the absolute or relative number of the generation for which SYSOUT is affected by the CHANGE statement If omitted, the most recently archived SYSOUT group for the ID is affected.
ID=xxxxxxxxxxxx	Specifies the SYSOUT ID of the group to be affected by the CHANGE statement This parameter is required.

LINECT= <i>nnnn</i>	Specifies the maximum number of lines to be printed on each output page
MODIFY=(<i>xxxx n</i>)	Specifies an optional copy modification module name and table reference character for the 3800 printer to override those used to print the SYSOUT The copy modification module name and table reference character are separated by one or more blanks and/or commas and are enclosed in parentheses. The table reference character can have a range of 0 to 3.
OPTCDJ=Y N	Specifies an optional override as to whether the SYSOUT records contain table reference characters for the 3800 printer Valid values are Y or N.
PAGEDEF= <i>xxxxxxxx</i>	Specifies a library member containing statements to control printing of the SYSOUT data on the 3800 printer The statements can specify logical page length, width, fonts, and page segments.
PASSWORD= <i>xxxxxxxx</i>	Specifies the same password as the one specified with the PWBATCH initialization parameter If specified, and the password matches the one specified with the PWBATCH initialization parameter, no further security checking is done, and the requested SYSOUT group is printed. If omitted, or the password does not match the one specified with the PWBATCH initialization parameter, the security user exit is invoked to determine whether the user ID is authorized to print the SYSOUT group.
PRMODE= <i>xxxxxxxx</i>	Specifies the process mode required for printing the SYSOUT group
SEQ= <i>nnn</i>	Specifies the absolute or relative SYSOUT sequence number of the SYSOUT group to be affected by the CHANGE statement If omitted, the most recently archived SYSOUT group for the ID and generation specified is affected. This is ignored when GEN is omitted.
UCS= <i>xxxx</i>	Specifies an optional special character set name to override the one used to print the SYSOUT
USERDATA= <i>xxxx</i>	Specifies a 20-byte user data field (typically accounting data)
USERFLD= <i>xxxx</i>	Specifies user comments to be displayed with this SYSOUT on the CA-View selection lists If you want to include any spaces within the comment, enclose the entire comment in quotes, as in USERFLD='THIS IS MY COMMENT'.

Defaults If you specify a parameter without a value, that parameter will be set to blanks.
For example, if you specify:

PAGEDEF=

the PAGEDEF field will be set to blanks.

DBASE

The DBASE control statement is used to specify the high-level name of the CA-View database. If omitted, the high-level name specified as the PARM parameter on the EXEC JCL statement, if any, is used. The DBASE control statement applies to all control statements that follow it until another DBASE control statement is encountered.

Syntax

/DBASE NAME=XXXXXXXXXXXXXXXXXXXX

where *XXXXXXXXXXXXXXXXXXXX* specifies the high-level name for the CA-View database.

DEFDIST

The DEFDIST control statement creates or modifies a list of SYSOUT IDs for a DIST ID.

Syntax

```
/DEFDIST DISTID=XXXXXXXXX
      SYSOUT=XXXXXXXXXXXXX
      SYSDISC=XXXXXXXXXXXXXXXXXXXXX
      DIDDESC=XXXXXXXXXXXXXXXXXXXXX
      RVIEW=Y | N
      REPRT=Y | N
      DEL=Y | N
```

where:

DISTID=XXXXXXXX Specifies the name of the distribution identifier to be processed.

This value can be 1 to 8 characters with national and/or alpha-numeric characters.

SYSOUT= Specifies the name of the SYSOUT to be processed

XXXXXXXXXXXXX

If the SYSOUT does not exist in the CA-View database, it will be added. If it already exists, it will be modified.

SYSDISC= Specifies a description of the SYSOUT

XXXXXXXXXXXXXXXXXXXXX

This value can be 1 to 24 characters.

<p>DIDDESC= xxxxxxxxxxxxxxxx</p>	<p>Specifies the description of the DIST ID This value can be 1 to 24 characters.</p>
<p>RVIEW=Y N</p>	<p>Specifies whether logical view access for the associated SYSOUT is to be restricted to non-secured logical views</p>
<p>REPRT=Y N</p>	<p>Specifies reprint capability; indicates whether the user can reprint SYSOUT</p>
<p>DEL=Y N</p>	<p>Specifies the delete capability; indicates whether the DIST ID can delete SYSOUT</p>

DEFSYS

The DEFSYS control statement creates or modifies a list of DIST IDs for a SYSOUT ID.

Syntax

```

/DEFSYS SYSOUT=xxxxxxxxxxxxx
        DISTID=xxxxxxxx
        SYSDESC=xxxxxxxxxxxxxxxxxxxxx
        DIDDESC=xxxxxxxxxxxxxxxxxxxxx
        RVIEW=Y|N
        REPRT=Y|N
        DEL=Y|N
    
```

where:

<p>SYSOUT= xxxxxxxxxxxxx</p>	<p>Specifies the name of the SYSOUT to be processed If the SYSOUT does not exist in the CA-View database, it will be added. If it already exists, it will be modified.</p>
<p>DISTID= xxxxxxxx</p>	<p>Specifies the name of the distribution identifier to be processed This value can be 1 to 8 characters with national and/or alpha-numeric characters.</p>
<p>SYSDESC= xxxxxxxxxxxxxxxxxxxxx</p>	<p>Specifies a description of the SYSOUT This value can be 1 to 24 characters.</p>
<p>DIDDESC= xxxxxxxxxxxxxxxxxxxxx</p>	<p>Specifies the description of the DIST ID This value can be 1 to 24 characters.</p>
<p>RVIEW=Y N</p>	<p>Specifies whether logical view access for the associated SYSOUT is to be restricted to non-secured logical views</p>
<p>REPRT=Y N</p>	<p>Specifies reprint capability; indicates whether the user can reprint SYSOUT</p>
<p>DEL=Y N</p>	<p>Specifies the delete capability; indicates whether the DIST ID can delete SYSOUT</p>

DEFUSER

The DEFUSER control statement adds CA-View user IDs to the database, or modifies existing user IDs.

Syntax

```

/DEFUSER USER=xxxxxxxxx
         USERPSWD=xxxxxxxxx
         MASTER=Y|N
         DISTMASK=xxxxxxxxx
         DISTID=xxxxxxxxx
         ACC=xxxxx
         MODE=xxxx
         BANNER=xxxxxxxxx
         JCL1=xxxxxxxxx
         JCL2=xxxxxxxxx
         JCL3=xxxxxxxxx
         JCL4=xxxxxxxxx
         LANGUAGE=x
         PCLASS=x
         PDEST=x
         ACLASS=x
         ADEST=x

```

where:

USER= xxxxxxxxx	Specifies the name of the user ID to be processed If the user ID does not exist in the database, it will be added. If it already exists, it will be modified. This parameter is required.
USERPSWD= xxxxxxxxx	Specifies the password associated with the user ID for logging on to an online session This value can be 1 to 8 characters with national and/or alpha-numeric characters. This parameter is optional
MASTER=Y N	Specifies whether the USER has master authority If omitted, MASTER=N is used.
DISTMASK= xxxxxxxxx	Specifies the generic distribution ID mask for users in EXP mode or SAR mode This value can be 1 to 8 characters with any combination of asterisk, national and alpha-numeric characters. If omitted, MASK= <i>userid</i> is used.
DISTID= xxxxxxxxx	Specifies the default DIST ID for users in EXP mode or SAR mode This value can be 1 to 8 characters with alpha-numeric and/or national characters. If omitted, DISTID= <i>userid</i> is used.

<code>ACC=xxxxx</code>	<p>Specifies which of the modes a user can access</p> <p>This value is a 5-character string consisting of a combination of Ys and Ns to indicate whether the user can access modes ALL, EXPO, EXP, SARO and SAR respectively.</p> <p>If omitted, SARINIT parameter DEFMODE is used. At least one mode must be active, so ACC=NNNNN is not valid.</p>
<code>MODE=xxxx</code>	<p>Specifies the default mode in which the user automatically enters CA-View</p> <p>If omitted, the first D in the ACC parameter will be used. If there is no D, the first Y will be used. If ACC is omitted, the SARINIT parameter DEFMODE is used; otherwise ALL will be used.</p>
<code>BANNER=xxxxxxx</code>	<p>Specifies the default BANNER page for user in EXP mode</p> <p>This value can be 1 to 8 characters with alpha-numeric or national characters.</p> <p>This parameter is optional.</p>
<code>JCL1=xxxxxxxx</code> through <code>JCL4=xxxxxxxx</code>	<p>The JCL job submit cards used by CA-View J selection code printing</p> <p>JCL statements that contain blank or special characters must be enclosed in single or double quotes. An example is:</p> <pre>JCL1="//AJOB JOB MSGCLASS=**</pre>
<code>LANGUAGE=x</code>	<p>Specifies the system default language to be used when displaying online panels and messages</p> <p>Possible values are R (or blank) for English, C for Canadian French, G for German, D for Danish.</p>
<code>PCLASS=x</code>	<p>Specifies the Primary CLASS to be used in the Print menu for a user in SAR or EXP mode</p>
<code>PDEST=x</code>	<p>Specifies the Primary DEST to be used in the Print menu for a user in SAR or EXP mode</p>
<code>AClass=x</code>	<p>Specifies the Alternate CLASS to be used in the Print menu for a user in SAR or EXP mode</p>
<code>ADEST=x</code>	<p>Specifies the Alternate DEST to be used in the Print menu for a user in SAR or EXP mode</p>

DELETE

The DELETE control statement deletes the following from the database:

- An archived SYSOUT
- The page indexes of a SYSOUT
- A user ID
- A logical view.

Syntax

```
/DELETE ID=XXXXXXXXXXXXX
        DISK
        GEN=nnnnn
        PASSWORD=XXXXXXXXXXXXX
        SEQ=nnnnn
        USER=XXXXXXXXXXXXX
        VIEW=nnn
        INDEX
```

where:

ID= XXXXXXXXXXXXX	Specifies the SYSOUT identifier on the SYSOUT group or view that is to be deleted. If this parameter is specified by itself or with the GEN and/or SEQ parameters, the respective archival SYSOUT group is permanently deleted from the database. If this parameter is specified with the VIEW parameter, only the respective view control records are deleted. The ID parameter cannot be specified with the USER parameter.
DISK	Specifies that the disk space occupied by the SYSOUT group is to be deleted from the database. The index reference SYSOUT group is not deleted. The DISK parameter cannot be specified with the VIEW and USER parameters.
GEN=nnnnn	Specifies the absolute or relative number of the generation of the SYSOUT group to be deleted. If omitted, the most recently-archived SYSOUT group for the ID is used. This parameter cannot be specified with the CA-View and USER parameters.

- PASSWORD=**
xxxxxxx Specifies the same password as the one specified with the PWBATCH initialization parameter
- If specified, and the password matches the one specified by the PWBATCH initialization parameter, no further security checking is done, and the requested SYSOUT group is deleted.
- If omitted, or the password does not match the one specified with the PWBATCH initialization parameter, the security user exit is invoked to determine whether the user is authorized to delete the SYSOUT group.
- Note:** Password checking is not done for the DELETE USER command, but is done for the DELETE VIEW and the DELETE ID commands.
- SEQ=***nnnnn* Specifies the absolute or relative sequence number of the SYSOUT group to be deleted
- If omitted, the most recently archived group for the ID and generation specified is deleted. This parameter is ignored when the GEN parameter is omitted and cannot be specified with the VIEW and USER parameters.
- USER=**
xxxxxxx Specifies the name of the USERID to be deleted from the database
- This parameter cannot be specified with the GEN and SEQ parameters.
- VIEW=***nnn* Specifies a number from 1 to 255 of the logical view to be deleted
- Specify an asterisk to delete all logical views for the specified SYSOUT group.
- This parameter cannot be specified with the GEN and SEQ parameters.
- INDEX** Deletes any created page indexes for the report on the disk database
- Page indexes on disk are used by the CA-View online cross report indexing capability. (The page index definitions still exist with the logical views for the report.)

EPRINT

The CA-Deliver-to-CA-View interface provides a function, invoked by the EPRINT control statement, to print reports archived directly from CA-Deliver.

Syntax

```

/EPRINT  BANNER=xxxxxxxx
        BURST=x
        CHARS=(xxxx xxxx xxxx xxxx)
        CLASS=x
        COPIES=x
        COPYG=(nnn nnn nnn nnn nnn nnn nnn nnn)
        DIST=((distid distid ...)/dest (distid distid ...)/dest ...)
        FCB=xxxx
        FLASH=(xxxx nnn)
        FORM=xxxx
        FORMDEF=xxxxxxx
        GEN=nnn
        HOLD=Y|N
        ID=xxxxxxxxxxxxx
        INST=('text' 'text'...)
        MODIFY=(xxxx n)
        OPTCDJ=Y|N
        OUTPUT=name
        PAGE=(nnn nnn nnn nnn nnn nnn nnn nnn)
        PAGEDEF=xxxxxxx
        PASSWORD=xxxxxxxx
        PRMODE=xxxxxxx
        RECORD=(nnn nnn nnn nnn nnn nnn nnn nnn)
        SELECT=xxxxxxx
        SEQ=nnn
        UCS=xxxx
        VIEW=nnn
        WRITER=n

```

where:

BANNER= xxxxxxxx	Specifies an optional model banner page name to be used to override the one defined for the report in the CA-Deliver database.
BURST=Y N	Specify Y or N to indicate whether the report destined for the 3800 needs to be burst.
CHARS=(xxxx xxxx xxxx xxx)	Specifies an optional set of character arrangement table names for the 3800 printer to override the ones used to print the report A value of 1 to 4 names separated by one or more blanks and/or commas and enclosed in parentheses can be specified.
CLASS=x	Specifies an optional class to override the one used to print the report
COPIES=Y N	Specify Y or N to indicate whether the copies value is to be used when printing the report for the report recipients.

<code>COPYG=(<i>nnn</i> <i>nnn nnn nnn</i> <i>nnn nnn nnn</i> <i>nnn</i>)</code>	<p>Specifies an optional set of copy groups for the 3800 printer to override the ones used to print the report</p> <p>A value of 1 to 8 copy groups separated by one or more blanks and/or commas and enclosed in parentheses can be specified. Each copy group value must be in the range of 1 to 255.</p>
<code>DIST=((<i>distid</i> <i>distid</i>)/<i>dest</i> (<i>distid</i> <i>distid</i>/<i>dest</i>)</code>	<p>Specifies an optional, complete definition of distribution specifications to override the one defined for the report in the CA-Deliver database</p> <p>Specify a list of distribution identifiers or groups of distribution identifiers separated by one or more blanks and/or commas and enclosed in parentheses. A group of distribution identifiers consists of a list of distribution identifiers separated by one or more blanks and/or commas and enclosed in parentheses.</p> <p>Only one copy of the report is written to spool for a group; the model banner page for the group then references all the distribution identifiers in the group. An optional remote print destination can be specified for any single, non-grouped distribution identifier or any group of distribution identifiers by following the distribution identifier or group with a slash (/) and the destination. The destination can be a synonym created via the online DEFine DEVice command.</p>
<code>FCB=<i>xxxx</i></code>	<p>Specifies an optional forms control image to override the one used to print the report</p>
<code>FLASH= (<i>xxxx nnn</i>)</code>	<p>Specifies an optional forms flash overlay name and flash count for the 3800 printer to override those used to print the report</p> <p>The forms flash overlay name and flash count are separated by one or more blanks and/or commas and are enclosed in parentheses.</p>
<code>FORM=<i>xxxx</i></code>	<p>Specifies an optional forms name to override the one used to print the report</p>
<code>FORMDEF= <i>xxxx</i></code>	<p>Specifies a library member containing statements to control printing of the SYSOUT data on the 3800 printer</p> <p>The statements can specify overlay forms, page location for overlays, and page format suppressions that can be activated.</p>
<code>GEN=<i>nnn</i></code>	<p>Specifies the absolute or relative number of the generation of the report to be printed</p> <p>If omitted, the most recently-archived report for the report identifier is printed.</p>
<code>HOLD=Y N</code>	<p>Specifies whether the report is to be placed on the held queue for printing</p> <p>If omitted, HOLD=N is assumed.</p>

ID= xxxxxxxxxxxx	<p>Specifies the SYSOUT ID/report identifier of the group to be printed</p> <p>This parameter is required.</p>
INST= (<i>text</i> <i>text</i>)	<p>Specifies an optional, complete set of special instructions to override the set defined for the report in the CA-Deliver database</p> <p>Multiple lines of instruction text can be specified as a list of the text lines separated by blanks and/or commas and enclosed in parentheses.</p> <p>A single line of text must be enclosed within single quotation marks; a single quotation mark within the text itself must be represented by two, contiguous single quotation marks.</p>
MODIFY= (xxxx n)	<p>Specifies an optional copy modification module name and table reference character for the 3800 printer to override those used to print the report</p> <p>The copy modification module name and table reference character are separated by one or more blanks and/or commas and are enclosed in parentheses.</p> <p>The table reference character can have a value of 0 to 3.</p>
OPTCDJ=Y N	<p>Specify Y or N to indicate whether the report records contain table reference characters for the 3800 printer</p>
OUTPUT= xxxxxxx	<p>Specifies the name of the output statement to be used for printing the SYSOUT group</p> <p>This parameter overrides the specifications of the FORMDEF, LINECNT, PAGEDEF, PRMODE, and possibly, FORM parameters. The parameter (<i>xxxxxxx</i>) data is specified as follows:</p> <p><i>name</i> <i>stepname.name</i> <i>stepname.procstepname.name</i></p> <p>An asterisk can precede the parameter data to match the JCL specification of the OUTPUT parameter.</p>
PAGE=(<i>nnn</i> <i>nnn nnn nnn</i> <i>nnn nnn nnn</i> <i>nnn nnn</i>)	<p>Specifies 1 to 9 page numbers and/or ranges of pages to be printed</p> <p>The page numbers and/or ranges of pages are separated by one or more blanks and/or commas and are enclosed in parentheses. A range of pages is specified as two page numbers separated by a colon.</p> <p>If both PAGE and RECORD are omitted, the entire SYSOUT group is printed.</p>

PAGEDEF= xxxx	Specifies a library member containing statements to control printing of the SYSOUT data on the 3800 printer The statements can specify logical page length, width, fonts, and page segments.
PASSWORD= xxxxxxxx	Specifies the same password as the one specified with the PWBATCH option If specified and the password matches the one specified with the PWBATCH option, no further security checking is done, and the requested SYSOUT group is printed. If omitted or the password does not match the one specified with the PWBATCH initialization parameter, the security user exit is invoked to determine whether the user is authorized to print the SYSOUT group.
PRMODE= xxxxxxxx	Specifies the process mode required for printing the SYSOUT group
RECORD=(<i>nnn</i> <i>nnn nnn nnn</i> <i>nnn nnn nnn</i> <i>nnn nnn</i>)	Specifies 1 to 9 record numbers and/or ranges of records to be printed The record numbers and/or ranges of records are separated by one or more blanks and/or commas and are enclosed in parentheses. A range of records is specified as two record numbers separated by a colon. If both PAGE and RECORD are omitted, the entire SYSOUT group is printed.
SELECT= xxxxxxxx	Specifies the page separation index value for selecting pages to print If the value contains any of the special characters: blank, comma, or single quote, the index value must be enclosed within single or double quotes.
SEQ= <i>nnn</i>	Specifies the absolute or relative SYSOUT sequence number of the report to be printed If omitted, the most recently-archived report of the identifier and generation specified is printed. This operand is ignored when GEN is omitted.
UCS= <i>xxxx</i>	Specifies an optional, special character set name to override the one used to print the report
VIEW= <i>nnn</i>	Specifies a view format in which report is printed, where <i>n</i> = 1 to 255
WRITER= xxxxxxxx	Specifies the external writer name to be used for printing the SYSOUT group

EXTRACT

The EXTRACT control statement specifies that a SYSOUT archived to CA-View is to have fields extracted from it by CA-Balancing.

Syntax

```
/EXTRACT GEN=nnn
          ID=XXXXXXXXXXXX
          INBSSN=XXXXXXXXXXXXXXXXXXXX
          PAGE=(nnn nnn nnn nnn nnn nnn nnn nnn)
          PASSWORD=XXXXXXXX
          SEQ=nnn
```

where:

GEN=nnn	Specifies the absolute or relative number of the generation of the report to be accessed by CA-Balancing If omitted, the most recently-archived report for the report identifier is used.
ID= XXXXXXXXXXXX	Specifies the SYSOUT ID/report identifier of the group This parameter is required.
INBSSN= ('text' 'text')	Specifies the CA-Balancing LSERV subsystem name
PAGE=(nnn nnn nnn nnn nnn nnn nnn nnn nnn)	Specifies 1 to 9 page numbers and/or ranges of pages where data fields will be extracted by CA-Balancing
PASSWORD= XXXXXXXX	Specifies the same password as the one specified with the PWBATCH option If specified and the password matches the one specified with the PWBATCH option, no further security checking is done.
SEQ=nnn	Specifies the absolute or relative sequence number of the SYSOUT group to be accessed by CA-Balancing If omitted, the most recently-archived group for the ID and GEN specified is used. This operand is ignored when GEN is omitted.

INDEX

The INDEX control statement creates a page index for a SYSOUTs, using all page separation criteria defined online. Page separation criteria are defined with the logical views of a SYSOUT. See the chapter on Logical Viewing in the *CA-View Online User's Guide* for more information about page indexing.

An archived report must reside on the CA-View primary disk database to be indexed.

Syntax

```
/INDEX   GEN=nnn  
          ID=xxxxxxxxxxxx  
          PASSWORD=xxxxxxxx  
          SEQ=nnn
```

where:

GEN=nnn	Specifies the absolute or relative number of the generation of the report to be indexed. If omitted, the most recently-archived report for the report identifier is used.
ID= xxxxxxxxxxxx	Specifies the SYSOUT ID/report identifier of the group. This parameter is required.
PASSWORD= xxxxxxxx	Specifies the same password as the one that was specified with the PWBATCH option. If specified and the password matches the one specified with the PWBATCH option, no further security checking is done.
SEQ=nnn	Specifies the absolute or relative sequence number of the SYSOUT group to be indexed. If omitted, the most recently-archived group for the ID and GEN specified is used. This operand is ignored when GEN is omitted.

LIST

The LIST control statement produces a listing of archived SYSOUT and user IDs. The report is output to the REPORT DD statement.

SYSOUT Listing

The listing of archived SYSOUT groups can be for an individual SYSOUT group, a complete generation of archived SYSOUT, or all archived SYSOUT. The listing contains the following information:

- SYSOUT ID
- Job name
- Job ID
- Generation number
- SYSOUT sequence number
- Archive date and time
- Last print date and time
- Location of the SYSOUT (disk, tape, or temporary disk)
- Number of lines archived
- Number of pages archived
- Number of 3476-byte blocks written to disk
- Exception condition

The following is a SYSOUT listing generated by the LIST control statement:

SARBCT		CA-VIEW (2.0) - BATCH PROCESSING UTILITY										PAGE		1
01/13/97		SYSOUT ARCHIVAL LISTING												
ID	JOBNAME	JOBID	GEN	SEQ	ARC DATE	ARC TIME	PRT DATE	PRT TIME	LOC	LINES	PAGES	BLOCKS	XCODE	TSEQ
ASTALLEG	ASTALLEG	JOB05544	26	7	12/18/92	13:42:35	12/18/96	15:10:11	DISK	24	6	1		
BSPURRIS	BSPURRIS	JOB05185	26	1477	01/12/97	11:55:31			DISK	93	4	1		
BSPURR11	BSPURR11	JOB05668	26	1458	01/11/97	15:57:06			DISK	2166	54	27		
BSPURR11	BSPURR11	JOB05156	26	1454	01/11/97	13:37:08			DISK	18708	587	432	0016	
BSPURR11	BSPURR11	JOB05148	26	1453	01/11/97	13:00:40			DISK	186	5	3	S222	
CBRMOBBP	CBRMOBBP	JOB05119	26	1517	01/13/97	19:42:05			DISK	17149	319	217		
CBRMOBOT	CBRMOBOT	JOB05312	26	1518	01/13/97	19:42:11			DISK	15987	297	198		
CNV153	CNV153	JOB05276	26	1340	01/04/97	14:52:32			DISK	70	3	1		
DCL-RMOBBP	DLEE2	JOB05230	26	1297	12/31/96	11:23:43			DISK	12581	239	182		
DCL-RMOBBP	DLEE2	JOB05105	26	1296	12/31/96	10:52:15			DISK	12584	239	182		
DCL-RMODBASE	DLEE2	JOB05179	26	1378	01/05/97	13:50:42			DISK	7463	148	103		
DCL-RMOGAM	DLEE2	JOB05471	26	1040	12/30/96	18:25:29			DISK	4009	82	56		
DCL-RMOGRDB	DLEE2	JOB05859	26	1387	01/05/97	15:40:48			DISK	7320	139	111	0004	
DCL-RMOPRDCD	DLEE2	JOB05249	26	1382	01/05/97	14:00:35			DISK	1988	40	28		
DCL-RMOPRDCD	DLEE9	JOB05540	26	5	12/18/96	13:42:30			DISK	2010	40	28		
DCL-RMORPT	DLEE2	JOB05494	26	61	12/29/96	18:34:42			DISK	2529	54	34		
DCL-RMOSTC	DLEE3	JOB05782	26	34	12/23/96	21:24:03			DISK	16531	320	234		
DCL-RMOUTIL	DLEE2	JOB05639	26	1057	12/30/96	20:17:06			DISK	3511	72	50		
DCLP1322	DCLP1322	JOB05926	26	1389	01/05/97	18:30:20			DISK	143	6	2		
DCLP1322	DCLP1322	JOB05186	26	1388	01/05/97	18:30:18			DISK	143	6	2		
DLEE	DLEE	TSU05764	26	8	12/18/96	13:42:35			DISK	224	3	3		

User ID Listing

The listing of user IDs can be for an individual user ID, a group of user IDs, or all user IDs. The listing contains the following information:

- User ID
- User ID password
- Master capability indicator
- Generation number
- Distribution identifier validation mask
- Distribution identifier
- Mode access indicator
- Current mode
- Default banner name

The following is a user ID listing generated by the LIST control statement:

SARBCT 01/13/97		CA-VIEW 2.0 - BATCH PROCESSING UTILITY					PAGE 1	
		USERID LISTING						
USERID	PASSWORD	M	DISTID MASK	DISTID	AESS O O	MODE	BANNER	
		N	ACCT		YYNN	ALL	DEFAULT	
AMARZO		N	AMARZO	AMARZO	YYYY	ALL	DEFAULT	
CSA		N	CSA	CSA	YYYY	EXPO	DEFAULT	
CUST01		N	CUST01	CUST01	YYYY	ALL	DEFAULT	
CUST03		N	CUST03	CUST03	YYYY	ALL	DEFAULT	
CUST05		N	CUST05	CUST05	YYYY	ALL	DEFAULT	
CUST09		N	CUST09	CUST09	YYYY	ALL	DEFAULT	
CUST11		N	CUST11	CUST11	YYYY	ALL	DEFAULT	
ESCHIN		N	ESCHIN	ESCHIN	YYYY	ALL	DEFAULT	
ESCHI2		N	ESCHI2	ESCHI2	YYYY	ALL	DEFAULT	
ESCHI3		N	ESCHI3	ESCHI3	YYYY	ALL	DEFAULT	
HGROUP		N	HGROUP	HGROUP	YYYY	ALL	DEFAULT	

Syntax

```

/ LIST  EXCP=x
        GEN=nnn
        ID=XXXXXXXXXXXXX
        PASSWORD=XXXXXXXXX
        USER=XXXXXXXXX
    
```

where:

- EXCP=x Specifies whether EXCEPTIONS are listed
- Y Lists only those SYSOUT groups with exceptional conditions
 - N Lists those SYSOUT groups without exceptional conditions
 - A Lists all SYSOUT groups

This parameter cannot be specified with the USER parameter.

GEN= <i>nnn</i>	<p>Specifies the absolute or relative number of the generation for which SYSOUT is listed.</p> <p>If omitted, only the most recent generation is listed. To list SYSOUT for all generations, specify an asterisk as the generation number.</p> <p>This parameter cannot be specified with the USER parameter.</p>
ID= <i>xxxxxxxxxxxx</i>	<p>Specifies the SYSOUT ID of the SYSOUT group to be listed.</p> <p>A generic ID can be specified by appending an asterisk to the generic ID. If omitted, all SYSOUT IDs are listed.</p> <p>This parameter cannot be specified with the USER parameter.</p>
PASSWORD= <i>xxxxxxx</i>	<p>Specifies the same password as that specified with the PWBATCH initialization parameter.</p> <p>If specified and the password matches the one specified with the PWBATCH initialization parameter, no further security checking is done, and all requested SYSOUT groups are listed.</p> <p>If omitted or the password does not match the one specified with the PWBATCH initialization parameter, the security user exit is invoked to determine whether the user is authorized to access each SYSOUT group. In this case, any SYSOUT group for which access is not authorized is omitted from the listing.</p> <p>Note: Password checking is not done for the LIST command.</p>
USER= <i>xxxxxxxx</i>	<p>Specifies the name of the user ID or user IDs to be listed.</p> <p>A generic ID can be specified by appending an asterisk to the identifier.</p> <p>If omitted, all user IDs are listed.</p> <p>This parameter cannot be specified with the ID, GEN, and SEQ parameters.</p>

LOAD

The LOAD control statement loads an archived SYSOUT group from tape to disk. The SYSOUT is either temporarily loaded to the CA-View database or loaded to a user-defined data set.

If you use the expanded access server for tape and robotics, and the server becomes inactive when a report is selected online, CA-View will LOAD the report to disk so it can be viewed without the server.

LOAD jobs should execute on the system with the TYPE=PRIMARY server; otherwise, all the data will need to be transmitted across systems using XCF or LSERV.

For information about the expanded access server, see the section Expanded Access Server for Tape and Robotics in Chapter 3, "Configuring CA-View."

The following table indicates the destination of the SYSOUT group:

If the DDname parameter is	And if a SARLOAD DD statement is	Then
Specified	Specified or not specified	CA-View loads the SYSOUT group to the data set named with the DDname.
Not specified	Specified	CA-View loads the SYSOUT group to the SARLOAD data set.
Not specified	Not specified	CA-View temporarily loads the SYSOUT group to the CA-View database and you can view it online. The SYSOUT will automatically be deleted by the backup cycle via the HOLDTEMP initialization parameter.

Syntax

The syntax of the control statement is:

```
/LOAD DDNAME=xxxxxxxx
      GEN=nnn
      ID=xxxxxxxxxxxx
      INDEX
      PASSWORD=xxxxxxxx
      SEQ=nnn
      TAPE
```

where:

DDNAME= xxxxxxxx	Specifies the DD statement name to which the SYSOUT group is loaded. This parameter overrides the SARLOAD DD statement, if it is specified. If DCB attributes for the DD statement are omitted, the following are used: <ul style="list-style-type: none"> ■ A record format of VBM ■ A record size of the SYSOUT group record size plus four ■ A block size of 32760
GEN=nnn	Specifies the absolute or relative number of the generation for which SYSOUT is loaded to disk. If omitted, the most recently-archived SYSOUT group for the ID loaded to disk.
ID= xxxxxxxxxxxx	Specifies the SYSOUT ID of the group to be loaded to disk. This parameter is required.

INDEX	<p>Specifies to LOAD any page indexes defined for the report to the disk database</p> <p>Page indexes on disk are used by the CA-View online cross report indexing capability. (The DDname parameter does not apply to page indexes.)</p>
PASSWORD= xxxxxxx	<p>Specifies the same password as the one specified with the PWBATCH initialization parameter</p> <p>If specified and the password matches the one specified with the PWBATCH initialization parameter, no further security checking is done, and the requested SYSOUT group is loaded to disk.</p> <p>If omitted or the password does not match the one specified with the PWBATCH initialization parameter, the security user exit is invoked to determine whether the user is authorized to load the SYSOUT group.</p>
SEQ= <i>nnn</i>	<p>Specifies the absolute or relative sequence number of the SYSOUT group to be loaded to disk</p> <p>If omitted, the most recently-archived group for the ID and generation specified is loaded to disk. This operand is ignored when GEN is omitted.</p>
TAPE	<p>Specifies to LOAD only from tape.</p> <p>This parameter can be used to bypass LOADING from optical disk.</p>

PERM

The PERM control statement sets a SYSOUT group to permanent status (can be used for long term archiving) or removes it from permanent status.

When the SYSOUT group is set to permanent status, its period of retention and its location are dependent on the Expanded Retention Option initialization parameters and table statements. These parameters and statements are processed during the CA-View started task backup cycle.

When the SYSOUT group is removed from permanent status, it no longer resides under the control of the Expanded Retention Option.

Syntax: **/PERM DELETE**
 DISK
 GEN=nnn
 ID=xxxxxxxxxxxx
 PASSWORD=xxxxxxx
 SEQ=nnn
 TAPE

where:

- | | |
|------------------|--|
| DELETE | Specifies that the SYSOUT group is to be removed from permanent status |
| DISK | Specifies that the SYSOUT group is to be set to a permanent "on disk" status

When this keyword is specified, the SYSOUT group must currently reside in a disk or temporary disk status. This parameter cannot be specified with the DELETE and TAPE keywords. If the DELETE, DISK, and TAPE keywords are omitted, DISK is the default. |
| GEN=nnn | Specifies the absolute or relative number of the generation of the SYSOUT group to be set to permanent status or removed from permanent status |
| ID=xxxxxxxxxxxx | Specifies the SYSOUT ID of the SYSOUT group to be set to permanent status or removed from permanent status |
| PASSWORD=xxxxxxx | Specifies the same password as the one specified with the PWBATCH initialization parameter

If specified and the password matches the one specified by the PWBATCH initialization parameter, no further security checking is done, and the requested SYSOUT group can be set to permanent status or removed from that status.

If omitted, or the password does not match the one specified by the PWBATCH initialization parameter, the security user exit is invoked to determine whether the user is authorized to access the SYSOUT group. |
| SEQ=nnn | Specifies the absolute or relative SYSOUT sequence number of the SYSOUT group to be set to permanent status or removed from that status |
| TAPE | Specifies that the SYSOUT group is to be set to a permanent on tape status

This parameter cannot be specified with the DELETE and DISK keywords. |

PRINT

The PRINT control statement outputs a SYSOUT group to spool for printing. Overrides to the print attributes can be specified as operands.

Syntax

```

/PRINT BURST=x
      CHARS=(xxxx xxxx xxxx xxxx)
      CLASS=x
      COPIES=nnn
      COPYG=(nnn nnn nnn nnn nnn nnn nnn nnn)
      DDNAME=xxxxxxxxx
      DEST=xxxxxxxxx
      FCB=xxxx
      FLASH=(xxxx nnn)
      FORM=xxxx
      FORMDEF=xxxxxxxxx
      GEN=nnn
      HOLD=x
      ID=xxxxxxxxxxxxx
      LINECT=nnnn
      MODIFY=(xxxx n)
      OPTCDJ=x
      OUTPUT=name
      PAGE=(nnn nnn nnn nnn nnn nnn nnn nnn)
      PAGEDEF=xxxxxxxxx
      PASSWORD=xxxxxxxxx
      PRMODE=xxxxxxxxx
      RECORD=(nnn nnn nnn nnn nnn nnn nnn nnn)
      SELECT=xxxxxxxxx
      SEQ=nnn
      UCS=xxxx
      VIEW=nnnn
      WRITER=xxxxxxxxx

```

where:

- | | |
|------------------------------------|---|
| BURST=x | Specifies an optional burst value for the 3800 printer to override the one used to print the SYSOUT

Valid values are Y or N. |
| CHARS=
(xxxx xxxx xxxx
xxxx) | Specifies an optional set of character arrangement table names for the 3800 printer to override those used to print the SYSOUT

A value of 1 to 4 names separated by one or more blanks and/or commas and enclosed in parentheses can be specified. |
| CLASS= | Specifies an optional class to override the one used to print the SYSOUT |
| COPIES=nnn | Specifies an optional number of copies to override the one used to print the SYSOUT

A range of 1 to 255 can be specified. |

<code>COPYG=(nnn nnn nnn nnn nnn nnn nnn nnn)</code>	<p>Specifies an optional set of copy groups for the 3800 printer to override those used to print the SYSOUT</p> <p>A range of 1 to 8 copy groups separated by one or more blanks and/or commas and enclosed in parentheses can be specified. Each copy group value must be in the range of 1 to 255.</p>
<code>DDNAME= xxxxxxx</code>	<p>Specifies the DD statement name to which the SYSOUT group is printed</p> <p>If the DCB attributes for the DD statement are omitted, the following values are used:</p> <ul style="list-style-type: none">■ A record format of VBM■ A record size of the SYSOUT group record size plus 4 but not less than 137■ A blocksize of 32760
<code>DEST=xxxxxxx</code>	<p>Specifies an optional destination to override the one used to print the SYSOUT</p> <p>The destination can be a synonym created via the online DEFine DEvice command.</p>
<code>FCB=xxxx</code>	<p>Specifies an optional forms control image to override the one used to print the SYSOUT</p>
<code>FLASH= (xxxx nnn)</code>	<p>Specifies an optional forms flash overlay name and flash count for the 3800 printer to override those used to print the SYSOUT</p> <p>The forms flash overlay name and copy count are separated by one or more blanks and/or commas and are enclosed in parentheses.</p>
<code>FORM=xxxx</code>	<p>Specifies an optional forms name to override the one used to print the SYSOUT</p>
<code>FORMDEF= xxxxxxx</code>	<p>Specifies a library member containing statements to control printing of the SYSOUT data on the 3800 printer</p> <p>The statements can specify overlay forms, page location for overlays, and page format suppressions that can be activated.</p>
<code>GEN=nnn</code>	<p>Specifies the absolute or relative number of the generation for which SYSOUT is printed</p> <p>If omitted, the most recently-archived SYSOUT group for the ID is printed.</p>
<code>HOLD=x</code>	<p>Specifies either Y or N to indicate whether the SYSOUT is to be placed on the hold queue for printing</p> <p>If omitted, HOLD=N is assumed.</p>

ID= xxxxxxxxxxxx	Specifies the SYSOUT ID of the group to be printed This parameter is required.
LINECT=nnnn	Specifies the maximum number of lines to be printed on each output page
MODIFY= (xxxx n)	Specifies an optional copy modification module name and table reference character for the 3800 printer to override those used to print the SYSOUT The copy modification module name and table reference character are separated by one or more blanks and/or commas and are enclosed in parentheses. The table reference character can have a range of 0 to 3.
OPTCDJ=x	Specifies an optional override as to whether the SYSOUT records contain table reference characters for the 3800 printer Valid values are Y or N.
OUTPUT= xxxxxxxx	Specifies the name of the //OUTPUT statement to be used for printing the SYSOUT group This parameter overrides the specifications of the FORMDEF, LINECNT, PAGEDEF, PRMODE, and possibly FORM parameters. The parameter (xxxxxxxx) data is specified as follows: name stepname.name stepname.procstepname.name An asterisk can proceed the parameter data to match the JCL specification of the OUTPUT parameter.
PAGE=(nnn nnn nnn nnn nnn nnn nnn nnn nnn)	Specifies 1 to 9 page numbers and/or ranges of pages to be printed The page numbers and/or ranges of pages are separated by one or more blanks and/or commas and are enclosed in parentheses. A range of pages is specified as two page numbers separated by a colon. If both PAGE and RECORD are omitted, the entire SYSOUT group is printed.
PAGEDEF= xxxxxxxx	Specifies a library member containing statements to control printing of the SYSOUT data on the 3800 printer The statements can specify logical page length and width, fonts, and page segments.

<code>PASSWORD=xx xxxxxx</code>	<p>Specifies the same password as the one specified with the PWBATCH initialization parameter</p> <p>If specified, and the password matches that of the PWBATCH initialization parameter, no further security checking is done, and the requested SYSOUT group is printed. If omitted, or the password does not match the one specified with the PWBATCH initialization parameter, the security user exit is invoked to determine whether the user ID authorized to print the SYSOUT group.</p>
<code>PRMODE= xxxxxxxx</code>	<p>Specifies the process mode required for printing the SYSOUT group</p>
<code>RECORD=(<i>nnn</i> <i>nnn nnn nnn nnn</i> <i>nnn nnn nnn</i> <i>nnn)</i></code>	<p>Specifies 1 to 9 record numbers and/or ranges of records to be printed</p> <p>The record numbers and/or ranges of records are separated by one or more blanks and/or commas and are enclosed in parentheses. A range of records is specified as two record numbers separated by a colon. If both PAGE and RECORD are omitted, the entire SYSOUT group is printed.</p>
<code>SELECT= xxxxxxxx</code>	<p>Specifies the page separation index value for selecting pages to print</p> <p>If the value contains any of the special characters: blank, comma, or single quote, it must be enclosed within single quotes. A single quote must be represented as two single quotes.</p>
<code>SEQ=<i>nnn</i></code>	<p>Specifies the absolute or relative SYSOUT sequence number of the SYSOUT group to be printed</p> <p>If omitted, the most recently-archived SYSOUT group for the ID and generation specified is printed. This is ignored when GEN is omitted.</p>
<code>UCS=<i>xxxx</i></code>	<p>Specifies an optional special character set name to override the one used to print the SYSOUT</p>
<code>VIEW=<i>nnn</i></code>	<p>Specifies a view format in which report is printed, where <i>n</i> = 1 to 255</p>
<code>WRITER= xxxxxxxx</code>	<p>Specifies the external writer name to be used for printing the SYSOUT group</p>

SARBCH Examples

Example 1

The two most recent generations of archived SYSOUT are listed.

```
//EXAMPLE1 JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=SARBCH
//STEPLIB DD DSN=CAI.CAILIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//REPORT DD SYSOUT=*
//SYSIN DD *
/DBASE NAME=VIEW.SYSTEM1
/LIST
/LIST GEN=-1
/*
```

Example 2

The most recent SYSOUT group for job A0627WE is printed to special forms 2PT.

```
//EXAMPLE2 JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=SARBCH
//STEPLIB DD DSN=CAI.CAILIB, DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
/DBASE NAME=VIEW.SYSTEM1
/PRINT ID=A0627WE FORM=2PT
/*
```

Example 3

The report having a SYSOUT ID of M35AST03R1 created two generations ago is loaded to existing data set USER.M35AST03.R1.

```
//EXAMPLE3 JOB ACCOUNT, PROGRAMMER
//STEP1 EXEC PGM=SARBCH, PARM='VIEW.SYSTEM1'
//STEPLIB DD DSN=CAI.CAILIB, DISP=SHR
//SARLOAD DD DSN=USER.M35AST03.R1, DISP=OLD
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
/LOAD ID=A35AST03R1 GEN=-2
/*
```



Chapter 10

Using the Optical Disk Interface

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Chapter 10

Using the Optical Disk Interface

In This Chapter

This chapter covers the following topics:

- Optical disk page-level access
- Configuring the optical disk interface
- Operating the optical migration subtask
- Submitting the optical migration batch job
- Optical disk drivers
- Optical disk database maintenance

Overview

CA-View provides optional drivers that enable you to archive SYSOUT data to the following:

- FileTek Optical Disk Storage Machine
- Kodak Optistar Storage System
- IBM 3995 Optical Library Dataserver, models 131, 132, 133, and 153

Using the CA-View optical disk driver also enables you to retrieve data from optical disk to the CA-View database for viewing or printing.

Once you have configured CA-View to use an optical disk driver, CA-View archives SYSOUT data to three levels of storage:

- Primary disk (the CA-View database)
- Secondary disk (optical disk; saved using the driver)
- Tape storage (CA-View archival tapes)

What Is Secondary Disk Storage?

Secondary disk storage is a storage alternative to the CA-View primary disk database. You can specify an optical disk device as a destination for SYSOUT archiving. This lets you create a more portable and permanent backup for reports.

Note: In this document, the terms *secondary storage* and *optical disk storage* are used interchangeably.

When to Use Secondary Disk Storage

Choose a destination for SYSOUT group archiving based upon retrieval frequency and retention period.

- Use *primary disk storage* for storing SYSOUT groups that you must view on a frequent basis so that the SYSOUT group is always available for immediate retrieval. Also, any SYSOUT group with a relatively short retention requirement is a candidate for primary disk storage, since primary disk space is reusable and the space quickly becomes available again.
- Use *secondary disk storage* (optical disk) for archiving any SYSOUT group with a relatively long retention period or that is not frequently required for viewing. When an optical disk is used for this kind of storage, it is an extremely reliable and cost effective medium.
- Use *tape storage* to back up SYSOUT groups on primary or secondary disk.

Requirements

The system requirements for the CA-View Optical Disk Interface are as follows:

- SAR 6.0 or higher or CA-View 1.7 (or higher), and the CA-View Expanded Retention Option (ERO) are required to use any of the optical disk interfaces.
- The Kodak Optistar Storage System page level driver requires the Data/Ware Multi-user Data Retrieval Subsystem (MDRS).
- The FileTek drivers require the FileTek callable interface (module LSMCALL).
- The OAM driver requires that OAM is running, and that all CA-View transactions occur on the system that is running OAM. This involves the following:
 - The CA-View archival started task must execute on the system with OAM if either the CA-View backup cycle or optical migration subtask does the migration to OAM.

- All online users selecting SYSOUT groups from secondary disk storage must be executing on the system with OAM.

Users on another system can load the SYSOUT group from secondary disk to the CA-View database in order to access it. The SARBCH job used to load the SYSOUT group must run on the system with OAM.

- All SARBCH jobs requesting SYSOUT groups from secondary disk storage must execute on the system with OAM.

Report-Level Versus Page-Level Access

When you select a SYSOUT group from CA-View that shows a status of DSK2, PRDK2, or PRM2 (all of which indicate optical disk secondary storage), CA-View does one of the following:

- Allows you to view or print the SYSOUT file directly from optical disk (page-level access)
- Loads the entire SYSOUT from the optical disk into the CA-View database (report-level access)

Most of the information in this document applies to both types of drivers. For more information about page-level access, see *Optical Disk Page-Level Access* later in this chapter.

Driver Names and Types

CA-View currently supports the following optical disk drivers:

- SARD2D00 for IBM DASD Emulation Optical devices (including the ESA/370 and ESA/390 3995 model 153 Optical Library Dataserver) with page-level access
- SARD2D01 for the Kodak Optistar Storage System with report-level access
- SARD2D02 for the FileTek Optical Disk Storage Machine with report-level access
- SARD2D03 for the FileTek Optical Disk Storage Machine with page-level access
- SARD2D04 for the Kodak Optistar Storage System optical disk device with page-level access
- SARD2D05 for IBM Object Access Method (OAM) devices (including the ESA/370 and ESA/390 3995 models 131, 132, and 133 Optical Library Dataserver) with page-level access

Optical Disk Page-Level Access

This section covers the drivers that enable page-level access and explains how page-level access works.

Drivers

Page-level access is currently available with the following drivers:

- SARD2D00 driver for IBM DASD Emulation Optical devices (including the IBM ESA/370 and ESA/390 3995 Optical Library Dataserver, model 153)
- SARD2D03 driver for the FileTek Storage Machine
- SARD2D04 driver for the Kodak Optistar Storage System
- SARD2D05 driver for OAM devices (including the IBM ESA/370 and ESA/390 3995 Optical Library Dataserver, model 132)

Purpose

The CA-View Optical Disk Interface offers enhanced functionality that enables you to access archived SYSOUT data directly from optical disk secondary storage. This capability is called *page-level access*, to distinguish it from *report-level access*, in which an entire SYSOUT must be loaded into the CA-View database for viewing.

This capability helps you reduce the DASD load at your site while minimizing the performance impact of the slightly slower access speed of optical disk. Instead of loading a 100,000-line report back to the CA-View database, you can view or print just the data you need.

Operation

With page-level access, you can add indexes to your SYSOUT archives at archive time. The optical disk interface uses these user-defined indexes to reduce optical disk access time, minimizing the performance impact of the slightly slower access speed of optical disk. The net result is that, depending on your indexing and the number of concurrent access requests to optical disk, the response time can be indistinguishable from viewing records from primary storage.

Configuring the Optical Disk Interface

These instructions provide an overview of the steps required to configure CA-View to use the optical disk storage drivers. Each of the information blocks in this section apply to all CA-View optical disk drivers, unless indicated otherwise by the block label (for example, the DSK2PARM parameter explanation in the following section).

Important! Read the instructions thoroughly before attempting the configuration.

Overview of Configuration Steps

This section presents an overview of the steps you must perform to configure CA-View to use the optical disk interface. These steps are detailed in the sections that follow.

1. Use the SARINIT initialization parameter
DSK2DRVR
to specify which optical disk driver you will be using.
2. Use the SARINIT initialization parameter
DSK2PARM
to specify the page-level drivers.
3. Set optical migration options in the ERO table (in conjunction with disk and tape migration options), using the following keywords:
DSK2DAYS
DSK2NOTP
4. You can customize optical migration scheduling with the following initialization parameters:
DSK2MIGD
DSK2TIME
DSK2INTV
Note: By default, the CA-View backup cycle performs all optical migration.
5. Run SARINIT to implement your initialization parameter settings to the database.

Step 1. Specify the Optical Disk Storage Driver

Specify which optical disk driver you will be using with the

DSK2DRVR

SARINIT initialization parameter.

This parameter is required; there is no default value.

Syntax

DSK2DRVR=SARD2D0n

where:

SARD2D00	IBM ESA/370 and ESA/390 3995 Optical Library Dataserver, model 153, page-level access
SARD2D01	Kodak Optistar report-level access
SARD2D02	FileTek report-level access
SARD2D03	FileTek page-level access
SARD2D04	Kodak Optistar page-level access
SARD2D05	IBM ESA/370 and ESA/390 3995 Optical Library Dataserver, models 132 and 133, page-level access

Step 2. Configure the Page-Level Drivers

Specify the appropriate values for the

DSK2PARM

SARINIT initialization parameter.

The values for each of the drivers are explained in the sections that follow.

DSK2PARM: IBM Page-Level Driver for Models 131, 132, 133

Specify the high-level index prefix for creating the collection and object names for OAM.

Syntax

DSK2PARM=*index/storclas/mgmtclas/db2id*

The index can consist of a maximum of 17 characters. The default value for *index* is the high-level index of the CA-View database. Specify the SMS storage class as *storclas*.

Specify the SMS management class as *mgmtclas*. Specify the DB2 system identifier as *db2id*. This identifier must match that specified on the SMS subsystem definition in member IEFSSNNxx in SYS1.PARMLIB.

DSK2PARAM: IBM Page Level Driver for Model 153

Specify the high-level index prefix for creating the optical disk data sets.

Syntax: **DSK2PARAM=*index/unit/blksize***

The index can consist of a maximum of 17 characters. If you change the *index*, older data sets will have to be renamed with the new *index* name to be accessible. You can choose to set up a special user's catalog for all of these MVS data sets. The default value for *index* is the high-level index of the CA-View database. Specify the unit name of the pool of optical disk volumes as *unit*. Specify the block size to be used as *blksize*. The default is 1/2 track 3390.

DSK2PARAM: Kodak Optistar Page Level Driver

Specify the unit name of the optical disk for unit.

Syntax: **DSK2PARAM=*unit/volser1/volser2/ssid***

Specify the lowest volume serial number in the range as *volser1* and the highest volume serial number in the range as *volser2*. The serial numbers for the range of emulated tape volumes must be the same length, must end with one or more digits, and must have matching beginning alphabetic characters (if any).

Whenever a new emulated tape is required for archival, the next tape in the range is used. When the end of the range is reached, the first tape in the range is used. The range of emulated tape volumes must have been previously defined and initialized within the optical disk device. Specify the MDRS one-character subsystem identifier for *ssid*. The default *ssid* is S.

DSK2PARAM: FileTek Drivers

Specify the high-level index prefix for creating file names on the Storage Machine as INDEX. The syntax is as follows:

Syntax **DSK2PARAM=*index/account/password/smid***

The index can consist of a maximum of 17 characters. The default value for *index* is the high-level index of the CA-View database. The value for *account* specifies the account identification code for the storage machine as *account* and can be a maximum of 8 characters. The value for *password* specifies the account password for the storage machine and can be a maximum of 8 characters. The value for *smid* specifies the storage machine identifier and can be a maximum of 6 characters.

Example: FileTek:
DSK2PARAM

To use the default storage machine, omit the SMID parameter. For example:

DSK2PARAM=SARP.SYSTEM1/VIEW/SARPSWD

This example specifies an index prefix of VIEW.SYSTEM1, an account identification code of VIEW, an account password of SARPSWD, and a default *smid*.

DSK2PARAM: Kodak Optistar Report Level Driver

Specify the unit name of the optical disk for UNIT. The syntax is as follows:

Syntax **DSK2PARAM=*unit/volser1/volser2***

Specify the lowest volume serial number in the range as *volser1* and the highest volume serial number in the range as *volser2*. The serial numbers for the range of emulated tape volumes must be the same length, must end with one or more digits, and must have matching beginning alphabetic characters (if any).

Whenever a new emulated tape is required for archival, the next tape in the range is used. When the end of the range is reached, the first tape in the range is used. The range of emulated tape volumes must have previously been defined and initialized within the optical disk device.

Adding the MOUNT Attribute: Kodak Optistar Report Level Driver Only

This step is optional. Because the Kodak Optistar optical disk device appears to the system as a tape device, the emulated tape volumes must be mounted before being accessed. If you are using the report-level driver and you intend to allow TSO users to access SYSOUT groups on optical disk storage, you must assign the mount attribute to those TSO users.

Consult your optical disk device documentation for possible alternatives to setting the mount attribute. The TSO ACCOUNT command can be used to assign the mount attribute as follows:

```
ACCOUNT  
C (user ID) MOUNT  
END
```

The Kodak Optistar page level driver uses the services of MDRS, which performs the mounts automatically for the TSO user. Do not assign the mount attribute for users of the page-level driver.

Step 3. Set Initialization and ERO Table Parameters

Set optical migration options in the ERO table (in conjunction with disk and tape migration options) using the following keywords:

```
DSK2DAYS  
DSK2NOTP
```

The values for these keywords are explained in the following sections.

DSK2DAYS: Initialization Parameter and ERO Table Parameter

The DSK2DAYS ERO table parameter specifies the number of days a SYSOUT group with expanded retention status is to remain on primary disk before it is migrated to secondary disk and deleted from primary disk.

Syntax:

```
DSK2DAYS=nnn
```

Only SYSOUT groups with permanent retention status are eligible for migration to optical disk. See the section Writing ERO Table Statements in Chapter 6, "Expanded Retention Option," for information.

The DSK2DAYS SARINIT initialization parameter sets a global default for a CA-View database. See the section Setting and Changing Initialization Parameters in Chapter 2, "Initialization Parameters," for information on using SARINIT.

Setting DSK2DAYS=0 specifies that SYSOUT groups are to be migrated to optical disk with the next scheduled optical migration. The default is 999, which specifies that SYSOUT groups are never to be migrated to optical disk.

DSK2NOTP: ERO Table Parameter

The DSK2NOTP ERO table parameter specifies that once a report resides on optical disk, the tape backup, if it exists, is deleted. If the parameter is not specified, tape backups are still maintained.

Syntax **DSK2NOTP**

Example Specify

DSK2NOTP DSK2DAYS=0

to indicate that no tape backup will ever be created by the SAR standard backup cycle. If you specify for the CA-View backup cycle to perform optical migration (B value for DSK2MIGD initialization parameter), and an INTERIM backup runs before the report migrates to optical, the report will be backed up to tape.

Customization via SARD00UX User Exit

Sites that use the IBM model 3995 153 optical drives can code user exit SARD00UX to completely customize optical migration. SARD00UX has access to all attributes of the report, as contained in the GCR (group control record).

Possible applications are:

- Reports that are under 25K do not migrate to optical
- Reports that are over 3M do not migrate to optical

See the comments in the source code of SARD00UX for specifications.

Migration Options

You have many options for how and when reports will be migrated to optical disk. The following is a list of possible migration needs, and how to implement them. Migration to optical means that a report on primary disk is written to optical, and then deleted from primary disk.

Reports with these requirements	Should have these ERO statements
(Report ID: DAILY)	/DAILY DRETPD=3 RETPD=180 DSK2DAYS=999 ALL
<ul style="list-style-type: none"> ■ Stay on primary disk for 3 days ■ Stay on tape backup for 6 months ■ Never go to optical disk 	

Continued

Continued

Reports with these requirements	Should have these ERO statements
(Report ID: MONTHEND) <ul style="list-style-type: none"> ■ Stay on primary disk for 30 days ■ Migrate to optical after 30 days, and stay for 7 years ■ Are also kept on tape backup for 7 years 	<pre>/MONTHEND RETPD=2557 DSK2DAYS=30 ALL</pre> DRETPD includes both primary (DASD) and secondary (optical) disk retention.
(Report ID: QRTREND) <ul style="list-style-type: none"> ■ Stay on primary disk and tape backup for 90 days ■ Migrate to optical after 90 days, and stay there for 7 years ■ Are deleted from tape backup when migrated to optical 	<pre>/QRTREND RETPD=2557 DSK2DAYS=90 DSK2NOTP ALL</pre> When you use DSK2NOTP, disk retention (DRETPD, DGENS, DCOPIES) and tape retention (RETPD, TGENS, TCOPIES) should be equal. In this example, even though RETPD=2557, the reports are deleted from tape when they go to optical (90 days).
(Report ID: BIGRPT) <ul style="list-style-type: none"> ■ Migrate to optical from primary disk at the next opportunity ■ Stay on optical for 7 years ■ Are never backed up to tape 	<pre>/BIGRPT DSK2DAYS=0 RETPD=2557 DSK2NOTP ALL</pre> The reports are never backed up to tape, unless an interim backup cycle is run before the report migrates to optical.

Step 4. Customize Optical Migration Scheduling (Optional)

Optionally customize optical migration scheduling with the following parameters:

```
DSK2MIGD
DSK2TIME
DSK2INTV
```

These parameters work in conjunction with the DAYS initialization parameter, which defines when the CA-View backup cycle (migration to tape) will occur. You can set a separate optical migration schedule for each day of the week.

For automatic migration by the optical migration subtask, you can specify ranges of time for migration to occur, and ranges of idle time.

This step is optional. By default, the CA-View backup cycle performs all migration to optical disk.

Scheduling Parameters: DSK2MIGD

The DSK2MIGD specifies the type of optical migration to occur on each day of the week beginning with Monday. The syntax is as follows:

Syntax: **DSK2MIGD=~~XXXXXXXX~~**

where:

- A Specifies automatic scheduling; migration occurs during the time set by DSK2TIME

Note: The optical migration subtask scans the database intelligently (not a repeat full pass each time), so processing time is minimized.

If a time range specified by DSK2TIME goes across midnight (for example, Friday 11 PM to 2 AM Saturday), only the day that the range begins (Friday) needs to be specified with an A.

- M Specifies that no automatic scheduling occurs

Optical migration occurs when it is manually requested, via the operator commands to the optical migration task.

- B Specifies that optical migration is performed by the CA-View standard backup cycle

- N Specifies that no backup migration is to occur, even if the operator commands are issued to start up the optical migration task

This option is provided so that you can have times of ensuring that no optical migration will occur.

The default is BBBBbbb.

Scheduling Parameters: DSK2TIME

The DSK2TIME parameter specifies the time intervals during which optical migration will automatically occur.

Syntax: **DSK2TIME=nnnn-nnnn, ...**

Automatic migration is activated by an A value for the DSK2MIGD parameter. Up to four ranges can be specified.

The default is 0000 to 2400.

Scheduling Parameters: DSK2INTV

The DSK2INTV parameter specifies the amount of time the optical migration task will wait (idle time) before scanning the database again.

Syntax

DSK2INTV=nnnn

This parameter works in conjunction with the DSK2MIGD and DSK2TIME parameters, to schedule automatic optical migration. Automatic migration is activated by an A value for the DSK2MIGD parameter. DSK2INTV is also used as the idle time interval whenever the optical migration task is manually started.

The default is 0015.

Scheduling Optical Migration

You have many options for scheduling optical migration. The following is a list of possible scheduling needs, and how to implement them:

Optical migration occurs	When you specify these parameters
<ul style="list-style-type: none"> ■ Each night by the CA-View standard backup cycle 	<p>DSK2MIGD=BBBBBBB DAYS=YYYYYYY</p> <p>The DAYS initialization parameter determines what days of the week the CA-View backup cycle will run.</p>
<ul style="list-style-type: none"> ■ Automatically, by the optical migration subtask, Monday through Friday only 	<p>DSK2MIGD=AAAANN DSK2INTV=0045 DSK2TIME=2100-2300, 0100-0500</p>
<ul style="list-style-type: none"> ■ Every 45 minutes from 9 PM to 11 PM, and every 45 minutes from 1 AM to 5 AM. 	
<ul style="list-style-type: none"> ■ When the system administrator manually invokes the optical migration subtask (no automatic migration) 	<p>DSK2MIGD=MMMMMM</p>

Step 5. Run SARINIT

Run SARINIT to set the initialization parameters you specified in Step 3 for the database.

For information on setting the initialization parameters for a CA-View database by running SARINIT, see the section Setting and Changing Initialization Parameters in Chapter 2, "Initialization Parameters."

Operating the Optical Migration Subtask

Optical migration can be done as follows:

- By the backup cycle (disk to tape)
- By a batch job (SARSK2B)
- By the optical migration subtask of the CA-View started task

The optical migration subtask can be either automatically scheduled or manually invoked. The following commands are available for operating the subtask.

Starting the Optical Migration Subtask

Issue the following operator command to start the optical migration subtask:

```
F SARSTC,DSK2 START
```

Stopping the Optical Migration Subtask

Issue the following operator command to terminate the optical migration subtask:

```
F SARSTC,DSK2 STOP
```

Resuming Automatic Optical Migration

After the optical migration subtask has been stopped by the DSK2 STOP parameter, you can resume the automatic migration schedule by issuing the following operation command:

```
F SARSTC,DSK2 RESUME
```

Note: Automatic migration is determined by the DSK2MIGD, DSK2TIME, and DSK2INTV parameters.

Submitting the Optical Migration Batch Job

You can submit the following batch job (in member SARDSK2B of CAI.PPOPTION) to perform a single pass of the CA-View disk database, and migrate any reports destined for optical:

```
//EXAMPLE JOB ACCOUNT, PROGRAMMER
//SARSK2B EXEC PGM=SARSK2B, PARM='VIEW.SYSTEM1'
//STEPLIB DD DSN=CAI.CAILIB, DISP=SHR
//SARD2LST DD SYSOUT=X, DCB=BLKSIZE=1210
//SARPATAB DD DSN=VIEW.SYSTEM1.SARPATAB(ERO), DISP=SHR
```

In the SARSK2B statement, specify your CA-View database as:

```
PARM='dbase.name'
```

SARD2LST DD Statement: Migration Report

The SARD2LST DD statement is optional. It creates the SARD2LST report, which lists any reports that were migrated to optical. Here is an example of the report:

SARD2LST		CA-VIEW (2.0)				PAGE 1			
09/19/95 19:58:47		REPORTS MIGRATED TO SECONDARY DISK - BATCH JOB							
ID	JOB NAME JOBID	GEN	SEQ	ARC	DATE	ARC TIME	PAGES	LINES	MIGRATED
AAC	CBROERIA JOB09130	10	52	09/19/95	19:53:21	1	10	19:58:47	
AAC	CBROERIA JOB09129	10	45	09/19/95	19:53:16	1	10	19:58:47	
AAC	CBROERIA JOB09128	10	38	09/19/95	19:53:10	1	10	19:58:48	
AAC	CBROERIA JOB09127	10	31	09/19/95	19:53:04	1	10	19:58:49	
ACC	CBROERIA JOB09130	10	54	09/19/95	19:53:22	1	10	19:58:50	
ACC	CBROERIA JOB09129	10	47	09/19/95	19:53:17	1	10	19:58:51	
ACC	CBROERIA JOB09128	10	40	09/19/95	19:53:12	1	10	19:58:51	
ACC	CBROERIA JOB09127	10	33	09/19/95	19:53:06	1	10	19:58:52	
TOTAL REPORTS MIGRATED TO SECONDARY DISK =							8		

SARPATAB DD Statement

The SARPATAB DD statement specifies the name of the data set containing your ERO (Expanded Retention Option) table. This statement is required if you specify optical retention in your ERO table with the DSK2DAYS parameter. The optical subtask will then read the ERO table to determine migration options.

Kodak Optistar Drivers

CA-View migrates a SYSOUT group to optical disk when all of the following are true:

- The SYSOUT group is archived on primary disk
- The SYSOUT group has or will have permanent retention status
- The number of days since the SYSOUT group was archived exceeds the DSK2DAYS initialization parameter

Once migrated to secondary disk storage, a SYSOUT group continues to reside there until deleted, or until it expires from ERO disk retention. ERO disk retention is specified by the DGENS, DCOPIES, or DRETPD ERO table statements.

How CA-View Retrieves SYSOUT Data From Optical Disk (Report-Level Driver Only)

If Your TSO User ID Has MOUNT Authority

When you select a SYSOUT group that shows a status of DSK2, PRDK2, or PRM2 (all of which indicate optical disk secondary storage), CA-View reloads the entire SYSOUT from optical disk back into the CA-View database.

You can explicitly request to load the SYSOUT group back to the primary disk database using the L line command online or by using the /LOAD function when executing in batch using SARBCH. If you are using CA-View under VM/CMS, you must use the L line command or the /LOAD function; you cannot retrieve data from optical disk by selecting it within CA-View.

If Your TSO User ID Does Not Have MOUNT Authority

You must use the L line command online or the /LOAD function when executing in batch using SARBCH.

Once retrieved, the SYSOUT group continues to reside in the CA-View database (as well as on optical disk storage) until the backup cycle specified by the HOLDTEMP initialization parameter occurs.

You can remove the SYSOUT group from the CA-View database before the next backup cycle by explicitly requesting its removal using the C line command online or by specifying the CLEAN option when starting the CA-View started task.

How CA-View Retrieves SYSOUT Data From Optical Disk (Page-Level Driver Only)

When you select a SYSOUT group that shows a status of DSK2, PRDK2, or PRM2 (all of which indicate optical disk secondary storage), CA-View enables you to view or print the SYSOUT group directly. This is the preferred method of operation.

If necessary, you can explicitly request to load the SYSOUT group back to the primary disk database using the L line command online or by using the /LOAD function when executing in batch using SARBCH. If you are using CA-View under VM/CMS, you *must* use the L line command or the /LOAD function; you cannot retrieve data from optical disk by selecting it within CA-View.

How CA-View Defines Optical Disk Data Sets

When migrating SYSOUT groups to optical disk storage, CA-View creates data sets automatically. Only one SYSOUT data set is created per emulated tape volume. CA-View continues to write SYSOUT groups to the data set on the emulated tape volume, until the data set is full. Each SYSOUT group is separated from the next by a tape mark.

When a SYSOUT group is being written to secondary disk and the end of volume is reached, CA-View does the following:

1. Terminates the data set
2. Allocates a new data set on the next emulated tape volume in the volume serial number range
3. Continues writing to the new data set

DCB attributes for the data set are:

```
RECFM=VB
LREC=32756
BLKSIZE=32760
```

Naming Optical Disk Data Sets

CA-View assigns the data sets names as follows:

Syntax

```
index.SARDSK2.Tnnnnnnnn
```

where:

index Specifies the high-level index naming prefix as defined by the DSK2PARM initialization parameter

nnnnnnnn Specifies the sequence number for the emulated tape data set

You specify the unit name and volume serial number range using the DSK2PARM initialization parameter.

Deleting Optical Disk Data Sets

As part of its backup cycle, CA-View uncatalogs any emulated tape data set that is no longer needed. This determination is based either on the global settings specified in the initialization parameters or on the entries in the Expanded Retention Option (ERO) table. See the section Initialization Parameter Descriptions in Chapter 2, "Initialization Parameters," and Chapter 6, "Expanded Retention Option," for more information.

FileTek Drivers

CA-View migrates a SYSOUT group to optical disk when all of the following are true:

- The SYSOUT group is archived on primary disk
- The SYSOUT group has or will have permanent retention status
- The number of days since the SYSOUT group was archived exceeds the DSK2DAYS initialization parameter

Once migrated to secondary disk storage, a SYSOUT group continues to reside there until deleted, or until it expires from ERO disk retention. ERO disk retention is specified by the DGENS, DCOPIES, or DRETPD ERO table statements.

How CA-View Retrieves SYSOUT Data From Optical Disk (Page-Level Driver Only)

When you select a SYSOUT group that shows a status of DSK2, PRDK2, or PRM2 (all of which indicate optical disk secondary storage), CA-View enables you to view or print the SYSOUT group directly. This is the preferred method of operation.

If necessary, you can explicitly request to load the SYSOUT group back to the primary disk database using the L line command online or by using the /LOAD function when executing in batch using SARBCH. If you are using CA-View under VM/CMS, you *must* use the L line command or the /LOAD function; you cannot retrieve data from optical disk by selecting it within CA-View.

How CA-View Defines Optical Disk Data Sets

When migrating SYSOUT groups to optical disk storage, CA-View creates a separate file on the storage machine for each SYSOUT group migrated. CA-View writes the data in compressed format in blocks of 32760 bytes.

Optical Disk Naming Conventions

The files on the Storage Machine are assigned names as follows:

Syntax: ***index.SARDSK2.Gggggggg.Ssssssss***

where:

index: Specifies the high-level index naming prefix as defined by the DSK2PARAM initialization parameter

ggggggg: Specifies the generation number for the SYSOUT group

sssssss: Specifies the sequence number for the SYSOUT group

Deleting Optical Disk Data Sets

As part of its backup cycle, CA-View deletes any file from the storage machine that is no longer needed. This determination is based either on the global settings specified in the initialization parameters or on the entries in the Expanded Retention Option (ERO) table. See the section Initialization Parameter Descriptions in Chapter 2, "Initialization Parameters," and Chapter 6, "Expanded Retention Option," for more information.

OAM Drivers

CA-View migrates a SYSOUT group to optical disk when all of the following are true:

- The SYSOUT group is archived on primary disk.
- The SYSOUT group has or will have permanent retention status.
- The number of days since the SYSOUT group was archived exceeds the DSK2DAYS initialization parameter.

Once migrated to secondary disk storage, a SYSOUT group continues to reside there until deleted, or until it expires from ERO disk retention. ERO disk retention is specified by the DGENS, DCOPIES, or DRETPD ERO table statements.

How CA-View Retrieves SYSOUT Data From Optical Disk

When you select a SYSOUT group that shows a status of DSK2, PRDK2, or PRM2 (all of which indicate optical disk secondary storage), CA-View enables you to view or print the SYSOUT group directly.

If necessary, you can explicitly request to load the SYSOUT group back to the primary disk database using the L line command online or by using the /LOAD function when executing in batch using SARBCH. If you are using CA-View under VM/CMS, you must use the L command or the /LOAD function; you cannot retrieve data from optical disk by selecting it within CA-View.

How CA-View Defines Optical Disk Objects

When migrating SYSOUT groups to optical disk storage (that is, OAM), CA-View creates one or more objects for each SYSOUT group migrated. An object is stored in compressed format in a unit of up to 100 logical blocks of 32,760 bytes each; all objects, except for the last, are stored as 100 logical blocks, or 3,276,000 bytes.

Naming Optical Disk Objects

The collection name used for all objects in a single CA-View database is as follows:

Syntax

index.SARCOLL

The object names have the format:

index.Gggggggg.Ssssssss.Oooooooo

where:

<i>index</i>	Specifies the high-level index naming prefix as defined by the DSK2PARAM initialization parameter
<i>gggggggg</i>	Specifies the generation number for the SYSOUT group
<i>sssssss</i>	Specifies the sequence number for the emulated tape data set
<i>ooooooo</i>	Specifies a sequential number starting with 1, used to identify each member of a SYSOUT group

User exit SARD05UX can be coded to modify the collection names. See the comments in the SARD05UX source code for specifications.

Deleting Optical Disk Objects

As part of its backup cycle, CA-View deletes any objects that are no longer needed. This determination is based either on the global settings specified in the initialization parameters or on the entries in the Expanded Retention Option (ERO) table. See Chapter 2, "Initialization Parameters," and Chapter 6, "Expanded Retention Option," for more information.

IBM DASD Emulation Optical Drivers

CA-View migrates a SYSOUT group to optical disk when all of the following are true:

- The SYSOUT group is archived on primary disk
- The SYSOUT group has or will have permanent retention status
- The number of days since the SYSOUT group was archived exceeds the DSK2DAYS initialization parameter

Once migrated to secondary disk storage, a SYSOUT group continues to reside there until deleted, or until it expires from ERO disk retention. ERO disk retention is specified by the DGENS, DCOPIES, or DRETPD ERO table statements.

How CA-View Retrieves SYSOUT Data From Optical Disk

When you select a SYSOUT group that shows a status of DSK2, PRDK2, or PRM2 (all of which indicate optical disk secondary storage), CA-View enables you to view or print the SYSOUT group directly.

If necessary, you can explicitly request to load the SYSOUT group back to the primary disk database using the L line command online or by using the /LOAD function when executing in batch using SARBCH. If you are using CA-View under VM/CMS, you must use the L command or the /LOAD function; you cannot retrieve data from optical disk by selecting it within CA-View.

How CA-View Defines Optical Disk Data Sets

When migrating SYSOUT groups to optical disk storage, CA-View creates a separate data set for each SYSOUT group migrated. The data sets are allocated using the unit name specified in the DSK2PARM initialization parameter. CA-View writes the data in compressed format in blocks, using the blocksize specified in the DSK2PARM parameter.

Optical Disk Naming Conventions

The data sets are assigned names in the form:

index.SARDSK2.Gggggggg.Ssssssss

where:

<i>index</i>	Specifies the high-level index naming prefix as defined by the DSK2PARAM initialization parameter
<i>gggggggg</i>	Specifies the generation number for the SYSOUT group
<i>sssssss</i>	Specifies the sequence number for the emulated tape data set

Deleting Optical Disk Data Sets

As part of its backup cycle, CA-View deletes any data set that is no longer needed. This determination is based either on the global settings specified in the initialization parameters or on the entries in the Expanded Retention Option (ERO) table. See the section Initialization Parameter Descriptions in Chapter 2, "Initialization Parameters," and Chapter 6, "Expanded Retention Option," for more information.

Optical Disk Database Maintenance

The MERGE and UNLOAD functions of the CA-View database maintenance utility (SARDBASE) contain parameters to support optical disk storage. See the section Database Maintenance with SARDBASE in Chapter 7, "Database Utilities," for additional information about these functions.

UNLOAD Control Statement

The UNLOAD control statement allows for unloading the SYSOUT data for SYSOUT groups archived to secondary disk storage.

Syntax: **UNLOAD** [**SECOND**|**NOSECOND**]

where:

SECOND Unload the SYSOUT data for SYSOUT groups archived to secondary disk storage

NOSECOND Do not unload the SYSOUT data for SYSOUT groups archived to secondary disk storage

The **SECOND**/**NOSECOND** parameter has a default value of **NOSECOND**. Specifying **SECOND** can substantially increase the time required to perform the UNLOAD function.

Whether or not you specify **SECOND** when unloading, the **LOAD** function never reloads the SYSOUT data for SYSOUT groups archived to secondary disk storage. The **LOAD** function merely transfers ownership of the secondary disk storage that is already archived.

You must specify **SECOND** when unloading the databases if you are going to use the **MERGE** function, because the **MERGE** function always reloads the SYSOUT data, either to primary or secondary disk.

Only MERGE Moves Optical Disk Data

The **MERGE** function should be used for reloading the actual SYSOUT data from secondary disk storage. The **COPY** and **LOAD** functions copy the index information about the SYSOUT groups on secondary disk storage. In other words, **COPY** and **LOAD** merely transfer ownership of the secondary disk storage data that is already archived, while the **MERGE** actually reloads the data to another optical disk data set.

In addition to merging multiple databases together, you can use the merge function to replace one type of secondary disk device with another, to consolidate the archived secondary disk storage, and to replace secondary disk storage with primary disk.

MERGE Statement Prerequisite

When performing a MERGE function with an input database that contains any SYSOUT groups archived to secondary disk storage, the contents of the secondary disk SYSOUT groups must have been unloaded with SECOND specified on the UNLOAD control statement (UNLOAD Control Statement later in this chapter). The MERGE function will then reload the SYSOUT groups based upon the secondary disk operands on the MERGE command.

MERGE Control Statement

The syntax of the MERGE control statement is as follows:

Syntax:

MERGE *tape-index driver parameters*

where:

- tape-index* Specifies the high-level naming prefix to be set for the TAPEIDX initialization parameter
If omitted, TAPEIDX is set to the name of the output database.
- driver* Specifies the required name of the secondary disk storage driver
This name must be the same as the one specified by the DSK2DRVR initialization parameter. Specify SARD2D0x for the optical disk driver you have purchased. Replace the x with the driver number described in Driver Names and Types earlier in this chapter.
- parameters* Specifies the required unit name and volume serial number range for the secondary disk storage driver as defined by the DSK2PARAM initialization parameter.

The parameters are required when you specify a driver name.

- For the Kodak Optistar Report-Level Driver, the format of this operand is:

unit/volser1/volser2

For an explanation of these identifiers, see the section DSK2PARAM: Kodak Optistar Report-Level Driver earlier in this chapter.

- For the Kodak Optistar Page-Level Driver, the format of this operand is:

unit/volser1/volser2/ssid

For an explanation of these identifiers, see the section DSK2PARM: IBM Page-Level Driver for Models 131, 132, 133 earlier in this chapter.

- For the IBM DASD Emulation Optical Driver, the format of this operand is:

index/unit/blksize

For an explanation of these identifiers, see the section DSK2PARM: IBM Page Level Driver for Models 131, 132, 133 earlier in this chapter.

MERGE Command Operand Restrictions

Since the operands for the MERGE command are positional, specify an asterisk to indicate the omission of the *tape-index* operand when you code the *driver* and *parameters* operands.

To prevent conflicts with any existing archive tapes, MERGE requires that the high-level naming prefix for tapes be different from those for any other tapes defined in the input databases.

To Reload From Optical Disk to the CA-View Database

If you omit the *driver* operand, you must also omit the *parameters* operand. When the *driver* and *parameters* operands are omitted, at MERGE time any SYSOUT groups unloaded from the optical disk are reloaded to the primary disk CA-View database.



Chapter 11

User Exits

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Chapter 11

User Exits

In This Chapter

This chapter discusses the user exits that allow you to customize CA-View.

CA-View user exits allow you to customize the product to fit your requirements. The code for the exits as well as the mapping macros for the CA-View control blocks are distributed in VIEW.SOURCE. The exits must be link-edited with authorization code 1 and placed in the library containing the CA-View load modules.

User Exit	Function
E22CICUX	CICS/cross-memory connection ID
E22xxxUX	Cross-memory connection ID
SAR\$xxxx	Device specific
SARACFUX	ACIF archival task exit
SARACTUX	Job accounting
SARARAUX	Automatic report archival
SARATHUX	Authorization
SARBKTUX	Backup cycle
SARDSTUX	Reprint destinations
SARDVSUX	DVS Xerox archival task exit
SAREASUX	EAO for tape and robotics exit
SARJS2UX	JES control block mapping
SARMFPUX	Microfiche
SAROMSUX	Online management system
SARPACUX	SARPAC tape consolidation
SARPRFUX	User profile
SARPRTUX	Banner page

Continued

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User Exit	Function
SARSECUX	Security
SARSMFUX	SMF processing
SARSPFUX	Selection list formatting
SARSRQUX	Selection request
SARSTCUX	Archival task
SARSUBUX	Job submission
SARTPOUX	Tape creation volser exit
SARUSXUX	User ID determination
SARXCTUX	Exceptional condition checking

E22CICUX-CICS/Cross-Memory Connect ID Exit

The E22CICUX exit determines the CICS/ cross-memory connection ID used for online retrieval. The exit is called by the CICS/cross-memory features to supply the connection ID whenever the feature is initially invoked by a user.

Register Contents:
Entry

This exit follows standard CICS command-level conventions, and is a standard CICS application.

Other Security Exits

This exit can be used in conjunction with the SARUSXUX and SARSECUX user exits. For more information, see the descriptions of these exits, and the Security section in Chapter 3, "Configuring CA-View."

E22xxxUX-Cross-Memory Connect ID Exits

The E22xxxUX exits can determine the cross-memory connection ID used for online retrieval. The exits are:

E22SPFUX	For ISPF/cross-memory online retrieval
E22TSOUX	For TSO/cross-memory online retrieval
E22ROSUX	For CA-Roscoe/cross-memory online retrieval
E22IMSUX	For IMS/cross-memory online retrieval

The exits are called by the cross-memory features to supply the connection IID whenever the feature is initially invoked by a user.

Register Contents:
Entry

The significant contents of the general registers on entry are:

- Reg 1 Address of the parameter list
- Reg 13 Address of a standard, 72-byte register save area
- Reg 14 Return address
- Reg 15 Entry point address

Register Contents:
Return

On return from the exit, registers 2 to 13 must contain the same contents as they contained on entry, and the exit must place a return code in register 15. The return codes are:

- 0 The logon process is continued
- 4 The logon process is aborted

Other Security Exits

This exit can be used in conjunction with the SARUSXUX and SARSECUX user exits. For more information, see the descriptions of these exits, and the Security section in Chapter 3, "Configuring CA-View."

SAR\$xxxx-Device-Specific Exit

SAR\$xxxx provides any configuring information required by "smart" devices that have multiple operating and/or emulating modes. An opportunity is provided to send such special configuring data to the device, both before and after the OPEN, as well as before and after the CLOSE.

The name of this exit is user-selectable, except that it must begin with SAR\$.

Sample Exit

The sample exit provided must be tailored to meet your site requirements.

Register Contents:
Entry

A parameter list is passed to the exit with the addresses of the master control record, the group control record, the open print DCB and the SYSOUT destination, forms name, and class. The contents of the significant general registers on entry to the exit are:

Reg 0 Contains function codes as follows:

X'00'	Called before OPEN
X'04'	Called after OPEN
X'0C'	Called before CLOSE
X'10'	Called after CLOSE

Reg 1 Address of the print parameter list (mapped by SARPPL)

Reg 13 Address of a standard, 72-byte register save area

Reg 14 Return address

Reg 15 Entry point address

Register Contents:
Return

On return from the exit, registers 2 to 13 must contain the same contents as they contained on entry. The exit must be link-edited with authorization code 1 and placed in the library containing the CA-View load modules.

Calling Sequence

Calling sequence with regard to I/O and SARPRTUX is as follows:

1. This exit-Function 0 (before OPEN)
2. OPEN
3. This exit-Function 4 (after OPEN)
4. SARPRTUX-Function 0 (start of group)
5. PUTs
6. SARPRTUX-Function 4 (end of group)
7. This exit-Function 12 (before CLOSE)
8. CLOSE
9. This exit-Function 16 (after CLOSE)

CA-Spool

Many CA-Spool parameters are kept near the end of the SARPPL in fields labeled 'PPLCM...'

SARACFUX-ACIF Archival Task Exit

SARACFUX is invoked by a SARFSS archival started task at the following times:

- When SARFSS begins processing a SYSOUT data set
- As SARFSS gets each SYSOUT record in the data set
- Before each AFP record is put into the CA-View database
- When SARFSS completes processing of the SYSOUT data set

The exit can be used to modify report attributes and to analyze the records for exceptional conditions. The report ID, generation number, sequence number, and archival date cannot be modified.

Whenever an exceptional condition is identified, this exit can do either or both of the following:

- Set a short exception message in the group control record (GCRXCODE), which is displayed in the SYSOUT selection list used for retrieval
- Change or set the user accounting data in the group control record (GCRUSER)

This exit must be link-edited with authorization code 1 and placed in the library containing the CA-View load modules.

Standard Exit

The standard exit that is supplied with CA-View is a dummy routine which merely returns control to the caller.

Register Contents: Entry

A parameter list is passed to the exit containing the addresses of the master control record, the group control record, and the SYSOUT record, and the length of the SYSOUT record.

The contents of the significant general registers on entry to the exit are:

- Reg 0 Contains entry codes as follows:
 - 0 Specifies that a new SYSOUT data set has been selected
The GCR for the data set can be modified as desired, with the exception of report ID, generation number, sequence number, and archival date.
 - 4 Specifies that an AFP-style record (bound for the CA-View database) is being passed for exceptional condition analysis
 - 8 Specifies the end of the current SYSOUT group
 - 12 Specifies that a SYSOUT record from JES (bound for AFP processing) is being passed for exceptional condition analysis
These records are more legible than the AFP-style records passed with entry code 4.
- Reg 1 Address of the security parameter list (mapped by macro SARSPL)
- Reg 13 Address of a standard, 72-byte register save area
- Reg 14 Return address
- Reg 15 Entry point address

Register Contents: On return from the exit, registers 2 to 13 must contain the same contents as they
Return contained on entry.

SARACTUX–Job Accounting Exit

SARACTUX extracts accounting data for a job or time-sharing session. The exit is passed the type-20 SMF record for the job or time-sharing session and returns 20 bytes of accounting data. When subsequently archiving SYSOUT for the same job or time-sharing session, the archival task copies these 20 bytes of data to the user accounting data field in the group control record for the SYSOUT (GCRUSER).

The exit must be link-edited with authorization code 1 and placed in the library containing the CA-View load modules. In addition, the exit must not contain any relocatable address constants, for example, A (relocatable address) or V (relocatable address).

Standard Exit The standard exit that is supplied with CA-View extracts the first and second fields from the accounting field of the JOB statement. The two fields are returned as bytes 1 to 10 and 11 to 20, respectively.

Register Contents: The contents of the significant general registers on entry to the exit are:
Entry

- Reg 0 Address of the 20-byte area into which the exit is to return the accounting data
- Reg 1 Address of the type-20 SMF record
- Reg 13 Address of a standard, 72-byte register save area
- Reg 14 Return address
- Reg 15 Entry point address

Register Contents: On return from the exit, registers 2 to 13 must contain the same contents as they
Return contained on entry.

SARARAUX–Automatic Report Archival Exit

SARARAUX is given control by the automatic report archival feature of CA-View extensions to determine whether or not a copy of a SYSOUT data set is to be produced for archival purposes. In addition, the exit can be used to modify the SYSOUT attributes used to create the archival copy of the data set and to assign a SYSOUT ID to it.

The exit must be link-edited with authorization code 1 and placed in the library containing the CA-View load modules. In addition, the exit must not contain any relocatable address constants, for example, A (relocatable address) or V (relocatable address).

Standard Exit The standard exit that is supplied with CA-View allows the job and SYSOUT classes specified in the PARM field to SARXTD to determine whether to automatically archive the SYSOUT data sets.

Register Contents: The contents of the significant general registers on entry to the exit are:
Entry

- Reg 1 Address of the automatic report archival exit parameter list (mapped by macro SARAPL)
- Reg 13 Address of a standard, 72-byte register save area
- Reg 14 Return address
- Reg 15 Entry point address

Register Contents: On return from the exit, registers 2 to 13 must contain the same contents as they
Return contained on entry, and the exit must place a return code in register 15.

The return codes are:

- 0 Use the job and SYSOUT classes specified in the PARM field to SARXTD to determine whether to automatically archive the SYSOUT data set
- 4 Automatically archive the SYSOUT data set; **unconditional**
- 8 Do not automatically archive the SYSOUT data set; **unconditional**

SARATHUX--Authorization Exit

SARATHUX determines whether a specified job is authorized to perform high-level database functions. To do this, CA-View passes the request type and request data requiring authorization to SARATHUX. It returns a return code to the caller that indicates the authorization condition. The standard exit that is supplied with CA-View authorizes all jobs to perform all functions.

The exit must be link-edited with authorization code 1 and placed in the library containing the CA-View load module; it will be invoked in 31-bit mode and must maintain 31-bit compatibility in an MVS/XA and MVS/ESA environment.

Register Contents:
Entry

The contents of the significant general registers on entry to the exit are:

- Reg 0 Address of the 8-byte request type
- Reg 1 Address of the request data
- Reg 13 Address of a standard, 72-byte register save area
- Reg 14 Return address
- Reg 15 Entry point address

Authorization Request
Types

The following are the authorization request types, and their descriptions:

Request Type	Invoking Program	Authorization Description
ADDDS	SARDBASE	Creates data sets for a database
ADDLOCK	SARDBASE	Creates lock data set for a database
BATCH	SARBCH	Performs requests via the SARBCH utility
COPY	SARDBASE	Copies a database
DELETE	SARDBASE	Deletes a database

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Request Type	Invoking Program	Authorization Description
DELLOCK	SARDBASE	Deletes lock data set for a database
IDXOUT	SARDBASE	Offloads database index
INIT	SARINIT	Updates or displays CA-View initialization parameters
LOAD	SARDBASE	Loads a database from a sequential, previously unloaded file
MERGE	SARDBASE	Merges databases
OLOAD	SARDBASE	Loads online panels and messages
RENAME	SARDBASE	Renames a database
REORG	SARDBASE	Reorganizes a database
RESTORE	SARDBASE	Restores a database
STATUS	SARDBASE	Obtains database statistics
UNLOAD	SARDBASE	Unloads a database
UNLOCK	SARDBASE	Unlocks a database
VERIFY	SARDBASE	Verifies and recovers a corrupted database
VERSION	SARDBASE	Resets the database to a specific version

Data Format of
Authorization Request
Types

The format of the request type data, referenced by general register 1, for the related request types is as follows:

Request Type	Request Data										
ADDDS	35-byte parameter: <table border="0" style="margin-left: 20px;"> <tr> <td>Bytes 01-08</td> <td>Unit name</td> </tr> <tr> <td>Bytes 09-14</td> <td>Volume serial</td> </tr> <tr> <td>Bytes 15-16</td> <td>Binary number of cylinders</td> </tr> <tr> <td>Bytes 17-18</td> <td>Binary database blocksize</td> </tr> <tr> <td>Bytes 19-35</td> <td>High-level database index name</td> </tr> </table>	Bytes 01-08	Unit name	Bytes 09-14	Volume serial	Bytes 15-16	Binary number of cylinders	Bytes 17-18	Binary database blocksize	Bytes 19-35	High-level database index name
Bytes 01-08	Unit name										
Bytes 09-14	Volume serial										
Bytes 15-16	Binary number of cylinders										
Bytes 17-18	Binary database blocksize										
Bytes 19-35	High-level database index name										

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Request Type	Request Data
ADDLOCK	35-byte parameter: Bytes 01-08 Unit name Bytes 09-14 Volume serial Bytes 15-18 Not used Bytes 19-35 High-level database index name
BATCH	17-byte high-level database index name
COPY	34-byte parameter: Bytes 01-17 High-level database index name of receiving database Bytes 18-34 High-level database index name of sending database
DELLOCK	17-byte high-level database index name
DELETE	17-byte high-level database index name
IDXOUT	17-byte high-level database index name
INIT	17-byte high-level database index name
LOAD	17-byte high-level database index name
MERGE	102-byte parameter: Bytes 01-17 High-level database index name of merge database Bytes 18-34 New tape high-level database index name for database Bytes 35-42 Name of secondary disk driver Bytes 43-102 Parameter data for secondary disk driver
OLOAD	17-byte high-level database index name
RENAME	34-byte parameter: Bytes 01-17 High-level database index name of database to be renamed Bytes 18-34 High-level database index name to which the database will be renamed
REORG	17-byte high-level database index name

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Request Type	Request Data
RESTORE	17-byte high-level database index name
STATUS	17-byte high-level database index name
UNLOAD	17-byte high-level database index name
UNLOCK	17-byte high-level database index name
VERIFY	17-byte high-level database index name
VERSION	17-byte high-level database index name

Register Contents:
Return

On return from the exit, registers 2 to 13 must contain the same contents as they contained on entry to the exit. The exit must also place a return code in register 15. The return codes are as follows:

- 0 The job is authorized to perform the requested function.
- 4 The job is **not** authorized to perform the requested function.

SARBKTUX-Backup Cycle Exit

SARBKTUX is invoked by the CA-View backup cycle before copying a report to tape. The exit can be used to override the decision to backup a report to tape.

Standard Exit

The standard exit that is supplied with CA-View is a dummy routine that merely returns control to the caller.

Register Contents:
Entry

A parameter list is passed to the exit containing the addresses of the group control record (mapped by DSECT SARGCR). The contents of the significant general registers on entry to the exit are:

- Reg 1 Address of the parameter list
- Reg 13 Address of a standard, 72-byte register save area
- Reg 14 Return address
- Reg 15 Entry point address

Register Contents:
Return

On return from the exit, registers 2 to 13 must contain the same contents as they contained on entry.

Register 15 must be returned as follows:

- 0 The SYSOUT group will be backed up to tape
- Other The SYSOUT group will NOT be backed up to tape

Examples

- You do not wish to back up reports that were rerun, with condition codes greater than 8.
The exit would query GCRXCODE.
- You do not wish to back up CICS started task output.
The exit would query GCRJNAM or GCRID.

SARDSTUX–Destination Exit

SARDSTUX determines whether a user or job is authorized to invoke an output (print) command to a specified destination.

A parameter list is passed to the exit containing the addresses of the master control record, the group control record, the job name, the user ID, the RACF user ID, the mode of the caller, and the destination. The exit must be link-edited with authorization code 1 and placed in the library containing the CA-View load modules.

Standard Exit

The standard exit that is supplied with CA-View allows all output to be generated at any destination.

Register Contents:
Entry

The contents of the significant general registers on entry to the exit are:

- Reg 0 Address of the security parameter list (mapped by macro SARDPL)
- Reg 1 Address of the request data
- Reg 13 Address of a standard, 72-byte register save area
- Reg 14 Return address
- Reg 15 Entry point address

Register Contents: On return from the exit, registers 2 to 13 must contain the same contents as they
Return contained on entry, and the exit must place a return code in register 15. The return codes are:

- 0 The user/job is authorized to print this output.
- 4 The user/job is **not** authorized to print this output.

SARDVSUX--DVS Xerox Archival Task Exit

SARDVSUX is invoked by a SARFSS archival started task at the following times:

- When it begins processing a SYSOUT data set
- As it gets each SYSOUT record from JES
- Before each DVS-style record is put into the CA-View database
- When it completes processing of the SYSOUT data set

The exit can be used to modify report attributes and to analyze the records for exceptional conditions. The report ID, generation number, sequence number, and archival date cannot be modified.

Whenever an exceptional condition is identified, the exit can do either or both of the following:

- Set a short exception message in the group control record (GCRXCODE) which is displayed in the SYSOUT selection list used for retrieval.
- Change or set the user accounting data in the group control record (GCRUSER).

The exit must be link-edited with authorization code 1 and placed in the library containing the CA-View load modules.

Standard Exit The standard exit that is supplied with CA-View is a dummy routine which merely returns control to the caller.

Register Contents: A parameter list is passed to the exit containing the addresses of the master
Entry control record, the group control record, and the SYSOUT record, and the length of the SYSOUT record.

The contents of the significant general registers on entry to the exit are:

- Reg 0 Contains the entry code:
- 0 Specifies that a new SYSOUT data set has been selected
The GCR for the data set can be modified as desired, with the exception of report ID, generation number, sequence number, and archival date.
 - 4 Specifies that a DVS-style record (bound for the CA-View database) is being passed for exceptional condition analysis
 - 8 Specifies the end of the current SYSOUT group
 - 12 Specifies that a SYSOUT record from JES (bound for DVS processing) is being passed for exceptional condition analysis
When processing LCDS data, these records may be more legible than the DVS-style records passed with entry code 4.
- Reg 1 Address of the security parameter list (mapped by macro SARSPL)
- Reg 13 Address of a standard, 72-byte register save area
- Reg 14 Return address
- Reg 15 Entry point address

Register Contents: On return from the exit, registers 2 to 13 must contain the same contents as they
Return contained on entry.

SAREASUX-EAO for Tape and Robotics Exit

SAREASUX is available for customizing the expanded access option for tape and robotics, most commonly for use with tape-emulation optical. It is invoked by the started task running a program called SAREAS. SAREASUX is called to determine whether a request for a given volume should be handled by the processing thread which is currently handling a different given volume. It is most commonly used to improve performance with tape-emulation optical devices, where it allows the same processing thread to handle requests for all logical volumes on the same optical platter.

Standard Exit The standard exit that is supplied with CA-View is a dummy routine which merely returns 4 to indicate that requests for different volumes are not to be processed together.

Register Contents:
Entry

A parameter list is passed to the exit containing the addresses of the master control record, the group control record, and the SYSOUT record, and the length of the SYSOUT record. The contents of the significant general registers on entry to the exit are:

Reg 1 Address of the parameter list

The first word contains one of the following entry codes:

- 0 Initialization
- 4 Termination
- 8 Comparison of current thread volume with new volume
- 12 Comparison of current thread volume with volume to service next

The next 4 words in the parameter list are only valid for entry codes 8 and 12:

Word 2 Address of data set name on thread

Word 3 Address of volume name on thread

Word 4 Address of data set name for new request or to service next

Word 5 Address of volume name for new request or to service next

Reg 13 Address of a standard, 72-byte register save area

Reg 14 Return address

Reg 15 Entry point address

Register Contents:
Return

On return from the exit, registers 0 to 13 must contain the same contents as they contained on entry. If register 15 is non-zero on return from initialization, SAREAS fails. If register 15 is non-zero on return from entry code 8, the new request is NOT to be handled by the thread handling the given volume. If register 15 is non-zero on return from entry code 12, the given volume (word 5 of the parameter list) is **not** to be serviced next.

SARJS2UX–Control Block Mapping Exit

SARJS2UX is invoked by the archival task when it needs to extract print attributes for a JES2 SYSOUT data set and the initialization parameter JES2LVL=0 is specified. The user exit obtains the address and offsets within JES2.

There is no load module supplied for this exit, only source code. To use the exit, it must be assembled as is, with the installation's source library. The exit must be link-edited with authorization code 1 and placed in the library containing the CA-View load modules. After link-editing the exit, the SARINIT program should be executed with the initialization option JES2LVL=0.

In general, a value other than JES2LVL=0 should be specified and this user exit should not be used; however, if the standard PDDBs supplied by IBM have been changed, this user exit is available.

SARMFPUX–Microfiche Exit

SARMFPUX performs the following functions for the microfiche format program:

- Determines whether a SYSOUT group is to be microfiched
- Formats and outputs the SYSOUT data
- Updates the group control record with changes

A parameter list is passed to the exit containing the addresses of the master control record, the group control record, the open DCB for the output file, and the SYSOUT record.

The exit must be link-edited with authorization code 1 and placed in the library containing the CA-View load modules.

Standard Exit

The standard exit that is supplied with CA-View writes all SYSOUT for the generation sequentially to the output file and inserts a special separator record before each SYSOUT group. Data from the separator record can be used to identify the job, create an index for the fiche, or produce human-readable titles. See the section Microfiche Processing with SARMFP in Chapter 3, "Configuring CA-View," for a description of the separator record.

Register Contents:
Entry

The contents of the significant general registers on entry to the exit are:

- Reg 0 Contains entry codes as follows:
- 0 Specifies that a new SYSOUT group is being processed
The exit indicates whether to microfiche the group via a return code.
 - 4 Specifies that a data record is being passed to the exit
 - 8 Specifies the end of data for SYSOUT group
 - 12 Specifies final call, all SYSOUT has been processed
- Reg 1 Address of the microfiche parameter list (mapped by macro SARMPL)
- Reg 13 Address of a standard, 72-byte register save area
- Reg 14 Return address
- Reg 15 Entry point address

Register Contents:
Return

On return from the exit, registers 2 to 13 must contain the same contents as they contained on entry, and the exit must place a return code in register 15. The return codes are:

Function	Return Code	Description
0	0	Microfiche the SYSOUT group
	4	Do not microfiche the SYSOUT group
4	0	Obtain the next SYSOUT record and call the exit again with it
	4	Terminate processing of the SYSOUT group
8	-	Return codes are not checked
12	-	Return codes are not checked

SAROMSUX-Online Management System Exit

The online management system Exit, SAROMSUX, is invoked prior to calling display services. It allows you to examine and/or change the Online Exit Block (OXB) and its contents.

SAROMSUX can change a panel to invoke an alternate panel.

Online Exit Block Contents The address of the OXB is passed to SAROMSUX so that it can identify the display function and panel. The contents of the OXB are as follows:

- UPL address
- Online panel name
- Address and exit communication area
- Work area
- Length of OXB

Register Contents: Entry The contents of the significant general registers on entry to the exit are:

- Reg 1 Address of the online exit block (mapped by macro SAROXB)
- Reg 13 Address of a standard, 72-byte register save area
- Reg 14 Return address
- Reg 15 Entry point address

SARPACUX-Permanent Archival Consolidation Exit

SARPACUX can override SARPAC's internal decision that determines whether or not to consolidate a tape.

A parameter list is passed to the exit containing usage information about the tape. The exit can examine the information and, based upon its own criteria, make a decision as to whether or not the tape should be consolidated.

The exit must be link-edited with authorization code 1 and placed in the library containing the CA-View load modules.

Standard Exit The standard exit supplied with the CA-View returns without overriding SARPAC's internal decision.

Register Contents: Entry The contents of the significant general registers on entry to the exit are:

- Reg 1 Address of the tape specification parameter list (mapped by SARTPL)
- Reg 13 Address of a standard, 72-byte register save area
- Reg 14 Return address
- Reg 15 Entry point address

Register Contents: On return from the exit, registers 2 to 13 must contain the same contents as they
Return contained on entry, and the exit must place a return code in register 15. The return codes are:

- 0 Do not override SARPAC's decision as to whether the tape should be consolidated.
- 4 Instruct SARPAC to consolidate the tape.
- 8 Instruct SARPAC to **not** consolidate the tape.

SARPRFUX–User Profile Exit

SARPRFUX is invoked by online retrieval at logon time and can change user profile (def user) and PF key information dynamically.

The exit must be link-edited with authorization code 1 and placed in the library containing the CA-View load modules.

Standard Exit

The standard exit that is supplied with CA-View loads:

- Table SARPFTAB, which controls PF key updating
- Table SARUSRTAB, which controls user profile overrides

Register Contents: Entry

A parameter list is passed to the exit with the address and length of the JCL records and the mode of the caller.

The contents of the significant general registers on entry to the exit are:

- Reg 0 Contains entry codes as follows:
 - 0 Specifies a new user
 - 4 Specifies an existing user
- Reg 1 Address of the parameter list (mapped by macro SARBPL)
- Reg 13 Address of a standard, 72-byte register save area
- Reg 14 Return address
- Reg 15 Entry point address

SARPRTUX-Banner Page Exit

SARPRTUX composes a banner page for printed SYSOUT.

The standard exit that is supplied with CA-View produces a banner page containing the SYSOUT ID and job ID in large block letters, and the date and time of archival. It calls the system block letter routine, IEFSD095. The routine is described in IBM manual, *OS/VS2 MVS System Programming Library: Job Management GC28-0627* and is located in distribution library SYS1.AOSB0. The exit must be link-edited with authorization code 1 and placed in the library containing the CA-View load modules.

Register Contents:
Entry

A parameter list is passed to the exit containing the addresses of the master control record, the group control record, the open print DCB and the SYSOUT destination, forms name, and class. The contents of the significant general registers on entry to the exit are:

- Reg 0 Contains entry codes as follows:
- 0 Specifies the start of the SYSOUT group
 - 4 Specifies the end of the SYSOUT group
 - 8 Specifies that the VTAM Print option is about to open a destination in PPLVPTR.
- This can be changed by the user.

- Reg 1 Address of the print parameter list (mapped by macro SARPPPL)
- Reg 13 Address of a standard, 72-byte register save area
- Reg 14 Return address
- Reg 15 Entry point address

Register Contents:
Return

On return from the exit, registers 2 to 13 must contain the same contents as they contained on entry.

SARSECUX-Security Exit

SARSECUX determines whether a user or job is authorized to access a SYSOUT group or perform online tape mounts. The exit must be link-edited with authorization code 1 and placed in the library containing the CA-View load modules.

Standard Exit

The standard exit that is supplied with CA-View allows access to all users and jobs.

- Other Security Exits This exit can be used in conjunction with the SARUSxUX and XMSCIxUX user exits. For more information, see the descriptions of these exits, and the Security section in Chapter 3, "Configuring CA-View."
- Register Contents:
Entry A parameter list is passed to the exit containing the addresses of the master control record, the group control record, the job name the user ID, the RACF user ID, the mode of the caller, and the function for which the group is being accessed.
- The contents of the significant general registers on entry to the exit are:
- Reg 0 Contains entry codes as follows:
 - 0 Called from online
 - 4 Called from batch
 - Reg 1 Address of the security parameter list (mapped by macro SARCPPL)
 - Reg 13 Address of a standard, 72-byte register save area
 - Reg 14 Return address
 - Reg 15 Entry point address
- Register Contents:
Return On return from the exit, registers 2 to 13 must contain the same contents as they contained on entry, and the exit must place a return code in register 15. The return codes are:
- 0 The user/job is authorized to access the SYSOUT group.
 - 4 The user/job is not authorized to access the SYSOUT group.

SARSMFUX-SMF Exit

SARSMFUX is invoked whenever a type-6 SMF record is to be written by the archival started task. The exit can examine and modify the record, or it can suppress the writing of the record.

The exit must be link-edited with the authorization code 1 and placed in the library containing the CA-View load modules.

- Standard Exit The standard exit that is supplied with CA-View returns the same SMF records to be written that it receives.

Register Contents: The contents of the significant general registers on entry to the exit are:
Entry

Reg 1 Address of the type-6 SMF record
For the format of the record, see the section SMF Type-6 Records in Chapter 3, "Configuring CA-View." The record can be mapped with system macro IFASMFR 6.

Reg 13 Address of a standard, 72-byte register save area

Reg 14 Return address

Reg 15 Entry point address

Register Contents: On return from the exit, register 1 must contain the address of the SMF record to
Return be written, registers 2 to 13 must contain the same contents as they contained on entry, and register 15 must contain one of the following return codes:

0 The SMF record whose address is in register 1 is to be written

4 No SMF record is to be written.

SARSPFUX–Selection List Formatting Exit

SARSPFUX formats the SYSOUT selection list for online retrieval. The exit must be link-edited with authorization code 1 and placed in the library containing the CA-View load modules.

Standard Exit The standard exit that is supplied with CA-View formats the selection list with the following data: job name, job ID, archival date and time, generation number, physical location of the SYSOUT, number of lines, number of pages, and any exception code.

Register Contents: A parameter list is passed to the exit containing the addresses of the master
Entry control record, the group control record, the selection list heading, and the entry in the selection list. The contents of the significant general registers on entry to the exit are:

Reg 0 Contains entry codes as follows:

0 Creation of SYSOUT Selection List entry (for ALL, SARO and SAR modes)

4 Creation of Report Selection List entry (for ALL, SARO and SAR modes)

Reg 1	Address of the security parameter list (mapped by macro SARIPPL)
Reg 13	Address of a standard, 72-byte register save area
Reg 14	Return address
Reg 15	Entry point address

Register Contents: On return from the exit, registers 2 to 13 must contain the same contents as they
Return contained on entry.

SARSRQUX-Selection Request Exit

SARSRQUX examines each selection code entered on the SYSOUT selection list. The exit can process the request itself or pass it on to CA-View for the standard processing. Services are available to the exit to update the user data in the group control record for the SYSOUT group selected, and copy the SYSOUT group to a data set it creates. The exit must be link-edited with authorization code 1 and placed in the library containing the CA-View load modules.

Standard Exit The standard exit that is supplied with CA-View passes all selection codes back to CA-View for standard processing.

Register Contents: The contents of the significant general registers on entry to the exit are:
Entry

Reg 0	Contains entry codes as follows:
0	Selection request is initially being passed
4	Return from unsuccessfully updating the user data in the group control record
8	Return from successfully updating the user data in the group control record
12	Return from successfully writing SYSOUT group to data set
16	Return from unsuccessfully writing SYSOUT group to data set
Reg 1	Address of the security parameter list (mapped by macro SARLPL)
Reg 13	Address of a standard, 72-byte register save area
Reg 14	Return address
Reg 15	Entry point address

Register Contents:
Return

On return from the exit, registers 2 to 13 must contain the same contents as they contained on entry, and the exit must place a return code in register 15. The return codes are:

- 0 Request is processed
- 4 Exits processed request, no message is returned
- 8 Exits processed request, a message is returned, and the alarm is sounded
- 12 Exits processed request, a message is returned, and the alarm is not sounded
- 16 The GCR user data is updated and control is returned to the exit
- 20 The SYSOUT group is written to the exit-supplied DCB and control is returned to the exit

SARSTCUX—Archival Task Exit

SARSTCUX is invoked by the archival started task at the following times:

- When it begins processing a SYSOUT data set
- As it gets each SYSOUT record in the data set from JES
- When it completes processing of the data set

The exit can be used to modify the data set attributes and to analyze the records for exceptional conditions. The generation number, sequence number, and archival date cannot be modified.

Whenever an exceptional condition is identified, the exit can do any of the following:

- Return a message to be displayed via a WTO
- Set a short exception message in the group control record (GCRXCODE) which is displayed in the SYSOUT selection list used for retrieval
- Indicate that the SYSOUT for the job is to be printed
- Change or set the user accounting data in the group control record (GCRUSER)

The exit must be link-edited with authorization code 1 and placed in the library containing the CA-View load modules.

Standard Exit

The standard exit that is supplied with CA-View is a dummy routine which merely returns control to the caller.

Register Contents:
Entry

A parameter list is passed to the exit containing the addresses of the master control record, the group control record, and the SYSOUT record and the length of the SYSOUT record. The contents of the significant general registers on entry to the exit are:

- Reg 0 Contains entry codes as follows:
- 0 Specifies that a new data set has been selected
The GCR for the data set can be modified as needed (except the generation number, sequence number, and archival date).
 - 4 Specifies that a SYSOUT record is being passed for exceptional condition analysis
 - 8 Specifies the end of the current SYSOUT group
- Reg 1 Address of the security parameter list (mapped by macro SARSPL)
- Reg 13 Address of a standard, 72-byte register save area
- Reg 14 Return address
- Reg 15 Entry point address

Register Contents:
Return

On return from the exit, registers 2 to 13 must contain the same contents as they contained on entry.

In addition, for entry code 4 (SYSOUT record passed for exceptional analysis) and 8, registers 0, 1, and 15 must be returned as follows:

- 0 Address of the WTO message to issue, or zero if no message is to be issued
- 1 Length of the WTO message to issue, or zero if no message is to be issued
- 15 The following:
 - 0 The SYSOUT group print status is not changed
 - 4 The SYSOUT group is printed
 - 8 The SYSOUT group is not printed

A return code of 8, returned from an entry code 8, will override any prior print status selected.

SARSUBUX-Submit Exit

SARSUBUX is invoked by online retrieval to examine and control the submission of jobs for CA-View. The exit can modify the records for CA-View to submit or take over the submission of the JCL itself.

The exit must be link-edited with authorization code 1 and placed in the library containing the CA-View load modules.

Standard Exit The standard exit that is supplied with CA-View is a dummy routine that merely returns control to the caller.

Register Contents: Entry A parameter list is passed to the exit with the address and length of the JCL records and the mode of the caller. The contents of the significant general registers on entry to the exit are:

Reg 0	Contains entry codes as follows:
0	Initial call, no record passed
4	Record is passed to the exit
8	Final call, no exit passed
Reg 1	Address of the parameter list (mapped by macro SARBPL)
Reg 13	Address of a standard, 72-byte register save area
Reg 14	Return address
Reg 15	Entry point address

Register Contents: Return On return from the exit, registers 2 to 13 must contain the same contents as they contained on entry. For the initial call (function code 0), the exit must place a return code in register 15. The return codes are:

0	CA-View submits the records after they are processed by the exit.
4	CA-View does not submit the records; the exit handles the submission.

SARTPOUX-Tape Creation/Volser Range Exit

SARTPOUX is available for customizing tape creation and is most commonly used with tape-emulation optical devices in conjunction with the STORGRXn SARINIT parameters mxbks. It is invoked during the backup cycle and SARPAC when a new volume is created from a Volser range.

SARTPOUX can prevent the creation of the next volume in a range, causing SARTPOUX to be called with the volume after that, continuously, until SARTPOUX returns 0 to indicate that a given volume can be created. (An optional PTF or SARINIT parameter can prevent the Volser range from wrapping around. See version SARTPOU1 on the distribution tape for why and when this exit is necessary.)

Standard Exit

The standard exit that is supplied with CA-View is a dummy routine which merely returns 0 to indicate that the given volume can be created.

Register Contents:
Entry

The contents of the significant general registers on entry to the exit are:

Reg 0 Contains entry codes as follows:

0 Initialization

4 Termination

8 EOV was reached, proposal to create new volume

Reg 1 Address of the parameter list (for entry code 8 only):

Word 1 Address of volume name just created that reached EOV

Word 2 Address of name of proposed new volume

Reg 13 Address of a standard, 72-byte register save area

Reg 14 Return address

Reg 15 Entry point address

Register Contents:
Return

On return from the exit, registers 0-13 must contain the same contents as they contained on entry. A non-zero register 15 on exit from entry codes 0 and 4 is ignored.

If register 15 is non-zero on return from entry code 8, the proposed new volume will not be created; rather, SARTPOUX will be called again, proposing that the next volume from the range be created. SARTPOUX must eventually return 0 in register 15 to indicate that a given volume can be created. (Optionally, a PTF or a SARINIT parameter can be used to prevent the Volser range from wrapping, thus causing the backup cycle or SARPAC to abend in the event that the Volser range is exhausted. An administrator would have to reset the Volser range with SARINIT.)

SARUSxUX–User ID Determination Exits

SARUSxUX represents the user ID determination exits for online retrieval. The exits are:

SARUSAUX	For native VTAM online retrieval
SARUSBUX	For batch retrieval (SARBCH)
SARUSDUX	For CA-DRAS interface
SARUSRUX	For CA-Roscoe online retrieval
SARUSTUX	For native TSO and SPF/ISPF online retrieval
SARUSVUX	For VM/CMS online retrieval
SARUSXUX	For cross-memory feature

The exits are called by the appropriate retrieval option to supply and verify the user ID whenever the retrieval option is initially invoked by a user. For online retrieval options, the exit can optionally request CA-View to prompt the user for a user ID and password.

The exit must be link-edited with authorization code 1 and placed in the library containing the CA-View load modules.

Standard Exit

The standard exits that are supplied with CA-View perform the following:

SARUSAUX (VTAM)	Prompts the user for user ID and password
SARUSBUX (BATCH)	Extracts job name, RACF user ID for USER parameter on job card, or user ID from the PSCB
SARUSDUX(CA-DRAS)	Accepts user ID and password from CA-DocView and CA-DocView/Web
SARUSRUX (CA-ROSCOE)	Prompts the user for user ID and password
SARUSTUX (TSO/SPF/ISPF)	Extracts the user ID from the PSCB
SARUSVUX (VM/CMS)	Extracts the CMS user ID
SARUSXUX (CROSS MEMORY)	Prompts the user for user ID and password

Register Contents:
Entry

The contents of the significant general registers on entry to the exit are:

- Reg 0 Contains function codes as follows:
 - 0 Initiation of retrieval option
 - 4 Termination of retrieval option
- Reg 1 Address of the parameter list (mapped by macro SARUPL)
- Reg 13 Address of a standard, 72-byte register save area
- Reg 14 Return address
- Reg 15 Entry point address

Register Contents:
Return

On return from the exit, registers 2 to 13 must contain the same contents as they contained on entry, and the exit must place a return code in register 15. The return codes are:

- 0 Allows access to the user
- 4 Denies access to the user
- 8 Prompts user for user ID and password and returns control to exit (for online retrieval only)
- 12 For online retrieval, user is prompted for the user/password, a message is returned, and the alarm is sounded
 For batch retrieval, a message is printed, the requested function is denied, and processing continues with the next control statement.
- 16 For online retrieval, user is prompted for the user ID/password, a message is returned, and the alarm is not sounded
- 20 For online retrieval, verify that the user ID and password supplied by the exit are the same as those in the database
 For batch retrieval, a message is printed, the requested function is denied, and processing continues with the next control statement.

Other Security Exits

This exit can be used in conjunction with the SARSECUX and XMSCIXUX user exits. For more information, see the descriptions of these exits, and the Security section in Chapter 3, "Configuring CA-View."

SARXCTUX-Exceptional Condition Checking Exit

SARXCTUX can be customized to analyze and make a final decision when a user specified or system exceptional condition is detected. This exit can be used to change the GCRXCODE field, optionally bypassing exceptions for the remainder of the SYSOUT group, and communicate the exception results with a message or notify another system.

Standard Exit The standard exit distributed with the product is a null exit that simply returns to the caller.

Invoked by SARXCTUX is invoked by the archival task at the following times:

- During its initialization
- As it begins a new SYSOUT group
- After an exceptional condition is detected
- At the end of the SYSOUT group
- During its termination

Register Contents: Entry The SARXCL parameter list is passed to the exit containing:

- Address of the master control record (MCR)
- Address of the group control record (GCR) with the current XCODE in the GCRXCODE field (GCR is not present for initialization and termination entries)
- Address and length of the current record (for exception detected entry only)
- CA-View database high level index name
- Previous exception code, blanks if none
- Bypass (stop) SARXCT program flag
- 30-word user exit work area

The significant contents of the general registers on entry are:

- Reg 0 Contains function codes as follows:
- 0 Initialization of archival task
 - 4 Beginning of a new SYSOUT group
 - 8 Exceptional condition detected in the SYSOUT record during archiving
 The address and length of the record are provided in the SARXCL parameter list.
 - 12 End of the SYSOUT group
 - 16 Termination of the archival task
- Reg 1 Address of the SARXCL parameter list
- Reg 13 Address of a standard, 72-byte register save area
- Reg 14 Return address
- Reg 15 Entry point address

Register Contents:
Return

On return from the exit, registers 2 to 13 must contain the same contents as they contained on entry, and the exit must place a return code in register 15. The return codes are:

- 0 Normal return code
- 4 Entry code 8 only; bypass SARXCT exceptional condition program for the remainder of the group
 A customized SARSTCUX can still modify the GCRXCODE.



Chapter 12

Diagnostic and Error Messages

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Chapter 12

Diagnostic and Error Messages

In This Chapter

CA-View identifies dynamic allocation errors with the actual error and information codes returned from dynamic allocation. A description of the possible dynamic allocation error codes can be found in the tutorial for the online retrieval facility.

Alternatively, the definition of the error can be found in the IBM manual, *OS/VS2 MVS System Programming Library: Job Management, GC28-0627*.

This chapter documents the CA-View diagnostic and informational messages.

Diagnostic and Error Messages

EBCCIE01

NON-MVS/XA EXECUTION NOT ALLOWED

Reason: You are not using MVS/ESA; E22CEND requires MVS/ESA to work.

Action: Use MVS/ESA, then try again.

EBCCIE02

NON-CICS/XA EXECUTION NOT ALLOWED

Reason: The DFHPPT or RDO definition for the E22CIEND program is wrong. The comment indicates the specific error. You are possibly not using Version 2.1.1 or a later version of CICS. E22CEND requires Version 2.1.1 or a later version of CICS to work.

Action: Correct the E22CIEND definition.

EBCCIE03 XMS SUPPORT SUBTASK STOP FAILED

Reason: The E22XSTSK has not shut down after waiting 10 seconds. The termination program will stop with this error.

Action: Contact Computer Associates Technical Support.

EBCCIE10 E22XSTSK SUBTASK TERMINATE REQUESTED

Reason: The subtask termination program has requested that the MVS subtask terminate; this occurs when CICS is being shut down and the PLTSD program is executed, or when a terminal operator requests that the subtask be shut down through the operator interface (CICS OP20 transaction).

Action: None. This is an informational message.

EBCCIE99 XMS SUPPORT TASK STOPPED

Reason: E22CIEND terminated the MVS subtask program E22XSTSK.

Action: None. This is an informational message.

EBCCIN01 NON-MVS/ESA EXECUTION NOT ALLOWED

Reason: You are not using MVS/ESA. E22CINIT requires MVS/ESA to work.

Action: Use MVS/ESA, then try again.

EBCCIN02 NON-CICS/XA EXECUTION NOT ALLOWED

Reason: The DFHPPT or RDO definition for the E22CINIT program is wrong. The comment indicates what specifically was found to be in error. You are possibly not using Version 2.1.1 or a later version of CICS. E22CINIT requires Version 2.1.1 or a later version of CICS to work.

Action: Correct the E22CIEND definition.

EBCCIN03 USER SUB-POOL GETMAIN FAILURE

Reason: E22CINIT could not get enough storage to initialize. The MAXUSER parameter in E22XMCTR is used to determine the initial storage requirements.

Action: Reduce the value assigned to MAXUSER or increase the storage available above the 31-bit line in the region.

EBCCIN04 SERVICE TRANSACTION TRANID ERROR

Reason: E22CINIT could not start the service transaction defined in the E22XMCTR table. This transaction is required. The subtask is consequently terminated.

Action: Try to execute E22CINIT again.

EBCCIN05 EBCXSTSK ATTACH FAILURE

Reason: E22CINIT could not start the E22XSTSK subtask. The system cannot be initialized.

Action: Try to execute E22CINIT again.

EBCCIN06 EBCXSTSK ALREADY ACTIVE, CONTROL TABLE (E22XMCTR) RELOADED

Reason: The subtask is active when E22CINIT was executed. The control table was reloaded and no other changes were made. Some initialization options (MAXUSER, MSGLVL) are ignored.

Action: None. This is an informational message.

EBCCIN07 WAITLIST GETMAIN FAILURE

Reason: E22CINIT requires more storage above the 24-bit line to be initialized.

Action: Increase the MVS storage above the line required by increasing the region size of CICS or TSO.

EBCCIN08 CICS RELEASE DEPENDENT MISSING

Reason: E22CINIT could not find either the E22C0330 (for Version 3.3.0) or E22C0211 (for Version 2.1.1) CICS release-dependent program.

Action: Define the E22C0330 or E22C0211 program to the Resource Definition Online (RDO), then try again.

EBCCIN09 REQUIRED PROGRAMS MISSING FROM STEPLIB/DFHRPL

Reason: The E22CINIT program has checked and found one or more required programs cannot be loaded from the STEPLIB or DFHRPL.

Action: Review the CICS JOBLOG for EBCCIN10 or EBCCIN11 error messages indicating the specific programs that are not found. Copy the required programs to the STEPLIB/DFHRPL and restart the initialization process.

EBCCIN10 *pgm-name* NOT IN STEPLIB

Reason: The listed program is not found in the STEPLIB and is required for normal operation.

Action: Move the program to the CICS STEPLIB.

Note: This program cannot be loaded from the CICS DFHRPL libraries.

EBCCIN11 *pgm-name* NOT IN DFHRPL

Reason: The listed program is not found in the DFHRPL and is required for normal operation.

Action: Move the program to the CICS DFHRPL.

Note: The program cannot be loaded from the CICS STEPLIB or linklist.

EBCCIN99 XMS SUPPORT TASK READY (XM15)

Reason: E22CINIT finished initializing without error.

Action: None. This is an informational message.

EBCCIS01 NON-MVS/ESA EXECUTION NOT ALLOWED

Reason: You are not using MVS/ESA. E22CISRV requires or MVS/ESA to work.

Action: Use MVS/ESA, then try again.

EBCCIS02 NON-CICS/XA EXECUTION NOT ALLOWED

Reason: The DFHPPT or RDO definition for the E22CISRV program is wrong. The comment indicates what specifically was found to be in error. You are possibly not using Version 2.1.1 or a later version of CICS. E22CISRV requires Version 2.1.1 or a later version.

Action: Correct the E22CISRV definition.

EBCCIS03 E22XSTSK NOT ACTIVE

Reason: The E22XSTSK program is not executing. E22CISRV requires the E22XSTSK to work. E22CISRV ends. E22CINIT, which starts the subtask, was not executing, or the subtask was stopped.

Action: See your operations administrator for more information.

EBCCIS04 INVALID EBCXSCTL BLOCK FOUND

Reason: An internal error occurred in E22CISRV.

Action: Contact Computer Associates Technical Support.

EBCCIS05 E22CISRV PROGRAM IS NOT A TERMINAL PROGRAM

Reason: E22CISRV is not designed to be attached to a terminal. E22CISRV ends.

Action: Refrain from executing E22CISRV from a terminal.

EBCCIS06 E22CISRV PROGRAM HAS ABENDED

Reason: The service program has abended and will be shut down.

Action: Contact Computer Associates Technical Support.

EBCCMS02 PARAMETER FILE NOT FOUND

Reason: Unable to find CA-View parameter file SARIDX FILE.

Action: Ensure that the file is accessible, then retry.

EBCCMS03 UNDEFINED PARAMETER CONTROL STATEMENT

Reason: Parameter file contains an invalid control statement.

Action: Correct and retry.

EBCCMS04 I/O ERROR PROCESSING PARAMETER FILE CODE xx

Reason: An I/O error xx occurred trying to read the parameter file.

Action: Correct and retry.

EBCCMS05 INVALID OR MISSING USER NAME

Reason: The user name value on the USER control statement is either missing or invalid.

Action: Correct and retry.

EBCCMS06 INVALID USER PASSWORD

Reason: The password value on the USER control statement is either missing or invalid.

Action: Correct and retry.

EBCCMS07 INVALID OR MISSING HIGH-LEVEL NAME

Reason: The CA-View database high-level name password value on the NAME control statement is either missing or invalid.

Action: Correct and retry.

EBCCMS08 MODULE xxxxxxxx NOT FOUND

Reason: Unable to load the indicated program because the program is either not accessible or is not authorized.

Action: Correct and retry.

EBCCMS09 INVALID OR MISSING VIRTUAL DISK ADDRESS

Reason: The value on the VOL control statement is either missing or invalid.

Action: Correct and retry.

EBCCMS10 PRECEDING FILEDEF FAILED

Reason: The preceding FILEDEF failed.

Action: Correct and retry.

EBCCMS11 LINK FAILED FOR VIRTUAL VOLUME xxx

Reason: The attempt to link to the indicated volume as MW failed.

Action: Correct and retry.

EBCCMS12 VOLUME PREVIOUSLY DEFINED

Reason: You have more than one VOL control statement for the same volume.

Action: Correct and retry.

EBCCMS13 TOO MANY DISK VOLUMES

Reason: All 26 disk modes are in use.

Action: Release unnecessary disks and retry.

EBCCMS14 ACCESS FAILED FOR VIRTUAL VOLUME xxx

Reason: The ACCESS attempt for the indicated volume failed.

Action: Correct and retry.

EBCCMS15 UNABLE TO DETERMINE VM LEVEL FOR:xxxxxxxx

Reason: The indicated CP LEVEL is unknown to this version of the program, and automatic adjustments to differing VM internal control blocks cannot be performed.

Action: Contact Computer Associates Technical Support.

EBCCMS19 INVALID SPOOL PUNCH USER FOR SUBMIT

Reason: The value on the SUBMIT control statement is either missing or invalid.

Action: Correct and retry.

**EBCDBI00
through
EBCDBI13**

- EBCDBI00 DATABASE DOES NOT EXIST**
- EBCDBI01 ALLOCATION FAILED - ERROR=xxxx, INFO=xxxx**
- EBCDBI02 PHYSICAL I/O ERROR - ECB=xxxxxxxx**
- EBCDBI03 DATASET NUMBER OUT OF RANGE - DCCB=xxxxxxxx**
- EBCDBI04 DATASET RENAME FAILED FOR function**
- EBCDBI05 UNSUPPORTED DEVICE TYPE - BLKS/CYL=nnnn**
- EBCDBI06 MORE THAN 127 DATASETS - NUMBER=nnnnn**
- EBCDBI07 NO MORE SPACE IN DATASET**
- EBCDBI08 MISSING HIGH-LEVEL INDEX NAME OF DATABASE**
- EBCDBI09 LOGICAL I/O ERROR, xxxKEY=X'yyyyyyyyyyyyyyyyyy'**
- EBCDBI10 UNEXPECTED END OF DATA, xxxKEY=
X'yyyyyyyyyyyyyyyyyy'**
- EBCDBI11 RECORD NOT FOUND, xxxKEY=
X'yyyyyyyyyyyyyyyyyy'**
- EBCDBI12 LOCK DATASET ALREADY EXISTS**
- EBCDBI13 LOCK DATASET DOES NOT EXIST**

Reason: An I/O error occurred with the CA-View database as described by the text of the message. In these messages:

- xxx** Specifies the control block being processed (SFB, IFB, or XFB)
- yyyyyyyyyyyyyyyyyy** Specifies the key of the record in hex.
If the key is longer than 16 bytes, only the first 16 bytes are shown.

These messages can also have the following appended to them:

, **program-name** LOCATION *n*

where:

program-name Is the name of a CA-View program (such as SARPAM)

n Is a number identifying the location in the program where the error was detected

Action: Correct the problem with the database. This can require copying the database with the SARDBASE utility or, in the extreme case, recovering the database. See Chapter 7, "Database Utilities," and Chapter 8, "Backing Up and Recovering the Database," for information.

For information about the error codes contained in the EBCDBI01 message, refer to the IBM manual GC28-1645, *Application Development Guide: Authorized Assembler Language Programs*. See the section about requesting SVC99 functions.

EBCDBP01

CRITICAL ERROR. PROGRAM TERMINATED WITH DUMP. INVALID *blk*

Reason: A CA-View program has terminated, and a dump was generated. In this message *blk* specifies the control block CA-View expected but did not receive (usually IFB, SFB, XFB, or DBB). It may be suffixed with a number indicating which test point in the program detected the problem.

Action: Send the dump to Computer Associates Technical Support. Restart the program that was terminated. If the problem recurs, run SARDBASE VERIFY on the database. If the problem persists, contact Computer Associates Technical Support.

EBCDRV01

***pgm-name* SUBTASK ATTACHED**

Reason: The operator communication subtask has attached and is ready to accept operator commands. This message has a MSGLVL of NORM.

Action: None.

EBCDRV02

***pgm-name* SUBTASK ATTACHED**

Reason: The cross-memory signon subtask has attached and is ready to except cross-memory logon requests. This message has a MSGLVL of NORM.

Action: None.

EBCDRV03

pgm-name* SUBTASK ATTACHED APPLID=*applid

Reason: The VTAM signon subtask has attached to open the VTAM ACB and attach VTAM exits. This message has a MSGLVL of NORM.

Action: Correct the input parameters, then restart the region.

EBCDRV04

pgm-name* CANNOT BE USED WITH *parm-name=value

Reason: Initialization has detected incompatible input parameters. These parameters cannot be used together. For example, LGNFMT= cannot be specified when SARVTDB= is used because LGNFMT= specifies the FORMAT of the VTAM logon data, and SARVTDB= indicates the logon data is to be replaced by a specific qualifier. You cannot do both at the same time.

Action: Correct the input parameters, then restart the region.

EBCDRV05

XXXXXX= MUST BE SPECIFIED WITH YYYY=ZZZZ

Reason: Initialization has detected that a input parameter that requires a missing input parameter. For instance SARAPPL= must be specified when SARVTDB= is used because SARAPPL= specifies that the VTAM interface will be used, and SARVTDB= is only valid when VTAM is initialized.

Reason: Correct the input parameters, then restart the region.

EBCDRV06

VTAMPASS=YES IS SPECIFIED, BUT NO VTAM INTERFACE IS ACTIVE

Reason: Initialization has detected that a input parameter that specifies how VTAM logon processing will occur, but none of the VTAM interfaces (SARAPPL=, RMOAPPL= INBAPPL=) were specified.

Action: Correct the input parameters, then restart the region.

EBCDRV07 VTMSAA=YES IS SPECIFIED, BUT NO VTAM INTERFACE IS ACTIVE

Reason: Initialization has detected that a input parameter that specifies how VTAM logon processing will occur, but none of the VTAM interfaces (SARAPPL=, RMOAPPL= INBAPPL=) were specified.

Action: Correct the input parameters, then restart the region.

EBCDRV08 VTMQUERY= IS SPECIFIED, BUT NO VTAM INTERFACE IS ACTIVE

Reason: Initialization has detected that a input parameter that specifies how VTAM logon processing will occur, but none of the VTAM interfaces (SARAPPL=, RMOAPPL= INBAPPL=) were specified.

Action: Correct the input parameters, then restart the region.

EBCDRV09 VTAM INTERFACES ARE STARTED BY SARAPPL=, RMOAPPL= OR INBAPPL= SPECIFICATIONS

Reason: EBCDRV06, EBCDRV07, EBCDRV08 was issued previously. This message indicates that SARAPPL=, RMOAPPL=, or INBAPPL= can be used to initialize the VTAM interface.

Action: Correct the input parameters, then restart the region.

EBCDRV10 PC PROGRAM *pgm-name* ACTIVE ADDR=xxxxxx x.x xx/xx/xx

Reason: The displayed PC call routine has been loaded into the CSA at the address shown. The release, assembly date, and time are also shown. This message has a MSGLVL of INFO.

Action: None.

EBCDRV11 PC#xxxx ASID=xxxx XMEMCNTL ADDR=xxxxxx ID=xxxxxxx

Reason: The PC call function is now available to allow cross-memory communication to take place. The E22XMSGN routine must start before cross-memory signons can process. This message has a MSGLVL of NORM.

Action: None.

EBCDRV12 **NO USER INTERFACE WAS SPECIFIED, EITHER USE XMS=YES, OR USE A VTAM INTERFACE.**

Reason: Initialization has detected that a input parameter that requires a missing input parameter. For instance SARAPPL= must be specified when SARVTDB= is used. This is because SARAPPL= specifies that the VTAM interface will be used, and SARVTDB= is only valid when VTAM is initialized.

Action: Correct the input parameters, then restart the region.

EBCDRV30 ***pgm-name* DETACHED**

Reason: The operator communication subtask has detached and is no longer available. If any signon subtasks are still attached, they are forced off and the region will finish terminating. This message has a MSGLVL of CRIT.

Action: None.

EBCDRV31 ***pgm-name* DETACHED**

Reason: The cross-memory signon subtask has detached and is no longer available. This message has a MSGLVL of CRIT.

Action: None.

EBCDRV32 ***pgm-name* DETACHED APPLID=*applid***

Reason: The VTAM signon subtask has detached and is no longer available. This message has a MSGLVL of CRIT.

Action: None.

EBCDRV33 **E22DRVLG SYSLOG WRITER STOPPED**

Reason: The SYSPRINT writer subtask has stopped. This will normally occur when the region is shut down. It will also occur when the SYSPRINT log writer did not find a SYSPRINT DDCARD or the SYSPRINT log writer has abended for some reason.

Action: If the SYSLOG writer abended, you should contact Computer Associates Technical Support; otherwise no action should be taken.

EBCDRV40**SUBTASK FORCED TO DETACH PGM=*pgm-name***

Reason: The operator subtask terminated and this subtask was still active. CA-View has forced the subtask to shut down. This message has a MSGLVL of CRIT.

Action: Contact Computer Associates Technical Support.

EBCDRV80**MSG*n* QUEUE ALLOCATED *xxxxxxx* 1ST=*xxxxxxx*
SIZE=*xxxxxxx* FREE =*xxxxxxx***

Reason: The SYSPRINT message queue was allocated in storage.

Action: None.

EBCDRV90**RTUS POOL ALLOCATED *xxxxx* 1ST *xxxxx* END *xxxxx* SIZE *xxxx*
NEXT *xxxxx***

Reason: Issued when the cross-memory region started. The size and location of the pool of user control blocks received at system startup are displayed. This message has a MSGLVL of NORM.

Action: The USERMAX initialization parameter sets the maximum number of user control blocks to allocate in the region. To increase the USERMAX initialization parameter, you must shutdown and restart the region.

EBCDRV91**WAITING FOR TASK TO END**

Reason: The cross-memory region is terminating, but some subtasks are still active.

Action: Wait for all subtasks to end.

EBCDRV99***xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx***

Reason: The input parameter shown is unknown or invalid. The region will abend. This message has a MSGLVL of CRIT.

Action: None.

EBCIFP02 **CRITICAL ERROR. PROGRAM TERMINATED WITH DUMP.
INVALID *blk***

Reason: A CA-View program has terminated, and a dump was generated. In this message, *blk* specifies the control block CA-View expected but did not receive (usually IFB, SFB, XFB, or DBB). It may be suffixed with a number indicating which test point in the program detected the problem.

Action: Send the dump to Computer Associates Technical Support. Restart the program that terminated. If the problem recurs, run SARDBASE VERIFY on the database. If the problem persists, contact Computer Associates Technical Support.

EBCOCLS2 ***pgm-name* VTAM xxxxxxxxxxxxxxxxxxxxxxxxxxxx**
EBCOCLS4

Reason: The CLOSE operator command is attempting to close the VTAM interface ACB. The possible programs are SARVTAM, INBVTAM, RMOVTAM. This message has a MSGLVL of OPER.

Action: The text indicates whether there was an error. If there was an error, contact Computer Associates Technical Support.

EBCOCLS5 ***pgm-name* VTAM IS NOT VALID FOR THIS REGION**
EBCOCLS6

Reason: The CLOSE operator command has been issued, but the VTAM interface ACB is not open. The possible programs are INBVTAM and RMOVTAM. This message has a MSGLVL of OPER.

Action: Verify that the specified ACB is open.

EBCOCM10 **OPERAND (*xxxxxxx* - VALUE *n*) MUST BE YES/NO**

Reason: The operator command operand must be either YES or NO. This message has a MSGLVL of OPER.

Action: Re-issue the command with a valid operand.

EBCOCM11 OPERAND (xxxxxxx - VALUE n) CAN ONLY HAVE A SINGLE VALUE

Reason: The operator command operand must not specify more than one value. This message has a MSGLVL of OPER.

Action: Re-issue the command with a valid operand.

EBCOCM12 OPERAND (xxxxxxx - VALUE n) CAN ONLY HAVE 10 VALUES

Reason: The operator command operand is limited to 10 values. This message has a MSGLVL of OPER.

Action: Re-issue the command with a valid operand.

EBCOCM13 OPERAND (xxxxxxx - VALUE n) INVALID NUMERIC OPERAND

Reason: The operator command operand must be a number. This message has a MSGLVL of OPER.

Action: Re-issue the command with a valid operand.

EBCOCM14 OPERAND (xxxxxxx) CANNOT HAVE A VALUE

Reason: The operator command operand cannot be assigned a value. This message has a MSGLVL of OPER.

Action: Re-issue the command with a valid operand.

EBCOCM15 USER=xxxxxxxxxxxxxxxxxxxxxxxxx WAS NOT FOUND

Reason: The operator command could not locate this user on the system. This message has a MSGLVL of OPER.

Action: Re-issue the command with a valid user's connect ID.

EBCOCMD1 --> *command-name*

Reason: The displayed operator command was entered. This command will now be processed. This message has a MSGLVL of OPER.

Action: None.

EBCOCMD2

COMMAND (*command-name*) NOT KNOWN

Reason: The displayed operator command is not valid for cross-memory. This message has a MSGLVL of OPER.

Action: Re-enter a valid cross-memory operator command.

EBCOCMD3

OPERAND (*operand-name*) NOT KNOWN

Reason: The operator command operand is not valid. This message has a MSGLVL of OPER.

Action: Re-enter the cross-memory operator command with a valid operand.

EBCOCMD4

OPERAND (*operand-name*) IS NOT VALID FOR *command-name*

Reason: The operand is not valid for this operator command. This message has a MSGLVL of OPER.

Action: Re-issue the command with a valid operand.

EBCOCMD5

OPERAND (*operand-name*) DID NOT HAVE A VALUE

Reason: The operator command operand did not specify a value. This message has a MSGLVL of OPER.

Action: Re-issue the command with a value.

EBCOCMD6

OPERAND (*xxxxxxx* - VALUE *n*) UNBALANCED QUOTES

Reason: The operator command operand must end with a quote mark if it begins with a quote mark. This message has a MSGLVL of OPER.

Action: Re-issue the command with balanced quote marks.

EBCOCMD7

OPERAND (*xxxxxxx* - VALUE *M*) STRING NOT VALID

Reason: The operator command operand must not specify a character string. This message has a MSGLVL of OPER.

Action: Re-issue the command with a valid operand.

EBCOCMD8 OPERAND (xxxxxxx - VALUE *n*) EXCEEDS *n* CHARACTERS

Reason: The operator command operand must not be more than *n* characters. This message has a MSGLVL of OPER.

Action: Re-issue the command with a valid operand length.

EBCOCMD9 INTERNAL ERROR TYPE UNKNOWN

Reason: There was an internal error in the operator routine. This message has a MSGLVL of OPER.

Action: Contact Computer Associates Technical Support.

EBCOCNL1 *userid* USER CANCELED BY OPERATOR REQUEST

Reason: The CANCEL command has abended the requested user subtask. This message has a MSGLVL of OPER.

Action: None.

EBCOCNL2 MUST SPECIFY ALL/USER/UID#

Reason: The CANCEL command did not indicate which user to cancel. This message has a MSGLVL of OPER.

Action: Re-issue the CANCEL command with a user connect ID.

EBCOCNL4 NO USERS WERE CONNECTED

Reason: The CANCEL command did not find any users in this region. This message has a MSGLVL of OPER.

Action: None.

EBCOCNL9 INTERNAL ERROR HAS OCCURRED

Reason: The CANCEL command had an internal error. This message has a MSGLVL of OPER.

Action: Contact Computer Associates Technical Support.

EBCOLS11 ** SUPPORT TASK USER LIST -----**

Reason: The operator list command is processing a LIST USER,ALL and found an XMSSUB=YES subtask with active control blocks.

Action: None.

EBCOLS12 ** SUPPORT TASK LOGON QUEUE -----**

Reason: The operator list command is processing a LIST USER,ALL and found a pending logon queue with active control blocks.

Action: None.

EBCOLS14 XX

Reason: The operator list command is processing a LIST S,TABLE. The message displays the contents of the E22XMCTR table that is currently in use.

Action: None.

EBCOLST1 *nn vtamacb.terminalid userid appl status dbname*

Reason: LIST command issued for a cross-memory region, USER display. This message has a MSGLVL of OPER.

Action: None. This is an informational message.

EBCOLST2 *username max cur hi xms vtm status flag asid longwt version*

Reason: LIST command issued for a cross-memory region, STATUS display. This message has a MSGLVL of OPER.

Action: None.

EBCOLST3 **DOES NOT SPECIFY STATUS USERS OR USER/UID#**

Reason: The LIST command did not indicate what users are to be listed. This message has a MSGLVL of OPER.

Action: Re-issue the command, specifying user connect-IDs.

EBCOLST4 **LIST REQUEST SPECIFIES STATUS AND USER=, UID#=, USERS ACTIVE, or INACTIVE**

Reason: The operands specified with the STATUS LIST command are not valid STATUS operands. This message has a MSGLVL of OPER.

Action: Re-issue the command with valid operands.

EBCOLST5 **NO USERS WERE CONNECTED**

Reason: The LIST command did not find any users in this region. This message has a MSGLVL of OPER.

Action: None.

EBCOLST6 **SUBSYS NOT ON SSCT CHAIN**

Reason: The LIST command had an internal error. This message has a MSGLVL of OPER.

Action: Contact Computer Associates Technical Support.

EBCOLST7 **XMEMCNTL INVALID ID BLOCK**

Reason: The LIST command had an internal error. This message has a MSGLVL of OPER.

Action: Contact Computer Associates Technical Support.

EBCOLST8 **RTUS INVALID ID BLOCK**

Reason: The LIST command had an internal error. This message has a MSGLVL of OPER.

Action: Contact Computer Associates Technical Support.

EBCOLST9 **XXXXXXXXXXXX**

Reason: LIST command display of database status.

Action: None.

EBCOLST10

XXXXXXXXXXXX

Reason: LIST command display of XMSSUB task status.

Action: None.

EBCOMDF1

USERMAX CHANGED

Reason: The CHANGE command has altered the USERMAX parameter. This message has a MSGLVL of OPER.

Action: None.

EBCOMDF2

LONGWAIT CHANGED

Reason: The CHANGE command has altered the LONGWAIT parameter. This message has a MSGLVL of OPER.

Action: None.

EBCOMDF3

CANCEL CHANGED

Reason: The CHANGE command has altered the CANCEL parameter. This message has a MSGLVL of OPER.

Action: None.

EBCOMDF4

VTAMPASS CHANGED

Reason: The CHANGE command has altered the VTAMPASS parameter. This message has a MSGLVL of OPER.

Action: None.

EBCOMDF5

USERMAX CHANGED

Reason: The CHANGE command has altered the USERMAX parameter. This message has a MSGLVL of OPER.

Action: None.

EBCOMDF6**BAD XMEMCNTL FOUND**

Reason: The CHANGE command had an internal error. This message has a MSGLVL of OPER.

Action: Contact Computer Associates Technical Support.

EBCOMDF9**INVALID VALUE**

Reason: The CHANGE command has found a value not in range. This message has a MSGLVL of OPER.

Action: Re-issue the command with a valid operand.

EBCOOPN2**SARVTAM xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx**

Reason: The OPEN command attempted to open the SARVTAM ACB, the text indicates if the request was successful or not. This message has a MSGLVL of OPER.

Action: If the request was not successful, contact Computer Associates Technical Support.

EBCOOPN3**SARVTAM xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx**

Reason: The OPEN command has attempted to open the SARVTAM ACB, the message indicates if the request was successful or not. This message has a MSGLVL of OPER.

Action: If the request was not successful, contact Computer Associates Technical Support.

EBCOPR01**OPER FUNCT xxxxxxxx ADDR=xxxxxxx x.x xx/xx/xx**

Reason: The operator routine was loaded at the address indicated. This message has a MSGLVL of INFO.

Action: None.

EBCOPR08**OPERATOR FUNCTION NOT SUPPORTED**

Reason: The operator routine was entered and there was no MODIFY or STOP command to process. This message has a MSGLVL of CRIT.

Action: Contact Computer Associates Technical Support.

EBCOPR09 ATTACH OF COMMAND

Reason: The OPEN command has attempted to open the SARVTAM ACB, the message indicates if the request was successful or not. This message has a MSGLVL of CRIT.

Action: If the request was not successful, contact Computer Associates Technical Support.

EBCOQSH1 XMS xxxxxxxxxxxxxxxxxxxxxxxxx

Reason: The QUIESCE command has attempted to QUIESCE the SARVTAM ACB, the message indicates if the request was successful or not. This message has a MSGLVL of OPER.

Action: Depends on the actual message. If the request was not successful, correct and re-issue the command.

EBCOQSH2 SARVTAM xxxxxxxxxxxxxxxxxxxxxxxxx

Reason: The QUIESCE command has attempted to QUIESCE the SARVTAM ACB, the message indicates if the request was successful or not. This message has a MSGLVL of OPER.

Action: Depends on the actual message. If the request was not successful, correct and re-issue the command.

EBCOQSH3 RMOVTAM xxxxxxxxxxxxxxxxxxxxxxxxx

Reason: The QUIESCE command has attempted to QUIESCE the RMOVTAM ACB, the message indicates if the request was successful or not. This message has a MSGLVL of OPER.

Action: Depends on the actual message. If the request was not successful, correct and re-issue the command.

EBCORSM1 XMS xxxxxxxxxxxxxxxxxxxxxxxxx

Reason: The RESUME command has attempted to RESUME the SARVTAM ACB, the message indicates if the request was successful or not. This message has a MSGLVL of OPER.

Action: Depends on the actual message. If the request was not successful, correct and re-issue the command.

EBCORSM2

SARVTAM xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Reason: The RESUME command has attempted to RESUME the SARVTAM ACB, the message indicates if the request was successful or not. This message has a MSGLVL of OPER.

Action: Depends on the actual message. If the request was not successful, correct and re-issue the command.

EBCORSM3

RMOVTAM xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Reason: The RESUME command has attempted to RESUME the RMOVTAM ACB, the message indicates if the request was successful or not. This message has a MSGLVL of OPER.

Action: Depends on the actual message. If the request was not successful, correct and re-issue the command.

EBCOSPN1

XMS xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Reason: The SUSPEND command has attempted to SUSPEND the SARVTAM ACB, the message indicates if the request was successful or not. This message has a MSGLVL of OPER.

Action: Depends on the actual message. If the request was not successful, correct and re-issue the command.

EBCOSPN2

SARVTAM xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Reason: The SUSPEND command has attempted to SUSPEND the SARVTAM ACB, the message indicates if the request was successful or not. This message has a MSGLVL of OPER.

Action: Depends on the actual message. If the request was not successful, correct and re-issue the command.

EBCOSPN3 RMOVTAM xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Reason: The SUSPEND command has attempted to SUSPEND the RMOVTAM ACB; the message indicates if the request was successful or not. This message has a MSGLVL of OPER.

Action: Depends on the actual message. If the request was not successful, correct and re-issue the command.

EBCOSTP1 XMS xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Reason: The SHUTDOWN command has attempted to SHUTDOWN the SARVTAM ACB; the message indicates if the request was successful or not. This message has a MSGLVL of OPER.

Action: Depends on the actual message. If the request was not successful, correct and re-issue the command.

EBCOSTP2 SARVTAM xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Reason: The SHUTDOWN command has attempted to SHUTDOWN the SARVTAM ACB; the message indicates if the request was successful or not. This message has a MSGLVL of OPER.

Action: Depends on the actual message. If the request was not successful, correct and re-issue the command.

EBCOSTP3 RMOVTAM xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Reason: The SHUTDOWN command has attempted to SHUTDOWN the RMOVTAM ACB; the text will indicate if the request was successful or not. This message has a MSGLVL of OPER.

Action: Depends on the actual message. If the request was not successful, correct and re-issue the command.

**EBCSFP01 CRITICAL ERROR. PROGRAM TERMINATED WITH DUMP
INVALID blk**

Reason: A CA-View program has terminated, and a dump was generated. In this message, *blk* specifies the control block CA-View expected but did not receive (usually IFB, SFB, XFB, or DBB). It may be suffixed with a number indicating which test point in the program detected the problem.

Action: Send the dump to Computer Associates Technical Support. Restart whatever program was terminated. If the problem recurs, run SARDBASE VERIFY on the database. If the problem persists, contact Computer Associates Technical Support Technical Support.

EBCXFP01**CRITICAL ERROR. PROGRAM TERMINATED WITH DUMP
INVALID *blk***

Reason: A CA-View program has terminated, and a dump was generated. In this message, *blk* specifies the control block CA-View expected but did not receive (usually IFB, SFB, XFB, or DBB). It may be suffixed with a number indicating which test point in the program detected the problem.

Action: Send the dump to Computer Associates Technical Support. Restart whatever program was terminated. If the problem recurs, run SARDBASE VERIFY on the database. If the problem persists, contact Computer Associates Technical Support.

EBCXMC01**NON-MVS/XA EXECUTION NOT ALLOWED**

Reason: You are not using MVS/XA or MVS/ESA. E22XMCIC requires MVS/XA or MVS/ESA to work.

Action: Use MVS/XA or MVS/ESA, then try again.

EBCXMC02**NON-CICS/XA EXECUTION NOT ALLOWED**

Reason: The DFHPPT or RDO definition for the E22XMCIC program is wrong. The comment indicates what specifically was found to be in error. You are possibly not using Version 2.1.1 or a later version of CICS. E22XMCIC requires Version 2.1.1 or a later version of CICS to work.

Action: Correct the E22XMCIC definition.

EBCXMC03**E22XSTSK NOT ACTIVE**

Reason: The E22XSTSK program is not executing. E22XMCIC requires the E22XSTSK to work. E22XMCIC ends. E22CINIT, which starts the subtask, was not executing, or the subtask was stopped.

Action: See your operations administrator for more information.

EBCXMC04

INVALID EBCXSCTL BLOCK FOUND

Reason: An internal error occurred in E22XMCIC.

Action: Contact Computer Associates Technical Support.

EBCXMC05

E22XMCIC PROGRAM MUST BE RUN FROM A TERMINAL

Reason: E22XMCIC is designed to execute attached to a terminal. E22XMCIC ends.

Action: Execute E22XMCIC from a terminal.

EBCXMC06

TRANSACTION COMAREA WRONG SIZE

Reason: An internal error occurred in E22XMCIC.

Action: Contact Computer Associates Technical Support.

EBCXMC07

COMAREA ID WRONG

Reason: An internal error occurred in E22XMCIC.

Action: Contact Computer Associates Technical Support.

EBCXMC08

EBCXSCTL ADDRESS CHANGED

Reason: An internal error occurred in E22XMCIC.

Action: Contact Computer Associates Technical Support.

EBCXMC09

E22CICUX PROGRAM NOT FOUND

Reason: E22XMCIC cannot find the E22CICUX program. E22XMCIC requires the E22CICUX to work. E22XMCIC ends.

Action: Define E22CICUX for CICS RDO (Resource Definition Online), then try again.

EBCXMC10

USER CONTROL BLOCK NOT ACTIVE

Reason: An internal error occurred in E22XMCIC.

Action: Contact Computer Associates Technical Support.

EBCXMC11 USER CONNECTION LOST

Reason: E22XMCIC cannot find the user connection to continue the session. E22XMCIC ends.

Action: Restart the transaction.

EBCXMC12 EBCXSUSR ADDRESS INVALID

Reason: An internal error occurred in E22XMCIC.

Action: Contact Computer Associates Technical Support.

EBCXMC13 EBCXSTSK ABENDED, SESSION ABORTED

Reason: An internal error occurred in E22XMCIC.

Action: Contact Computer Associates Technical Support.

EBCXMC14 DATA PASSED EXCEEDS 102 BYTES

Reason: Parameter data larger than 102 bytes was passed to E22XMCIC.

Action: Contact Computer Associates Technical Support.

EBCXMC15 CICS SESSION TIMEOUT= EXCEEDED

Reason: E22XMCIC timed out waiting for the cross-memory region to respond.

Action: If this condition occurs frequently, extend the parameter TIMEOUT in the E22XMCTR table, if possible.

EBCXMC16 EBCXSTSK STOPPED, SESSION ABORTED

Reason: E22XMCIC found that E22XSTSK is shut down. E22XMCIC ends. E22CINIT, which starts the subtask, was not executing, or the subtask was stopped or failed.

Action: See your operations administrator for more information.

EBCXMC17 XMS SESSION EXCEEDED LONGWAIT

Reason: Cross-memory region terminated the session because the XMS session exceeded the value of LONGWAIT in the cross-memory region.

Action: If this condition occurs frequently, increase the value of LONGWAIT in the cross-memory region start up file.

EBCXMC18 XMS REGION STOPPED

Reason: E22XMCIC found that the cross-memory region was terminated. E22XMCIC ends.

Action: Start the cross-memory region, then try again.

EBCXMC19 SUBTASK USERMAX LIMIT EXCEEDED

Reason: The maximum number of users, specified by the USERMAX parameter of the E22XMCTR macro EBCXMOPT has been reached, and no more sessions are allowed.

Action: Try to log on later, or increase the USERMAX value and restart the CICS region.

EBCXMC20 LOGON BLOCK FULL

Reason: The maximum number of logons, specified in the E22XMCTR macro EBCXMOPT, has been reached.

Action: Try to log on later, or increase the value and restart the CICS region.

EBCXMC21 RELEASE DEPENDENT PROGRAM NOT FOUND

Reason: The DFHPPT or RDO definition for the CICS release dependent program is missing. The program name varies with the CICS release we are executing under. E22C0330 would be used for CICS 3.3.0, E22C0212 would be used for CICS 2.1.2. The last three digits indicate the CICS release.

Action: Correct the E22C0*nmn* definition.

EBCXMC90 RELEASE DEPENDENT PROGRAM NOT FOUND

Reason: The E22XMCIC application program has abended.

Action: Contact Computer Associates Technical Support.

EBCXMM00

ACTION COMPLETED WITH NO ERRORS

Reason: The previous operation completed successfully.

Action: None. This message is provided for reference only.

EBCXMM01

ACTION COMPLETED, ONE LINE MESSAGE IN BUFFER

Reason: An internal error occurred in cross-memory region.

Action: Contact Computer Associates Technical Support.

EBCXMM02

REQUESTED CONNECTION ID CANNOT BE FOUND

Reason: Your session has been lost. This condition occurs when the time you specified for LONGWAIT is exceeded in the cross-memory region, the cross-memory region is shut down or abnormally ends, or an operator cancels your session.

Action: Restart your session.

EBCXMM03

CONNECTED PROGRAM ENDED NORMALLY

Reason: You have ended your session, and the cross-memory session completed without errors.

Action: None. This message is provided for reference only.

EBCXMM04

CONNECTED PROGRAM ABENDED

Reason: Your session was terminated. The cross-memory session failed.

Action: Check the job log of the cross-memory region. Restart your session.

EBCXMM05

UNABLE TO SIGNON - ALREADY AT MAXUSERS

Reason: All cross-memory regions are at the maximum user limit.

Action: Start more cross-memory regions to enable more users.

EBCXMM06 UNABLE TO SIGNON - SIGNONS ARE SUSPENDED

Reason: Someone suspended the cross-memory region.

Action: Review the cross-memory log to identify who suspended the region.
Have that person release the cross-memory region.

EBCXMM07 RECONNECTION REQUEST FAILED

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

EBCXMM08 REQUESTED SERVICE IS UNKNOWN

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

EBCXMM09 UNABLE TO SIGNON - SYSTEM IS QUIESCING

Reason: The cross-memory region is being terminated and logons are no longer accepted.

Action: Review the cross-memory log to identify who terminated the cross-memory region. Start the cross-memory region.

EBCXMM10 REQUESTED ITEM IS NOT HANDLED BY SERVICE

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

EBCXMM11 UNABLE TO SIGNON - SYSTEM IN STARTUP

Reason: The cross-memory region has not finished initializing.

Action: Wait for cross-memory to finish initializing, then retry your request.

EBCXMM12 CONNECTION ID IS ALREADY DISCONNECTED

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

EBCXMM13 GETMAIN FAILURE FOR USER TABLE ENTRY

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

EBCXMM14 TIMEOUT WAITING FOR PROGRAM RESPONSE

Reason: The last request exceeded the time-out value in the E22XMCTR table entry for this transaction.

Action: If too many of these failures occur, review and extend the TIMEOUT parameter.

EBCXMM15 CROSS-MEMORY ASCB CANNOT BE FOUND

Reason: An internal error occurred in CROSS-MEMORY.

Action: Contact Computer Associates Technical Support.

EBCXMM16 DISCONNECTION REQUEST FAILED

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

EBCXMM17 GETMAIN FAILURE FOR COMMUNICATION BLOCK

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

EBCXMM18 NO ACTIVE CROSS-MEMORY SYSTEM AVAILABLE

Reason: A cross-memory region must be executing to log on.

Action: Start a cross-memory region, then try to log on again.

EBCXMM19 CROSS-MEMORY CONTROL BLOCK IS INVALID

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

EBCXMM20 CONNECTION ALREADY ESTABLISHED

Reason: The connect identifier you specified is already in use.

Action: Make sure E22CICUX is generating a unique connect identifier for each user.

EBCXMM21 PARAMETER LIST PASSED IS INVALID

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

EBCXMM22 GETMAIN FAILURE FOR SIGNON REQUEST BLOCK

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

EBCXMM23 USER TABLE ENTRY IS INVALID

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

EBCXMM24 SIGNON QUEUE ELEMENT HAS INVALID FORMAT

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

EBCXMM25 ATTACH OF REQUESTED PROGRAM FAILED

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

EBCXMM26**USER TABLE CANNOT BE FOUND**

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

EBCXMM27**GETMAIN FAILURE FOR SUBTASK PARAM LIST**

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

EBCXMM28**XMSRETMG - REQUESTED CODE IS UNKNOWN**

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

EBCXMM29**ONLY PARTIAL TEXT MOVED**

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

EBCXMM30**XMS INTERFACE CONTROL BLOCK INVALID**

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

EBCXMT01**XXXXXXXX - LOGON REQ - XXXXXXXX**

Reason: A request to log onto XMSSUB has been received.

Action: None, the logon is being processed.

EBCXMT02**XXXXXXXX - INPUT REQ - XXXXXXXX**

Reason: An input request has been received from the terminal.

Action: None, the request is being processed.

EBCXMT03

E22XSTSK NOT ACTIVE

Reason: The E22XSTSK program is not executing. XMSSUB=YES is required in the cross-memory address space, or the cross-memory region is not active.

Action: Verify that XMSSUB=YES, and that the cross-memory region is active.

EBCXMT04

INVALID EBCXSCTL BLOCK FOUND

Reason: An internal error occurred in E22XMCIC.

Action: Contact Computer Associates Technical Support.

EBCXMT05

E22XMCIC TERMINAL NOT SUPPORTED

Reason: The terminal type is invalid.

Action: Verify that the terminal type is 3270, or a PC emulator.

EBCXMT06

TRANSACTION COMAREA WRONG SIZE

Reason: An internal error occurred.

Action: Contact Computer Associates Technical Support.

EBCXMT07

COMAREA ID WRONG

Reason: An internal error occurred.

Action: Contact Computer Associates Technical Support.

EBCXMT08

EBCXSCTL ADDRESS CHANGED

Reason: An internal error occurred.

Action: Contact Computer Associates Technical Support.

EBCXMT09

xxxxxxx PROGRAM NOT FOUND

Reason: The specified user connection exit was not found.

Action: Place the user exit in the LOADLIB.

EBCXMT10 USER CONTROL BLOCK NOT ACTIVE

Reason: An internal error occurred in E22XMCIC.

Action: Contact Computer Associates Technical Support.

EBCXMT11 USER CONNECTION LOST

Reason: E22XMCIC cannot find the user connection to continue the session. E22XMCIC ends.

Action: Restart the transaction.

EBCXMT12 EBCXSUSR ADDRESS INVALID

Reason: An internal error occurred in E22XMCIC.

Action: Contact Computer Associates Technical Support.

EBCXMT13 EBCXSTSK ABENDED, SESSION ABORTED

Reason: An internal error occurred in E22XMCIC.

Action: Contact Computer Associates Technical Support.

EBCXMT14 DATA PASSED EXCEEDS 102 BYTES

Reason: Parameter data larger than 102 bytes was passed to E22XMCIC.

Action: Contact Computer Associates Technical Support.

EBCXMT15 TSO SESSION TIMEOUT EXCEEDED

Reason: A time-out occurred waiting for the cross-memory region to respond.

Action: If this condition occurs frequently, increase the parameter TIMEOUT in the E22XMCTR table, if appropriate.

EBCXMT16 EBCXSTSK STOPPED, SESSION ABORTED

Reason: E22XMCIC found that E22XSTSK is shut down. E22XMCIC ends. E22CINIT, which starts the subtask, was not executing, or the subtask was stopped or failed.

Action: See your operations administrator for more information.

EBCXMT17 XMS SESSION EXCEEDED LONGWAIT

Reason: Cross-memory terminated the session because the XMS session exceeded the value of LONGWAIT in the cross-memory region.

Action: If this condition occurs frequently, increase the value of LONGWAIT in the cross-memory startup file.

EBCXMT18 XMS REGION STOPPED

Reason: E22XMCIC found that the cross-memory region was terminated. E22XMCIC ends.

Action: Start the cross-memory region, then try again.

EBCXMT20 INVALID XMEMCNTL FOUND

Reason: The region control block was invalid, or at the incorrect release level for this user connection.

Action: Check the status of the cross-memory regions, as they may have terminated.

EBCXMT21 NO ACTIVE XMS REGION AVAILABLE

Reason: There was no active cross-memory region available.

Action: Start up a cross-memory region. It must have the default SUBSYS= value, and must specify XMSSUB=YES. See the *CA-View Installation Guide* for details.

EBCXMT24 E22XSTSK USER MAX EXCEEDED

Reason: The USERMAX value was exceeded.

Action: If possible, increase the parameter value.

EBCXMT25 CANNOT FIND CROSS-MEMORY REGION

Reason: No cross-memory region with the default SUBSYS= value has been started.

Action: Start up a cross-memory region with the default SUBSYS= value.

EBCXMT26 XMSSUB=YES SUPPORT NOT ACTIVE

Reason: No cross-memory region with XMSSUB=YES value is active.

Action: Start up a cross-memory region with XMSSUB=YES.

EBCXMT27 SUPPORT SUBTASK NOT ACTIVE

Reason: A cross-memory region with XMSSUB=YES has terminated, or the subtask has failed.

Action: Start up a cross-memory region with XMSSUB=YES.

EBCXMT28 NON-MVS/XA EXECUTION NOT ALLOWED

Reason: The application interface must be in 31-bit mode.

Action: Contact Computer Associates Technical Support.

EBCXMT29 NON-TSO/XA EXECUTION NOT ALLOWED

Reason: The application interface must be in 31-bit mode.

Action: Contact Computer Associates Technical Support.

EBCXMT30

LOGON BLOCKS FULL

Reason: All user logon blocks are in use. The system may be having problems logging on a user and all the logon blocks are full. Try again later.

Action: None.

EBCXMT31

NO ACTIVE XMS REGION FOUND

Reason: The cross-memory region may have failed.

Action: Contact Computer Associates Technical Support.

EBCXMT32

INVALID XMEMCNTL FOUND

Reason: An internal error has occurred.

Action: Contact Computer Associates Technical Support.

EBCXMT33

BAD IMS TERMINAL TYPE

Reason: The operand of the IMS/DC transaction does not specify a valid terminal type.

Action: Re-enter the transaction with a proper operand.

EBCXMT34

BAD TERMINAL OPTIONS

Reason: The operand of the IMS/DC transaction does not specify a valid terminal option.

Action: Re-enter the transaction with a proper operand.

EBCXMT35

IMS/DC BAD PSB RETURN CODE

Reason: An unexpected return code was received from IMS/DC.

Action: Contact Computer Associates Technical Support.

EBCXMT39 REQUIRED PROGRAMS MISSING FROM STEPLIB

Reason: The E22XMTSO program has checked and found that one or more required programs cannot be loaded from the STEPLIB. The EBCXMT44 message will be displayed indicating the missing programs that must be available.

Action: Copy the required programs to the STEPLIB, then restart the initialization process.

EBCXMT40 USER EXIT DENIED ACCESS

Reason: A non-zero return code was received from the user connection exit.

Action: Contact Computer Associates Technical Support.

EBCXMT41 IMS/DC CALL (*func*) FAILED RC=*rc*, SESSION TERMINATED

Reason: The indicated IMS/DC function call failed with IMSIO_STAT set to the given return code. Check the appropriate IMS manual for function and return code meanings.

Action: If the cause of the problem cannot be determined, contact Computer Associates Technical Support.

**EBCXMT44 xxxxxxxx yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy NOT FOUND
ON STEPLIB**

Reason: The E22XMTSO program has checked and found one or more required programs that cannot be loaded from the STEPLIB.

Action: Copy the required programs to the STEPLIB, then restart the initialization process.

**EBCXSC00 QUEUE ALLOCATED # 1ST=*1st* SIZE=*size* FREE=*free*
EBCXSCTL=*xscfl* EBCXSUSR-1ST=*xsuser* XMPCSGPR-1=*pcsgpr***

Reason: This error message is displayed for debugging purposes.

In this message, #, *1st*, *size*, *free*, *xscfl*, *xsuser*, and *pcsgpr* represent additional parameter values provided for further reference.

Action: None. This is an informational message.

EBCXSST1 NO USER TABLE --- RECOVERY- Sn ----SUBTASK WAIT----

Reason: E22XSTSK abnormally ended. In this message, *n* represents an additional parameter value provided for further reference.

Action: None. E22XSTSK attempts to automatically restart itself.

EBCXSST2 PSW=#A #B #C #D E22XSTSK EPA=#E

Reason: E22XSTSK abnormally ended. In this message, #A, #B, #C, #D, and #E represent additional parameter values provided for further reference.

Action: None. E22XSTSK attempts to automatically restart itself.

**EBCXSST3
GPR 0-3 #A #B #C #D
GPR 4-7 #A #B #C #D
GPR 8-11 #A #B #C #D
GPR 12-15 #A #B #C #D**

Reason: E22XSTSK abnormally ended. In this message, #A, #B, #C, and #D represent additional parameter values provided for further reference.

Action: None. E22XSTSK attempts to automatically restart itself.

**EBCXST01
SUBTASK E22XSTSK ACTIVE ADDR=# 1.5 M/D/Y H.M
AWTO FUNCT E22AWTO ACTIVE ADDR=# 1.5 M/D/Y H.M
QMSG FUNCT E22QMSG ACTIVE ADDR=# 1.5 M/D/Y H.M
SUBT ETXR E22XSETX ACTIVE ADDR=# 1.5 M/D/Y H.M
SUBT ESTAE E22XSSTA ACTIVE ADDR=# 1.5 M/D/Y H.M
3270 DEV E22D3270 ACTIVE ADDR=# 1.5 M/D/Y H.M
XMS MSGS E22XMMSG ACTIVE ADDR=# 1.5 M/D/Y H.M
XMS CNTRL E22XMCTR ACTIVE ADDR=# 1.5 M/D/Y H.M
SRVTRAN=XM14 DEST=XM14**

Reason: This error message is displayed for debugging purposes.

In this message, # represents an actual address. *M*, *D*, and *Y* represent the month, day, and year, respectively. *H* and *M* represent the hour and minutes.

Action: None. This message is provided for reference only.

EBCXST02**xxxxxxx XMS LOGON xxxxxx HIGH LEVEL.QUAL
xxxxxxx****Reason:** The user is being logged on to the cross-memory address space.**Action:** None.**EBCXST03****xxxxxxx CICS TIMEOUT POSTED TO XMS****Reason:** The user has timed out, the session undergoes clean-up processing.**Action:** None.**EBCXST04****E22XSOPR SUBTASK ATTACHED****Reason:** The E22XSOPR (CICS operator subtask) has been attached to provide the CICS OPERATOR interface.**Action:** None.**EBCXST05****E22XSOPR SUBTASK DETACHED****Reason:** The E22XSOPR (CICS operator subtask) has been detached. This normally occurs only when the subtask is shutting down.**Action:** None.**EBCXST06****E22XSOPR SUBTASK DETACH (failed)****Reason:** The E22XSOPR (CICS operator subtask) has failed to stop. This operator subtask may have previously failed.**Action:** Contact Computer Associates Technical Support.**EBCXST20****CROSS-MEMORY VIEW RETRIEVAL HAS ABENDED****Reason:** An internal error occurred in cross-memory.**Action:** Contact Computer Associates Technical Support.

EBCXST21 NO CROSS-MEMORY SYSTEM REGION ACTIVE, SUBSYS=*name*

Reason: You tried to log onto a subsystem on which a cross-memory region is not initialized and active. In this message, *name* represents the name assigned to the subsystem.

Action: Initialize a cross-memory region on the subsystem, then try to log on again.

EBCXST22 INSUFFICIENT MEMORY FOR CROSS-MEMORY OPERATION

Reason: Not enough memory is allocated to cross-memory, or the USERMAX parameter is set too high.

Action: Allocate more memory to cross-memory and reduce the number of users assigned to the USERMAX parameter.

EBCXST24 FREE OF LOCAL MEMORY FAILED - SESSION ENDED

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

EBCXST25 USER CONNECTION ID IS INVALID

Reason: The connection identifier modified by the E22CICUX user exit is incorrect or invalid.

Action: Verify that the connection identifier modified by the E22CICUX user exit is valid.

EBCXST27 CROSS-MEMORY VIEW HAS TERMINATED NORMALLY - THIS SESSION IS ENDED

Reason: Your session ended with no errors.

Action: None. This message is provided for reference only.

EBCXST28 OUTPUT SCREEN EXCEEDS TERMINAL BUFFER SIZE - SESSION ENDED

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

**EBCXST29 TRANSACTION TO DATABASE INDEX NAME TABLE IS EMPTY -
SESSION ENDED**

Reason: Your E22XMCTR table contains zero entries.

Action: Rebuild the E22XMCTR table with at least one transaction definition.

**EBCXST30 INVALID CROSS-MEMORY CONTROL BLOCK FOUND (XMCT) -
CONTACT COMPUTER ASSOCIATES CORP.**

Reason: An internal error occurred in cross-memory.

Action: Contact Computer Associates Technical Support.

EBCXST31 CROSS-MEMORY ADDRESS SPACE NO LONGER ACTIVE

Reason: The cross-memory region is terminated.

Action: None. This message is provided for reference only.

**EBCXST32 DATABASE INDEX NAME NOT FOUND FOR TRANSACTION -
SESSION ENDED**

Reason: The entry for this transaction does not have a valid database name.

Action: Check the entry for the transaction to ensure the database name is correct. Correct the database name if necessary, then try again. If the problem persists, contact Computer Associates Technical Support.

EBCXST33 MAXIMUM SESSIONS IN USE - SESSION ENDED

Reason: The cross-memory session you are trying to initiate exceeds the maximum number allowed in the E22MCTR table. You cannot initiate new sessions.

Action: Terminate cross-memory sessions, then try again.

EBCXST34 DATABASE INDEX NAME NOT FOUND IN TABLE - SESSION ENDED

Reason: The E22XMCTR table does not contain the database index name you specified, and so you are denied access to the table.

Action: Add an entry to the E22XMCTR table for the database you want to specify.

EBCXST35 PROGRAM NAME NOT FOUND IN TABLE ENTRY, VERIFY VERSION OF MACRO USED IN TABLE ASSEMBLE

Reason: E22XMCTR was assembled with the SARXMTRN macro from a previous release of a Computer Associates product.

Action: Assemble the table again with the current macro library.

EBCXST40 ERROR DURING SIGNON -

Reason: An error occurred in cross-memory.

Action: Review the error message displayed after this error message for more information about the cause. Take action based on the contents of the second error message.

EBCXST41 CROSS-MEMORY FIND ERROR -

Reason: An error occurred in cross-memory.

Action: Review the error message displayed after this error message for more information about the cause. Take action based on the contents of the second error message.

EBCXST42 CROSS-MEMORY GET BUFFER ERROR -

Reason: An error occurred in cross-memory.

Action: Review the error message displayed after this error message for more information about the cause. Take action based on the contents of the second error message.

EBCXST43 CROSS-MEMORY PUT BUFFER ERROR -

Reason: An error occurred in cross-memory.

Action: Review the error message displayed after this error message for more information about the cause. Take action based on the contents of the second error message.

EBCXST44 CROSS-MEMORY GET COMAREA INFO ERROR -

Reason: An error occurred in cross-memory.

Action: Review the error message displayed after this error message for more information about the cause. Take action based on the contents of the second error message.

EBCXST45 CROSS-MEMORY POST ERROR -

Reason: An error occurred in cross-memory.

Action: Review the error message displayed after this error message for more information about the cause. Take action based on the contents of the second error message.

EBCXST50 XMS SUBTASK POSTED XSC_SUBF=#A XSC_ECB1=#B

Reason: This error message is a trace message to the indicated logic flow. In this message #A and #B represent additional parameter values provided for further reference.

Note: This message appears only if trace messages are requested.

Action: None. This message is provided for reference only.

SARACI01 UNABLE TO SET SVC SCREENING FOR product

Reason: The SVC screening product must be initialized, it could not be found.

Action: Verify the SVC screening product is available.

SARACI02 ACIF LOAD MODULE NOT FOUND FOR product

Reason: The APKACIF module could not be found in your IBM target libraries.

Action: Verify that the STEPLIB statement is concatenated to CAI.CAILIB, or verify that they are both in the LNKLIST.

**SARACI03 INVALID INITIALIZATION PARAMETER *keyword=parm* FOR
product**

Reason: A keyword was misspelled in the `//PRTnnn` statement.

Action: Correct the keyword, then resubmit the job.

SARACI04 INVALID INITIALIZATION VALUE *keyword=parm* FOR *product*

Reason: A keyword was assigned an invalid value.

Action: Correct the keyword, then resubmit the job.

SARACI05 UNDEFINED DATA BASE HIGH-LEVEL NAME FOR *product*

Reason: The database name specified as the NAME statement was not found.

Action: Correct the name, then resubmit the job.

SARACI06 INDEX CONTROL MEMBER *member* NOT FOUND FOR *product*

Reason: Either the index member name was misspelled or it does not exist.

Action: Correct the name, then resubmit the job.

SARACI07 ERROR OPENING SARINDEX DD STATEMENT FOR *product*

Reason: There is a media problem.

Action: Verify that the volume is online and functioning properly.

SARACI08 DATA BASE AT INCORRECT LEVEL FOR THIS RELEASE

Reason: The database is not at the appropriate level.

Action: Verify that your database level (set with the SARDBASE utility) is correct, then rerun SARDBASE if necessary.

SARACI09 ERROR FROM ACIF FOR *product*, *RC=return code*

Reason: An error came back from ACIF, the return code is provided.

Action: Check the IBM documentation on APKACIF messages.

SARACI10***product* AUTHORIZATION FAILED FOR USERLIB *userlib***

Reason: The RACROUTE request returned with an error code indicating that the security rules do not permit access to the userlib.

Action: Ensure the userlib is correctly specified and/or change the security rules for it.

SARACI22***product* PROCESSING *jobname(jobid) jobdsn***

Reason: This message is informational.

Action: None.

SARACI24**NO MORE SPACE IN DATA BASE - REPLY R (RETRY) T (TERMINATE)**

Reason: There is not enough space in the database to perform the archival.

Action: Reply with either an R to re-attempt archival, or a T to terminate:

1. Run the SARDBASE program to add more space to the database, or manually delete SYSOUT groups to free up space while the archival task waits. After you make more space available, reply R to have the archival task retry its archival with the additional space.
2. Reply T to terminate the archival task.

SARACT01**I/O ERROR UPDATING ACCOUNTING DATASET**

Reason: An I/O error occurred at job initiation when an attempt was made to update the job accounting data set.

Action: If this error persists, recreate the job accounting data set.

SARBCB02**USER NOT AUTHORIZED TO ACCESS SYSOUT**

Reason: The SARSECUX security user exit did not allow access to the SYSOUT group.

Action: Consult with your security administrator or system programming group to determine the reason why the authorization was not provided.

SARBCB05 BUNDLE SUCCESSFULLY PRINTED

Reason: The bundle was successfully produced.

Action: None.

SARBCB10 REQUESTED SYSOUT NOT FOUND IN MASTER INDEX

Reason: The requested SYSOUT group does not exist in the master index. This is normally caused by a backup cycle deleting the SYSOUT group prior to completion of the bundling process or the manual deletion of the SYSOUT group by using the online retrieval facility or batch retrieval facility (SARBCH).

Action: Verify the existence of all SYSOUT groups, change or omit any nonexistent SYSOUT groups, then resubmit the bundle reprint request.

SARBCB11 BUNDLE ID NOT SPECIFIED

Reason: The BID parameter was not specified and is required on the control statement.

Action: Add the BID parameter to the /BPRINT control statement, then resubmit the bundle reprint request.

SARBCB12 BUNDLE CONTENTS NOT SPECIFIED

Reason: The BCONT parameter was not specified and is required on the control statement.

Action: Add the BCONT parameter to the /BPRINT control statement, then resubmit the bundle reprint request.

**SARBCB13 INVALID SPECIFICATION OF BCONT PARAMETER NEAR
POSITION xxxx**

Reason: The syntax of the BCONT parameter is invalid. This is normally caused by null parameter data, invalid character data, or excessive parentheses or commas.

Action: Review the syntax of the BCONT parameter on the /BPRINT control statement, correct the parameter specification, then resubmit the bundle reprint request.

SARBCB14**DISTRIBUTION IDENTIFIER xxxxxxxx TOO LONG IN BCONT PARAMETER**

Reason: The specified distribution identifier contains too many characters. The distribution identifier on the BCONT parameter must be from 1 to 8 characters in length.

Action: Review the syntax of the BCONT parameter on the /BPRINT control statement, correct the parameter specification, then resubmit the bundle reprint request.

SARBCB16**REPORT IDENTIFIER xxxxxxxxxxxx TOO LONG IN BCONT PARAMETER**

Reason: The specified report identifier contains too many characters. The report identifier on the BCONT parameter must be from 1 to 12 characters in length.

Action: Review the syntax of the BCONT parameter on the /BPRINT control statement, correct the parameter specification, then resubmit the bundle reprint request.

SARBCB17**REPORT IDENTIFIER xxxxxxxxxxxx NOT DEFINED TO BUNDLE xxxxxxxxxxxx IN BCONT PARAMETER**

Reason: The specified report identifier was not defined to the specified bundle in the CA-Deliver database because the report identifier was incorrectly named, was deleted from the bundle prior to completion of the bundle reprint request, or was never defined to the bundle.

Action: Review the bundle definition in CA-Deliver Delivery, change or delete the report identifier specification, then resubmit the bundle reprint request.

SARBCB18**DISTRIBUTION IDENTIFIER xxxxxxxx NOT DEFINED TO REPORT xxxxxxxxxxxx IN BCONT PARAMETER**

Reason: The specified distribution identifier was not defined to specified report in the CA-Deliver database because the distribution identifier was incorrectly named, was deleted from the report prior to completion of the bundle reprint request, or was never defined to the report.

Action: Review the bundle definition in CA-Deliver, change or delete the distribution identifier specification, then resubmit the bundle reprint request.

SARBCB19 GENERATION xxxxx TOO LONG IN BCONT PARAMETER

Reason: The specified generation contains too many characters. The generation field in the BCONT parameter must be 1 to 5 characters in length.

Action: Review the syntax of the BCONT parameter on the /BPRINT control statement, correct the parameter specification, then resubmit the bundle reprint request.

SARBCB20 GENERATION xxxxx INVALID IN BCONT PARAMETER

Reason: The specified generation contains invalid characters. The generation field in the BCONT parameter specifies an absolute or relative numeric value.

Action: Review the syntax of the BCONT parameter on the /BPRINT control statement, correct the parameter specification, then resubmit the bundle reprint request.

SARBCB21 SEQUENCE NUMBER xxxxx TOO LONG IN BCONT PARAMETER

Reason: The specified sequence number contains too many characters. The sequence number field in the BCONT parameter must be 1 to 5 characters in length.

Action: Review the syntax of the BCONT parameter on the /BPRINT control statement, correct the parameter specification, then resubmit the bundle reprint request.

SARBCB22 SEQUENCE NUMBER xxxxx INVALID IN BCONT PARAMETER

Reason: The specified sequence number contains invalid characters. The sequence number field in the BCONT parameter specifies an absolute or relative numeric number.

Action: Review the syntax of the BCONT parameter on the /BPRINT control statement, correct the parameter specification, then resubmit the bundle reprint request.

SARBCB23 I/O error message

Reason: I/O operation against the CA-Deliver database failed. The error message can range from a severe error condition such as physical or logical I/O error to non-severe error condition such as record not found or database not defined.

Action: If a database not found message is produced, verify that the EXPRESS initialization parameter references the correct database. If a record not found message is produced, the respective identifier may have to be removed from the bundle reprint request. Consult the CA-Deliver documentation to remedy severe error conditions.

SARBCB25**USER IS NOT AUTHORIZED TO PRINT REPORT TO THIS DESTINATION**

Reason: The SARDSTUX user exit did not allow the bundle to be printed to its respective destination.

Action: Consult with your security administrator or systems programming group to determine the reason why the authorization was not provided.

SARBCC02**USER NOT AUTHORIZED TO ACCESS SYSOUT**

Reason: The SARSECUX security user exit did not allow access to the specified SYSOUT group.

Action: Consult with your security administrator or systems programming group to determine the reasons why the authorization was not provided.

SARBCC03**ID MISSING**

Reason: The ID parameter was incorrectly specified without a SYSOUT identifier and is required on the control statement.

Action: Change the ID parameter to include the SYSOUT identifier that is to be changed, then resubmit the print request.

SARBCC04**SYSOUT SUCCESSFULLY CHANGED**

Reason: The SYSOUT group was successfully updated with the requested information.

Action: None. This is an informational message.

SARBCC10 REQUESTED SYSOUT NOT FOUND IN MASTER INDEX

Reason: The requested SYSOUT group does not exist in the master index. This is normally caused by a misspelled SYSOUT identifier, the SYSOUT group was manually deleted from the online or batch retrieval facilities, or the backup cycle deleted the SYSOUT group prior to the completion of the change process.

Action: Verify the existence of the SYSOUT group. If the SYSOUT identifier (ID), generation number (GEN), and/or sequence number (SEQ) was specified incorrectly, change the parameter specification, then resubmit the change request.

SARBCC11 SYSOUT DOES NOT RESIDE ON DISK

Reason: The BACKUP=OFF parameter was specified on the change request to reset the tape backup indicator. When the tape backup indicator is reset, the SYSOUT group will be re-archived to tape during the next backup cycle. The backup cycle requires that the SYSOUT group reside on disk, but the SYSOUT group specified on the change request does not currently reside on disk.

Action: If the change request is being requested against the correct SYSOUT group, the SYSOUT group can be reloaded to disk via the LOAD request of the SARBCH utility.

SARBCC12 SYSOUT IS NOT MARKED FOR DELETION

Reason: The DELETE=OFF parameter was specified on the CHANGE request to reset the delete indicator for the SYSOUT group, but the SYSOUT group is not currently in a delete status.

Action: Verify that the correct SYSOUT group is being referenced on the change request. If additional parameters are being changed, remove the DELETE=OFF parameter, then resubmit the change request.

SARBCD02 USER NOT AUTHORIZED TO ACCESS SYSOUT

Reason: The SARSECUX security user exit did not allow access to the SYSOUT group.

Action: Consult with your security administrator or system programming group to determine the reason why the authorization was not provided.

SARBCD03**SYSOUT GROUP SUCCESSFULLY DELETED**

Reason: The disk space, if any, occupied by the requested SYSOUT group and the respective master index references have been successfully deleted from the database.

Action: None.

SARBCD04**DISK MEDIA FOR SYSOUT GROUP SUCCESSFULLY DELETED**

Reason: The disk space occupied by the requested SYSOUT group has been successfully deleted from the database. The SYSOUT group will now reside in non-disk status.

Action: None.

SARBCD05**VIEW SUCCESSFULLY DELETED**

Reason: The requested view was successfully deleted from the master index.

Action: None.

SARBCD06**USER SUCCESSFULLY DELETED**

Reason: The requested user ID and all associated online variables were successfully deleted from the master index.

Action: None.

SARBCD07**INDEX FILE FOR SYSOUT GROUP SUCCESSFULLY DELETED**

Reason: The disk space occupied by the report index for the requested SYSOUT group has been successfully deleted from the database.

Action: None.

SARBCD10**REQUESTED SYSOUT NOT FOUND IN MASTER INDEX**

Reason: The requested SYSOUT group does not exist in the master index. This is normally caused by a misspelled SYSOUT identifier, a backup cycle deleting the SYSOUT group prior to completion of the delete process, or the manual deletion of the SYSOUT group by using the online retrieval facility or batch retrieval facility (SARBCH).

Note: A generic SYSOUT identifier cannot be specified in the delete request.

Action: Verify the existence of the SYSOUT group. If the SYSOUT identifier (ID), generation (GEN), and/or sequence number (SEQ) was specified incorrectly, change the respective parameters, then resubmit the delete request.

SARBCD11 ID MISSING

Reason: The ID parameter was incorrectly specified without a SYSOUT identifier.

Action: Change the ID parameter to include the SYSOUT identifier that is to be deleted, then resubmit the delete request.

SARBCD12 DISK MEDIA NOT DELETED BECAUSE SYSOUT GROUP IS CURRENTLY OPEN

Reason: The disk space for the requested SYSOUT group was not deleted because the SYSOUT group is currently in open status. The SYSOUT group can be in open status due to a currently pending temporary load operation, a pending migration operation, or initial creation.

Action: Wait until the status of the SYSOUT group has changed from open status, then resubmit the delete request. If the open condition is invalid (for example, a system crash or abend occurred while the SYSOUT group was in open status and being processed) use the CLEAN operator command to remove the open status. Two backup cycles and a duration of 4 hours must have elapsed before the open status is removed.

SARBCD13 DISK MEDIA NOT DELETED BECAUSE SYSOUT GROUP HAS NO BACKUP

Reason: The disk space for the requested SYSOUT group was not deleted because the SYSOUT group has no tape or optical archival copy. If the delete request was honored, the SYSOUT group would not have any archival copy and would therefore render it useless.

Action: Wait until the completion of the backup cycle, or the next run of the optical migration subtask, then resubmit the delete request.

SARBCD14 DISK MEDIA NOT DELETED BECAUSE SYSOUT GROUP DOES NOT RESIDE ON DISK

Reason: The SYSOUT group does not reside on disk. This is normally caused by a backup cycle deleting the disk space for the SYSOUT group prior to completion of the delete request, or the disk space was deleted by another user or job by using the online retrieval facility or batch retrieval facility (SARBCH). See the initialization parameter NGEND for more information.

Action: None; since the SYSOUT group no longer resides on disk, the original intent of the delete disk request has been satisfied.

SARBCD15 DISK MEDIA NOT DELETED BECAUSE SECONDARY STORAGE DRIVER WAS NOT AVAILABLE

Reason: The SYSOUT group could not be deleted because it resided on secondary disk storage, and no secondary disk storage driver was available.

Action: Run SARINIT to redefine the secondary disk storage driver.

SARBCD16 VIEW MISSING

Reason: The VIEW parameter was incorrectly specified without a view number.

Action: Change the VIEW parameter to include the view number that is to be deleted or * to delete all views, then resubmit the delete request.

SARBCD17 VIEW KEYWORD CONFLICTS WITH DISK/GEN/SEQ/INDEX KEYWORD(S)

Reason: The VIEW parameter cannot be specified with the DISK, GEN, SEQ, and/or INDEX parameters.

Action: Either remove the VIEW parameter or remove the DISK, GEN, SEQ, and/or INDEX parameters from the control statement, then resubmit the delete request.

SARBCD18 REQUESTED VIEW NOT FOUND IN MASTER INDEX

Reason: The requested view does not exist in the master index. This is normally caused by an incorrect specification of the ID parameter and/or the VIEW parameter, or the view was already deleted by another user or job by using the online retrieval facility or batch retrieval facility (SARBCH).

Action: Verify the existence of the view. If the view (VIEW parameter) or SYSOUT identifier (ID parameter) was specified incorrectly, change the parameter specification, then resubmit the delete request.

SARBCD19 USER MISSING

Reason: The USER parameter was incorrectly specified without a user ID.

Action: Change the USER parameter to include the user ID that is to be deleted, then resubmit the delete request.

**SARBCD20 USER KEYWORD CONFLICTS WITH DISK/GEN/ID/SEQ/INDEX
KEYWORD(S)**

Reason: The USER parameter cannot be specified with the DISK, GEN, ID, SEQ, and/or INDEX parameters.

Action: Either remove the USER parameter or remove the DISK, GEN, ID, SEQ, and/or INDEX parameters from the control statement, then resubmit the delete request.

SARBCD21 REQUESTED USER NOT FOUND IN MASTER INDEX

Reason: The requested user ID does not exist in the master index. This is normally caused by an incorrect specification of the USER parameter, or the user ID was already deleted by another job or user by using the online retrieval facility or batch retrieval facility (SARBCH).

Note: A generic user ID cannot be specified in the delete request.

Action: Verify the existence of the user ID. If the user ID (USER) parameter was specified incorrectly, change the parameter, then resubmit the job.

SARBCD22 USER NOT AUTHORIZED TO DELETE USERID

Reason: The user ID extracted by the SARUSBUX does not have sufficient authority (master authority) to delete user IDs from the database. The user ID that requires authority is indicated in a previous (SARBCH05) message.

Action: Consult with your security administrator or systems programming group to determine the reason why the authorization was not provided.

SARBCE02 USER NOT AUTHORIZED TO ACCESS SYSOUT

Reason: The SARSECUX security user exit did not allow access to the SYSOUT group.

Action: Consult with your security administrator or system programming group to determine the reason why the authorization was not provided.

SARBCE03 ID MISSING

Reason: The ID parameter was specified without a SYSOUT identifier which is required on the control statement.

Action: Change the ID parameter to include the SYSOUT identifier that is to be printed, then resubmit the print request.

SARBCE05 REPORT SUCCESSFULLY PRINTED

Reason: The CA-Deliver report was successfully queued to print.

Action: None.

SARBCE07 SYSOUT QUEUED FOR TRANSMITTAL TO PC

Reason: The CA-Deliver report was successfully queued for download to a PC. The download process can be completed at the user's discretion from the online retrieval interface.

Action: None.

SARBCE10 REQUESTED SYSOUT NOT FOUND IN MASTER INDEX

Reason: The requested SYSOUT group does not exist in the master index. This is normally caused by a misspelled SYSOUT identifier, a backup cycle deleting the SYSOUT group prior to completion of the print process or the manual deletion of the SYSOUT group by using the online retrieval facility or batch retrieval facility (SARBCH).

Action: Verify the existence of the SYSOUT group. If the SYSOUT identifier (ID), generation (GEN), and/or sequence number (SEQ) was specified incorrectly, change the parameter specification, then resubmit the print request.

SARBCE11 SYSOUT GROUP WAS NOT ARCHIVED BY DELIVER

Reason: The print request referenced a SYSOUT group that was not archived by CA-Deliver.

Action: Either change the SYSOUT identifier (ID parameter) to specify a CA-Deliver report, or print the report with the /PRINT control statement.

SARBCE12 REPORT IDENTIFIER xxxxxxxxxxxx NOT FOUND IN DATABASE

Reason: The requested report does not exist in the master index. This is normally caused by a backup cycle deleting the report prior to completion of the print process, or the manual deletion of the report by using the online retrieval facility or batch retrieval facility (SARBCH).

Action: Verify the existence of the report. If the report identifier (ID), generation (GEN), and/or sequence number (SEQ) was specified incorrectly, change the respective parameter, then resubmit the print request.

SARBCE13 I/O error message

Reason: I/O operation against the CA-Deliver database failed. The error message can range from a severe error condition such as physical or logical I/O error, to non-severe error condition such as record not found or database not defined.

Action: If a database not found message is produced, verify that the EXPRESS initialization parameter references the correct database. Also verify that there is a STEPLIB statement for the CA-Deliver load modules in:

- The CA-View skeleton JCL
- The JCL for any of the online interfaces (these are both part of installing CA-View)

If a record not found message is produced, the respective identifier may have to be removed from the print request. See your CA-Deliver documentation to remedy severe error conditions.

SARBCE15 INVALID USE OF PARENTHESIS IN DIST PARAMETER

Reason: The syntax of the DIST parameter is invalid. This is normally caused by unbalanced parentheses or excessive parentheses.

Action: Review the syntax of the DIST parameter on the /EPRINT control statement, correct the parameter specification, then resubmit the reprint request.

SARBCE16**INVALID DISTRIBUTION IDENTIFIER IN DIST PARAMETER**

Reason: The distribution identifier in the DIST parameter contains invalid characters or too many characters. The distribution identifier can be from 1 to 8 characters in length and consists of alphanumeric, and national (\$, @, or #) characters.

Action: Review the syntax of the DIST parameter on the /EPRINT control statement, correct the parameter specification, then resubmit the print request.

SARBCE17**INVALID DESTINATION IN DIST PARAMETER**

Reason: The destination field in the DIST parameter contains invalid characters or too many characters. The destination field can be from 1 to 17 characters in length and consists of two qualifiers that are alphanumeric, and national (\$, @, or #) characters.

Action: Review the syntax of the DIST parameter on the /EPRINT control statement, correct the parameter specification, then resubmit the print request.

SARBCE18**INVALID TEXT STRING IN INST PARAMETER**

Reason: The syntax of the INST parameter is invalid. This can be caused by unbalanced quotes, excessive quotes (quotes within non-quoted string), invalid separator (blank, comma, or parenthesis not following quoted string), or too many characters in text string (maximum of 74 characters).

Action: Review the syntax of the INST parameter on the /EPRINT control statement, correct the parameter specification, then resubmit the print request.

SARBCE19**NO DISTRIBUTION IDENTIFIERS FOR REPORT – USE VIEW TO PRINT REPORT**

Reason: You have tried to print a CA-Deliver report without specifying any DIST IDs which are getting the report.

Action: Either specify at least one receiving DIST ID, or switch to SAR MODE and retry the print request. You can switch to SAR MODE by either typing SAR in the command area and pressing ENTER, or by typing MODE SAR in the command line of the primary menu and pressing ENTER.

SARBCE22 REPORT SUCCESSFULLY PRINTED, DIST=XXXXXXXX AT XXXXXXXX

Reason: The report was printed for the DIST ID indicated on the printer specified.

Action: None.

**SARBCE21 ERRORS ON OTHER DESTINATIONS PREVENTED PRINTING,
DIST=XXXXXXXX AT XXXXXXXX**

Reason: The report could not be printed for the DIST ID indicated on the printer specified because of another error in the print request.

Action: Correct the error as indicated in the associated error message and try the print request again.

SARBCE22 message text varies, DIST=XXXXXXXX AT XXXXXXXX

Reason: A subprogram returned a message which is being repeated here. The print request was to print the DISTID indicated on the printer specified.

Action: Varies depending on the message text displayed.

**SARBCE31 SELECT SPECIFICATION CONFLICTS WITH PAGE AND/OR
RECORD SPECIFICATION**

Reason: The SELECT keyword and the PAGE and/or RECORD keywords are mutually exclusive.

Action: Either remove the SELECT parameter or remove the PAGE and/or RECORD parameters from the control statement, then resubmit the print request.

**SARBCE32 SYSOUT IS NOT ON PRIMARY DISK AND ITS INDEX IS
UNAVAILABLE FOR PAGE SELECTION**

Reason: The SELECT keyword was specified but the SYSOUT group resides on tape.

Action: Either remove the SELECT keyword to print the entire SYSOUT group, or temporarily reload the SYSOUT group to the database so that its index will be available for printing.

SARBCE33**SELECT SPECIFIED WITHOUT A VALID LOGICAL VIEW**

Reason: The SELECT keyword was specified and either the CA-View keyword was omitted or specified for an invalid logical view.

Action: Correct the parameter specification, then resubmit the print request.

SARBCE34**ERROR OCCURRED ATTEMPTING TO READ IN THE INDEX FOR THE SYSOUT**

Reason: An error occurred attempting to obtain the index for the SYSOUT group.

Action: Either remove the SELECT keyword to print the entire SYSOUT group or re-archive the SYSOUT group to create a new index.

SARBCE35**SYSOUT HAS NOT BEEN INDEXED FOR THE LOGICAL VIEW OR BY ACIF**

Reason: The page separation definition in the logical view either did not exist when the SYSOUT group was archived or was changed subsequently.

Action: Either remove the SELECT keyword to print the entire SYSOUT group, re-index the SYSOUT group, or re-archive the SYSOUT group to create a new index.

SARBCE36**NO PAGES FOUND THAT MATCH SELECTION TEXT**

Reason: The selection text does not exist in the index for the logical view of the SYSOUT group. This is normally caused by an incorrect spelling on the SELECT keyword or the page separation criteria was never defined for the SYSOUT group.

Action: Either change the SELECT parameter to reference a different index specification or remove the SELECT keyword to print the entire SYSOUT group.

SARBCE37**USER IS NOT AUTHORIZED TO PRINT REPORT FROM THIS DESTINATION**

Reason: The SARDSTUX user exit did not allow the report to be printed to its respective destination.

Action: Consult with your security administrator or system programming group to determine the reason why the authorization was not provided.

SARBCE41 REQUESTED INDEX NOT FOUND

Reason: The page index value specified on the SELECT keyword of the print request was not found for the requested SYSOUT group.

Action: Verify that the correct page index value, SYSOUT group, and view are being specified. Otherwise, remove the SELECT parameter and print the entire SYSOUT group.

SARBCE42 NO TCR RECORD FOUND FOR REQUESTED SYSOUT

Reason: An attempt is being made to print a SYSOUT group from tape, but certain vital backup tape control information could not be found.

Action: Normally, tape control information is retained as long as there are reports that reference it. The tape control record (TCR) can be reinstated by re-adding the tape back into the database with the TADD facility of the SARTDR utility.

Important! This condition could identify a serious problem with the database or problems with the supporting code. Report the problem to Computer Associates Technical Support.

SARBCE43 ERROR DURING SECONDARY DISK OR EAS ACCESS

Reason: An error occurred opening a report on optical disk, or on tape accessed through an EAS tape server.

Action: Browse the report online to see any error messages from the DSK2 driver or EAS tape server interface routine.

SARBCH02 JOB/USER NOT AUTHORIZED TO ACCESS DATABASE

Reason: The SARATHUX security user exit did not allow the job or user access to the database.

Action: Consult with your security administrator or system programming group to determine the reason why the authorization was not provided.

**SARBCH03 INVALID OR MISPLACED CONTROL CARD, CONTROL STATEMENT
MUST BEGIN WITH A /**

Reason: A slash (/), denoting a new control statement, was expected in column 1 of the control card but was not found.

Action: Review syntax of control statement, insert a slash(/) before the function name in column 1 of the control card, then resubmit the job.

SARBCH04 INVALID FUNCTION NAME

Reason: The specified function name (name that follows the slash) contains invalid characters, contains too many characters, or is not a valid batch retrieval function.

Note: The function name must immediately follow a slash (/) which is coded in column 1 of the control card. Also, control statements that continue onto multiple control cards are not prefixed with the slash.

Action: Review the spelling of function name and the syntax of the control statement, correct the control statement specification, then resubmit the job.

SARBCH05 LOGON SUCCESSFUL FOR *userid* TO *database*

Reason: The user ID determination exit (SARUSBUX) provided successful logon for the specified user ID to the specified database.

Action: None. User ID logon is performed during initial access to the database.

SARBCH06 LOGON UNSUCCESSFUL FOR *userid* TO *database*

Reason: The user ID determination exit (SARUSBUX) did not allow logon for the specified user ID to the specified database.

Action: Consult with your security administrator or systems programming group to determine the reason why the authorization was not provided.

SARBCH10 INVALID KEYWORD NAME *xxxxxxxx*

Reason: The specified keyword name contains invalid characters, contains too many characters, or is not a valid name.

Action: Review syntax of control statement and spelling of the keyword name, correct the parameter specification, then resubmit the job.

SARBCH11 INVALID PARAMETER DATA FOR KEYWORD

Reason: The parameter data for the specified keyword contains invalid characters or is not an acceptable value.

Action: Review syntax of control statement, correct the parameter specification, then resubmit the job.

SARBCH12 UNBALANCED QUOTED STRING ENCOUNTERED IN PARAMETER DATA FOR KEYWORD

Reason: The parameter data for the specified keyword contains a quoted string that was not terminated by an ending quote.

Action: Review syntax of control statement, correct the parameter specification, then resubmit the job.

SARBCH13 UNBALANCED PARENTHESES ENCOUNTERED IN PARAMETER DATA FOR KEYWORD

Reason: The parameter data for the specified keyword contains an incorrect number of parentheses. For every right parenthesis there must be a matching left parenthesis.

Action: Review syntax of control statement, correct the parameter specification, then resubmit the job.

SARBCH14 PARAMETER DATA TOO LONG FOR KEYWORD

Reason: The parameter data for the specified keyword contains too many characters.

Action: Review syntax of control statement, correct the parameter specification, then resubmit the job.

SARBCH15 TOO MANY PARAMETERS SPECIFIED FOR KEYWORD

Reason: The parameter data for the specified keyword contains too many values.

Action: Review syntax of control statement, correct the parameter specification, then resubmit the job.

SARBCH21 DATABASE AT INCORRECT LEVEL FOR THIS RELEASE

Reason: The program load modules and the database are not at the same release level. This is normally caused by the STEPLIB, JOBLIB, link-list, or LPA pointing to old load modules, or the database has not been converted to the correct release level (new releases of product may require conversion of the database).

Action: Either STEPLIB to the correct load modules or convert the database to the correct release level.

SARBCI01 USER NOT AUTHORIZED TO ACCESS SYSOUT

Reason: The SARSECUX security user exit did not allow access to the SYSOUT group.

Action: Consult with your security administrator or system programming group to determine the reason why the authorization was not provided.

SARBCI02 ID MISSING

Reason: The ID parameter was incorrectly specified without a SYSOUT identifier.

Action: Change the ID parameter to include the SYSOUT identifier that is to be re-indexed, then resubmit the index request.

SARBCI03 REQUESTED SYSOUT NOT FOUND IN MASTER INDEX

Reason: The requested SYSOUT group does not exist in the master index. This is normally caused by a misspelled SYSOUT identifier, a backup cycle deleting the SYSOUT group prior to completion of the index process, or the manual deletion of the SYSOUT group using the online retrieval facility or batch retrieval facility (SARBCH).

Action: Verify the existence of the SYSOUT group. If the SYSOUT identifier (ID), generation (GEN), and/or sequence number (SEQ) was specified incorrectly, change the parameter specification, then resubmit the index request.

SARBCK02 USER NOT AUTHORIZED TO ACCESS SYSOUT

Reason: The SARSECUX security user exit did not allow access to the SYSOUT group.

Action: Consult with your security administrator or systems programming group to determine the reason why the authorization was not provided.

SARBCK03 ID MISSING

Reason: The ID parameter was incorrectly specified without a SYSOUT identifier and is required on the control statement.

Action: Change the ID parameter to include the SYSOUT identifier that is to be set to or removed from permanent status, then resubmit the PERM request.

SARBCK04 DISK/TAPE/DELETE KEYWORDS CONFLICT, ONLY ONE OF THESE KEYWORDS MAY BE SPECIFIED

Reason: The DISK, TAPE, and/or DELETE keywords are mutually exclusive and cannot be specified on the same control statement.

Action: Change control statement to specify either DISK, TAPE, or DELETE, then resubmit PERM request.

SARBCK05 SYSOUT GROUP SUCCESSFULLY SET TO PERMANENT DISK STATUS

Reason: The SYSOUT group was successfully set to a permanent on disk status (location of PERM). The long term status of the SYSOUT group will depend on the setting of the Expanded Retention Option initialization parameters and table parameters.

Action: None.

SARBCK06 SYSOUT GROUP SUCCESSFULLY SET TO PERMANENT TAPE STATUS

Reason: The SYSOUT group was successfully set to permanent on tape status (location of PDSK, PTMP, or PTAP). The long term status of the SYSOUT group will depend on the setting of the Expanded Retention Option initialization parameters and table parameters.

Action: None.

SARBCK07 SYSOUT GROUP SUCCESSFULLY REMOVED FROM PERMANENT STATUS

Reason: The SYSOUT group was successfully removed from permanent status. The disk and tape retention of the SYSOUT group depends on the setting of the NGEND and NGENT initialization parameters.

Action: None.

SARBCK08**SYSOUT GROUP IS ON SECONDARY DISK STORAGE -
PERMANENT STATUS NOT DELETED**

Reason: The SYSOUT group resides on secondary disk storage and must remain in permanent status.

Action: None. Permanent status cannot be deleted.

SARBCK10**REQUESTED SYSOUT NOT FOUND IN MASTER INDEX**

Reason: The requested SYSOUT group does not exist in the master index. This is normally caused by a misspelled SYSOUT identifier, a backup cycle deleting the SYSOUT group prior to completion of the PERM process, or the manual deletion of the SYSOUT group by using the online retrieval facility or batch retrieval facility (SARBCH).

Action: Verify the existence of the SYSOUT group. If the SYSOUT identifier (ID), generation (GEN), and/or sequence number (SEQ) was specified incorrectly, change the parameter specifications, then resubmit the PERM request.

SARBCK11**PERMANENT STATUS NOT SET BECAUSE SYSOUT GROUP IS
CURRENTLY OPEN**

Reason: The SYSOUT group was not set to or removed from permanent status because the SYSOUT group is currently in open status. The SYSOUT group can be in open status due to a currently pending temporary load operation, a pending migration operation, or initial creation.

Action: Wait until the status of the SYSOUT group has changed from open status, then resubmit PERM request. If the open condition is invalid, (for example, a system crash or an abend occurred while the SYSOUT group was in open status and being processed), use the CLEAN operator command to remove the open status. Two backup cycles and a duration of 4 hours must have elapsed before the open status is removed.

SARBCK12**PERMANENT DISK STATUS NOT SET BECAUSE SYSOUT GROUP IS
NOT ON DISK**

Reason: The SYSOUT group cannot be set to a permanent on disk status because the SYSOUT group does not reside on disk media.

Action: Temporarily load SYSOUT group to the database, then resubmit PERM request.

SARBCL02 USER NOT AUTHORIZED TO ACCESS SYSOUT

Reason: The SARSECUX security user exit did not allow access to the SYSOUT group.

Action: Consult with your security administrator or systems programming group to determine the reason why the authorization was not provided.

SARBCL03 ID MISSING

Reason: The ID parameter was incorrectly specified without a SYSOUT identifier and is required on the control statement.

Action: Change the ID parameter to include the SYSOUT identifier that is to be loaded, then resubmit the load request.

SARBCL04 DDNAME xxxxxxxx NOT FOUND

Reason: The JCL DD statement name specified in the DDNAME parameter was not provided.

Action: Either remove the DDNAME parameter or specify the respective JCL DD statement, then resubmit the load request.

SARBCL05 SYSOUT SUCCESSFULLY LOADED

Reason: The SYSOUT group was successfully loaded from tape to the database and resides in a temporary on disk status.

Action: None.

SARBCL06 SYSOUT SUCCESSFULLY WRITTEN TO DDNAME=

Reason: The SYSOUT group was successfully copied to the specified JCL DD statement.

Action: None.

SARBCL07 INDEX FILE SUCCESSFULLY LOADED

Reason: The page index file for the requested SYSOUT group was successfully loaded from tape or secondary disk to the CA-View database.

Action: None.

SARBCL10 REQUESTED SYSOUT NOT FOUND IN MASTER INDEX

Reason: The requested SYSOUT group does not exist in the master index. This is normally caused by a misspelled SYSOUT identifier, a backup cycle deleting the SYSOUT group prior to completion of the load process, or the manual deletion of the SYSOUT group by using the online retrieval facility or batch retrieval facility (SARBCH).

Action: Verify the existence of the SYSOUT group. If the SYSOUT identifier (ID), generation (GEN), and/or sequence number (SEQ) was specified incorrectly, change the parameter specification, then resubmit the load request.

SARBCL12 DATASET NOT LOADED - ALREADY ON DISK

Reason: The SYSOUT group was not loaded to the database because it already resides on disk.

Action: Since the original intent of the load request has been satisfied, no further action is necessary. If the SYSOUT group was incorrectly loaded or is empty, the disk portion of the SYSOUT group can be deleted by using the online retrieval facility or batch retrieval facility, and the load request can be resubmitted.

SARBCL13 REQUESTED SYSOUT DOES NOT EXIST ON ANY TAPE BACKUP DATASET

Reason: The SYSOUT group could not be found on any tape backup.

Action: None. The SYSOUT group is not available on tape.

SARBCL14 THE TAPE FILE WAS NOT THE SELECTED SYSOUT GROUP - USE SARTCP TO MAP THE TAPE

Reason: The SYSOUT group located on the backup tape is not the same as referenced in the master index.

Action: Use the SARTCP utility to map and correct the backup tape.

SARBCL15 BACKUP TAPE DOES NOT EXIST

Reason: The backup tape could not be found in the master index. This is normally caused by the backup cycle deleting the tape prior to completion of the load request.

Action: None. The SYSOUT group is no longer available.

**SARBCL16 DYNAMIC ALLOCATION FAILED FOR TAPE FILE, ERROR
CODE - xxxx, INFO CODE - xxxxx**

Reason: Dynamic allocation failed for allocating the backup tape file. The hexadecimal error and information codes are provided.

Action: Consult the online retrieval HELP facility for a description of the dynamic allocation error code. Take appropriate action to correct the allocation error, then resubmit the load request.

SARBCL17 I/O ERROR POSITIONING TAPE

Reason: A permanent I/O error occurred attempting to position the archival tape to retrieve the SYSOUT group.

Action: Resubmit the request. If the I/O error occurs again, use the SARTCP utility to map and correct the tape.

SARBCL18 SYSOUT GROUP IS OPEN FOR OUTPUT

Reason: The requested function could not be performed because the specified SYSOUT group is open for output. The SYSOUT group can be in open status due to a currently pending temporary load operation, a pending migration operation, or initial creation.

Action: Wait until the status of the SYSOUT group has changed from open status, then resubmit load request. If the open condition is invalid, that is, a system crash or an abend occurred while the SYSOUT group was in open status and being processed, use the CLEAN operator command to remove the open status. Two backup cycles and a duration of 4 hours must have elapsed before the open status is removed.

SARBCL19 PERMANENT I/O ERROR ON INPUT TAPE

Reason: A permanent I/O error occurred attempting to read SYSOUT data from a backup tape.

Action: Resubmit the load request. If the I/O error occurs again, use the SARTCP utility to map and correct the tape. Also see Chapter 8, "Backing Up and Recovering the Database," for recovery procedures.

SARBCL20 VIEW NOT FOUND

Reason: The specified view does not exist in the master index.

Action: Verify the existence of the view. If the view number was specified incorrectly, change the parameter specification, then resubmit the load request.

SARBCL21 INDEX FILE ALREADY RESIDES ON DISK

Reason: A load request was issued to specifically load the page index file for the requested SYSOUT group from tape or secondary disk to the CA-View database, but the page index file already resides on the disk.

Action: Since the page index file already resides on disk, the load request is not necessary. If there is something wrong with the page index file on the CA-View database, the page index file can be deleted and then reloaded.

SARBCL22 INDEX FILE WAS NOT FOUND ON TAPE OR SECONDARY DISK

Reason: A load request was issued to specifically load the page index file for the requested SYSOUT group from tape or secondary disk to the CA-View database, but no page index file was generated for the SYSOUT group.

Action: Re-index or re-archive the report to generate a page index file for the SYSOUT group.

SARBCP02 USER NOT AUTHORIZED TO ACCESS SYSOUT

Reason: The SARSECUX security user exit did not allow access to the specified SYSOUT group.

Action: Consult with your security administrator or system programming group to determine the reason why the authorization was not provided.

SARBCP03 ID MISSING

Reason: The ID parameter was incorrectly specified without a SYSOUT identifier and is required on the control statement.

Action: Change the ID parameter to include the SYSOUT identifier that is to be printed, then resubmit the print request.

SARBCP04 DDNAME xxxxxxxx NOT FOUND

Reason: The JCL DD statement name specified in the DDNAME parameter was not provided.

Action: Either remove the DDNAME parameter or specify the respective DDNAME.

SARBCP05 SYSOUT SUCCESSFULLY PRINTED

Reason: The SYSOUT group was successfully queued to print.

Action: None.

SARBCP06 SYSOUT SUCCESSFULLY WRITTEN TO DDNAME=xxxxxxx

Reason: The SYSOUT group was successfully copied to the specified JCL DD statement.

Action: None.

SARBCP07 SYSOUT QUEUED FOR TRANSMITTAL TO PC

Reason: The CA-Deliver report was successfully queued for download to a PC. The download process will be complete at the users discretion from the online retrieval interface.

Action: None.

SARBCP10 REQUESTED SYSOUT NOT FOUND IN MASTER INDEX

Reason: The requested SYSOUT group does not exist in the master index. This is normally caused by a misspelled SYSOUT identifier, a backup cycle deleting the SYSOUT group prior to the completion of the print process, or the manual deletion of the SYSOUT group by using the online retrieval facility or batch retrieval facility (SARBCH).

Action: Verify the existence of the SYSOUT group. If the SYSOUT identifier (ID), generation (GEN), and/or sequence number (SEQ) was specified incorrectly, change the parameter specification, then resubmit the print request.

SARBCP12 DATASET NOT LOADED - ALREADY ON DISK

Reason: The SYSOUT group was not loaded to the database because it already resides on disk.

Action: Since the original intent of the load request has been satisfied, no further action is necessary. If the SYSOUT group was incorrectly loaded or is empty, the disk portion the SYSOUT group can be deleted by using the online retrieval facility or batch retrieval facility, and the load request can be resubmitted.

SARBCP13 REQUESTED SYSOUT DOES NOT EXIST ON ANY TAPE BACKUP DATA

Reason: The SYSOUT group could not be found on any backup tape.

Action: None. The SYSOUT group is not available on tape.

SARBCP14 THE TAPE FILE WAS NOT THE SELECTED SYSOUT GROUP - USE SARTCP TO MAP THE TAPE

Reason: The SYSOUT group located on the backup tape is not the SYSOUT as referenced in the master index.

Action: Use the SARTCP utility to map and correct the backup tape.

SARBCP15 BACKUP TAPE DOES NOT EXIST

Reason: The backup tape could not be found in the master index. This is normally caused by the backup cycle deleting the tape prior to completion of the load request.

Action: None. The SYSOUT group is no longer available.

SARBCP16 DYNAMIC ALLOCATION FAILED FOR TAPE FILE, ERROR CODE - xxxx INFO CODE - xxxxx

Reason: Dynamic allocation failed for allocating the backup tape file. The hexadecimal error and information codes are provided.

Action: Consult the online retrieval HELP facility for a description of the dynamic allocation error code. Take appropriate action to correct the allocation error, then resubmit the print request.

SARBCP17 I/O ERROR POSITIONING TAPE

Reason: A permanent I/O error occurred attempting to position the archival tape to retrieve the SYSOUT group.

Action: Resubmit the request. If the I/O error occurs again, use the SARTCP utility to map and correct the tape.

SARBCP18 SYSOUT GROUP IS OPEN FOR OUTPUT

Reason: The requested function could not be performed because the specified SYSOUT group is open for output. The SYSOUT group can be in open status due to a currently-pending temporary load operation, a pending migration operation, or initial creation.

Action: Wait until the status of the SYSOUT group has changed from open status, then resubmit print request. If the open condition is invalid, that is, a system crash or abend occurred while the SYSOUT group was in open status and being processed, use the CLEAN operator command to remove the open status. Two backup cycles and a duration of 4 hours must have elapsed before the open status is removed.

SARBCP19 PERMANENT I/O ERROR ON INPUT TAPE

Reason: A permanent I/O error occurred attempting to read SYSOUT data from a backup tape.

Action: Resubmit the request. If the I/O error occurs again, use the SARTCP utility to map and correct the tape. Also see Chapter 8, "Backing Up and Recovering the Database," for recovery procedures.

SARBCP20 VIEW NOT FOUND

Reason: The specified view does not exist in the master index.

Action: Verify the existence of the view. If the view number was specified incorrectly, change the parameter specification, then resubmit the print request.

SARBCP21 DYNAMIC ALLOCATION FAILED FOR SYSOUT FILE, ERROR CODE - xxxx, INFO CODE - xxxxx

Reason: Dynamic allocation failed for allocating the print SYSOUT data set. The hexadecimal error and information codes are provided.

Action: Consult the online retrieval HELP facility for a description of the dynamic allocation error code. Take appropriate action to correct the allocation error, then resubmit load request.

SARBCP22**// OUTPUT FAILED FOR SYSOUT. REASON - xxxxxxxx**

Reason: An error occurred attempting to create an OUTPUT JCL statement for the SYSOUT group. The hexadecimal reason code from SJF is provided.

Action: Determine the cause of the allocation error. A possible alternative is to remove the output JCL parameter, for example, PAGEDEF, FORMDEF, LINECNT, and PRMODE.

SARBCP23**PC TRANSMITTAL QUEUE FULL - SYSOUT NOT QUEUED TO PC**

Reason: The PC transmittal queue is full for the user.

Action: Have the user transmit his queue and clear the entries.

SARBCP24**PC DESTINATION INVALID - SYSOUT NOT QUEUED TO PC**

Reason: The destination specified must be of the format PC user ID.

Action: Correct the destination.

SARBCP25**USER NOT DEFINED - SYSOUT NOT QUEUED TO PC**

Reason: The user ID specified in the destination is not defined to CA-View.

Action: Correct the destination or define the user ID to CA-View.

SARBCP28**SYSOUT QUEUED FOR EXTERNAL PRINT**

Reason: The external print request was successfully queued for processing.

Action: None.

SARBCP30**PRINTER SPECIFICATION CONFLICTS WITH DEST AND/OR DDNAME SPECIFICATION**

Reason: The SARBCH print request has failed because the PRINTER keyword is mutually exclusive with the DEST and/or DDNAME specifications.

Action: Eliminate either the DEST or DDNAME keyword specifications, then resubmit the print request.

SARBCP31 SELECT SPECIFICATION CONFLICTS WITH PAGE AND/OR RECORD SPECIFICATION

Reason: The SARBCH print request has failed because the SELECT keyword is mutually exclusive with the PAGE and RECORD specifications.

Action: Eliminate either the SELECT, PAGE, or RECORD keyword specification, then resubmit the print request.

SARBCP32 SYSOUT IS NOT ON PRIMARY DISK AND ITS INDEX IS UNAVAILABLE FOR PAGE SELECTION

Reason: The SARBCH print request specifying the SELECT keyword has failed because the SYSOUT does not reside on disk. The most likely reason for this is that the location is TAPE.

Action: Reload the SYSOUT to disk. Verify that the index is present, then resubmit the print request.

SARBCP33 SELECT SPECIFIED WITHOUT A VALID LOGICAL VIEW

Reason: The SARBCH print request specifying the SELECT keyword has failed because no views exist for the SYSOUT.

Action: Do one of the following:

- Remove the SELECT keyword, then resubmit the print request.
- Specify a view number that contained page indexing criteria when the SYSOUT was archived, then resubmit the request.

Note: Page indexing occurs only during archival.

SARBCP34 ERROR OCCURRED ATTEMPTING TO READ IN THE INDEX FOR THE SYSOUT

Reason: The SARBCH print request specifying the SELECT keyword has failed because an I/O error occurred while opening or reading the page index data from the database. The data is unreadable.

Action: Do one of the following:

- Remove the SELECT keyword, then resubmit the print request.

- Rebuild the page index data as follows:
 1. Reprint the SYSOUT to a held class.
 2. Delete the SYSOUT from CA-View
 3. Release the SYSOUT to CA-View for re-archival, retaining the same SYSOUT-ID.
 4. Resubmit the print request.

Note: The index can be rebuilt only by re-archiving the SYSOUT.

SARBCP35**SYSOUT HAS NOT BEEN INDEXED FOR THE LOGICAL VIEW OR BY ACIF**

Reason: The SARBCH print request specifying the SELECT keyword has failed because indexing has not been established for the view.

Action: Establish indexing criteria for the view if it does not already exist. Re-index or re-archive the SYSOUT. Be aware that page indexing occurs only during archival.

SARBCP36**NO PAGES FOUND THAT MATCH THE SELECTION TEXT**

Reason: The SARBCH print request specifying the SELECT keyword has failed because the SELECT text ID did not match any index selection.

Action: Check that the SELECT text and index selection criteria are as intended. The SYSOUT would have to be re-archived if the page indexing criteria is changed. Be aware that page indexing occurs only during archival.

SARBCP37**USER IS NOT AUTHORIZED TO PRINT REPORT FROM HIS DESTINATION**

Reason: The SARBCH print request has failed because the user exit SARDSTUX has denied the request.

Action: See your system administrator or specify an authorized destination for the reprint.

SARBCP38

ONLINE PRINTING TO A VTAM PRINTER EXCEEDED THE MAXIMUM PERMITTED PRINT LINES

Reason: Your print request exceeded the maximum number of lines permitted during online VTAM print processing. This message can also occur on non-VTAM printers as an indication that an error occurred while printing on both devices simultaneously.

Action: Do one of the following:

- Print in smaller segments.
- Increase the maximum permitted for this device by using the DEFine DEvice facility.
- Increase the maximum permitted for all devices by using SARINIT parameter VPRITMAXO.
- Make multiple separate print requests.

SARBCP39

PRINTING VIA CMASPOOL EXCEEDED THE MAXIMUM PERMITTED PRINT LINES

Reason: Your print request exceeded the maximum number of lines permitted during CA-Spool print processing. This message can also occur on non-VTAM printers as an indication that an error occurred while printing on both devices simultaneously.

Action: Do one of the following:

- Print in smaller segments.
- Increase the maximum permitted for this device by using the DEFine DEvice facility.
- Increase the maximum permitted for CA-Spool devices by using SARINIT parameter CMAMAX.
- Make multiple separate print requests.

SARBCP40

ERROR IN DEFINE DEVICE RECORD

Reason: The DEFine DEvice record is invalid. This could be caused by a record which was not completely defined.

Action: Correct the DEFine DEvice record and retry.

SARBCP41**REQUESTED INDEX NOT FOUND**

Reason: The page index value specified on the SELECT keyword of the print request was not found for the requested SYSOUT group.

Action: Verify that the correct page index value, SYSOUT group, and view are being specified; otherwise, remove the SELECT parameter, then print the entire SYSOUT group.

SARBCP42**NO TCR RECORD FOUND FOR REQUESTED SYSOUT**

Reason: An attempt is being made to print a SYSOUT group from tape, but certain vital backup tape control information could not be found.

Action: Normally, tape control information is retained as long as there are reports that reference it. The tape control record (TCR) can be reinstated by re-adding the tape back into the database with the TADD facility of the SARTDR utility.

***Important!** This condition could identify a serious problem with the database or problems with the supporting code. Report the problem to Computer Associates Technical Support.*

SARBCP43**ERROR DURING SECONDARY DISK OR EAS ACCESS**

Reason: An error occurred opening a report on optical disk, or on tape accessed through an EAS tape server.

Action: Browse the report online to see any error messages from the DSK2 driver or EAS tape server interface routine.

SARBCT02**REPORT SUCCESSFULLY COMPLETED**

Reason: The listing of SYSOUT groups or USERIDs was successfully written to the REPORT DD statement.

Action: None.

SARBCT10 REQUESTED SYSOUT NOT FOUND IN MASTER INDEX

Reason: The requested SYSOUT group does not exist in the master index. This is normally caused by a misspelled SYSOUT identifier, a backup cycle deleting the SYSOUT group prior to completion of the list process, or the manual deletion of the SYSOUT group by using the online retrieval facility or batch retrieval facility (SARBCH).

Action: Verify the existence of the SYSOUT groups. If the SYSOUT identifier (ID), and/or generation (GEN) was specified incorrectly, change the parameter specification, then resubmit the list request.

SARBCT11 REQUESTED USER(S) NOT FOUND IN MASTER INDEX

Reason: The requested user ID does not exist in the master index. This is normally caused by an incorrect specification of the USER parameter or the user ID was already deleted by another job or user by using the online retrieval facility or batch retrieval facility (SARBCH).

Action: Verify the existence of the user ID. If the user ID (USER parameter) was specified incorrectly, change the parameter specification, then resubmit the list request.

**SARBCT12 USER KEYWORD CONFLICTS WITH EXCP/GEN/ID/SEQ
KEYWORD(S)**

Reason: The USER parameter cannot be specified with the EXCP, GEN, ID, and/or SEQ parameter.

Action: Either remove the USER parameter or remove the EXCP, GEN, ID, and/or SEQ parameters from the control statement, then resubmit the list request.

SARBCT13 USER NOT AUTHORIZED TO LIST USERID(S)

Reason: The USERID extracted by the SARUSBUX utility does not have sufficient authority (master authority) to list USERIDs from the database. The USERID that requires authority is indicated in the SARBCH05 message.

Action: Consult your security administrator or systems programming group to determine the reason why the authorization was not provided.

SARBCT14 REPORT DD STATEMENT MISSING

Reason: The REPORT JCL DD statement was not provided and is required for the control statement.

Action: Specify the REPORT JCL DD statement, then resubmit the job.

SARBCU02 USER=*userid*
PASSWORD=*password*
MASTER=Y|N
DISTMASK=*distid-mask*
DISTID=*distid*
ACC=*access-to-modes*
MODE=*current-mode*
BANNER=*banner-name*
LANGUAGE=*language*
PRINTER=*printer*
PCLASS=*class*
PDEST=*dest*
ACCLASS=*class*
ADEST=*dest*
JCL1=*submit-job-jcl1*
JCL2=*submit-job-jcl2*
JCL3=*submit-job-jcl3*
JCL4=*submit-job-jcl4*

Reason: This message identifies the profile attributes of the online user after processing the DEFUSER request.

Action: None. This is an informational message.

SARBCU03 USER SUCCESSFULLY ADDED

Reason: The online user and profile attributes were successfully added to the CA-View database. This message is accompanied by the SARBCU02 message which details the user profile information.

Action: None.

SARBCU04 USER SUCCESSFULLY MODIFIED

Reason: The online user and profile attributes for an existing user were successfully changed. This message is accompanied by the SARBCU02 message which details the user profile information.

Action: None. This is an informational message.

SARBCU05 SYSOUT/DISTID SUCCESSFULLY DEFINED

Reason: The SYSOUT and DISTID references used to qualify selection of SYSOUT for online users in SAR mode have been successfully added to the CA-View database.

Action: None. This is an informational message.

SARBCU12 USER NOT AUTHORIZED TO PERFORM DEFINE FUNCTION

Reason: Master authority is required to perform the DEFDIST, DEFSYS, or DEFUSER request.

Action: Consult with your security administrator or systems programming group to determine the reasons why the authorization was not provided.

SARBCU15 MODE MUST BE "ALL", "EXPO", "EXP", "SARO", OR "SAR"

Reason: The parameter specification for the MODE keyword on the DEFUSER control statement is invalid. The acceptable values are ALL, EXPO, EXP, SARO, or SAR.

Action: Correct the MODE keyword specification on the DEFUSER control statement, then resubmit the define request.

SARBCU16 USERID NOT SUPPLIED

Reason: The USER keyword was not specified, or a user ID was not supplied with the USER keyword. The USER parameter is required on the DEFUSER control statement.

Action: Correct or add the USER keyword specification on the DEFUSER control statement, then resubmit the define request.

SARBCU17 DISTID DOES NOT CONFORM TO DISTID MASK SPECIFICATION

Reason: The distribution identifier specified on the DISTID keyword of the DEFUSER request does not match the masking pattern of the DISTID mask.

Action: Either change the distribution identifier on the DISTID keyword to conform to the DISTID mask or change the DISTID mask to encompass the specification of the specified distribution identifier.

SARBCU18 ACCESS TO SPECIFIED MODE DENIED BY ACCESS INDICATORS

Reason: The access mode specified on the MODE parameter of the DEFUSER control statement is not accessible based on the access mode indicators defined to the user.

Action: Either change the access mode specified on the MODE parameter to an accessible mode or change the access mode indicators to allow access to the specified access mode.

SARBCU19 ACCESS MODE INDICATORS INVALID

Reason: The access mode indicator specification on the ACC parameter of the DEFUSER control statement is not valid. The access mode indicator specification may be Y or N for each of the five access modes, ALL, EXPO, EXP, SARO, and SAR, respectively.

Action: Correct the specification of the access mode indicators on the ACC parameter, then resubmit the define request.

SARBCU20 USER OR SYSOUT PARAMETER NOT SUPPLIED

Reason: The USER keyword was not specified on the DEFUSER control statement, or the SYSOUT keyword was not specified on the DEFDIST or DEFSYS control statement.

Action: Add the appropriate keyword specification to the define request, then resubmit the request.

SARBCU21 DISTID IS MISSING FOR DEFINING SYSOUT/DISTID

Reason: The DISTID keyword was not specified on the DEFDIST or DEFSYS control statement and is required.

Action: Add the DISTID keyword specification to the define request, then resubmit the request.

SARBCU22 I/O ERROR

Reason: An error occurred while reading or writing data from the CA-View database. This message should be accompanied by a SARDBLxx message indicating the nature of the error.

Action: See the explanation and action of the SARDBLxx message for resolution.

SARBCU23 INVALID LANGUAGE OR ITS PANELS NOT FOUND IN DATABASE

Reason: The online panels for the specified language were not found in the CA-View database. When the LANGUAGE keyword is specified on the DEFUSER control statement, the CA-View database is queried for the online member name SxRP1, where x is the language specification. This error message is generated when that online member is not found.

Action: Load the appropriate language panels into the CA-View database or specify a language that is defined to your CA-View database.

SARBCX02 USER NOT AUTHORIZED TO ACCESS SYSOUT

Reason: The SARSECUX security user exit did not allow access to the SYSOUT group.

Action: Consult with your security administrator or systems programming group to determine the reasons why the authorization was not provided.

SARBCX03 ID MISSING

Reason: The ID parameter was specified without a SYSOUT identifier, which is required on the control statement.

Action: Change the ID parameter to include the SYSOUT identifier that is to be extracted, then resubmit the extract request.

SARBCX04 INBALANCE EXTRACTION PROGRAM IS NOT INSTALLED OR IS NOT AVAILABLE

Reason: The CA-Balancing extraction program, INBEXTP, was not found.

Action: Ensure that the INBEXTP load module is accessible from the STEPLIB, JOBLIB, or the linklist, resubmit the request.

SARBCX05 INBALANCE EXTRACTION COMPLETED SUCCESSFULLY

Reason: The CA-Balancing extraction for the request SYSOUT group completed successfully.

Action: None.

SARBCX06 INBALANCE EXTRACTION COMPLETED (WARNING MESSAGES WERE ISSUED)

Reason: The CA-Balancing extraction completed, but there were warning messages that were issued.

Action: Review the warning message to determine if action is necessary.

SARBCX07 INBALANCE EXTRACTION UNSUCCESSFUL

Reason: The CA-Balancing extraction was unsuccessful due to a previous error.

Action: Refer to the previous error to determine the appropriate action.

SARBCX10 REQUESTED SYSOUT NOT FOUND IN MASTER INDEX

Reason: The requested SYSOUT group does not exist in the master index. This is normally caused by a misspelled SYSOUT identifier, a backup cycle deleting the SYSOUT group prior to completion of the extract process, or the manual deletion of the SYSOUT group by using the online retrieval facility or batch retrieval facility (SARBCH).

Action: Verify the existence of the SYSOUT group. If the SYSOUT identifier (ID), generation (GEN), and/or sequence number (SEQ) was specified incorrectly, change the parameter specification, then resubmit the load request.

SARBCX12 DATA SET NOT LOADED - ALREADY ON DISK

Reason: The SYSOUT group was not loaded to the CA-View database because it already resides on disk. Initial processing of the extract request determined that the SYSOUT group which resides on tape or secondary disk must be loaded to the CA-View database to perform the extraction. Subsequently, it was determined that the SYSOUT group was reloaded by another batch or online request.

Action: Resubmit the extract request.

SARBCX13 REQUESTED SYSOUT DOES NOT EXIST ON ANY TAPE BACKUP DATA SET

Reason: The SYSOUT group could not be found on any tape backup.

Action: None. The SYSOUT group is not available on tape.

SARBCX14 THE TAPE FILE WAS NOT THE SELECTED SYSOUT GROUP - USE SARTCP TO MAP THE TAPE

Reason: The SYSOUT group located on the backup tape is not the same as the one that is referenced in the master index.

Action: Use the SARTCP utility to map and correct the backup tape.

SARBCX15 BACKUP TAPE DOES NOT EXIST

Reason: The backup tape could not be found in the master index. This is normally caused by the backup cycle deleting the tape prior to completion of the load request.

Action: None. The SYSOUT group is no longer available.

SARBCX16 DYNAMIC ALLOCATION FAILED FOR TAPE FILE, ERROR CODE - xxxx, INFO CODE - xxxx

Reason: Dynamic allocation failed for allocating the backup tape file. The hexadecimal error and information codes are provided.

Action: Consult the online retrieval help facility for a description of the dynamic allocation error code. Take appropriate action to correct the allocation error, then resubmit the extract request.

SARBCX17**I/O ERROR POSITIONING TAPE**

Reason: A permanent I/O error occurred attempting to position the archival tape to retrieve the SYSOUT group.

Action: Resubmit the request. If the I/O error occurs again, use the SARTCP utility to map and correct the tape.

SARBCX18**SYSOUT GROUP IS OPEN FOR OUTPUT**

Reason: The requested function could not be performed because the specified SYSOUT group is open for output. The SYSOUT group can be in open status due to a currently pending temporary load operation, a pending migration operation, or initial creation.

Action: Wait until the status of the SYSOUT group has changed from open status, then resubmit the extract request. If the open condition is invalid (for example, a system crash or an abend occurred while the SYSOUT group was in open status and being processed) use the CLEAN operator command to remove the open status. Two backup cycles and a duration of four hours must have elapsed before the open status is removed.

SARBCX19**PERMANENT I/O ERROR ON INPUT TAPE**

Reason: A permanent I/O error occurred attempting to read SYSOUT data from a backup tape.

Action: Resubmit the extract request. If the I/O error occurs again, use the SARTCP utility to map and correct the tape. Also see Chapter 8, "Backing Up and Recovering the Database," for recovery procedures.

SARBKT00**{STANDARD | INTERIM} BACKUP CYCLE STARTED FOR GEN *nnn*
ON *ddddddd* AT *#####***

Reason: A CA-View backup cycle has been initiated.

Action: None.

SARBKT50**SYSOUT GROUP *xxxxxxxxxxxx* SKIPPED DUE TO PREVIOUS I/O
ERROR**

Reason: An I/O error occurred attempting to backup the specified SYSOUT group. The remainder of the SYSOUT group is skipped.

Action: Probably none; however, verify that there is no major problem with the database.

SARBKT51 SYSOUT GROUP xxxxxxxxxxxx NOT DELETED DUE TO PREVIOUS I/O ERROR

Reason: An I/O error occurred attempting to delete the specified SYSOUT group. The group is not deleted.

Action: Probably none; however, verify that there is no major problem with the database.

SARBKT52 *WARNING*** RUN SARPAC TO COPY TAPES FOLLOWING MERGE OF DATABASES**

Reason: The database contains references to tape volumes owned by another database. This condition is the result of a database merge.

Action: Run SARPAC to copy the SYSOUT groups on tape to new tape volumes owned by this database.

SARBKT53 SYSOUT ALLOCATION ERROR CODE - xxxx, INFO CODE - xxxx

Reason: A dynamic allocation request for allocating the print data set to SYSOUT failed. The hexadecimal error and information codes are provided.

Action: Determine the reason for the failure and fix the problem, then resubmit the job.

SARBKT55 RECOVERY DATASET FILE ERROR - OPER=xxxx, RC=nn

Reason: Error attempting to access the recovery data set. The CA-View backup cycle is terminated.

Action: None. If a hardware error is not indicated, Contact Computer Associates Technical Support.

SARBKT56 NO SARRECV DD STATEMENT - RECOVERY DATASET NOT UPDATED

Reason: There is no DD statement for the backup recovery file in the started task.

Action: None, if you wish to run without the backup recovery file. Otherwise, change the started task JCL and restart.

**SARBKT57 ERROR DETERMINING IF OPEN SYSOUT STILL BEING PROCESSED.
RC= xx**

Reason: The CA-View started task issues the IEFSSREQ macro to verify that a SYSOUT is not still in the process of being written to the CA-View database when the backup cycle attempts to migrate it off disk. The IEFSSREQ macro had a return code of xx.

Action: See the IBM documentation for return codes for the IEFSSREQ macro.

SARBKT58 UNEXPECTED IEFSSREQ RETURN CODE. RC=xx

Reason: The CA-View started task issues the IEFSSREQ macro to verify that a SYSOUT is not still in the process of being written to the CA-View database when the backup cycle attempts to migrate it off disk. The IEFSSREQ macro had a return code of xx. Field SSOBRETN contained an unanticipated value. This may be caused by changes to JES control blocks SSOB and SSCS.

Action: See the IBM documentation for return codes for the IEFSSREQ macro.

**SARBKT59 SYSOUT GROUP xxxxxxxx NOT DELETED DUE TO PREVIOUS
ERROR**

Reason: This message is issued after message SARBKT57 or SARBKT58. It indicates that the identified SYSOUT sub-file data was to have been deleted from disk because it has expired via the NGEND initialization parameter value. Because the attempt to verify that the SYSOUT group was not still being processed failed, it will not be deleted from disk.

Action: See the IBM documentation for the IEFSSREQ return code indicated in the previously issued SARBKT57 or SARBKT58 msg. Possibly use the DD online command to manually change the location to TAPE in order to free the allocated disk space.

**SARBKT60 SYSOUT GROUP xxxxxxxx NOT DELETED SINCE IT IS STILL BEING
PROCESSED**

Reason: The CA-View started task discovered a SYSOUT was still in OPEN status, issued the IEFSSREQ macro to verify whether it was still being written to disk, and it was.

Action: None. If the message persists, and you want to free the disk space, use the `C` online command to change the location from `OPEN` to `DISK`. With the next backup cycle, the partial `SYSOUT` will be backed up to tape unless you delete it first.

SARBKT61 {STANDARD | INTERIM} BACKUP CYCLE STARTING PHASE *n*

Reason: This message identifies which internal backup phase is beginning. Phase 1 backs up the current generation to tape and performs `ERO` processing. Phase 2 backs up the master index to tape, deletes expired reports, and uncatalogs expired tapes.

Action: None. This is an informational message.

**SARBKT62 {STANDARD | INTERIM} BACKUP CYCLE ENDING PHASE *n*
OF *nnn* REPORTS ON DATABASE, *nnn* WERE PROCESSED**

Reason: This message identifies which internal backup phase is ending. The number of reports on the database includes those which are not currently on `DASD` (they are on tape). The number processed only includes those in the current generation. Because archiving may continue during the backup, these numbers may change from backup phase to backup phase.

Action: None. This is an informational message.

**SARBKT63 {STANDARD | INTERIM} PHASE *n* PROCESSING *rrrrrr*, ARCHIVED
ON *dddd* AT *ttt***

Reason: This message is a progress report issued during a backup. It appears at intervals specified by the `SARINIT` parameter `DBMSGFRQ`.

Action: None. This is an informational message.

**SARBKT65 UNABLE TO DELETE SYSOUT GROUP *xxxxxxx* FROM
SECONDARY DISK**

Reason: An error occurred attempting to delete the report from optical disk.

Action: Verify that the optical device is functioning properly.

SARBKT66***stor-group-name* STORAGE GROUP IS BEING COPIED TO TAPE**

Reason: The named storage group is being copied from disk to tape. STORGRP0 is named DEFAULT by CA-View.

Action: None. This is an informational message.

SARBKT99**BACKUP CYCLE ENDED FOR GEN *nnn* ON dddddddd AT #####**

Reason: Backup cycle ended.

Action: None. This is an informational message.

SARBKT9A**CURRENT GENERATION IS {NOW | STILL} *nnn***

Reason: Issued in conjunction with SARBKT99 to advise you of current archival generation and whether the generation number has changed as a result of the just completed backup.

Action: None. This is an informational message.

SARBKU02**DIRECT TO TAPE ARCHIVAL SUSPENDED FOR COMPLETION OF BACKUP CYCLE**

Reason: Direct-to-tape archival must be suspended until the backup cycle has completed.

Action: None. Direct-to-tape archival will resume following completion of the backup cycle.

SARBKU03**ARCHIVAL SUSPENDED FOR COMPLETION OF BACKUP CYCLE**

Reason: Another backup cycle has been started, possibly by the operator or due to insufficient storage, etc. SYSOUT archival must be suspended until the backup cycle has completed.

Action: None. This is an informational message.

SARBKU04 TERMINATION SUSPENDED FOR COMPLETION OF BACKUP CYCLE

Reason: The operator has attempted to stop SAR with a P command. The SYSOUT archival termination must be suspended until the backup cycle has completed.

Action: None. This is an informational message.

SARBKU05 {STANDARD | INTERIM} BACKUP BYPASSED PER STACKBU=NO

Reason: The request for the type of backup indicated (standard or interim) has been ignored since to honor it would cause multiple backups to queue and you have specified STACKBU=NO as an initialization parameter.

Action: None.

SARBKU06 *database-name* BACKUP BYPASSED DUE TO RECOVERY PROCESS

Reason: The backup cycle is bypassed because a SARDBASE RESTORE operation is in progress. The backup cycle scratches the old recovery files and creates new ones, but SARDBASE RESTORE is reading the old recovery files.

Action: None. This is an informational message.

SARBKU07 BACKUP CYCLE IS RUNNING - REPLY W (WAIT) TO WAIT FOR IT TO COMPLETE OR T (TERMINATE)

Reason: You have attempted to stop the backup cycle with a P operator command. This message gives you the option of having CA-View terminate its backup.

Warning! If you have CA-View terminate its backup, it will continue from where it left off the next time it is brought up. This is a consideration if you are using a tape management system, and canceling a tape backup job could result in the tape being scratched.

Action: Reply W to let the backup cycle complete running, or T to terminate it.

SARBKU30

```
*****  
*                                     *  
*                BACKUP ABENDED WITH CODE 3000K                *  
*                                     *
```

*

Reason: The CA-View backup cycle has abended. The system or user abend code is provided.

Action: Consult the *IBM MVS System Codes* manual to determine the reason for the abend. If you still cannot determine the problem, contact Computer Associates Technical Support.

SARBPT01**ALLOCATION FAILED FOR SYSOUT DATASET, ERR=XXXX,
INFO=XXXXXX**

Reason: CA-View was not able to allocate space for the SYSOUT data set indicated in the error message.

Action: Correct and retry.

SARBPT02**NO DISTRIBUTION IDENTIFIERS FOR BUNDLE**

Reason: No distribution identifiers for the report exist.

Action: Correct and retry.

SARBPT03**NO REPORTS DEFINED FOR DISTRIBUTION IDENTIFIER**

Reason: No reports exist for the distribution identifier.

Action: Correct and retry.

SARBPT05**THE TAPE CONTAINED A NULL FILE FOR THE SYSOUT GROUP**

Reason: A file on the mounted tape is null.

Action: Correct and retry.

SARBPT06**THE TAPE FILE WAS NOT THE SELECTED GROUP - USE SARTCP TO
MAP THE TAPE**

Reason: The file specified is not the selected group.

Action: Correct and retry.

SARBPT07 BACKUP TAPE DOES NOT EXIST

Reason: The backup tape specified does not exist.

Action: Correct and retry.

SARBPT08 TAPE ALLOCATION ERROR CODE - xxxx, INFO CODE - xxxx

Reason: Tape allocation was not possible because of reasons referenced by code.

Action: Correct and retry.

SARBPT09 I/O ERROR POSITIONING TAPE

Reason: I/O was not possible because of error positioning the tape.

Action: Correct and retry.

SARBPT10 SYSOUT GROUP IS OPEN FOR OUTPUT

Reason: The SYSOUT group specified is open for output.

Action: Correct and retry.

SARBPT11 // OUTPUT FAILED FOR SYSOUT, REASON=xxxx

Reason: The attempt to dynamically create a // OUTPUT statement failed. The hexadecimal reason code is provided.

Action: Correct and retry.

SARBPT12 PERMANENT I/O ERROR ON INPUT TAPE

Reason: A permanent I/O error occurred when reading the tape.

Action: Use SARTCP to correct the problem with the tape.

SARCIC01 CA-VIEW 2.0 TERMINATED

Reason: SYSOUT archival was terminated.

Action: None.

SARCIC02 CA-VIEW 2.0 ABENDED

Reason: The CA-View CICS conversational interface has abended.

Action: Contact Computer Associates Technical Support.

SARCIF01 INVALID INDEX BLOCK,DCCB=nnnn

Reason: An invalid index block was encountered when attempting to reorganize the index file of the database.

Action: Correct the problem with the database. This may require running SARDBASE VERIFY, or performing other recovery functions against it.

SARCIF02 REORG HAS PROCESSED TO KEY=X

Reason: This is an informational message, periodically issued to indicate the progress of an asynchronous SARDBASE REORG.

Action: None. This is an informational message.

SARCIF03 RECOVERED INDEX BLOCKS = n

Reason: This is an informational message that specifies the number of empty blocks in the index file that have been recovered by an asynchronous SARDBASE REORG.

Action: None.

SARCIF04 REORG ENDED AT KEY=database key

Reason: A stop command was issued during processing the SARDBASE asynchronous REORG. This message indicates where the asynchronous REORG ended.

Action: None. This is an informational message.

SARCMA01 CMASPOOL *ffff* FAILED ON *dddddddd*, RC=*rr* *ppp*

Reason: This message is issued when CA-Spool rejected a request made by CA-View in an unexpected fashion (no other more specific error message applies). *ffff* is the function, which can be OPEN, WRITE, or CLOSE. *dddddddd* is the target CA-Spool device. *rr* is the CA-Spool return condition found in CA-Spool parameter list field @OPENSTA. *ppp* is only present when the error is an invalid CA-Spool parameter list, and identifies the unacceptable parameter as found in CA-Spool parameter list field @OPENPID.

Action: Check the CA-Spool documentation for the return condition that was found.

SARCMA02 CMASPOOL NOT AVAILABLE FOR *dddddddd*

Reason: CA-Spool rejected a CA-View open request because the CA-Spool subsystem is not available. *dddddddd* is the target CA-Spool device.

Action: Bring up the CA-Spool subsystem. If the problem still occurs, verify that the SARINIT parameter CMASPOOL= has the same value as the CA-Spool ESFPARM parameter SUBID=. If you are using the CA-View DEFINE DEVICE facility, and have overridden the SARINIT CMASPOOL parameter by specifying SUB-SYSTEM ID, then it must be the same as the CA-Spool ESFPARM SUBID= parameter.

SARCMA03 CMASPOOL FULL FOR *dddddddd*

Reason: The CA-Spool database is full. *dddddddd* is the target CA-Spool device.

Action: Make room in the CA-Spool database by either waiting for SYSOUT to finish printing, deleting items, or making the database larger.

SARCMA04 CMASPOOL DEVICE *dddddddd* DOES NOT EXIST

Reason: You are trying to print to a device which is not defined to CA-Spool. *dddddddd* is the target CA-Spool device.

Action: Specify a device already defined to CA-Spool, or define the new device to CA-Spool.

**SARCMA05 CMASPOOL INTERFACE PROGRAM NOT LINK EDITED FOR
 dddddddd**

Reason: The installation of the CA-View-to-CA-Spool interface was not finished. It requires a link-edit of the AESFPRIV routine provided on the user's CA-Spool distribution tape into the SARCMAIX program provided on the CA-View distribution tape. *ddddddd* is the target CA-Spool device.

Action: Finish the installation.

SARCMA06 CMASPOOL INVALID INTERNAL REQUEST FOR dddddddd

Reason: CA-View posted an unacceptable request code to CA-Spool. *ddddddd* is the target CA-Spool device.

Action: Contact Computer Associates Technical Support.

SARCP101 SYSOUT IS NOT ON PRIMARY DISK

Reason: A SYSOUT must be on primary disk to be indexed.

Action: Reload the SYSOUT to disk (Online L Command or SARBCH LOAD), then resubmit the index request.

SARCP102 NO INDEX SPECIFIED FOR THIS SYSOUT

Reason: No page separation criteria was specified with any logical view for this SYSOUT.

Action: Specify the desired page separation criteria online, with at least one logical view definition.

SARCP103 ERROR OPENING THE SYSOUT SUBFILE

Reason: An I/O error occurred opening the SYSOUT.

Action: Report the problem to your CA-View administrator.

SARCP104 I/O ERROR READING SYSOUT

Reason: An I/O error occurred reading the SYSOUT.

Action: Report the problem to your CA-View administrator.

SARCPI05 CANNOT ALLOCATE SUBFILE FOR THE NEW PAGE INDEX

Reason: The database is possibly out of space.

Action: Run SARDBASE STATUS, to check the percentage of utilization of the database. If the utilization is very high, report the problem to your CA-View administrator for appropriate action.

SARCPI06 ERROR WRITING LAST BLOCK OF NEW PAGE INDEX

Reason: An I/O error occurred writing the page index, possibly because the database is out of space.

Action: Report the problem to your CA-View administrator.

SARCPI07 ERROR UPDATING GROUP CONTROL RECORD

Reason: An I/O error occurred updating the SYSOUT Group Control Record.

Action: Report the problem to your CA-View administrator.

SARCPI08 ERROR DELETING OLD PAGE INDEX

Reason: An I/O error occurred when deleting the old page index.

Action: Report the problem to your CA-View administrator.

SARCPI09 NEW PAGE INDEX HAS BEEN CREATED

Reason: A new page index has been created.

Action: None. This is an informational message.

SARCPI10 ERROR REWRITING GROUP CONTROL RECORD

Reason: An I/O error occurred rewriting the SYSOUT Group Control Record.

Action: Report the problem to your CA-View administrator.

SARCPI11 ERROR WRITING PAGE INDEX TO NEW SUBFILE

Reason: The database is possibly out of space.

Action: Run SARDBASE STATUS, to check the percentage of utilization of the database.

SARCP112 ERROR READING THE MASTER DATABASE INDEX

Reason: A database I/O error occurred.

Action: Report the problem to your CA-View administrator.

SARCP113 CANNOT CREATE NEW PAGE INDEX FOR ACIF SYSOUT

Reason: An AFP report, archived using the AFP Conversion and Indexing Facility (ACIF), cannot be indexed by SARBCH INDEX.

Action: AFP reports are indexed with ACIF index control statements. See Indexing AFP Reports in Chapter 5, "Archival," for more information.

SARCST01 CICS SUBTASK STARTED

Reason: The CICS interface subtask has been started.

Action: None. This is an informational message.

SARCST02 CICS SUBTASK ENDED

Reason: The CICS interface subtask has ended.

Action: None. This is an informational message.

SARCTE01 SUBTASK IS NOT ACTIVE

Reason: A request has been made to deactivate the CA-View CICS subtask, but the subtask is already inactive.

Action: None.

SARCTE02 ACTIVE SESSIONS USING SUBTASK - ENTER Y/N TO FORCE TERMINATION

Reason: A request has been made to deactivate the CA-View CICS subtask, but active users were found.

Action: Enter Y to force termination, or N to cancel subtask inactivation.

SARCTE03 SUBTASK NOT TERMINATED

Reason: Unable to terminate the CICS interface subtask.

Action: Correct the problem and retry.

SARCTE04 SUBTASK SUCCESSFULLY TERMINATED

Reason: The CICS interface subtask has been successfully terminated.

Action: None. This is an informational message.

SARD0001 INVALID INDEX NAME

Reason: The index prefix in the DSK2PARM initialization parameter is invalid.

Action: Correct the value.

SARD0002 INVALID UNIT NAME

Reason: The unit name in the DSK2PARM initialization parameter is invalid.

Action: Correct the value.

SARD0005 INVALID BLKSIZE

Reason: The block size in the DSK2PARM initialization parameter is invalid.

Action: Correct the value.

SARD0006 CATALOG ERROR RC=xxxx.xxxx.xxxx, DSN=*dsname*

Reason: A catalog management error was received when attempting to catalog the data set. The decimal value of registers 15, 0, and 1 are provided.

Action: Determine the reason for the catalog error, then correct the problem.

SARD0007 NO ACCESS UNDER VM/CMS, RELOAD SYSOUT GROUP TO DATA BASE

Reason: The optical disk device cannot be accessed directly from VM/CMS.

Action: Use the L selection code to submit a batch job to temporarily load the SYSOUT group to primary disk so it can be accessed.

SARD0008 END OF DATA

Reason: An unexpected end of data condition was encountered when accessing the SYSOUT group on secondary disk storage. This condition should never happen.

Action: Delete and re-archive the SYSOUT group.

SARD0009 SYSOUT GROUP IS NOT ON SECONDARY DISK STORAGE

Reason: The SYSOUT group is identified in the master index as residing on secondary disk storage, but it could not be found there.

Action: Delete the disk copy of the SYSOUT group to enable the tape copy to be accessed.

SARD0010 SYSTEM ABEND xxx CREATING DSN=*dsname*

Reason: The driver was abnormally terminated by the system when attempting to create a data set. The abend code is provided.

Action: Determine the reason for the abnormal termination and correct the problem.

SARD0011 DYNAMIC ALLOCATION ERR=*xxx*,INFO=*xxxx*,DSN=*dsname*

Reason: A dynamic allocation request for allocating a data set failed. The hexadecimal error and information codes are provided.

Action: Determine the reason for the allocation failure and correct the problem.

SARD0013 LOGICAL ERROR PROCESSING DSN=*dsname*

Reason: The internal format of the archived SYSOUT group is in error and cannot be used.

Action: Delete and re-archive the SYSOUT group.

SARD0101 INVALID UNIT NAME

Reason: The unit name in the DSK2PARM initialization parameter is invalid.

Action: Correct the value.

SARD0102 INVALID LOW VOLSER

Reason: The low or high volume serial number in the DSK2PARM initialization parameter is invalid.

Action: Correct the value.

SARD0103 INVALID HIGH VOLSER

Reason: The low or high volume serial number in the DSK2PARM initialization parameter is invalid.

Action: Correct the value.

SARD0104 LOW/HIGH VOLSER SPECIFIED WITHOUT THE OTHER

Reason: Only one volume serial number for the range of volume serial numbers in the DSK2PARM initialization parameter was specified.

Action: Specify both volume serial numbers for the range.

SARD0105 LOW/HIGH VOLSER DOES NOT END WITH A NUMERIC

Reason: Either the low or high volume serial was specified without a numeric character as its last character.

Action: Review and correct the specified volume serial.

SARD0106 LOW AND HIGH VOLSERS ARE DIFFERENT FORMATS

Reason: When specifying a range of volume serial numbers in the DSK2PARM initialization parameter, the volume serial numbers must be the same format.

Action: Correct the volume serial numbers.

SARD0107 NO ACCESS UNDER VM/CMS, RELOAD SYSOUT GROUP TO DATA BASE

Reason: The optical disk device cannot be accessed directly from VM/CMS.

Action: Use the L selection code to submit a batch job to temporarily load the SYSOUT group to primary disk so it can be accessed.

SARD0108 END OF DATA

Reason: An unexpected end of data condition was encountered when accessing the SYSOUT group on secondary disk storage.

Action: Delete and re-archive the SYSOUT group.

SARD0109 SYSOUT GROUP IS NOT ON SECONDARY DISK STORAGE

Reason: The SYSOUT group is identified in the master index as residing on secondary disk storage, but it could not be found there.

Action: Delete the disk copy of the SYSOUT group to enable the tape copy to be accessed.

SARD0111 ERROR PROCESSING OUTPUT FILE ON SECONDARY DISK

Reason: An error occurred when writing to the optical disk device.

Action: Correct the problem with the optical disk device.

SARD0120 SYSOUT GROUP NOT FOUND

Reason: The SYSOUT group has been deleted by another user between the time the selection list was created and the time you made your request to access the SYSOUT group.

Action: None. The SYSOUT group is no longer archived.

SARD0121 DYNAMIC ALLOCATION ERR=xxxx, INFO=xxxx

Reason: A dynamic allocation request for allocating the secondary disk storage copy failed. The hexadecimal error and information codes are provided.

Action: Determine the reason for the allocation failure and correct the problem.

SARD0122 POSITIONING ERROR

Reason: An error occurred attempting to position the secondary disk storage emulation tape to retrieve the SYSOUT group.

Action: Resubmit the request. If the problem occurs again, then the SYSOUT group can no longer be accessed from secondary disk. You may then delete the disk copy of the SYSOUT group to enable the tape copy to be accessed.

SARD0123 I/O ERROR ON SECONDARY DISK

Reason: An I/O error occurred attempting to access the secondary disk storage emulation tape.

Action: Resubmit the request. If the problem occurs again, then the SYSOUT group can no longer be accessed from secondary disk. You may then delete the disk copy of the SYSOUT group to enable the tape copy to be accessed.

SARD0201 INVALID INDEX NAME

Reason: The index prefix in the DSK2PARM initialization parameter is invalid.

Action: Correct the value.

SARD0202 INVALID ACCOUNT NUMBER

Reason: The account identification code in the DSK2PARM initialization parameter is invalid.

Action: Correct the value.

SARD0203 INVALID ACCOUNT PASSWORD

Reason: The account password in the DSK2PARM initialization parameter is invalid.

Action: Correct the value.

SARD0204 INVALID STORAGE MACHINE ID

Reason: The storage machine identifier in the DSK2PARM initialization parameter is invalid.

Action: Correct the value.

SARD0205 UNABLE TO LOCATE LSMCALL

Reason: When loading the FileTek Callable Interface, module LSMCALL could not be found.

Action: Verify that the FileTek Callable Interface library is available to the step.

**SARD0207 NO ACCESS UNDER VM/CMS, RELOAD SYSOUT GROUP TO
DATA BASE**

Reason: The optical disk device cannot be accessed directly from VM/CMS.

Action: Use the L selection code to submit a batch job to temporarily load the SYSOUT group to primary disk so it can be accessed.

SARD0208 END OF DATA

Reason: An unexpected end of data condition was encountered when accessing the SYSOUT group on secondary disk storage. This condition should never happen.

Action: Delete and re-archive the SYSOUT group.

SARD0209 SYSOUT GROUP IS NOT ON SECONDARY DISK STORAGE

Reason: The SYSOUT group is identified in the master index as residing on secondary disk storage, but it could not be found there.

Action: Delete the disk copy of the SYSOUT group to enable the tape copy to be accessed.

SARD0301 INVALID INDEX NAME

Reason: The index prefix in the DSK2FARM initialization parameter is invalid.

Action: Correct the value.

SARD0302 INVALID ACCOUNT NUMBER

Reason: The account identification code in the DSK2PARM initialization parameter is invalid.

Action: Correct the value.

SARD0303 INVALID ACCOUNT PASSWORD

Reason: The account password in the DSK2PARM initialization parameter is invalid.

Action: Correct the value.

SARD0304 INVALID STORAGE MACHINE ID

Reason: The storage machine identifier in the DSK2PARM initialization parameter is invalid.

Action: Correct the value.

SARD0305 UNABLE TO LOCATE LSMCALL

Reason: When loading the FileTek Callable Interface, module LSMCALL could not be found.

Action: Verify that the FileTek Callable Interface library is available to the step.

SARD0307 NO ACCESS UNDER VM/CMS, RELOAD SYSOUT GROUP TO DATA BASE

Reason: The optical disk device cannot be accessed directly from VM/CMS.

Action: Use the L selection code to submit a batch job to temporarily load the SYSOUT group to primary disk so it can be accessed.

SARD0308 END OF DATA

Reason: An unexpected end of data condition was encountered when accessing the SYSOUT group on secondary disk storage. This condition should never happen.

Action: Delete and re-archive the SYSOUT group.

SARD0309**SYSOUT GROUP IS NOT ON SECONDARY DISK STORAGE**

Reason: The SYSOUT group is identified in the master index as residing on secondary disk storage, but it could not be found there.

Action: Delete the disk copy of the SYSOUT group to enable the tape copy to be accessed.

SARD0313**LOGICAL ERROR PROCESSING DSN=*dsname***

Reason: The internal format of the archived SYSOUT group is in error and cannot be used.

Action: Delete and re-archive the SYSOUT group.

SARD0401**INVALID UNIT NAME**

Reason: The unit name in the DSK2PARM initialization parameter is invalid.

Action: Correct the value.

SARD0402**INVALID LOW VOLSER**

Reason: The low or high volume serial number in the DSK2PARM initialization parameter is invalid.

Action: Correct the value.

SARD0403**INVALID HIGH VOLSER**

Reason: The low or high volume serial number in the DSK2PARM initialization parameter is invalid.

Action: Correct the value.

SARD0404**LOW/HIGH VOLSER SPECIFIED WITHOUT THE OTHER**

Reason: Only one volume serial number for the range of volume serial numbers in the DSK2PARM initialization parameter was specified.

Action: Specify both volume serial numbers for the range.

SARD0405 LOW/HIGH VOLSER DOES NOT END WITH A NUMERIC

Reason: Either the low or high volume serial was specified without a numeric character as its last character.

Action: Review and correct the specified volume serial.

SARD0406 LOW AND HIGH VOLSERS ARE DIFFERENT FORMATS

Reason: When specifying a range of volume serial numbers in the DSK2PARM initialization parameter, the volume serial numbers must be of the same format.

Action: Correct the volume serial numbers.

SARD0407 NO ACCESS UNDER VM/CMS, RELOAD SYSOUT GROUP TO DATA BASE

Reason: The optical disk device cannot be accessed directly from VM/CMS.

Action: Use the L selection code to submit a batch job to temporarily load the SYSOUT group to primary disk so it can be accessed.

SARD0408 END OF DATA

Reason: An unexpected end of data condition was encountered when accessing the SYSOUT group on secondary disk storage.

Action: Delete and re-archive the SYSOUT group.

SARD0409 SYSOUT GROUP IS NOT ON SECONDARY DISK STORAGE

Reason: The SYSOUT group is identified in the master index as residing on secondary disk storage, but it could not be found there.

Action: Delete the disk copy of the SYSOUT group to enable the tape copy to be accessed.

SARD0411 ERROR PROCESSING OUTPUT FILE ON SECONDARY DISK

Reason: An error occurred when writing to the optical disk device.

Action: Correct the problem with the optical disk device.

SARD0413 UNABLE TO LOAD MDRSCALL

Reason: When loading MDRS, the MDRSCALL module could not be found.

Action: Verify that the MDRS library is available to the step.

SARD0414 INVALID MDRS SUBSYSTEM ID

Reason: The specified subsystem ID is not defined to MDRS for a connected optical disk device.

Action: Check that the specified subsystem ID is correct for the desired optical disk device.

SARD0420 SECONDARY DISK VOLUME NOT FOUND

Reason: The requested emulated tape volume could not be found on the optical disk device. This condition could occur if the tape volume was deleted before your request for access.

Action: Check the requested volume serials for validity.

SARD0421 MDRS INTERFACE ERROR RC=xxxx

Reason: The Data/Ware MDRS interface has encountered an error.

Action: Consult your Data/Ware MDRS documentation for the meaning of the return code.

SARD0501 INVALID INDEX NAME

Reason: The index prefix in the DSK2PARM initialization parameter is invalid.

Action: Correct the value.

SARD0502 INVALID STORAGE CLASS

Reason: The storage class in the DSK2PARM initialization parameter is invalid.

Action: Correct the value.

SARD0503 INVALID MANAGEMENT CLASS

Reason: The management class in the DSK2PARM initialization parameter is invalid.

Action: Correct the value.

SARD0504 INVALID DB2 SYSTEM ID

Reason: The DB2 system ID in the DSK2PARM initialization parameter is invalid.

Action: Correct the value.

**SARD0506 OAM REQUEST FAILED, RC=xx, REASON=X'xxxxxxxx'
DB2 REQUEST FAILED, RC=XX, REASON=X'xxxxxxxx'**

Reason: The OAM or DB2 request failed with the specified return and reason codes.

Action: Consult the *Object Access Method Application Programmer's Reference* for a list of reason and return codes.

**SARD0507 NO ACCESS UNDER VM/CMS, RELOAD SYSOUT GROUP TO
DATA BASE**

Reason: The optical disk device cannot be accessed directly from VM/CMS.

Action: Use the L selection code to submit a batch job to temporarily load the SYSOUT group to primary disk so it can be accessed.

SARD0508 END OF DATA

Reason: An unexpected end of data condition was encountered when accessing the SYSOUT group on secondary disk storage.

Action: Delete and re-archive the SYSOUT group.

SARD0509 SYSOUT GROUP IS NOT ON SECONDARY DISK STORAGE

Reason: The SYSOUT group is identified in the master index as residing on secondary disk storage, but it could not be found there.

Action: Delete the disk copy of the SYSOUT group to enable the tape copy to be accessed.

SARD0513 LOGICAL ERROR PROCESSING DSN=*object-name*

Reason: The internal format of the archived SYSOUT group is in error and cannot be used.

Action: Delete and re-archive the SYSOUT group.

SARD2M01 NO DATABASE HIGH-LEVEL INDEX SPECIFIED

Reason: No database high level index was specified in the SARDSK2B batch job for optical disk migration.

Action: Rerun the job with the appropriate parameters.

SARD2M02 NO PCR RECORD FOUND IN DATABASE

Reason: ERO (Expanded Retention Option) settings are not specified for this database.

Action: Verify that you have implemented the Expanded Retention Option for the reports in the database. For information, see Chapter 6, "Expanded Retention Option."

SARD2M03 DSK2DRVR MUST BE SPECIFIED WITH SARINIT

Reason: No DSK2DRVR parameter was specified in the SARINIT job.

Action: Specify the appropriate DSK2DRVR parameter for the optical device you are using.

SARD2M04 ERROR LOADING DSK2DRVR

Reason: An error occurred loading the secondary disk driver.

Action: Verify that the DSK2DRVR ERO initialization parameter is appropriately specified (00, 01, 02, etc.).

SARD2M05 ERROR INITIALIZING DSK2DRVR

Reason: An error occurred initializing the secondary (optical) disk driver.

Action: Verify that all components of your optical system, including hardware, OAM (if it is used) etc., are properly working. If the problem persists, contact Computer Associates Technical Support.

SARD2M06 ERROR INITIALIZING SARPAR

Reason: An error occurred initializing ERO (Expanded Retention Option).

Action: Verify that the SARPATAB DD statement is specified in your CA-View started task JCL (SARSTC), and that the correct name of the table is specified.

SARD2M07 ERROR FINALIZING SARPAR

Reason: An error occurred finalizing ERO (Expanded Retention Option).

Action: Verify that your ERO table is valid. If the problem persists, contact Computer Associates Technical Support.

SARD2M51 SYSOUT GROUP NOT DELETED DUE TO PREVIOUS I/O ERROR

Reason: The SYSOUT group was not deleted from secondary disk due to an I/O error.

Action: Refer to the discussion and action for the previously issued I/O error message.

SARD2M63 OPTICAL MIGRATION READING GCR FOR: *report-id*, GEN *nnnn*

Reason: This informational message is issued every 10 minutes, when the optical migration subtask is reading the GCRs (Group Control Records) from the disk database.

Action: None. This is an informational message.

SARD2M97 OPTICAL MIGRATION ENDED DUE TO BACKUP

Reason: The backup cycle began running, so the optical migration subtask stopped.

Action: None. This is an informational message.

SARD2M98 OPTICAL MIGRATION ENDED DUE TO DSK2MIGD

Reason: The ERO initialization parameter DSK2MIGD parameter had an N specified (no migration), so optical migration has ended.

Action: None. This is an informational message.

SARD2M99 OPTICAL MIGRATION ENDED SCHEDULED TIME RANGE

Reason: This message is informational.

Action: None.

SARDBA01 DATASET SUCCESSFULLY ADDED TO DATABASE

DSNAME: *dsname*
UNIT REQUESTED: *unit*
VOLUME SERIAL NO.: *volser*
CYLINDERS: *nnnnn*
BLOCKS: *nnnnn*
BLOCK SIZE: *nnnnn*
MANAGEMENT CLASS: *mgmtclass*
STORAGE CLASS: *storclass*
DATA CLASS: *dataclass*

Reason: The requested space has been added to the database. Physical attributes of the newly added data set are provided. Non-SMS data sets are shown as having a management, storage, and data class of NON-SMS.

Action: None. This is an informational message.

SARDBA02 DATABASE SUCCESSFULLY RENAMED

Reason: The database was successfully renamed.

Action: None. This is an informational message.

SARDBA03 DATABASE SUCCESSFULLY DELETED

Reason: The database was successfully deleted.

Action: None. This is an informational message.

SARDBA04 INVALID CONTROL STATEMENT OPERATION

Reason: The control statement has an invalid operator.

Action: Correct the control statement, then resubmit the job.

SARDBA05 INVALID OR MISSING HIGH-LEVEL INDEX NAME

Reason: The high-level index name is missing or invalid.

Action: Correct the control statement, then resubmit the job.

SARDBA06 INVALID VOLUME SERIAL NUMBER

Reason: The volume serial number is invalid.

Action: Correct the control statement, then resubmit the job.

SARDBA07 INVALID OR MISSING CYLINDER SPECIFICATION

Reason: The number of cylinders specification is invalid or missing.

Action: Correct the control statement, then resubmit the job.

SARDBA08 INVALID UNIT NAME

Reason: The unit name is missing or invalid.

Action: Correct the control statement, then resubmit the job.

SARDBA09

This message number represents one of the following messages:

STATUS OF DATABASE *high-level-name*

BLOCK SIZE: *nnnnnnnn*

TOTAL BLOCKS: *nnnnnnnn*

TOTAL USED BLOCKS: *nnnnnnnn*

PERCENT UTILIZATION: *nnnnnn*

INDEX STATISTICS:

INDEX LEVELS:

INDEX RECORDS:

INDEX ALLOCATIONS:

INDEX BLOCKS:

INDEX USED BLOCKS:

INDEX POINTER BLOCKS:

INDEX DATA BLOCKS:

INDEX EMPTY BLOCKS:

DATASET *dsname*

CYLINDERS: *nnnnnnnn*

BLOCKS: *nnnnnnnn*

USED BLOCKS: *nnnnnnnn*

ERROR BLOCKS: *nnnnnnnn*

One of the following messages may be issued if a lock file has been created for the database:

SARDBA09 NO LOCK CURRENTLY HELD ON DATABASE
SARDBA09 LOCK HELD BY name ON mm/dd/yy AT hh:mm:ss

Reason: A request for the status of the database was made with the SARDBASE STATUS command. Statistics on the database are presented. Depending on the options specified, statistics on the index are also presented. See STATUS in Chapter 7, "Database Utilities," for more information about the STATUS control statement, and the SARDBA09 index statistics.

Action: None.

SARDBA10**DATABASE SUCCESSFULLY COPIED**

Reason: The database was successfully copied.

Action: None. This is an informational message.

SARDBA11

INDEX FILE SUCCESSFULLY OUTPUT

Reason: The master index was successfully written to the sequential output file.

Action: None. This is an informational message.

SARDBA12

ONLINE LIBRARY MEMBERS SUCCESSFULLY LOADED

Reason: The online library members were successfully loaded to the database.

Action: None. This is an informational message.

SARDBA13

INVALID OPERAND operand

Reason: The specified operand is invalid.

Action: Correct the control statement, then resubmit the job.

SARDBA14

INVALID RELATIVE GENERATION NUMBER

Reason: The relative generation number specified is invalid or a backup of the relative generation does not exist.

Action: Correct the control statement, then resubmit the job.

SARDBA15

AUTHORIZATION FAILED

Reason: The user is not authorized to perform the requested function.

Action: Contact the appropriate personnel to obtain authorization to perform the function.

SARDBA16

DATABASE INDEX SUCCESSFULLY REORGANIZED

Reason: The database INDEX was successfully reorganized.

Action: None. This is an informational message.

SARDBA17

DATABASE SUCCESSFULLY RESTORED

Reason: The database was successfully restored.

Action: None. This is an informational message.

SARDBA18 DATABASE SUCCESSFULLY LOADED

Reason: The database was successfully loaded.

Action: None. This is an informational message.

SARDBA19 DATABASE SUCCESSFULLY UNLOADED

Reason: The database was successfully unloaded.

Action: None. This is an informational message.

SARDBA20 DATABASE SUCCESSFULLY VERIFIED

Reason: The database was successfully verified.

Action: None. This is an informational message.

SARDBA21 VERIFICATION TERMINATED - UNCORRECTABLE ERROR

Reason: A critical error as indicated by previous SARDBV and/or SARDVP messages disallowed successful completion of the verify process.

Action: The recovery process must be accomplished by using the RESTORE control statement of the SARDBASE utility. See Chapter 8, "Backing Up and Recovering the Database," for more information.

SARDBA22 LOCK DATASET SUCCESSFULLY CREATED

Reason: The lock data set was successfully allocated and formatted.

Action: None. This is an informational message.

SARDBA23 LOCK DATASET SUCCESSFULLY DELETED

Reason: The lock data set was successfully deleted.

Action: None. This is an informational message.

SARDBA24 NO LOCK CURRENTLY HELD ON DATABASE

Reason: The unlock function of the SARDBASE utility attempted to release a lock held on the lock data set but no lock existed.

Action: None. This is an informational message.

SARDBA25 LOCK HELD BY *name* ON *mm/dd/yy* AT *hh:mm:ss* SUCCESSFULLY RELEASED

Reason: The lock held to the lock data set was unsuccessfully released.

Action: None. This is an informational message.

SARDBA26 DATABASES SUCCESSFULLY MERGED

Reason: The databases were successfully merged.

Action: None. If the newly merged database contains backup tapes from the merge process, run the SARPAC utility to copy the SYSOUT groups on tape to new tape volumes owned by this database.

SARDBA27 INVALID HIGH-LEVEL INDEX TAPE INDEX

Reason: The high-level tape index name indicated on the MERGE control statement is invalid. The tape index name is from 1 to 17 bytes and must conform to data set naming conventions.

Action: Correct the tape index name, then resubmit the job.

SARDBA28 INVALID SECONDARY DISK DRIVER

Reason: There is a syntax error in the secondary disk driver specification of the MERGE control statement.

Action: Verify that the secondary disk driver specification is the same as the DSK2DRVR initialization parameter. Check to see that it is the name of an accessible authorized load module.

SARDBA29 INVALID SECONDARY DISK PARAMETERS

Reason: There is a syntax error in the secondary disk driver parameters specification of the MERGE control statement.

Action: See Chapter 10, "Using the Optical Disk Interface," for the parameters required.

SARDBA30 NO LOCK DATASET EXISTS

Reason: This message indicates that a SARDBASE UNLOCK request was entered, however the database does not have an associated VM lock file.

Action: None. This is an informational message.

SARDBA31 INVALID BLOCKSIZE

Reason: The block size is invalid.

Action: Correct the control statement, then resubmit the job.

SARDBA32 INVALID DATABASE RELEASE LEVEL

Reason: The CA-View programs being used are not at the same release level as what is specified in the SARDBASE control statement.

Action: Verify the STEFLIB or link-listed version of the programs.

SARDBA33 RELEASE SUCCESSFULLY CONVERTED TO xxx

Reason: The database version has been successfully changed with the SARDBASE VERSION control statement.

Action: None. This is an informational message.

SARDBA34 STATISTICS SUCCESSFULLY CALCULATED

Reason: Database statistics were successfully calculated using the SARDBASE STATUS control statement.

Action: None. This is an informational message.

SARDBA35 UNKNOWN KEYWORD xxxxxxxx

Reason: The keyword specified in the ADDDS control statement specifications was not a valid ADDDS keyword.

Action: Correct the control statement, then resubmit the job.

SARDBA36 INVALID PARAMETER SPECIFICATION

Reason: The appropriate syntax of keyword=value was not used in the ADDDS control statement specifications.

Action: Correct the control statements to follow the keyword=value syntax, then resubmit the job.

SARDBA37 INVALID DATA CLASS NAME

Reason: The SMS data class specified in the ADDDS control statement specifications was not valid.

Action: Correct the control statement, then resubmit the job.

SARDBA38 INVALID MANAGEMENT CLASS NAME

Reason: The SMS management class specified in the ADDDS control statement specifications was not valid.

Action: Correct the control statement, then resubmit the job.

SARDBA39 INVALID STORAGE CLASS NAME

Reason: The SMS storage class specified in the ADDDS control statement specifications was not valid.

Action: Correct the control statement, then resubmit the job.

SARDBA40 INCORRECT GENLEVEL FOR CAIRIM - GENLEVEL 9111 OR HIGHER REQUIRED FOR LMP

Reason: CA-View requires a GENLEVEL level of 9512 or higher for CA90s to perform licensing authentication.

Action: Install a more current version of CA90s.

SARDBA90**PROCESSING TERMINATED DUE TO STOP COMMAND**

Reason: A stop command was issued for the SARDBASE utility. Control statement processing was prematurely ended.

Action: None.

SARDBA91**INVALID COMMAND *command***

Reason: The MVS operator command issued to the SARDBASE utility is invalid or not supported.

Action: See Chapter 7, "Database Utilities," for the syntax of the operator commands for the SARDBASE utility and reissue the MVS operator command.

SARDBC01**ERROR ON "FROM" DATABASE**

Reason: An I/O error occurred reading the SYSOUT to be copied. The SYSOUT is skipped and execution continues with the next SYSOUT group.

Action: See the associated message for the I/O error.

SARDBC02**ERROR ON "TO" DATABASE**

Reason: An I/O error occurred writing the SYSOUT on the output database. Execution is terminated.

Action: See the associated message for the I/O error.

SARDBC03**SYSOUT GROUP IS BEING COPIED - ID=*id*, GEN=*nnnnn*,
SEQ=*nnnnn***

Reason: The specified SYSOUT group is being copied.

Action: None.

SARDBC04**INPUT DATABASE AT INCORRECT LEVEL**

Reason: The CA-View database used as input for SARDBASE COPY is at the incorrect release level.

Action: Verify the versions of the TO and FROM databases for the SARDBASE COPY. If necessary, change the versions with SARDBASE VERSION.

**SARDBC05 SYSOUT INDEX IS BEING COPIED - ID=xxxxxxxxxxxxx
 GEN=xxxxx, SEQ=xxxxx**

Reason: This message indicates that the page index for the given SYSOUT group is being copied.

Action: None. This is an informational message.

SARDBG01 ERROR ON DATABASE

Reason: There has been an error in the processing of the database. There is an message preceding this message indicating the error condition.

Action: Respond to the preceding error message.

SARDBG02 DATABASE IS BEING CONVERTED

Reason: A REORG during database conversion is in process.

Action: None.

**SARDBG04 ARCHIVAL DATE FORMAT INVALID FOR ID=xxxxxxxxxxxxx,
 RECORD DROPPED**

Reason: An alternate control record entry could not be added to the alternate index because the archival date for the specified SYSOUT was invalid.

Action: None. The problem may be the result of a database corruption or a SARSTCUX user exit that was coded erroneously.

**SARDBG05 REORGANIZING xxxxxxxxxxxx, GEN=nnnn, ARCHIVED ON
 mm/dd/yy AT hh:mm**

Reason: This informational message is a progress report issued during a SARDBASE REORG. It will appear at intervals specified by the SARINIT parameter DBMSGFRQ, which only counts SYSOUT IDs. Therefore, with a default DBMSGFRQ=5000, this message will appear for every 5000th SYSOUT.

Action: None.

SARDBG06**ALTERNATE INDEX REORGANIZATION STARTED**

Reason: This informational message indicates the start of the alternate index record reorganization phase of an asynchronous SARDBASE REORG. The alternate index records identify the starting date and SYSOUT IDs of a generation. These records are updated reflect current SYSOUTs and reports in the database.

Action: None.

SARDBG07**INDEX RECORD REORGANIZATION STARTED**

Reason: This message indicates the start of the index record reorganization phase of an asynchronous SARDBASE REORG. During this phase of the REORG, the database index structure is compressed to provide optimal access time.

Action: None. This is an informational message.

SARDBG08**REORG PROCESSING ALTERNATE INDEX GEN *gen* WITH *count* GEN(S) REMAINING**

Reason: This message indicates that the SARDBASE utility is currently in the second phase of the asynchronous REORG. This message is issued in response to the status operator command.

Action: None. This is an informational message.

SARDBG09**REORG SUCCESSFULLY TERMINATED DUE TO STOP COMMAND**

Reason: A stop command was issued during processing of the SARDBASE asynchronous REORG. Reorganization processing has been properly terminated, leaving all reorganization activity intact.

Action: None. This is an informational message.

SARDBG10**REORG CANCELLED DUE TO STOP COMMAND**

Reason: A stop command was issued during processing of the SARDBASE standard REORG. Reorganization processing was terminated and the database was reset to the pre-organization state.

Action: None. This is an informational message.

SARDBI00
through
SARDBI13

SARDBI00 DATABASE DOES NOT EXIST
 SARDBI01 ALLOCATION FAILED - ERROR=xxxx, INFO=xxxx
 SARDBI02 PHYSICAL I/O ERROR - ECB=xxxxxxxx
 SARDBI03 DATASET NUMBER OUT OF RANGE - DCCB=xxxxxxxx
 SARDBI04 DATASET RENAME FAILED FOR *function*
 SARDBI05 UNSUPPORTED DEVICE TYPE - BLKS/CYL=nnnn
 SARDBI06 MORE THAN 127 DATASETS - NUMBER=nnnnn
 SARDBI07 NO MORE SPACE IN DATASET
 SARDBI08 MISSING HIGH-LEVEL INDEX NAME OF DATABASE
 SARDBI09 LOGICAL I/O ERROR, xxxKEY=X'yyyyyyyyyyyyyyyyyy'
 SARDBI10 UNEXPECTED END OF DATA,
 xxxKEY=yyyyyyyyyyyyyyyyyy'
 SARDBI11 RECORD NOT FOUND, xxxKEY=X'yyyyyyyyyyyyyyyyyy'
 SARDBI12 LOCK DATASET ALREADY EXISTS
 SARDBI13 LOCK DATASET DOES NOT EXIST

Reason: An I/O error occurred with the CA-View database as described by the text of the message where:

xxx	Specifies the control block being processed (SFB, IFB, or XFB)
yyyyyyyyyyyyyyyyyy	Specifies the key of the record in hex If the key is longer than 16 bytes, only the first 16 bytes are shown.

These messages may also have the following appended to them:

, *program-name* LOCATION *n*

where:

<i>program-name</i>	Specifies the name of a CA-View program (such as SARPAM)
<i>n</i>	Specifies a number identifying the location in the program where the error was detected.

Action: Correct the problem with the database. This can require copying the database with the SARDBASE utility or, in the extreme case, recovering the database. See Chapter 7, "Database Utilities," and Chapter 8, "Backing Up and Recovering the Database," for information.

For information about the error codes contained in the SARDBI01 message, refer to the IBM manual GC28-1645, *Application Development Guide: Authorized Assembler Language Programs*. See the section on requesting SVC99 functions.

SARDBI14**DATACLAS/MGMTCLAS/STORCLAS ALLOWED ONLY FOR SMS DATA SETS**

Reason: In the ADDDS statement of a SARDBASE job, one of the SMS parameters (DATACLAS/MGMTCLAS/STORCLAS) was specified, but the data set CA-View attempted to allocate for the database was a non-SMS data set.

Action: If the data set should not be SMS-managed, do the following:

1. Remove the SMS parameters from the ADDDS statement.
2. Ensure that the storage class is not defaulted by an site-written ACS routine.
3. Resubmit the SARDBASE job.

If the data set should be SMS-managed, specify an appropriate STORCLAS, or ensure that storage class is selected by an site-written ACS routine, then resubmit the SARDBASE job.

SARDBI15**UNIT/VOLSER ALLOWED ONLY FOR NON-SMS DATA SETS**

Reason: In the ADDDS statement of a SARDBASE job, the UNIT or VOLSER parameter was specified, but the data set CA-View attempted to allocate for the database was an SMS data set.

Action: If the data set should not be SMS-managed, do the following:

1. Remove any SMS parameters from the ADDDS statement.
2. Ensure that the storage class is not selected by an site-written ACS routine.
3. Resubmit the SARDBASE job.

If the data set should be SMS-managed, remove the UNIT and VOLSER parameters from the ADDDS statement, then resubmit the SARDBASE job.

SARDBI21**SUBFILE ALLOCATION I/O ERROR ON DATASET *dsname* - NEXT DATASET USED**

Reason: An I/O error occurred allocating space on the specified data set. The allocation will be attempted on the next data set in the database.

Action: Probably none; however, verify that there is no major problem with the database.

SARDBI22 **I/O ERROR FOR BLOCK *nnnnn* - BLOCK REMOVED FROM DATABASE**

Reason: An I/O error occurred writing a block to the database. The block is marked in error and the data in the block is rewritten to a different location in the database.

Action: Probably none; however, verify that there is no major problem with the database.

SARDBI23 ***database* DATABASE IS AT *nn*% UTILIZATION**

Reason: The database has exceeded maximum threshold of utilization; the actual percentage used is given.

Action: None; however, the database should be monitored to see that it does not run out of space. It may be necessary to add more space to the database. The maximum threshold setting can be altered by changing the DBTHRESH initialization parameter.

SARDBI30 This message number represents one of the following messages:

**JOB *jobname* (*jobid*) WAITING FOR EXCLUSIVE LOCK ON *data-*
base
LOCK HELD BY *name* ON *mm/dd/yy* AT *hh:mm:ss***

Reason: The specified job could not obtain an exclusive lock on the lock data set to update data in the specified database. The message will be issued in one minute intervals until the lock is resolved.

Action: If the lock is held by a user or job that is no longer executing due to an abend or cancellation, use the UNLOCK control statement of the SARDBASE utility to release the lock. Otherwise, the lock will be obtained when available.

SARDBL01 **MEMBER *xxxxxxx* IS BEING LOADED TO DATABASE**

Reason: The specified online library member is being loaded to the database.

Action: None. This is an informational message.

SARDBL02 **INPUT DATASET IS EMPTY, NOTHING TO LOAD**

Reason: No panels were found in the input OLIB data set.

Action: Verify that your CA-View OLIB data set is correctly named in the STEPLIB, and that it contains panels.

SARDBL03**SAROLIB DD STATEMENT MISSING**

Reason: An OLOAD control statement was issued to load online members into the CA-View database, but the SAROLIB DD statement was not specified. The SAROLIB DD statement references the library containing the online members and is required for the load request.

Action: Add the SAROLIB DD statement referencing the library containing the online members, then resubmit the load request.

SARDBM01**SECONDARY DISK ERROR FOR ID=xxxxxxx, GEN=xxxxx, SEQ=xxxxx**

Reason: CA-View cannot write to the secondary disk.

Action: Verify your DSK2PARAM initialization parameter.

SARDBM02**ERROR ON "TO" DATABASE**

Reason: There is an error on the database being copied to.

Action: Verify that the database has enough allocation (you may increase the allocation with SARDBASE ADDDS), and that the DASD is available to the system.

SARDBM03**UNEXPECTED END OF DATA ON INPUT FILE**

Reason: CA-View found the end of the SARLOAD file before the database was fully loaded.

Action: Verify that the SARLOAD data set is complete.

SARDBN01**SARMERG1 AND SARMERG2 DD STATEMENTS MISSING**

Reason: A SARDBASE MERGE job was submitted without DD statements.

Action: Include the DD statements in the SARDBASE JCL.

SARDBN02 UNEXPECTED END OF DATA ON INPUT TAPE

Reason: One of the SARDBASE MERGE input tapes is incomplete.

Action: Verify that all SARDBASE MERGE input tapes are correct, and rerun SARDBASE MERGE.

SARDBN03 NOTHING ARCHIVED - MERGE TERMINATED

Reason: The MERGE input tapes do not contain any data.

Action: Verify that all SARDBASE MERGE input tapes are correct, and rerun SARDBASE MERGE.

SARDBN04 LOAD FAILED - MERGE TERMINATED

Reason: One of the input tapes for SARDBASE MERGE failed to load to the database.

Action: Verify that all SARDBASE MERGE input tapes were created by the SARDBASE UNLOAD facility.

SARDBN05 PHASE 1 SCAN FOR SARMERGx

Reason: Input tape SARMERGx began scan processing.

Action: None.

SARDBN06 LOAD INVOKED FOR SARMERGx

Reason: Input tape SARMERGx began load processing.

Action: None.

SARDBN07 MAXIMUM SYSOUT SEQUENCE NUMBER EXCEEDED FOR NEW GENERATION *nnnnnnnn*

Reason: In the SARDBASE MERGE operation, a new generation *nnnnnnnn* exceeded 64,000 SYSOUTs.

Action: Reduce the number of input databases and rerun SARDBASE MERGE.

SARDBN08**CONFLICT EXISTS WITH NEW TAPE HIGH-LEVEL INDEX**

Reason: The tape index for the output database is the same as one of the SARDBASE MERGE input tapes.

Action: Name the output tape index differently than any of the MERGE input tapes, and rerun SARDBASE MERGE.

SARDBN09**SECONDARY DISK FILES WERE NOT UNLOADED**

Reason: One or more of the SARMERGX tapes containing data on optical disk was not properly UNLOADED with the SECOND/NOSECOND parameter of the SARDBASE MERGE facility.

Action: Unload all databases with the SECOND/NOSECOND parameter of SARDBASE UNLOAD specified. Then rerun SARDBASE MERGE.

SARDBN10**UNLOADED SECONDARY SYSOUT GROUPS BEING LOADED TO PRIMARY DATABASE**

Reason: SYSOUTS are being loaded to disk by SARDBASE MERGE. The SYSOUTs were on optical disk, and were unloaded to tape by SARDBASE UNLOAD, with the SECOND parameter specified.

Action: None. This is an informational message.

SARDBN12**LOAD FAILED FOR SECONDARY DISK DRIVER**

Reason: The secondary disk storage driver specified in the MERGE control statement of SARDBASE could not be successfully loaded for execution.

Action: Correct the control statement, and rerun SARDBASE MERGE.

SARDBN13**NO MCR RECORD FOUND**

Reason: One of the SARDBASE MERGE input tapes is missing the Master Control Record.

Action: Check the output of all SARDBASE UNLOAD jobs, that were used to create input tapes for SARDBASE MERGE. Verify that complete tapes were created. Rerun SARDBASE MERGE.

SARDBP01 **CRITICAL ERROR. PROGRAM TERMINATED WITH DUMP.
INVALID *blk***

Reason: A CA-View program has terminated, and a dump was generated. In this message, *blk* specifies the control block CA-View expected but did not receive (usually IFB, SFB, XFB, or DBB). It may be suffixed with a number indicating which test point in the program detected the problem.

Action: Send the dump to Computer Associates Technical Support. Restart whatever program was terminated. If the problem recurs, run SARDBASE VERIFY on the database. If the problem persists, contact Computer Associates Technical Support.

SARDBR01 **ERROR ON "FROM" DATABASE**

Reason: An I/O error occurred reading the SYSOUT to be restored. The SYSOUT is skipped and execution continues with the next SYSOUT group.

Action: See the associated message for the I/O error.

SARDBR02 **ERROR ON "TO" DATABASE**

Reason: An I/O error occurred writing the SYSOUT on the output database. Execution is terminated.

Action: See the associated message for the I/O error.

SARDBR03 **ATTEMPT TO COPY SYSOUT GROUP FROM OLD DATABASE -
ID=*id*, GEN=*nnnnn*, SEQ=*nnnnn***

Reason: The specified SYSOUT group is being copied.

Action: None. This is an informational message.

SARDBR04 **REQUESTED TAPE FILE DOES NOT CONTAIN INDEX BACKUP**

Reason: The file recorded in the backup recovery file or specified in the JCL does not contain a backup of the master index.

Action: Use SARTCP to map the backup tape to locate the backup of the master index.

**SARDBR05 ATTEMPT TO COPY ONLINE MEMBER FROM OLD DATABASE -
NAME=xxxxxxxx**

Reason: The specified member of the online library is being copied.

Action: None. This is an informational message.

SARDBR12 PERMANENT I/O ERROR READING TAPE

Reason: A permanent I/O error occurs while reading the tape backup of the master index.

Action: Resubmit the job. If the error recurs, use a different backup for restoring the master index.

SARDBR13 REQUESTED BACKUP DOES NOT EXIST

Reason: The requested backup for the master index cannot be located.

Action: Restore the master index from a newer backup.

SARDBR14 TAPE ALLOCATION ERROR CODE - xxxx, INFO CODE - xxxx

Reason: Dynamic allocation failed for the backup tape file. The hexadecimal error and information codes are provided.

Action: Correct the problem, then resubmit the job.

SARDBR16 RESTORE OF DATABASE BEGUN

Reason: The restore function has begun.

Action: None. This is an informational message.

**SARDBR17 PARTIAL RESTORE COMPLETED - ARCHIVAL AND ONLINE
ACTIVITY MAY BE RESUMED FOR *high-level-prefix***

Reason: Informational message indicating that the restore process has restored the index data necessary to resume archival and online activity. The restore process continues with the restoration of SYSOUT groups and SYSOUT data.

Action: If errors occurred during the loading of panel data or if the FROM database was omitted from the RESTORE control statement, online panels will have to be reloaded to the database before online activity can be resumed.

SARDBR18 LOADING OF SUBFILE DATA-BEGUN

Reason: Informational message indicating that the restore process will proceed with the restoration of SYSOUT groups and SYSOUT data.

Action: None. This is an informational message.

SARDBR19 PROCESSING SUCCESSFULLY COMPLETED

Reason: This message indicates that the restore process has completed.

Action: None. This is an informational message.

**SARDBR20 SYSOUT GROUP ADDED TO INDEX - ID=XXXXXXXXXXXXX,
GEN=XXXXX, SEQ=XXXXX**

Reason: This message indicates that the SYSOUT groups that were added to the database during the restore process. This message is also written to the operator console at intervals based on the DBMSGFRQ initialization parameter to inform the operator of the progress of the restore process.

Action: None. This is an informational message.

**SARDBR21 NEITHER SARRECV NOR SARTAPE DD STATEMENTS SUPPLIED FOR
RESTORE**

Reason: A SARTAPE DD statement, or a SARRECV DD statement has not been included in the JCL for the job. CA-View cannot determine the backup tape to use for the restore.

Action: Correct the JCL, then resubmit the job.

SARDBR22 MASTER INDEX IS NOT COMPLETE ON BACKUP TAPE SUPPLIED

Reason: The master index must be contained on a single tape volume when the SARRECV DD statement is not specified.

Action: Correct tape sequence and retry.

SARDBR23**RECOVERY DATASET ERROR OPER=XXXX**

Reason: Error attempting to access the recovery data set.

Action: None. If a hardware error is not indicated, Contact Computer Associates Technical Support.

SARDBR24**MULTI-VOLUME MASTER INDEX IS INVALID**

Reason: The first record on this tape must be an index continuation record. This tape may have been used out of sequence.

Action: Correct tape sequence and retry.

SARDBR25**VIEW xxxxxxxxxxxx ID #n IS TOO LONG. VIEW HAS BEEN DROPPED**

Reason: The restore process attempted conversion of an old view record, but the view record, after conversion, is too long and it cannot be restored. The indicated view record will be dropped.

Action: The old view record in question must be manually added to the database.

SARDBR26**PANEL AND SYSOUT DATA NOT RESTORED, USE SARDBASE/OLOAD, SARRSP, AND/OR SARTDR UTILITIES TO RESTORE**

Reason: The panel and SYSOUT data was not restored because an old database name was not specified in the RESTORE control statement.

Action: The SARDBASE, SARRSP, and/or SARTDR utilities must be used to restore or load panel or SYSOUT data to the database.

SARDBT01**ERROR ON DATABASE**

Reason: An I/O error occurred when opening the database.

Action: Probably none; however, verify that there is no major problem with the database.

SARDBT02 DATABASE ALREADY AT THE DESIRED LEVEL

Reason: The database is already at the desired level.

Action: None. This is an informational message.

SARDBT03 UNSUPPORTED DATABASE LEVEL

Reason: The release level to be converted to is not supported.

Action: Check the release number, then resubmit the job.

SARDBT04 DATABASE RELEASE LEVEL SUCCESSFULLY CONVERTED TO xxx

Reason: The specified release is being converted.

Action: None. This is an informational message.

SARDBT05 INPUT UNIT=xxxxxxx, OUTPUT UNIT=xxxxxxx

Reason: The unit name of tape data set specified in INPUT UNIT is different than that of duplex tape data set specified in OUTPUT UNIT.

Action: None. This is an informational message.

SARDBT06 DUPLEX TAPE UNIT RESET TO BE IDENTICAL TO PRIMARY TAPE UNIT

Reason: The unit name of duplex tape data set is being converted to the same unit name as tape data set.

Action: None. This is an informational message.

SARDBU01 ERROR ON "FROM" DATABASE

Reason: An I/O error occurred reading the SYSOUT to be written to tape. The SYSOUT is skipped and execution continues with the next SYSOUT group.

Action: See the associated message for the I/O error.

SARDBU02

This message number represents one of the following messages:

**SECONDARY DISK ERROR FOR ID=xxxxxxx, GEN=xxxxx,
SEQ=xxxxx
SECONDARY DISK ERROR FOR RESOURCE=xxxxxxxxxxx**

Reason: CA-View cannot write to secondary disk.

Action: Verify your DSK2PARM initialization parameter.

SARDBU03

UNABLE TO LOAD SECONDARY DISK STORAGE DRIVER

Reason: CA-View cannot find the program required to access secondary storage.

Action: Determine if the program is available in STEPLIB or link-list.

SARDBU04

**ERROR ON GET EQUAL FOR ID=xxxxxxxxxxxxx GEN=xxxxx,
SEQ=xxxxx**

Reason: The given SYSOUT group was being unloaded from secondary disk to the unload file, but the SYSOUT group is no longer in the CA-View database.

Action: None. The SYSOUT group will not be unloaded, and the unload continues processing with the next SYSOUT group.

SARDBV01

INDEX BLOCK VERIFICATION STARTED

Reason: Informational message indicating the start of the index file block mapping phase of the database verification process. The verification process involves three phases which are the index file block mapping phase, the index record verification and subfile (SYSOUT data and panel data) mapping phase, and the alternate index and extended index record verification phase.

Action: None. This is an informational message.

SARDBV10

INDEX RECORD/SUB-FILE DATA VERIFICATION STARTED

Reason: Informational message indicating the start of the index record verification and subfile (SYSOUT data and panel data) mapping phase of the database verification process. The verification process involves three phases which are the index file block mapping phase, the index record verification and subfile mapping phase, and the alternate index and extended index record verification phase.

Action: None. This is an informational message.

SARDBV11 INDEX VERIFICATION FOR ID=*id*, GEN=*gen*, SEQ=*seq*

Reason: Informational message indicating the index record currently being processed in index record verification and subfile mapping phase. This message is written to the operator console on an interim basis depending on the frequency defined in the DBMSGFRQ initialization option.

Action: None. This is an informational message.

SARDBV12 ALTERNATE INDEX FROM INCOMPLETE REORG DELETED

Reason: The data space occupied by the incomplete REORG function is freed from the database.

Action: None. This is an informational message.

SARDBV13 SUB-FILE VERIFICATION FOR ONLINE MEMBER xxxxxxxxx

Reason: The data space occupied by the specified online member (panel, message, or skeleton JCL) is being verified and mapped. If the internal structure of the subfile is incorrect, the online member may be truncated or lost.

Action: None. This is an informational message.

SARDBV14 This number represents one of the following messages:

SUB-FILE VERIFICATION FOR SYSOUT MEMBER xxxxxxxxxxxxxx
SUB-FILE VERIFICATION FOR RESOURCE MEMBER xxxxxxxxxxxxxx

Reason: The data space occupied by the subfile for the specified SYSOUT or page layout RESOURCE is being verified and mapped. If the internal structure of the subfile is incorrect, the archival SYSOUT data may be truncated or lost.

Action: None. This is an informational message.

SARDBV15

This number represents one of the following messages:

**AUXILIARY FILE VERIFICATION FOR SYSOUT MEMBER
XXXXXXXXXXXXX
AUXILIARY FILE VERIFICATION FOR RESOURCE MEMBER
XXXXXXXXXXXXX**

Reason: The data space occupied by the auxiliary file (SYSOUT indexing mapping data) for the specified SYSOUT or page layout RESOURCE is being verified and mapped. If the internal structure of the subfile is incorrect, the auxiliary data may be truncated or lost.

Action: None. This is an informational message.

SARDBV16**DUMMY MCR RECORD IS BEING CREATED**

Reason: A master control record (index record which contains initialization parameters and other vital information) cannot be found in the database and is being created.

Action: After the database verification process is complete, run the SARINIT utility to reinstate all initialization options.

SARDBV17**GENERATION AND TAPE NUMBERS RESET IN MCR**

Reason: SYSOUT groups are found in the database to contain a higher generation number, sequence number, and/or tape sequence number than indicated in the master control record (index record which contains initialization parameters and other vital information). The higher generation number, sequence number, and/or tape sequence number are being placed in the master control record.

Action: None. This is an informational message.

**SARDBV18 GENERATION/SEQUENCE NUMBERS COMPLEMENTED FOR
MASTER CONTROL RECORD**

Reason: The current generation number and sequence number in the master control record are being changed from a complemented form to a non-complemented form.

Action: None. This is an informational message.

SARDBV20 ALTERNATE INDEX/EXTENDED RECORD VERIFICATION STARTED

Reason: Informational message indicating the start of the alternate index and extended index record verification phase of the database verification process. The verification process involves three phases, as follows:

- The index file block mapping phase
- The index record verification and subfile (SYSOUT data and panel data) mapping phase
- The alternate index and extended index record verification phase

Action: None. This is an informational message.

**SARDBV21 ALTERNATE INDEX VERIFICATION FOR ID=*id*, GEN=*gen*,
SEQ=*seq***

Reason: Informational message indicating the index record that is currently being processed in the alternate index and extended index record verification phase. This message is written to the operator console on an interim basis depending on the frequency defined in the DBMSGFRQ initialization option.

Action: None. This is an informational message.

SARDBV22 INVALID EXTENDED INDEX RECORD X'*record-key*' DELETED

Reason: The extended index record for the specified key contains invalid data and has been deleted from the database.

Action: None. This is an informational message.

SARDBV23**INVALID GROUP CONTROL RECORD ID=*id*, GEN=*gen*, SEQ=*seq*
DELETED**

Reason: The index record for the specified SYSOUT group contains invalid data and has been deleted from the database.

Action: None. This is an informational message.

SARDBV30**DATABASE VERIFICATION COMPLETED**

Reason: Informational message indicates the end of the verification process.

Action: None. This is an informational message.

SARDRP00**FORWARD RECOVERY CAPTURE ACTIVATED FOR *dataset***

Reason: The SARSTC archival task has been started with Forward Recovery activated. The CA-View initialization parameters RCVPRIM=*xxxx* and RCVUNIT=*nnnn* activate Forward Recovery.

Action: None. This is an informational message.

SARDRP01**ALLOCATION FAILED FOR *dataset* - ERROR=*xxxx*, INFO=*xxxx***

Reason: An error occurred during the allocation of a forward recovery data set. The hexadecimal error and information codes are provided.

Action: The allocation error message may not be critical if issued during the recovery process or during the deletion process of the backup cycle. If the message, however, is issued by the archival task during archival of SYSOUT data, forward recovery may be disabled as indicated by the SARDRP99 message. In this case, the error will have to be resolved before forward recovery can be restarted. Forward recovery can be restarted by recycling the archival task or by initiating a backup cycle.

SARDRP02**PHYSICAL I/O ERROR ON *dataset* - ECB=*xxxxxxxx***

Reason: An error occurred performing I/O to a forward recovery data set.

Action: If the I/O error occurred while recording archival data, an attempt will be made to recover from the I/O error by allocating a new forward recovery data set and writing the appropriate information to the new data set. If recovery fails, forward recovery will be disabled as indicated by the SARDRP99 message. In this case, the error will have to be resolved before forward recovery can be restarted. Forward recovery can be restarted by recycling the archival task or by initiating a backup cycle.

SARDRP03 UNRECOVERABLE ERROR ON *dataset*

Reason: Forward recovery was unable to recover from a previous error.

Action: See the explanation and action indicated by the previous error message for resolution. When the previous error is resolved, forward recovery may be restarted by recycling the archival task or by initiating a backup cycle.

SARDRP04

This message number represents one of the following messages:

**END OF FILE
END OF FILE READING TAPE CONTROL RECORDS
END OF FILE READING GROUP CONTROL RECORDS
END OF FILE READING DATA RECORDS
END OF FILE READING AUXILIARY RECORDS
MASTER CONTROL RECORD NOT FOUND
MASTER CONTROL RECORD NOT WRITTEN
TAPE CONTROL RECORD NOT WRITTEN
GCR CONTROL RECORD NOT WRITTEN
DATASET NOT ALLOCATED DUE TO INITIALIZATION PARAMETERS**

Reason: The end-of-file messages are purely informational and rarely issued. The not found/not written messages may indicate possible logic errors. These logic errors arise when there are no forward recovery data sets to read from or write to. The data set not allocated message indicates that the RCVUNIT and/or RCVPRIM initialization parameters were not initialized to activate forward recovery.

Action: The only messages that may require attention are the not found and not written messages. Normally, these messages will be accompanied by previous error messages. See the explanation and action of the previous error messages for resolution.

SARDRP05 OPEN FAILED FOR *dataset*

Reason: An error occurred opening a forward recovery data set.

Action: Normally, forward recovery will continue processing by allocating a new forward recovery data set. In extreme cases, forward recovery may be disabled as indicated by the SARDRP99 message. In this case, the error will have to be resolved before forward recovery can be restarted. Forward recovery can be restarted by recycling the archival task or by initiating a backup cycle.

SARDRP06**UNKNOWN OR INCONSISTENT DATA FORMAT FOR *dataset***

Reason: The forward recovery data set does not conform to the data structure of its data records. This condition may occur when foreign data is copied into a forward recovery data set or a foreign data set is renamed to conflict with a current forward recovery data set. This message may also be produced with new releases of the product when the length of database index records have changed.

Action: None. Forward recovery will continue processing with a new forward recovery data set.

SARDRP07**DEVICE RESIDENCE ERROR FOR *dataset***

Reason: The residence or location of the forward recovery data set on a DASD device has changed. This condition may occur when a forward recovery data set is moved to a different volume or moved to a different location within the same volume.

Action: None. Forward recovery will continue processing with a new forward recovery data set.

SARDRP08**INSUFFICIENT SPACE ALLOCATION FOR *dataset***

Reason: The space allocation for the forward recovery data set was not large enough to contain its internally maintained control records and archival control data.

Action: Increase the primary and/or secondary space allocation amount for the forward recovery data set which are identified by the RCVPRIM and RCVSEC initialization parameters.

SARDRP10**INVALID OR OVERLAYED CONTROL BLOCK**

Reason: The internal control block structure used to control the forward recovery data sets has been overlaid or destroyed.

Action: This error may occur from incorrectly modified user exits or from internal logic errors. Forward recovery will be disabled as indicated by the SARDRP99 message. Forward recovery may be restarted by recycling the archival task or by initiating a backup cycle. Contact Computer Associates Technical Support for resolution.

**SARDRP11
SARDRP11**

**READ FUNCTIONS NOT PERMITTED DURING OUTPUT PROCESSING
WRITE FUNCTIONS NOT PERMITTED DURING INPUT PROCESSING**

Reason: I/O activity issued against a forward recovery data set is inconsistent with its designed processing features.

Action: This error identifies a flaw in the internal processing logic. Contact Computer Associates Technical Support for resolution.

SARDRP12

**WRITE OF GROUP CONTROL RECORD REQUIRED BEFORE
WRITING OF RECORD OR AUXILIARY DATA**

Reason: I/O requests to write archived data or auxiliary data to the forward recovery data set were not preceded by an I/O request to write the archival group control which identifies the archival data.

Action: This error identifies a flaw in the internal processing logic. Contact Computer Associates Technical Support for resolution.

SARDRP13

POSSIBLE DATA LOST ON *dataset*

Reason: Forward recovery was unable to successfully write control data and/or archival data to the forward recovery data set.

Action: This error is normally accompanied by the SARDRP12 I/O error message. Processing will normally continue with a new forward recovery data set. In extreme cases, forward recovery will be disabled as indicated by the SARDRP99 message. Forward recovery may be restarted by recycling the archival task or by initiating a backup cycle.

SARDRP20

DATASET *dataset* CREATED ON VOLUME *volume*

Reason: This message indicates that a forward recovery data set has been allocated on the specified volume.

Action: None. This is an informational message.

SARDRP21**DATASET *dataset* DELETED**

Reason: This message indicates that a forward recovery data set has been deleted. Old forward recovery data sets are deleted as part of the normal processing flow at the end of the backup cycle.

Action: None. This is an informational message.

SARDRP99**FORWARD RECOVERY CAPTURE DEACTIVATED FOR *dataset***

Reason: The SARSTC archival task has stopped the process of capturing SYSOUT and writing a duplex copy of it to the forward recovery data set. This message is normal during shutdown of SARSTC.

Action: None for normal shutdown. Check for previous error messages indicating I/O errors on the forward recovery data set if this message occurs at a time other than normal shutdown.

SARDVP01**INDEX FILE - SPACE ALLOCATION VERIFICATION**

Reason: The index file space allocation is being verified.

Action: None. This is an informational message.

SARDVP02*****SPACE ALLOCATION CORRECTED**

Reason: The space allocated for the file overlaps that of another. The allocation has been corrected.

Warning! Some of the data may be lost.

Action: None. This is an informational message.

SARDVP03***** INVALID BLOCK POINTER CORRECTED**

Reason: The file contains an invalid block pointer. The pointer has been corrected. Some of the data may be lost.

Action: None. This is an informational message.

SARDVP04 RE-WRITE OF DATABASE ALLOCATION BLOCKS

Reason: The database allocation blocks are being rewritten.

Action: None. This is an informational message.

SARDVP05 INDEX FILE - LOGICAL INDEX VERIFICATION

Reason: The contents of the index file are being logically verified.

Action: None. This is an informational message.

SARDVP06 *INDEX ENTRY DELETED FOR KEY=*record-key***

Reason: A logical error is found in the index file. The index entry is deleted.

Action: None. This is an informational message.

SARDVP07 *INDEX ENTRY SET TO HIGH KEY=*record-key***

Reason: A logical error is found in the index file. The index entry is corrected to the high key for the lower block.

Action: None. This is an informational message.

SARDVP08 *INVALID DATA RECORD REMOVED FROM INDEX**

Reason: A logical error is found in the index file. Unrecognizable data is found in an index entry. The entry is corrected.

Action: None. This is an informational message.

SARDVP09 *INDEX DATA RECORD DELETED FOR KEY=*record-key***

Reason: A logical error is found in the index file. The index data record is deleted.

Action: None. This is an informational message.

SARDVP10*****INDEX BLOCK ENTRY COUNT CORRECTED**

Reason: A logical error is found in the index file. The number of index entries in an index block is in error and has been corrected.

Action: None. This is an informational message.

SARDVP11*****INDEX BLOCK USED DATA COUNT CORRECTED**

Reason: A logical error is found in the index file. The used data count is in error and has been corrected.

Action: None. This is an informational message.

SAREA00S

```
*****
*
*                               *
*           EXPANDED ACCESS SERVER           *
*   SAREAS (XXXX) HAS ABENDED WITH CODE XXXXX   *
*           ***** RESTART SAREAS ASAP ***** *
*
*                               *
*****
```

Reason: The expanded access server for tape and robotics has abended. The system or user abend code is provided.

Action: Consult the *IBM MVS System Codes* manual to determine the reason for the abend. If you still cannot determine the problem, Contact Computer Associates Technical Support.

SAREA01S

**SAREAS (xxxx) TASK HAS ABENDED WITH CODE XXXXX
 TASK=xxxxxxxx, REQUEST=xxxxxxxx, TYPE=N,
 REQUESTER=xxxxxxxx**

Reason: A tape processing task of the expanded access server for tape and robotics has abended. The system or user abend code, TCB address, process request entry address, process request type, and requester's job ID are provided.

Action: Consult the *IBM MVS System Codes* manual to determine the reason for the abend. If you still cannot determine the problem, Contact Computer Associates Technical Support.

Note: The task will be restarted automatically and processing will continue.

SAREA02I TASK WILL BE RESTARTED FOR SAREAS (*jobname/sysid*)

Reason: A tape processing task of the expanded access server for tape and robotics has abended and is being restarted automatically.

Action: None.

**SAREA03S DYNAMIC ALLOCATION ERROR FOR SAREAS (*jobname/sysid*)
ERROR=*xxxx*, INFO=*xxxx*, DSN=*dsname***

Reason: Dynamic allocation failed for the tape specified by *dsname*. The hexadecimal error and information codes are provided.

Action: None, the tape cannot be used. Processing will continue.

**SAREA04I NUMBER OF PROCESS REQUEST ENTRIES FOR SAREAS
(*jobname/sysid*) ALLOCATED=*N*, HIGH WATER=*N***

Reason: This message is displayed whenever the server is stopped. You can use the information provided to adjust the NREQ initialization parameter.

Action: None. This is an informational message.

**SAREA05S DEVICE TYPE *x'xxxxxxxx'* INVALID FOR SAREAS
(*jobname/sysid*), DSN=*dsname***

Reason: The device type is invalid for the tape specified by *dsname*. The server can only process 3480/3490 type cartridge tapes.

Action: None, the tape cannot be used. Processing will continue.

**SAREA06S ATTEMPT TO ACCESS SARTCP COPIED TAPE FOR SAREAS
(*jobname/sysid*) DSN=*dsname***

Reason: An attempt was made to read data from a copy of an archival tape that had been created by the SARTCP utility. SARTCP created tapes cannot be used directly. Note, however, that the data on the SARTCP created tape can be made available again by compacting the tape to another tape with the SARPAC utility.

Action: None, the tape cannot be used. Processing will continue.

SAREA09S**PRIMARY SERVER IS ALREADY ACTIVE FOR SAREAS
(*jobname/sysid*)**

Reason: The primary server is already active and cannot be started again.

Action: None. This is an informational message.

SAREA10S**SAREAS (XXXX) IS ALREADY ACTIVE**

Reason: The server is already active on this system and cannot be started again.

Action: None. This is an informational message.

SAREA11W**INVALID COMMAND FOR SAREAS (*jobname/sysid*)
Command=xxxxxxxxxxxxxxxxxxxx**

Reason: The specified operator command is invalid.

Action: Reissue the operator command in its correct form.

SAREA12W**INVALID INITIALIZATION PARAMETER FOR SAREAS
(*jobname/sysid*) KEYWORD=xxxxxxx,VALUE=xxxxxxx**

Reason: The specified parameter is invalid. The server will use the default value for the parameter and continue processing.

Action: Correct the initialization parameter in the start procedure JCL.

SAREA13W**INVALID SERVER TYPE FOR SAREAS (*JOBNAME/SYSID*)
KEYWORD=xxxxxxx,VALUE=xxxxxxx**

Reason: The specified server type is invalid. The server will use the default value ONLY for the server type and continue processing.

Action: Correct the initialization parameter in the start procedure JCL.

**SAREA15I
SAREA16I****THE FOLLOWING PARAMETERS ARE BEING USED FOR SAREAS
(*JOBNAME/SYSID*): KEYWORD = VALUE**

Reason: A listing of the parameters actually used by the server is provided at startup time.

Action: None. This is an informational message.

**SAREA17W XCF XXXX REQUEST FAILED FOR SAREAS (JOBNAME/SYSID),
RETURN=XXXX, REASON=XXXX**

Reason: The specified XCF request failed. The hexadecimal return and reason codes are provided.

Action: Consult the *IBM Authorized Assembler Reference Guide* for the return and reason codes to determine the cause of the failure. If you still cannot determine the problem, Contact Computer Associates Technical Support.

**SAREA18W L-SERV XXXX REQUEST FAILED FOR SAREAS (JOBNAME/SYSID),
RETURN=XXXX, REASON=XXXX**

Reason: The specified L-Serv request failed. The hexadecimal return and reason codes are provided.

Action: Consult the *Computer Associates L-Serv System Guide* for the return and reason codes to determine the cause of the failure. If you still cannot determine the problem, Contact Computer Associates Technical Support.

**SAREA19W INVALID COMMUNICATION MECHANISM FOR SAREAS
(JOBNAME/SYSID) KEYWORD=XXXXXXXX, VALUE=XXXXXXXX**

Reason: The specified communication mechanism is invalid. The server will use the default value LSERV for the communication mechanism and continue processing.

Action: Correct the initialization parameter in the start procedure JCL.

SAREA20I COMMUNICATIONS RESET FOR SAREAS (jobname/sysid)

Reason: The COMMRESET operator command was successfully executed.

Action: None.

SAREA21I UNLOAD COMMAND POSTED FOR SAREAS (jobname/sysid)

Reason: The UNLOAD operator command was posted to the tape processing threads.

Action: None. This is an informational message.

SAREDM01**xxxxxxx - INVALID OR MISSING PRINTER ID**

Reason: The SARINIT initialization parameter *xxxxxxx* contains an invalid or missing printer ID.

Action: Correct the initialization parameter.

SAREDM02**xxxxxxx - INVALID SYSOUT CLASS**

Reason: The SARINIT initialization parameter *xxxxxxx* contains an invalid SYSOUT class.

Action: Correct the initialization parameter.

SAREDM03**xxxxxxx - INVALID DESTINATION**

Reason: The SARINIT initialization parameter *xxxxxxx* contains an invalid destination.

Action: Correct the initialization parameter.

SAREDM04**xxxxxxx - INVALID FORMS NAME**

Reason: The SARINIT initialization parameter *xxxxxxx* contains an invalid forms name.

Action: Correct the initialization parameter.

SAREDM05**xxxxxxx - INVALID EXTERNAL WRITER NAME**

Reason: The SARINIT initialization parameter *xxxxxxx* contains an invalid external writer name.

Action: Correct the initialization parameter.

SAREDM06**INVALID EXTERNAL PRINT INTERFACE**

Reason: An invalid external print interface was found in the master control record. Only types JESDS and PGM are valid.

Action: Run SARINIT to correct the external print initialization parameters.

SAREDM07 DYNAMIC ALLOCATION ERR=xxxx INFO=xxxx

Reason: Dynamic allocation failed for the JESDS data set. The hexadecimal error and information codes are provided.

Action: Run SARINIT to correct the external print initialization parameters.

SAREDM08 TOO MANY DISTIDS/INSTRUCTIONS FOR EXTERNAL PRINT REQUEST

Reason: Too many distribution identifiers and/or special instructions were contained in the CA-Deliver external print request.

Action: Re-issue the external print request with fewer distribution identifiers and/or special instructions.

SAREDM09 xxxxxxxx - INVALID OR MISSING INTERFACE TYPE

Reason: The SARINIT initialization parameter xxxxxxxx contains an invalid or missing interface type.

Action: Correct the initialization parameter.

SAREDM10 xxxxxxxx - INVALID OR MISSING PROGRAM NAME

Reason: The SARINIT initialization parameter xxxxxxxx contains an invalid or missing program name.

Action: Correct the initialization parameter.

SAREDM11 xxxxxxxx - INVALID PROGRAM PARAMETER

Reason: The SARINIT initialization parameter xxxxxxxx contains an invalid program parameter.

Action: Correct the initialization parameter.

**SAREDM12 LOAD FAILED FOR EXTERNAL PRINT INTERFACE PROGRAM
xxxxxxx**

Reason: The external print interface was unable to load program xxxxxxxx.

Action: Correct the program name in the corresponding external *print* initialization parameter. If it is already correct, supply the STEPLIB DD statement for the library that contains the program.

SAREPI01 INVALID FUNCTION CODE

Reason: The requested function code is invalid. This is a problem in the coding of the external print interface product.

Action: Contact the vendor who supplied the external print interface product for a resolution.

SAREPI02 INVALID INITIALIZATION TOKEN PASSED

Reason: The requested initialization token is invalid, probably the result of an improper initialization request. This is a problem in the coding of the external print interface product.

Action: Contact the vendor who supplied the external print interface product for a resolution.

SAREPI03 INVALID ACCESS TOKEN PASSED

Reason: The requested access token is invalid, probably the result of an improper access request. This is a problem in the coding of the external print interface product.

Action: Contact the vendor who supplied the external print interface product for a resolution.

SAREPI04 INVALID EXTERNAL PRINT RECORD

Reason: The external print record is invalid. This is a problem in the coding of the external print interface product.

Action: Contact the vendor that supplied the external print interface product and have them correct the error.

SAREPI05 DATABASE AT INCORRECT LEVEL FOR THIS RELEASE

Reason: The program load modules and the database are not at the same release level. CA-View will not execute.

Action: Correct the problem and retry.

SAREPI06

**GCR NOT FOUND FOR ID=XXXXXXXXXXXX, GEN=XXXXX,
SEQ=XXXXX**

Reason: The group control record for the archived SYSOUT could not be found in the database. This is normally caused by a user deleting the SYSOUT group between the time it was queued for external printing and the time that the external print actually occurs.

Action: None. The SYSOUT group is no longer available.

SAREPI07

**PAGE SELECTION TEXT CONFLICTS WITH PAGE AND/OR RECORD
SPECIFICATION**

Reason: A page and/or record range was specified for an external print of a page selection request for a SYSOUT group.

Action: Resubmit the external print request omitting the page and/or record range.

SAREPI08

**PAGE SELECTION TEXT SPECIFIED WITHOUT A VALID LOGICAL
VIEW**

Reason: The page selection text specification requires a valid logical view.

Action: Resubmit the external print request with a valid logical view.

SAREPI09

**SYSOUT IS NOT ON DISK AND ITS INDEX IS UNAVAILABLE FOR
PAGE SELECTION**

Reason: The SYSOUT group does not currently reside on DISK and its page selection is not available.

Action: Reload the SYSOUT group to disk and then resubmit the external print request.

SAREPI13

**REQUESTED SYSOUT DOES NOT EXIST ON ANY TAPE BACKUP
DATASET**

Reason: The SYSOUT group requested for the external print could not be found on any backup tape.

Action: None. The SYSOUT group is not available on tape.

SAREPI14 THE TAPE FILE WAS NOT THE SELECTED SYSOUT GROUP - USE SARTCP TO MAP THE TAPE

Reason: The SYSOUT group located on the backup tape for external printing is not the SYSOUT as referenced in the master index.

Action: Use the SARTCP utility to map and correct the backup tape.

SAREPI15 BACKUP TAPE DOES NOT EXIST

Reason: The backup tape could not be found in the master index. This is normally caused by the backup cycle deleting the tape prior to completion of the load request.

Action: None. The SYSOUT group is no longer available.

SAREPI16 DYNAMIC ALLOCATION FAILED FOR TAPE FILE, ERROR CODE - xxxx, INFO CODE - xxxxx

Reason: Dynamic allocation failed for allocating the backup tape file. The hexadecimal error and information codes are provided.

Action: Consult the online retrieval HELP facility for a description of the dynamic allocation error code. Take appropriate Action to correct the allocation error, then resubmit the print request.

SAREPI17 I/O ERROR POSITIONING TAPE

Reason: A permanent I/O error occurred attempting to position the archival tape to retrieve the SYSOUT group for external printing.

Action: Resubmit the request. If the I/O error occurs again, use the SARTCP utility to map and correct the tape.

SAREPI19 PERMANENT I/O ERROR ON INPUT TAPE

Reason: A permanent I/O error occurred attempting to read SYSOUT data from a backup tape.

Action: Resubmit the request. If the I/O error occurs again, use the SARTCP utility to map and correct the tape. Also see Chapter 8, "Backing Up and Recovering the Database," for recovery methods.

SAREPI20 VIEW NOT FOUND

Reason: The specified view does not exist in the master index.

Action: Verify the existence of the view. If the view number was specified incorrectly, change the parameter specification, then resubmit the external print request.

SAREPI33 SELECT SPECIFIED WITHOUT A VALID LOGICAL VIEW

Reason: The external print request specifying the SELECT keyword has failed because no views exist for the SYSOUT.

Action: Do one of the following:

- Remove the SELECT keyword, then resubmit the external print request.
- Specify a view number that contained page indexing criteria when the SYSOUT was archived, then resubmit the request.

Be aware that page indexing occurs only during archival.

SAREPI34 ERROR OCCURRED ATTEMPTING TO READ IN THE INDEX FOR THE SYSOUT

Reason: The external print request specifying the SELECT keyword has failed because an I/O error occurred while opening or reading the page index data from the database. The data is unreadable.

Action: Do one of the following:

- Remove the SELECT keyword, then resubmit the external print request.
- Rebuild the page index data as follows:

Note: The index can be rebuilt only by re-archiving the SYSOUT.

1. Reprint the SYSOUT to a held class.
2. Delete the SYSOUT from CA-View.
3. Release the SYSOUT to CA-View for re-archival, retaining the same SYSOUT-ID.
4. Resubmit the print request.

SAREPI35 SYSOUT HAS NOT BEEN INDEXED FOR THE LOGICAL VIEW

Reason: The external print request specifying the SELECT keyword has failed because indexing has not been established for the view.

Action: Establish indexing criteria for the view if it does not already exist. Re-archive the SYSOUT. Be aware that page indexing occurs only during archival.

SAREPI36 NO PAGES FOUND THAT MATCH SELECTION TEXT

Reason: The external print request specifying the SELECT keyword has failed because the SELECT text ID did not match any index selection.

Action: Check that the SELECT text and index selection criteria are as intended. The SYSOUT would have to be re-archived if the page indexing criteria is changed. Be aware that page indexing occurs only during archival.

**SARFSA03 FSA CONNECT FAILED FOR *fssname*, SSOBRETN=*nnnn*
FSIRESN=*nnnn***

Reason: The connect request from the FSA to JES failed; the return and reason codes are provided.

Action: The FSA is terminated.

**SARFSA04 FSA DISCONNECT FAILED FOR *fssname*,
SSOBRETN=*nnnn*,FSIRESN=*nnnn***

Reason: The disconnect request from the FSA to JES failed; the return and reason codes are provided.

Action: The FSA is terminated.

SARFSA05 FSA SEND FAILED FOR *fssname*, RC=*nnnn*

Reason: A send request from the FSA to JES failed; the return and reason codes are provided.

Action: The FSA is terminated.

SARFSA06 **FSA GETDS FAILED FOR *fssname*, RC=*nnnn***

Reason: A get data set request from the FSA to JES failed; the return and reason codes are provided.

Action: The FSA is abnormally terminated.

SARFSA07 **FSA RELDS FAILED FOR *fssname*, RC=*nnnn***

Reason: A release data set request from the FSA to JES failed; the return and reason codes are provided.

Action: The FSA is abnormally terminated.

SARFSA08 **FSA GETREC FAILED FOR *fssname*, RC=*nnnn*, GLRFLGS1=*nnnn***

Reason: A get record request from the FSA to JES failed; the return and reason codes are provided.

Action: The FSA is abnormally terminated.

SARFSA09 **FSA GETREC PERMANENT I/O ERROR FOR *fssname***

Reason: A permanent I/O error occurred attempting to get a record from JES.

Action: Processing for the data set is ended, and execution continues.

SARFSA10 **FSA GETREC LOGIC ERROR FOR *fssname***

Reason: A logical I/O error occurred attempting to get a record from JES.

Action: Processing for the data set is ended, and execution continues.

SARFSA11 ***fssname* OPEN FAILED FOR DEVICE DD STATEMENT *ddname***

Reason: An attempt to open the input parameter file for the device failed.

Action: The FSA is terminated.

SARFSA13***fssname* FIRST CNTL STATEMENT IS NOT "TYPE="**

Reason: The first control statement in the input parameter file for the device must be a TYPE= statement.

Action: The FSA is terminated. Add the TYPE= control statement.

SARFSA14**UNDEFINED DATA COLLECTOR "TYPE" FOR *fssname***

Reason: An invalid data collector name was specified on the TYPE= statement in the input parameter file for the device.

Action: The FSA is terminated. Correct the TYPE= control statement.

SARFSA15**LOAD MODULE *module* NOT FOUND FOR *fssname***

Reason: The load module was not found for the FSA.

Action: The FSA is terminated. Verify that the correct step/job libraries were specified in the FSS startup procedure.

SARFSA16**SJF RETRIEVE ERROR FOR *fssname*, RC=nnnn**

Reason: An error occurred attempting to retrieve the OUTPUT statements for a data set.

Action: The data set is placed on hold and not processed.

SARFSA17***fssname* CONTROL STATEMENT - xxxxxxxxxxxxxxxxxxxx**

Reason: A copy of the input parameter statement is logged.

Action: None. This is an informational message.

SARFSS01***fssname* NOT STARTED BY JES**

Reason: An attempt has been made to start the FSS directly with a START operator command, bypassing JES.

Action: Use the appropriate JES command to start the FSS.

SARFSS02 **INVALID START COMMAND FOR *fssname***

Reason: An invalid start command was issued for the FSS.

Action: Use the appropriate JES command to start the FSS.

SARFSS03 **FSS CONNECT FAILED FOR *fssname*, SSOBRETN=*nnnn*
FSIRESN=*nnnn***

Reason: The connect request from the FSS to JES failed.

Action: Take the appropriate action, based on the return and reason codes provided.

SARFSS04 **FSS DISCONNECT FAILED FOR *fssname*,
SSOBRETN=*nnnn*,FSIRESN=*nnnn***

Reason: The disconnect request from the FSS to JES failed; the return and reason codes are provided.

Action: Take the appropriate action, based on the return and reason codes provided.

SARGET01 ******* MAXIMUM LINES EXCEEDED ON VTAM PRINTER *******

Reason: Your print request exceeded the maximum number of lines permitted during online VTAM print processing. This message can also occur on non-VTAM printers as an indication that an error occurred while printing on both devices simultaneously.

Action: Do one of the following:

- Print in smaller segments.
- Increase the maximum permitted for this device by using the DEFINE DEVICE facility.
- Increase the maximum permitted for all devices by using SARINIT parameter VPRTMAXO.
- Make multiple separate print requests.

SARGET02***** MAXIMUM LINES EXCEEDED ON CMASPOOL PRINTER *****

Reason: Your print request exceeded the maximum number of lines permitted during CA-Spool print processing. This message can also occur on non-VTAM printers simultaneously.

Action: Do one of the following:

- Print in smaller segments.
- Increase the maximum permitted for this device by using the DEFINE DEVICE facility.
- Make multiple separate print requests.

SARIFP01**INVALID GROUP CONTROL RECORD ID=xxxxxxxxxxxxx,
GEN=nnnn, AND SEQ=nnnn ENCOUNTERED, PROGRAM
TERMINATED.**

Reason: An attempt was made to add or update a SYSOUT group index record with an invalid generation and sequence number. Processing is terminated with a USER 100 abend.

Action: If this occurs during a SARDBASE REORG, the program will automatically correct the error and you can ignore this message. If bad records reside in the database from prior releases of the product, the database will have to be corrected with the VERIFY control statement from the SARDBASE utility. Otherwise the processing can be resumed. For more information, please Contact Computer Associates Technical Support.

SARIFP02**CRITICAL ERROR. PROGRAM TERMINATED WITH DUMP.
INVALID blk**

Reason: A CA-View program has terminated, and a dump was generated. In this message, *blk* specifies the control block CA-View expected but did not receive (usually IFB, SFB, XFB, or DBB). It may be suffixed with a number indicating which test point in the program detected the problem.

Action: Send the dump to Computer Associates Technical Support. Restart whatever program was terminated. If the problem recurs, run SARDBASE VERIFY on the database. If the problem still occurs, contact Computer Associates Technical Support.

SARINA11**OPEN FAILED FOR ACCOUNTING FILE**

Reason: The SARACT DD statement is not provided and is required.

Action: Specify SARACT DD statement in execution JCL, then resubmit the job.

SARINA12 MULTIPLE EXTENTS FOR ACCOUNTING FILE

Reason: The accounting file has multiple extents.

Action: Recreate the accounting file, then resubmit the job.

SARINA22 UTILITY PROCESSING SUCCESSFULLY COMPLETED

Reason: Processing has successfully completed.

Action: None. This is an informational message.

SARINI01 SYNTAX ERROR

Reason: The specified option statement contains a syntax error.

Action: Correct the option statement, then resubmit the job.

SARINI02 OPTION NOT FOUND

Reason: The specified option is not valid.

Action: Correct the option, then resubmit the job.

SARINI03 INVALID VALUE

Reason: The specified value is invalid for the option.

Action: Correct the value, then resubmit the job.

SARINI04 DUPLICATE STATEMENT

Reason: The option has been previously specified.

Action: Correct the problem, then resubmit the job.

SARINI05**TVSER1/TVSER2 SPECIFIED WITHOUT THE OTHER IN THE STORAGE GROUP**

Reason: Only one volume serial number for a range of volumes has been specified.

Action: Correct the problem, then resubmit the job.

SARINI06**CODE PAGE *name* IS NOT AVAILABLE**

Reason: The CODEPAGE initialization parameter references a codepage member name that does not exist.

Action: Ensure that the codepage name indicated on the error message resides in your STEPLIB, JOBLIB, or link-list and rerun.

SARINI07**TAPE VOLUME SERIAL NUMBERS DO NOT END WITH A NUMERIC**

Reason: One of the volume serial numbers for a range of tape volumes does not end with numeric characters.

Action: Correct the volume serial number, then resubmit the job.

SARINI08**TAPE VOLUME SERIAL NUMBERS ARE DIFFERENT FORMATS**

Reason: When specifying a range of tape volumes, the volume serial numbers must be of the same format.

Action: Correct the volume serial numbers, then resubmit the job.

SARINI09**SECONDARY DISK STORAGE DRIVER NOT FOUND OR NOT AUTHORIZED**

Reason: The DSK2DRVR parameter specifies the name of a load module which could not be found or is not authorized.

Action: Verify that DSK2DRVR specifies the name of an authorized load module accessible to SARINIT.

SARINI10**LANGUAGE CODE *x* IS NOT INSTALLED**

Reason: There are no panels for the indicated language code in the CA-View database.

Action: Either install the desired panels or specify a language code for panels which are already in the database.

SARINI19 JOB/USER NOT AUTHORIZED TO ACCESS DATA

Reason: The authorization user exit does not allow the job or user to access the database.

Action: Consult the system programming group or security group to determine the reason why the authorization user exit explicitly denies access to the database.

SARINI20 PROCESSING TERMINATED DUE TO PREVIOUS ERRORS

Reason: Previous errors have occurred.

Action: Take the appropriate action for the previous errors.

SARINI22 UTILITY PROCESSING SUCCESSFULLY COMPLETED

Reason: Processing has successfully completed.

Action: None. This is an informational message.

SARINI23 DATABASE AT INCORRECT LEVEL FOR THIS RELEASE

Reason: The program load modules and the database are not of the same release level. CA-View does not execute.

Action: Correct the problem and retry.

**SARINI24 GEN=, TAPESEQ= ONLY VALID DURING FIRST INIT OF DATABASE;
IGNORED.**

Reason: The GEN= and TAPSEQ= initialization parameters can only be used for newly created databases.

Action: None. The unacceptable parameters are ignored.

SARINI25**FINDLIM MUST BE LESS THAN OR EQUAL TO FINDMAX**

Reason: The second portion of the FINDLIM initialization parameter is a maximum for the parameter (that is, FINDLIM=limit,max-limit).

Action: Correct the parameter and rerun.

SARINI26**TAPE STORAGE GROUP NAMES MUST BE UNIQUE**

Reason: The tape storage group names, defined by the STORGRPn initialization parameters must be unique.

Action: Correct the STORGRPn parameter and rerun.

SARINI27**TAPE STORAGE VOLSER RANGES MUST NOT PARTIALLY OVERLAP**

Reason: The tape Volser ranges specified for the STORGRPn initialization parameters must be either exactly the same, or completely disjoint. No partial overlaps are allowed.

Action: Correct the tape Volser ranges for the STORGRPn parameter and rerun.

SARINI28**ERO OPTION IS NOT ACTIVE**

Reason: The EROOPT=NO initialization parameter was specified and all of the ERO parameters have been removed from the CA-View database.

Action: None. This is an informational message.

SARINI29**PARAMETER CONFLICT WITH ERO PARAMETER SPECIFICATION AND EROOPT=NO SPECIFICATION**

Reason: The EROOPT=NO initialization parameter was specified, indicating that all ERO options are to be removed and new ERO initialization parameters are being specified.

Action: Either remove the EROOPT=NO parameter, or remove the ERO initialization parameters and rerun.

SARMFP03**DEFAULT ATTRIBUTES USED FOR OUT DATASET**

Reason: Either RECFM, LRECL, or BLKSIZE has been omitted for the output file. Default attributes have been used.

Action: Verify that the default attributes have been desired.

SARMFP04 INVALID DCB ATTRIBUTES FOR OUT DATASET

Reason: The output file has been assigned an invalid DCB attribute.

Action: Correct the DCB specifications for the output file.

SARMFP05 INVALID GENERATION IN PARM FIELD

Reason: An invalid generation number has been passed to the program in the parm field.

Action: Correct the problem and start SARMFP again.

SARMFP08 INVALID SORT FIELD NAME xxxxxxxx

Reason: One of the options, MSORT1, MSORT2, etc., has been given an invalid value. The field is ignored and processing continues.

Action: Correct the option.

SARMFP10 DATABASE AT INCORRECT LEVEL FOR THIS RELEASE

Reason: The program load modules and the database are not of the same release level. CA-View does not execute.

Action: Correct the problem and retry.

SARMFP16 SARMFP IS NOT A STARTED TASK

Reason: An attempt has been made to execute SARMFP as other than a started task.

Action: Execute SARMFP by using the start operator command.

SAROLR03 DATABASE AT INCORRECT LEVEL FOR THIS RELEASE

Reason: The program load modules and the database are not of the same release level. CA-View does not execute.

Action: Correct the problem and retry.

SARPAC02**EXPANDED RETENTION WAS NEVER INITIALIZED**

Reason: The Expanded Retention Option (ERO) has never been initialized.

Action: Run SARINIT to initialize the Expanded Retention Option.

SARPAC03**MASTER INDEX IS ALREADY IN USE**

Reason: Another consolidation task with the same database is already executing.

Action: Correct the problem.

SARPAC04**VERIFY SARPAC NOT ACTIVE ON SYSTEM xxxx, REPLY Y/N TO CONTINUE**

Reason: The master index indicates that the archival task is already active on system xxxx. This message can also be issued if the archival task abended or the system crashed the last time the archival task was active.

Action: Verify whether the archival task is actually active on the specified system. If it is, reply N to terminate this task; if it is not, reply Y to continue.

Warning! Never run the archival task for the same index file on more than one system at the same time because this can destroy the master index.

SARPAC05***** ERROR ON INPUT TAPE *****

Reason: An error occurs while reading the input tape.

Action: See the associated SARTPLxx message.

SARPAC06***** ERROR ON OUTPUT TAPE *****

Reason: An error occurs while writing to the output tape.

Action: See the associated SARTPOxx message.

SARPAC10**NO SYSOUT GROUPS REQUIRE CONSOLIDATION**

Reason: There are no SYSOUT groups on expired CA-View backup tapes, therefore consolidation is not necessary.

Action: None. This is an informational message.

SARPAC11 xxxxx SYSOUT GROUPS COPIED

Reason: Tape consolidation has completed and copied xxxxx SYSOUT groups.

Action: None. This is an informational message.

SARPAC15 DATABASE AT INCORRECT LEVEL FOR THIS RELEASE

Reason: The program load modules and the database are not of the same release level. CA-View does not execute.

Action: Correct the problem and retry.

SARPAC20 SYSIN CONTROL CARDS GOVERNING THIS SARPAC

Reason: Optional SYSIN control statements are being used for this run of SARPAC.

Action: None. This is an informational message.

SARPAC21 NO TAPESEQ= or STORGRP= FOUND

Reason: SYSIN control statements did not specify either a storage group or tape sequence number.

Action: Either remove the optional SYSIN DD statement, or use the TAPESEQ= or STORGRP= control statement.

SARPAC22 INVALID OR EXTRANEIOUS CONTROL CARD FOUND

Reason: Only one STOPGRP= or one TAPESEQ= control statement is valid as SYSIN.

Action: Use only one control statement for each run of SARPAC. You may need to run SARPAC multiple times to accomplish the desired result.

SARPAC23**STORAGE GROUP NOT DEFINED IN DATABASE**

Reason: SYSIN control statement STORGRP= specified a storage group whose definition does not currently exist in the database via the SARINIT parameter's STORGRP*n*.

Action: Check the storage group name for misspelling. If the storage group name is correct, be sure the database name is correct. The storage group name must be correct, and a backup cycle must have run to set the storage group name in the reports in the database. SARPAC does not read the ERO table directly.

SARPAC52****WARNING** RUN SARPAC TO COPY TAPES FOLLOWING MERGE OF DATABASES**

Reason: The database contains references to tape volumes owned by another database. This condition is the result of a database merge. Note: This message continues to appear even after all tape volumes have been copied until the started task backup cycle is executed.

Action: Run SARPAC, as necessary, to copy the SYSOUT groups on tape to new tape volumes owned by this database and then execute a backup cycle.

SARPAC86**SYNTAX ERROR IN KEYWORD PARAMETER REPORT**

Reason: The SARPAC parameter must be VIEW-database-name,REPORT, or VIEW-database-name. The parameter specified was not the keyword REPORT.

Action: Correct the parameter and re-run.

SARPAM21**DATABASE AT INCORRECT LEVEL FOR THIS RELEASE**

Reason: The program load modules and the database are not at the same release level. CA-Deliver-direct-to-CA-View archival will not operate.

Action: Set the version of the database (with the VERSION control statement of the SARDBASE utility) to the current release level, then resubmit the job.

SARPAM22**I/O ERROR WRITING PAGE INDEX FOR SYSOUT - PAGE INDEX DELETED**

Reason: An I/O error occurs while writing out the index data for the SYSOUT group. Any index data already written is deleted.

Action: Correct the error with the database.

SARPAM24 DATABASE *database-name* FULL - REPLY R (RETRY) OR T (TERMINATE)

Reason: There is no more space in the database to hold direct-to-CA-View archival reports from CA-Deliver.

Action: Either create more space in the database by deleting SYSOUTS or adding more space to the database by either ADDDS or SARDBASE and reply R to retry, or reply T to terminate (abend) the application job.

SARPAM25 INVALID REPLY

Reason: An invalid reply to SARPAM24 was given.

Action: See SARPAM24 and reply accordingly.

SARPAR01 (CARD *xxxx*) INVALID CONTROL CARD *control card*

Reason: A permanent archival control card is invalid. The backup cycle of the CA-View started task will terminate with a U0001 user abend.

Action: Correct the control card, then restart the started task to complete the backup cycle.

SARPAR02 (CARD *xxxx*) INVALID ID *xxxxxxxxxxxxx+* - SKIPPING TO NEXT CONTROL CARD

Reason: The SYSOUT identifier on a permanent archival control record is too long. The backup cycle of the CA-View started task will terminate with a U0001 user abend.

Action: Correct the control card, then restart the started task to complete the backup cycle.

SARPAR03 (CARD *xxxx*) INVALID KEYWORD *xxxxxxxx+* FOR ID=*xxxxxxxxxxxxx* - SKIPPING TO NEXT CONTROL CARD

Reason: The keyword on a permanent archival control record is too long. The backup cycle of the CA-View started task will terminate with a U0001 user abend.

Action: Correct the control card, then restart the started task to complete the backup cycle.

SARPAR05

**(CARD xxxx) INVALID VALUE FOR KEYWORD=xxxxxxx,
ID=xxxxxxxxxxxxx - SKIPPING TO NEXT CONTROL CARD**

Reason: The value for the keyword on a permanent archival control record is invalid. The backup cycle of the CA-View started task will terminate with a U0001 user abend.

Action: Correct the control card, then restart the started task to complete the backup cycle.

SARPAR06

**(CARD xxxx) EXCESSIVE OPERANDS FOR KEYWORD=xxxxxxx,
ID=xxxxxxxxxxxxx - SKIPPING TO NEXT CONTROL CARD**

Reason: The keyword on a permanent archival control record contains too many operands. The backup cycle of the CA-View started task will terminate with a U0001 user abend.

Action: Correct the control card, then restart the started task to complete the backup cycle.

SARPAR07

**KEYWORD x CONFLICTS WITH KEYWORD y FOR ID=z, x
ASSUMED**

Reason: The specified keywords cannot be specified on the same control statement and are mutually exclusive. The message is issued in conjunction with the specification of the Expanded Retention option ALL, LAST, and MARK parameters.

Action: Execution continues with the assumed specification. Change the Expanded Retention Option control statement to specify either ALL, LAST, or MARK.

SARQP60

PC TRANSMITTAL QUEUE FULL - SYSOUT NOT QUEUED TO PC

Reason: The PC transmittal queue is full for the user.

Action: Have the user transmit his queue and clear the entries.

SARQP64

PC DESTINATION INVALID - SYSOUT NOT QUEUED TO PC

Reason: The destination specified must be of the format PC user ID.

Action: Correct the destination.

SARPQP68 USER NOT DEFINED - SYSOUT NOT QUEUED TO PC

Reason: The user ID specified in the destination is not defined to CA-View.

Action: Correct the destination or define the user ID to CA-View.

SARPRT01 UNEXPECTED RETURN CODE - x UNABLE TO LOAD VTAM DEVICE DRIVER xxxxxxxx

Reason: Your print request specified the synonym for a VTAM Print Option device. The DEFine DEvice specification for that synonym specified that the indicated special device driver was to be used when doing the printing, but that device driver could not be found.

Action: Either correct the device driver specification on the VTAM DEVICE ATTRIBUTE PANEL of the DEFine DEvice facility, or make the device driver accessible by putting it in the CA-View LOADLIB, or in a library concatenated to CA-View LOADLIB.

SARPRT02 UNABLE TO LOAD DEVICE'S USER EXIT xxxxxxxx

Reason: Your print request specified the synonym for a real device. The DEFine DEvice specification for that synonym specified that the indicated special user exit was to be used when doing the printing, but that user exit could not be found.

Action: Either correct the device driver specification on the appropriate DEVICE ATTRIBUTE PANEL of the DEFine DEvice facility, or make the device driver accessible by putting it in the CA-View LOADLIB, or in a library concatenated to CA-View LOADLIB.

SARRSP00 SYSOUT RESTORE STARTED

Reason: This message indicates the start of the restore process.

Action: None. This is an informational message.

SARRSP01 ERROR OPENING DATABASE

Reason: The database specified by the PARM parameter of the execution JCL cannot be opened. This message accompanies a SARDBLxx message indicating the nature of the error.

Action: Verify the correct database prefix is specified in the PARM parameter of the execution JCL. Otherwise, see the explanation and action of the SARDBLxx message for resolution.

SARRSP02**ERROR OPENING INDEX FILE**

Reason: An error occurs while opening the master index. The restore process cannot access this master index data, and is terminated. This message accompanies a SARDBLxx message indicating the nature of the error.

Action: Ensure that the restore process by using the RESTORE control statement of the SARDBASE utility completes successfully. See the explanation and action of the SARDBLxx message for resolution.

SARRSP03**ERROR READING MASTER CONTROL RECORD**

Reason: An error occurs while reading the master control record. This message accompanies a SARDBLxx message indicating the nature of the error.

Action: Ensure that the restore process by using the RESTORE control statement of the SARDBASE utility completes successfully. See the explanation and action of the SARDBLxx message for resolution.

SARRSP04**ERROR OPENING FILE FOR PANEL=XXXXXXXX**

Reason: An error occurs while attempting to restore the specified panel to the database. This message accompanies a SARDBLxx message indicating the nature of the error.

Action: See the explanation and action of the SARDBLxx message for resolution.

SARRSP05**ERROR WRITING FILE FOR PANEL=XXXXXXXX**

Reason: An error occurs while attempting to restore the specified panel to the database. This message accompanies a SARDBLxx message indicating the nature of the error.

Action: See the explanation and action of the SARDBLxx message for resolution.

SARRSP06 ERROR UPDATING INDEX RECORD FOR PANEL=xxxxxxx

Reason: An error occurs while attempting to restore the specified panel to the database. This message accompanies a SARDBLxx message indicating the nature of the error.

Action: See the explanation and action of the SARDBLxx message for resolution.

SARRSP07 ERROR OPENING FILE FOR SYSOUT=xxxxxxxxxxxx

Reason: An error occurs while attempting to restore the specified SYSOUT to the database. This message accompanies a SARDBLxx message indicating the nature of the error.

Action: See the explanation and action of the SARDBLxx message for resolution.

SARRSP08 ERROR WRITING FILE FOR SYSOUT=xxxxxxxxxxxx

Reason: An error occurs while attempting to restore the specified SYSOUT to the database. This message accompanies a SARDBLxx message indicating the nature of the error.

Action: See the explanation and action of the SARDBLxx message for resolution.

SARRSP09 ERROR UPDATING INDEX RECORD FOR SYSOUT=xxxxxxxxxxxx

Reason: An error occurs while attempting to restore the specified SYSOUT to the database. This message accompanies a SARDBLxx message indicating the nature of the error.

Action: See the explanation and action of the SARDBLxx message for resolution.

SARRSP11 ERROR READING INDEX FILE

Reason: An error occurs while reading an index record from the master index of the database. This message accompanies a SARDBLxx message indicating the nature of the error.

Action: See the explanation and action of the SARDBLxx message for resolution.

SARRSP12**ABNORMAL END TO SORT, RETURN CODE=xxxx**

Reason: The sort phase of the restore process ends with the specified non-zero return code.

Action: The non-zero return code from the sort phase can be caused by a critical error as indicated by a previous SARRSPxx message, a missing SYSOUT DD statement (return code 20), or a sort error as indicated in the sort message data set. Take the appropriate action, then resubmit the job.

SARRSP13**DATABASE AT INCORRECT LEVEL FOR THIS RELEASE**

Reason: The program load modules and the database are not at the same release level. This is normally caused by the STEPLIB, JOBLIB, link-list, or LPA pointing to old load modules, or the database has not been converted to the correct release level (new releases of product may require conversion of the database).

Action: Either STEPLIB to the correct load modules or convert the database to the correct release level (see VERSION in the SARDBASE Control Statements section of Chapter 7, "Database Utilities," for more information).

SARRSP14**UNLOAD TAPE AT INCORRECT LEVEL FOR THIS RELEASE**

Reason: The unload tape referenced by the SARLOAD DD statement is not produced by a compatible release level of the SARDBASE utility.

Action: Remove the SARLOAD DD statement from the restore execution JCL, or use an unload tape from a compatible release level of the SARDBASE utility.

SARRSP15**UNLOAD TAPE IS FORMATTED INCORRECTLY**

Reason: The unload tape referenced by the SARLOAD DD statement contains unrecognizable data.

Action: Remove the SARLOAD DD statement from the restore execution JCL, or specify a different unload tape.

SARRSP16**NO BACKUP COPY FOR SYSOUT, SYSOUT=XXXXXXXXXXXXX,
GEN=xxxx, SEQ=xxxxx**

Reason: The specified SYSOUT group cannot be restored because the SYSOUT does not reside on any backup tape.

Action: None. The status of the SYSOUT group remains unchanged, and processing continues.

SARRSP17 **SYSOUT NOT RESTORED BECAUSE OF TAPE ERROR,
ID=XXXXXXXXXXXX, GEN=XXXXX, SEQ=XXXXX**

Reason: The specified SYSOUT group cannot be restored due to problems with the related backup tape. This message accompanies a SARTPOxx message indicating the nature of the error.

Action: None. The SYSOUT group is removed from disk status and processing continues. For future use of the SYSOUT group, the backup tape may have to be recovered. See Chapter 8, "Backing Up and Recovering the Database," for more information.

SARRSP18 **SYSOUT COULD NOT BE FOUND ON BACKUP TAPE,
ID=XXXXXXXXXXXX, GEN=XXXXX, SEQ=XXXXX**

Reason: The specified SYSOUT group cannot be restored because the SYSOUT cannot be found on the related backup tape. This message accompanies a SARTPOxx message indicating the nature of the error.

Action: None. The SYSOUT group is removed from disk status and processing continues. For future use of the SYSOUT group the backup tape may have to be recovered. See Chapter 8, "Backing Up and Recovering the Database," for more information.

SARRSP19 **SYSOUT REMOVED FROM DISK STATUS DUE TO TAPE ERROR,
ID=XXXXXXXXXXXX, GEN=XXXXX, SEQ=XXXXX**

Reason: The specified SYSOUT group cannot be restored due to problems with the related backup tape and therefore, is being removed from disk status.

Action: None. The SYSOUT group is removed from disk status and processing continues. For future use of the SYSOUT group the backup tape may have to be recovered. See Chapter 8, "Backing Up and Recovering the Database," for more information.

SARRSP20 **ERROR OPENING FILE FOR RESOURCE=XXXXXXXXXXXX**

Reason: An error occurs while attempting to restore the specified page layout RESOURCE to the database. This message accompanies a SARDBIxx message indicating the nature of the error.

Action: See the explanation and action of the SARDBIxx message for resolution.

SARRSP21**ERROR WRITING FILE FOR RESOURCE=XXXXXXXXXXXX**

Reason: An error occurs while attempting to restore the specified page layout RESOURCE to the database. This message accompanies a SARDBIxx message indicating the nature of the error.

Action: See the explanation and action of the SARDBIxx message for resolution.

SARRSP22**ERROR UPDATING INDEX RECORD FOR RESOURCE=XXXXXXXXXXXX**

Reason: An error occurs while attempting to restore the specified page layout RESOURCE to the database. This message accompanies a SARDBIxx message indicating the nature of the error.

Action: See the explanation and action of the SARDBIxx message for resolution.

SARRSP23**NO BACKUP COPY FOR RESOURCE, ID=XXXXXXXXXXXX**

Reason: The specified page layout RESOURCE cannot be restored because the RESOURCE does not reside on any backup tape.

Action: None. The status of the RESOURCE remains unchanged, and processing continues.

SARRSP24**RESOURCE NOT RESTORED BECAUSE OF TAPE ERROR,
ID=XXXXXXXXXXXX**

Reason: The specified page layout RESOURCE cannot be restored due to problems with the related backup tape. This message accompanies a SARTPOxx message indicating the nature of the error.

Action: None. The RESOURCE is removed from disk status and processing continues. For future use of the RESOURCE, the backup tape may have to be recovered. See Chapter 8, "Backing Up and Recovering the Database," for more information.

**SARRSP25 RESOURCE COULD NOT BE FOUND ON BACKUP TAPE,
ID=XXXXXXXXXXXX**

Reason: The specified page layout RESOURCE cannot be restored because the SYSOUT cannot be found on the related backup tape. This message accompanies a SARTPOxx message indicating the nature of the error.

Action: None. The RESOURCE is removed from disk status and processing continues. For future use of the RESOURCE the backup tape may have to be recovered. See Chapter 8, "Backing Up and Recovering the Database," for more information.

**SARRSP26 RESOURCE REMOVED FROM DISK STATUS DUE TO TAPE ERROR,
ID=XXXXXXXXXXXX**

Reason: The specified page layout RESOURCE cannot be restored due to problems with the related backup tape and therefore, is being removed from disk status.

Action: None. The RESOURCE is removed from disk status and processing continues. For future use of the RESOURCE the backup tape may have to be recovered. See Chapter 8, "Backing Up and Recovering the Database," for more information.

SARRSP30 PANEL RESTORED FROM LOAD TAPE, PANEL=XXXXXXX

Reason: The specified panel has been successfully restored from the unload tape.

Action: None. This is an informational message.

**SARRSP31 SYSOUT RESTORED FROM LOAD TAPE, SYSOUT=XXXXXXXXXXXX,
GEN=XXXXX, SEQ=XXXXX**

Reason: The specified SYSOUT group has been successfully restored from the unload tape and now resides on disk media.

Action: None. This is an informational message.

**SARRSP32 SYSOUT RESTORED FROM BACKUP TAPE,
SYSOUT=XXXXXXXXXXXX, GEN=XXXXX, SEQ=XXXXX**

Reason: The specified SYSOUT group has been successfully restored from the backup tape and now resides on disk media.

Action: None. This is an informational message.

SARRSP33

**SYSOUT DATA WAS NOT RESTORED DURING THE RECOVERY
PROCESS BECAUSE THERE WAS NO TAPE ARCHIVAL OR
UNLOAD BACKUP CONTAINING THE SYSOUT**

Reason: This message becomes the data for the SYSOUT attempted to be restored.

Action: None. If a tape which contains the SYSOUT can be located, the SYSOUT can be reloaded using CA-View utilities.

SARRSP34

RESOURCE RESTORED FROM LOAD TAPE, ID=XXXXXXXXXXXX

Reason: The specified page layout RESOURCE has been successfully restored from the unload tape and now resides on disk media.

Action: None. This is an informational message.

SARRSP35

RESOURCE RESTORED FROM BACKUP TAPE, ID=XXXXXXXXXXXX

Reason: The specified page layout RESOURCE has been successfully restored from the backup tape and now resides on disk media.

Action: None. This is an informational message.

SARRSP99

SYSOUT RESTORE COMPLETED

Reason: This message indicates that the restore process is finished (whether successfully or not).

Action: None. This is an informational message.

SARSEP30

```
*****
*
* CA-View FSS/FSA      (jobname /jobid ) *
*   PRODUCT HAS ABENDED WITH CODE code *
*   ***      RESTART PRODUCT ASAP      *** *
*
*****
```

Reason: The CA-View FSS (Functional Subsystem) or CA-View FSA (Functional Subsystem Application) has abended. The system or user abend code is provided.

Action: Consult the *MVS System Codes* manual to determine the reason for the abend. If you still cannot determine the problem, Contact Computer Associates Technical Support.

**SARSFP01 CRITICAL ERROR. PROGRAM TERMINATED WITH DUMP.
INVALID blk**

Reason: A CA-View program has terminated, and a dump was generated. In this message, *blk* specifies the control block CA-View expected but did not receive (usually IFB, SFB, XFB, or DBB). It may be suffixed with a number indicating which test point in the program detected the problem.

Action: Send the dump to Computer Associates Technical Support. Restart whatever program was terminated. If the problem recurs, run SARDBASE VERIFY on the database. If the problem persists, contact Computer Associates Technical Support.

SARSPT01 SYSOUT ALLOCATION FAILED, ERR=xxxx, INFO=xxxxx

Reason: Dynamic allocation failed for allocating the print data set to SYSOUT. The hexadecimal error and information codes are provided.

Action: Correct the problem, then resubmit the job.

**SARSPT03 NO DISTRIBUTION IDENTIFIERS FOR REPORT - USE CA-VIEW TO
PRINT REPORT**

Reason: Distribution identifier has not been specified for the desired report.

Action: Specify a Distribution Identifier for the report or enter the keyword SAR and print through CA-View directly.

SARSPT04 NO SYSOUT COULD BE PRINTED

Reason: Problems are encountered with the CA-Deliver database interface, or problems are encountered printing banner pages for reports in CA-Deliver. Processing is terminated.

Action: Respond to additional message which precedes this message.

SARSPT05 THE TAPE CONTAINED A NULL FILE FOR THE SYSOUT GROUP

Reason: The SYSOUT group cannot be found on the tape backup.

Action: None. The SYSOUT group is not available on tape.

SARSPT06**THE TAPE FILE WAS NOT THE SELECTED SYSOUT GROUP - USE SARTCP TO MAP THE TAPE**

Reason: The SYSOUT group located on tape is not the same as referenced in the master index.

Action: Use the SARTCP utility to map and correct the tape.

SARSPT07**BACKUP TAPE DOES NOT EXIST**

Reason: The backup tape cannot be found in the index file. This is normally caused by a backup cycle deleting the tape between the time the job was submitted and the time it was executed.

Action: None. The SYSOUT group is no longer available.

SARSPT08**TAPE ALLOC ERROR CODE - xxxx, INFO CODE - xxxxxx**

Reason: Dynamic allocation failed for the backup tape file. The hexadecimal error and information codes are provided.

Action: Correct the problem, then resubmit the job.

SARSPT09**I/O ERROR POSITIONING TAPE**

Reason: A permanent I/O error occurs while attempting to position the archival tape to retrieve the SYSOUT group.

Action: Resubmit the job. If the I/O error occurs again, then the desired SYSOUT group can no longer be printed.

SARSPT10**SYSOUT GROUP IS OPEN FOR OUTPUT**

Reason: The requested function cannot be performed because the specified SYSOUT group is open for output.

Action: If the open condition is valid (for example, the SYSOUT group is still being archived or is being loaded to disk), wait for the SYSOUT group to be closed and rerun the job.

If the open condition is invalid (for example, there was a system crash or abend while the SYSOUT group was open leaving the SYSOUT group in an open status), use the CLEAN operator command to remove the open status. Two backup cycles and a duration of 4 hours must have elapsed before the open status is removed.

SARSPT11 PERMANENT I/O ERROR ON INPUT TAPE

Reason: A permanent I/O error occurs while reading the SYSOUT from tape. The print function is terminated.

Action: Use the SARTCP utility to map and correct the tape.

SARSPT12 VIEW DEFINITION FOR REPORT WAS NOT FOUND

Reason: The logical view definition for the report is not found.

Action: Respecify the print request with a new logical view.

SARSPT13 *message text varies*

Reason: A subprogram returned a message which is being repeated here.

Action: Varies depending on the message text displayed.

SARSPT14 THE GCR RECORD WAS NOT FOUND FOR THE RESOURCE GROUP

Reason: The resource group identified by a group control record was not found in the CA-View database.

Action: Use the SARTCP utility to map and locate the resource group and use the SARTDR utility to reload the resource group back into the CA-View database.

SARSPT56 SYSOUT QUEUED FOR TRANSMITTAL TO PC

Reason: The SYSOUT group is successfully queued for PC transmittal.

Action: None. This is an informational message.

SARSPT60 PC TRANSMITTAL QUEUE FULL - SYSOUT NOT QUEUED TO PC

Reason: The PC transmittal queue for the user is full. The SYSOUT group cannot be added to the queue.

Action: Transmit and clear the queue.

SARSPT64 PC DESTINATION INVALID - SYSOUT NOT QUEUED TO PC

Reason: The destination is not of the form PC user ID.

Action: Correct the destination.

SARSPT68 USER NOT DEFINED - SYSOUT NOT QUEUED TO PC

Reason: The PC user is not defined to CA-View.

Action: Correct the user ID in the destination.

SARSPT78 UNABLE TO LOAD VTAM DEVICE DRIVER xxxxxxxx

Reason: The DEFine DEvice information requests that output be processed by an optional device driver called *xxxxxxx*, but it cannot be found.

Action: Either make the device driver available (perhaps through LINKLIST or STEPLIB), or remove it from the DEFine DEvice.

SARSPT80 VTAM MAXIMUM PRINT LINES WAS EXCEEDED

Reason: Your print request exceeds the maximum number of lines permitted during online VTAM print processing.

Action: Do one of the following:

- Print in smaller segments.
- Increase the maximum permitted for this device by using the DEFine DEvice facility.
- Increase the maximum permitted for all devices by using SARINIT parameter VPRTMAXO.

SARSPT81 NOT PRINTED DUE TO ERRORS ON OTHER DESTINATIONS

Reason: There are no problems printing to this destination, but an error occurs while printing to another destination in your reprint request.

Action: Do one of the following:

- Correct the other error and retry.
- Make multiple separate print requests.

SARSPT82 INVALID DEFINE DEVICE RECORD

Reason: The DEFINE DEVICE record is invalid. This can be caused by a record which is not completely defined.

Action: Correct the DEFINE DEVICE record and retry.

SARSPT83 DUPLICATE VTAM PRINTER ID, LU=XXXXXXXX

Reason: You are attempting to print more than one SYSOUT or report on the same VTAM printer at the same time. This cannot be done.

Action: Either use more than one printer or make more than one print request to the printer in question.

SARSPT84 CMASPOOL MAXIMUM PRINT LINES WAS EXCEEDED

Reason: Your print request exceeds the maximum number of lines permitted during CA-Spool print processing.

Action: Do one of the following:

- Print in smaller segments.
- Increase the maximum permitted for this device by using the DEFINE DEVICE facility.
- Increase the maximum permitted for CA-Spool devices by using SARINIT parameter CMAMAX.

SARSPT85 UNABLE TO LOAD DEVICE'S USER EXIT xxxxxxxx

Reason: The DEFINE DEVICE information requests that the output be processed by an optional device-specific user exit called xxxxxxxx, but it cannot be found.

Action: Either make the device driver available (perhaps through LINKLIST or STEPLIB), or remove it from the DEFine DEVice.

SARSPT86**SYSOUT QUEUED FOR EXTERNAL PRINTING**

Reason: The external print request was successfully queued for processing.

Action: None. This is an informational message.

SARSSO01**ALLOCATION FAILED FOR ARCHIVAL SYSOUT - ERROR xxxx,
INFO xxxx**

Reason: A dynamic allocation request for allocating the archival copy for the automatic report archival feature failed. The hexadecimal error and information codes are provided. Execution continues without creating the archival copy of the SYSOUT—no archival of the SYSOUT is done.

Action: Correct the parameter information for the automatic report archival feature.

SARSSO02**OPEN FAILED FOR ARCHIVAL SYSOUT - ERROR xx**

Reason: The open request failed for the archival copy for the automatic report archival feature.

Action: Correct the problem with open.

SARSTC00**CA-VIEW 2.0 IS INITIALIZED**

Reason: Initialization has completed for the archival task.

Action: None. This is an informational message.

SARSTC01**SUBSYSTEM REQUEST FAILED - RETURN CODE xxxxxxxx**

Reason: A subsystem request failed. The hexadecimal return code is provided.

Action: Contact your systems programmer.

SARSTC02 PROCESS SYSOUT REQUEST FAILED - RETURN CODE xxxxxxxx

Reason: A process SYSOUT request failed for the subsystem. The hexadecimal return code is provided.

Note: A return code of X'1C' indicates an invalid destination. Verify that the destination specified with the DEST initialization option is known to JES.

Action: Contact your systems programmer.

**SARSTC05 SUBSYSTEM ALLOCATION FAILED ERROR CODE - xxxx, INFO
CODE - xxxx, JOB job(jobid), DATASET datasetname**

Reason: Dynamic allocation failed for the process SYSOUT data set. The hexadecimal error and information codes are provided.

Action: Contact your systems programmer.

**SARSTC06 SUBSYSTEM OPEN REQUEST FAILED - ERROR CODE xx, JOB
job(jobid), DATASET dsname**

Reason: A subsystem open request failed. The hexadecimal error code is provided.

Action: Contact your systems programmer.

SARSTC07 ATTEMPT TO ARCHIVE SYSOUT FROM ARCHIVAL TASK

Reason: The jobname of the SYSOUT passed to CA-View for archival is the same as the archival started task, and the producing DDname is SYSmmn. To prevent a potential archival-print loop, CA-View deletes the SYSOUT without ever archiving it.

Action: Correct or specify the NEWCLSL, NEWDEST, or NEWFORM options to prevent the archival of SYSOUT automatically printing the archival started task.

SARSTC10 SUBSYSTEM GET REQUEST FAILED - RPL FEEDBACK xxxxxx

Reason: A subsystem GET request failed. The hexadecimal feedback code is provided. This is normally due to a system crash while the job that created the data set was executing.

Action: None. This is an informational message.

SARSTC14**ESTAE FAILED - RETURN CODE xxxxxxxx**

Reason: An ESTAE failed. The hexadecimal return code is provided.

Action: Contact your systems programmer.

SARSTC15**INVALID COMMAND**

Reason: The modify command for the archival started task is invalid and ignored.

Action: Correct and reissue the modify command.

SARSTC16**SARSTC IS NOT A STARTED TASK**

Reason: An attempt has been made to execute SARSTC as other than a started task.

Action: Execute SARSTC by using the START command.

SARSTC17**SYSOUT ALLOCATION FAILED - ERROR CODE xxxx, INFO CODE xxxx**

Reason: A dynamic allocation request for allocating the print data set to SYSOUT failed. The hexadecimal error and information codes are provided. Execution continues without printing the SYSOUT for the job.

Action: Determine the reason for the failure and correct the problem.

SARSTC19**DATABASE IS ALREADY EXCLUSIVELY BEING USED**

Reason: Another archival task with the same database is already executing.

Action: Correct the problem.

SARSTC21**VERIFY SARSTC NOT ACTIVE ON SYSTEM xxxx, REPLY Y/N TO CONTINUE**

Reason: The master index indicates that the archival task is already active on system xxxx. This message may also be issued if the archival task abended or the system crashed the last time the archival task was active.

Action: Verify whether or not the archival task is actually active on the specified system. If it is, reply N to terminate this task; if not, reply Y to continue.

Warning! Never run the archival task for the same index file on more than one system at the same time; this can destroy the master index.

SARSTC22 **PROCESSING *jobname/dsname***

Reason: The specified SYSOUT data set is being processed by CA-View.

Action: None. This is an informational message.

SARSTC23 **MAXIMUM LINES EXCEEDED FOR *job(jobid)***

Reason: The maximum number of lines that can be archived for a SYSOUT data set (defined by the MAXLINES initialization parameter) has been exceeded. If BYPASS has been coded as a subparameter of MAXLINES, all remaining SYSOUTs for the data set are deleted without archival. If BYPASS is not coded, the records are passed to SARSTCUX for processing.

Action: None. This is an informational message.

SARSTC24 **NO MORE SPACE IN DATABASE - REPLY R (RETRY), B (BACKUP),
C (CLEAN), OR T TERMINATE**

Reason: The database is out of space.

Action: You have four recovery options, as follows:

- Run the SARDBASE program to add more space to the database, or manually delete SYSOUT groups to free up space while the archival task waits. After you make more space available, reply R to have the archival task retry its archival with the additional space.
- Reply B to force the archival task to execute its backup cycle. As part of its backup cycle, the archival task deletes the generation of SYSOUT on disk that is in excess of the NGEND= initialization parameter, freeing some space.
- Reply C to force the archival task to scan its database for SYSOUT groups left in an open state due to a system crash and recover the space used by them.
- Reply T to terminate the archival task.

SARSTC25 DATABASE AT INCORRECT LEVEL FOR THIS RELEASE

Reason: The program load modules and the database are not the same release level. CA-View does not execute.

Action: Correct the problem and retry.

SARSTC26 NO RESPONSE FROM JES(2/3) IN *nn* MINUTES

Reason: This is an informational message. Informs a user that CA-View is operative, though JES has not had any outputs in the queue within the predefined 5 minute time span.

Action: None. This is an informational message.

SARSTC27 I/O ERROR WRITING PAGE INDEX FOR SYSOUT - PAGE INDEX DELETED

Reason: An I/O error occurs while writing out the index data for the SYSOUT group. Any index data already written is deleted.

Action: Correct the error with the database.

SARSTC28 SARSTC REQUIRES APF AUTHORIZATION

Reason: CA-View initialization failed because program authorization via the Authorized Program Facility (APF) is required.

Action: APF authorize the libraries containing the CA-View load modules or move the load modules to an authorized library.

SARSTC29 FORWARD RECOVERY TERMINATED DUE TO ERROR

Reason: The SARSTC archival task has encountered an error in the process of writing a duplex copy of a SYSOUT to the forward recovery data set.

Action: Archival continues without forward recovery capture. Check the RCVPRIM, RCVSEC, RCVSPACE, and RCVUNIT initialization parameters for values that could cause problems allocating, reading, or writing to the forward recovery data set.

SARSTC30

```
*****  
*                                                                 *  
*           SARSTC HAS ABENDED WITH CODE 10000000              *  
*                                                                 *  
*****
```

Reason: The CA-View started task has abended. The system or user abend code is provided.

Action: Consult the *MVS System Codes* manual to determine the reason for the abend. If you still cannot determine the problem, contact Computer Associates Technical Support.

SARSTC31

PC TRANSMITTAL QUEUE FULL - SYSOUT NOT QUEUED TO PC

Reason: The PC transmittal queue is full for the user. The SYSOUT group will not be queued for transmittal to the PC.

Action: Have the user transmit the queue and clear the entries.

SARSTC32

PC DESTINATION INVALID - SYSOUT NOT QUEUED TO PC

Reason: The destination specified must be of the format PC.user ID.

Action: Correct the destination.

SARSTC33

USER NOT DEFINED - SYSOUT NOT QUEUED TO PC

Reason: The user ID specified in the destination is not defined to CA-View.

Action: Correct the destination or define the user ID to CA-View.

SARSTC37

MAXIMUM LINES EXCEEDED FOR SYSOUT ON VTAM PRINTER

Reason: Your print request exceeded the maximum number of lines permitted during VTAM print processing. This message can also occur on non-VTAM printers as an indication that an error occurred while printing on both devices simultaneously.

Action: Increase the maximum permitted for this device by using the DEFine DEVice facility or increase the maximum permitted for all devices by using SARINIT parameter VPRTMAXO.

SARSTC38 MAXIMUM LINES EXCEEDED FOR SYSOUT ON CMASPOOL

Reason: Your print request exceeded the maximum number of lines permitted during online CA-Spool print processing. This message can also occur on non-VTAM printers as an indication that an error occurred while printing on both devices simultaneously.

Action: Increase the maximum permitted for this device by using the DEFine DEVice facility or increase the maximum permitted for CA-Spool devices by using SARINIT parameter CMAMAX.

SARSTC39 ERROR IN DEFINE DEVICE RECORD FOR SYSOUT

Reason: The device record is invalid. This could be caused by a record which was not completely defined.

Action: Correct the device record by using the DEFine DEVice facility.

**SARSTC40 UNEXPECTED RETURN CODE PRINTING SYSOUT *id* ON *dest*.
RC=*code***

Reason: An unknown return code was detected in response to a print request.

Action: Contact Computer Associates Technical Support.

SARSTC99 *jobid jobname message*

Reason: An exceptional condition identified by message occurs for the specified job.

Action: Take appropriate action.

SARTCP01 CONTROL CARD ERROR

Reason: There is an error in the specified control statement.

Action: Correct the control statement, then resubmit the job.

**SARTCP10 INPUT TAPE I/O ERROR, ECB=xx, BLOCK=xxxxxxx,
SENSE=xxxx SARTCP10 ENTER Y/N TO DROP BLOCK AND
CONTINUE**

Reason: A permanent I/O error occurs while reading the specified block from the input tape. The ECB and SENSE codes are provided.

Action: Reply Y to skip the bad block and continue, or N to terminate the job.

SARTCP11 OUTPUT TAPE I/O ERROR, ECB=xx, BLOCK=xxxxxxx, SENSE=xxxx

Reason: A permanent I/O error occurs while writing the specified block to the output tape.

Action: Resubmit the job using a different output tape.

SARTCP12 WRITE TAPE MARK I/O ERROR, ECB=xx, SENSE=xxxx

Reason: A permanent I/O error occurs while writing a tape mark on the output tape.

Action: Resubmit the job using a different output tape.

SARTCP16 PROCESSING SUCCESSFULLY COMPLETED

Reason: Processing has been successfully performed.

Action: None. This is an informational message.

SARTDR00 REPLY Y/N TO AUTHORIZE EXECUTION OF SARTDR

Reason: The operator must authorize the execution of SARTDR.

Action: Reply Y to authorize the execution of SARTDR, or N to cancel the execution of SARTDR.

SARTDR01 INVALID REPLY

Reason: The console reply to the SARTDR00 message is invalid.

Action: When the SARTDR00 message is reissued, reply Y to authorize the execution of SARTDR, or N to cancel the execution of SARTDR.

SARTDR02

**TAPE SEQUENCE NUMBER DOES NOT MATCH THAT OF SYSOUT GROUP xxxxxxxx RECORDED=nnnnn ACTUAL=nnnnn
TAPE SEQUENCE NUMBER DOES NOT MATCH THAT OF RESOURCE xxxxxxxx RECORDED=nnnnn ACTUAL=nnnnn**

Reason: The actual tape sequence number obtained from the data set name for the tape does not match that recorded with the SYSOUT group or page layout RESOURCE that is being added. The SYSOUT group or RESOURCE is not added.

Action: Verify the data set name for the tape.

SARTDR03

SYNTAX ERROR

Reason: The specified control statement contains an error in its syntax.

Action: Correct the statement, then resubmit the job.

SARTDR04

This message number represents one of the following messages:

**POSITION OF SYSOUT GROUP xxxxxxxx INVALID RECORDED=nnnnn ACTUAL=nnnnn
POSITION OF RESOURCE xxxxxxxx INVALID RECORDED=nnnnn ACTUAL=nnnnn**

Reason: The actual position of the SYSOUT group or page layout RESOURCE on the tape does not match that recorded with it. The SYSOUT group or RESOURCE is not added.

Action: USE SARTCP to correct the problem with the tape.

SARTDR05

I/O ERROR POSITIONING TAPE

Reason: A permanent I/O error occurs while attempting to position the archival tape to retrieve the SYSOUT group.

Action: Salvage the data on the tape using the SARTCP utility, then resubmit the job.

SARTDR06 **TAPES NOT ADDED IN ORDER FOR SYSOUT GROUP xxxxxxxx**
GEN=nnnnn SEQ=nnnnn
TAPES NOT ADDED IN ORDER FOR RESOURCE xxxxxxxx

Reason: A multi-tape SYSOUT group or page layout RESOURCE is being added but the tapes for it have not been added in ascending order.

Action: Re-add the tapes for the SYSOUT group or RESOURCE in ascending order.

SARTDR07 **AUTHORIZATION DENIED BY OPERATOR**

Reason: The operator replies N to message SARTDR00.

Action: Obtain authority to run SARTDR from the operator, then resubmit the job.

SARTDR08 **TAPE DD STATEMENT NOT FOUND**

Reason: The DD statement for the tape cannot be found.

Action: Add the DD statement to the JCL, then resubmit the job.

SARTDR09 **INVALID TAPE DATASET NAME**

Reason: The data set name for the tape to be added does not conform to the naming conventions for archival tapes.

Action: Correct the problem, then resubmit the job.

SARTDR10 **CURRENT GENERATION SET TO nnnnn**

Reason: The addition of the tape requires the current generation number to be reset.

Action: None. This is an informational message.

**SARTDR11 TAPE ADDED - *dsname* SEQ=*nnnnn* LGEN=*nnnnn* HGEN=*nnnnn*
TM=*nnnnn***

Reason: The specified archival tape is successfully added to the master index file. The tape sequence number, low generation number, high generation number, and number of tape marks are given in the message.

Action: None. This is an informational message.

**SARTDR14 TAPE ERROR PROCESSING SYSOUT GROUP *xxxxxxxx*
GEN=*nnnnn* SEQ=*nnnnn*
TAPE ERROR PROCESSING RESOURCE *xxxxxxxx***

Reason: An error occurs when loading the SYSOUT group or page layout RESOURCE from tape.

Action: Consult the associated tape error message written to the job log for the appropriate action.

SARTDR19 TAPE LOAD SUCCESSFULLY PERFORMED

Reason: The specified generation has been successfully reloaded to disk.

Action: None. This is an informational message.

**SARTDR23 SYSOUT GROUP *xxxxxxxx* LOADED TO DISK GEN=*nnnnn*
SEQ=*nnn* RESOURCE *xxxxxxxx* LOADED TO DISK**

Reason: The specified SYSOUT group or page layout RESOURCE has been successfully loaded to disk.

Action: None. This is an informational message.

SARTDR24 DATABASE IS ALREADY IN USE

Reason: Another archival task with the same database is already executing.

Action: Correct the problem.

SARTDR26 SPECIFIED GENERATION DOES NOT EXIST

Reason: The master index does not contain any SYSOUT groups for the generation specified on the TLOAD control statement.

Action: SYSOUT groups must be previously added to the master index by using the TADD control statement. If an invalid generation was specified, correct specification, then resubmit the job.

SARTDR49 PERMANENT I/O ERROR READING TAPE

Reason: An I/O error occurs while loading a SYSOUT group to disk.

Action: Salvage the data on the tape using the SARTCP utility, then resubmit the job.

SARTIA01 EXPANDED ACCESS TAPE SERVER IS NOT ACTIVE

Reason: TAPEOPT=EAST for the VIEW database and the SAREAS server whose name appears in the EASTNAME parameter is not active.

Action: See your system administrator to determine why SAREAS is not active. Generally, VIEW will attempt to directly mount the volume containing the report.

SARTIA02 EXPANDED ACCESS PRIMARY TAPE SERVER IS NOT ACTIVE

Reason: The primary server (responsible for mounting volumes and performing I/O) is not active.

Action: See your system administrator to determine why SAREAS is not active. Generally, VIEW will attempt to directly mount the volume containing the report.

SARTIA03 EXPANDED ACCESS TAPE SERVER ABENDED

Reason: The server has abended while the user's request was outstanding.

Action: Collect the appropriate information for problem analysis, then see your system administrator to restart the server.

SARTIA05 EASTMAXW TIMEOUT EXCEEDED - RETRY LATER

Reason: An attempt was made to view a report directly from tape, using the Expanded Access Server. The EASTMAXW parameter, which specifies a time-out time, was exceeded.

Action: Retry later.

SARTIA06 UNABLE TO LOCATE PAGE RECORD VECTOR

Reason: You are viewing a tape report, and the Expanded Access Server was unable to locate a page record vector.

Action: See your system administrator. Each report's page record vector is located via a field in the GCR in the DASD database. The tape may have been damaged. The system administrator may be successful in running SARPAC on just the volume containing the report, after which you should be able to access it.

SARTIA07 NO ACCESS UNDER VM/CMS, RELOAD SYSOUT GROUP TO DATA BASE

Reason: An attempt was made to view a report in tape via the Expanded Access Server under VM/CMS. The server is not supported under VM/CMS.

Action: Access the report from another CA-View online interface, or reload the report to DASD.

SARTIA08 END OF DATA

Reason: A report on tape was being viewed via the expanded access server. The END OF DATA was unexpectedly reached.

Action: See your system administrator about running SARPAC on the volume containing the report. The report's mapping information may have been overwritten. SARPAC will write new mapping information for each report on the tape.

SARTIA09 SYSOUT GROUP IS NOT ON EXPANDED ACCESS TAPE

Reason: An attempt was made to view a report on a tape that was not created with TAPEOPT=EAST or TAPEOPT=3480.

Action: See your system administrator about running SARPAC on the volume containing the report.

SARTIA11 LOGICAL I/O ERROR ON TAPE

Reason: An attempt was made to view a report on tape via the expanded access server, and an I/O error was encountered.

Action: See your system administrator about running SARPAC on the volume containing the report.

SARTIA20 TAPE VOLUME NOT FOUND

Reason: A dynamic allocation error or an open error occurred in an attempt to access the tape.

Action: See your system administrator to determine the reason that the tape cannot be found or accessed. The system log of the SAREAS server will give dynamic allocation return codes for problem analysis.

SARTIA30 REPORT SPANS MORE THAN 16 VOLUMES

Reason: An attempt was made to view a report on tape via the Expanded Access Server, and the report spans more than 16 tapes.

Action: SAREAS can accommodate reports spanning 16 or fewer volumes. The report is not viewable unless client services can create an optional zap. The entire page record vector is read in before the report can be accessed, so response time could have been extremely slow and memory requirements in a multi-user environment may have been prohibitive.

If software compression was not in effect when the report was written to tape, the system administrator could set the SOFT option of the TAPEOPT parm and SARPAC the volumes containing the report, and the user could try accessing the report again.

SARTIA40 NO DIRECT ACCESS OF THIS UNIT ALLOWED

Reason: None of the EASTNAMx parameters currently specifies the unit containing the report. That is, the report is on a tape volume for which no server has been defined.

Action: Retry the access. The device should be requested directly without the server. Alternatively, ask the CA-View administrator to define a server for the unit.

SARTPI41**TAPE OPEN FAILED**

Reason: The OPEN of the tape data set failed, though the dynamic allocation succeeded.

Action: An attempt will be made to switch to the duplex. Map the original tape using SARTCP to determine the error if no security problems or other obvious errors exist.

SARTPI42**TAPE ALLOCATION ERR=xxxx DSN=xxxxxxxxx**

Reason: Dynamic allocation has failed for the archival tape. The hexadecimal error and information codes are provided. Recovery is attempted by switching to the duplex/primary tape.

Action: If recovery is unsuccessful, correct the problem with the tape.

SARTPI43**I/O ERROR POSITIONING TAPE**

Reason: A permanent I/O error occurs while attempting to position the archival tape. Recovery is attempted by switching to the duplex/primary tape.

Action: Use SARTCP to correct the problem with the tape.

SARTPI44**### TAPE DOES NOT EXIST OR DOES NOT CONTAIN FILE-TSQ=nnn**

Reason: The PRIMARY or DUPLEX tape entry is not found in the database for the SYSOUT group. The tape sequence number is provided. Recovery is attempted by switching to the duplex/primary tape.

Action: Use SARTDR to add the tape back to the database.

SARTPI45**NULL FILE LOCATED**

Reason: The file for the requested SYSOUT group is empty. This is most likely caused by a tape recovery using SARTCP. An attempt is made to switch to the duplex/primary tape.

Action: None. If recovery was unsuccessful, then no data is available.

SARTPI46 PERMANENT I/O ERROR ON TAPE

Reason: A permanent I/O error occurs when reading the tape. Recovery is attempted by switching to the duplex/primary tape.

Action: Use SARTCP to correct the problem with the tape.

SARTPI47 TAPE SWITCH IS BEING ATTEMPTED

Reason: In order to recover from an error with the archival tape, a switch to the duplex/primary tape is being made.

Action: None. If you do not want the switch to occur, you can reply NO to the tape mount message.

SARTPI48 INVALID HEADER LOCATED FOR FILE

Reason: When positioning the archival tape, an invalid header record is found. Recovery is attempted by switching to the duplex tape.

Action: Use SARTCP to correct the problem with the tape.

**SARTPO42 TAPE ALLOCATION ERROR CODE - xxxx, INFO CODE = xxxx
DSNAME =xxxxxxxx
REPLY Y/N TO CONTINUE PROCESSING WITH NEW TAPE**

Reason: Dynamic allocation has failed for the backup tape. The hexadecimal error and information codes are provided.

Action: Reply Y to the message to allocate a new tape and continue processing. Otherwise reply N, correct the problem with the tape, and restart the function.

**SARTPO43 I/O ERROR FORWARD SPACING TAPE - NEW TAPE VOLUME
FORCED**

Reason: A permanent I/O error occurs when attempting to forward space the archival tape. A new tape volume is used and execution continues.

Action: None. This is an informational message.

SARTPO44 CATALOG ERROR ON BACKUP TAPE - DSN=xxxxxxx,RC=nn.nn

Reason: An error occurs when attempting to catalog the archival tape. The data set name, the return code, and reason code from catalog management are provided.

Action: Correct the problem with the catalog structure.

SARTPO45 DUPLEX TAPE NOT COMPATIBLE WITH PRIMARY TAPE - NEW TAPE VOLUME FORCED

Reason: A primary tape with archival data normally appends with more archival data, however; tape duplexing has been requested. Since the primary and duplex tape volumes must be exact copies of each other, a new primary tape is forced.

Action: None. This is an informational message.

SARTPO46 dsname ALREADY EXISTS - NEW TAPE VOLUME FORCED

Reason: Allocation of a new backup tape is being attempted for the specified dsname, but the dsname is already cataloged to the system.

Action: None. A new tape volume and dsname are used.

SARTPO47 UNABLE TO OBTAIN DEVICE NAME FOR unit

Reason: The device characteristics for the specified unit are not available by using the DEVTYPE system service. Recovery is attempted by switching to the duplex tape.

Action: Normally, this condition is caused by an invalid device name as specified by the UNITT initialization parameter. Otherwise, consult your systems programming group to determine why the DEVTYPE system service cannot be performed against the unit.

SARTPO49 PERMANENT I/O ERROR WRITING BACKUP TAPE - NEW TAPE FORCED

Reason: A permanent I/O error occurs while writing to the archival tape. A new tape volume is used and execution continues.

Action: None. This is an informational message.

SARTPO54 TAPE TO BE MOUNTED NEEDS FILE PROTECT RING IN

Reason: The archival tape to be mounted is written on and requires its file protect ring to be left in.

Action: Verify that the tape to be mounted has its file protect ring in.

SARTPO55 SECONDARY DISK DOES NOT EMULATE 3480 TAPES

Reason: The DSK2PARM specifies a unit which is not a tape device.

Action: Correct the DSK2DRVR name to use the correct driver if it is in error, correct the DSK2PARM to use a tape device, or correct the tape unit's system definition.

SARTPO56 IMMEDIATE TAPE ACCESS REQUIRES 3480 TAPES

Reason: The TAPEOPT parameter specifies EAST, but the tape unit does not support block ID processing.

Action: Correct the tape unit name in the STORGRP x definition, correct the tape unit's system definition, or change TAPEOPT to use 3420 processing.

SARTPO57 VOLSER RANGE xxxxxx-xxxxxx EXCEEDED (VOLSER RANGE MUST BE EXTENDED OR CHANGED), PROCESSING TERMINATED

Reason: CA-View needs to create a new tape volume, but the specified range has been exhausted.

Action: Define new volumes and modify the range in the STORGRP x or STORGRX x parameter.

SARTPO58 MAXBLKS FOR STORAGE GROUP SET TOO LOW

Reason: CA-View writes several blocks to a tape volume simultaneously. The maxblks specification in the STORGRX x parameter is below this number (currently 10).

Action: Correct the maxblks specification in the STORGRX x parameter.

SARTPO59**BAD BLOCK ID, USING TAPE MARK TO APPEND**

Reason: For best performance, CA-View uses a block ID to locate the appendage point on a tape volume. CA-View did not find the correct information at that point on the tape volume, so it rewound the volume and used forward-space-file to locate the point to append as it did in releases prior to CA-View 1.7.

Action: Contact Computer Associates Technical Support to report the problem. The message is informational only, and if the locate by forward-space-file succeeds, the only impact is on performance. If the locate by forward-space-file fails, a new tape volume will be requested.

SARV0101**VTAM OPEN FAILED, ERROR=xx**

Reason: An error occurs while issuing an open ACB request. Code *xx* is returned in ACB field ACBERFLG.

Action: Consult the *IBM VTAM Programmer* manual for explanation on error for open of VTAM ACB, correct and retry.

SARV0102**VTAM OPENDST FAILED, LU=xxxxxxxx, RTNCD=xx, FDBK2=xx, SENSE=xxxxxxxx**

Reason: An error occurs when issuing an OPENDST for the indicated logical unit. The return code, feedback code, and sense information are shown.

Action: Consult the *IBM VTAM Programmer* manual for explanation on error for open for OPENDST, correct and retry.

SARV0103**VTAM SEND FAILED, LU=xxxxxxxx, RTNCD=xx, FDBK2=xx, SENSE=xxxxxxxx**

Reason: An error occurs when issuing a SEND for the indicated logical unit. The return code, feedback code, and sense information are shown.

Action: Consult the *IBM VTAM Programmer* manual for explanation on error for SEND to VTAM Device, correct and retry.

SARV0104**INVALID DEVICE FOR VTAM PRINT, LU=xxxxxxxx**

Reason: The logical unit indicates it is not a VTAM logical unit as reported by a value other than DEVLU being returned in the DEVTCODE field of the NIB after the OPENDST is completed.

Action: Use a VTAM device.

SARV0105 NO AVAILABLE APPLIDS, LU=xxxxxxx, APPLID=xxxxxxx

Reason: The task of successfully opening the VTAM ACB while processing the logical unit indicates that it is not possible to locate an available APPLID with the indicated value.

Action: Either define the necessary APPLIDs to VTAM or specify an existing APPLID in the VPRAPPL initialization parameter.

SARV0106 VTAM SIMLOGON FAILED, LU=xxxxxxx, RTNCD=xx, FDBK2=xx, SENSE=xxxxxxx

Reason: An error occurs when issuing a SIMLOGON for the indicated logical unit. The return code, feedback code, and sense information are shown.

Action: Correct the error and retry.

SARV0107 DEVICE NOT AVAILABLE, LU=xxxxxxx

Reason: The VTAM printer specified as xxxxxxx is either not defined to VTAM or is busy longer than the retry limits specify in the VPRTRTRY and VPRTRINT initialization parameters.

Action: Either use a printer defined to VTAM, or if the printer is already defined to VTAM, wait until it is not being used.

SARV0108 LOGMODE NOT AVAILABLE, LU=xxxxxxx, LOGMODE=xxxxxxx

Reason: The LOGMODE specified in the DEFINE DEVICE for logical unit xxxxxxx is not available to VTAM.

Action: Either make the LOGMODE available to VTAM, or specify a usable LOGMODE in the DEFINE DEVICE panel.

SARVCL99 INCORRECT LEVEL OF BASE COMMON CODE - BASE=V., REQ=V.M

Reason: An unusable earlier version of shared common code has been detected. BASE shows the version detected, REQ shows the version required.

Action: Correct the error and retry. This can be done by putting the CA-View LOADLIB ahead of EXPRESS, BALANCING, and/or ARISE LOADLIBs.

SARVDRV1

XXXXXXXXXX TERMINAL CONNECTED

Reason: The VTAM terminal has been successfully connected to the user subtask in the region. This message has a MSGLVL of NORM.

Action: None. This is an informational message.

SARVDRV2

XXXXXXXXXX APPLICATION ENDED

Reason: The CA-View program has ended normally. This message has a MSGLVL of NORM.

Action: None. This is an informational message.

SARVDRV3

XXXXXXXXXX SESSION CLSDST

Reason: A VTAM CLSDST to disconnect the terminal will now be issued. This message has a MSGLVL of TRCE.

Action: None. This is an informational message.

SARVDRV4

XXXXXXXXXX *REJECTED*** XXXXXXXXXXXXXXXX**

Reason: CA-View detected a problem with the session bind parameters and has rejected the terminal logon. This message has a MSGLVL of ACTN.

Action: Review the REJECT reason for the appropriate action.

SARVDRV5

XXXXXXXXXX XX

Reason: Displays the bad bind image data rejected by message SARXDRV5. This message has a MSGLVL of ACTN.

Action: Contact your VTAM systems programmer or Computer Associates Technical Support. This may be a VTAM definition problem.

SARVDRV6 BAD SCREEN SIZE=(nn,nn), CHANGED TO=(nn,nn)

Reason: The incorrect screen size to bind data will change to conform to normal 3270 screen sizes. This message has a MSGLVL of NORM.

Action: Contact your VTAM systems programmer. This may be a VTAM definition problem.

SARVEND1 SARAPPLID=xxxxxxxx VTAM TPEND RC=nn

Reason: The VTAM access method has requested closing the VTAM ACB, because of command processing or VTAM shutdown. This message has a MSGLVL of CRIT.

Action: Contact your VTAM systems programmer.

SARVERR1 xxxxxxxx REQ=xxxxx RC=xxxx FDBK2=xxxxx xxxxxxxxxxxx

Reason: A VTAM error has occurred processing a request from the VTAM interface. The RC= shows the problem return code. This message has a MSGLVL of ACTN.

Action: The action to take depends on the session status and type of error. Most errors show communications problems.

SARVETX1 xxxxxxxx TASK ENDED or ABENDED nnnnn

Reason: The VTAM user subtask has ended normally or with an abend condition. This message has a MSGLVL of NORM.

Action: None. This is an informational message.

SARVLGN1 xxxxxxxxxxxx LOGON REQUEST RTUS=xxxxxxx SLU=xxxxxxx

Reason: The VTAM logon request has been received, CA-View will attach user subtask to support the user. This message has a MSGLVL of INFO.

Action: None. This is an informational message.

SARVLGN2 xxxxxxxxxxxx *REJECT*** xxxxxxxxxxxxxxxxxxxx**

Reason: The VTAM logon request was rejected, the message shows the reason. This message has a MSGLVL of ACTN.

Action: Review the REJECT reason for the appropriate action.

SARVLGN3

XXXXXXXXXX PASSING TO APPLID=XXXXXX XXXXXXXXXXXXXXXXXXXX

Reason: The VTAM logon request was not accepted by this region, the request is passed to the next CA-View region for processing. This message has a MSGLVL of NORM.

Action: None. This is an informational message.

SARVLST1

XXXXXXXXXX LOSTERM RC=XX XXXXXXXXXXXXXXXXXXXXXXXX

Reason: A VTAM session has been lost for this terminal. This message has a MSGLVL of NORM.

Action: VTAM has disconnected the terminal, possibly due to a terminal or network outage.

SARVLST2

XXXXXXXXXX SESSION CLSDST

Reason: A VTAM CLSDST to disconnect the terminal will be issued. This message has a MSGLVL of INFO. This message occurs at the normal end, or an ABEND, of the VTAM session.

Action: None. This is an informational message.

SARVLST3

XXXXXXXXXX FORCED OFF

Reason: The VTAM terminal session has been forced off successfully. This message has a MSGLVL of INFO.

Action: None. This is an informational message.

SARVPS01

VTAM OPEN FAILED, ERROR=XX

Reason: An error occurs while issuing an open ACB request. Code *xx* is returned in ACB field ACBERFLG.

Action: Consult the *IBM VTAM Programmer* manual for explanation of errors for open of VTAM ACB; correct and retry.

SARVPS02 (SARV0102) VTAM OPENDST FAILED, LU=xxxxxxxx, RTNCD=xx, FDBK2=xx, SENSE=xxxxxxxx

Reason: An error occurs when issuing an OPENDST for the indicated logical unit. The return code, feedback code, and sense information are shown.

Action: Consult the *IBM VTAM Programmer* manual for explanation of errors for open for OPENDST; correct and retry.

SARVPS03 (SARV0103) VTAM SEND FAILED, LU=xxxxxxxx, RTNCD=xx, FDBK2=xx, SENSE=xxxxxxxx

Reason: An error occurs when issuing a SEND for the indicated logical unit. The return code, feedback code, and sense information are shown.

Action: Consult the *IBM VTAM Programmer* manual for explanation of errors for SEND to VTAM Device; correct and retry.

SARVPS04 (SARV0104) INVALID DEVICE FOR VTAM PRINT, LU=xxxxxxxx

Reason: The logical unit indicates it is not a VTAM logical unit as reported by a value other than DEVLU being returned in the DEVTCODE field of the NIB after the OPENDST is completed.

Action: Use a VTAM device.

SARVPS05 (SARV0105) NO AVAILABLE APPLIDS, LU=xxxxxxxx, APPLID=xxxxxxxx

Reason: The task of successfully opening the VTAM ACB while processing the logical unit indicates that it is not possible to locate an available APPLID with the indicated value.

Action: Either define the necessary APPLIDs to VTAM or specify an existing APPLID in the VPRTAPPL initialization parameter.

SARVPS06 (SARV0106) VTAM SIMLOGON FAILED, LU=xxxxxxxx, RTNCD=xx, FDBK2=xx, SENSE=xxxxxxxx

Reason: An error occurs when issuing a SIMLOGON for the indicated logical unit. The return code, feedback code, and sense information are shown.

Action: Correct the error and retry.

SARVPS07**(SARV0107) DEVICE NOT AVAILABLE, LU=xxxxxxx**

Reason: The VTAM printer specified as *xxxxxxx* is either not defined to VTAM or is busy longer than the retry limits specify in the VPRTRTRY and VPRTRINT initialization parameters.

Action: Either use a printer defined to VTAM, or if the printer is already defined to VTAM, wait until it is not being used.

SARVPS08**(SARV0108) LOGMODE NOT AVAILABLE, LU=xxxxxxx,
LOGMODE=xxxxxxx**

Reason: The LOGMODE specified in the DEFine DEvice for logical unit *xxxxxxx* is not available to VTAM.

Action: Either make the LOGMODE available to VTAM, or specify a usable LOGMODE in the DEFine DEvice panel.

SARVSGN1**OPN/CLOSE ERROR APPLID=xxxxxx ACBERRFLG=xx**

Reason: A VTAM OPEN or CLOSE has not completed successfully. The VTAM signon task will be shutdown. This message has a MSGLVL of CRIT.

Action: Contact your VTAM systems programmer.

SARVSGN2**XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX**

Reason: A VTAM OPEN or CLOSE code failure reason. This message has a MSGLVL of CRIT.

Action: Contact your VTAM systems programmer.

SARVSGN3**MODCB ERROR APPLID=xxxxxx**

Reason: A VTAM MODCB macro has failed, the VTAM session cannot be initialized and the E13VTSGN program will shutdown. This message has a MSGLVL of CRIT.

Action: Contact Computer Associates Technical Support.

SARVSGN4 APPLID=xxxxxx NOW ACCEPTING LOGONS

Reason: VTAM signon initialization is completed. VTAM users can now sign onto the region. This message has a MSGLVL of NORM.

Action: None. This is an informational message.

SARVSGN5 APPLID=xxxxxx QUIESCE PENDING, WAITING FOR USERS TO LOGOFF

Reason: The console operator has stopped the region, but users are still active. The VTAM signon task will wait for the users to complete processing. This message has a MSGLVL of NORM.

Action: None. This is an informational message.

**SARVSGN6 VTAM EXIT xxxxxxxx ACTIVE ADDR=xxxxxx x.x
 xx/xx/xx**

Reason: The indicated VTAM routine loaded and attached to the VTAM ACB exit list. The release and assembly date and time are displayed. This message has a MSGLVL of INFO.

Action: None. This is an informational message.

SARVSTA1 xxxxxxxx RECOVERY-xxxx

Reason: A subtask abend has been detected and the session will now be cleaned up. This message has a MSGLVL of ACTN.

Action: None. This is an informational message.

SARVSTM1 xxxxxxxxxxxx USER HAS EXCEEDED THE LONGWAIT TIME

Reason: The terminal shown has not had a transaction for a time period exceeding the time specified in the LONGWAIT= parameter. This message has a MSGLVL of ACTN.

Action: If CANCEL=YES was specified for the region, the user will be canceled. Otherwise the task status will be changed to LONGWAIT.

SARVTA01**OPEN ERROR APPLID=xxxxxxx ACBERFLG=xx**

Reason: The open has failed for application program ACB.

Action: Verify that the SARVTAM APPLID is activated. Normally, inactivating and re-activating the SARVTAM APPLID will fix the problem.

SARVTA02**APPLID=xxxxxxx NOW ACCEPTING LOGONS**

Reason: The VTAM online retrieval task is now ready for users to logon to it.

Action: None. This is an informational message.

SARVTA03**APPLID=xxxxxxx DISABLED FOR LOGONS**

Reason: This message is in response to the successful quiesce request.

Action: None. This is an informational message.

SARVTA04**APPLID=xxxxxxx NOW CLOSED**

Reason: The application is terminating.

Action: None. This is an informational message.

SARVTA05**INVALID COMMAND IGNORED**

Reason: An invalid operator command has been issued.

Action: Re-enter the operator command in its correct form.

SARVTA06**TASK ABEND xxx xxxx**

Reason: The user subtask has abended. Consult message SARVTA14 for further information.

Action: None. This is an informational message.

SARVTA07**LOSTERM REASON=xxxx FOR LU xxxxxxxx**

Reason: The losterm exit has been invoked for the session with the specified LU name. The session is terminated.

Action: None. This is an informational message.

SARVTA08 TPEND REASON xx

Reason: VTAM has been terminated with a Z NET or V NET,INACT command. VTAM online retrieval is terminated.

Action: After VTAM has been started again, start the VTAM online retrieval task.

SARVTA09 LU xxxxxxxx STARTED

Reason: A session with the specified logical unit has started.

Action: None. This is an informational message.

SARVTA10 LU xxxxxxxx ENDED

Reason: The session with the specified logical unit has terminated normally.

Action: None. This is an informational message.

SARVTA11 LU REQ=xxxxxxx RTNCD=xxxx FDBK2=xxxxxxx

Reason: The specified VTAM request has failed.

Action: Reference the return and feedback codes to determine the cause of the error.

SARVTA12 RECURSIVE ERRORS AT xxxxxxxx xxxx xxxxxxxx

Reason: An attempt to recover from a previous error has failed.

Action: Consult the message for the previous error.

SARVTA13 LU xxxxxxxx DFASY REQ - RPLCNTRL=XXXXXX

Reason: The DFASY exit has been entered for the specified logical unit.

Action: None. This is an informational message.

SARVTA14**LU xxxxxxxx ABEND CMPC=xxxxxx**

Reason: The user subtask has abended. A completion code of 306000 occurs when the CA-View load library is not authorized. The session with the user is terminated.

Action: None. This is an informational message.

SARVXIT1**xxxxxxxxxxxx xxxxxx RPLCNTL=xxxxxxxx**

Reason: An exceptional condition was reported by VTAM.

Action: This message has a MSGLVL of NORM. This can occur for a number of reasons. For further information contact Computer Associates Technical Support.

SARVXIT2**xxxxxxxxxxxx xxxxxx PCID=xxxxxx REASON=xxxx
SENSE=xxxx**

Reason: An exceptional condition was reported by VTAM.

Action: This message has a MSGLVL of NORM. This can occur for a number of reasons. For more information contact Computer Associates Technical Support.

SARVXIT9**xxxxxxxxxxxx xxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx**

Reason: An exceptional condition was reported by VTAM.

Action: This message has a MSGLVL of NORM. This can occur for a number of reasons. For further information contact Computer Associates Technical Support.

SARXCT01**INVALID EXCEPTION TABLE STATEMENT - IGNORED
control statement**

Reason: The control statement does not begin with a slash (/), or a percent sign (%). The control statement is ignored.

Action: Correct the statement.

SARXCT02 **INVALID JOBNAME IN EXCEPTION TABLE STATEMENT - IGNORED
*control statement***

Reason: The control statement contains an invalid SYSOUT ID. The control statement is ignored.

Action: Correct the statement.

SARXCT03 **INVALID PARAMETER IN EXCEPTION TABLE STATEMENT
*'parameter' - IGNORED control statement***

Reason: The control statement contains an invalid parameter. The parameter is ignored.

Action: Correct the statement.

SARXCT04 **TOO MANY PARAMETERS FOR SYSOUT ID**

Reason: Too many parameters are specified for the SYSOUT ID.

Action: Reduce the number of parameters on the control statement.

SARXCT05 **NEW EXCEPTION CONDITION TABLE LOADED**

Reason: The Exceptional Conditions checking table parameters have been reloaded.

Action: None. This is an informational message.

SARXETX1 **xxxxxxx SESSION HAS ABENDED**

Reason: The XMS user subtask has terminated abnormally. This message has a MSGLVL of NORM.

Action: None. This is an informational message.

SARXETX2 **xxxxxxx SESSION HAS ENDED**

Reason: The XMS user subtask has terminated normally. This message has a MSGLVL of NORM.

Action: None. This is an informational message.

SARXETX3**XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX**

Reason: The XMS user subtask has terminated and an internal error was detected cleaning up the session. This message has a MSGLVL of NORM.

Action: Contact Computer Associates Technical Support.

SARXFP01**CRITICAL ERROR. PROGRAM TERMINATED WITH DUMP.
INVALID blk**

Reason: A CA-View program has terminated, and a dump was generated. In this message, *blk* specifies the control block CA-View expected but did not receive (usually IFB, SFB, XFB, or DBB). It may be suffixed with a number indicating which test point in the program detected the problem.

Action: Send the dump to Computer Associates Technical Support. Restart whatever program was terminated. If the problem recurs, run SARDBASE VERIFY on the database. If the problem persists, contact Computer Associates Technical Support.

SARXSGN1**XXXXXXXXXXXX SIGNON IN PROGRESS RTUS=XXXXXXXX
SLU=XXXXXXXX**

Reason: XMS signon request received, CA-View will attach the user subtask to support the user.

Action: None. This is an informational message.

SARXSGN2**XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX**

Reason: XMS signon has detected an internal error during processing. This message has a MSGLVL of ACTN.

Action: Contact Computer Associates Technical Support.

SARXSGN3**RTUS COUNT MISMATCH**

Reason: XMS found the count of active users in the XMEMCNTL was bad and corrected it. This message indicates CA-View has lost track of the correct number of users in the region. This message has a MSGLVL of ACTN.

Action: Contact Computer Associates Technical Support.

SARXSGN4

ASCB LOCATE FAILED

Reason: XMS has not been able to locate its ASCB control block. This message has a MSGLVL of ACTN.

Action: Contact Computer Associates Technical Support.

SARXSTA1

XXXXXXXXXX RECOVERY-XXXX

Reason: A subtask abend has been detected and the session will now be now be cleaned up. This message has a MSGLVL of ACTN.

Action: None. This is an informational message.

SARXSTM1

XXXXXXXXXX USER HAS EXCEEDED THE LONGWAIT TIME

Reason: The terminal shown has not had a transaction for a time period exceeding the time specified in the LONGWAIT= parameter. This message has a MSGLVL of ACTN.

Action: If CANCEL=YES was specified for the region, the user will be canceled. Otherwise, the task status will be changed to LONGWAIT.

SARXTD01

REPLY Y/N TO AUTHORIZE CHANGE TO CA-VIEW SYSTEM EXTENSIONS

Reason: SARXTD has been started to change or turn off extensions.

Action: Reply Y to authorize the change, or N to prevent the change.

SARXTD02

INVALID REPLY

Reason: An invalid reply has been given to message SARXTD01.

Action: Reply correctly to message SARXTD01.

SARXTD03

AUTHORIZATION DENIED

Reason: The operator has replied N to message SARXTD01.

Action: If authorization has been erroneously denied, start SARXTD again.

SARXTD04**JOB ACCOUNTING NOT IN EFFECT**

Reason: SARXTD has been started without a DD statement for the job accounting data set.

Action: Verify that job accounting is not to be in effect.

SARXTD05**JOB ACCOUNTING DATASET CAN ONLY HAVE ONE EXTENT**

Reason: The job accounting data set can only have one extent.

Action: Recreate the job accounting data set.

SARXTD06**INVALID PARAMETER AT *xxxxxx***

Reason: The PARM field contains invalid syntax starting with the first character displayed.

Action: Correct the PARM field and start SARXTD again.

SARXTD07**SECURITY ENABLED FOR DATASET PREFIX *xxxxxxxxxxxxxxxxxxxxxx***

Reason: Data set security is in effect for all data sets whose names begin with the specified prefix.

Action: None. This is an informational message.

SARXTD08**ACCOUNTING ENABLED FOR DATASET *dsname***

Reason: Job accounting information is maintained in the specified accounting data set.

Action: None. This is an informational message.

SARXTD09**AUTOMATIC REPORT ARCHIVAL ENABLED WITH SPECIFICATIONS *archival-criteria***

Reason: The automatic report archival feature is active and the specified archival criteria is in effect.

Action: None. This is an informational message.

SARXTD10

SECURITY DISABLED

Reason: Data set security is no longer in effect.

Action: None. This is an informational message.

SARXTD11

ACCOUNTING DISABLED

Reason: Job accounting data is no longer being maintained.

Action: None. This is an informational message.

SARXTD12

AUTOMATIC REPORT ARCHIVAL DISABLED

Reason: The automatic report archival feature is no longer in effect.

Action: None. This is an informational message.

SARXTD13

INVALID OPERATOR COMMAND

Reason: When systems extensions is started and contains a NOTERM DD statement, the system extensions task remains active and responds to operator commands. The MODIFY command that was entered at the operator console is invalid.

Action: The valid operator commands that can be entered are: OFF, OFFSEC, OFFACT, OFFARA, STATUS, and STOP. The system extensions task automatically terminates when the OFF or STOP commands are entered, or when all the system extension facilities have been disabled.

SARXTD14

CA-VIEW SYSTEM EXTENSION IS ALREADY ACTIVE ON THE SYSTEM

Reason: A system extensions task is already active for the subsystem identifier. Each system extensions task is assigned a one character subsystem identifier, which can be defined by using the SUBSYSx DD statement, and a system extensions task currently is executing with the same identifier. Execution of the recently started task is terminated.

Action: If an additional system extension task is required, specify a unique subsystem identifier by using the SUBSYSx DD statement. Otherwise, verify that the previously started systems extensions task specifies the desired parameters. If not, terminate the previously started systems extensions task, and start the new task.

SARXTD15**CA-VIEW SYSTEM EXTENSIONS 2.0 IS NOW INACTIVE**

Reason: Informational message indicating that all facilities for the system extensions task have been disabled, and the systems extensions task is terminating.

Action: None. This is an informational message.

SARXTD16**SARXTD IS NOT A STARTED TASK**

Reason: An attempt has been made to execute SARXTD as other than a started task.

Action: Execute SARXTD by using the START command.

SARXTD18**SARXTD REQUIRES APF-AUTHORIZATION**

Reason: SARXTD has determined that it lacks required APF-authorization. SARXTD requires APF-authorization in order to dynamically modify various operating system interfaces.

Action: Ensure that SARXTD resides in an APF-authorized load library. Alternatively, SARXTD can be placed in a link list library provided LNKAUTH=LNKLST has been specified or allowed to default in the active IEASYSxx member of SYS1.PARMLIB. Under no circumstances should SARXTD be placed in any of the link pack areas.

SARXTD99***action SUPPRESSED FOR dsname***

Reason: CA-View system extensions have prevented the specified action (OPEN, OPEN J, SCRATCH, or RENAME) from being performed on the specified data set. With the security feature of system extensions enabled, only authorized programs recognized by CA-View are allowed to access CA-View data sets.

Action: Normally, no action is required; system extensions are controlling access to CA-View data sets as requested. However, in an emergency, the security feature of system extensions can be disabled in order to allow unrestricted access to CA-View data sets.

XMSCG001**USERMAX CHANGED**

Reason: This is an informational message.

Action: None. This is an informational message.

XMSCG002 CHANGE REQUEST DOES NOT SPECIFY *parameter*, REQUEST IGNORED

Reason: Change request has specified an unknown parameter.

Action: Correct and retry.

XMSCG003 INVALID QUOTED STRING, REQUEST IGNORED

Reason: Invalid quoted string.

Action: Correct and retry.

XMSCG004 USERMAX VALUE NOT SPECIFIED, REQUEST IGNORED

Reason: USERMAX value not specified.

Action: Correct and retry.

XMSCG005 INVALID USERMAX VALUE - EITHER NOT A NUMBER OR ZERO, REQUEST IGNORED

Reason: An invalid USERMAX parameter has been specified.

Action: Correct and retry.

XMSCL001 CANCEL REQUEST MUST SPECIFY EITHER ALL, USER= OR UID#=#, REQUEST IGNORED

Reason: An invalid CANCEL REQUEST has been specified.

Action: Correct and retry.

XMSCL002 INVALID QUOTED STRING, REQUEST IGNORED

Reason: An invalid QUOTED STRING has been specified.

Action: Correct and retry.

- XMSCL003** **INVALID USER NAME - ONLY 20 CHARACTERS ALLOWED,
REQUEST IGNORED**
- Reason:** An invalid USER NAME has been specified.
- Action:** Correct and retry.
-
- XMSCL004** **USER NAME OR NUMBER NOT SPECIFIED, REQUEST IGNORED**
- Reason:** The USER NAME or USER NUMBER has not been specified.
- Action:** Correct and retry.
-
- XMSCL005** **INVALID USER NUMBER - EITHER NOT A NUMBER OR ZERO,
REQUEST IGNORED**
- Reason:** An invalid USER NUMBER has been specified.
- Action:** Correct and retry.
-
- XMSCL006** **CANCEL REQUEST SPECIFIED SOME USERS WHO WERE NOT
FOUND AND CANCELED**
- Reason:** This is an informational message.
- Action:** None.
-
- XMSCL007** **NO USERS CURRENTLY CONNECTED, CANCEL REQUEST
IGNORED**
- Reason:** This is an informational message.
- Action:** None.
-
- XMSCL099** **INTERNAL ERROR HAS OCCURRED IN CANCEL COMMAND,
REQUEST IGNORED**
- Reason:** Internal error.
- Action:** Contact Computer Associates Technical Support.

XMSLS001 NO. USERID APPL STATUS DATABASE

Reason: This is an informational message in response to a list request.

Action: None.

XMSLS002 *nnn uuuuuuuu aaaaaaaaa sssssss ddddddddddddddd*

Reason: Reason: This is an informational message in response to a list request, issued with XMSLS001, which identifies the fields (USERID, APPL, etc.).

Action: None. This is an informational message.

XMSLS003 NAME USERMAX USERS STATUS

Reason: This is an informational message in response to a list request.

Action: None. This is an informational message.

XMSLS004 *XXXXXXXX XXX XXX XXXXXXXXXXX*

Reason: This is an informational message in response to a list request.

Action: None. This is an informational message.

XMSLS005 LIST REQUEST DOES NOT SPECIFY STATUS, USERS OR USER/UID#, REQUEST IGNORED

Reason: The LIST REQUEST does not specify STATUS, USERS, or USER ID number.

Action: Correct the problem, then retry.

XMSLS006 INVALID USER NAME - ONLY 20 CHARACTERS ALLOWED, REQUEST IGNORED

Reason: An invalid USER NAME has been specified.

Action: Correct the problem, then retry.

XMSLS007

INVALID QUOTED STRING, REQUEST IGNORED

Reason: An invalid QUOTED STRING has been specified.

Action: Correct the problem, then retry.

XMSLS008

NO USER NAME OR UID# IS SPECIFIED, REQUEST IGNORED

Reason: No USER NAME or UID# has been specified.

Action: Correct the problem, then retry.

XMSLS009

INVALID UID# VALUE - EITHER NOT A NUMBER OR ZERO, REQUEST IGNORED

Reason: An invalid UID# has been specified.

Action: Correct and retry.

XMSLS010

THERE ARE NO USERS CURRENTLY CONNECTED

Reason: No users are connected.

Action: None. This is an informational message.

XMSLS011

NO USERS DISPLAYED

Reason: No users are displayed.

Action: None. This is an informational message.

XMSLS098

LIST command

Reason: This message displays the previously entered cross-memory started task command.

Action: None. This is an informational message.

XMSLS099 INTERNAL ERROR HAS OCCURRED IN LIST COMMAND, REQUEST IGNORED

Reason: This is an informational message.

Action: Contact Computer Associates Technical Support.

XMSPM001 REQUESTED COMMAND IS UNKNOWN - REQUEST WILL BE IGNORED

Reason: The request from an MVS modify command cannot be recognized.

Action: Correct the problem, then retry.

XMSQU001 CROSS-MEMORY SYSTEM QUIESCE HAS BEEN INITIATED

Reason: The quiesce has been initiated.

Action: None. This is an informational message.

XMSRS001 SIGNONS RESUMED

Reason: The signons are resumed.

Action: None. This is an informational message.

XMSRS002 SIGNONS NOT SUSPENDED - REQUEST IGNORED

Reason: The request is ignored.

Action: None. This is an informational message.

XMSRS003 SYSTEM IS QUIESCING - REQUEST IGNORED

Reason: The request is ignored.

Action: None. This is an informational message.

XMSSD001 IMMEDIATE SHUTDOWN HAS BEEN STARTED

Reason: Shutdown has been started.

Action: None. This is an informational message.

XMSSP001

SIGNONS SUSPENDED

Reason: The signons are suspended.

Action: None. This is an information message.

XMSSP002

SIGNONS ALREADY SUSPENDED - REQUEST IGNORED

Reason: The request is ignored.

Action: None. This is an informational message.

XMSSP003

SYSTEM IS QUIESCING - REQUEST IGNORED

Reason: The request is ignored.

Action: None. This is an informational message.

XMSXD001

PARAMETER STRING TOO LONG - RUN ABORTED

Reason: Input parameter is too long.

Action: Check the parameter field on the EXEC statement.

XMSXD002

CROSS-MEMORY SYSTEM MUST BE A STARTED TASK - RUN ABORTED

Reason: CA-View has aborted the job run because the cross-memory system is not a started task.

Action: Correct and retry.

XMSXD003

NO MEMORY FOR ANCHOR SSCT - RUN ABORTED

Reason: Unable to obtain CSA for SSCT.

Action: Contact your systems programmer.

XMSXD004 NO MEMORY FOR CROSS-MEMORY SYSTEM CONTROL BLOCK - RUN ABORTED

Reason: Unable to obtain CSA for XMCT.

Action: Contact your systems programmer.

XMSXD005 A CROSS-MEMORY SYSTEM WITH THE SAME IDENTIFICATION IS CURRENTLY ACTIVE

Reason: A cross-memory system running has the same ID.

Action: Change XMS identification and retry.

XMSXD006 ATTACH OF THE OPERATOR COMMUNICATION INTERFACE ROUTINE FAILED - RUN ABORTED

Reason: The cross-memory system is not able to attach to the operator communication interface.

Action: Contact Computer Associates Technical Support.

XMSXD007 ATTACH OF CROSS-MEMORY SIGNON ROUTINE FAILED - RUN ABORTED

Reason: The cross-memory SIGNON is not able to attach.

Action: Contact Computer Associates Technical Support.

XMSXD008 NO STARTUP PARAMETER SPECIFIED - RUN ABORTED

Reason: The cross-memory system startup parameter is not specified.

Action: Specify a parm field on the EXEC statement.

XMSXD009 INVALID CROSS-MEMORY IDENTIFICATION PARAMETER - RUN ABORTED

Reason: The input XMS ID is too long.

Action: Check parm field on EXEC statement.

XMSXD010**INVALID USERMAX PARAMETER - RUN ABORTED****Reason:** The USERMAX initialization parameter is not specified.**Action:** Specify a USERMAX parameter on the EXEC statement.**XMSXD011****SPECIFIED PARAMETER IS UNKNOWN - RUN ABORTED****Reason:** The input parameter is unknown.**Action:** Check parm field on EXEC statement.**XMSXD012****INVALID LONGWAIT PARAMETER - RUN ABORTED****Reason:** The LONGWAIT parameter on the EXEC statement is invalid.**Action:** Correct and retry.**XMSXD013****INVALID CANCEL PARAMETERS - RUN ABORTED****Reason:** The CANCEL parameter on the EXEC statement is invalid.**Action:** Correct and retry.**XMSXD014****INVALID SUBSYS PARM, RUN ABORTED****Reason:** The SUBSYS parameter on the cross-memory EXEC statement is invalid.**Action:** Correct the SUBSYS parameter, then restart.**XMSXD090****PC ROUTINE rrrrrrr ACTIVE ADDR=aaaaaaaa vv dd/mm/yy
hh/mm****Reason:** This is an informational message.**Action:** None.**XMSXD091****PC ASID=xxxx XMEMCNTL ADDR=aaaaaaaa ID=xxxxxxxx****Reason:** This is an informational message.**Action:** None.

XMSXE001 USER CONNECTION xxxxxxxxxxxxxxxxxxxxxxxx HAS ENDED

Reason: The user connection has ended.

Action: None. This is an informational message.

XMSXE002 USER CONNECTION xxxxxxxxxxxxxxxxxxxxxxxx ABEND xxxx

Reason: The user connection has abended.

Action: None. This is an informational message.

XMSXE003 UNABLE TO LOCATE USERS ASCB - CONNECTION TERMINATED

Reason: This is an informational message.

Action: Contact Computer Associates Technical Support.

**XMSXE004 UNABLE TO LOCATE CROSS-MEMORY CONTROL BLOCK - RUN
ABORTED**

Reason: Internal error.

Action: Contact Computer Associates Technical Support.

XMSXE005 CROSS-MEMORY CONTROL BLOCK IS INVALID - RUN ABORTED

Reason: Internal error.

Action: Contact Computer Associates Technical Support.

**XMSXE006 UNABLE TO LOCATE USER INFORMATION CONSOLE TABLE - RUN
ABORTED**

Reason: Internal error.

Action: Contact Computer Associates Technical Support.

XMSXE007 UNABLE TO LOCATE USER CONNECTION TCB - RUN ABORTED

Reason: Internal error.

Action: Contact Computer Associates Technical Support.

XMSXO001 OPERATOR FUNCTION REQUESTED IS NOT SUPPORTED

Reason: The request from an MVS modify command cannot be recognized.

Action: Correct and retry.

XMSXS001 USER CONNECTION xxxxxxxxxxxxxxxxxxxxxxxxxxxx SIGNON IN PROGRESS

Reason: The signon is in progress.

Action: None. This is an informational message.

XMSXS002 UNABLE TO LOCATE USER SIGNON ASCB - SIGNON IGNORED

Reason: Internal error.

Action: Contact Computer Associates Technical Support.

**XMSXS901 INTERNAL ERROR - INVALID RTUS FOUND:aaaaaaaa nnn
xxxxxxxxxxx**

Reason: Internal error.

Action: Contact Computer Associates Technical Support.

**XMSXS902 INTERNAL ERROR - RTUS COUNT MISMATCH, CONTROL
TABLE ADJUSTED ACTIVE INACT TOTAL|
(COMPUTED) nnnnn nnnnn nnnnn**

Reason: The cross-memory system has detected an internal error and has recovered from it.

Action: Contact Computer Associates Technical Support.



Appendix A

Data Sets and Environmental Considerations

In This Appendix

This appendix discusses the data sets used by CA-View.

CA-View Data Sets

The following data sets are used by CA-View:

- CA-View database
- Optional lock data set
- Tape archival data sets
- Tape duplex data sets
- Load/unload data sets
- Recovery data set
- Accounting file
- Exceptional condition table
- Expanded retention table

These are all discussed in the following sections.

The CA-View Database

The CA-View database is a set of one or more direct-access data sets containing the master index and the disk-archived SYSOUT. The database is created and maintained with the SARDBASE utility. The master index is initialized and modified with the SARINIT utility.

The database is designed for high performance and quick access. Data is stored in a compressed format to minimize space requirements.

A maximum of 127 data sets can be defined for the database; however, for performance considerations, it is preferable to use a small number of large data sets rather than a large number of small data sets.

Attributes and Naming Convention

The data sets comprising the database have the following attributes:

```
DSORG=DA
RECFM=F
BLKSIZE=3476
SPACE=(CYL,,,CONTIG)
```

Although the data sets are marked as movable, they can only be moved to a volume of the same device type. Each data set must also occupy one contiguous extent, occupy the same number of cylinders, and be allocated on a cylinder extent boundary.

The data sets are assigned names in the following format:

Syntax:

```
index.SARDBASE.Dnnnnnnn
```

where:

<i>index</i>	Specifies the high-level name of the database. The index comprises one or more qualifiers separated by periods. The maximum length of the index is 17 characters.
<i>nnnnnnnn</i>	Specifies the relative sequence number of the data set within the database

Master Index

The master index contains the following types of records:

- Master control record (MCR)
The MCR contains the control information for CA-View, including the initialization parameters that have been selected. There is only one MCR.
- Tape control record (TCR)
The TCR identifies the tape archival and tape duplex data sets. There is one TCR for each tape volume.

- Group control record (GCR)

The GCR describes the characteristics of each SYSOUT group that is archived. There is one GCR for each SYSOUT group.

- User attribute control record (UCR)

The UCR describes the attributes for the online users (for example, PF key definitions). There is one UCR for each attribute for each user.

- Online member control record (OCR)

The OCR describes the panels, messages, and skeleton JCL members loaded from the online library. There is one OCR for each panel, message, and skeleton JCL member.

- Expanded retention control record (PCR)

The PCR contains the control information for the Expanded Retention Option (formerly known as the Permanent Archival Option or PAO). There is only one PCR, and is only present if the Expanded Retention Option is installed.

- View control record (VCR)

The VCR contains a logical view definition. There is one VCR for each logical view defined.

- Alternate index control record (ACR)

The ACR consists of an index of SYSOUT IDs within generation number. There can be many ACRs in a CA-View database.

Mapping macros for the records (SARMCR, SARTCR, SARGCR, SARUCR, SAROCR, SARVCR, SARPCR and SARACR) and a COBOL copy book defining the records (SARCBREC) are provided in VIEW.SOURCE.

Optional Lock Data Set

An optional lock data set can be created with the SARDBASE ADDLOCK command and deleted by the SARDBASE DELETE [LOCK] command. It is used to serialize CA-View database access in environments where the hardware reserve/releases cannot be used (such as in multi-CPU VM installations).

Attributes

The DCB attributes for this data set are as follows:

```
DSORG=DA  
RECFM=F  
BLKSIZE=256
```

Tape Archival Data Set

The tape archival data sets (also referred to as backup tape data sets) are automatically created and deleted by CA-View. One data set is created per tape volume. SYSOUT groups and the backup of the master index are written sequentially to the same tape data set and are separated from each other by tape marks. The first record written to the tape for a SYSOUT group is the group's GCR. In this manner, CA-View can quickly "spin down" to any SYSOUT group for retrieval.

As much SYSOUT as can fit on a tape is written to that tape. When the end of the tape is sensed or an I/O error occurs, CA-View terminates the tape data set, allocates a new data set on another tape volume, and continues writing to the new volume.

Initialization Parameters and Tape Archival

The unit name used for allocation is specified by the UNITT initialization parameter. The TVSER1 and TVSER2 parameters can be specified to assign a range of tapes for CA-View to use. The MAXGENT initialization parameter can be used to limit the number of generations of SYSOUT that are written to the same tape volume.

As part of its backup cycle, CA-View uncatalogs any tape that is no longer needed. The EXPDT initialization parameter can be used to determine when a tape is actually available for scratch.

Copying Tapes

Due to the special format of the CA-View tape archival data sets, normal utilities generally cannot be used to copy archival tapes. A special utility, SARTCP, is provided for this purpose. In addition, the utility maps the contents of a tape and can be used to salvage SYSOUT from a damaged tape. See Tape Management Scratch and Clean Utility (SARTCHK) in Chapter 7, "Database Utilities," for a complete description.

Attributes and Naming Convention

DCB attributes for the data sets are:

```
RECFM=VB  
LRECL=32756  
BLKSIZE=32760
```

The data sets are assigned names in the following format:

Syntax: ***index.SARTAPE.Tnnnnnnn***

where:

index Specifies the high-level index used to name the CA-View database
nnnnnnn Specifies the sequence number of the tape data set

Tape Duplex Data Set

The tape duplexing feature of CA-View allows a site to obtain a duplicate copy of their backup tape data sets. When this feature is activated, an additional tape is mounted during the backup cycle and during direct to tape archival. All I/O to the original backup tape is simultaneously written to the duplex tape data set. This feature is activated by having a second unit present on the UNITT initialization parameter.

Tape duplex data sets are created and deleted in the same method as tape archival data sets.

The unit name used for allocation is specified by the UNITT initialization parameter. The TVSER1 and TVSER2 parameters can be specified to assign a range of tapes for CA-View to use.

Attributes and Naming Convention

DCB attributes for the data sets are:

**RECFM=VB
 LRECL=32756
 BLKSIZE=32760**

The data sets are assigned names in the following format:

Syntax: ***index.SARDPLX.Tnnnnnnn***

where:

index Specifies the high-level index used to name the CA-View database
nnnnnnn Specifies the sequence number of the tape data set
 This number is the same as the sequence number from the original backup tape.

Load/Unload Data Sets

The UNLOAD SARDBASE database function creates a sequential data set for backup purposes. The database records are written in ascending key sequence order to the data set. This data set can be used at a later time to restore the contents of the designated database using the LOAD function.

If the output data set is tape, duplexing is not done.

Attributes and Naming Convention

DCB attributes for the data sets are:

```
RECFM=VB  
LRECL=32756  
BLKSIZE=32760
```

The output data set is assigned a name as designated by the user.

Recovery Data Set

This data set resides on a direct-access volume and is used by the backup process of the archival task to keep track of the tapes used to backup the database. The recovery data set is allocated as part of the installation procedure.

This data set is referenced by the CA-View archival task and other utilities by using the SARRECV DD statement. See the section Recovery Data Set in Chapter 3, "Configuring CA-View," for more information.

Attributes and Naming Conventions

DCB attributes for the data set are:

```
RECFM=F  
LRECL=12288  
BLKSIZE=12288
```

Forward Recovery Data Set

This data set resides on a direct-access volume and is used by the archival task to store SYSOUTs that are archived to the database. The forward recovery data set is allocated as part of the installation procedure.

See the section Forward Recovery in Chapter 8, "Backing Up and Recovering the Database" for more information.

Attributes

DCB attributes for the data set are:

```
RECFM=U  
LRECL=0  
BLKSIZE=32760
```

The data sets are assigned names in the following format:

```
index.SARFRDS.Dnnnnnnnn
```

where:

<i>index</i>	Specifies the high-level index used to name the CA-View database
<i>nnnnnnnn</i>	Specifies the sequence number of the disk data set

Accounting File

The accounting file is a direct-access data set used to maintain accounting data on jobs for use by the archival started task. The data set is defined and initialized as part of the installation procedure.

A logical record in the file contains an 8-byte jobname and 20 bytes of accounting data selected from type-20 SMF records by the SARACTUX user exit. The location of the logical record in the file corresponds to the job ID of the job.

The accounting file is only used when job accounting is initiated as a CA-View extension.

Attributes

DCB attributes for the file are:

```
RECFM=FB  
LRECL=28  
BLKSIZE=2800
```

Exceptional Condition Table

The exceptional condition table or exception table is a sequential data set that contains control statements defining specifications for exceptional condition checking. The data set is allocated to the CA-View archival started task with the SARXCTAB DD statement. See Exceptional Condition Checking in Chapter 5, "Archival," for a complete description.

Attributes

DCB attributes for the file are:

```
RECFM=F or FB  
LRECL=80  
BLKSIZE=nnnnn
```

where *nnnnn* is a multiple of 80.

Expanded Retention Table

The expanded retention table is a sequential data set that contains control statements defining specifications for automatic retention of SYSOUT. The data set is allocated to the CA-View archival started task with the SARPATAB DD statement. See Chapter 6, "Expanded Retention Option," for a complete description.

Attributes

DCB attributes for the file are:

```
RECFM=F or FB  
LRECL=80  
BLKSIZE=nnnnn
```

where *nnnnn* is a multiple of 80.

Environmental Considerations

The following variables should be considered when establishing an operating environment for CA-View Release 2.0.

CA-Spool

CA-Spool must be at Release 9 with the CA-Spool PTF ST-09171 applied for CA-View 2.0 to run properly.

- CA-Deliver When running CA-View 2.0 in conjunction with CA-Deliver, note the following:
- You must be running CA-Deliver.
 - When printing through CA-View VTAM print, CA-Deliver reports can be printed; however bundles cannot be printed.
- CA-DocView
(Formerly CA-View Workstation) CA-View Workstation version 1.4 or higher is required to view reports from CA-View 2.0.
- Note:** CA-View Workstation has been renamed to CA-DocView.

Interfaces and Output Functions

The following table indicates whether a CA-View 2.0 interface, listed in the left-most column, works in conjunction with a CA-View 2.0 output function:

Online Interface/ Function	CA-View VTAM Print	CA-Spool	PC Download	Double- Byte Characters
TSO	Yes	Yes	Yes	Yes
ISPF	Yes	Yes	Yes*	Yes
VTAM	Yes	Yes	Yes	No
CA-Roscoe	Yes	Yes	Yes	No
CICS Cross- memory	No	Yes	Yes	No
IMS	No	Yes	Yes	No
CMS	No	No	Yes	No
Batch	Yes	Yes	Yes	Yes

- Optical Disk Interface The optical disk interface for CA-View 2.0 is **not** available under the VM/CMS online retrieval interface.
- AFP Reports:
Archiving and
Viewing The CA-View ACIF interface, which archives AFP reports to the CA-View database, requires the following:
- IBM PSF/MVS 2.1.1 or higher (Print Services Facility)
 - SAR Version 6.5 or higher, or CA-View
- Online Filters Creating filters for online viewing requires ISPF 3.5 or above.



Appendix B

Troubleshooting and Technical Support

In This Appendix

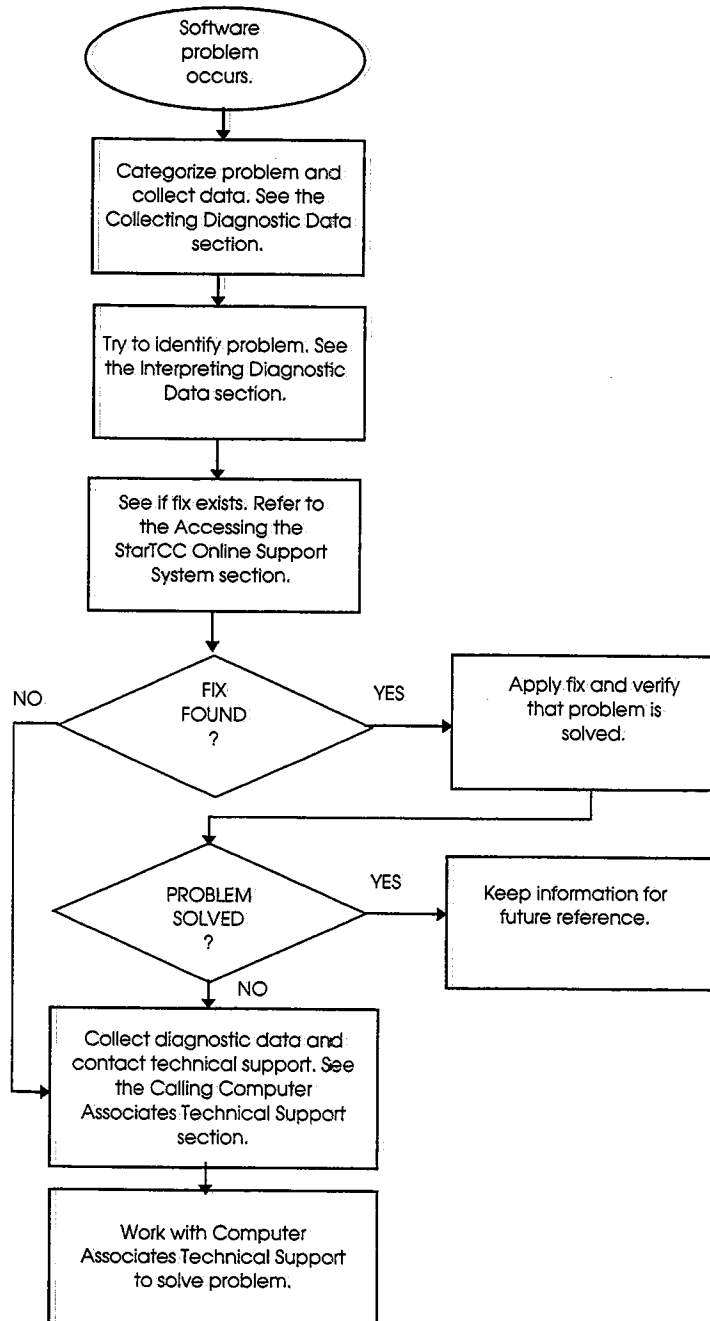
This appendix explains how to troubleshoot problems, obtain customer support, and request product enhancements. The following topics are discussed:

- Diagnostic procedures
- Troubleshooting
- Collecting diagnostic data
- Accessing the StarTCC online support system
- Calling Computer Associates Technical Support
- Sending documentation to Computer Associates Technical Support
- Product releases and maintenance
- Requesting product enhancements

Diagnostic Procedures

The flowchart that follows summarizes the procedures to use if you have a problem with a Computer Associates software product. Each of these procedures is detailed on the following pages.

Problem Diagnosis Flowchart



Troubleshooting

Before contacting Computer Associates Technical Support, attempt to resolve the problem yourself by doing the following:

1. Review the troubleshooting flowchart in the previous section for general debugging suggestions.
2. Review the activities you performed when the problem occurred, comparing them to the documented procedures.
3. If you performed all procedures correctly, repeat the activity under conditions similar to those that existed when the problem first appeared. (If the results are satisfactory, an inadvertent error may have caused the problem.)
4. If the error recurs when you repeat a given activity, and you can find nothing in the documentation to suggest that your procedure may be flawed, try to get help from others at your site.

Collecting Diagnostic Data

This section identifies some potential problem areas and presents debugging suggestions; it also lists the documentation to have on hand when you call Computer Associates Technical Support.

System Crash

If an abend occurs that brings down the operating system, do the following:

1. Refer to the operating system documentation for the various system dump formats that can be produced for diagnostic purposes.
2. Check for operating system messages or return codes and follow the procedures for recovery that are documented in the IBM MVS system and message code documentation.
3. Initiate the restart procedures documented in the IBM MVS system and message code documentation.

Documentation

Have the following on hand when you call Computer Associates Technical Support:

- A completed Support Contact Information form (see the section Support Contact Information Form later in this appendix)
- Product release and maintenance levels

- System release and maintenance levels
- System and/or application logs
- Recent changes or upgrades
- System and/or application dumps

Application Problems or Errors

If you have a problem with an application program, or it terminates abnormally, do the following:

1. If your system abended, see the appropriate IBM system messages and codes documentation.
2. If you received an inappropriate return code, review the procedure you used, then review the return code description for the recommended action in the IBM MVS system messages and codes documentation.
3. If you have a problem with a system or operator function, collect the dump or screen print, if appropriate.
4. Check all system and application logs for applicable messages.
5. If the current maintenance tape has not been applied, check the information member for an applicable solution or access StarTCC online. (See Accessing the StarTCC Online Support System later in this appendix.)

Documentation

Have the following on hand when you call Computer Associates Technical Support:

- A completed Support Contact Information form (see the section Support Contact Information Form later in this appendix)
- Error messages
- Return codes
- Product release and maintenance levels
- System release and maintenance levels
- System and/or application logs
- Complete problem description and procedures for recreating the problem

- Recent changes or upgrades
- System and/or application dumps

Performance Problems

If you have a performance problem, which is indicated by slow online response time or slow batch job processing, do the following:

1. Try to determine whether the problem is associated with a single job or with an environmental problem.
2. If the current maintenance tape has not been applied, check the information member for an applicable solution or access StarTCC online. (See Accessing the StarTCC Online Support System later in this appendix.)

Interpreting Diagnostic Data

When you have collected the specified diagnostic data, write down your answers to the following questions:

1. What was the sequence of events prior to the error condition?
2. Can the problem be recreated at will?
3. What circumstances existed when the problem occurred, and what action did you take?
4. Has this situation occurred before? What was different then?
5. Did the problem occur after a particular PTF was applied or after a new release of the software was installed?
6. Have you recently installed a new release of the operating system?
7. Has the hardware configuration (tape drives, disk drives, and so forth) changed?

From your response to these questions and the diagnostic data, try to identify the cause and resolve the problem.

If you determine that the problem is the result of an error in a Computer Associates software product, you can use CA-TCC to see if a fix (APAR or PTF) or other solution has been published, then call Computer Associates Technical Support.

Accessing the StarTCC Online Support System

To complement standard technical support, Computer Associates offers extended real-time support via StarTCC on the Internet. Using StarTCC, which you access from the Computer Associates Home page on the World Wide Web, you can:

- Download fixes
- Communicate with Computer Associates Technical Support on existing issues
- Open new issues
- Search for solutions and problems

To access StarTCC, do the following:

1. Point your Web browser to the Computer Associates Home page at <http://www.cai.com>.
2. Select Support to display the Service and Support page, then click CA Total Client Care.
3. Do one of the following:
 - To register, click the CA-TCC Registration link.
 - To access StarTCC, click the Access CA-TCC (registered clients only) link.

You must have a Web browser that supports HTML 2.0 or higher, such as Netscape Navigator 2.0 or higher or Microsoft's Internet Explorer 3.0 or higher. These browsers support the following functions required for StarTCC:

- Secure sockets layer (SSL) for encrypting transaction traffic between you and Computer Associates
- "Cookies"—encrypted data records required by StarTCC
- HTML tables

Calling Computer Associates Technical Support

Computer Associates provides telephone support for all of its products. Refer to the *Computer Associates Product Support Directory* for the telephone number and refer to the section Where to Call for Support later in this appendix. To expedite problem resolution, assemble all recommended information before placing the call.

When to Call Technical Support

If you have a current maintenance agreement with Computer Associates, you can contact Computer Associates Technical Support to:

- Open a new issue
- Address an open issue
- Reopen a closed issue

Opening a New Issue

Open an issue when you have identified one or more of the following types of problems but have not been able to resolve them:

- A problem with CA-View
- A problem related to CA-View's coexistence with other software products
- Site-specific solutions you may require
- A problem determining how to use a CA-View feature for a site-specific purpose
- A problem with documentation, including errors, omissions, or incomplete explanations or procedures

Addressing an Open Issue

Contact Computer Associates Technical Support on a previously opened issue to:

- Provide new information on an open issue
- Inquire about the status of an open issue
- Revise the problem severity rating (see Describing the Problem later in this appendix)
- Inform Computer Associates Technical Support that you solved an open issue, and how you solved it

Reopening A Closed Issue

If the original problem recurs, you can reopen a closed issue. Be sure to identify the issue by its original contact number.

Preparing to Call About a New Issue

Before you call, prepare the following:

- A photocopy of the Support Contact Information form (see the section Support Contact Information Form later in this appendix) with all available information logged
- A Support Contact Number Log with the date of the call recorded in the Date Opened field (see the section Support Contact Number Log Form later in this appendix)
- A history of the problem
- All available diagnostic data (see the section Collecting Diagnostic Data earlier in this appendix)

The person calling Computer Associates Technical Support should be generally familiar with CA-View, the current release, the current maintenance level, the details of the problem reported, and the various options and features in use; or s/he should have immediate access to someone who has this information.

Preparing to Call About an Open Issue

When you call Computer Associates Technical Support about an open issue, refer to the issue by contact number, not by the name of the technician with whom you previously spoke. The issue may have been transferred to a different group internally, and a new technician may have assumed responsibility for further action on the issue. All prior history of the contact is retained in the Computer Associates Technical Support tracking and reporting system under that contact number, so the technician has immediate access to it.

Before you call, have the following available:

- The Support Contact Information form containing the CA-supplied information:
 - The name of the Computer Associates Technical Support technician
 - Contact number
 - Issue number (if there is more than one issue associated with the contact number)

- Solution number, if provided
- Your CA site ID

Note: If you no longer have the Support Contact Information form, look up the contact number recorded on your Support Contact Number Log form.

- A brief description of the nature of this call.

Preparing to Reopen a Closed Issue

If a previous-resolved problem recurs, contact Computer Associates Technical Support to have the issue reopened. Please refer to the **original** contact number so that all historical information is available for diagnosis.

Before you call, have the following available:

- The original contact number and solution (if available)
- A history of the problem and resolution
- All available diagnostic data (see the section Collecting Diagnostic Data earlier in this appendix)

Where to Call for Technical Support

If you are in North America, refer to the *Computer Associates Product Support Directory* for the Computer Associates Technical Support phone number and hours of operation. Outside North America, call your local Computer Associates Support Center during normal business hours.

Note: Only your local Computer Associates Support Center can provide native language assistance. Please speak English when contacting any North American center.

Emergency phone numbers are available for after-hours technical support: In North America call **1-800-645-3042**. Outside North America, call the Computer Associates Technical Support phone number listed in the *Computer Associates Product Support Directory*. All after-hours calls should be limited to severity 1 problems. (See the following section, Describing the Problem.)

If you are unable to locate the technical support number you need, call **1-800-645-3042** for assistance if you are in North America or **516-342-4683** outside North America. The operator will record your call and a Computer Associates Technical Support technician will call you back.

Describing the Problem

Do the following before calling Computer Associates Technical Support:

1. Identify the context in which the problem occurred (for example, a problem with installation or a problem in the production environment).
2. If this is a new installation, product upgrade, pilot project, or problem with a test system, list the steps you followed up to this point.
3. If the problem occurred in a production environment, describe the following in detail:
 - The attempted activity, with the expected results and actual results
 - The attempts to resolve the problem and their results

Note: The very act of producing an accurate description of the problem may suggest its cause and perhaps a way to correct it. If not, an accurate description will assist the Computer Associates Technical Support technician in helping you to resolve it.

Problem Severity
Rating

4. Prioritize the problem.

Computer Associates uses a rating system to expedite resolution of support calls. Use the following guide to establish the severity of your problem:

Severity	Description
1	Production system down or major business impact
2	Major component nonfunctional or serious business impact
3	Minor component nonfunctional or moderate business impact
4	General question or a noncritical problem

5. Photocopy the following forms (located later in this appendix) and complete the applicable sections:

- Support Contact Information form

Prior to making the call, use this form to record all the information required by the Computer Associates Technical Support technician. During the call, use this form to record all the information the technician provides. (See the section Support Contact Information Form later in this appendix.)

- Support Contact Number Log form

Use this form to keep a permanent record of the contact numbers associated with the issues about which you contact Computer Associates Technical Support. If an issue that has been closed reappears due to incomplete resolution, this form can serve as a reference of the original contact number so that the technician can reactivate the appropriate file. (See the section Support Contact Number Log Form later in this appendix.)

Making the Call

When you call Computer Associates Technical Support, you are connected directly to a technician for CA-View. If no CA-View technician is available, your call will be answered by a technical administrator who will record your problem in the Computer Associates Technical Support tracking system.

All calls are returned in the order received and by degree of severity. The next available technician will return your call as soon as possible.

1. Provide the Computer Associates Technical Support technician with the following information:

- Your CA site ID and PIN number, if known
- The severity rating of your problem
- Your company information (see the section Support Contact Information Form later in this appendix)
- A brief description of the problem

Note: When you call about a new issue, **do not** refer to a contact number previously assigned for a different issue; this could impede the resolution of your current problem.

If you do not know your CA site ID or are not certain what the problem severity code should be, the technician will provide this information. Record the site ID and severity level on the Support Contact Information form.

2. When the technician enters your issue in the Computer Associates Technical Support tracking system, record the information provided by the technician on the Support Contact Information form.

This information will include a contact number and, if you address multiple issues, the issue numbers.

3. The technician may request that you:
 - Provide additional detailed information
 - Forward applicable diagnostic documentation
 - Perform troubleshooting procedures as directed
 - Relate site-specific environmental information
4. If a solution is determined during the initial call, record the solution on the Support Contact Information form. Also, be sure to record the current date under Date Closed on the Support Contact Number Log form.

If the Problem is Not Resolved Immediately

1. If the problem cannot be resolved immediately over the phone, the technician may provide a solution number and advise you to expect the solution in the form of a module replacement, ZAP, or source change.

The solution will be supplied to you by one of the following methods:

- Via telephone, FAX, telex, or mail
 - On a maintenance or product tape
 - Through one of the online client support systems
2. If a solution is not readily available, the technician may require additional documentation and/or that more testing be performed.

Whenever possible, the technician will attempt to reproduce the problem in-house to obtain diagnostic data. If the problem is not reproducible due to environmental factors, you will be asked to provide diagnostic information to the technician for analysis. To expedite problem resolution please provide as much detail as possible.

As soon as a solution is available, it will be provided by one of the methods listed in Step 1.

3. If the solution resolves the problem, record the date of resolution under Date Closed on the Support Contact Number Log form; otherwise, continue the dialog with the technician until the problem is resolved.

Sending Documentation to Computer Associates Technical Support

Use the following guidelines when the Computer Associates Technical Support technician requests dumps, trace listings, compile lists, or other documentation related to an open issue:

1. Write the contact and issue numbers prominently on each listing.
2. Include a photocopy of the completed Support Contact Information form for this issue.
3. Address the package to the CA-View support center. Obtain the address from your Computer Associates representative or consult the *Computer Associates Product Support Directory*.

Sample Forms

The forms on the following pages are designed to help you keep an accurate record of your contacts with Computer Associates Technical Support. Refer to these forms when making calls. For example, use the Support Contact Number Log form to record the issues associated with a contact number. When issues are resolved (closed), enter the date in the last column. If a closed problem recurs, refer to this log for its contact number so that the appropriate file can be reactivated. You can photocopy these forms as needed.

Support Contact Information Form

SUPPORT CONTACT INFORMATION

General Information:

Support Telephone Number () _____

Date of Call: _____

Problem Severity: _____

CA-Supplied Information:

Support Technician: _____ Contact Number: _____

Fax Number: () _____ Issue Number: _____

Your CA Site ID: _____ Your CA PIN Number: _____

Solution Number: _____ for Product: _____ Release: _____

Your Company Information:

Company Name: _____ Location: _____

Your Name: _____

Telephone Number: () _____ Extension: _____

Fax Number: () _____

Alternate Contact Person: _____

Alternate Telephone Number: () _____ Extension: _____

Notes:

Support Contact Information Form (Continued)

SUPPORT CONTACT INFORMATION

Product Releases and Maintenance Levels:

Product:	Release	Maintenance
CA-View	_____	_____
Operating System	_____	_____
CA90s Services	_____	_____
Other	_____	_____
Other	_____	_____
	_____	_____

Additional solutions applied:

Product:	Solution Numbers	
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Enclosed Documentation:

- | | |
|----------|----------|
| 1. _____ | 2. _____ |
| 3. _____ | 4. _____ |
| 5. _____ | 6. _____ |
| 7. _____ | 8. _____ |

Product Releases and Maintenance

New users of CA-View are provided with a distribution tape containing the current version of the system. Clients are requested to operate only under currently supported releases of CA-View.

Standard user documentation is also provided to CA-View users. Updates to this documentation are provided automatically to all clients having current maintenance agreements.

Clients with current maintenance agreements also receive ongoing CA-View maintenance. When a new release of the system is available, a notice is sent to all current CA-View clients.

Requesting Product Enhancements

Computer Associates welcomes your suggestions for product enhancements. All suggestions are considered and acknowledged. Contact your Account Manager who will initiate a Demand Analysis Request (DAR) for you.

The DAR system serves as a central receiving point for all enhancement requests.



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