

CA IDMS™ Extractor

CA IDMS™ Database Extractor Option

Release 18.5.00



This Documentation, which includes embedded help systems and electronically distributed materials, (hereinafter referred to as the "Documentation") is for your informational purposes only and is subject to change or withdrawal by CA at any time. This Documentation is proprietary information of CA and may not be copied, transferred, reproduced, disclosed, modified or duplicated, in whole or in part, without the prior written consent of CA.

If you are a licensed user of the software product(s) addressed in the Documentation, you may print or otherwise make available a reasonable number of copies of the Documentation for internal use by you and your employees in connection with that software, provided that all CA copyright notices and legends are affixed to each reproduced copy.

The right to print or otherwise make available copies of the Documentation is limited to the period during which the applicable license for such software remains in full force and effect. Should the license terminate for any reason, it is your responsibility to certify in writing to CA that all copies and partial copies of the Documentation have been returned to CA or destroyed.

TO THE EXTENT PERMITTED BY APPLICABLE LAW, CA PROVIDES THIS DOCUMENTATION "AS IS" WITHOUT WARRANTY OF ANY KIND, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NONINFRINGEMENT. IN NO EVENT WILL CA BE LIABLE TO YOU OR ANY THIRD PARTY FOR ANY LOSS OR DAMAGE, DIRECT OR INDIRECT, FROM THE USE OF THIS DOCUMENTATION, INCLUDING WITHOUT LIMITATION, LOST PROFITS, LOST INVESTMENT, BUSINESS INTERRUPTION, GOODWILL, OR LOST DATA, EVEN IF CA IS EXPRESSLY ADVISED IN ADVANCE OF THE POSSIBILITY OF SUCH LOSS OR DAMAGE.

The use of any software product referenced in the Documentation is governed by the applicable license agreement and such license agreement is not modified in any way by the terms of this notice.

The manufacturer of this Documentation is CA.

Provided with "Restricted Rights." Use, duplication or disclosure by the United States Government is subject to the restrictions set forth in FAR Sections 12.212, 52.227-14, and 52.227-19(c)(1) - (2) and DFARS Section 252.227-7014(b)(3), as applicable, or their successors.

Copyright © 2013 CA. All rights reserved. All trademarks, trade names, service marks, and logos referenced herein belong to their respective companies.

CA Technologies Product References

This document references the following CA Technologies products:

- CA OLQ™ Online Query for CA IDMS™ (CA OLQ)
- CA Culprit for CA IDMS™ (CA Culprit)
- CA IDMS™/DC Transaction Server Option (CA IDMS/DC)
- CA IDMS™ Database Universal Communications Facility Option (CA IDMS UCF)
- CA IDMS™/DC Transaction Server Option or Advantage™ CA IDMS™ Database Universal Communications Facility Option (DC/UCF)
- CA ADS™ for CA IDMS™ (CA ADS)

Contact CA Technologies

Contact CA Support

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

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

Providing Feedback About Product Documentation

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

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

Contents

Chapter 1: General Information 9

What Is CA IDMS Extractor?	9
CA IDMS Extractor Components	9
Online Components	9
Batch Components	12
Customization Macro	13
Writing a User Exit Module	13

Chapter 2: Concepts 15

Consider a Test Database	15
CA IDMS Extractor Implementation	15
Phased Implementation	16
CA IDMS Extractor Database Paths	16
Database Entry Point	16
Record Level Selection Criteria	17
Recursive Data Structures	21
Creating CA IDMS Extractor Database Paths	22
Manual Selection of Records/Sets	23
Hierarchical Selection	23
Network Selection	24
Deselecting Previously Selected Records/Sets	24
Terminating Record Level Selection Criteria	25

Chapter 3: Online Session 27

Getting Started	27
Signing on to CA IDMS Extractor	27
Online Documentation	28
Online Documentation Message Facility	28
CA IDMS Extractor Screens	29
Logical System Overview	29
Transfer Facility	29
Transfer Facility Values and Commands	30
Typical Session Activities	30
Naming the Source and Target Subschemas	30
Creating a Selection Criteria Specification	31
Running the Batch Components	31

A Sample Selection Criteria Specification Session.....	31
Data Structure Diagram for the Sample Session	33
Step 1. Sign On to CA IDMS Extractor	33
Step 2. Specify the Source and Target Subschemas.....	34
Step 3. Define the Database Path	36
Step 4. Limit the Number of Records Displayed.....	37
Step 5. Select the Entry Record	38
Step 6. Define Record Level Selection Criteria--DEPT Record	39
Step 7. Select Sets for the Extract Component	40
Step 8. Define Record Level Selection Criteria--TEACHER Record.....	41
Step 9. Select Additional Record/Sets	42
Step 10. Return to the Database Entry Point Selection Menu Screen	44
Step 11. Return to the Specify Database Extract Specification Screen	44
Step 12. Edit JCL.....	45
Step 13. Submit JCL for Execution	47
Step 14. Sign Off From CA IDMS Extractor	48
Additional Screens	48
Specify Specification List Screen.....	49
Begin Edit Record Selection List Screen	50
Index Entry Point Selection List Screen	50
Area Deselection Screen	51
Entry Record/Index Deselection Screen.....	52
Path Set Deselection Screen.....	53
Field Level Selection Criteria Screen	54
Record/Element Review Screen	55
Field Level Criteria Deselection Screen	59
Confirm Subschema Record Date Screen	60
Field Mismatch Screen	61
Utilities Menu Screen	61
Specification Utilities Screen	62
JCL Utilities Screen	63
Copy Utility Screen	64

Chapter 4: Reports 67

CA IDMS Extractor Audit Reports	67
Common Report Header Information	67
Extract Audit Report	68
Processing Messages and Statistics	68
Areas/Records/Sets Extracted	70
Extract Statistics	72
Load Audit Report	74

Processing Messages	74
---------------------------	----

Chapter 5: Operations **77**

Operational Considerations.....	77
CA IDMS Extractor Requirements	78
System Requirements.....	78
Online Storage Requirements	79
Batch Storage Requirements	80
Recovery Procedure.....	81
Executing CA IDMS Extractor	81
Sample JCL	82
Syntax Notation.....	82
Extract File.....	83
Workfile.....	83
Communication File.....	83
Syntax File.....	83
Allocating Space for DASD Files.....	83
PROCESS Parameter.....	85
PROCESS Parameter Keywords	86
Performing the EXTRACT and LOAD Steps--USVEXEC.....	88
z/OS JCL.....	91
z/VSE JCL.....	95
z/VM EXEC	100
Printing JCL--USVPJCL.....	109
z/OS JCL.....	110
z/VSE JCL.....	111
z/VM JCL.....	112
Running in Local Mode.....	114
Printing a Selection Criteria Specification--USVPSPC.....	114
z/OS JCL.....	115
z/VSE JCL.....	116
z/VM EXEC	118
Running in Local Mode.....	120
Printing Online Documentation--USVPRINT.....	120
Online Documentation Modules	120
Customizing the CA IDMS Extractor Environment--USVTPARM	121
USVTPARM--Customizing the CA IDMS Extractor Environment	122
Writing a User Exit Module--CUVUSRXA.....	124
CUVUSRXA Rules and Guidelines	124

Chapter 6: Messages **129**

Appendix A: JCL Editing Commands **231**

Editing Commands231

- Scroll Options231
- Primary Commands.....231
- Line Commands232

Program Function Keys232

Entering Commands232

- Scroll Options233
- Primary Commands.....234
- Line Commands245
- Text Manipulation Line Commands249

Glossary **253**

Index **257**

Chapter 1: General Information

This guide provides the information you need to significantly speed up the testing and maintenance phases of applications development by using CA IDMS Extractor. In addition, the many features that CA IDMS Extractor offers are documented.

This chapter introduces CA IDMS Extractor and describes its components and features.

This section contains the following topics:

[What Is CA IDMS Extractor?](#) (see page 9)

[CA IDMS Extractor Components](#) (see page 9)

What Is CA IDMS Extractor?

CA IDMS Extractor is an application development tool that significantly speeds up the testing and maintenance phases of applications development by reducing or eliminating the need to develop special test database load programs.

To use CA IDMS Extractor, three basic steps are necessary:

1. Choose an appropriate CA IDMS database as input (that is, the source database).
2. Use the Selection Criteria Specification Component of CA IDMS Extractor to describe the records of the source database that you want extracted from the source database and loaded to the target database.
3. Tell CA IDMS Extractor to extract the selected records from the source database and load them to the target database. The source database remains unchanged.

CA IDMS Extractor Components

CA IDMS Extractor consists of several components, some of which execute in an online environment, and others in a batch environment.

Online Components

The CA IDMS Extractor online components are described below. They include:

- Selection Criteria Specification Component
- Specification Utilities Component
- JCL Editor Component

- JCL Utilities Component
- JCL Submission Component
- User Profile Component
- Online Documentation Component

The Selection Criteria Specification Component

The Selection Criteria Specification Component manages your library of selection criteria specifications. Use this component to:

- Describe the existing source database that is used as the basis for generating the target database
- Describe the paths to use when selecting the records from the source database
- Describe the selection criteria to be used when following these paths
- Save your specifications under a specification name of your choice.

The Selection Criteria Specification Component allows you to specify criteria for selection in these ways:

- Select particular areas/records/fields/sets
- Limit the selection of a record type to a specific FROM/TO page range
- Select a record by field value(s), including by CALC key and integrated index SORT key values
- Select a record by direct DBKEY
- Select a group of records within a specified page range, beginning with the first record occurrence within the range
- Select a group of records within a specified page range beginning with the *n*th occurrence within the range
- Skip a specified number of records before selecting the next record occurrence
- Specify the number of levels to be extracted in a recursive bill-of-materials structure
- Specify whether you want to extract all owners of extracted recursive records
- Limit the total number of records selected by record type
- Limit the number of records selected in each set occurrence

The Specification Utilities Component

Use the Specification Utilities Component to copy, delete, print, and rename your Selection Criteria Specifications.

The JCL Editor Component

Use the JCL Editor Component to create and modify the JCL used to run the Batch Components of CA IDMS Extractor. It contains sample JCL members that you can quickly modify online to suit the needs of your environment.

The JCL Utilities Component

Use the JCL Utilities Component to copy, delete, print, and rename JCL members.

The JCL Submission Component

Use the JCL Submission Component to submit JCL online to the internal reader for executing the batch extract and batch load components of CA IDMS Extractor.

The User Profile Component

Use the User Profile Component to tailor PF keys to suit your needs. Use the KEYS command to access the User Profile Component and change your PF key settings. The PF key assignments that you make are saved, and are in effect for every session of CA IDMS Extractor until you change them again.

The Online Documentation Component

The Online Documentation Component gives you information about the CA IDMS Extractor screens, commands, the Transfer Facility, available PF keys, and CA IDMS Extractor message text.

The CA Online Documentation Print Utility provided with CA IDMS Extractor allows you to print the information included in the Online Documentation Component. The sample JCL library member GSIPRINT contains the JCL to execute the Online Documentation Print Utility.

The printed version of the online documentation is presented one screen per page and includes page reference indexes for screen options. Characters highlighted in the online documentation appear bolded in the printed version.

For more information about the Online Documentation Print Utility, see the chapter "Operations."

Batch Components

The CA IDMS Extractor Batch Components are described below. They include:

- Database Extract Component
- Database Load Component
- Specification Print Utility
- JCL Member Print Utility

The Database Extract Component

The Database Extract Component accesses the specified source database to extract record and set information. The number and type of set and record occurrences selected is governed by both the description you provided during the Selection Criteria Specification process and the structure and information contained within the source database.

Selected information is written to an Extract File and an audit report is produced. The audit report displays the parameters that you submitted and a summary of the information extracted from the source database.

The Database Load Component

The Database Load Component uses the extract file created during the database extract process and loads the target database with information extracted from the source database.

The Specification Print Utility

The Specification Print Utility allows you to print a Selection Criteria Specification that you created and saved using the online Selection Criteria Specification Component.

The JCL Member Print Utility

The JCL Member Print Utility allows you to print a JCL member that you created and saved using the JCL Editor Component.

Customization Macro

The CA IDMS Extractor customization macro gives you the ability to change the following operational parameters:

- The task code used to invoke CA IDMS Extractor.
- The dictionary into which the online documentation modules were loaded at installation.
- The number of entries to allocate for the CA IDMS Extractor set stack.
- From whom a user can copy other JCL members and Selection Criteria Specifications.
- The default for the RETAIN PHYSICAL SEQUENCE OF MEMBER RECORDS IN THE SET? field on the Record Level Selection Criteria screen.
- The default for the EXTRACT ALL OWNERS FOR EXTRACTED RECURSIVE RECORDS? field on the Record Level Selection Criteria screen.
- The default for the BEGIN VIEWING/EDITING IN THE MIDDLE OF A PATH DEFINITION? field on the Specify Database Extract Specification screen.
- Whether to have message NLYZ008 be a warning (W) message or an error (E) message. NLYZ008 is displayed at extract time when a mandatory member is being extracted without its owner. An error message prevents the Selection Criteria Specification from being used.

See the chapter "Operations" for information on customizing CA IDMS Extractor.

Writing a User Exit Module

CA IDMS Extractor Release gives you the ability to write an assembler user exit module to be called prior to a record's being written to the Extract File. This exit is called by the Database Extract Component when:

- CA IDMS Extractor is walking the source database looking for records to be extracted, and
- A record meets its Record Level Selection Criteria.

You can change the record data, add or delete fields to/from the record data, or prevent the record from being written to the file. We supply the descriptions of the parameters that are passed to your exit module in both Assembler and COBOL formats.

Chapter 2: Concepts

This chapter briefly discusses the procedure for extracting a test database. Also presented are several important concepts about CA IDMS Extractor. Understanding these concepts should help you to more easily extract a test database.

This section contains the following topics:

[Consider a Test Database](#) (see page 15)

[CA IDMS Extractor Implementation](#) (see page 15)

[CA IDMS Extractor Database Paths](#) (see page 16)

[Creating CA IDMS Extractor Database Paths](#) (see page 22)

Consider a Test Database

Using a test database allows you to overcome the problems encountered by creating a mirror copy of your existing production database to use for testing purposes.

A very large database, by virtue of its size alone, prohibits creating a mirror copy for use as a test database. Logical segregation, to simplify testing and to help isolate problems discovered during the testing phase, is not easily achieved with mirror copies of large databases.

CA IDMS Extractor Implementation

CA IDMS Extractor allows you to create a test database that contains a meaningful sampling of data. Use this extracted data to test the known data interactions encountered by a unit of work in day-to-day processing.

To extract a test database, you must segregate data and all the programs that impact or are impacted by that same data. To do this:

1. Prepare an information model from business methods so that you can identify and group data according to business procedures. If test database implementation is considered in the design phase, this information model could evolve as a result of data flow diagrams.
2. Segregate all the dialogs that access (update or retrieve) a given set of record types:
 - a. Select a major dialog and identify all the record types that it uses.
 - b. Find all the dialogs that use the same record types used by the dialog in the previous step.

3. Create a subschema with the records and sets identified through the segregation process detailed above.

If your existing database is already grouped into functional areas, an existing subschema can be used with CA IDMS Extractor. If no existing subschema is appropriate, create a new one.

4. Use the identified set of dialogs to begin testing.

This implementation method creates multiple test databases. Using this method actually simplifies the testing process and helps to isolate problems encountered.

Phased Implementation

CA IDMS Extractor can be used when you do not have a pre-existing database. Phased implementation allows data input programs to be implemented first. While this implementation does not create a test database, it does provide data for the subsequent implementation phases that require test data.

CA IDMS Extractor Database Paths

A database path describes the records/sets that CA IDMS Extractor looks at in your source database. For each record that CA IDMS Extractor retrieves in a path, Record Level Selection Criteria that you define are applied. If the record meets the selection criteria, it is written to an Extract File. The records on the Extract File are loaded onto the target database.

Database Entry Point

A database entry point defines the beginning of a database path. A database path describes the records/sets that CA IDMS Extractor walks in your source database. You can have one or more entry points or database paths depending on your particular database structure.

An entry point can be a **record**, or a **system-owned integrated index** that is used to retrieve a record:

- **If an Entry Record is used**, the Database Extract Component needs to sweep the area in which the record resides to retrieve the record
- **If an Entry Index is used**, the index is used to retrieve the record without having to perform an area sweep.

However, if you specify CALC or IIX SORT keys by means of Field Level Selection Criteria for an Entry Record or an Entry Index, CA IDMS Extractor retrieves the Entry Record or indexed record by the specified CALC or SORT key value. This specification eliminates the need for CA IDMS Extractor to sweep an area looking for occurrences of the Entity Record and significantly speeds up extract time. See the chapter "Online Sessions" for more information about the Field Level Selection Criteria screen.

Record Level Selection Criteria

Record Level Selection Criteria define what record occurrences in the source database are going to be extracted. The Criteria is maintained by set type and must be specified for each owner and member record of all sets selected in a path definition. If a record type is retrieved by two different sets, two sets of record level selection criteria must be specified.

For example, in Example Data Structure Diagram, IX-SUBJ-LNAME is selected as an entry index, the PREREQSFOR set is selected walking from owner to member, and the PREREQSARE set is selected walking member to owner. The SUBJECT record is retrieved twice in this path definition: once as member of the Entry Index and once as owner of the PREREQSARE set. Therefore, Record Level Selection Criteria must be defined for the SUBJECT record both as a member of the Entry Index and as owner of the PREREQSARE set. Thus, the Record Level Selection Criteria for the SUBJECT record as it is retrieved as a member of the entry index can be different than the Record Level Selection Criteria for the SUBJECT as it is retrieved as owner of the PREREQSARE set.

Records can be selected from the source database in a variety of ways. Refer to the example of Sample Record Level Selection Criteria Screen.

- **Direct DBKEY**--Extract the record occurrence with the DBKEY specified by the page/line fields. If you do not want to use Field Level Selection Criteria, use Direct DBKEY to select an OOK Entry Record or to select a record containing specific values in a particular field.
- **Limit Page Range**--Limits the extraction of record occurrences to the page range specified by the from/to page numbers.
- **Limit Records of This Type**--Limit the number of record occurrences extracted from the source database by:
 - Total number of record occurrences that you want CA IDMS Extractor to extract from the source database. This value is the maximum number of record occurrences that CA IDMS Extractor extracts for the record type.
 - Maximum number of record occurrences that CA IDMS Extractor extracts for each set occurrence in which the record participates as a member.
- **Skip Between Records**--Bypasses the number of record occurrences specified by the skip count record type. For example, to extract every fifth record occurrence on the source database, specify a Skip Count of "4".

- **Specify First Within Range**--Tells CA IDMS Extractor to extract the first occurrence of a record type accessed within a record's specified range. For a CALC record that is a member of a set being walked, the first occurrence retrieved may NOT be the first physical occurrence in the range.
- Field values tell CA IDMS Extractor to compare field data in record occurrences to entered Field Level Selection Criteria. You may indicate that a record is to be extracted if the data in the record occurrence is:
 - Equal
 - Not Equal
 - Less Than
 - Less Than or Equal
 - Greater Than
 - Greater Than or Equal
 to the data you specify, or:
 - Within
 - Not Within
 a range of values you specify.

Sample Record Level Selection Criteria Screen

```

CA-IDMS/DBX Rnn.nn  Record Level Selection Criteria  hh:mm mm/dd/yy
COMMAND ==>

Entry Record: CRITERIA
Path Record: CRITERIA          From Page: 370000
To Page: 372999
Accessed By: AREA SWEEP of area USV-DATA-AREA
Enter S to Select, D or blank to Deselect selection criteria,
press ENTER.
Note: The specification is currently not complete.
Direct DBKEY          Page ==> 0000000000 Line ==> 0000
Limit Page Range     From Page ==> 0000370000 To Page ==> 0000372999
S Limit Records of This Type      Total Record Count ==> 0000000050
                                   Per Set Occurrence ==> 0000000000
Skip Between Records      Skip Count ==> 0000000000
First Within Range
Nth Within Range          Which Occurrence ==> 0000000000
Field Level Selection Criteria  Display Criteria? ==> Y (Y/N)
Logical Key Selection Criteria  Display Criteria? ==> Y (Y/N)
Retain Physical Sequence of Member Records in the Set? ==> Y (Y/N)
Extract All Owners of Extracted Recursive Records? ==> Y (Y/N)
Number of Levels to Extract in the Recursive Structure ==> 00000000
    
```

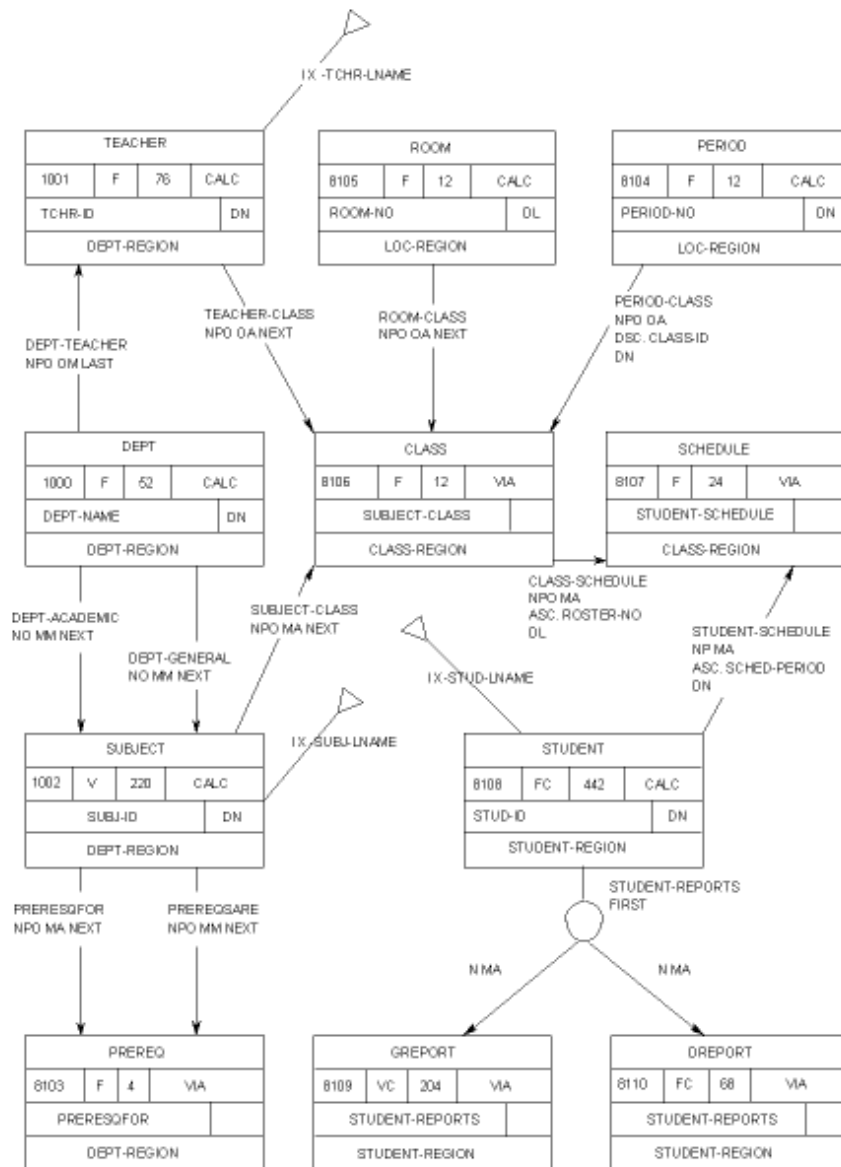
- In a situation where a record is retrieved by two different sets, you must tell CA IDMS Extractor how many levels of the recursive structure are to be extracted.

Using the same example shown in Sample Record Level Selection Criteria Screen, where the IX-SUBJ-LNAME is selected as an Entry Index, the PREREQSFOR set is selected walking from owner to member, and the PREREQSARE set is selected walking member to owner, the SUBJECT record as owner of the PREREQSARE set would be retrieved a second time. You need to tell CA IDMS Extractor how many occurrences of the SUBJECT record are to be retrieved, as owner of the PREREQSARE set, after each occurrence of the SUBJECT is retrieved by the Entry Index.

A more detailed discussion of extracting from recursive structures is presented below.

- When a selected set is accessed by walking from **member to owner** and the set is a non-sorted set, CA IDMS Extractor must perform an OBTAIN NEXT IN SET until end of set in order to keep the logical integrity of the set intact. For extremely large sets, this walking may impose a tremendous amount of overhead. An option is provided to have CA IDMS Extractor perform an OBTAIN OWNER in the set if you do not require CA IDMS Extractor to maintain logical set integrity for the member records.

Example Data Structure Diagram



Recursive Data Structures

A structure is considered to be recursive if a record type is retrieved by more than one set type in the same path. A Bill-of-Materials (BOM) structure is an example of a recursive structure.

CA IDMS Extractor lets you know that a recursive structure is in the path once you reach the Record Level Selection Criteria screen when a record type is retrieved a second or more time in the same path.

The following fields appear on the Record Level Selection Criteria screen only when a record type is retrieved a second or more time in the same path:

- `EXTRACT ALL OWNERS OF EXTRACTED RECURSIVE RECORDS?===>` is displayed if the current record is recursive and the set is walked member to owner. You must tell CA IDMS Extractor whether to extract all of the record's owners.

This action imposes a great deal of overhead. Enter an **N** in this field if you are certain that the owner records of all extracted recursive records are extracted because they are retrieved via some OTHER SET in your path definition. Otherwise, your target database will NOT be complete.

- `NUMBER OF LEVELS TO EXTRACT IN THE RECURSIVE STRUCTURE===>` In most recursive structures, this value should be set to zero (**0**), except for true BOM structures. Your situation may dictate otherwise. You must be aware, however, of the additional overhead needed to process recursive structures.

In the simplified data structure diagram shown below, the structure in Example 1 contains a BOM structure. In both examples, Record A is an Entry Record and SETS AB and BC1 are selected walking from owner to member. After defining Record Level Selection Criteria for record C as a member of the BC1 set, SET BC2 is selected walking from member to owner in Example 1. Set CA is selected walking owner to member in Example 2.

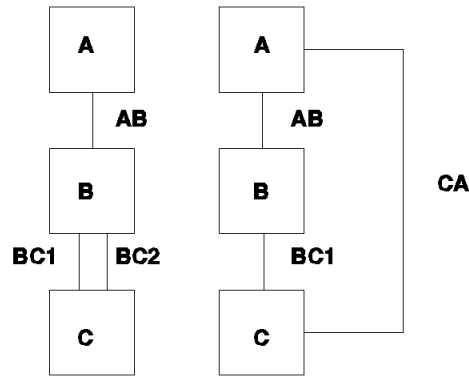
At this point, CA IDMS Extractor determines that Record B in Example 1 and Record A in Example 2 participate in recursive structures and are regarded as **recursive** records. These records/sets define the beginning of the recursive structure. You must tell CA IDMS Extractor how many times the recursive structure is to be walked once the beginning of the recursive structure is found.

In these examples, once Record B is retrieved through set BC2 and Record A is retrieved through set CA, you must tell CA IDMS Extractor how many more times sets selected in the path after Record B in Example 1 and Record A in Example 2 are to be walked. Specifying zero (**0**) in the `NUMBER OF LEVELS TO EXTRACT IN THE RECURSIVE STRUCTURE` field tells CA IDMS Extractor to not retrieve any more records/sets in the path at that point.

For each recursive record that is extracted, CA IDMS Extractor also extracts **all owners of selected sets** in which the recursive record is currently a member. In these examples, after Record B is retrieved and extracted through set BC2, CA IDMS Extractor extracts the owning Record A **even though set AB is being walked from owner to member**.

You may specify a value for NUMBER OF LEVELS TO EXTRACT IN THE RECURSIVE STRUCTURE that is greater than the actual number of levels present in your database. CA IDMS Extractor uses this value as the **maximum** number of levels that it traverses.

Examples of Recursive Structures



Creating CA IDMS Extractor Database Paths

There are several ways of creating a database path in CA IDMS Extractor:

- Manually selecting records/sets
- Having CA IDMS Extractor perform a hierarchy selection
- Having CA IDMS Extractor perform a network selection
- Deselecting previously selected records/sets.

Manual Selection of Records/Sets

Manually selecting sets in a path is an iterative process that consists of selecting sets to be included in the path, then defining Record Level Selection Criteria for owner and member records of the selected sets.

To begin the process, you first select an Entry Record or Entry Index to define the beginning of a database path. CA IDMS Extractor then displays the Record Level Selection Criteria screen for the Entry Record or Entry Index record. You define the Record Level Selection Criteria for the record. CA IDMS Extractor then displays the Path-Record Set Selection list screen that shows the sets that may be walked from the entry record. Sets are displayed only if they are not already selected in a path for the current specification.

If you select any sets from the Path-Record Level Selection Criteria screen, and the selected set is walked from:

- **Owner to Member** — The Record Level Selection Criteria screen is displayed for the **member** record. If the set is a multi-member set, a Record Level Selection Criteria screen is displayed for **each** member.
- **Member to Owner** — The Record Level Selection Criteria screen is displayed for the **owner** record.

Record Level Selection Criteria must be specified for each owner/member of all selected sets.

The process of selecting sets to be included in a path and defining Record Level Selection Criteria for all owner and member records of selected sets continues until:

- No sets are selected from the Path-Record Set Selection List screen, or all sets accessible from path records are already included in a path; and
- Record Level Selection Criteria have been defined for all owner and member records of selected sets.

Hierarchical Selection

With a hierarchical selection, CAIDMS Extractor **automatically** selects all records and sets accessible walking **down** the structure, that is, **from owner to member**. When you make a hierarchical selection of a record or index, CA IDMS Extractor marks it as an Entry Record or Entry Index. All members of sets owned by the Entry Record or Entry Indexed record, which do not already participate in a path and which are not indexed by an Entry Index, are selected in the path. All selected records that are themselves owners of sets are subject to the same selection process as the Entry Record.

There is an exception to the hierarchical selection process regarding a Bill-Of-Material (BOM) structure. The AUTOMATIC member of the BOM set is selected walking from the BOM record to the junction record. The MANUAL member of the BOM set is selected walking from the junction record to the BOM record.

The Record Level Selection Criteria from all records selected in this manner indicate to extract **all** record occurrences. You may modify the selection criteria of any or all of these records to limit the number of records extracted.

Network Selection

With a network selection, CA IDMS Extractor automatically selects all records and sets accessible in the **entire** structure. When you make a network selection of a record in index, CA IDMS Extractor marks it as an Entry Record or Entry Index. All owners of sets of which the Entry Record or Entry Indexed record is a member and, which do not already participate in a path and which are not indexed by an Entry Index, are selected in the path. All selected records that are themselves owners or members of sets are treated as if it were an Entry Record.

There is an exception to the network selection process regarding a Bill-Of-Material (BOM) structure. The AUTOMATIC member of the BOM set is selected walking from the BOM record to the junction record. The MANUAL member of the BOM set is selected walking from the junction record to the BOM record.

The Record Level Selection Criteria for all records selected in this manner indicate to extract **all** record occurrences. You may modify the selection criteria of any or all of these records to limit the number of records extracted.

You should verify that sets are walked in the manner in which you want them walked, that is, from owner to member or member to owner. CA IDMS Extractor may select a set as being walked from member to owner when you really want the set walked from owner to member. If this is the case, you must deselect the set and then select it again using a manual selection.

For a data structure containing recursive records (records that are accessed by more than one set type in the same path), CA IDMS Extractor sets the number of levels to extract to zero. You may need to modify this value. Refer to Recursive Data Structures for more information.

Deselecting Previously Selected Records/Sets

To remove records/sets from a path definition or to delete an entire path definition, you may deselect a path set, an Entry Record or Entry Index, or an area. Deselection of:

- An Entry Record/Entry Index deletes the entire path definition.
- An area deselects all Entry Records residing in the area.

- A path set deselects all sets in the path accessed after the deselected set. The deselection process stops at recursive records. However, sets selected in the path after recursive records are not deselected.

Deselection causes all Record Level Selection Criteria to be removed from the record, including all Field Level Selection Criteria. Once deselected, a record or set can be selected again.

Terminating Record Level Selection Criteria

When you tell CA IDMS Extractor to terminate the specification for the current specification session, by typing the END command or pressing the End PF key at the Record Level Selection screen, the session may not be complete. There may be record types in selected path-record sets for which Record Level Selection Criteria have not been specified. CA IDMS Extractor flags the specification so that you are not able to use it without completing it.

CA IDMS Extractor indicates whether or not the specification is complete at the time the Record Level Selection Criteria screen is displayed.

Chapter 3: Online Session

This chapter presents an overview of a typical CA IDMS Extractor online session. It describes how to sign on and sign off CA IDMS Extractor and introduces the CA IDMS Extractor screens.

This section contains the following topics:

- [Getting Started](#) (see page 27)
- [Signing on to CA IDMS Extractor](#) (see page 27)
- [Online Documentation](#) (see page 28)
- [CA IDMS Extractor Screens](#) (see page 29)
- [Transfer Facility](#) (see page 29)
- [Typical Session Activities](#) (see page 30)
- [A Sample Selection Criteria Specification Session](#) (see page 31)
- [Additional Screens](#) (see page 48)

Getting Started

This chapter presents an overview of a typical CA IDMS Extractor online session. It describes:

- Signing on to CA IDMS Extractor
- Online documentation for CA IDMS Extractor
- Using CA IDMS Extractor screens
- Performing typical CA IDMS Extractor session activities
- Signing off of CA IDMS Extractor.

Signing on to CA IDMS Extractor

Follow the steps below to sign on to CA IDMS Extractor (unless your DBA or security administrator has implemented a different procedure):

1. Access your online CA IDMS/DC system.
2. At the CA IDMS/DC system prompt, type the task code assigned to the CA IDMS Extractor system and press the ENTER key. Obtain the task code, which is assigned at the time of installation, from your DBA. The default is **DBX**.

The CA IDMS Extractor Main Menu screen is displayed.

Online Documentation

At any point in a CA IDMS Extractor session, you can use the **HELP** command or the Help PF key to access the online documentation, which includes:

- Information about the CA IDMS Extractor screens
- Complete details about each of the commands, options, and keys used to edit a JCL member
- The CA IDMS Extractor online message facility.

To access the online documentation:

- Select option **T** at the Main Menu screen
- Enter the **HELP** command in the command field of any CA IDMS Extractor screen
- Use the PF key associated with the **HELP** command.

You can print the text for all CAIDMS Extractor online documentation and messages using the Online Documentation Print Utility. See the chapter "Operations" for detailed information on using the Online Documentation Print Utility.

Online Documentation Message Facility

CA IDMS Extractor allows you to view message text online.

To access the Message Index screen:

1. Access the online documentation
2. Type **M** in the **OPTION** field of the first screen of any CA IDMS Extractor online documentation module.
3. Press the **ENTER** key.

The Message Index screen is displayed. To view the message text:

1. Type the message number in the **INDEX** field of the Message Index screen.
2. Press the **ENTER** key.

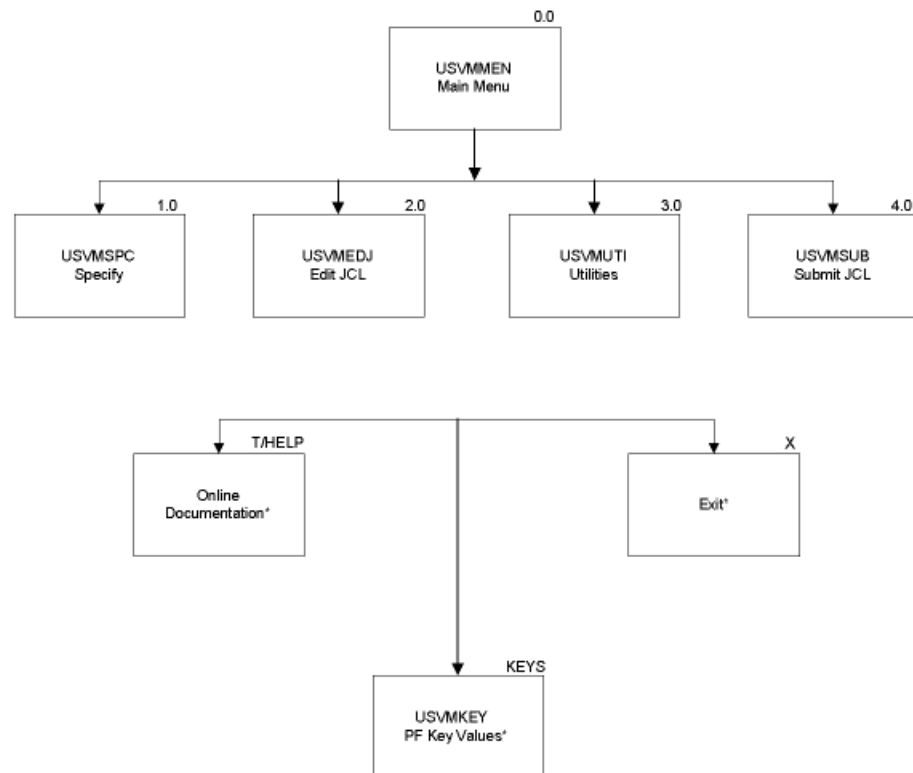
The text for that message is displayed.

You can print the text for all CAIDMS Extractor messages using the CA Online Documentation Print Utility. See **Error! Reference source not found.** page=no. for detailed information on using this utility.

CA IDMS Extractor Screens

CA IDMS Extractor is menu-driven. The diagram below shows a logical overview of the system. To perform some of the functions, several screens may be used. Each screen and its associated fields are described in detail in the online documentation that you can access from any CA IDMS Extractor screen by using the HELP command or the appropriate PF key.

Logical System Overview



*You can invoke these functions from any screen

Transfer Facility

The Transfer Facility allows you to move between major components of CA IDMS Extractor without returning to the Main Menu screen. An equal sign followed by an alphanumeric string (=3.1) or the option command name (=SUTIL) transfers you to the function you want. The available transfer commands are shown below.

Transfer Facility Values and Commands

System Level	Assigned Value	Option Command
CA IDMS/DC	=X	
Main Menu	=0	=MENU
Specify Database Extract Specification	=1	=SPECIFY
Edit JCL	=2	=JCL
Edit JCL Member List	=2.1	
Utilities Menu	=3	=UTIL
Specification Utilities	=3.1	=SUTIL
Specification Utilities List	=3.1.1	
JCL Utilities	=3.2	=JUTIL
JCL Utilities List	=3.2.1	
Copy Utility	=3.3	=COPY
Submit JCL for Execution	=4	=SUBMIT

Typical Session Activities

There are three categories of activity that you might perform during a typical CA IDMS Extractor session. Each of these activities are detailed below:

- Naming the source and target subschemas
- Creating a Selection Criteria Specification
- Running the Batch Components of CA IDMS Extractor.

This section introduces these activities and shows how to access the CA IDMS Extractor screens where these activities can be performed. Detailed field descriptions and information about how to input data are found in the online documentation.

Naming the Source and Target Subschemas

You must name the source and target subschemas to be used by the Extract and Load Components of CA IDMS Extractor. Do this naming with the Specify Database Build Specification screen, which is displayed when you select option **1** from the Main Menu screen.

Creating a Selection Criteria Specification

After you have named the source subschema, you must specify the selection criteria CA IDMS Extractor will use to extract the target database. This may include:

- Selecting particular areas/records/fields/sets
- Limiting the selection of a record type to a specific FROM/TO page range
- Selecting a record by field value(s)
- Selecting a record by direct DBKEY
- Selecting a group of records within a specified page range, beginning with the first record occurrence within the range
- Selecting a group of records within a specified page range beginning with the *n*th occurrence within the range
- Skipping a specified number of records before selecting the next record occurrence
- Specifying the number of levels to be extracted in a bill-of-materials structure
- Specifying whether you want to extract all owners of extracted recursive records
- Limiting the total number of records selected by record type
- Limiting the number of records selected in each set occurrence

Running the Batch Components

After you have specified the selection criteria, you need to run the Batch Components of CA IDMS Extractor. To do this:

1. Create a JCL stream. Sample JCL is provided with CA IDMS Extractor. Edit this JCL to meet the requirements at your site.
2. Submit the JCL for execution.

See the chapter "Operations" for a detailed description of the JCL.

A Sample Selection Criteria Specification Session

The remainder of this chapter takes you through a sample session that includes the following steps:

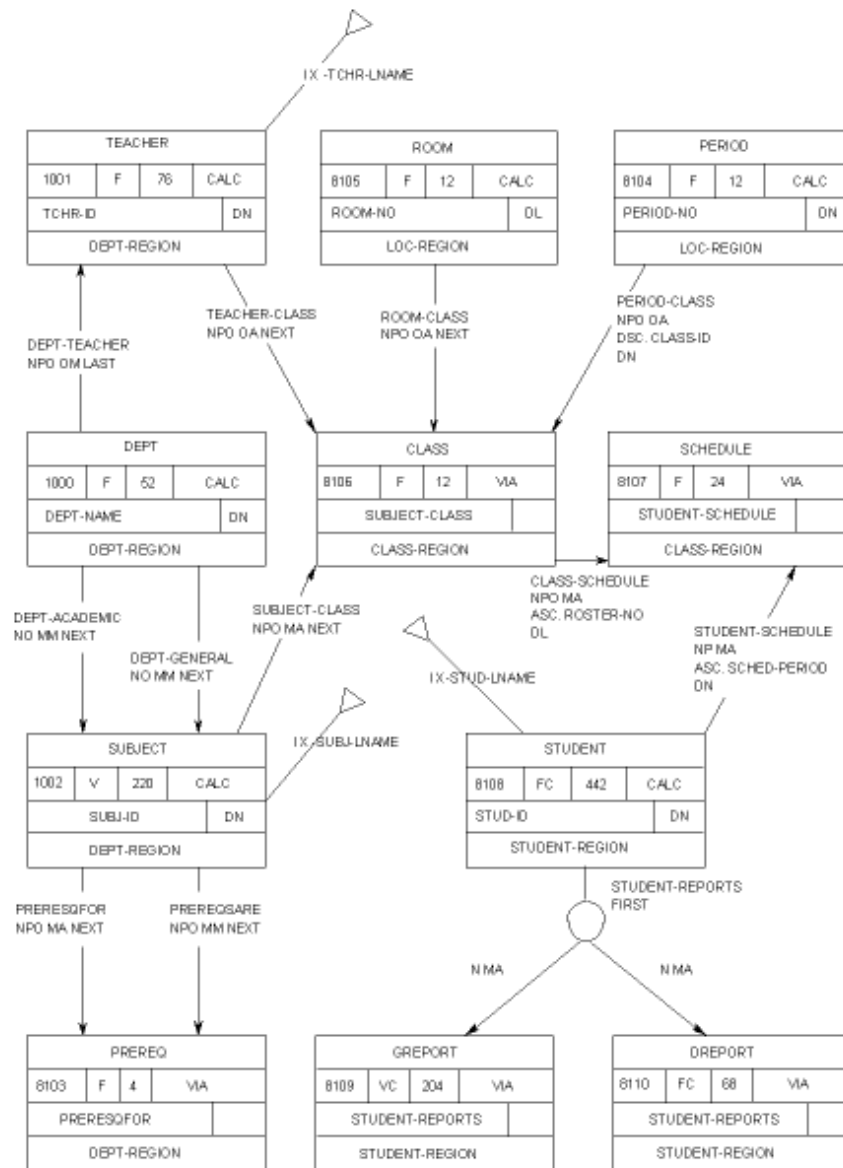
1. Sign on to CA IDMS Extractor.
2. Specify the source and target subschemas.
3. Define the database path.

4. Limit the number of records displayed.
5. Select the entry record.
6. Define Record Level Selection Criteria for the DEPT record.
7. Select sets for the Extract Component.
8. Define Record Level Selection Criteria for the TEACHER record.
9. Select additional record/sets.
10. Return to the Database Entry Point Selection Menu screen.
11. Return to the Specify Database Extract Specification screen.
12. Edit JCL.
13. Submit JCL for execution.
14. Sign off from CA IDMS Extractor.

The data structure diagram for the STUDENT-TEACHER database used in this sample session is shown below.

Information specific to the sample session is shown in each step.

Data Structure Diagram for the Sample Session



Step 1. Sign On to CA IDMS Extractor

To sign on to CA IDMS Extractor:

1. Access your online CA IDMS/DC system.
2. At the CA IDMS/DC system prompt, type the task code assigned by your system administrator to CA IDMS Extractor and press the ENTER key. The default is **DBX**.

The CA IDMS Extractor Main Menu screen is displayed.

The user ID (or, if you did not sign on to CA IDMS/DC, the LTERM ID) is displayed in the upper right corner of the screen. This ID is the ID under which all specifications and JCL members are saved.

For the sample session

You have signed on to CA IDMS/DC prior to invoking CA IDMS Extractor. The user ID in this example is JSMITH. Your specifications and JCL members are saved under the user ID JSMITH.

Main Menu Screen

```
      CCCCCCCC
      CCCCCCCC
                                     Rmm.mm UVyymm USVMEN
      CCC
      CCC      AAAA  USER-ID:  JSMITH
                                     mm/dd/yy hh:mm
      CCC      AAAAA
      CCC      AAAAAA                                     Database Extractor (DBX)
      CCC  AAA  AAA  International,
      CCC  AAA  AAA  Incorporated
      CCAAACCCCCC                                     Copyright (c) 2003
      AAACCCCCCCC                                     CA, Inc.
      AAA      AAA
      AAA      AAA  OPTION ==>
      AAA      AAA

      1 Specify - Specify a Database Extract Selection Criteria Specification
      2 Edit JCL - Edit Execution JCL
      3 Utilities - Perform Utility Functions
      4 Submit - Submit JCL for Execution
      T Tutorial - Display Information (Help) about Database Extractor
      X Exit - Exit Database Extractor
```

Step 2. Specify the Source and Target Subschemas

The Specify Database Extract Specification screen is shown below.

To access this screen:

1. Type **1** in the OPTION field of the CA IDMS Extractor Main Menu screen.
2. Press the ENTER key.

The Specify Database Extract Specification screen is displayed.

Specify Database Extract Specification Screen

```

CA-IDMS/DBX Rnn.nn — Specify Database Extract Specification – hh:mm mm/dd/yy
COMMAND ==>
USVMSPC

Enter Spec Name and, if a new spec, Subschema and DB Names, press ENTER

Specification
Name ==> dept-teacher (blank for Specification list)

Source Subschema ==> testsub1 DMCL ==> CVMCL
Dictionary Name ==>
Dictionary Node ==>
Database Name ==> (or Segment)
Database Node ==>

Target Subschema ==> loadsub1 DMCL ==> CVMCL
Dictionary Name ==>
Dictionary Node ==>
Database Name ==> (or Segment)
Database Node ==>

Compare Subschemas ==> Y (Y/N)

```

Because the specification shown in the Name field is a new specification, you must also enter the names of the source and target subschemas. CA IDMS Extractor allows the same subschema to be named as the source subschema and the target subschema.

For the sample session

The data structure diagram for the STUDENT-TEACHER databases shown in Data Structure Diagram for the Sample Session. For this sample session, the target database is to consist of DEPT records that own TEACHER records, selected from an existing source database. The other selection criteria follow:

- Define a path that has the DEPT record as an Entry Record
- Extract the first DEPT, and every fifth DEPT record after the first
- Limit the number of extracted DEPT records to 40
- Limit the extracted records to a subset of its from/to page range
- Extract every second TEACHER record in the DEPT-TEACHER set
- Place no limit on the number of TEACHER records.

The name of the specification is DEPT-TEACHER and both source and target databases reside in the primary dictionary for the CV under which you are running.

1. Type **DEPT-TEACHER** in the Specification Name field.
2. Use the TAB key to move to the Source Subschema field and type **TESTSUB1**.

3. Use the TAB key to move to the Source Subschema Database Name field and type **STUDTCHR**.
4. Use the TAB key to move to the Target Subschema field and type **LOADSUB1**.
5. Use the TAB key to move to the Target Subschema Database Name field and type **STUDTCHR**.
6. Press the ENTER key.

The Database Entry Point Selection Menu screen is displayed.

Rules for Source and Target Subschemas

All non-system-owned, integrated index records and sets in the source subschema must also be in the target database. The records defined in the source and target subschemas can reside in different areas and can have different page ranges. Additionally, the source and target subschemas must:

- Have record types that are the same length.
- Contain the same record/set relationships. That is, an owner or member of a set in the source database must be an owner or member of the same set type in the target database.
- Be accessible to the online component so that the above rules can be validated. Either subschema can reside in a dictionary load area or in a load/core-image library.

Note: The Compare Subschemas field allows CA IDMS Extractor to bypass comparison of the source and target subschemas. This allows the batch Database Extract Component of CA IDMS Extractor to access a database whose subschema is not accessible by the online Selection Criteria Specification component.

Step 3. Define the Database Path

Use the Database Entry Point Selection Menu screen, shown below, to begin the definition of a database path. A database path tells the Extract Component how to walk through your source database. A path must begin with either an Entry Record or an Entry Index.

- If you want to have only one Entry Record or Index, select either Record or Index and enter the name of the record or index on this screen.
- If you want to have more than one Entry Record or Entry Index or cannot recall the names of the records or indexes in the source subschema, select either Area, Record, or Index and leave the associated name field blank. The names of all areas, records, or system-owned integrated indexes in the source subschema are displayed, and you can select from them.

Database Entry Point Selection Menu Screen

```

CA-IDMS/DBX Rnn.nn—— Database Entry Point Selection Menu —— hh:mm mm/dd/yy
COMMAND ==> USVMENT

Enter S to Show a list of records residing in the area, or
S to Select a Record or Index as an Entry point, or
H to Select a Hierarchy of records starting with the named Record or
Index as an Entry point (this option is not valid with Area), or
N to Select a Network of records starting with the named Record or
Index as an Entry point (this option is not valid with Area), or
D to Deselect a previously selected (*S) item, press ENTER
Note: Leave the name field blank to obtain a list of names.

S Area
Area Name ==> (blank for Area Name List)

Record
Record Name ==> (blank for Record Name List)

Index
Index Name ==> (blank for Index Name List)

An Entry Index must be a System Owned Integrated Index or SPF Index

```

For the sample session

For a list of all areas in the database:

1. Type **S** in the selection field to the left of AREA.
2. Press the ENTER key.

The Area Selection List screen is displayed.

Note: Because we are defining only one path for the sample session Selection Criteria Specification, beginning with the DEPT record, we could have selected Record and filled in the Record Name field with DEPT. However, to illustrate the Area and Record Entry Point Selection List screens, we have selected Area.

Step 4. Limit the Number of Records Displayed

Use the Area Selection List screen to limit the number of records displayed on the Record Entry Point Selection List screen. Select the areas for which you want resident records displayed. An area name is displayed only if it contains at least one user-defined record. Areas containing only integrated index control records are not displayed.

Area Selection List Screen

```
CA-IDMS/DBX Rnn.nn — Area Selection List — hh:mm mm/dd/yy
COMMAND ==> SCROLL ==> PAGE USWMARE

Enter S to Show a list of records residing in the area(s),
D to Deselect all Entry Records in a selected (*S) area,
blank to not show records residing in a selected area, press ENTER

CLASS-REGION
s DEPT-REGION
LOC-REGION
STUDENT-REGION
**END**
```

For the sample session

Because the DEPT record is the only Entry Record and it resides in the DEPT-REGION:

1. Type **S** in the selection field to the left of DEPT-REGION.
2. Press the ENTER key.

The Record Entry Point Selection List screen is displayed.

Step 5. Select the Entry Record

The Record Entry Point Selection List screen is shown below. A list of all records in the area or areas selected on the Area Entry Point Selection screen is displayed. Because the DEPT-REGION was the only area selected, only records residing in the DEPT-REGION are displayed.

Record Entry Point Selection List Screen

```
CA-IDMS/DBX Rnn.nn — Record Entry Point Selection List — hh:mm mm/dd/yy
COMMAND ==> SCROLL ==> PAGE USWMREC

Enter S to Select an Entry Record,
H to Select a Hierarchy of records starting with the selected Record as
an Entry Record,
N to Select a Network of records starting with the selected Record as
an Entry Record,
D to Deselect a previously selected (*S) Record,
blank to not show a previously selected path, press ENTER

s DEPT
PREREQ
SUBJECT
TEACHER
**END**
```

For the sample session

You want DEPT to be the only Entry Record.

1. Type **S** in the selection field to the left of the DEPT record.
2. Press the ENTER key.

The Record Level Selection Criteria screen is displayed for the DEPT record.

Step 6. Define Record Level Selection Criteria--DEPT Record

You must define Record Level Selection Criteria for each Entry Record selected or record indexed by an Entry Index and all records selected in subsequent sets within the path definition. This is the criteria the Database Extract Component uses. The Record Level Selection Criteria screen for the DEPT record is shown below.

CA IDMS Extractor fills in the current Entry Record or Index Name; the current Path Record Name; its from/to page numbers; how the record is accessed; and the area, record, or set name. The record can be accessed by either an area sweep, an Entry Index, or a set walk. In this case, the DEPT record is accessed by an area sweep because it is an Entry Record.

There is also an indication on the screen as to whether the Selection Criteria Specification is complete or not complete. For the example, the Specification is **not** complete.

Record Level Selection Criteria Screen--DEPT Record

```

CA-IDMS/DBX Rnn.nn  — Record Level Selection Criteria  ——— hh:mm mm/dd/yy
COMMAND ==>                                               USVMRLS

Entry Record: DEPT
Path Record:  DEPT           From Page:   088001  To Page:   088015
Accessed By:  AREA SWEEP   of area      DEPT-REGION

Enter S to Select, D or blank to Deselect selection criteria, press ENTER.
Note: The specification is currently complete.

   Direct DBKEY           Page ==> 0000000000 Line   ==> 0000

s Limit Page Range      From Page ==> 0000088003 To Page ==> 0000088008
s Limit Records of This Type      Total Record Count ==> 0000000050
                                   Per Set Occurrence ==> 0000000000
s Skip Between Records      Skip Count ==> 0000000004
  First Within Range
  Nth   Within Range           Which Occurrence ==> 0000000000

Field Level Selection Criteria      Display Criteria? ==> Y (Y/N)

```

For the sample session

You want to limit the selection of DEPT records to a subset of its from/to page range, have the first DEPT and every fifth DEPT record after the first selected, and select no more than 40 DEPT records.

1. Type **S** to the left of the Limit Page Range field.
2. Type **88003** in the From Page field and press the EOF key.
3. Type **88008** in the To Page field and press the EOF key.
4. Type **S** to the left of the Limit Records of This Type field.
5. Type **40** in the Record Count field and press the EOF key.
6. Type **S** to the left of the Skip Between Records field.
7. Type **4** in the Skip Count field and press the EOF key.
8. Type **S** to the left of the First Within Range field.
9. Press the ENTER key.

The Path Record Set Selection List screen is displayed.

Step 7. Select Sets for the Extract Component

The Path-Record Set Selection List screen is shown below. Use this screen to select the sets that you want the Extract Component to walk **from the current path record**. All sets owned by the current record and all sets in which the current record participates as a member are displayed, except a set already selected in a path of this specification. The field in front of the set name indicates whether the current record is an owner or member of that set.

CA IDMS Extractor fills in the current record name and shows how the record is accessed. The DEPT record participates in three sets: DEPT-TEACHER, DEPT-ACADEMIC, and DEPT-GENERAL. The DEPT record is an owner of all of these sets and does not participate as a member in any sets. It is being accessed by an area sweep.

Note: A set can only be selected once in a specification. If you need to access the same set in more than one way, you must define multiple Selection Criteria Specifications. Remember that you can run the CA IDMS Extractor Database Load Component on a non-empty target database.

Path-Record Set Selection List Screen--DEPT Record

```

CA-IDMS/DBX Rnn.nn  Path-Record Set Selection List  hh:mm mm/dd/yy
COMMAND  ==>          SCROLL ==> PAGE  USVMSET

Entry Record: DEPT
Path Record:  DEPT
Accessed By:  AREA SWEEP  of area  DEPT-REGION

Enter S to Select a set (include set in the current path), or
D to Deselect a previously selected (*S) Set (remove set from path), or
END command to terminate the path at current record when creating a new
path, to not process selected sets when viewing an existing path, or
QUIT command to terminate editing of an existing path, press ENTER

Note: You will need to specify Record Level Selection Criteria for each owner
and member record type of all sets included in the path.

Own/Mbr  ___Set Name___
s  Owner  DEPT-TEACHER
   Owner  DEPT-ACADEMIC
   Owner  DEPT-GENERAL
      **END**

```

For the sample session

You want to select the DEPT-TEACHER set.

1. Type **S** in the selection field to the left of the DEPT-TEACHER set.
2. Press the ENTER key.

The Record Level Selection Criteria screen is displayed again for you to specify the Record Level Selection Criteria for the next record in the path definition.

Step 8. Define Record Level Selection Criteria--TEACHER Record

Because the DEPT-TEACHER set was included in the path definition, you must define Record Level Selection Criteria for the TEACHER record. The Record Level Selection Criteria screen for the TEACHER record is shown below.

In this case, DEPT is the Entry Record. The current path record for which Record Level Selection Criteria is being defined is the TEACHER record. The TEACHER record is accessed by walking from the owner (SET-WALK) in the DEPT-TEACHER set.

There is an indication on the screen as to whether this Selection Criteria Specification is complete or not complete. For the example, the specification is **not** complete.

A302101.Record Level Selection Criteria Screen--TEACHER Record

```

CA-IDMS/DBX Rnn.nn  Record Level Selection Criteria  hh:mm mm/dd/yy
COMMAND ==>                                         USVMRLS

Entry Record: DEPT
Path Record:  TEACHER      From Page:  088001  To Page:  088015
Accessed By:  SET WALK    of area  DEPT-TEACHER  set, walked own to mb

Enter S to Select, D or blank to Deselect selection criteria, press ENTER.
Note: The specification is currently not complete.

Direct DBKEY          Page ==> 0000000000 Line ==> 0000
Limit Page Range     From Page ==> 0000088001 To Page ==> 0000088015
Limit Records of This Type      Total Record Count ==> 0000000040
s Skip Between Records          Per Set Occurrence ==> 0000000000
First Within Range              Skip Count ==> 0000000002
Nth Within Range                Which Occurrence ==> 0000000000
Field Level Selection Criteria  Display Criteria? ==> Y (Y/N)
    
```

For the sample session

You want to specify that a TEACHER record should be skipped in between selections:

1. Type **S** to the left of the SKIP BETWEEN RECORDS field.
2. TAB to the SKIP COUNT field, type **2**, and press the EOF key.
3. Press the ENTER key.

The Path Record Set Selection screen is displayed.

If you want to **all** records of this type displayed:

1. Type **A** to the left of the LIMIT RECORDS OF THIS TYPE field.
2. Press the ENTER key.

Step 9. Select Additional Record/Sets

The names of all sets owned by the TEACHER record and all sets in which the TEACHER record participates as a member are displayed on the Path Record Set Selection List screen. If you want to have more records/sets in the path, select the appropriate sets at this time.

Note: After a path set is selected, CA IDMS Extractor displays the Record Level Selection Criteria screen for all associated owner and member records of selected paths. You must specify Record Level Selection Criteria for all records in the path.

Path-Record Set Selection List Screen--TEACHER Record

```

CA-IDMS/DBX Rnn.nn  Path-Record Set Selection List  hh:mm mm/dd/yy
COMMAND  ==>                SCROLL ==> PAGE USVMSET

Entry Record: DEPT
Path Record:  TEACHER
Accessed By:  SET WALK      as member of DEPT-TEACHER      set, walked own to mb

Enter S to Select a set (include set in the current path), or
D to Deselect a previously selected (*S) Set (remove set from path), or
END command to terminate the path at the current record, or
QUIT command to terminate editing of an existing path, press ENTER

Note: You will need to specify Record Level Selection Criteria for each owner
and member record type of all sets included in the path.

Own/Member  Set Name
Owner       TEACHER-CLASS
           **END**

```

For the sample session

You only want to select the DEPT-TEACHER set. Therefore, the path definition is complete.

1. Press PF3. The Record Entry Point Selection screen is displayed.
2. Press PF3. The Database Entry Point Selection Menu screen is displayed.

Record Entry Point Selection List Screen

```

CA-IDMS/DBX Rnn.nn  Record Entry Point Selection List  hh:mm mm/dd/yy
COMMAND  ==>                SCROLL ==> PAGE USVMREC

Enter S to Select an Entry Record,
H to Select a Hierarchy of records starting with the selected Record as
an Entry Record,
N to Select a Network of records starting with the selected Record as
an Entry Record,
D to Deselect a previously selected (*S) Record,
blank to not show a previously selected path, press ENTER

s  DEPT
   PREREQ
   SUBJECT
   TEACHER
   **END**

```

Step 10. Return to the Database Entry Point Selection Menu Screen

The Database Entry Point Selection Menu is shown below. If you want to define another path, or modify the path just defined, select the appropriate area, record, or index and continue with the definition.

Database Entry Point Selection Menu Screen

```

CA-IDMS/DBX Rnn.nn Database Entry Point Selection Menu  hh:mm mm/dd/yy
COMMAND  ==>                                         USVMENT

Enter S to Show a list of records residing in the area, or
S to Select a Record or Index as an Entry point, or
H to Select a Hierarchy of records starting with the named Record or
Index as an Entry point (this option is not valid with Area), or
N to Select a Network of records starting with the named Record or
Index as an Entry point (this option is not valid with Area), or
D to Deselect a previously selected (*S) item, press ENTER
Note: Leave the name field blank to obtain a list of names.

s Area
  Area Name  ==>                                     (blank for Area Name list)

Record
  Record Name ==>                                     (blank for Record Name list)

Index
  Index Name  ==>                                     (blank for Index Name list)

An Entry Index must be a System Owned Integrated Index
    
```

For the sample session

The Selection Specification Criteria are complete.

Press PF3 to end the specification process. The specification is saved on the CA IDMS Extractor database.

The Specify Database Extract Specification screen is displayed.

Step 11. Return to the Specify Database Extract Specification Screen

CA IDMS Extractor returns you to the Specify Database Extract Specification screen shown below. You can edit the specification again, create a new specification, or modify another existing specification. For specifications that you have saved, CA IDMS Extractor allows you to modify the values that you specified, add new path definitions, or delete old specifications.

Specify Database Extract Specification Screen

```

CA-IDMS/DBX Rnn.nn  — Specify Database Extract Specification — hh:mm mm/dd/yy
COMMAND ==>                                               USVMSPC

Enter Spec Name and, if a new spec, Subschema and DB Names, press ENTER

Specification
Name ==> dept-teacher                                     (blank for Specification list)

Source Subschema ==> testsub1   DMCL ==> CVMCL
Dictionary Name ==>
Dictionary Node ==>
Database Name ==>           (or Segment)
Database Node ==>

Target Subschema ==> loadsub1   DMCL ==> CVMCL
Dictionary Name ==>
Dictionary Node ==>
Database Name ==>           (or Segment)
Database Node ==>

Compare Subschemas ==> Y (Y/N)

```

For the sample session

1. Press PF3.

The CA IDMS Extractor Main Menu screen is displayed.

Step 12. Edit JCL

You need to create JCL that executes the Extract and Load Components for the selection criteria that you just specified. The Edit JCL Entry screen is shown below.

To access this screen:

1. Type **2** in the OPTION field on the CA IDMS Extractor Main Menu screen.
2. Press the ENTER key. The Edit JCL screen is displayed.

The CA EDITOR is invoked from this screen, allowing you to edit the JCL member.

You should not specify the PROCESS parameter statement in the JCL member because CA IDMS Extractor creates it for you when the JCL is submitted for execution. You can use one JCL member for several specifications.

Step 13. Submit JCL for Execution

Use the Submit JCL for Execution screen shown below to submit the JCL you created in the prior step.

To access this screen:

1. Type **4** in the OPTION field on the CA IDMS Extractor Main Menu screen.
2. Press the ENTER key. The Submit JCL for Execution screen is displayed.

CA IDMS Extractor creates the correct PROCESS parameter statement for you and bases the parameter statement on the Specification that you enter in the Specification Name field. The parameter statement is placed after the first SYSIPT statement in your JCL.

Submit JCL for Execution Screen

```

CA-IDMS/DBX Rnn.nn  Submit JCL for Execution  &cont.
hh:mm mm/dd/yy
COMMAND ==> USVMSJB

Enter JCL Member Name and Specification Name to be submitted, press ENTER.
Note: You need to fill in the rest of the fields if you are having DBX insert
a parameter statement into the JCL stream.

JCL Member
Name ==> STUDENT-DATABASE                (blank for Member Name list)

Specification
Name ==> DEPT-TEACHER                    (blank for Specification list)

Insert Parns into JCL? ==> Y (Y/N)      Compare Subschemas? ==> Y (Y/N)
Transient SSC Name ==>                  Extract User Exit ==>

Create SIGNON stmt? ==> Y (Y/N)         Dictionary Password ==> password
SIGNON User ID ==> userid

New Source SSC Name ==>                 DMCL Name ==>
Dict Name/Node => /                      DB Name/Node => /

```

For the sample session

Press the ENTER key, accepting all of the default values and actions. The Submit JCL for Execution screen is redisplayed with the message DBX0039I JCL SUBMITTED displayed under the COMMAND field.

Step 14. Sign Off From CA IDMS Extractor

To sign off CA IDMS Extractor:

- Return to the CA IDMS Extractor Main Menu screen, type **X** in the OPTION field, and press the ENTER key
- Type **=X** in the COMMAND/OPTION field of any screen, or press the PF key associated with the **=X** command.

You return to CA IDMS/DC system prompt.

If you were editing a JCL member or specifying a Selection Criteria Specification when either the **X** or **=X** command is entered, your JCL member or Selection Criteria Specification is saved prior to exiting to CA IDMS/DC.

Signing off ends your CA IDMS Extractor session. Any changes you have made to your PF key assignments are saved.

How Specifications and JCL Members are Saved

If you are signed onto CA IDMS/DC when you execute CA IDMS Extractor, your specifications and JCL members are saved on the CA IDMS Extractor database under your user ID. If you are not signed onto CA IDMS/DC when you execute CA IDMS Extractor, your specifications and JCL members are saved on the CA IDMS Extractor database under your logical terminal identifier (LTERM ID) of the terminal you are using.

If you enter CA IDMS Extractor again and have not signed on to CA IDMS/DC, you are not able to access your specifications saved in the previous session.

If you enter CA IDMS Extractor again, either after signing on to CA IDMS/DC, or after your terminal is given a different LTERM ID by CA IDMS/DC, you are also not able to access your specifications saved in the previous session.

You should sign on to CA IDMS/DC before using CA IDMS Extractor.

Additional Screens

The CA IDMS Extractor screens listed below were not covered in the sample CA IDMS Extractor session:

- Specify Specification List
- Begin Edit Record Selection List
- Index Entry Point Selection List

- Area Deselection
- Entry Record/Index Deselection
- Path Set Deselection
- Field Level Selection Criteria
- Record/Element Review
- Field Level Criteria Deselection
- Confirm Subschema Record Date
- Field Mismatch
- Utilities Menu
- Specification Utilities
- JCL Utilities
- Copy Utility

A brief description of each screen is given on the following pages. See the online documentation for additional information about these screens.

Specify Specification List Screen

The Specify Specification List screen, shown below, is displayed when the Specification Name field on the Specify Database Extract Specification screen is left blank. The names of all specifications that you have previously saved are displayed on this screen.

The COMPLETE field indicates whether you have specified Record Level Selection Criteria for ALL selected records/sets in all paths in the specification. If N(o) is shown, you must finish the specification before using it.

To select a specification for viewing or modification:

1. Type **S** in the selection field to the left of the specification name you want to select.
2. Press the ENTER key.

Specify Specification List Screen

```

CA-IDMS/DBX Rnn.nn — Specify Specification List ——— hh:mm mm/dd/yy
COMMAND ==> SCROLL ==> PAGE USVMSPL

Enter S to Select a Specification to Edit, press ENTER

———Specification Name——— Created Last Modified Size Complete
s DEPARTMENT-TEACHER mm/dd/yy mm/dd/yy hh:mm 11 Y
**END**

```

Begin Edit Record Selection List Screen

The Begin Edit Record Selection List screen, shown below, is displayed when you specify **Y** in the Begin viewing/editing in the middle of a path definition field on the Specify Database Extract Specification screen. This field is only displayed when viewing a previously saved specification.

Use this screen to bypass the viewing of all the Record Level Selection Criteria and Path-Record Set Selection List screens that would appear if you were to view the path definition beginning with the Entry Record or Index. A list of all records and the sets in which the record participates in, and which are included in your path definition, are displayed on this screen.

The RLSC field indicates whether Record Level Selection Criteria have been specified for the indicated record/set.

The Recursive field indicates whether or not the record in the set is recursive.

To select a record to begin viewing or editing:

1. Type **S** in the selection field to the left of the record name you want to select.
2. Press the ENTER key.

Begin Edit Record Selection List Screen

```

CA-IDMS/DBX Rnn.nn  — Begin Edit Record Selection List  ——— hh:mm mm/dd/yy
COMMAND ==>                               SCROLL ==> PAGE  USVMBER
DBX0018I EDITING AN EXISTING SELECTION CRITERIA SPECIFICATION

Enter S to Select the record/set at which viewing/editing of an existing path
definition is to begin, or
END command to return to the Specify Database Extract Specification
screen, press ENTER

—Record Name—  —Type—  —Set Name—  Set Walked From  RLSC  Recursive
DEPT            Owner   DEPT-TEACHER  Entry Record    Y     N
SUBJECT        Member  DEPT-ACADEMIC  Owner to Member  Y     N
**END**
    
```

Index Entry Point Selection List Screen

The Index Entry Point Selection List screen, shown below, is displayed when you select Index on the Database Entry Point Selection Menu screen and leave the Index Name field blank.

To select indexes that are to be entry points into the source database (that is, indexes that define the beginning of a path definition):

1. Type **S** in the selection field to the left of the index you want to select as an entry point.
2. Press the ENTER key.

Index Entry Point Selection List Screen

```

CA-IDMS/DBX Rnn.nn----- Index Entry Point Selection List ----- hh:mm mm/dd/yy
COMMAND ==> SCROLL ==> PAGE USWMIDX

Enter S to Select an Entry Index,
    H to Select a Hierarchy of records starting with the selected Index as
        an Entry Index,
    N to Select a Network of records starting with the selected Index as
        an Entry Index,
    D to Deselect a previously selected (*S) Index,
    blank to not show a previously selected path, press ENTER

s  IX-SUBJ-LNAME
**END**

```

Area Deselection Screen

The Area Deselection screen, shown below, is displayed when you deselect an entry area on the Database Entry Point Selection Menu screen.

Deselecting an entry area implies that ALL entry records residing in the area are deselected. Deselecting an entry record implies that the ENTIRE path definition will be deleted.

Each previously selected area is shown with an *S to the left of its name. To deselect an area, type a **D** to the left of the name you want deselected and press the ENTER key.

When the Area Deselection screen appears, you have two processing options:

- Press the ENTER key to continue with the deselection or
- Type the **END** command or press the End PF key to cancel the deselection.

Area Deselection Screen

```

CA-IDMS/DBX Rnn.nn  Area/Record/Index/Set Deselection  hh:mm mm/dd/yy
COMMAND ==>                                         USVMDSL

*****
**                                                                 **
**      WARNING  _____ WARNING  _____ WARNING      **
**                                                                 **
**                                                                 **
**      You are requesting to DESELECT a previously selected AREA  **
**                                                                 **
**              Entry Area:  DEPT-REGION                          **
**                                                                 **
**      Note: Deselecting an Entry Area implies that ALL Entry    **
**            Records residing in the area will be deselected.    **
**                                                                 **
**      Do you want only THIS set deselected or this set and ALL  **
**      selected sets in the path AFTER this set also deselected? **
**      Enter Deselection Type (T/A) ==> A                          **
**                                                                 **
**      Press ENTER key to Deselect or enter an END command to cancel.  **
**                                                                 **
*****

```

Entry Record/Index Deselection Screen

The Entry Record/Index Deselection screen, shown below, is displayed when you deselect an Entry Record or Entry Index on the Database Entry Point Selection Menu screen.

Deselecting an Entry Record or Entry Index implies that the ENTIRE path definition is deleted.

Each previously selected Entry Record or Entry Index is shown with an *S to the left of its name. To deselect the Entry Record or Entry Index, type a **D** to the left of the name you want deselected and press the ENTER key.

When the Entry Record/Index Deselection screen appears, you have two processing options:

- Press the ENTER key to continue with the deselection or
- Type the **END** command or press the End PF key to cancel the deselection.

Entry Record/Index Deselection Screen

```

CA-IDMS/DBX Rnn.nn  Area/Record/Index/Set Deselection  hh:mm mm/dd/yy
COMMAND ==>                                               USVMSL

*****
**
**          WARNING          WARNING          WARNING
**
**
**      You are requesting to DESELECT a previously selected RECORD
**
**              Entry Record: SUBJECT
**
**      Note: Deselecting an Entry Record/Index implies that the
**              ENTIRE path definition will be deleted.
**
**      Do you want only THIS set deselected or this set and ALL
**      selected sets in the path AFTER this set also deselected?
**      Enter Deselection Type (T/A) ==> A
**
**      Press ENTER key to Deselect or enter an END command to cancel.
**
*****

```

Path Set Deselection Screen

The Path Set Deselection screen is displayed when you deselect a path set on the Path-Record Set Selection List screen. Deselecting a path implies that all sets selected in the path after the deselected set are also deselected. However, the deselected process stops at recursive records. Sets selected in the path after recursive records are not deselected. This allows you to flip-flop the way sets are walked in recursive structures.

Deselecting a path set can have one of two effects:

- **If the path set does not participate in a recursive structure**, deselecting a path set implies that ALL sets selected in the path AFTER the deselected set are also deselected.
- **If the owner-member record of this set participates in a recursive structure** and is therefore accessed by other sets in the path, you have one of the following options:
 - Deselect THIS set only (Option T)
 - Deselect this set and ALL selected sets in the path AFTER this set (Option A).

Thus, you can deselect only one set or flip-flop the way a recursive bill-of-materials structure is walked.

Path Set Deselection Screen Non-Recursive Structure

```

CA-IDMS/DBX Rnn.nn  Area/Record/Index/Set Deselection  hh:mm mm/dd/yy
COMMAND ==>                                               USVMSL

*****
**
**          WARNING  _____ WARNING  _____ WARNING
**
**
**      You are requesting to DESELECT a previously selected SET
**
**          Path Set:    DEPT-TEACHER
**
**      Note: Deselecting a Path Set implies that ALL sets
**            selected in the path AFTER the deselected set
**            will also be deselected. However, the destination
**            process stops at recursive records. Sets selected
**            in the path AFTER recursive records will not be
**            deselected.
**
**      Press ENTER key to Deselect or enter an END command to cancel.
**
*****
    
```

Field Level Selection Criteria Screen

The Field Level Selection Criteria screen, shown below, is displayed when the Field Level Selection Criteria field is selected on the Record Level Selection Criteria screen. This screen is used to select field level criteria for the specified path record.

To define field level selection criteria:

1. Type **S** in the selection field to the left of one of the operands you want to select or type **S** in the selection field to the left of one of the range options you want to select.
2. Press the ENTER key.

Field Level Selection Criteria Screen

```

CA-IDMS/DBX Rnn.nn—— Field Level Selection Criteria —— hh:mm mm/dd/yy
COMMAND ==> USVMFLS

Entry Index: DEPT VIEWING Criterion 001 of 002
Path Record: TEACHER
Accessed By: SET WALK as member of DEPT-TEACHER set, walked own to mb

Enter the criterion number you wish to view/edit, or
S to Select one (1) of the operators to be applied against the data you
specify on subsequent Record Element screen(s), or
END command to end viewing/editing field level criteria, press ENTER

Extract a record from the source database if its data is

EQ (=) S NE (=) LT (<) LE (<=) GT (>) GE (>=)

the data specified on the following Record Element screen, OR

Within Not Within

the range of data specified on the following two Record Element screens.

Specify Character for Record Element screen ==> \

```

Record/Element Review Screen

The Record/Element Review screen, shown below, is displayed after selecting an operand on the Field Level Selection Criteria screen. This screen is used to specify values that CA IDMS Extractor uses to determine which records to extract from the source database.

Example

To have CA IDMS Extractor select records where the DEPT-ROOM-NO is not equal to zero:

1. Type **0** for all the field values for the DEPT-ROOM-NO field and press the EOF key.
When values are entered in multiple fields, each field must satisfy the condition or database record is not extracted. In this example, DEPT-ROOM-NO(1) must be not=0 **and** DEPT-ROOM-NO(2) must be not=0, etc. for the database record to be extracted.
2. Type the **END** command or press the End PF key to save the criteria and return to the Field Level Selection Criteria screen.

At this time, another criteria can be specified by selecting another operator and pressing the ENTER key again. In this situation, the database record would be extracted if its data satisfied either Criteria 1 **or** Criteria 2.

Record/Element Review Screen

```

GSI Rnn.nn _____ Record/Element Review _____ h
COMMAND ==> _____ GSIRECC0
TDB0077I MODIFY FIELD SELECTION DATA FOR "NOT_EQUAL" (NE) CONDITION
RECORD: DEPT V 6 _____ DICT:
_____ DSPEC: \ LINE 0001 OF 009

02 DEPT-NAME..... A
02 DEPT-HEAD..... A
02 DEPT-ROOM..... G
05 DEPT-ROOM-NO(0001)..... P 000
05 DEPT-ROOM-NO(0002)..... P 000
05 DEPT-ROOM-NO(0003)..... P 000
05 DEPT-ROOM-NO(0004)..... P 000
05 DEPT-ROOM-NO(0005)..... P 000
05 DEPT-ROOM-NO(0006)..... P 000
    
```

Record/Element Display & Modification Commands

The following commands are active at the Record/Element Review screen:

Command	Function
DISPLAY	Redisplay the record after using the SET command.
EXIT	Leave the record display and return to the CA IDMS Extractor session.
INITIALIZE	Ensure that all record element descriptions are available and initialize elements to null values.
QUIT	Leave record display, terminate the CA IDMS Extractor session, and return to the CA IDMS/DC system prompt.
SET HEX/NATIVE	Change the display format to/from hexadecimal format.
SET AUTOHEX	Change the display format of any element whose data content does not match its picture and/or usage to hexadecimal.
SET LOWERCASE	Change the display format of any element to lowercase.

Record/Element Display & Modification Commands Syntax Summary

DISPLAY [CONTINUE]

EXIT

INITialize record-name

QUIT

```
[SET] AutoHEX < ON >
          /      \
          \ OFF /
```

```
[SET] eLement < HEX >
          /      \
          \ NATIVE /
```

```
[SET] LowerCASE < ON >
          /      \
          \ OFF /
```

DISPLAY Command

DISPLAY [CONTINUE]

Use the DISPLAY command to redisplay the record under review or modification. You must enter this command in order to enact a SET AUTOHEX, SET HEX/NATIVE, or SET LOWERCASE command.

Rule for the DISPLAY Command

Record display may exhaust available CA IDMS Extractor storage before all fields (or occurrences) are formatted. CA IDMS Extractor responds by displaying a warning message to inform you of this condition. Use the DISPLAY CONTINUE command to begin formatting at the point in the record where storage is exhausted.

EXIT Command

eXit

Use the EXIT command to leave the record display and return to the CA IDMS Extractor session.

INITIALIZE Command

INITialize record-name

Use the INITIALIZE command at the Record/Element Review screen to ensure that all record element descriptions are available and to initialize elements to null values appropriate to usage: numeric fields are initialized to zero and others are initialized to spaces.

QUIT Command

Quit

Use the QUIT command to leave the record display, terminate the CA IDMS Extractor session, and return to the CA IDMS/DC system prompt.

SET AUTOHEX Command

```
[SET] AutoHEX < ON >
           /      \
           \ OFF /
```

Use the SET AUTOHEX command to automatically change the record/element display format of any element whose data contents does not match its PICTURE and/or USAGE to hexadecimal. Items with valid data are not affected.

If ON or OFF is not specified, the option is toggled.

If AUTOHEX is specified while a record is being displayed, enter the DISPLAY command to change the fields on the current display.

SET HEX/NATIVE Command

```
[SET] element < HEX >
           /      \
           \ NATIVE /
```

Use the SET HEX/NATIVE command to change the display format of a specific element to/from hexadecimal format.

The command does not cause the record, group, or element to be displayed. The new mode takes effect only when you enter the DISPLAY command or when a new occurrence of the record is obtained from the database.

When you specify NATIVE at the element level, CA IDMS Extractor displays the level number and usages of the specified element in the message area.

SET LOWERCASE Command

```

      /      \
[SET] LowerCASE < ON >
      \      /
      OFF /

```

Use the SET LOWERCASE command to change the display format of any element to lowercase.

If ON or OFF is not specified, the option is toggled.

If LOWERCASE is specified while a record is being displayed, enter the display command to change the fields on the current display.

Field Level Criteria Deselection Screen

The Field Level Criteria Deselection screen, shown below, is displayed when you want to deselect ALL field level selection criteria for a selected record. To deselect the field level criteria, place a **D** to the left of the Field Level Selection Criteria field on the Record Level Selection Criteria screen and press the ENTER key.

When the Field Level Criteria Deselection screen appears, you have two processing options:

- Press the ENTER key to continue with the deselection or
- Type the **END** command or press the End PF key to cancel the deselection.

Field Level Criteria Deselection Screen

```

CA-IDMS/DBX Rnn.nn—— Field Level Criteria Deselection —— hh:mm mm/dd/yy
COMMAND ==> USVMDSF

*****
**
**          WARNING —— WARNING —— WARNING          **
**
**      You are requesting to DESELECT previously specified      **
**
**              FIELD LEVEL SELECTION CRITERIA              **
**
**      Entry Record: DEPT                                     **
**      Path Record:  TEACHER                                 **
**      Accessed By:  SET WALK      of area      DEPT-TEACHER   **
**
**
**      Note: Continuing with the Deselection will cause all Field Level
**              Selection Criteria for the named record to be deleted.
**
**      Press ENTER key to Deselect or enter an END command to cancel.
**
*****

```

Confirm Subschema Record Date Screen

The Confirm Subschema Record Date screen, shown below, is displayed when you are viewing or editing an existing path definition and want to look at Field Level Selection Criteria for a record. If the dictionary has been updated and any element within that record has changed since the last time the specification was saved, this screen is displayed.

The Confirm Subschema Record Date screen warns you that the dictionary has been updated since the last time you specified Field Level Selection Criteria for that record. If elements were added to or deleted from the dictionary, or the lengths of any element changed, you will not be able to use the Field Level Selection Criteria you specified. The name of the record and the date at which the record was updated in the dictionary are displayed.

When the Confirm Subschema Record Date screen appears, you have two processing options:

- Press the ENTER key to continue with the deletion of the Field Level Selection Criteria or
- Type the **END** command or press the End PF key to continue using the Field Level Selection Criteria.

Confirm Subschema Record Date Screen

```

CA-IDMS/DBX Rnn.nn Confirm Subschema Record Date hh:mm mm/dd/yy
COMMAND ==> USVMCFD

*****
**
**          WARNING          WARNING          WARNING          **
**
**          The DEPT record in the dictionary was updated as of mm/dd/yy.
**          You created and saved Field Level Selection Criteria for
**          this record prior to it being updated.
**
**          If elements were added or deleted or the lengths of any
**          elements changed, you will NOT be able to use the
**          Field Level Selection Criteria you specified.
**
**          Press ENTER to delete the Field Level Selection Criteria.
**
**          Use END command to continue using the Field Level Selection Criteria.
**
*****

```

Field Mismatch Screen

The Field Mismatch screen, shown below, is displayed when you are viewing or editing an existing path definition and you want to look at the Field Level Selection Criteria for a record. This screen is displayed after the Confirm Subschema Record Date screen.

The Field Mismatch screen informs you that the dictionary has been updated since the last time you specified Field Level Selection Criteria for the record. The data lengths or displacements of the fields defined in the dictionary no longer match the data lengths or displacements of the fields in your Field Level Selection Criteria.

When the Field Mismatch screen appears, you have two processing options:

- Press the ENTER key to continue with the deletion of the Field Level Selection Criteria.
- Type the **END** command or press the End PF key to return to the Field Level Selection Criteria screen.

Field Mismatch Screen

```

CA-IDMS/DBX Rnn.nn----- Field Mismatch ----- h
COMMAND ==>
DBX0079E FIELD LEVEL CRITERIA CANNOT BE USED FOR THE DEPT RECORD
USVMFMM

*****
**
**          WARNING ----- WARNING ----- WARNING          **
**
**          The data lengths or displacements of fields defined in the **
**          dictionary for the DEPT          record do NOT match **
**
**          the data lengths or displacements of fields in the **
**          Field Level Selection Criteria which was saved on **
**          the DBX database. **
**
**          Press ENTER to delete the Field Level Selection Criteria. **
**
**          Use END command to return to Field Level Selection Criteria screen. **
**
*****

```

Utilities Menu Screen

The Utilities Menu screen, shown below, is displayed when option **3** (utilities) is specified on the CA IDMS Extractor Main Menu. The Utilities Menu screen gives you the following options:

Deleting, Printing, or Renaming Selection Criteria Specifications

1. Type **1** in the OPTION field.
2. Press the ENTER key. The Specification Utilities screen is displayed.

Deleting, Printing, or Renaming JCL Members

1. Type **2** in the OPTION field.
2. Press the ENTER key. The JCL Utilities screen is displayed.

Copying Selection Criteria Specifications or JCL Members

1. Type **3** in the OPTION field.
2. Press the ENTER key. The Copy Utility screen is displayed.

Utilities Menu Screen

```
CA-IDMS/DBX Rnn.nn----- Utilities Menu -----
OPTION  ==> 1                                     USWMUTI

Enter Option, press ENTER

  1 Specification - Delete, Print, or Rename Selection Criteria
                        Specifications
  2 JCL Member    - Delete, Print, or Rename JCL Members
  3 Copy         - Copy Selection Criteria Specifications or JCL Members
```

Specification Utilities Screen

The Specification Utilities screen, shown below, is displayed when option **1** is specified on the Utilities Menu screen. The Specification Utilities screen allows you to delete, rename, or print a specification.

Deleting a Selection Specification

1. Type **D** in the OPTION field.
2. Type the name of the specification you want to delete in the Name field.
3. Press the ENTER key.

Renaming a Selection Criteria Specification

1. Type **R** in the OPTION field.
2. Type the name of the specification you want to rename in the Name field.
3. Type a new name for the specification in the Newname field.
4. Press the ENTER key.

Printing a Selection Criteria Specification

The -MODEL-PRINT-SPEC member must first be copied and renamed to PRINT-SPEC then edited to tailor it for your environment. This JCL is submitted to perform the actual printing of the specification.

1. Type **P** in the OPTION field.
2. Type the name of the specification you want to print in the Name field.
3. Press the ENTER key.

Specification Utilities Screen

```

CA-IDMS/DBX Rnn.nn----- Specification Utilities ----- hh:mm mm/dd/yy
OPTION  ==> D                                     USVMSUT

blank - Display Specification List
D - Delete Spec          R - Rename Spec (From "Name" to "Newname")
P - Print Spec

Enter Option and optional Specification Name(s), press ENTER

Specification
Name ==>>>> DEPT-TEACHER                (if option "D", "P", or "R")
Newname ==>                               (if option "R")

```

JCL Utilities Screen

The JCL Utilities screen, shown below, is displayed when option **2** is specified on the Utilities Menu screen. Use the JCL Utilities screen to delete, rename, or print a JCL member.

Deleting a JCL Member

1. Type **D** in the OPTION field.
2. Type the name of the JCL member you want to delete in the Name field.
3. Press the ENTER key.

Renaming a JCL Member

1. Type **R** in the OPTION field.
2. Type the name of the JCL member you want to rename in the Name field.
3. Type a new name for the JCL member in the Newname field.
4. Press the ENTER key.

Printing a JCL Member

The -MODEL-PRINT-JCL member must first be copied and renamed to PRINT-JCL and then edited to tailor it for your environment. This JCL is submitted to perform the actual printing of the JCL member.

1. Type **P** in the OPTION field.
2. Type the name of the JCL member you want to print in the Name field.
3. Press the ENTER key.

JCL Utilities Screen

```
CA-IDMS/DBX Rnn.nn----- JCL Utilities -----
OPTION  ==> D                                                    USMJUT

blank - Display JCL Member List
D - Delete JCL          R - Rename JCL (From "Name" to "Newname")
P - Print JCL

Enter Option and optional JCL Member Name(s), press ENTER

JCL Member
Name ==>>> STUDENT-DATABASE                (if option "D", "P", or "R")
Newname ==>                                (if option "R")
```

Copy Utility Screen

The Copy Utility screen, shown below, is displayed when option **3** is specified on the Utilities Menu screen. Use the Copy Utility screen to copy a Selection Criteria Specification or JCL member from any CA IDMS Extractor user ID, including yours elf.

Copying a Selection Criteria Specification

1. Type **1** in the OPTION field.
2. Type the user ID or LTERM ID you want to copy from in the Copy from User-id field.
3. Type the name of the Selection Criteria Specification in the Name field.
4. Type a name for the copied Selection Criteria Specification in the Newname field.
5. Press the ENTER key.

Copying a JCL Member

1. Type **2** in the OPTION field.
2. Type the user ID or LTERM ID you want to copy from in the Copy from User-id field.
3. Type the name of the JCL member in the Name field.
4. Type a name for the copied JCL member in the Newname field.
5. Press the ENTER key.

Copy Utility Screen

```
CA-IDMS/DBX Rnn.nn—— Copy Utility ——&
OPTION ==> 1                                USMCPY

  1 - Copy a Selection Criteria Specification
  2 - Copy a JCL Member

Enter Option, From User-id, and optional Name(s), press ENTER

Copy from User-id ==> userid

Specification/JCL
Name ==>>> DEPT-TEACHER                    (blank for member list)
Newname ==> NEW-DEPT-TEACHER
```


Chapter 4: Reports

This chapter describes the Extract Audit Report and the Load Audit Report produced by CA IDMS Extractor. Included is an example of each report along with a brief description of each field contained in the report.

This section contains the following topics:

[CA IDMS Extractor Audit Reports](#) (see page 67)

[Extract Audit Report](#) (see page 68)

[Load Audit Report](#) (see page 74)

CA IDMS Extractor Audit Reports

CA IDMS Extractor produces two audit reports:

- EXTRACT audit report
- LOAD audit report

Each report displays information on run times, input parameters, processing statistics, processing options, database statistics, and any processing errors that may have occurred. See **Error! Reference source not found.** page=no. for complete error message information.

Common Report Header Information

The header portion of the Extract and Load Audit report is identical. Load Audit Reports are shown below.

ID	RELEASE Rnn.nn	CA IDMS/DATABASE EXTRACTOR EXTRACT AUDIT REPORT	DATE mm/dd/yy	TIME hh:mm:ss	PAGE nnnn
----	-------------------	--	------------------	------------------	--------------

Field Descriptions

The table below describes each of the header fields.

Report Field	Description
Rnn.nn	The version of CA IDMS Extractor that was installed, where <i>nn.nn</i> represents the release number and the subrelease number.

Report Field	Description
Report Title	The report shown below is titled: EXTRACT AUDIT REPORT. It is produced by the Database Extract Component of CA IDMS Extractor. The Database Load Component of CA IDMS Extractor produces the LOAD AUDIT REPORT.
mm/dd/yy	The date on which the report was run where <i>mm</i> indicates the month, <i>dd</i> indicates the day, and <i>yy</i> indicates the year.
hh:mm:ss	The time at which the report was run where <i>hh</i> indicates the hour, <i>mm</i> indicates the minute, and <i>ss</i> indicates the second. The time is shown in 24 hour format.
nnnn	The page number within the report.

Extract Audit Report

The following section contains an example of the Extract Audit Report and a description of the fields that appear below the header information.

Processing Messages and Statistics

ID	RELEASE Rnn.nnn	CA IDMS/DATABASE EXTRACTOR EXTRACT AUDIT REPORT	DATE mm/dd/yy	TIME hh:mm:ss	PAGE nnnn
		V-+-----1-----2-----3-----4-----5-----6-----7-V			
NKWP091I		INPUT PARAMETER STATEMENT			
NKWP092I		CONTINUATION STATEMENT			
PARM002I		NO PARAMETER ERRORS DETECTED			
NKWP094I		END OF PARAMETER INPUT			
PSUB003I		SOURCE PSUB STORAGE REQUIRED.....18,072 BYTES			
PSUB003I		TARGET PSUB STORAGE REQUIRED.....18,072 BYTES			
RETS001I		THE SPECIFICATION WAS SUCCESSFULLY RETRIEVED			
RETS005I		RETRIEVING SUBSCHEMA TESTSUB1; USING DICTNAME **NONE**, DICTNODE **NONE**			
XTRC001I		USING SUBSCHEMA TESTSUB1; COMPILED mm/dd/yy hh:mm:ss; DMCL CVDML DBNAME STUDTCHR			
XTRC002I		EXTRACT STEP STARTED mm/dd/yy hh:mm&colo.			
XTRC003I		STORAGE-POOL SIZE.5,856 BYTES			
XTRC004I		INITIATING RECORD BINDS			
XTRC005I		INITIATING READIES			
		READY SHARED RETRIEVAL SUCCESSFUL FOR AREA CLASS-REGION			
		READY SHARED RETRIEVAL SUCCESSFUL FOR AREA DEPT-REGION			
		READY SHARED RETRIEVAL SUCCESSFUL FOR AREA INDX2-REGION			
		READY SHARED RETRIEVAL SUCCESSFUL FOR AREA INDX3-REGION			
		READY SHARED RETRIEVAL SUCCESSFUL FOR AREA LOC-REGION			
		READY SHARED RETRIEVAL SUCCESSFUL FOR AREA STUDENT-REGION			
XTRC006I		BEGINNING SWEEP OF AREA DEPT-REGION mm/dd/yy hh:mm:ss			
XTRC007I		END OF AREA SWEEP mm/dd/yy hh:mm&			
XTRC012I		EXTRACT STEP ENDED mm/dd/yy hh:mm&			
XTRC013I		EXTRACTS STATISTICS . . .			
		EXTRACTS WRITTEN.....128			
		DBX PROCESSING EXTRACTS.....9			

Field Descriptions

Report Field	Description
Input parameter statement ruler	Indicates the 80 positions of the parameter statement. Enter all syntax in columns 1 through 72.
INPUT PARAMETER STATEMENTS	List of all parameter statements input for this execution of CA IDMS Extractor.
SOURCE PSUB STORAGE REQUIRED	The amount of storage, in bytes, required for building the pseudo subschema table of the source subschema.
TARGET PSUB STORAGE REQUIRED	The amount of storage, in bytes, required for building the pseudo subschema table of the target subschema.
Informative message	Indicates that the Selection Criteria Specification named on the PROCESS parameter statement was successfully retrieved from the CA IDMS Extractor database.
USING SUBSCHEMA	The name of the source subschema used by the Database Extract Component.
EXTRACT STEP STARTED	The date and time at which the EXTRACT step was started in the format <i>mm/dd/yy</i> and <i>hh:mm:ss</i> .
STORAGE POOL SIZE	The size of the storage pool, in bytes, required for the extract record and save stack.
INITIATING READIES	The names of areas in the source database that were successfully readied for processing. These areas are always readied in shared retrieval mode.
BEGINNING SWEEP	The date and time CA IDMS Extractor began walking an index in the format <i>mm/dd/yy</i> and <i>hh:mm:ss</i> .
END OF AREA SWEEP	The date and time CA IDMS Extractor ended walking of an index in the format <i>mm/dd/yy</i> and <i>hh:mm:ss</i> .
EXTRACT STEP ENDED	The date and time at which the EXTRACT step ended in the format <i>mm/dd/yy</i> and <i>hh:mm:ss</i> .
EXTRACTS WRITTEN	The total number of extracts written.
DBX PROCESSING EXTRACTS	The number of extracts required by the EXTRACT step to describe the Specification's Path (or paths).

Areas/Records/Sets Extracted

The following fields display the areas, records, and sets that participated in the extraction. See the example shown below.

ID	RELEASE Rnn.nn	CA IDMS/DATABASE EXTRACTOR EXTRACT AUDIT REPORT	DATE mm/dd/yy	TIME hh:mm:ss	PAGE nnnn
SPECIFICATION: DEPT-TEACHER					
***** ***** A R E A S / R E C O R D S / S E T S E X T R A C T E D ***** *****					
SUBSCHEMA...TESTSUB1 DICTNAME **NONE**; DICTNODE **NONE**; DBNAME STUdTCHR; DBNODE **NONE**					
AREA...CLASS-REGION	NOSWEEP	LOPAGE (***)89,001) HIPAGE(***)89,030) FROM(*****)) TO(*****))			
SET...CLASS-SCHEDULE		WALKED FROM CLASS - OWNER TO MEMBER			
MEMBER...SCHEDULE		FROM(*****06,001) TO(*****06,020) DBKEY(*****- - - - -) SKIP(*****)) LIMIT(*****)) PERSET(*****)) NTHWR(*****)) LEVEL(*****))			
AREA...DEPT-REGION	SWEEP	LOPAGE(***)88,001) HIPAGE(***)88,015) FROM(***)88,001) TO(***)88,015)			
ENTRY RECORD...DEPT		FROM(*****88,001) TO(*****88,015) DBKEY(*****- - - - -) SKIP(*****)) LIMIT(*****)) PERSET(*****)) NTHWR(*****)) LEVEL(*****))			
SET...DEPT-TEACHER		WALKED FROM DEPT - OWNER TO MEMBER			
MEMBER...TEACHER		FROM(*****88,001) TO(*****88,015) DBKEY(*****- - - - -) SKIP(*****)) LIMIT(*****)) PERSET(*****)) NTHWR(*****)) RECUR LEVEL(*****))			
SET...DEPT-ACADEMIC		WALKED FROM DEPT - OWNER TO MEMBER			
MEMBER...SUBJECT		FROM(*****91,001) TO(*****91,080) DBKEY(*****- - - - -) SKIP(*****)) LIMIT(*****)) PERSET(*****)) NTHWR(*****)) RECUR LEVEL(*****))			

Field Descriptions

Report Field	Description
SUBSCHEMA	The name of the source subschema named in the specification or overridden in the PROCESS statement.
DICTNAME	The name of the source dictionary named in the specification or overridden in the PROCESS statement.
DICTNODE	The name of the source node named in the specification or overridden in the PROCESS statement.
DBNAME	The name of the source database named in the specification or overridden in the PROCESS statement.
DBNODE	The name of the source database node named in the specification or overridden in the PROCESS statement.
AREA	Name of the area containing records that were extracted.
Area Sweep Option	If there were entry records in the area, the indicator reads SWEEP. If all entry records were retrieved by either direct DBKEY or CALC key, or there were no Entry Records in the area, the indicator reads NOSWEEP.
LOPAGE	Low page number of the area.

Report Field	Description
HIPAGE	High page number of the area.
FROM	Page number at which area sweeping began.
TO	Page number at which area sweeping ended. The FROM/TO page numbers differ from the LOPAGE and HIGHPAGE numbers only if you specified a FROM/TO page number on a Record Level Selection Criteria screen. FROM/TO page numbers are all asterisks if the area was not swept.
Set Name	Name of a set included in a path that has an owner or member residing in the named area.
Access Method	The method by which the set, listed in the SET Name field, was accessed.
Record Name	Name of a record residing in the area listed in the Area field. The record was either an Entry Record or an owner or a member of a set included in a path.
Record Level Selection Criteria	A summary of the data entered on the Record Level Selection Criteria screen for the record listed in the Record Name field. If a particular selection criteria was not entered for the record, all asterisks appear within the parentheses.

Extract Statistics

The following fields of the Extract Audit Report display statistical information. See the example shown below.

ID	RELEASE Rnn.nn	CA IDMS/DATABASE EXTRACTOR EXTRACT AUDIT REPORT	DATE mm/dd/yy	TIME hh:mm:ss	PAGE nnnn
***** ***** E X T R A C T S T A T I S T I C S ***** *****					
- AREA NAME -	-PAGES- -SWEEP-	-----ENTRY RECORD----- --NAME---- -RETRIEVED- -EXTRACTED-	-SET NAME-	-GL. -NAME-	OCCURRENCES -EXTRACTED-
CLASS-REGION	0				
			CLASS-SCHEDULE SCHEDULE	71	0
DEPT-REGION	15	DEPT	16	16	
			DEPT-TEACHER TEACHER	18	18
DEPT-ACADEMIC			SUBJECT	126	126
			DEPT-GENERAL SUBJECT	126	126
			IX-TCHR-LNAME TEACHER	0	0
			PREREQSFOR PREREQ	17	17
			PREREQSFOR PREREQ	17	17
			SUBJECT-CLASS CLASS	20	20
LOC-REGION	0				
			ROOM-CLASS ROOM	20	0
STUDENT-REGION	0				
** TOTALS **	-----	-----	-----	-----	-----
	15	16	16	415	324

Field Descriptions

Report Field	Description
AREA NAME	Name of the area containing records which were extracted.
PAGES SWEEPED	Number of pages swept within the area listed in the AREA NAME field. The number is zero if: <ul style="list-style-type: none"> ■ All entry records were retrieved by Direct DBKEY or CALC key. ■ Entry into an area was only by Entry Index(es).
ENTRY RECORD NAME	Name of Entry Record residing in the area listed in the AREA NAME field.
ENTRY RECORDS RETRIEVED	Number of entry records retrieved by area sweeping.

Report Field	Description
ENTRY RECORDS EXTRACTED	<p>Number of entry records retrieved that met the Record Level Selection Criteria. An asterisk next to this field indicates that the extraction record limit was reached.</p> <p>Note: If a set is walked from member to owner, the number of RECORDSRETRIEVED may be greater than the number of actual record occurrences on the database because this value reflects the number of owners retrieved when walking from all member record occurrences. If a set occurrence has 10 member records and the owner was obtained for each of the 10 member records, RECORDS RETRIEVED reflects a count of 10 even though there was only one physical occurrence of the owner record type. The same situation exists for RECORDS EXTRACTED.</p>
SET NAME	Name of a set in which the record occurrence listed in the OWNER/MEMBER RECORDS NAME field is a participant. The set was included in a path.
OWNER/MEMBER RECORDS NAME	The name of the record occurrence that is an owner or member of the set listed in the SET NAME field.
OWNER/MEMBER RECORD OCCURRENCES	Number of record occurrences retrieved when walking set occurrences owned by the record listed in the RECORD NAME field.
OWNER/MEMBER RECORDS EXTRACTED	Number of records retrieved which met their Record Level Selection Criteria. An asterisk next to this field indicates that the extraction record limit was reached. See the note above for the ENTRY RECORDS EXTRACTED field.

Load Audit Report

A description of the fields appearing on the Load Audit Report is given below.

ID	RELEASE Rnn.nn	CA IDMS/DATABASE EXTRACTOR LOAD AUDIT REPORT	DATE mm/dd/yy	TIME hh:mm:ss	PAGE 0001
LOAD001I		LOAD STEP STARTED.....mm/dd/yy			
RETS005I		RETRIEVING SUBSCHEMA TRANSSUB; USING DICTNAME TESTDICT; DICTNODE TESTNODE			
PSUB003I		TARGET PSUB STORAGE REQUIRED.....18,072 BYTES			
LOAD006I		EXTRACTED USING SUBSCHEMA DBRR1016; COMPILED mm/dd/yy hh:mm:ss			
LOAD007I		LOADING USING SUBSCHEMA TRANSSUB; COMPILED mm/dd/yy hh:mm:ss			
LOAD008I		INITIATING RECORD BINDS READY PROTECTED UPDATE SUCCESSFUL FOR AREA CLASS-REGION READY PROTECTED UPDATE SUCCESSFUL FOR AREA DEPT-REGION			
LOAD009I		STORE STEP STARTED.....mm/dd/yy hh:mm:ss			
LOAD010I		STORE STEP ENDED.....mm/dd/yy hh:mm:ss			
LOAD011I		STORE STEP STATISTICS TOTAL EXTRACTS READ.....&p. DBX PROCESSING EXTRACTS READ.....21 EXTRACTS WRITTEN TO WORKFILE.....382 RECORDS STORED.....&p. RECORDS W/DUP CALC KEYS.....&pe.			
<hr/>					
ID	RELEASE Rnn.nn	CA IDMS/DATABASE EXTRACTOR LOAD AUDIT REPORT	DATE mm/dd/yy	TIME hh:mm:ss	PAGE 0002
***** ***** STORE STATISTICS ***** *****					
		--RECORD NAME--			
		--- <td></td> <td></td> <td></td>			
		DUP CALC KEYS			
		CLASS	20	0	
		DEPT	16	0	
		PREREQ	17	0	
		ROOM	0	0	
<hr/>					
ID	RELEASE Rnn.nn	CA IDMS/DATABASE EXTRACTOR LOAD AUDIT REPORT	DATE mm/dd/yy	TIME hh:mm:ss	PAGE 0003
LOAD012I		CONNECT STEP STARTED.....			
LOAD013I		CONNECT STEP ENDED.....&p.			
LOAD014I		CONNECT STEP STATISTICS OWNER RECORDS OBTAINED.....58 MEMBER RECORDS CONNECTED.....324 MANUAL INDEX SET CONNECTIONS.....0			
<hr/>					
ID	RELEASE Rnn.nn	CA IDMS/DATABASE EXTRACTOR LOAD AUDIT REPORT	DATE mm/dd/yy	TIME hh:mm:ss	PAGE 0004
***** ***** CONNECT STATISTICS ***** *****					
		---SET NAME---			
		---OWNER---			
		---OCCURRENCES---			
		---MEMBER---			
		---CONNECTED---			
		CLASS-SCHEDULE	CLASS	0	
			SCHEDULE	0	
		DEPT-TEACHER	DEPT	0	
			TEACHER	0	

Processing Messages

Report Field	Description
LOAD STEP STARTED	The date and time at which the LOAD step was started in the format <i>mm/dd/yy</i> and <i>hh:mm:ss</i> .

Report Field	Description
TARGET PSUB STORAGE REQUIRED	The amount of storage, in bytes, required for building the pseudo subschema table of the target subschema.
EXTRACTED/LOADING USING SUBSCHEMA	The name of the source subschemas used by the EXTRACT step, and the target subschema used by the LOAD step, respectively.
INITIATING READIES	The names of areas in the target database that were successfully readied for processing, and the ready mode.
STORE STEP STARTED/STORE STEP ENDED	The date and time CA IDMS Extractor began/ended storing records on the target database in the format <i>mm/dd/yy</i> and <i>hh:mm:ss</i> .
TOTAL EXTRACTS READ	The total number of extracts read.
DBX PROCESSING EXTRACTS READ	The number of processing extracts required by the LOAD step for determining what records and sets participated in the extraction in addition to the header and trailer extracts.
EXTRACTS WRITTEN TO WORKFILE	The number of extracts required by the connect step.
RECORDS STORED	The number of records stored on the target database.
RECORDS W/DUP CALC KEYS	The number of CALC records that would have violated a DUPLICATES NOT ALLOWED restriction. This situation occurs only if you load a populated database.
CONNECT STEP STARTED/CONNECT STEP ENDED	The date and time at which CA IDMS Extractor began/ended connected member records into their set occurrences in the format <i>mm/dd/yy</i> and <i>hh:mm:ss</i> .
OWNER RECORDS OBTAINED	The number of set occurrences loaded that had member records.
MEMBER RECORDS CONNECTED	The number of member records connected.
MANUAL INDEX SET CONNECTIONS	The number of member records, with a set connect option of MANUAL, connected to system-owned, integrated indexes. The records were connected to the same index in the source database.
LOAD STEP ENDED	The date and time at which the LOAD step ended in the format <i>mm/dd/yy</i> and <i>hh:mm:ss</i> .

Chapter 5: Operations

This chapter covers CA IDMS Extractor operations. It describes the CA IDMS Extractor system requirements, storage requirements, and recovery procedures.

This section contains the following topics:

[Operational Considerations](#) (see page 77)

[CA IDMS Extractor Requirements](#) (see page 78)

[Recovery Procedure](#) (see page 81)

[Executing CA IDMS Extractor](#) (see page 81)

[Syntax Notation](#) (see page 82)

[PROCESS Parameter](#) (see page 85)

[Performing the EXTRACT and LOAD Steps--USVEXEC](#) (see page 88)

[Printing JCL--USVPJCL](#) (see page 109)

[Printing a Selection Criteria Specification--USVPSPC](#) (see page 114)

[Printing Online Documentation--USVPRINT](#) (see page 120)

[Online Documentation Modules](#) (see page 120)

[Customizing the CA IDMS Extractor Environment--USVTPARM](#) (see page 121)

[Writing a User Exit Module--CUVUSRXA](#) (see page 124)

Operational Considerations

Before running CA IDMS Extractor, consider these operational factors:

- All CA IDMS conventions regarding locking of the source and target databases are used. To ensure accurate extraction of data from the source database while CA IDMS Extractor is executing, you may want to prevent other jobs from updating the source database.
- You may either load a new database (that is, a database that was just formatted) or update an existing database. If you update an existing database, unexpected problems may arise if an attempt is made to store or connect a duplicate record unless the store or connect is prevented by a `DUPLICATES NOT ALLOWED` clause.

- The target subschema must reside in a dictionary load area. The Database Load Component of CA IDMS Extractor requires all user-defined and non-system owned integrated index sets have a set CONNECT option of MANUAL and a set ORDER of NEXT or SORTED. Further, if a SORTED set allows duplicates, and the source database was created with duplicates FIRST, the target database must be created with DUPLICATES LAST. To assist in complying with these requirements, a transient (temporary) subschema is created from the specified target so that you do not have to create a special target schema/subschema for CA IDMS Extractor use. The transient subschema is added to the target dictionary, used by the Database Load Component, and subsequently deleted from the target dictionary. Optionally, the transient subschema may be linked into a load library that is defined as a STEPLIB for the Database Load Component.

CA IDMS Extractor Requirements

The system requirements and storage requirements for executing both the Online and Batch Components of CA IDMS Extractor are outlined below.

System Requirements

The system requirements of CA IDMS Extractor are as follows:

Operating Environment

CA IDMS Extractor supports the following product releases:

- CA IDMS Release 16.0
- CA IDMS/DC Release 16.0

Terminal Type

The online components of CA IDMS Extractor can be used from any 3270-compatible terminal, model 2, 3, 4, or 5.

Security

Normal CA IDMS/DC security applies when using the Online Components of CA IDMS Extractor. You can access only selection criteria specifications and JCL members that you create during the current session, or that you have previously created and saved. Your ability to access to other users' Selection Criteria Specifications and JCL members is controlled using the CA IDMS Extractor customization macro described in this chapter.

Online Storage Requirements

CA IDMS Extractor requires program storage, working storage, scratch storage, and queue storage.

Program Storage

All CA IDMS Extractor modules are reentrant. Therefore, one copy supports multiple users. All modules, except modules related to the following functions, are pseudo-conversational:

- Recovery
- Area/Record/Index/Set Deselection
- Online Documentation.

The total program storage requirement for the CA IDMS Extractor online modules is approximately 750K. In addition, the Edit JCL function, which uses the CA EDITOR, requires 120K of program storage.

Working Storage

Each user that is currently executing a command uses between 10K and 20K of working storage, depending upon the function being performed. In addition, each active user shares the program storage, which is noted above.

Scratch Storage

Scratch records are used during the session to store information about the executing task. Approximately 4K of scratch area are used per task. The EDIT JCL function uses an additional 1K of scratch area for every 10 lines of source code.

Queue Storage

CA IDMS Extractor does not use CA IDMS/DC queue storage.

Batch Storage Requirements

CA IDMS Extractor batch storage requirements depend on the following factors:

- The size of the source and target subschemas.
- The size of the largest database record included in a database path.
- The sort storage requirements.
- Whether the components are run under a central version (CV) or in local mode.

The tables in the [Batch Storage Requirements--EXTRACT Step](#) (see page 80) and [Batch Storage Requirements--LOAD Step](#) (see page 80) sections show the amount of batch storage that is required for the Database Extract and Database Load Components, respectively, when executing the components under a CV. If the components are to run in local mode, additional storage is required for:

- CA IDMS runtime system modules
- Journal and database buffers.

Batch Storage Requirements--EXTRACT Step

Category	Description
Database Extract Component	250K - size of the largest module loaded into virtual storage at one time for the Batch Database Extract Component.
File Buffers	Size of the operating system buffers for the files used by the Database Extract Component.
Pseudo Subschema	Approximately 3 times the size of the source or target subschemas.
Extract Record	Size of the largest database record being extracted plus 28 bytes, or 256 bytes, whichever is greater.
Set Stack Area	8K - size of area for saving set information when walking sets.

Batch Storage Requirements--LOAD Step

Category	Description
Database Load Component	100K - size of the largest modules loaded into virtual storage at one time for the batch Database Load Component.
File Buffers	Size of the operating system buffers for the files used by the Database Load Component.

Pseudo Subschema	Approximately 3 times the size of the target subschema.
Extract Record	Size of the largest database record being extracted plus 28 bytes, or 256 bytes, whichever is greater.
Sort Storage	Use you installation's default sort storage.

Recovery Procedure

During a CA IDMS Extractor session, information is stored in the scratch area. While editing a JCL member, the member you are editing is also stored in the scratch area. In the event of an abend, you can recover the changes you have made since your last save only if the scratch area is left intact. If CA IDMS Extractor abends, the scratch area is unaffected and recovery is possible unless you were in the middle of an online Selection Criteria Specification session. If your system goes down, the scratch area is lost.

When an abend does occur, you are returned to the CA IDMS/DC prompt and a message is displayed. When you invoke CA IDMS Extractor again, you are returned to the point in the session when the abend occurred.

Executing CA IDMS Extractor

Once a Selection Criteria Specification is created, you must run the Database Extract Component to extract data from the source database and the Database Load Component to load the extracted data onto the target database.

- To run the extract and load batch components, the model JCL and key for:
 - z/OS-Target or Distribution source library member USVEXEC
 - z/VSE- SAMPJCL library member USVEXEC.S
 - z/VM- USVEXEC EXEC
- To run the JCL Member Print Utility, the model JCL and key for:
 - z/OS-Target or Distribution source library member USVPJCL
 - z/VSE- SAMPJCL library member USVPJCL.S
 - z/VM- USVPJCL EXEC

- To run the Specification Print Utility, the model JCL and key for:
 - z/OS-Target or Distribution source library member USVPSPC
 - z/VSE- SAMPJCL library member USVPSPC.S
 - z/VM- USVPSPC EXEC

The sampleJCL and keys for these components and utilities are shown below.

Sample JCL

When CA IDMS Extractor is installed, sampleJCL is loaded onto the CA IDMS Extractor database by USVUJCL. This sampleJCL is associated with the user ID of DBXADMIN. When you access the Edit JCL Component, if you do not already have a copy of the sampleJCL, it is copied to your user ID. You must edit the JCL, using the JCL Editor Component, to tailor it to your environment. You can copy the JCL member first, using the JCL Utilities Component, to a name of your choice so that the original model JCL is not modified.

Syntax Notation

Example	Function
Process=	Keywords appear in mixed case. The minimum required portion of each keyword appears in uppercase.
JCLMBR=jcl-member-name	Variables appear in lowercase. You substitute an appropriate value for each variable.
[PASSWORD=dictionary-password]	Brackets indicate optional clauses or commands.
/ transient-subschema-name\ TRANSSub= < target-subschema-name >	Braces enclose two or more options. You must select one of them.

Extract File

Information extracted from the source database by the Database Extract Component of CA IDMS Extractor is written to the Extract File. The Extract File is a variable-blocked file with an LRECL of 32756 and a BLKSIZE of 32760.

Note: For more information about the size of this file, see [Allocating Space for DASD Files](#) (see page 83).

Workfile

The Workfile is a temporary file used by the Database Load Component of CA IDMS Extractor. Information is saved on the Workfile between sort exits. It is a variable-blocked file.

Communication File

The Communication File (COMMFILE) contains a single record which is used to pass information between the CA IDMS Extractor Batch Components.

Syntax File

Appropriate CA IDMS DDDL syntax is written to the Syntax File by various batch components of CA IDMS Extractor to:

- PUNCH the target database from the target dictionary
- ADD the transient subschema to the target dictionary
- DELETE the transient subschema from the target dictionary.

Allocating Space for DASD Files

CA IDMS Extractor requires space allocation for an Extract File, a Workfile, a Communication File, a Syntax File, and sort work files. The Syntax and Communication Files are fixed at one track apiece. Space allocation for a DASD Extract File is dependent on the number of database records extracted and on the number of set occurrences in which those records participate as either owner or member. The table below displays the type and number of extracts created and written to the Extract File. The work file and total sort work space require the same amount of space as the Extract File.

Type and Number of Extracts Created

Type	Length In Bytes	# Of Records Written
header	256	One (1)
trailer	80	One (1)
ssrec	36	One (1) for each selected record type in the source subschema
ssset	36	One (1) for each selected set type in the source subschema
dbrec	28 + data length of selected database record	One (1) for each selected: - Entry Record - owner and member record of each selected set occurrence
index	20	One (1) or more for each index to which a selected record is connected. These are written for records retrieved through an area sweep, index, or set walk. If a selected record is both an entry record (or indexed through an entry index) and a selected owner or member of a selected set occurrence, multiple index extracts are written.

Review your Selection Criteria Specification to estimate the number of database records that will be extracted.

The Database Load Component creates a Workfile from the Extract File. You must allocate the same amount of space for the Workfile as the Extract File. The Workfile is also variable-blocked. The Database Load Component calculates the LRECL of the file for you with a BLKSIZE of 6144. You can override this block size.

Provide enough SORT SPACE capacity for the entire Workfile.

PROCESS Parameter Syntax Summary

```

Process / SPecname=selection-criteria-specification-name, USERId=userid \
< Jc1mbr=JCL-member-name, USERId=userid >
\ UNload /

[, SIgnonid=dictionary-userid[, Password=dictionary-password]]

[, TRANSSub= < transient-subschema-name >
\ target-subschema-name / ]

[, TRANSDmcl=target-DMCL-name]

[, SRCSub=source-subschema-name]

[, SRCDMcl=source-DMCL-name]

[, SRCDICTName=source-dictionary-name]

[, SRCDICTNode=source-dictionary-node-name]

[, SRcdbName=source-database-name]

[, SRcdbNode=source-database-node-name]

[, USERExit=user-exit-module-name]

[, NOCompare]

```

PROCESS Parameter

All CA IDMS Extractor parameter input is processed by the Database Extract Component and is obtained from a PROCESS parameter statement. The information tells the Database Extract Component:

- The name of the Selection Criteria Specification
- The user ID or LTERM ID under which the specification was saved
- The optional name of a transient subschema to be used during Database Load Component processing
- When using a transient subschema, the sign-on ID and password (if required) for the target dictionary
- An optional subschema to be used by the Database Extract Component, instead of the source subschema named in the Selection Criteria Specification
- An optional name of the user exit load module to be invoked whenever a database record meets its Record Level Selection Criteria
- An optional keyword to indicate that the source and target subschemas are not to be compared.

Note: The online JCL Submission Component creates the PROCESS parameter statement and places it in the appropriate position in the JCL when writing the JCL stream to the operating system. This allows you to use a single JCL member for multiple Selection Criteria Specifications that reference the same source and target databases. When using the JCL Submission Component, **do not** include a PROCESS parameter statement in the JCL member. Otherwise, the Database Extract Component issues a parameter error. When USVUJCL uploads the model JCL to the CA IDMS Extractor database, the PROCESS statement is not uploaded. This description is included in case you want to submit the JCL manually without using the online JCL Submission Component.

PROCESS Parameter Keywords

Process

Must be coded as is. Indicates that PROCESS keywords follow.

USERID=userid

Required keyword if SPECNAME is coded. Used as primary key for selection of a Selection Criteria Specification. This is the user ID or LTERM ID under which the specification was saved. USERID and UNLOAD are mutually exclusive.

Specname=selection-criteria-specification-name

Required keyword if UNLOAD is not coded. Used as secondary key for selection of a specification created using the online Selection Criteria Specification component. SPECNAME and UNLOAD are mutually exclusive.

UNload

Required keyword if SPECNAME is not coded. Used to unload (extract) the entire database accessible by the SRCSUB subschema. A specification is not used in this case. SPECNAME and UNLOAD are mutually exclusive parameters. In this case, SRCSUB is required and will be used at version 1 as both the source and target subschema.

Signonid=dictionary-userid

Optional based upon whether you are using a transient subschema and whether the target dictionary requires a valid SIGNON statement. The user must have authority to add, delete, and punch load modules to/from the target dictionary.

Password=dictionary-password

Optional based upon whether the SIGNONID requires a sign-on password for the target dictionary.

**TRANSSub= < transient-subschema-name >
 \ target-subschema-name /**

Optional user-supplied name for the transient subschema used during CA IDMS Extractor load processing. If not specified, it defaults to:

UVhmmss

Where:

- UV is a system constant
- *hh* is the hour of job start
- *mm* is the minute of job start
- *ss* is the second of job start

The subschema name used by the Database Load Component is taken from this parameter regardless of whether or not a transient subschema is used. If a transient subschema is not used, specify the name of a subschema that the Database Load Component can successfully use.

SRCSub=source-subschema-name

Optional name of a subschema to be used by the Database Extract Component. Specifying a new source subschema allows the Database Extract Component to use a subschema that was not accessible to the online Selection Criteria Specification component but is almost identical to the original subschema. The subschema you specify must contain the same record and sets as the original subschema. The user records and sets must be in the same physical sequence in both subschemas (that is, they must be copied in the same order). If these conditions are not met, unpredictable results can occur.

SRCDMcl=source-DMCL-name

Optional name of a DMCL to be used in conjunction with the SRC SUB subschema.

SRCDICTNAme=source-dictionary-node-name

Optional name of the dictionary in which the SRC SUB subschema resides if the subschema is in a load area other than the primary dictionary specified for the CV that the Database Extract Component is going to use.

TRANSDmcl=transient-dmcl-name

Optional name of a DMCL to use when the LOAD Component runs in LOCAL mode or when the DMCL named in TRANSSUB should not be used.

SRCDICTNOde=source-dictionary-node-name

Optional name of a DDS node for the SRC SUB subschema. The name identifies the communication link between CVs and CPUs. Specifying this parameter indicates that CA IDMS accesses a CV that exists in a CPU other than the one it is to be executing under to retrieve the specified SRC SUB subschema.

SRCDBName= < source-db >
 \ segment-name /

Optional name of a DB name or segment for the SRCSUB subschema. The DB name or segment maps the logical subschema view to a physical database.

SRCDBNode=source-database-node-name

Optional name of a DDS node for the SRCSUB subschema. Specifying this parameter indicates that the Database Extract Component executes in a DDS environment and accesses a CV in another CPU.

USERExit=user-exit-module-name

Optional name of the user exit load module to be invoked whenever a database record meets its record level selection criteria.

Note: For more information, see [Writing a User Exit Module--CUVUSRXA](#) (see page 124).

NOCompare

Optional parameter to indicate that the source and target subschemas are not to be compared. Use it if the target subschema is not accessible to the CV under which the Database Extract Component executes.

However, inconsistencies between the source and target subschemas can cause unpredictable results.

Performing the EXTRACT and LOAD Steps--USVEXEC

The sample JCL for the batch Database Extract and Database Load Components of CA IDMS Extractor are contained in:

- z/OS-Target or Distribution source library member USVEXEC
- z/VSE- SAMPJCL library member USVEXEC.S
- z/VM- USVEXEC EXEC

This JCL is used after you create and save a Selection Criteria Specification using the online Selection Criteria Specification Component.

After supplying values for the variables, you can use this JCL as is, or it can be used as a model when you create and save a JCL member of the CA IDMS Extractor database using the Edit JCL option on the Main Menu screen. You can then use the Submit option to submit the JCL for execution.

Be sure to review Allocating Space for DASD Files.

Also review the CA IDMS Extractor Data Flow Information exhibit shown below.

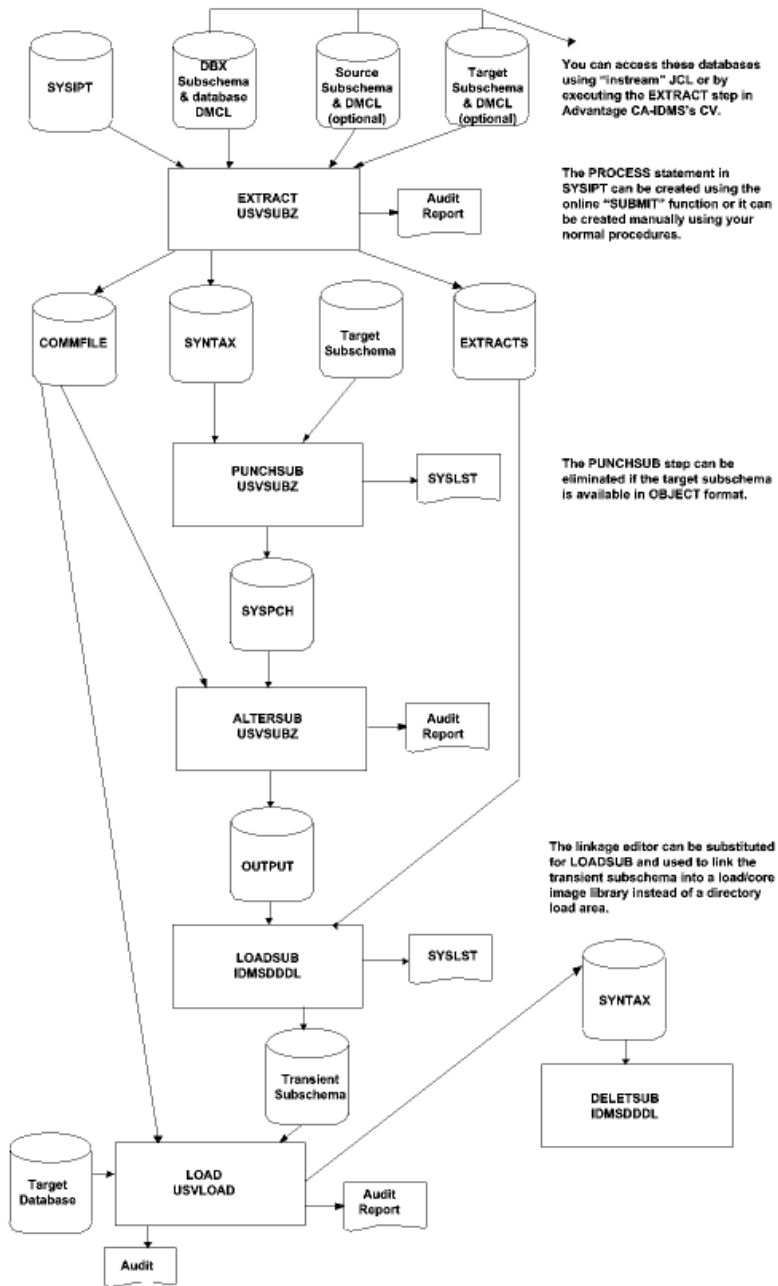
Notes:

- If you create this member using the Edit JCL Option, do not include the PROCESS parameter statement in the member. The appropriate PROCESS parameter statement is created and placed into the JCL for you prior to submitting the job by the Submit Option. Thus, a single JCL member can be used by more than one Selection Criteria Specification.
- If the database name DBNAME of the target database differs from that of the source database, then a SYSIDMS DBNAME parameter should be added to the JCL used in the Load step as follows:

```
//SYSIDMS DBNAME=target-dbname
```

Also all areas included in the specified target subschema must be included in this DBNAME table.

CA IDMS Extractor Data Flow Information



z/OS JCL

```

//USVEXEC JOB  job-card-parameters
//*
//EXTRACT EXEC PGM=USVXTRC,REGION=1024K
//*
//STEPLIB DD DSN=your.dbx.loadLib,DISP=SHR
//          DD DSN=your.idms.loadLib,DISP=SHR
//SYSCTL DD DSN=your.idms.sysctl,DISP=SHR
//EXTRACTS DD DSN=your.dbx.extract,DISP=(NEW,CATLG,DELETE),
//            UNIT=disk,VOL=SER=volser,
//            SPACE=(CYL,(primary,secondary))
//COMMFIL DD DSN=your.dbx.comfile,DISP=(NEW,CATLG,DELETE),
//            UNIT=disk,VOL=SER=volser,SPACE=(TRK,1)
//SYNTAX DD DSN=your.dbx.syntax,DISP=(NEW,CATLG,DELETE),
//            UNIT=disk,VOL=SER=volser,SPACE=(TRK,1)
//SYSPRINT DD SYSOUT=a
//SYSLSST DD SYSOUT=a
//SYSUDUMP DD SYSOUT=a
//*
//SYSIPT DD *
PROCESS,USERID=userid,SPECNAME=selection-criteria-specification-name,
[SIGNONID=dictionary-userid,]
[PASSWORD=dictionary-password,]
[TRANSSUB=transient-or-target-subschema-name,]
[SRCSUB=source-subschema-name,]
[SRCDMCL=source-dmcl-name,]
[SRCDICTNAME=source-dictionary-name,]
[SRCDICTNODE=source-dictionary-node-name,]
[SRCDBNAME=source-db-or-segment-name,]
[SRCDBNODE=source-db-node-name,]
[USEREXIT=user-exit-module-name,]
[NOCOMPARE]

/*
/*
//PUNCHSUB EXEC PGM=IDMSDDL, REGION=1024K,
//          COND=((5,LT,EXTRACT))
//*****
/*PUNCHSUB - Punch the target-subschema to a work-file based upon *
/*          values from previous step. *
//*****
//STEPLIB DD DSN=your.idms.loadLib,DISP=SHR
//SYSLSST DD SYSOUT=a
//SYSCTL DD DSN=your.idms.sysctl,DISP=SHR
//SYSPCH DD DSN=&. &SUBPCH.,DISP=(,PASS),UNIT=DISK,
//          SPACE=(TRK,(10,5)),DCB=(BLKSIZE=80,LRECL=80,RECFM=F)
//SYSIPT DD DSN=your.dbx.syntax,DISP=(OLD,DELETE,DELETE)
/*
//ALTERSUB EXEC PGM=USVSUBZ,REGION=1024K,PARM='NOSPIE/',

```

```

//          COND=((5,LT,EXTRACT),(5,LT,PUNCHSUB))
//*****
//*ALTERSUB - Alter the target subschema contents and create a      *
//*          transient working copy of the target-subschema.      *
//*****
//STEPLIB DD DSN=your.dbx.loadLib,DISP=SHR
//INPUT   DD DSN=&.&SUBPCH.,DISP=(OLD,PASS)
//COMMFIL DD DSN=your.dbx.commfile,DISP=(OLD,KEEP)
//SYSLST  DD SYSOUT=a
//CAIOUT  DD SYSOUT=a
//SYSPRINT DD SYSOUT=a
//OUTPUT  DD DSN=&.&ALTSUB.,DISP=(NEW,PASS),UNIT=DISK,
//          SPACE=(TRK,(10,5)),DCB=(BLKSIZE=80,LRECL=80,RECFM=F)
//*
//*
//*
//LOADSUB EXEC PGM=IDMSDDL,REGION=1024K,
//          COND=((5,LT,EXTRACT),(5,LT,PUNCHSUB),(0,NE,ALTERSUB))
//*****
//*LOADSUB - Add the transient-subschema to the target dictionary  *
//*          node using IDMSDDL.                                  *
//*****
//STEPLIB DD DSN=your.idms.loadLib,DISP=SHR
//SYSIPT  DD DSN=&.&ALTSUB.,DISP=(OLD,PASS)
//SYSLST  DD SYSOUT=a
//SYSCTL  DD DSN=your.idms.sysctl,DISP=SHR
//SYSPCH  DD DUMMY
//*
//*
//LOAD    EXEC PGM=USVLOAD,REGION=1536K,
//          COND=((5,LT,EXTRACT),(5,LT,PUNCHSUB),(0,NE,ALTERSUB),
//          (5,LT,LOADSUB))
//*
//* You can run the load against an existing database, although
//* unexpected problems may arise if an attempt is made to add duplicate
//* records to the database and the attempt is not prevented by the
//* DUPLICATES NOT ALLOWED option while doing this. Otherwise, run the
//* FORMAT Utility
//* against the target database prior to executing this
//*
//* There is no parameter statement for this step. Processing is
//* controlled by information read from the EXTRACTS and COMMFIL
//* files.
//*
//*
//STEPLIB DD DSN=your.dbx.loadLib,DISP=SHR
//          DD DSN=your.idms.loadLib,DISP=SHR
//SYSCTL  DD DSN=your.idms.sysctl,DISP=SHR

```

```
//EXTRACTS DD DSN=your.dbx.extract,DISP=SHR
//WORKFILE DD UNIT=disk,VOL=SER=volser,
//          SPACE=(CYL,(primary,secondary))
//SORTWK01 DD UNIT=disk,SPACE=(CYL,(primary,secondary))
//SORTWK02 DD UNIT=disk,SPACE=(CYL,(primary,secondary))
//SORTWK03 DD UNIT=disk,SPACE=(CYL,(primary,secondary))
//SORTMSG DD SYSOUT=a
//SYSPRINT DD SYSOUT=a
//SYSLST DD SYSOUT=a
//SYSUDUMP DD SYSOUT=a
//COMMFIL DD DSN=your.dbx.commfile,DISP=SHR
//SYNTAX DD DSN=your.dbx.syntax,DISP=SHR
/*
/**
//DELTSUB EXEC PGM=IDMSDDL,REGION=1024K,
//          COND=((5,LT,EXTRACT),(5,LT,PUNCHSUB),(0,NE,ALTERSUB),
//          (5,LT,LOADSUB),EVEN)
//*****
//*DELTSUB - Remove the transient-subschema from the target dictionary*
//*          node using IDMSDDL. *
//*****
//STEPLIB DD DSN=your.idms.loadlib,DISP=SHR
//SYSIPT DD DSN=your.dbx.syntax,DISP=(OLD,DELETE,DELETE)
//SYSLST DD SYSOUT=a
//SYSCTL DD DSN=your.idms.sysctl,DISP=SHR
//SYSPCH DD DUMMY
//
```

job card parameters The job card parameters at your site.

your.dbx.loadlib	The name of the load library into which CA IDMS Extractor load modules were link edited.
your.idms.loadlib	The name of the load library into which CA IDMS load modules were link edited.
your.idms.sysctl	The data set name of the SYSCTL file for the CV used during CA IDMS Extractor batch processing.
your.dbx.extract	The name of the file to which all extracted records from your source database are written.
disk	An appropriate UNIT designation for each file.
volser	The volume serial number of the UNIT that contains the file being defined.
primary,secondary	The primary/secondary space allocation for files that are being allocated to disk.

your.dbx.commfile	The name of the file used by CA IDMS Extractor for communication between the Database Extract and Database Load components.
your.dbx.syntax	The name of the file used by CA IDMS Extractor to create syntax for the various transient subschema steps.
a	An appropriate SYSOUT class for your environment.
your.dmcl.name	The name of your runtime system DMCL.

Running in Local Mode Under z/OS

This JCL assumes you are going to be running under a CV. To run in local mode:

1. Remove the SYSCTL DD statements.
2. Add the appropriate DD statement(s) for your local journal(s).
3. Add the STEPLIB DD statements for your local DMCL and for your source and transient subschemas.
4. To the EXTRACT step, add DD statements for your:
 - a. CA IDMS Extractor database
 - b. Source database
5. To the LOAD step, add DD statements for your target database.

If the source subschema exists in a CA IDMS Extractor dictionary load area, the PUNCHSUB and ALTERSUB steps do not need to be changed. If the source subschema exists in a load library, it must be uploaded to a dictionary load area before the transient subschema process is executed. If the source subschema exists in object format, do not execute the PUNCHSUB step, and:

1. Change the INPUT of the ALTERSUB step to be the file of the object subschema.
2. Change the LOADSUB step to execute the linkage editor instead of IDMSDDDL. Supply appropriate JCL for a link edit. The SYSLIN data set should be the OUTPUT from the ALTERSUB step. The SYSLMOD member name should be the TRANSSUB (transient SSC name) specified when the JCL was submitted. Specify an execute parameter of LET and expect various IEW0302 error messages, as well as a condition code of 8.
3. For the LOAD step, change the COND parameter from 5,LT,LOADSUB to 9,LT,LOADSUB.
4. Change the DELETESUB step to execute IEHPRGM instead of IDMSDDDL. Change the COND parameter to remove the reference to the LOADSUB step. Supply a DD statement that references the SYSLMOD data set from the LOADSUB step. The SYSIN data set should be:

```
SCRATCH DSNAME=your.loadlib,VOL=SYSDA=valid,MEMBER=transsub
```

z/VSE JCL

```

* SS JOB JNM=USVEXEC
// JOB USVEXEC
*
// OPTION LOG,PARTDUMP
* **** CREATE A SYSIDMS PARAMETER FILE ****
// UPSI 1
// DLBL    SYSIDMS,'work.file.SYSIDMS',0,SD
// EXTENT  SYS041,volserw,,,rel-trk-blk,1
// ASSGN   SYS041,DISK,VOL=volserw,SHR
// EXEC    DITTO
$$DITTO CSQ FILEOUT=SYSIDMS
*
* SYSIDMS parameters for target dictionary
*
/*
/&
// UPSI  a
// ASSGN  SYS006,SYSLST
*
* *** CORE IMAGE LIBRARY FOR PRODUCT
// DLBL  tool,'tool.corelib'
// EXTENT ,volserc
// DLBL  idms,'idms.corelib'
// EXTENT ,volserc
// LIBDEF PHASE,SEARCH=(tool.sublib,idms.sublib),TEMP
*
* *** DBX EXTRACT FILE
// DLBL  EXTRACT,'dbx.extract',99/365,SD
// EXTENT SYS010,volserw,,,rel-trk-blk,amount
// ASSGN  SYS010,DISK,VOL=volserw,SHR
*
* *** DBX COMMUNICATION FILE
// DLBL  COMMFIL,'dbx.commfile',99/365,SD
// EXTENT SYS015,volserw,,,rel-trk-blk,amount
// ASSGN  SYS015,DISK,VOL=volserw,SHR
*
* *** IDD SYNTAX FILE
// DLBL  SYNTAX,'dbx.syntax',99/365,SD
// EXTENT SYS016,volserw,,,rel-trk-blk,amount
// ASSGN  SYS016,DISK,VOL=volserw,SHR
*
* *** INPUT

```

```

// ASSGN SYSIPT,SYSRDR
* SYSCTL FILE
*
// DLBL  SYSCTL, 'your.sysctl.file', ,SD
// EXTENT SYS000,volser,,,rel-trk-blk,1
// ASSGN  SYS000,DISK,VOL=volser,SHR
// DLBL  SYSIDMS, '#SYSIPT', 0,SD
// EXEC  USVXTRC,SIZE=(USVXTRC,400K)
*
* SYSIDMS parameters
/*
PROCESS,USERID=userid,SPECNAME=selection-criteria-specification-name,
SIGNONID=dictionary-userid,
PASSWORD=dictionary-password,
TRANSSUB=transient-subschema-name,
TRANSDMCL=transient-dmcl-name
/*
* PUNCHSUB step. Punch the target subschema from the dictionary
*
// DLBL  IJSYSPH, 'dbx.sypch', 99/365,SD
// EXTENT SYSPCH,volserw,,,rel-trk-blk,amount
// ASSGN  SYSPCH,DISK,VOL=volserw,SHR
// DLBL  IJSYSIN, 'dbx.syntax', 0,SD
// EXTENT SYSIPT,volserw,,,rel-trk-blk,amount
// ASSGN  SYSIPT,DISK,VOL=volserw,SHR
// DLBL  SYSIDMS, 'work.file.SYSIDMS'
// EXTENT SYS041,volserw
// ASSGN  SYS041,DISK,VOL=volserw,SHR
// DLBL  SYSCTL, 'your.sysctl.file', ,SD
// EXTENT SYS000,volser,,,rel-trk-blk,1
// ASSGN  SYS000,DISK,VOL=volser,SHR
// EXEC  IDMSDDL,SIZE=512K
// CLOSE SYSIPT,SYSRDR
// CLOSE SYSPCH,xxx
*
* ALTERSUB step. Alter the target subschema and create a transient
*                  working copy of the target subschema.
*
// DLBL  INPUT, 'dbx.sypch', 0,SD
// EXTENT SYS017,volserw,,,rel-trk-blk,amount
// ASSGN  SYS017,DISK,VOL=volserw,SHR
// DLBL  OUTPUT, 'dbx.transsub', 99/365,SD
// EXTENT SYS018,volserw,,,rel-trk-blk,amount
// ASSGN  SYS018,DISK,VOL=volserw,SHR
// DLBL  COMMFIL, 'dbx.commfile', 0,SD
// EXTENT SYS016,volserw,,,rel-trk-blk,amount
// ASSGN  SYS016,DISK,VOL=volserw,SHR
// DLBL  SYSCTL, 'your.sysctl.file', ,SD

```



```

// EXTENT SYS000,volser,,,rel-trk-blk,1
// ASSGN SYS000,DISK,VOL=volser,SHR
// ASSGN SYS012,SYSLST
// EXEC USVSUBZ,SIZE=AUTO
/*
*
* LOADSUB step. Add the transient subschema to the target dictionary
*
// DLBL IJSYSIN,'dbx.transsub',0,SD
// EXTENT SYSIPT,volserw,,,rel-trk-blk,amount
// ASSGN SYSIPT,DISK,VOL=volserw,SHR
// ASSGN SYSPCH,IGN
// DLBL SYSCTL,'your.sysctl.file',,SD
// EXTENT SYS000,volser,,,rel-trk-blk,1
// ASSGN SYS000,DISK,VOL=volser,SHR
// DLBL SYSIDMS,'work.file.SYSIDMS'
// EXTENT SYS041,volserw
// ASSGN SYS041,DISK,VOL=volserw,SHR
// EXEC IDMSDDL,SIZE=512K
// CLOSE SYSIPT,SYSPDR
/*
* LOAD step. Add the extracted records to the target database
*
// DLBL EXTRACT,'dbx.extract',0,SD
// EXTENT SYS010,volserw,,,rel-trk-blk,amount
// ASSGN SYS010,DISK,VOL=volserw,SHR
// DLBL WORKFIL,'dbx.workfile',99/365,SD
// EXTENT SYS011,volserw,,,rel-trk-blk,amount
// ASSGN SYS011,DISK,VOL=volserw,SHR
// DLBL COMMFIL,'dbx.commfile',0,SD
// EXTENT SYS016,volserw,,,rel-trk-blk,amount
// ASSGN SYS016,DISK,VOL=volserw,SHR
// DLBL SYNTAX,'dbx.syntax',0,SD
// EXTENT SYS016,volserw,,,rel-trk-blk,amount
// ASSGN SYS016,DISK,VOL=volserw,SHR
// DLBL SORTWK1,'SORT.WORK1',0,SD
// EXTENT SYS001
// ASSGN SYS001,DISK,VOL=volserw,SHR
// DLBL SORTWK2,'SORT.WORK2',0,SD
// EXTENT SYS002
// ASSGN SYS002,DISK,VOL=volserw,SHR
// DLBL SORTWK3,'SORT.WORK3',0,SD
// EXTENT SYS003
// ASSGN SYS003,DISK,VOL=volserw,SHR
// DLBL SORTWK4,'SORT.WORK4',0,SD
// EXTENT SYS004
// ASSGN SYS004,DISK,VOL=volserw,SHR
// ASSGN SYS006,SYSLST

```

```

// DLBL  SYSCTL, 'your.sysctl.file', ,SD
// EXTENT SYS000,volser,,,rel-trk-blk,1
// ASSGN  SYS000,DISK,VOL=volser,SHR
// DLBL  SYSIDMS, '#SYSIPT', 0,SD
// EXEC  USVLOAD,SIZE=(AUTO,400K)
*
* SYSIDMS parameters
/*
* DELETESUB step. Delete the transient subschema from the dictionary
*
// ASSGN  SYSPCH,IGN
// DLBL  IJSYSIN, 'dbx.syntax', 0,SD
// EXTENT SYSIPT,volserw,,,rel-trk-blk,amount
// ASSGN  SYSIPT,DISK,VOL=volserw,SHR
// DLBL  SYSCTL, 'your.sysctl.file', ,SD
// EXTENT SYS000,volser,,,rel-trk-blk,1
// ASSGN  SYS000,DISK,VOL=volser,SHR
// DLBL  SYSIDMS, 'work.file.SYSIDMS'
// EXTENT SYS041,volserw
// ASSGN  SYS041,DISK,VOL=volserw,SHR
// EXEC  IDMSDDL,SIZE=512K
// CLOSE SYSIPT,SYSPDR
/*
//*
/&
* SS E0J

```

a	The UPSI switch to invoke CA IDMS CV as specified in your IDMSOPTI module.
tool	The file name of the core image library into which the executable phases of CA IDMS Extractor were installed.
tool.corelib	The file ID of the core image library into which the executable phases of CA IDMS Extractor were installed.
volser_	The volume serial number or generic assignment of the volume on which the file, as specified in the previous statement, resides. The following letters identify the file in question: <ul style="list-style-type: none"> ■ c=core image library ■ w=work file ■ r=relocatable library ■ s=source statement library
idms	The file name of the core image library into which the executable phases of CA IDMS were installed.

idms.corelib	The file ID of the core image library into which the executable phases of CA IDMS were installed.
.sublib	The sublibrary name of the z/VSE library specified in the previous file name.
dbx.extract	The file ID of the file to which the CA IDMS Extractor extract records are written.
rel-trk-blk	Relative track or relative block number: The starting position of the DASD for storage of the files specified in the previous statement.
amount	The number of tracks or blocks you need for storage of the work file specified in the previous statement.
dbx.commfile	The file ID of the file to which the CA IDMS Extractor communication records are written.
dbx.syntax	The file ID of the file to which the IDD syntax records are written.
dbx.syspch	The file ID of the file to which the CA IDMS subschema object records are written.
xxx	The physical device or logical unit to which the SYSPCH logical unit is to be assigned.
your.sysctl.file	The file ID of the SYSCTL file for the CV used during CA IDMS Extractor batch processing.
dbx.transsub	The file ID of the file to which the transient subschema is written.

Running in Local Mode Under z/VSE

This JCL assumes you are going to be running under a CV. To run in local mode:

1. Supply the appropriate UPSI switch.
2. Add the appropriate JCL statement(s) for your local journal(s).
3. Add the correct SYSIDMS parameters for your local DMCL.
4. To the EXTRACT step, add JCL statements for your:
 - a. CA IDMS Extractor database
 - b. source database.
5. If the target subschema exists in a CA IDMS Extractor dictionary load area, the PUNCHSUB and ALTERSUB steps do not need to be changed. If the target subschema exists in a core image library, it must be uploaded to a dictionary load area before the transient subschema process is executed. If the target subschema exists in object format, do not execute the PUNCHSUB step, but change the INPUT of the ALTERSUB step to be the file of the object subschema.

Change the LOADSUB step to execute the linkage editor instead of IDMSDDDL. Supply appropriate JCL for a link edit. The linkage editor input data set should be the OUTPUT from the ALTERSUB step. The linkage editor core image phase name should be the TRANSSUB (transient SSC name) specified when the JCL was submitted. Specify a linkage editor parameter of LET and expect various error messages that result from the IDMSDDDL statements appended to the punched subschema object statements.

6. To the LOAD step, add JCL statements for your target database.
7. Change the DELETESUB step to execute LIBR instead of IDMSDDDL. Supply a statement that references the core image library from the LOADSUB step. The SYSIPT dataset should be: DELETE *transsub*.
8. Remove the DLBLs for the SYSCTL file.

z/VM EXEC

```
/* */
TRACE OFF; SIGNAL ON ERROR
/*
----- EXEC MODIFICATIONS ----- 'USVEXEC' SAMPLE EXEC -----
*/
DBX_LOADLIB_FN      = 'dbxlib'
DBX_LOADLIB_FT      = 'LOADLIB'
DBX_LOADLIB_FM      = '*'
/* */
IDMS_LOADLIB_FN     = 'idmslib'
IDMS_LOADLIB_FT     = 'LOADLIB'
IDMS_LOADLIB_FM     = '*'
/* */
SORT_SORTLIB_FN     = 'sortlib'
SORT_SORTLIB_FT     = 'TXTLIB'
SORT_SORTLIB_FM     = '*'
/* */
USVXTRC_SYSIPT_FN   = 'USVXTRC'
USVXTRC_SYSIPT_FT   = 'SYSIPT'
USVXTRC_SYSIPT_FM   = 'a'
/* */
MAX_RC = 0
/* */
/* */
CALL CREATE_USVXTRC_SYSIPT_FILE
/* */
CALL EXECUTE_USVXTRC
IF USVXTRC_RC > 4
```

```
        THEN CALL USVXTRC_ERROR
    END
    IF USVXTRC_RC > MAX_RC
        THEN MAX_RC = USVXTRC_RC
    END
    /* */
    CALL EXECUTE_PUNCHSUB
    IF USVXTRC_RC > 4
        THEN CALL PUNCHSUB_ERROR
    END
    IF USVXTRC_RC > MAX_RC
        THEN MAX_RC = USVXTRC_RC
    END
    /* */
    CALL EXECUTE_ALTERSUB
    IF USVXTRC_RC > 0
        THEN CALL ALTERSUB_ERROR
    END
    IF USVXTRC_RC > MAX_RC
        THEN MAX_RC = USVXTRC_RC
    END
    /* */
    CALL EXECUTE_LOADSUB
    IF USVXTRC_RC > 4
        THEN CALL LOADSUB_ERROR
    END
    IF USVXTRC_RC > MAX_RC
        THEN MAX_RC = USVXTRC_RC
    END
    /* */
    CALL EXECUTE_USVLOAD
    IF USVLOAD_RC > 4
        THEN CALL USVLOAD_ERROR
    END
    IF USVXTRC_RC > MAX_RC
        THEN MAX_RC = USVXTRC_RC
    END
    /* */
    IF LOADSUB_RC = 0
        THEN CALL EXECUTE_DELTSUB
            IF USVXTRC_RC > 5
                THEN CALL DELTSUB_ERROR
            END
    END
    IF USVXTRC_RC > MAX_RC
        THEN MAX_RC = USVXTRC_RC
    END
    /* */
    'CP SPOOL PRINTER NOCONT'
```

```

'CP CLOSE PRINTER NAME USVEXEC LISTING'
'CP SPOOL PRINTER OFF'
'GLOBAL LOADLIB'
'GLOBAL sortlib'
'FILEDEF * CLEAR'
/* */
EXIT MAX_RC
/* */
/*+++++ */
CREATE_USVXTRC_SYSIPT_FILE:
/*+++++ */
SIGNAL OFF ERROR
'ERASE' USVXTRC_SYSIPT_FN USVXTRC_SYSIPT_FT USVXTRC_SYSIPT_FM
SIGNAL ON ERROR
/* */
PUSH 'FFILE'
PUSH
PUSH ' NOCOMPARE'
PUSH ' USEREXIT=user-exit-module-name,'
PUSH ' SRCDNODE=source-db-node-name,'
PUSH ' SRCDNAME=source-db-or-segment-name,'
PUSH ' SRCDICTNODE=source-dictionary-node-name,'
PUSH ' SRCDICTNAME=source-dictionary-name,'
PUSH ' SRCDMCL=source-dmcl-name,'
PUSH ' SRCSUB=source-subschema-name,'
PUSH ' TRANSSUB=transient-or-target-subschema-name,'
PUSH ' PASSWORD=dictionary-password,'
PUSH ' SIGNONID=dictionary-userid,'
PUSH ' SPECNAME=selection-criteria-specification-name,'
/* PUSH ' UNLOAD,SRCSUB=source-subschema-name,' */
PUSH ' USERID=userid,'
PUSH ' PROCESS,'
PUSH 'INPUT'
PUSH 'SET LRECL 80'
PUSH 'SET RECFM F'
'XEDIT' USVXTRC_SYSIPT_FN USVXTRC_SYSIPT_FT USVXTRC_SYSIPT_FM ,
' (NOPROFILE NOSCREEN NOMSG'
RETURN
/* */
/*+++++ */
EXECUTE_USVXTRC:
/*+++++ */
'FILEDEF * CLEAR'
'GLOBAL LOADLIB' DBX_LOADLIB_FN IDMS_LOADLIB_FN
'FILEDEF EXTRACTS DISK FILE EXTRACTS a'
'FILEDEF COMMFIL DISK FILE COMMFIL a'
'FILEDEF SYNTAX DISK FILE SYNTAX a'
'FILEDEF SYSIDMS DISK SYSIDMS INPUT a'

```

```

'FILEDEF SYSCTL DISK fn SYSCTL fm'
'FILEDEF SYSIPT DISK' USVXTRC_SYSIPT_FN USVXTRC_SYSIPT_FT USVXTRC_SYSIPT_FM
'FILEDEF SYSLST PRINTER'
'FILEDEF SYSPRINT PRINTER'
SIGNAL OFF ERROR
SAY 'STARTING CA-IDMS/DATABASE EXTRACTOR EXTRACT'
'EXECOS'
'OSRUN USVXTRC'
USVXTRC_RC = RC
SIGNAL ON ERROR
RETURN
/* */
/*+++++ */
EXECUTE_PUNCHSUB:
/*+++++ */
/*****/
/*PUNCHSUB - Punch the target-subschema to a work-file based upon */
/* values from previous step. */
/*****/
/* */
'FILEDEF * CLEAR'
'GLOBAL LOADLIB' IDMS_LOADLIB_FN
'FILEDEF SYSPCH DISK FILE DDDLUPD a'
'FILEDEF SYSIPT DISK FILE SYNTAX a'
'FILEDEF SYSIDMS DISK SYSIDMS INPUT a'
'FILEDEF SYSCTL DISK fn SYSCTL fm'
'FILEDEF SYSLST PRINTER'
/* */
SIGNAL OFF ERROR
SAY 'STARTING CA-IDMS/DATABASE EXTRACTOR PUNCH SUBSCHEMA'
'EXECOS'
'OSRUN IDMSDDL PARM=' 'CVMACH=machine-id''
USVXTRC_RC = RC
SIGNAL ON ERROR
RETURN
/* */
/*+++++ */
EXECUTE_ALTERSUB:
/*+++++ */
/* */
/*****/
/*ALTERSUB - Alter the target subschema contents and create a */
/* transient working copy of the target-subschema. */
/*****/
/* */
'FILEDEF * CLEAR'
'GLOBAL LOADLIB' DBX_LOADLIB_FN IDMS_LOADLIB_FN
'FILEDEF INPUT DISK FILE DDDLUPD a'

```

```

'FILEDEF COMMFIL DISK FILE COMMFIL a'
'FILEDEF OUTPUT DISK FILE ALTSUB a'
'FILEDEF SYSLST PRINTER'
'FILEDEF CAIOUT PRINTER'
/* */
SIGNAL OFF ERROR
SAY 'STARTING CA-IDMS/DATABASE EXTRACTOR ALTER SUBSCHEMA'
'EXECOS'
'OSRUN USVSUBZ'
USVXTRC_RC = RC
SIGNAL ON ERROR
RETURN
/* */
/*+++++ */
EXECUTE_LOADSUB:
/*+++++ */
/*****/
/*LOADSUB - Add the transient-subschema to the target dictionary */
/* node using IDMSDDL. */
/*****/
/* */
'FILEDEF * CLEAR'
'GLOBAL LOADLIB' IDMS_LOADLIB_FN
'FILEDEF SYSPCH DUMMY'
'FILEDEF SYSLST PRINTER'
'FILEDEF SYSIPT DISK FILE ALTSUB a'
'FILEDEF SYSIDMS DISK SYSIDMS INPUT a'
'FILEDEF SYSCTL DISK fn SYSCTL fm'
/* */
SIGNAL OFF ERROR
SAY 'STARTING CA-IDMS/DATABASE EXTRACTOR RELOAD SUBSCHEMA'
'EXECOS'
'OSRUN IDMSDDL PARM='CVMACH=machine-id''
LOADSUB_RC = RC
SIGNAL ON ERROR
RETURN
/* */
/*+++++ */
EXECUTE_USVLOAD:
/*+++++ */
'FILEDEF * CLEAR'
'GLOBAL LOADLIB' DBX_LOADLIB_FN IDMS_LOADLIB_FN
'GLOBAL TXTLIB' SORT_SORTLIB_FN
'FILEDEF EXTRACTS DISK FILE EXTRACTS a'
'FILEDEF WORKFILE DISK FILE WORKFILE a'
'FILEDEF COMMFIL DISK FILE COMMFIL a'
'FILEDEF SYNTAX DISK FILE SYNTAX a'
'FILEDEF SYSIDMS DISK SYSIDMS INPUT a'

```



```

'FILEDEF SYSCTL DISK fn SYSCTL fm'
'FILEDEF SYSLST PRINTER'
'FILEDEF SYSPRINT PRINTER'
'FILEDEF SORTMSG PRINTER'
SIGNAL OFF ERROR
SAY 'STARTING CA-IDMS/DATABASE EXTRACTOR LOAD DATABASE'
'EXECOS'
'OSRUN USVLOAD PARM='''MSGOPT=A'''
USVXTRC_RC = RC
SIGNAL ON ERROR
RETURN
/* */
/*+++++ */
EXECUTE_DELSUB:
/*+++++ */
/* */
/*****/
/*DELSUB - Remove the transient-subschema from the target dictionary*/
/* node using IDMSDDL. */
/*****/
/* */
'FILEDEF * CLEAR'
'GLOBAL LOADLIB' IDMS_LOADLIB_FN
'FILEDEF SYSPCH DUMMY'
'FILEDEF SYSLST PRINTER'
'FILEDEF SYSIPT DISK FILE SYNTAX a'
'FILEDEF SYSIDMS DISK SYSIDMS INPUT a'
'FILEDEF SYSCTL DISK fn SYSCTL fm'
/* */
SIGNAL OFF ERROR
SAY 'STARTING CA-IDMS/DATABASE EXTRACTOR DELETE SUBSCHEMA'
'EXECOS'
'OSRUN IDMSDDL PARM='''VMACH=machine-id'''
USVXTRC_RC = RC
SIGNAL ON ERROR
RETURN
/* */
/*+++++ */
USVXTRC_ERROR:
/*+++++ */

```

```
TRACE OFF; SIGNAL OFF ERROR
/* */
SAY 'UNACCEPTABLE USVXTRC RETURN CODE' USVXTRC_RC
/* */
'CP SPOOL PRINTER NOCONT'
'CP CLOSE PRINTER NAME USVEXEC LISTING'
'CP SPOOL PRINTER OFF'
'GLOBAL LOADLIB'
'GLOBAL sortlib'
'FILEDEF * CLEAR'
/* */
EXIT USVXTRC_RC
/* */
/*+++++ */
PUNCHSUB_ERROR:
/*+++++ */
TRACE OFF; SIGNAL OFF ERROR
/* */
SAY 'UNACCEPTABLE PUNCHSUB RETURN CODE' USVXTRC_RC
/* */
'CP SPOOL PRINTER NOCONT'
'CP CLOSE PRINTER NAME USVEXEC LISTING'
'CP SPOOL PRINTER OFF'
'GLOBAL LOADLIB'
'GLOBAL sortlib'
'FILEDEF * CLEAR'
/* */
EXIT USVXTRC_RC
/* */
/*+++++ */
ALTERSUB_ERROR:
/*+++++ */
TRACE OFF; SIGNAL OFF ERROR
/* */
SAY 'UNACCEPTABLE ALTERSUB RETURN CODE' USVXTRC_RC
/* */
'CP SPOOL PRINTER NOCONT'
'CP CLOSE PRINTER NAME USVEXEC LISTING'
'CP SPOOL PRINTER OFF'
'GLOBAL LOADLIB'
'GLOBAL sortlib'
'FILEDEF * CLEAR'
/* */
EXIT USVXTRC_RC
/* */
/*+++++ */
LOADSUB_ERROR:
/*+++++ */
```

```
TRACE OFF; SIGNAL OFF ERROR
/* */
SAY 'UNACCEPTABLE LOADSUB RETURN CODE' USVXTRC_RC
'CP SPOOL PRINTER NOCONT'
'CP CLOSE PRINTER NAME USVEXEC LISTING'
'CP SPOOL PRINTER OFF'
'GLOBAL LOADLIB'
'GLOBAL sortlib'
'FILEDEF * CLEAR'
/* */
EXIT USVXTRC_RC
/* */
/*+++++ */
USVLOAD_ERROR:
/*+++++ */
TRACE OFF; SIGNAL OFF ERROR
SAY 'UNACCEPTABLE USVLOAD RETURN CODE' USVXTRC_RC
/* */
'CP SPOOL PRINTER NOCONT'
'CP CLOSE PRINTER NAME USVEXEC LISTING'
'CP SPOOL PRINTER OFF'
'GLOBAL LOADLIB'
'GLOBAL sortlib'
'FILEDEF * CLEAR'
/* */
EXIT USVXTRC_RC
/* */
/*+++++ */
DELTSUB_ERROR:
/*+++++ */
TRACE OFF; SIGNAL OFF ERROR
SAY 'UNACCEPTABLE DELTSUB RETURN CODE' USVXTRC_RC
/* */
'CP SPOOL PRINTER NOCONT'
'CP CLOSE PRINTER NAME USVEXEC LISTING'
'CP SPOOL PRINTER OFF'
'GLOBAL LOADLIB'
'GLOBAL sortlib'
'FILEDEF * CLEAR'
/* */
EXIT USVXTRC_RC
/* */
/*+++++ */
ERROR:
/*+++++ */
ERROR_RC = RC
TRACE OFF; SIGNAL OFF ERROR
/* */
```

```
SAY 'NON-ZERO RETURN CODE ENCOUNTERED IN EXEC AT LINE' SIGL
/* */
'CP SPOOL PRINTER NOCONT'
'CP CLOSE PRINTER NAME USVEXEC LISTING'
'CP SPOOL PRINTER OFF'
'GLOBAL LOADLIB'
'GLOBAL sortlib'
'FILEDEF * CLEAR'
/* */
EXIT ERROR_RC
```

dbxlib	The file name of the load library into which you downloaded CA IDMS Extractor.
idmslib	The file name of the load library which contains your CA IDMS load modules.
sortlib	The file name of the text library which contains your Sort text files.
fn SYSCTL fm	The file name, filetype, and file mode of the SYSCTL file used by the Central Version (CV) during batch processing.
a	The file mode for each relevant file. If necessary, change the file name and filetype to conform to your site's standards.

Running in Local Mode Under z/VM

The JCL assumes you are going to be running under a CV. To run in local mode:

1. Add the appropriate FILEDEFS for your local journal(s).
2. Add the FILEDEF for the LOADLIB containing your local DMCL and for your source and transient subschemas.
3. Add the above loadlib to the GLOBAL LOADLIB statement.
4. To the EXTRACT step, add FILEDEFS for:
 - a. your CA IDMS Extractor database
 - b. your source database.
5. To the LOAD step, add FILEDEFS for your target database.
6. Remove or comment out the SYSCTL FILEDEF statement.
7. Alter the parameters in your SYSIDMS INPUT file accordingly.

If the target subschema exists in a CA IDMS dictionary load area, the PUNCHSUB and ALTERSUB steps do not need to be changed. If the target subschema exists in a load library, it must be uploaded to a dictionary load area before the transient subschema process is executed.

If the target subschema exists in object format, do not execute the PUNCHSUB step, and:

1. Change the INPUT of the ALTERSUB step to be the file of the object subschema.
2. Change the LOADSUB step to execute the linkage editor instead of IDMSDDDL. (Supply appropriate JCL for a link edit.) The SYSLIN dataset should be the OUTPUT from the ALTERSUB step. The SYSLMOD member name should be the TRANSSUB (transient SSC name) specified when the EXEC was submitted. Specify an execute parameter of LET and expect various IEW0302 error messages, as well as a condition code of 8.
3. For the LOAD step, change the return code check from 5 to 9.
4. Change the DELETESUB step to execute a LOADLIB DELETE command for the transsub member name.

Printing JCL--USVPJCL

The sample JCL contained in:

- z/OS-Target or Distribution source library member USVPJCL
- z/VSE- SAMPJCL library member USVPJCLS
- z/VM- USVPJCL EXEC

Is used by the Print Utility or the Online JCL Utilities Component after JCL has been uploaded, or edited and saved using the online JCL Component.

The JCL and keys for USVPJCL are shown below.

z/OS JCL

```
//USVPJCL JOB (job card parameters)
//*
//PRTJCL EXEC PGM=USVPJCL,REGION=1024K
//STEPLIB DD DSN=your.dbx.loadLib,DISP=SHR
// DD DSN=your.idms.loadLib,DISP=SHR
//SYSCTL DD DSN=your.idms.sysctl,DISP=SHR
//SYSLST DD SYSOUT=a
//SYSUDUMP DD SYSOUT=a
//*
//SYSIPT DD *
PROCESS,USERID=userid,JCLMBR=jcl-member-name
```

job card parameters	The job card parameters at your site.
your.dbx.loadlib	The name of the load library into which CA IDMS Extractor load modules were link edited.
your.idms.loadlib	The name of the load library into which CA IDMS load modules were link edited.
your.idms.sysctl	The data set name of the SYSCTL file for the CV used during CA IDMS Extractor batch processing.
a	An appropriate SYSOUT class for your environment.
PROCESS	Must be coded as is. Indicates that PROCESS keywords follow.
userid	Required keyword used as primary key for selection of a CA IDMS Extractor JCL member. This keyword is the user ID or LTERM ID under which the member was saved.
jcl-member-name	Required keyword, used as secondary key for selection of a CA IDMS Extractor JCL member.

z/VSE JCL

```

* SS JOB JNM=USVPJCL
// JOB USVPJCL
*
// OPTION LOG,PARTDUMP
// UPSI a
*
* *** CORE IMAGE LIBRARY FOR PRODUCT
// DLBL tool,'tool.corelib'
// EXTENT ,volserc
// DLBL idms,'idms.corelib'
// EXTENT ,volserc
// LIBDEF *,SEARCH=(tool.sublib,idms.sublib),TEMP
*
* *** INPUT - SYNTAX
// ASSGN SYSIPT,SYSPDR
*
* *** OUTPUT - PRINT REPORT FILE
// ASSGN SYS006,SYSLST
*
// DLBL SYSCTL,'your.sysctl.file',,sd
// EXTENT SYS000,volser
// ASSGN SYS000,DISK,VOL=volser,SHR
*
// DLBL SYSIDMS,'#SYSIPT',0,SD
// EXEC USVPJCL,SIZE=(USVPJCL,400K)
PROCESS,USERID=userid,JCLMBR=jcl-member-name
/*
* SYSIDMS parameters
/*
/*
/&
* SS E0J

```

a	The UPSI switch to invoke CA IDMS CV as specified in your IDMSOPTI module.
tool	The file name of the core image library into which the executable phases of CA IDMS Extractor were installed.
tool.corelib	The file ID of the core image library into which the executable phases of CA IDMS Extractor were installed.

volser_	<p>The volume serial number or generic assignment of the volume on which the file, as specified in the previous statement, resides. The following letters identify the file in question:</p> <ul style="list-style-type: none"> ■ c=core image library ■ w=work file ■ r=relocatable library ■ s=source statement library
	<p>The file name of the core image library into which the executable phases of CA IDMS were installed.</p>
idms.corelib	<p>The file ID of the core image library into which the executable phases of CA IDMS were installed.</p>
.sublib	<p>The sublibrary name of the z/VSE library specified in the previous file name.</p>
your.sysctl.file	<p>The file ID of the SYSCTL file for the CV used during CA IDMS Extractor batch processing.</p>

z/VM JCL

```

/* */
TRACE OFF; SIGNAL ON ERROR
/*
DBX_LOADLIB_FN      = 'dbxlib'
IDMS_LOADLIB_FN     = 'idmslib'
/*
      Link and access the Minidisks containing the required libraries
'CP SPOOL PRINTER NOCONT CLOSE'
'CP SPOOL PRINTER TO * NOHOLD CONT FORM OFF DIST OFF'
'GLOBAL LOADLIB ' DBX_LOADLIB_FN IDMS_LOADLIB_FN
/*

```



```

        Create the input parameter file.
CALL CREATE_INPUT_PARM_FILE
/*
        Product specific files.
'FILEDEF SYSLST  PRINTER'
'FILEDEF SYSJUMP PRINTER'
'FILEDEF SYSIPT  DISK USVPJCL SYSIPT A'
/*
        You must create a file 'SYSIDMS INPUT A' containing the SYSIDMS
        parameters you use to specify your runtime environment.
'FILEDEF SYSIDMS DISK SYSIDMS INPUT A'
'FILEDEF SYSCTL  DISK fn SYSCTL fm'
/*
SIGNAL OFF ERROR
SAY 'STARTING PRINT OF CA-IDMS/DATABASE EXTRACTOR JCL'
'EXECOS OSRUN USVPJCL'
USVPJCL_RC = RC
'CP SPOOL PRINTER NOCONT'
'CP CLOSE PRINTER NAME USVPJCL LISTING'
'CP SPOOL PRINTER OFF'
SAY 'USVPJCL FINISHED WITH A RETURN CODE OF' USVPJCL_RC
'GLOBAL LOADLIB'
'FILEDEF * CLEAR'
EXIT USVPJCL_RC
/* */
/*+++++*/
CREATE_INPUT_PARM_FILE:
/*+++++*/
SIGNAL OFF ERROR
'ERASE USVPJCL SYSIPT A'
SIGNAL ON ERROR
/* */
PUSH 'FFILE'
PUSH
PUSH ' JCLMBR=jcl.member.name'
PUSH ' USERID=userid,'
PUSH ' PROCESS,'
PUSH 'INPUT'
PUSH 'SET LRECL 80'
PUSH 'SET RECFM F'
'XEDIT USVPJCL SYSIPT A' ,
' (NOPROFILE NOSCREEN NOMSG'
RETURN
/* */
/*+++++*/
ERROR:
/*+++++*/
ERROR_RC = RC

```

```
TRACE OFF; SIGNAL OFF ERROR
/* */
SAY 'NON-ZERO RETURN CODE ENCOUNTERED IN EXEC AT LINE' SIGL
/* */
'CP SPOOL PRINTER NOCONT'
'CP CLOSE PRINTER NAME USVPJCL LISTING'
'CP SPOOL PRINTER OFF'
'GLOBAL LOADLIB'
'FILEDEF * CLEAR'
EXIT ERROR_RC
/* */
```

dbxlib	The file name of the load library into which you downloaded CA IDMS Extractor.
idmslib	The file name of the load library which contains your CA IDMS load modules.
fn SYSCTL fm	The file name, file type, and file mode of the SYSCTL file used by the Central Version (CV) during batch processing.
PROCESS	Must be coded as is. Indicates that PROCESS keywords follow.
userid	Required keyword used as primary key for selection of a CA IDMS Extractor JCL member. This keyword is the user ID or LTERM ID under which the member was saved.
jcl-member-name	Required keyword, used as secondary key for selection of a CA IDMS Extractor JCL member.

Running in Local Mode

To run in local mode under z/OS , and z/VSE, remove the SYSCTL DD statement and add appropriate DD statements for your CA IDMS Extractor database and your local journal. To run in local mode under z/VM, remove the SYSCTL FILEDEF statement and add appropriate FILEDEF statements for your CA IDMS Extractor database and your local journals.

Printing a Selection Criteria Specification--USVPSPC

The sample JCL contained in:

- z/OS-Target or Distribution source library member USVPSPC
- z/VSE- SAMPJCL library member USVPSPC.S
- z/VM- USVPSPC EXEC

Is used by the batch Specification Print Utility or the online Specification Utilities Component after a Selection Criteria Specification has been created and saved using the online Selection Criteria Specification Component. The JCL and keys for USVPSPC are shown below.

z/OS JCL

```
//USVPSPC JOB (job-card-parameters)
//*
//PRTSPEC EXEC PGM=USVPSPC,REGION=1024K
//STEPLIB DD DSN=your.dbx.loadLib,DISP=SHR
//          DD DSN=your.idms.loadLib,DISP=SHR
//SYSCTL DD DSN=your.idms.sysctl,DISP=SHR
//SYSLST DD SYSOUT=a
//SYSUDUMP DD SYSOUT=a
//*
//SYSIPT DD
PROCESS,USERID=userid,SPECNAME=selection-criteria-specification-name
```

job-card-parameters	The job card parameters at your site.
<i>your.dbx.loadlib</i>	The name of the load library into which CA IDMS Extractor load modules were link edited.
<i>your.idms.loadlib</i>	The name of the load library into which CA IDMS load modules were link edited.
<i>your.idms.sysctl</i>	The data set name of the SYSCTL file for the CV used during CA IDMS Extractor batch processing.
<i>a</i>	An appropriate SYSOUT class for your environment.
PROCESS	Must be coded as is. Indicates that PROCESS keywords follow.
<i>userid</i>	Required keyword used as primary key for selection of a specification. This is the user ID or LTERM ID under which the specification was saved.
<i>selection-criteria-specification-name</i>	Required keyword, used as secondary key for selection of a specification.

z/VSE JCL

```

* SS JOB JNM=USVPSPC
// JOB USVPSPC
*
// OPTION LOG,PARTDUMP
// UPSI 1
* **** CREATE A SYSIDMS PARAMETER FILE ****
// UPSI 1
// DLBL anyname,'work.file.SYSIDMS',0,SD
// EXTENT SYSnnn,volser,,,start-track,1
// ASSGN SYSnnn,DISK,VOL=volser,SHR
// EXEC DITTO
$$DITTO CSQ FILEOUT=ANYNAME
ECHO=ON
JOURNAL=OFF
LOCAL=ON-OR-OFF
DMCL=DMCLNAME
DICTNAME=DICTNAME
DBN=DBX
/*
/*
// UPSI a
*
* *** CORE IMAGE LIBRARY FOR PRODUCT
// DLBL dbms,'dbx.corelib'
// EXTENT ,volserc
// DLBL idms,'idms.corelib'
// EXTENT ,volserc
// LIBDEF *,SEARCH=(dbms.sublib,idms.sublib),TEMP
*
* *** INPUT - SYNTAX
// ASSGN SYSIPT,SYSRDR
*
* *** OUTPUT - PRINT REPORT FILE
// ASSGN SYS006,SYSLST
*
// DLBL SYSCTL,'your.sysctl.file',,sd
// EXTENT SYS000,volser,,,start-track,1
// ASSGN SYS000,DISK,VOL=volser,SHR

```

```

*
// DLBL      SYSIDMS, 'work.file.SYSIDMS',0,SD
// EXTENT    SYSnnn,volser
// ASSGN     SYSnnn,DISK,VOL=volser,SHR
*
// EXEC      USVPSPC,SIZE=(USVPSPC,400K)
           PROCESS,USERID=userid,SPECNAME=selection-criteria-specification-name
/*
/&
* SS E0J

```

a	The UPSI switch to invoke CA IDMS CV as specified in your IDMSOPTI module.
anyname	Any suitable name for your SYSIDMS file. The name you have chosen must be identical to the FILEOUT value in the DITTO step.
SYSnnn	An appropriate SYS number for your SYSIDMS file.
volser_	The volume serial number or generic assignment of the volume on which the file, as specified in the previous statement, resides. The following letters identify the file in question: <ul style="list-style-type: none"> ■ c=core image library ■ w=work file ■ r=relocatable library ■ s=source statement library
start-track	The starting track number for the specified file.
dbms	The file name of the core image library into which the executable phases of CA IDMS Extractor were installed.
dbx.corelib	The file ID of the core image library into which the executable phases of CA IDMS Extractor were installed.
idms	The file name of the core image library into which the executable phases of CA IDMS were installed.
idms.corelib	The file ID of the core image library into which the executable phases of CA IDMS were installed.
dbms.sublib	The sublibrary name of the z/VSE library specified in the previous file name.
your.sysctl.file	The file ID of the SYSCTL file for the CV used during CA IDMS Extractor batch processing.

z/VM EXEC

```
/* */
TRACE OFF; SIGNAL ON ERROR
/*
DBX_LOADLIB_FN      = 'dbxlib'
IDMS_LOADLIB_FN     = 'idmslib'
/*
        Link and access the Minidisks containing the required librariе(s)
*/
'CP SPOOL PRINTER NOCONT CLOSE'
'CP SPOOL PRINTER TO * NOHOLD CONT FORM OFF DIST OFF'
'GLOBAL LOADLIB ' DBX_LOADLIB_FN IDMS_LOADLIB_FN
/*
        Create the input parameter file.
*/
CALL CREATE_INPUT_PARM_FILE
/*
        Product specific files.
*/
'FILEDEF SYSIPT   DISK USVPSPC SYSIPT A'
'FILEDEF SYSLST  PRINTER'
'FILEDEF SYSJUMP PRINTER'
/*
        You must create a file 'SYSIDMS INPUT A' containing the SYSIDMS
        parameters you use to specify your runtime environment.
*/
'FILEDEF SYSIDMS DISK SYSIDMS INPUT A'
'FILEDEF SYSCTL  DISK fn SYSCTL fm'
/* */
SIGNAL OFF ERROR
SAY 'STARTING PRINT OF CA-IDMS/DATABASE EXTRACTOR SPECIFICATION'
'EXECOS OSRUN USVPSPC'
USVPSPC_RC = RC
'CP SPOOL PRINTER NOCONT'
'CP CLOSE PRINTER NAME USVPSPC LISTING'
'CP SPOOL PRINTER OFF'
SAY 'USVPSPC FINISHED WITH A RETURN CODE OF' USVPSPC_RC
'GLOBAL LOADLIB'
'FILEDEF * CLEAR'
EXIT USVPSPC_RC
/* */
```

```

/* ++++++ */
CREATE_INPUT_PARM_FILE:
/* ++++++ */
SIGNAL OFF ERROR
'ERASE USVSPSPC SYSIPT A'
SIGNAL ON ERROR
/* */
PUSH 'FFILE'
PUSH
PUSH ' SPECNAME=specification-name'
PUSH ' USERID=userid,'
PUSH ' PROCESS,'
PUSH 'INPUT'
PUSH 'SET LRECL 80'
PUSH 'SET RECFM F'
'XEDIT USVSPSPC SYSIPT A' ,
  '(NOPROFILE NOSCREEN NOMSG'
RETURN
/* */
/* ++++++ */
ERROR:
/* ++++++ */
ERROR_RC = RC
TRACE OFF; SIGNAL OFF ERROR

SAY 'NON-ZERO RETURN CODE ENCOUNTERED IN EXEC AT LINE' SIGL

'CP SPOOL PRINTER NOCONT'
'CP CLOSE PRINTER NAME USVSPSPC LISTING'
'CP SPOOL PRINTER OFF'
'GLOBAL LOADLIB'
'FILEDEF * CLEAR'
EXIT ERROR_RC
/* */

```

dbxlib	The file name of the load library into which you downloaded CA IDMS Extractor.
idmslib	The file name of the load library which contains your CA IDMS load modules.
fn SYSCTL fm	The file name, file type, and file mode of the SYSCTL file used by the Central Version (CV) during batch processing.
PROCESS	Must be coded as is. Indicates that PROCESS keywords follow.
userid	Required keyword used as primary key for selection of a CA IDMS Extractor JCL member. This keyword is the user ID or LTERM ID under which the member was saved.

specification-name	Required keyword, used as secondary key for selection of a CA IDMS Extractor Selection Criteria Specification.
--------------------	--

Running in Local Mode

To run in local mode under z/OS and z/VSE, remove the SYSCTL DD statement and add appropriate DD statements for your CA IDMS Extractor database and your local journal. To run in local mode under z/VM, remove the SYSCTL FILEDEF statement and add appropriate FILEDEF statements for your CA IDMS Extractor database and your local journals.

Printing Online Documentation--USVPRINT

The CA Online Documentation Print Utility provided with CA IDMS Extractor allows error messages and other product information to be printed upon request.

- z/OS and-Target or Distribution source library member USVPRINT
- z/VSE- SAMPJCL library member USVPRINT
- z/VM- USVPRINT EXEC

Online documentation modules for CA IDMS Extractor screens other than list or confirmation screens are shown in the table below.

The printed version of the online documentation is presented one screen per page and includes page reference indexes for screen options. Characters highlighted in the online documentation appear bolded in the printed version.

Online Documentation Modules

Module Name	Description
Generic Modules:	
COMMANDS	Generic EDITOR documentation.
CA IDMS Extractor Modules:	
USVAARE	Area Selection List
USVABER	Begin Edit Record Selection List
USVACPL	Copy Utility Member List
USVACPY	Copy Utility

USVAEDJ	Edit JCL Entry Screen
USVAENT	Database Entry Point Selection Menu
USVAFLS	Field Level Selection Criteria Screen
USVAFMM	Field Mismatch Screen
USVAIDX	Index Entry Point Selection List
USVAJUT	JCL Utilities
USVAKEY	Display PF Key Values
USVAMEN	Table of Contents for Online Documentation
USVAREC	Record Entry Point Selection List
USVARLS	Record Level Selection Criteria Screen
USVASET	Path-Record Set Selection List
USVASPC	Specify Database Build Specification Screen
USVASUB	Submit JCL for Execution
USVASUT	Specification Utilities
USVAUTI	Utilities Menu
USVDBP	Creating a CA IDMS Extractor Database Path
USVEXIT	Exiting from CA IDMS Extractor
USVGENRL	General Information about CA IDMS Extractor
USVMSG	CA IDMS Extractor Messages
USVXFERF	Transfer Facility

Customizing the CA IDMS Extractor Environment--USVTPARM

The CA IDMS Extractor customization macro gives you the ability to change the following operational parameters:

- The taskcode used to invoke CA IDMS Extractor.
- The dictionary into which the CA IDMS Extractor online documentation modules were loaded at installation.
- The number of entries to allocate for the CA IDMS Extractor set stack.
- From whom a user can copy other JCL members and Selection Criteria Specifications.

- The default for the RETAIN PHYSICAL SEQUENCE OF MEMBER RECORDS IN THE SET? field on the Record Level Selection Criteria screen.
- The default for the EXTRACT ALL OWNERS FOR EXTRACTED RECURSIVE RECORDS? field on the Record Level Selection Criteria screen.
- The default for the BEGIN VIEWING/EDITING IN THE MIDDLE OF A PATH DEFINITION? field on the Specify Database Extract Specification screen.
- Whether to have message NLYZ008 be a warning (W) message or an error (E) message. NLYZ008 is displayed at extract time when a mandatory member is being extracted without its owner. An error message prevents the Selection Criteria Specification from being used.

These runtime options can be changed at anytime after initial product installation, either before or after SMP/E ACCEPT (z/OS) or MSHP (z/VSE) processing. See the CA IDMS installation guide for your operating system for detailed instructions on processing customization macro changes.

USVTPARM--Customizing the CA IDMS Extractor Environment

TASK=task-code,
HLPDICT=help-dictionary-name,
HLPNODE=help-dictionary-node,
HLPVERS=help-dictionary-version,
STKENTS=set-stack-size,
COPY=USER|DBXADMIN|ANYONE,
RETSEQ=Yes|No,
XRECURO=Yes|No,
BGINMID=Yes|No,
NLYZ008=Warning|Error

Key to Customizing the CA IDMS Extractor Environment

task-code

The task code used to invoke CA IDMS Extractor. The default is DBX.

help-dictionary-name

The 1-8 character dictionary name of the dictionary into which the CA IDMS Extractor online documentation modules were loaded at installation. The default is NULL for the default dictionary.

help-dictionary-node

The 1-8 character dictionary node for help-dictionary-name. The default is NULL if no DDS.

help-version-number

The version number at which USVTUTOR online documentation modules were added. From 1 to 9999. The default is 1.

set-stack-size

The number of 8-byte entries to allocate for the CA IDMS Extractor set stack. From 30-1000. The default is 50.

COPY=USER|DBXADMIN|ANYONE

Specify from whom a user can copy other JCL members and Selection Criteria Specifications:

USER

From only the user

DBXADMIN

From the user plus any global members under the DBXADMIN user ID

ANYONE

From any user on the CA IDMS Extractor database. This is the default.

RETSEQ=Yes|No

Specify YES or NO to define the default (Yes or No) for the RETAIN PHYSICAL SEQUENCE OF MEMBER RECORDS IN THE SET? field on the Record Level Selection Criteria screen. The default is YES.

XRECURO=Yes|No

Specify YES or NO to define the default (Yes or No) for the EXTRACT ALL OWNERS FOR EXTRACTED RECURSIVE RECORDS? field on the Record Level Selection Criteria screen. The default is YES.

BGINMID=Yes|No

Specify YES or NO to define the default (Yes or No) for the BEGIN VIEWING/EDITING IN THE MIDDLE OF A PATH DEFINITION? field on the Specify Database Extract Specification screen. The default is NO.

NLYZ008=Warning|Error

Specify WARNING or ERROR to define whether the message NLYZ008 is a warning message or an error message. NLYZ008 is displayed at extract time when a mandatory member is being extracted without its owner. An error message prevents the Selection Criteria Specification from being used. The default is WARNING.

Writing a User Exit Module--CUVUSRXA

The copy book contained in sampleJCL library member:

- For Assembler--CUVUSRXA (z/OS) , or CUVUSRXA.S (z/VSE)
- For COBOL--CUVUSRXC (z/OS), or CUVUSRXC.S (z/VSE)

Describes the input parameters that will be passed to a user exit module that you provide. This exit module is called by the Database Extract Component when:

- CA IDMS Extractor walking the source database looking for records to extract, and
- A record meets its Record Level Selection Criteria.

You can change the record data, add or delete fields to/from the record data, or prevent the record from being written to the file.

CUVUSRXA Rules and Guidelines

- If you change the record's length, you must update the record length (USVRECLN) to reflect the record's new data length. The record buffer is 32,732 bytes in length.
- Moving data past the end of any of the passed parameters causes unpredictable results.

CUVUSRXA--Copy Book for Writing a User Exit Module

```
* COPY CUVUSRXA ----- CA-IDMS/DBX *
*
* THIS COPY BOOK DESCRIBES THE PARAMETERS PASSED TO AN ASSEMBLER USER *
* EXIT MODULE WRITTEN FOR THE DATABASE EXTRACTOR (DBX) EXTRACT *
* COMPONENT. REFER TO CUVUSRXC FOR THE COBOL VERSION. THE USER *
* EXIT IS CALLED: *
*
* 1) ONLY FOR RECORDS WHICH MEET THEIR RECORD/FIELD LEVEL SELECTION *
* CRITERIA. *
* 2) PRIOR TO EACH RECORD BEING WRITTEN TO THE EXTRACT FILE. *
*
```

```

* YOU CAN CHANGE THE RECORD DATA, ADD OR DELETE FIELDS TO/FROM THE *
* RECORD DATA, OR PREVENT THE RECORD FROM BEING WRITTEN TO THE FILE. *
* IF YOU CHANGE THE RECORD'S LENGTH, YOU MUST UPDATE THE RECORD *
* LENGTH (USVRECLN) TO REFLECT THE RECORD'S NEW DATA LENGTH. THE *
* RECORD BUFFER IS 32,732 BYTES IN LENGTH. MOVING DATA PAST THE END *
* OF ANY OF THE PASSED PARAMETERS WILL CAUSE UNPREDICTABLE RESULTS. *
*
* THERE ARE THREE CONTROL BLOCKS PASSED TO THE USER EXIT. EACH *
* CONTROL BLOCK IS PRECEDED BY A TABLE WHICH EXPLAINS EACH PARAMETER *
* FIELD.
*
*-----*
***
* COPY CUVUSRXA ----- CA-IDMS/DBX *
*-----*
***
*-----*
* STATUS CONTROL BLOCK: THIS IS THE FIRST BLOCK OF INFORMATION *
* PASSED TO THE USER EXIT. IT REFLECTS *
* THE GENERAL CONDITIONS UNDER WHICH THE USER *
* EXIT IS BEING INVOKED. TOTAL LENGTH IS 69 *
* BYTES.
*-----*
* ITEM          USAGE          LENGTH   DESCRIPTION *
*-----*
* SUBSCHEMA    ALPHANUMERIC    8 BYTES  NAME OF SUBSCHEMA BEING USED. *
* NAME
* DATABASE     BINARY          4 BYTES  DATABASE KEY FOR CURRENT OF *
* KEY          TRANSACTION RECORD.
* CANCEL       BINARY          2 BYTES  ZERO TO INDICATE THAT THE *
* INDICATOR    CURRENT OF TRANSACTION RECORD *
*              SHOULD BE EXTRACTED; NON-ZERO *
*              TO INDICATE THAT THE RECORD *
*              SHOULD NOT BE EXTRACTED.
* RECORD       ALPHANUMERIC    18 BYTES NAME OF RECORD TYPE FOR CURRENT *
* NAME         OF TRANSACTION.
* AREA         ALPHANUMERIC    18 BYTES NAME OF AREA TO WHICH CURRENT OF *
* NAME         TRANSACTION RECORD IS ASSIGNED.*
* SET NAME     ALPHANUMERIC    18 BYTES NAME OF SET IN WHICH CURRENT OF *
*              TRANSACTION RECORD PARTICIPATES*
*              AS EITHER AN OWNER OR MEMBER *
*              (THE NAME OF THE SET THAT DBX *
*              IS CURRENTLY WALKING); IF *
*              SPACES, THEN THE CURRENT OF *
*              TRANSACTION RECORD WAS OBTAINED*

```

```

*                                     BY AN AREA SWEEP (A SET IS NOT *
*                                     BEING WALKED). *
* SET          ALPHANUMERIC  1 BYTE  '0' INDICATES THAT THE CURRENT *
* RELATION-    OF TRANSACTION RECORD IS AN *
* SHIP        OWNER OF SET NAMED ABOVE; 'M' *
*                                     INDICATES THAT THE RECORD IS A *
*                                     MEMBER OF THE SET. *
*-----*
USVPRM1 DSECT          PARAMETER #1 - STATUS INFORMATION
USVSSNM DS   CL08      NAME OF SUBSCHEMA BEING USED
USVDBKEY DS   F        DATABASE KEY OF RECORD
USVCANCL DS   H        CANCEL INDICATOR: X
                        0 TO EXTRACT THE RECORD X
                        NON-ZERO TO CANCEL THE EXTRACTION.
USVRECNM DS   CL18     NAME OF RECORD
USVARENM DS   CL18     NAME OF AREA IN WHICH RECORD RESIDES
USVSETNM DS   CL18     NAME OF SET IN WHICH RECORD PARTICIPATES X
                        - SPACES IF AREA SWEEP RECORD.
USVRELAT DS   CL01     RELATIONSHIP OF RECORD TO SET:
USVOWNER EQU  '0'      OWNER OF THE SET
USVMEMBR EQU  'M'      MEMBER OF THE SET.
USVPRM1L EQU  *-USVPRM1 LENGTH OF PARAMETER #1
***
*-----*
* RECORD CONTROL BLOCK: THIS IS THE SECOND BLOCK OF INFORMATION *
* PASSED TO THE USER EXIT. IT CONTAINS *
* INFORMATION REGARDING THE CURRENT OF *
* TRANSACTION RECORD TYPE WHICH HAS MET ITS *
* RECORD LEVEL SELECTION CRITERIA. TOTAL *
* LENGTH IS 64 BYTES. *
*-----*
* ITEM          USAGE          LENGTH  DESCRIPTION *
*-----*
* RECORD       ALPHANUMERIC  18 BYTES  NAME OF RECORD TYPE FOR CURRENT *
* NAME                                     OF TRANSACTION. *
* AREA        ALPHANUMERIC  18 BYTES  NAME OF AREA TO WHICH CURRENT OF *
* NAME                                     TRANSACTION RECORD IS ASSIGNED. *
* RECORD ID   BINARY         2 BYTES  IDENTIFICATION NUMBER FOR *
*                                     CURRENT OF TRANSACTION RECORD. *
* RECORD     BINARY         2 BYTES  LENGTH (DATA ONLY), IN BYTES, OF *
* LENGTH                                           CURRENT OF TRANSACT. RECORD; IF *
*                                     YOU CHANGE THE LENGTH OF THE *
*                                     RECORD, YOU MUST UPDATE THIS *
*                                     FIELD TO REFLECT THE RECORD'S *
*                                     NEW DATA LENGTH. *
* CONTROL    BINARY         2 BYTES  LENGTH (DATA ONLY), IN BYTES, OF *
* LENGTH                                           CURRENT OF TRANSACTION RECORD *
*                                     UP TO AND INCLUDING THE LAST *

```

```

*
*          CALC OR SORT-CONTROL FIELD.
* MAXIMUM  BINARY  2 BYTES  ACTUAL LENGTH OF FIXED-LENGTH
* LENGTH
*          RECORD OR MAXIMUM LENGTH OF A
*          VARIABLE-LENGTH RECORD, IN
*          BYTES.
*
* DATABASE  BINARY  4 BYTES  DATABASE KEY FOR CURRENT OF
* KEY
*          TRANSACTION RECORD.
* RECORD    BINARY  4 BYTES  NUMBER OF LOWEST PAGE ON WHICH
* LOW PAGE
*          RECORDS OF THIS TYPE CAN EXIST.
* RECORD    BINARY  4 BYTES  NUMBER OF HIGHEST PAGE ON WHICH
* HIGH PAGE
*          RECORDS OF THIS TYPE CAN EXIST.
* AREA LOW  BINARY  4 BYTES  NUMBER OF LOWEST PAGE OF AREA
* PAGE
*          TO WHICH RECORD IS ASSIGNED.
* AREA HIGH BINARY  4 BYTES  NUMBER OF HIGHEST PAGE OF AREA
* PAGE
*          TO WHICH RECORD IS ASSIGNED.
*-----*
USVPRM2 DSECT          PARAMETER #2 - RECORD INFORMATION
USVRNAME DS   CL18     NAME OF RECORD
USVRARNM DS   CL18     NAME OF AREA IN WHICH RECORD RESIDES
USVRECID DS   H        RECORD IDENTIFICATION NUMBER
USVRECLN DS   H        LENGTH, IN BYTES, OF THE RECORD - IF YOU
                        CHANGE THE RECORD'S DATA LENGTH, YOU
                        MUST UPDATE THIS FIELD ACCORDINGLY.
USVRCNTL DS   H        DATA LENGTH, IN BYTES, OF RECORD UP TO &
                        INCLUDING THE LAST CALC OR SORT CONTROL
                        FIELD.
USVRMAXL DS   H        ACTUAL LENGTH IF FIXED LENGTH RECORD OR
                        MAXIMUM LENGTH IF VARIABLE LENGTH
                        RECORD, IN BYTES.
USVRDBK DS    F        DATABASE KEY OF RECORD
USVRLOPG DS   F        NUMBER OF LOWEST PAGE OF RECORD'S RANGE
USVRHIPG DS   F        NUMBER OF HIGHEST PAGE OF RECORD'S RANGE
USVALOPG DS   F        NUMBER OF LOWEST PAGE IN AREA
USVAHIPG DS   F        NUMBER OF HIGHEST PAGE IN AREA
USVPRM2L EQU  *-USVPRM2 LENGTH OF PARAMETER #2
***
*-----*
* RECORD OCCURRENCE BLOCK: THIS IS THE THIRD BLOCK OF INFORMATION
*
* PASSED TO THE USER EXIT. IT CONTAINS THE
*
* ACTUAL RECORD OCCURRENCE FOR THE CURRENT
*
* OF TRANSACTION RECORD. TOTAL LENGTH IS
*
* DEFINED IN THE RECORD TYPE'S SUBSCHEMA
*
* DESCRIPTION.
*-----*

```

* ITEM	USAGE	LENGTH	DESCRIPTION	*
* ----- *				
* RECORD	AS DEFINED	AS DEFINED	ACTUAL CURRENT OF	*
* OCCURRENCE	IN SUBSCHEMA	IN SUBSCHEMA	TRANSACTION RECORD.	*
* ----- *				
USVPARAM3	DSECT		PARAMETER #3 - RECORD OCCURRENCE	
USVRDATA	DS 0X		ACTUAL DATABASE RECORD OCCURRENCE -	
			LENGTH AS DEFINED IN THE SUBSCHEMA.	

Chapter 6: Messages

This chapter describes the messages generated by CA IDMS Extractor. CA IDMS Extractor messages are preceded by an alphanumeric code that ends with a letter indicating the severity. The severity code is either **I**, **W**, or **E**. This chapter lists for each message the code, the text, and an explanation.

Informative - The severity code **I** indicates an informative message. Informative messages are for your information only; no remedial action is required.

Warning - The severity code **W** indicates a warning. Warning messages report conflicting data or various processing conditions that may require action.

Error - The severity code **E** indicates an error. When CA IDMS Extractor encounters an error condition, an error message appears on your screen. Error messages report erroneous and conflicting data that require action.

In addition Record/Element Subroutine messages are generated. These messages are in the format *anxxx*, where *a* is a one-character identifier and *xxx* is a unique message number. :msgl xpl='Reason' uresp='Action' module='Section'.

COMM001E

COMMUNICATION FILE IS EMPTY

Reason:

The batch communication file was not properly passed between modules.

Action:

Correct the JCL stream to properly pass the Communication File between the batch modules. For information about the JCL required to run the batch components, see **Error! Reference source not found.**

CVTX001E

SHORT ON STORAGE...*number* BYTES REQUESTED

Reason:

The number of bytes required for executing the convert extract module utility was not available in the region/partition.

Action:

Increase the region/partition size and resubmit the job. See the chapter "Operations" for information about CA IDMS Extractor's storage requirements.

CVTX002I

THE *file-name* FILE HAS BEEN SUCCESSFULLY CONVERTED

Reason:

The indicated file was successfully converted to be used by CA IDMS Release 16.0.

Action:

Proceed with the remaining steps of the conversion.

CVTX003E

INVALID EXTRACT FILE - EXTRACT *type* RECORD WAS NOT FOUND OR IS INVALID

Reason:

The EXTRACT step that created the Extract File was cancelled before the indicated extract record was written.

1. The file being read is not a CA IDMS Extractor Extract File.
2. The Extract File was not created by Release 16.0 of the CA IDMS Extractor EXTRACT module.

Action:

1. Rerun the EXTRACT step.
2. Resubmit the job using a valid Extract File.
3. Rerun the EXTRACT step using Release 16.0 of CA IDMS Extractor.

CVTX004E

INVALID PSUB BLOCK DETECTED: *name*

Reason:

An internal error has been detected while CA IDMS Extractor was building a pseudo subschema.

Action:

Ensure that CA IDMS Extractor was installed and linked successfully, and is being executed from the proper library.

DBX0001E

COMMAND *name* IS NOT ACTIVE FOR THIS FUNCTION

Reason:

A command was entered that is not active for the current function or is not recognized by CA IDMS Extractor.

Action:

Enter a command that is active for the current function.

DBX0002E

THE PF KEY PRESSED IS NOT ACTIVE FOR THIS FUNCTION

Reason:

A PF key was pressed. However, the PF key is associated with a command that is inactive for the current function.

Action:

Press a PF key that is associated with a command that is active for the current function. Enter the KEYS command in the COMMAND/OPTION field to determine the current PF key settings.

DBX0003E

YOU CAN ONLY "QUIT" EDITING OF A PREVIOUSLY COMPLETED PATHDEFINITION

Reason:

A QUIT command was entered on the Path Record Set Selection List screen when creating a new path definition. However, a QUIT command can only be used when editing (that is, viewing or modifying) a previously completed path definition.

Action:

Enter an END command to terminate the path at the current record.

DBX0004E

AN ERROR OCCURRED DURING RECOVERY PROCEDURES

Reason:

An error has been detected while CA IDMS Extractor was attempting to recover from a system problem.

Action:

1. If you were editing or viewing a specification when the problem occurred, a recovery cannot be made. You must reenter the Specify component and start the editing or viewing from the beginning of the specification.
2. Otherwise, to access CA IDMS Extractor again, you must either:
3. Logoff your terminal, log on again, and reenter the CA IDMS Extractor task code from the CA IDMS/DC prompt; or
4. Cycle the CA IDMS CV.

DBX0005E

INTERNAL ERROR - diagnostics

Reason:

An internal processing error, indicated by the diagnostics message, was detected by CA IDMS Extractor.

Action:

Contact Technical Support with the message and diagnostics text.

DBX0006E

ALL *indexed* RECORDS ARE ALREADY PART OF A PATH DEFINITION

Reason:

On the Database Entry Point Selection Menu, you selected:

1. A record without entering a record name and all records were already included in a path definition; or
2. An index without entering an index name and all indexed records were already included in a path definition.

Action:

If you require another entry point into the source database, first deselect a path set. This removes all records and sets included in the path after the deselected set from the path definition and makes the affected records available as entry points.

DBX0007E

YOU MUST ENTER A VALUE GREATER THAN 0 FOR THE NUMERIC FIELD

Reason:

A field was selected. However, an associated numeric field (where the cursor resides) contains 0.

Action:

Enter a value greater than 0 in the numeric field and press the ENTER key.

DBX0008E

UNABLE TO TRANSFER TO *function-name*

Reason:

A command was entered to transfer to a CA IDMS Extractor function that is not accessible from the current function.

Action:

Enter a command that is active for the current function.

DBX0009E

SUBROUTINE ERROR - *diagnostics*

Reason:

A subroutine error, indicated by diagnostics, has occurred.

Action:

Contact Technical Support with the message and diagnostics text.

DBX0010E

LINE NUMBER IS > MAXIMUM LINE NUMBER ALLOWED FOR THE SUBSCHEMA

Reason:

The line number part of a DBKEY specification is greater than the maximum line number value allowed for the source subschema.

Action:

Enter a valid line number for the DBKEY and press the ENTER key.

DBX0011I

SELECTION CRITERIA DEFINITION COMPLETE

Reason:

Selection criteria for all entry records and records in all paths has been specified.

Action:

None.

DBX0012E

THE PAGE NUMBER IS OUTSIDE THE VALID PAGE RANGE FOR THE RECORD TYPE

Reason:

The entered page number is less than the "FROM" page number or greater than the "TO" number for the current record type. The "FROM" and "TO" page numbers are displayed at the top of the screen.

Action:

Enter a valid page number and press the ENTER key.

DBX0013I

MAKE A SELECTION BEFORE PRESSING ENTER OR TERMINATE WITH "END"COMMAND

Reason:

An entry required on the CA IDMS Extractor screen has not been made.

Action:

1. Provide the required entry and press the ENTER key.
2. Terminate the current CA IDMS Extractor function with an END command.

DBX0014E

THE TRANSFER FACILITY IS DISABLED FOR THIS FUNCTION

Reason:

A command to transfer to another CA IDMS Extractor function was entered. However, the current function does not permit transferring to another function.

Action:

Enter a command that is active for the current function.

DBX0015I

***entry/path area/record/index/set* SUCCESSFULLY DESELECTED- PRESS ENTER KEY TO CONTINUE**

Reason:

The deselection of the area, Entry Record, Entry Index, or path set was successfully completed.

Action:

Press the ENTER key to continue CA IDMS Extractor processing.

DBX0016E

"FROM" PAGE GREATER THAN "TO" PAGE

Reason:

The "FROM" page number for a FROM/TO page number specification is greater than the "TO" page number.

Action:

Enter a "FROM" page number that is smaller than the "TO" page number, and press the ENTER key.

DBX0017I

PATH DEFINITION COMPLETE FOR ENTRY *record/index name*

Reason:

Selection criteria for the entry record and all records included in the indicated path has been specified.

Action:

None.

DBX0018I

EDITING AN EXISTING SELECTION CRITERIA SPECIFICATION

Reason:

You have entered the name of a Selection Criteria Specification that CA IDMS Extractor has retrieved from its database.

Action:

You may view and/or modify the specification.

DBX0019E

name ERROR - INVALID PARM LIST

Reason:

An ESAM/EDITOR interface call failed.

Action:

Contact Technical Support with this message.

DBX0020E

ESAMnnnn - INVALID PARAMETER LIST

Reason:

An ESAM/EDITOR interface call failed.

Action:

Contact Technical Support with this message.

DBX0021E

ESAMnnnn - ILLEGAL CALL (PUT BEFORE OPEN)

Reason:

An ESAM/EDITOR interface call failed.

Action:

Contact Technical Support with this message.

DBX0022E

ESAMnnnn - I/O ERROR nnnn OCCURRED

Reason:

An ESAM/EDITOR interface call failed.

Action:

Contact Technical Support with this message.

DBX0023E

ESAMnnnn - UNEXPECTED RETURN CODE CREATING THE SOURCE TEXT AREA

Reason:

An ESAM/EDITOR interface call failed.

Action:

Contact Technical Support with this message.

DBX0024E

ESAMnnnn - END OF FILE REACHED (BEYOND BOTTOM)

Reason:

An ESAM/EDITOR interface call failed.

Action:

Contact Technical Support with this message.

DBX0025I

NEW SELECTION CRITERIA IS BEING CREATED

Reason:

You have entered the name of a Selection Criteria Specification that was not found on the CA IDMS Extractor database.

Action:

Continue with the Selection Criteria Specification. When you exit the Selection Criteria Specification component, the specification is saved on the CA IDMS Extractor database.

DBX0026I

RECOVERY WAS SUCCESSFUL

Reason:

A previously terminated session was successfully restarted.

Action:

None.

DBX0027E

BAD RETURN OF *nnnn* FROM KEY HANDLER

Reason:

The PF key handler returned an invalid code, indicated by *nnnn*.

Action:

Contact Technical Support with this message.

DBX0028I

FUNCTION TERMINATED BY USER REQUEST

Reason:

The current function was terminated by entering an END command. No CA IDMS Extractor processing was performed.

Action:

None.

DBX0029E

THE NUMBER CANNOT BE GREATER THAN *nnnn*

Reason:

A field was selected. However, an associated numeric field (where the cursor resides) contains a value greater than the indicated maximum value allowed.

Action:

Enter a value less than or equal to the maximum value allowed, and press the ENTER key.

DBX0030E**INVALID SOURCE/TARGET SUBSCHEMA AND/OR DBNAME****Reason:**

1. The entered source or target subschema was not found in the specified dictionary or load/core image library.
2. The entered dbname could not be found in the DB table or is not a valid segment name in the DMCL being used. The dbname or segment maps the logical subschema view to a physical database. This is required because you can specify page numbers in your specification.

Action:

1. Enter a valid subschema name.
2. Enter a valid dbname or segment.
3. Press the ENTER key.

DBX0031E**A *print-jcl* JCL MEMBER IS REQUIRED TO PRINT A JCL MEMBER****Reason:**

An attempt was made to print a JCL member using the JCL Print Utility. To do this, you must have a JCL member named "PRINT-JCL". However, a "PRINT-JCL" member was not found on the CA IDMS Extractor database.

Action:

Create a JCL member, named "PRINT-JCL", which contains the appropriate JCL to invoke the JCL Print Utility. The member "-MODEL-PRINT-JCL" may be used to assist in creating the required member. Select the PRINT JCL option again, and press the ENTER key.

DBX0032E**ERROR BUILDING *source/target* PSUB: diagnostics****Reason:**

An error was detected while building the indicated pseudo subschema table.

Action:

Contact Technical Support with this message and diagnostics text.

DBX0033E

BOTH SOURCE AND TARGET SUBSCHEMA NAMES MUST BE ENTERED

Reason:

A new Selection Criteria Specification is being created because the entered specification name was not found on the CA IDMS Extractor database. However, either a source and/or target subschema name was not entered. Both subschema names are required even if you told CA IDMS Extractor not to compare the subschemas.

Action:

Enter both source and target subschema names, and press the ENTER key.

DBX0034E

OPTION x IS NOT VALID FOR THIS FUNCTION

Reason:

1. An invalid option code for the current screen was entered.
2. A deselection request was made, but the set was not selected.
3. A hierarchical or network selection of an area was requested. A hierarchical or network selection can only be performed on a record or index.

Action:

1. Enter a valid option code, and press the ENTER key.
2. Remove the deselection code.
3. Remove the hierarchical or network selection code from the Area field.

DBX0035E

***area/record/index name* INVALID OR OPTION CANNOT BEPERFORMED ON THE
*area/record/index***

Reason:

The name of the indicated area, record, or index does not appear in the source subschema.

1. A deselection request was made but the indicated item was not selected. If an area, the area does not contain any Entry Records.
2. A hierarchical or network selection was made but the indicated item was already selected.

Action:

1. Enter a valid name, and press the ENTER key.
2. Enter the name of an area, record, or index which has been selected, and press the ENTER key.
3. Remove the hierarchical or network selection code.

DBX0036E

ONLY ONE ITEM MAY BE (DE)SELECTED AT A TIME

Reason:

More than one item on the screen is selected or deselected. The current screen, however, allows only one item to be selected or deselected at a time.

Action:

Enter an option for only one item, and press the ENTER key.

DBX0037E

DATA LENGTH FOR *name* RECORD NOT THE SAME IN BOTH SUBSCHEMAS

Reason:

The indicated record name does not have the same data lengths in both the source and target subschemas.

Action:

Specify source and target subschemas containing record types that have the same data lengths, and press the ENTER key.

DBX0038I

SPECIFICATION *name* SAVED

Reason:

The indicated Selection Criteria Specification was successfully saved on the CA IDMS Extractor database.

Action:

None.

DBX0039I

JCL SUBMITTED

Reason:

The JCL member selected was successfully submitted to the host operating system.

Action:

None.

DBX0040E

JCL MEMBER NAME DOES NOT EXIST - REENTER JCL MEMBER NAME

Reason:

A request was made to perform a JCL utility function on a JCL member. However, the entered JCL member name was not found on the CA IDMS Extractor database.

Action:

Reenter the JCL member name and press the ENTER key.

DBX0041E

SPECIFICATION NAME DOES NOT EXIST - REENTER SPECIFICATION NAME

Reason:

A request was made to perform a specification utility function on a specification. However, the entered specification name was not found on the CA IDMS Extractor database.

Action:

Reenter the specification name and press the ENTER key.

DBX0042I

JCL MEMBER *name* SUCCESSFULLY *action*

Reason:

The indicated action was successfully performed on the JCL member.

Action:

None.

DBX0043E

ENTER SPECIFICATION NAME

Reason:

A request was made to perform a specification utility function. No specification name was entered, however.

Action:

Enter a specification name and press the ENTER key.

DBX0044E

ENTER SPECIFICATION NEWNAME

Reason:

A request to copy or rename a Selection Criteria Specification was made. A Newname was not entered, however.

Action:

Enter a Newname and press the ENTER key.

DBX0045E

USER OWNS NO JCL MEMBERS

Reason:

A request to display the JCL Member List screen was made. There are, however, no JCL members on the CA IDMS Extractor database for the current user.

Action:

None.

DBX0046E

USER OWNS NO SELECTION CRITERIA SPECIFICATIONS

Reason:

A request to display the specification list screen was made. There are, however, no specifications on the CA IDMS Extractor database for the current user.

Action:

None.

DBX0047E

ENTER JCL MEMBER NAME

Reason:

A request was made to perform a JCL member utility function but a JCL member name was not entered.

Action:

Enter a JCL member name and press the ENTER key.

DBX0048E

ENTER JCL MEMBER NEWNAME

Reason:

A request to copy or rename a JCL member was made but a Newname was not entered.

Action:

Enter a Newname and press the ENTER key.

DBX0049E

newname JCL MEMBER ALREADY EXISTS

Reason:

A request was made to copy or rename a JCL member. However, a JCL member with the same name as newname was found on the CA IDMS Extractor database.

Action:

Enter newname with the name of a JCL member not already on the CA IDMS Extractor database and press the ENTER key.

DBX0050E***newname* SPECIFICATION ALREADY EXISTS****Reason:**

A request was made to copy or rename a Selection Criteria Specification. However, a specification with the same name as *newname* was found on the CA IDMS Extractor database.

Action:

Enter *.newname*: with the name of a specification not already on the CA IDMS Extractor database and press the ENTER key.

DBX0051I**SPECIFICATION *name* SUCCESSFULLY *action*****Reason:**

The indicated action was successfully performed on the Selection Criteria Specification.

Action:

None.

DBX0052E***A print-spec* JCL MEMBER IS REQUIRED TO PRINT ASPECIFICATION****Reason:**

An attempt was made to print a Selection Criteria Specification using the Specification Print utility. This action requires a JCL member named "PRINT-SPEC". A "PRINT-SPEC" member was not found on the CA IDMS Extractor database, however.

Action:

Create a "PRINT-SPEC" JCL member which contains the appropriate JCL to invoke the batch print specification utility. The member "-MODEL-PRINT-SPEC" may be used to assist in creating the required member. Select the PRINT specification option again, and press the ENTER key.

DBX0053I

ALL UTILITY FUNCTIONS COMPLETED SUCCESSFULLY

Reason:

All requested utility functions were performed successfully.

Action:

None

DBX0054I

SPECIFICATION *name* NOT SAVED

Reason:

A CANCEL request was entered during a Selection Criteria Specification session. The session was terminated without saving the Selection Criteria Specification on the CA IDMS Extractor database.

Action:

None.

DBX0055E

***name record/set* FOUND IN SOURCE BUT NOT IN TARGETSUBSCHEMA**

Reason:

The indicated record or set was found in the source subschema but not in the target subschema. Except for system owned integrated index sets, the source and target subschemas must contain the same record and set names.

Action:

Specify source and target subschemas that contain the same record and set names and press the ENTER key.

DBX0056E***name* RECORD NOT *an/a owner/member Ofname* SET IN TARGET SUBSCHEMA****Reason:**

The named record is either an owner or member of the named set in the source subschema. The set, however, does not have the same owner and members in the target subschema. A record type that is an owner of a set in the source subschema must be the owner of the same set in the target subschema. A record type that is a member of a set in the source subschema must be a member of the same set in the target subschema.

Action:

Specify source and target subschemas defining records and sets related in the same manner and press the ENTER key.

DBX0057I***nnnn* RECORDS AND *nnnn* SETS SELECTED IN THE HIERARCHY****Reason:**

The indicated number of records and sets were selected by CA IDMS Extractor when it performed a hierarchical selection. If a record was selected, it was marked as an Entry Record and all members of sets owned by the Entry Record were also selected. Selected member records were treated as if they were the Entry Record. If an index was selected, it was marked as an Entry Index and all members of sets owned by the indexed record were also selected. Selected member records were treated as if they were the indexed record. Record Level Selection Criteria for all records in the hierarchy indicates to extract all record occurrences.

Action:

Modify the Record Level Selection Criteria of record types in the hierarchy for which unique selection criteria are desired.

DBX0058I**"QUIT" COMMAND ACCEPTED FOR ENTRY *record/index name*****Reason:**

A QUIT command was entered on a Path-Record Set Selection List screen when editing the path definition for the indicated record or index. Editing of the path was terminated.

Action:

None.

DBX0059W

INSERTION POINT NOT FOUND IN JCL MEMBER - NO PARAMETER STMTINSERTED

Reason:

A request was made to submit a JCL member. The necessary insertion point was not found in the JCL member, however, so no PROCESS parameter statement was inserted. The unaltered JCL member was successfully submitted to the host operating system.

Action:

If you want CA IDMS Extractor to create a PROCESS statement for you, modify the JCL member accordingly.

z/OS users: Insert a

```
//SYSIPT DD *
```

SUBMIT FAILED - *system* IS NOT A SUPPORTED OPERATING SYSTEM

Reason:

An attempt was made to submit JCL to the host operating system. The attempt failed, however, because CA IDMS Extractor is installed in a CV that has an active operating system other than z/OS, z/VSE, or z/VM.

Action:

Contact Technical Support with this message.

DBX0062E

SET_STACK OVERFLOW

Reason:

CA IDMS Extractor was attempting to save set information in a stack area. No more room was available, however. Generally, one stack entry is needed for each set in a path. When a very complex specification is created, the default value is insufficient.

Action:

Use the USVTPARM macro to define a larger value for the number of stack entries.

After making this change, cycle your CV, or do a "DCMT VARY PRO USVTPARM NCI".

Then reenter CA IDMS Extractor.

See the chapter "Operations" for more information on the USVTPARM macro.

DBX0063E

FIRST CHARACTER OF NAME MUST BE NON BLANK

Reason:

A name was entered with a blank as the first character. The first character of the name must not be blank.

Action:

Delete all leading blanks from the name and press the ENTER key.

DBX0064E

INVALID NAME - ENTER TRANSFER COMMAND IN COMMAND/OPTION FIELD

Reason:

A transfer command (that is, a name containing an equal sign "=" as the first character) was entered in a field other than the COMMAND or OPTION field. A transfer command can only be entered in the COMMAND or OPTION field.

Action:

Reenter the transfer command in the COMMAND or OPTION field and press the ENTER key.

DBX0065E

INVALID CHARACTER IN NAME; VALID CHARS ARE A-Z,0-9,@,#,\$,"-

Reason:

A name was entered and contained a character other than the letters A through Z, numbers 0 through 9, and special characters "@" "#" "\$" "-" (at, pound, dollar, and hyphen).

Action:

Reenter the name using only valid characters and press the ENTER key.

DBX0066E

INVALID NAME - IMBEDDED BLANKS ARE NOT ALLOWED

Reason:

A name was entered with embedded blanks, which are not allowed in a name.

Action:

Delete all embedded blanks from the name and press the ENTER key.

DBX0067E

DICTIONARY NAME AND/OR NODE NOT VALID FOR THE *source/target* SUBSCHEMA

Reason:

A DICTNAME and/or DICTNODE was entered for the indicated subschema. The specified DICTNAME or DICTNODE could not be found, however.

Action:

Reenter a valid DICTNAME and/or DICTNODE and press the ENTER key.

DBX0068E

PATH DEFINITION TERMINATED PREMATURELY - SPECIFICATION CANNOT BEUSED

Reason:

1. An END command was entered while specifying Record Level Selection Criteria. However, record level selection for ALL owners and members of selected sets in the path has not been specified.
2. Field Level Selection Criteria was selected for a record on the Record Level Selection Criteria screen but no Field Level Selection Criteria was specified.

Action:

Complete the Selection Criteria Specification prior to attempting to use it in an extraction.

DBX0069I

JCL MEMBER name NOT SAVED

Reason:

1. A CANCEL request was entered after changes were made to the JCL member.
2. A request was made to save a JCL member that had no changes made to it.
3. The current EDITOR session was terminated without saving the JCL member on the CA IDMS Extractor database.

Action:

None.

DBX0070I

JCL MEMBER name SAVED

Reason:

The indicated JCL member was successfully saved on the CA IDMS Extractor database.

Action:

None.

DBX0071E

BIND RUN-UNIT ERROR nnnn FOR THE SOURCE/TARGET DICTIONARY

Reason:

A non-zero error status (nnnn) was returned when a BIND RUN UNIT (using IDMSNWKA as the subschema) was issued for the indicated dictionary.

Action:

See the *CA IDMS Messages and Codes Guide*. for the status indicated. Correct the situation as necessary. Resubmit the job.

DBX0072E

YOU MUST ENTER EITHER "Y" OR "N" IN THIS FIELD

Reason:

A character other than "Y" or "N" was entered in a field where only "Y" or "N" is acceptable.

Action:

Enter either "Y" or "N", and press the ENTER key.

DBX0073E

ENTER USER-ID

Reason:

A request was made to perform a copy operation. No user ID was entered, however.

Action:

Enter a user ID and press the ENTER key.

DBX0074E

INVALID USER-ID

Reason:

A request was made to perform a copy operation. The user ID that was entered was not found on the CA IDMS Extractor database, however.

Action:

Enter a valid user ID and press the ENTER key.

DBX0075I

ENTER OPTION

Reason:

A request was made to perform a CA IDMS Extractor utility function. No option was entered, however.

Action:

Enter a valid option and press the ENTER key.

DBX0076I***nnnn* RECORDS AND *nnnn* SETS SELECTED IN THENETWORK****Reason:**

The indicated number of records and sets were selected by CA IDMS Extractor when it performed a network selection. If a record was selected, it was marked as an Entry Record and all owners and members of sets owned by the Entry Record were also selected. Selected owner and member records were treated as if they were the Entry Record. If an index was selected, it was marked as an Entry Index and all owners and members of sets owned by the indexed record were also selected. Selected owner and member records were treated as if they were the indexed record. Record Level Selection Criteria for all records in the network indicates to extract all record occurrences.

Action:

Modify the Record Level Selection Criteria of record types in the network for which unique selection criteria are desired.

DBX0077I***action* FIELD SELECTION DATA FOR *condition*(operator) CONDITION****Reason:**

A request was made to have CA IDMS Extractor select a record from the source database if the data within the record meets the specified condition. A single condition of Equal (EQ), Not Equal (NE), Greater Than (GT), Greater Than or Equal (GE), Less Than (LT), or Less Than or Equal (LE) was selected. Action indicates whether the criteria is new (Enter) or existing (Modify).

Action:

Fill in the appropriate data to be used by CA IDMS Extractor for comparison when extracting data from the source database. Enter an END command or press the End PF key (PF3 is the default) when you are finished specifying your data.

DBX0078I

action FIELD SELECTION DATA FOR *upper/lower* LIMITOF *within/not within* RANGE

Reason:

A request was made to have CA IDMS Extractor select a record from the source database if the data is within or not within a specified range. Two screens of data must be filled in: one for the lower limit and one for the upper limit. A record's data falls within the range if it is greater than or equal to the lower limit's data and less than or equal to the upper limit's data. Action indicates whether the criteria is new (Enter) or existing (Modify).

Action:

Fill in the appropriate data to be used by CA IDMS Extractor for comparison when extracting data from the source database. Enter an END command or press the End PF key (default PF3) when you are finished specifying your data. If you are currently specifying the lower limit, you must specify the upper limit after completing the lower limit data.

DBX0079E

FIELD LEVEL CRITERIA CANNOT BE USED FOR THE *name* RECORD

Reason:

A request was made to view/edit previously saved field level selection criteria. The record description in the dictionary, however, was updated since the criteria was last saved. The displacements and/or field lengths of referenced fields were modified. The saved selection criteria cannot be used.

Action:

Delete the criteria by pressing the ENTER key on the Confirm Subschema Record Date screen and reenter your field level selection criteria.

DBX0080I

NEW FIELD LEVEL CRITERIA IS BEING CREATED

Reason:

A request was made to view or edit field level selection criteria. No field level selection criteria exists for the current record.

Action:

Select the required operand and press the ENTER key.

DBX0081I

EDITING EXISTING FIELD LEVEL CRITERIA

Reason:

A request was made to view or edit field level selection criteria. Field level selection criteria was previously specified and saved for the current record.

Action:

To view the criteria:

1. Press the ENTER key.

To modify the operand:

1. Blank out the operand filled in by CA IDMS Extractor.
2. Select the required operand.
3. Press ENTER.

DBX0082I

ALL EXISTING CRITERIA HAVE BEEN VIEWED -- ENTER ADDITIONAL CRITERIA

Reason:

A request was made to view or edit previously saved field level selection criteria. All the criteria have been viewed for the current record.

Action:

To enter additional field level criteria:

1. Select the required operand
2. Press ENTER.

If no additional criteria is required:

1. Enter an END command.

DBX0083E

INVALID DESPECIFY CHAR; VALID CHARS ARE BETWEEN HEX 4A AND 7FOR '\'

Reason:

A despecify character other than one of the following was entered: \$%&* .,; <>() +-=# @_(vertical bar) (broken vertical bar)/\?' and !. The despecify character is used on the Record Element Review screen to despecify a field (that is, to remove any values from the field) and is placed in the first position of the field.

Note: You cannot blank out or null out a field to despecify it because blanks and low-values are valid field values.

Action:

Enter a valid despecify character and press the ENTER key.

DBX0084E

THERE ARE *more/less* UPPER LIMIT (mmm) THAN LOWER LIMIT (nnn) FIELDVALUES

Reason:

The upper limit for a range of field level selection criteria values is being specified. The same number of field values was not entered as specified for the lower limit. The number of upper limit values entered is mmm. The number of lower limit values entered is nnn. The lower limit field values are redisplayed.

Action:

Verify that the correct lower limit values are specified. Enter the same number of field values for the upper limit as were specified for the lower limit.

DBX0085E

ALL ENTERED VALUES MUST BE GREATER THAN OR EQUAL TO LOWER LIMITVALUES

Reason:

The upper limit for a range of field level selection criteria values is being specified. At least one of the upper limit values is less than the corresponding value specified for the lower limit. The lower limit field values are redisplayed.

Action:

Verify that the correct lower limit values are specified. Enter the upper limit field values making sure that all values are equal to, or greater than, the values specified for the lower limit.

DBX0086E

COMMAND *name* IS NOT RECOGNIZABLE

Reason:

More than one match was found in the CA IDMS Extractor verb table for the command that was entered. The truncated name you used for the command was too short.

Action:

Enter more letters for the command.

DBX0087E

ENTER NAME

Reason:

1. A deselection request was made but the name of the record or index was not entered.
2. A hierarchical or network selection was made but the name of the record or index was not entered.

Action:

1. Enter the name of a selected record or index to be deselected and press the ENTER key.
2. Enter the name of a record or index that is not already selected and press the ENTER key.

DBX0088W

DATA WAS ENTERED FOR A FIELD BUT THE FIELD WAS NOT SELECTED

Reason:

Data was entered into a field but the field that marks the entry for selection was not selected.

Action:

Either remove the data from the field (by blanking or nulling it out) or properly select the field, and press the ENTER key.

DBX0089E

name RECORD IS MEMBER OF AN ENTRY INDEX

Reason:

A request was made to select the named record as an Entry Record. The record is a member of an Entry Index, however.

Action:

1. Deselect the Entry Index owning the named record, then select the record as an Entry Record.
2. Enter the name of another record to be selected as an Entry Record.

DBX0090E

MEMBER RECORD OF name INDEX IS AN ENTRY RECORD

Reason:

A request was made to select the named index as an Entry Index. The member of the index is an Entry Record, however.

Action:

1. Deselect the member of the named index, then select the index as an Entry Index.
2. Enter the name of another index to be selected as an Entry Index.

DBX0091I

FIELD LEVEL CRITERIA SUCCESSFULLY DELETED- PRESS ENTER KEY TOCONTINUE

Reason:

The deletion of field level selection criteria was successfully completed.

Action:

Press the ENTER key to continue CA IDMS Extractor processing.

DBX0092E

CRITERIA NUMBER CANNOT BE GREATER THAN CURRENT TOTAL + 1 (nnn)

Reason:

A number greater than the current total of specified criteria +1 was entered. A number that is one more than the current total indicates to position after the last set of criteria.

Action:

Enter a criteria number that is less than or equal to the current criteria total +1, which is indicated by nnn.

DBX0093E

CANNOT CHANGE OPERATOR FROM A RANGE TO A NON-RANGE CONDITION

Reason:

An attempt was made to modify the operand for an existing criterion from WITHIN or NOT WITHIN to EQ, NE, LT, LE, GT, or GE. The operand can only be changed to WITHIN or NOT WITHIN. The original criterion is displayed.

Action:

If you wish to modify the operand, select either WITHIN or NOT WITHIN, and press the ENTER key.

DBX0094E

CANNOT CHANGE OPERATOR FROM A NON-RANGE TO A RANGE CONDITION

Reason:

An attempt was made to modify the operand for an existing criterion from EQ, NE, LT, LE, GT, or GE to WITHIN or NOT WITHIN. The operand can only be changed to EQ, NE, LT, LE, GT, or GE. The original criterion is displayed.

Action:

If you wish to modify the operator, select either EQ, NE, LT, LE, GT, or GE, and press the ENTER key.

DBX0095E

FIELD MUST CONTAIN ONLY NUMBERS

Reason:

Non-numeric characters (such as letters, spaces, or punctuation marks) were entered into a field that must only contain numbers.

Action:

Correct the field so that it contains only the desired numbers. Use the ERASE EOF key when the desired number is shorter than the field (or pad the number with leading zeroes).

DBX0096E

name RECORD IS ALREADY PART OF A PATH

Reason:

A request was made to select the named record as an Entry Record. The record already participates in a path, however.

Action:

1. Deselect the named record, then select the record as an Entry Record.
2. Enter the name of another record to be selected as an Entry Record.

DBX0097E

MEMBER RECORD OF name INDEX IS ALREADY PART OF A PATH

Reason:

A request was made to select the named index as an Entry Index. However, the member of the index already participates in a path.

Action:

1. Deselect the member of the named index, then select the index as an Entry Index.
2. Enter the name of another index to be selected as an Entry Index.

DBX0098E

YOU ARE ALLOWED TO COPY ONLY YOUR OWN SPECS/JCL MBRS

Reason:

A request was made to perform a copy operation and you entered a user ID other than your own. You are authorized, however, to copy only your own specifications and JCL members.

Action:

Enter your user ID and press the ENTER key.

DBX0099E

YOU ARE ALLOWED TO COPY ONLY YOUR OWN AND 'DBXADMIN'SSPECS/JCL/MBRS

Reason:

A request was made to perform a copy operation and you entered a user ID other than your own or DBXADMIN. You are authorized, however, to copy only your own specifications and JCL members and global specifications and JCL members owned by DBXADMIN.

Action:

Enter your user ID or 'DBXADMIN', and press the ENTER key.

DBX0100E

INVALID source/target DMCL NAME

Reason:

The entered source or target DMCL name could not be found in the load/core image library.

Action:

Enter a valid DMCL name and press the ENTER key.

DBX0101E

ENTER DB OR SEGMENT NAME

Reason:

A request was made to create a new specification or view/edit an existing specification. A dbname or segment name was not entered, however. The dbname or segment maps the logical subschema view to a physical database. This action is required because you can specify page numbers in your specification.

Action:

Enter a valid dbname or segment name, and press the ENTER key.

DBX0102E

record/set/mbrset/area name NOT FOUND IN THE SUBSCHEMA

Reason:

CA IDMS Extractor retrieved a specification from its database and was attempting to update the subschema with the Record Level Selection Criteria for the named item. However, the record, set, or area could not be found. The most likely cause of this error is the subschema used to create the specification was modified after the specification was saved. The named record, set, or area was deleted from the subschema. You cannot use the specification if the subschema no longer contains records, sets, or areas referenced in any path in the specification.

Action:

Delete the specification and recreate it using the updated subschema.

DBX0103I

nnnn RECORDS AND *nnnn* SETS SELECTED

Reason:

A combination of hierarchical and network selections were made. The total number of records and sets selected by the hierarchical and network selections are displayed.

Action:

Modify the Record Level Selection Criteria of record types in the paths for which unique selection criteria are desired.

DBX0104E

YOU MUST SELECT A SCHEMA/VERSION COMBINATION FOR FIELD LEVELCRITERIA

Reason:

Field Level Selection Criteria were requested for the current path record. However, there is more than one occurrence of the subschema you specified on the Specify Database Extract Specification screen in the dictionary. You entered an END command on the Schema Version List screen without selecting a schema/version.

Action:

Select a field level selection criteria operator, and press the ENTER key. The Schema Version List screen is redisplayed, allowing you to make a selection.

DICT001I

BUILDING ELEMENT DESCRIPTORS FOR RECORD *name* VERSION*nnnn*

Reason:

CA IDMS Extractor prepares to access the dictionary and build a description of all elements for the named record.

Action:

None.

DICT002I

THE ELEMENT DESCRIPTORS FOR ALL RECORDS IN THE *name*SUBSCHEMA WERE SUCCESSFULLY RETRIEVED

Reason:

CA IDMS Extractor accessed the dictionary and successfully built a description of all records and record elements that are in the named subschema.

Action:

None.

DICT003E

PICTURE CLAUSE PROCESSING ERROR FOR THE *name* FIELD: *picture clause* LEN: *length* in hex

Reason:

The dictionary access module could not successfully decode a PICTURE clause for the named field.

Action:

Contact Technical Support with this message.

DICT004E

SOURCE COULD NOT BE FOUND IN THE DICTIONARY FOR RECORD*name* OF SUBSCHEMA *name* SCHEMA *name* VERSION *nnnn*

Reason:

The dictionary access module could not find the source for the named record/subschema in the dictionary being accessed.

Action:

1. Add the source for the subschema to the dictionary being accessed.
2. Add a DICTNAME or DICTNODE parameter to the PROCESS statement to access a dictionary containing the subschema source.
3. Rerun the job.

E2001

KEYWORD NOT RECOGNIZED - *keyword/command/operand*

Reason:

The keyword, command, and/or operand that was entered has not been defined to GSIRECEL.

Action:

1. Refer to the appropriate section in this guide for the correct spelling.
2. Enter the corrected command operand, and/or keyword, then press the ENTER key.

E2002

OPERAND MUST BE NUMERIC LITERAL

Reason:

A non-numeric operand was entered with the LINE command.

Action:

Enter a numeric value and press the ENTER key.

E2005

RECORD NOT IN SUBSCHEMA

Reason:

The record-name specified in an INITIALIZE command is invalid.

Action:

Correct the INIT and reissue the command.

E2019

FORMAT ERROR(S)

Reason:

A format error(s) occurred when processing new or modified data was entered. The field entered was in the wrong format (that is, more than one decimal point entered in a numeric field. '1.2.3').

Action:

1. Enter the 'SET field-name NATIVE' command to determine the correct usage mode for the field.
2. Correct and reenter the data.

E2027

LOGICAL DATA WIDTH MUST BE NUMERIC

Reason:

The value that was entered for the logical data width was entered as a non-numeric value.

Action:

Reenter the field as a numeric value. (This value must be from 80 to 264.)

E2033

INVALID DISPLAY OPTION

Reason:

The operand entered on the DISPLAY command has not been defined to GSIRECEL.

Action:

- Validate the operand on the DISPLAY command.
- Correct the operand and reenter the command.

E2034

CONTINUE ONLY VALID FOR THE LAST

Reason:

The CONTINUE operand on the DISPLAY command can only be used if a second screen is waiting to be viewed. (See the GSIRECEL online help facility for more details on the DISPLAY CONTINUE command.)

Action:

Delete CONTINUE operand and reenter the command.

E2038

LOGICAL DATA WIDTH IS OUT OF RANGE

Reason:

The Logical Data Width entered is either less than 80 or greater than 264. A value outside of this range is not permitted.

Action:

Enter a value between 80 and 264 as specified on the sign-on screen.

E2050

PA KEY/PF KEY NOT RECOGNIZED

Reason:

The value entered on Sign-on screen for the INTERRUPT key is not one of the supported keys. Valid values are PA1, PA2, PA3, and PF1 through PF24.

Action:

Change the value after the interrupt field on the Sign-on screen to one of the supported keys and reenter.

E5101

UNKNOWN COMMAND

Reason:

An unknown command was entered in the GSIRECEL command line.

Action:

Enter another command, or request HELP for information regarding valid commands.

E5512

COMMAND NOT ALLOWED AT THIS POINT

Reason:

You entered a command that is not allowed at this point in the session.

Action:

Remove the error command.

E5526

LOGICAL DATA WIDTH MUST BE NUMERIC AND 80-255

Reason:

You entered an invalid data width (screen width).

Action:

Correct the data width and retry.

F0100

TERMINAL READ/WRITE ERROR

Reason:

The terminal read or write routine has issued a return code greater than zero to GSIRECEL. A possible line or terminal error has occurred.

Action:

Re-invoke GSIRECEL, and try again. If the problem recurs, contact CA Product Support.

F0102

INTERNAL SCAN ERROR ON INPUT DATA

Reason:

The 3270 scan routine cannot locate the end-of-record marker for the data string that was entered.

Action:

Re-invoke GSIRECEL, and try again. If the problem recurs, contact Technical Support.

F0103

TEMPORARY STORAGE ACQUIRE ERROR

Reason:

One of the following caused this message:

1. A non-zero return code was returned from CICS/VS temporary storage, or
2. An ID error was encountered.

Action:

Re-invoke GSIRECEL, and try again. If the problem recurs, contact Technical Support.

F0108

DUPLICATE HASH ENTRY

Reason:

GSIRECEL located a duplicate area or record name in the internal table.

Action:

Contact CA Product Support.

F0118

RECORD HAS NO FIELDS

Reason:

A request was entered to process a record that did not have any elements defined.

Action:

Verify the record description in the subschema. If elements do exist, contact CA Product Support.

F0255

2 DLENGTH DATA INCORRECT (SHORT)

Reason:

The record length defined in the SSR-032 record is less than the actual record length. This is due to an invalid record length calculation for records containing BIT fields.

Action:

Re-invoke GSIRECEL and bypass binding any records with BIT fields. GSIRECEL cannot access these records.

F1002

PUSH STACK OVERFLOW

Reason:

GSIRECEL received a non-zero return code from the storage routine.

Action:

Allocate more storage to GSIRECEL. If the problem recurs, contact Technical Support.

F1003

ENTER STACK OVERFLOW

Reason:

GSIRECEL received a non-zero return code from the storage routine.

Action:

Allocate more storage to GSIRECEL. If the problem recurs, contact Technical Support.

F1718

INVALID USAGE FOR DEPENDS ON FIELD

Reason:

A record with an occurs depending on group has an object field whose usage mode is not numeric.

Action:

Verify the record. If the field is defined as numeric, contact Technical Support.

F1719

INVALID USAGE FOR SUBSCRIPTED FIELD

Reason:

The usage mode for a subscripted field must be filler, hexadecimal, or picture X.

Action:

Contact CA Product Support.

F1938

PACKED FIELD GREATER THAN 16 BYTES

Reason:

GSIRECEL encountered a field with a usage mode of packed decimal and a length greater than 16 bytes.

Action:

Contact CA Product Support.

F2005

OBTAIN FOR SS-026 FAILED

Reason:

A non-zero status was returned while CA IDMS was accessing the dictionary record 'SS-026' that relates to your subschema.

Action:

1. Correct the cause for the CA IDMS status code. The code is displayed on the screen.
2. Re-invoke GSIRECEL.

F2006

OBTAIN FOR SSR-032 FAILED

Reason:

A non-zero status was returned while CA IDMS was accessing the dictionary record 'SSR-032' that relates to your subschema.

Action:

1. Correct the cause for the CA IDMS status code. The code is displayed on the screen.
2. Re-invoke GSIRECEL.

F2007

OBTAIN FOR SSOR-034 FAILED

Reason:

A non-zero status was returned while CA IDMS was accessing the dictionary record 'SSOR-034' that relates to your subschema.

Action:

1. Correct the cause for the CA IDMS status code. The code is displayed on the screen.
2. Re-invoke GSIRECEL.

F2008

OBTAIN FOR SR-036 FAILED

Reason:

A non-zero status was returned while CA IDMS was accessing the dictionary record 'SR-036' that relates to your subschema.

Action:

1. Correct the cause for the CA IDMS status code. The code is displayed on the screen.
2. Re-invoke GSIRECEL.

F2009

OBTAIN FOR SDR-042 FAILED

Reason:

A non-zero status was returned while CA IDMS was accessing the dictionary record 'SDR-042' that relates to your subschema.

Action:

1. Correct the cause for the CA IDMS status code. The code is displayed on the screen.
2. Re-invoke GSIRECEL.

F2012

OBTAIN FOR PROG-051 FAILED

Reason:

A non-zero status was returned while CA IDMS was accessing the dictionary record 'PROG-051' that relates to your subschema.

Action:

1. Correct the cause for the CA IDMS status code. The code is displayed on the screen.
2. Re-invoke GSIRECEL.

F2014

OBTAIN FOR RCDSYN-079 FAILED

Reason:

A non-zero status was returned while CA IDMS was accessing the dictionary record 'RCDSYN-079' that relates to your subschema.

Action:

1. Correct the cause for the CA IDMS status code. The code is displayed on the screen.
2. Re-invoke GSIRECEL.

F2015

OBTAIN FOR NAMESYN-083 FAILED

Reason:

A non-zero status was returned while CA IDMS was accessing the dictionary record 'NAMESYN-083' that relates to your subschema.

Action:

1. Correct the cause for the CA IDMS status code. The code is displayed on the screen.
2. Re-invoke GSIRECEL.

F2016

OBTAIN FOR SRCD-113 FAILED

Reason:

A non-zero status was returned while CA IDMS was accessing the dictionary record 'SRCD-113' that relates to your subschema.

Action:

1. Correct the cause for the CA IDMS status code. The code is displayed on the screen.
2. Re-invoke GSIRECEL.

F2020

INVALID FIELD BLOCK CHAIN POINTER

Reason:

An error has occurred within GSIRECEL.

Action:

Contact CA Product Support.

F2023

INVALID PICTURE FOR FIELD

Reason:

The field name and picture clause that follow the message are invalid or not supported with the current release.

Action:

If the picture is invalid, correct the source.

F2024

BIT FIELD LENGTH TOO LONG FOR DISPLAY

Reason:

The requested bit field has exceeded your logical data width display area. (You defined this area when you signed on to GSIRECEL. For more information on logical data width refer to the GSIRECEL online help facility.)

Action:

1. Re-invoke GSIRECEL.
2. Supply GSIRECEL with a number in the logical data width field to accommodate the length of the bit field you need to display.

F2026

SESSION STORAGE UNAVAILABLE

Reason:

Request for storage returned a 'NOT AVAILABLE' condition.

1. The subschema being accessed requires more session storage than was available.
2. System load may be too high.
3. Dynamic storage pool defined in the TP environment may be too small.

Action:

1. Use a smaller subschema.
2. Wait until the system load decreases.
3. Increase TP environment dynamic storage pool. (For example, in CA IDMS/DC, increase STORAGE POOL SIZE; in CICS, increase DYNAMIC STORAGE POOL.)

F2027

PROGRAM LOAD FAILURE

Reason:

A module required by GSIRECEL could not be loaded.

Action:

Contact CA Product Support.

F2028

OBTAIN FOR SSMR-068 FAILED

Reason:

A non-zero status was returned while CA IDMS was accessing the dictionary record 'SSMR-068' that relates to your subschema.

Action:

1. Correct the cause for the CA IDMS status code. The code is displayed on the screen.
2. Re-invoke GSIRECEL.

F2029

OBTAIN FOR SSCR-070 FAILED

Reason:

A non-zero status was returned while CA IDMS was accessing the dictionary record 'SSCR-070' that relates to your subschema.

Action:

1. Correct the cause for the CA IDMS status code. The code is displayed on the screen.
2. Re-invoke GSIRECEL.

F2031

INTERNAL ERROR, MISSING SET HTE

Reason:

GSIRECEL could not find a set control block.

Action:

Contact CA Product Support.

F7702

LINK FOR GSIHELP FAILED

Reason:

GSIHELP could not be LINKed to.

Action:

Ensure that the installation instructions appropriate for your TP monitor have been followed.

F9800

INTERNAL ERROR IN HASH LOGIC

Reason:

Internal error.

Action:

Call CAProduct Support.

F9990

INTERNAL ERROR

Reason:

Internal error.

Action:

Call CAProduct Support.

F9991

INTERNAL ERROR

Reason:

Internal error.

Action:

Call CAProduct Support.

F9992

INTERNAL ERROR

Reason:

Internal error.

Action:

Call CAProduct Support.

F9993

INTERNAL ERROR

Reason:

Internal error.

Action:

Call CAProduct Support.

F9994

INTERNAL ERROR

Reason:

Internal error.

Action:

Call CAProduct Support.

F9995

INTERNAL ERROR

Reason:

Internal error.

Action:

Call CAProduct Support.

F9996

INTERNAL ERROR

Reason:

Internal error.

Action:

Call CA Product Support.

F9997

INTERNAL ERROR

Reason:

Internal error.

Action:

Call CA Product Support.

F9998

INTERNAL ERROR

Reason:

Internal error.

Action:

Call CA Product Support.

F9999

INTERNAL ERROR VALUE TOO LARGE

Reason:

An error has occurred within GSIRECEL.

Action:

Contact CA Product Support.

FILE905E**GSSFILE RETURNED AN ERROR DURING function,FILE=name, CODES n1,n2,n3,n4****Reason:**

The indicated file function could not be performed with the specified file.

Action:

See :tref refid=A6001T. to determine the reason the error occurred and the appropriate action. If you receive a return code combination of 0,24,0,8, contact CA Product Support.

Two types of errors can be reported by the return codes of n1, n2, n3, and n4--non-VSAM file errors and VSAM file errors. The error is described by n2 a to 28. The error is described by n1, n2, and n3. A general return code is given by n4 for both non-VSAM and VSAM errors. All return codes are decimal value

n4	Reason	Action
4	End-of-file	Call CA Product Support.
8	Open error or file is not open	Look for JCL errors or for the use of improper files.
12	An I/O error has occurred	Find cause for I/O error.
16	Request not recognized	Call CA Product Support.
20	File was already opened	Call CA Product Support.
24	Parameter list error	Call CA Product Support.
28	VSAM error n1=R15 return code from VSAM n2=low order byte from R0 GENCB/MODCB type of error n3=VSAM feedback byte error in I/O request	Use n1, n2, and n3 to check for possible user errors. If there are no user errors, call CA Product Support.
32	Insufficient storage	Increase storage for job step.
36	SYNAD error occurred n1=byte 1 of DECB n1=byte 2 of DECB n1=byte 3 of DECB	Call CA Product Support.
40	BPAM FIND error n1=R15 n2=R0	Use n1 and n2 (as described in Data Management Macro Instructions) to check for errors.

n4	Reason	Action
44	BPAM STOW error n1=R15 n2=0	Use n1 and n2 (as described in Data Management Macro Instructions) to check for errors.
n2	Reason	Action
0	n4=8, use of unopened file n4=24, parameter list error	Call CA Product Support. Call CA Product Support.
1	JCL/label override parm list	Remove DCB information from JCL and ensure that the correct files are referenced.
2	Parm list override JCL/label	Remove DCB information from JCL and ensure that the correct files are referenced.
3	Unrecognized request	Call CA Product Support.
4	OS x13 ABEND trapped at open	Fix cause for x13 ABEND.
5	Tried to update seq. file	Call CA Product Support.
6	VSAM write at other than load	Call CA Product Support.
7	SOS table could not expand	Call CA Product Support.
8	OS DCB open failed	Call CA Product Support.
9	SOS table buffer pointer lost	Call CA Product Support.
10	SOS table file CB not built	Call CA Product Support.
11	OS DD statement Missing	Supply missing DD statement.
12	VSAM ACB open failed	Call CA Product Support.
13	Record format invalid	Call CA Product Support.
14	Macro format invalid	Call CA Product Support.
15	Record length not numeric	Call CA Product Support.
16	Record length too large	Call CA Product Support.
17	Block size not numeric	Call CA Product Support.
18	Block size too large	Call CA Product Support.
19	Invalid DOS sysname table	Assemble a valid sysname table.
20	DOS sysname table entry missing	Assemble a sysname table with an entry for the missing one.
21	DOS LU number too large	Use an LU number within range.

n4	Reason	Action
22	DOS sysname is not numeric or is misspelled	Correct to a valid sysname.
23	DOS sysname blank	Do not use blank sysname.
24	DOS LU not assigned	Call CA Product Support.
25	DOS DTF prototype missing	Call CA Product Support.
26	DOS logic module missing	Generate missing logic module.
27	DOS CCW mismatch	Call CA Product Support.
28	File is not a PDS	Allocate file to a PDS.

GSCK000W**USER RECORD NOT FOUND *user-id*****Reason:**

No user ID was entered.

Action:

Enter correct user ID.

GSCK001E**DATABASE ERROR STATUS *idms-status-code*****Reason:**

An unexpected status code was returned from a CA IDMS call.

Action:

Check the status code for appropriate action.

GSCK002E**ENTITY REC NOT FOUND *entity-calc-key*****Reason:**

Internal error.

Action:

Contact CA Product Support.

GSCK003E

AUTH. CODE NOT DEFINED *invalid-request*

Reason:

Internal error.

Action:

Contact CA Product Support.

GSCK004E

SET NOT FOUND *set-name*

Reason:

Internal error.

Action:

Contact CA Product Support.

GSCK005E

ENTITY TYPE NOT FOUND *entity-type*

Reason:

Internal error.

Action:

Contact CA Product Support.

GSCK999E

UNDEFINED ERROR

Reason:

Internal error.

Action:

Contact CA Product Support.

I2001

FIELD RESET TO USAGE MODE LENGTH *nnn* BYTES, LEVEL*nn*

Reason:

The field-name was previously changed to hexadecimal usage mode. This message is returned after the field has been reset to its native mode by using the 'SET field-name NATIVE' command.

Action:

None. This message is informative only.

I2002

USAGE CHANGED

Reason:

The field or record in the 'SET field-name HEX' command was changed to hexadecimal usage mode.

Action:

None. This message is informative only.

I5001

AUTOHEX MODE NOW *on/off*

Reason:

The SET command for this option was processed.

Action:

None.

I5002

COBOL DISPLAY MODE NOW *on/off*

Reason:

The SET command for this option was processed.

Action:

None.

I5003

COMMAND DISPLAY WILL BE *as input / as used*

Reason:

The SET command for this option was processed.

Action:

None.

I5004

LOWER CASE OPTION NOW *on/off*

Reason:

The SET command for this option was processed.

Action:

None.

IDMS001E

A DML ERROR HAS OCCURRED - DIAGNOSTICS FOLLOW ...

Reason:

An unexpected CA IDMS status error occurred during database processing. Diagnostic messages follow this message.

Action:

See the *CA IDMS Messages and Codes Guide* for the status indicated. Correct the situation as necessary.

INIT001E

MODULE *name* COULD NOT BE LOADED; RC=*code*: *reason*

Reason:

The named module could not be loaded and processing could not continue for the indicated reason.

Action:

If RC (return code) equals:

- **004** - Make sure the named module was link edited into the load/core image library being used.
- **008** - Increase the amount of storage for the job step. If the module name is USVTPARM, refer to the chapter "Operations".
- Other than **004** or **008** - Contact Technical Support.

LOAD001I

LOAD STEP STARTED ... *date time*

Reason:

The date and time the LOAD step started are displayed.

Action:

None.

LOAD002I

LOAD STEP ENDED ... *date time*

Reason:

The date and time the LOAD step ended are displayed.

Action:

None.

LOAD003E

INVALID EXTRACT FILE - EXTRACT type RECORD WAS NOT FOUND OR IS INVALID

Reason:

The EXTRACT step that created the Extract File was cancelled before the indicated extract record was written.

1. The file being read is not a CA IDMS Extractor Extract File.
2. The Extract File was created by a release of the Database Extract Component incompatible with the current release of the load component.

Action:

1. Run the EXTRACT step to successful completion.
2. Resubmit the job using a valid Extract File.
3. Rerun both the EXTRACT and LOAD steps using the same release of CA IDMS Extractor.

LOAD004E

SUBSCHEMA *record/set name* WAS NOT FOUND IN THE TARGETSUBSCHEMA

Reason:

The source subschema contained the indicated record or set. The record or set cannot be found in the current target subschema. Any record or set defined in the source subschema must also be defined in the target subschema.

1. An invalid version of the target subschema is being used.
2. The target subschema was modified after the Selection Criteria Specification was created.

Action:

1. Allocate the dictionary or load/core image library which contains the correct version of the target subschema.
2. Add the indicated record or set to the target subschema, recompile the subschema, and resubmit the job. Recreate the Selection Criteria Specification using the current version of the target subschema.

LOAD005E

INVALID EXTRACT FILE - MULTIPLE header/trailer RECORDSDETECTED

Reason:

Extract Files from multiple CA IDMS Extractor jobs were concatenated.

Action:

Rerun the LOAD step, using a single Extract File.

LOAD006I

**extracted/loading USING SUBSCHEMA name; COMPILEDdate time; DMCL name;
DBNAME name**

Reason:

The subschema and associated schema for the EXTRACT or LOAD step are displayed.

Action:

None.

LOAD007I

INITIATING RECORD BINDS

Reason:

CA IDMS Extractor prepares to bind all records that are to be loaded.

Action:

None.

LOAD008I

INITIATING READIES

Reason:

CA IDMS Extractor prepares to ready all areas participating in the load process. Each area is readied in SHARED UPDATE. The name of each readied area follows this message.

Action:

None.

LOAD009I

STORE STEP STARTED ... *date time*

Reason:

The date and time the STORE step started are displayed.

Action:

None.

LOAD010I

STORE STEP ENDED ... *date time*

Reason:

The date and time the STORE step ended are displayed.

Action:

None.

LOAD011I

STORE STEP STATISTICS ...

Reason:

Statistics for the STORE step follow this message.

Action:

None.

LOAD012I

CONNECT STEP STARTED ... *date time*

Reason:

The date and time the CONNECT step started are displayed.

Action:

None.

LOAD013I**CONNECT STEP ENDED ... *date time*****Reason:**

The date and time the CONNECT step ended are displayed.

Action:

None.

LOAD014I**CONNECT STEP STATISTICS ...****Reason:**

Statistics for the CONNECT step follow this message.

Action:

None.

LOAD015E**SHORT ON STORAGE...*number* BYTES REQUESTED****Reason:**

The number of bytes required for executing the LOAD step was not available in the region/partition.

Action:

Increase the region/partition size and resubmit the job. See the chapter "Operations" for information about CA IDMS Extractor storage requirements.

NKWP008E***xxxx* MUST CONTAIN NO MORE THAN *nnn* VALUES****Reason:**

Too many values were supplied for keyword xxx.

Action:

Correct the keyword in error and resubmit the job.

NKWP009E

VALUE MUST BE *variable-text*

Reason:

variable-text explains the error situation.

Action:

Correct the statement in error and resubmit the job.

NKWP014E

NO MORE THAN *nnn* OF THESE KEYWORDS MAY BESPECIFIED: - *keyword-list*

Reason:

Too many keywords were selected from the variable list.

Action:

Correct the statement in error and resubmit the job.

NKWP016E

AT LEAST *nnn* OF THESE KEYWORDS MUST BESPECIFIED: - *keyword-list*

Reason:

Too few keywords were selected from the variable list.

Action:

Correct the statement in error and resubmit the job.

NKWP025E

***xxx* MUST CONTAIN AT LEAST *nnn* VALUES**

Reason:

Too few values were supplied for keyword *xxx*.

Action:

Correct the keyword in error and resubmit the job.

NKWP027E

xxx MUST CONTAIN NO MORE THAN nnn VALUES

Reason:

Too many values were supplied for keyword xxx.

Action:

Correct the keyword in error and resubmit the job.

NKWP051E

ERROR OCCURRED DURING CAN OF xxxxxxxx - GSSCALL RETURN CODE IS nn

Reason:

An error occurred during a call to the module. Possible return codes, with their meanings, are:

- **04** - internal parameter error
- **08** - module not found in STEPLIB or in the core image library
- **12** - insufficient GETVIS to load the module (z/VSE only)
- **16** - GSSANKR could not be loaded (internal problem)

Action:

Correct the situation and resubmit the job.

NKWP052E

ERROR OCCURRED DURING LOAD OF xxxxxxxx - GSSLOAD RETURN CODE IS nn

Reason:

An error occurred during a load of the module. Possible return codes, with their meanings, are:

- **04** - module not found in STEPLIB or in the core image library
- **08** - insufficient GETVIS to load the module (z/VSE only)
- **12** - Failure in GSSSVHP (z/VSE only)

Action:

Correct the situation and resubmit the job.

NKWP053E

ERROR OCCURRED DURING WRITE OF *xxxxxxxx* - GSSPRNT RETURN CODE IS *nn*

Reason:

An error occurred during file processing.

Action:

Ensure that your JCL contains the proper statements for the file. Correct the situation and rerun the job.

NKWP064E

ERROR OCCURRED DURING OPEN OF *xxx* FILE - GSSFILE RETURNCODE IS *n1,n2,n3,n4*

Reason:

An error occurred during file processing.

Action:

See the table in message FILE905E to determine the reason the error occurred and the appropriate action. If you receive a return code combination of 0,24,0,8, ensure that your z/VSE JCL contains an ASSGN statement for the file.

NKWP066E

ERROR OCCURRED DURING CLOSE OF *xxx* FILE - GSSFILE RETURNCODE IS *n1,n2,n3,n4*

Reason:

An error occurred during file processing.

Action:

See the table in message FILE905E to determine the reason the error occurred and the appropriate action.

NLYZ001E

THE *name record/set* WAS FOUND IN THE SOURCE SUBSCHEMA BUT NOT IN THE TARGET SUBSCHEMA

Reason:

The indicated record or set was found in the source subschema but not in the target subschema. Except for user owned integrated index sets, the source and target subschemas must contain the same record and set names.

Action:

Specify source and target subschemas that contain the same record and set names.

NLYZ002E

THE *name* RECORD IS NOT *an/a owner/member* OF THE *name* SET IN TARGET SUBSCHEMA

Reason:

The named record is either an owner or member of the named set in the source subschema. The set, however, does not have the same owner and members in the target subschema. A record type that is an owner of a set in the source subschema must be the owner of the same set in the target subschema. A record type that is a member of a set in the source subschema must be a member of the same set in the target subschema.

Action:

Specify source and target subschemas defining records and sets related in the same manner.

NLYZ003E

THE *name* SET DOES NOT HAVE A SET ORDER OF "NEXT" OR "SORTED" IN TARGET SUBSCHEMA

Reason:

The indicated set does not have a set order of NEXT and is not a SORTED set in the target subschema. All sets in the target subschema, except system-owned integrated indexes, must have either a set order of NEXT or SORTED.

Action:

Create a transient subschema, as described **Error! Reference source not found.** page=no.. Resubmit the job.

NLYZ004E

THE *name* RECORD DOES NOT HAVE A SET CONNECT OPTION OF "MANUAL" FOR THE *name* SET IN TARGET SUBSCHEMA

Reason:

The indicated record does not have a CONNECT option of MANUAL for the indicated set. Except for system-owned integrated index sets, member records of all sets in the target subschema must have a set CONNECT option of MANUAL.

Action:

Create a transient subschema, as described in **Error! Reference source not found.** page=no.. Resubmit the job.

NLYZ005E

SELECTION CRITERIA FOR THE ENTRY *name record/index* NOTCOMPLETE

Reason:

An END command was entered on the Record Level Selection Criteria screen. This action terminated the specification of selection criteria. As a result, the selection criteria specification for the indicated entry record or index is NOT complete.

Action:

Use the CA IDMS Extractor online Selection Criteria Specific Component to complete the selection criteria for the indicated entry record/index. Resubmit the job.

NLYZ006E

THE SPECIFICATION IS INCOMPLETE - YOU MUST SPECIFY RECORD LEVEL SELECTION CRITERIA FOR THE FOLLOWING RECORDS/SETS:

Reason:

You are attempting to use a Selection Criteria Specification that is not complete. There are records and sets selected in a path for which record level selection criteria have not been specified. All selected records and sets must have record level selection criteria in order for the specification to be valid. The names of the records/sets that do not have record level selection criteria follow this message.

Action:

Use the CA IDMS Extractor online Selection Criteria Specification Component to specify record level selection criteria for all the indicated records and sets. Resubmit the job.

NLYZ007E

DATA LENGTHS FOR THE *name* RECORD NOT THE SAME IN BOTH SUBSCHEMAS

Reason:

The indicated record does not have the same data length in both the source and target subschemas.

Action:

Specify source and target subschemas that contain record types having the same data lengths. Resubmit the job.

NLYZ008W

AUTOMATIC MEMBER *member-name* OF THE NLYZ008E *nameSET* IS BEING EXTRACTED; THE OWNER RECORD IS NOT

Reason:

The indicated record is being extracted because it participates in a set that was included in a path definition. The record, however, also participates as an AUTOMATIC member of the named set, which was not included in any path. These records, when loaded to the target database, become orphans of the named set.

Action:

If you do not want orphan records on the target database, use the CA IDMS Extractor online Selection Criteria Specification Component to specify, in a path, the set in which the record participates as an AUTOMATIC member. Resubmit the job.

NLYZ009E

THE *name* RECORD's RECORD LEVEL SELECTION CRITERIA IS OUTSIDE ITS FROM/THRU PAGE RANGE (*from-page/thru-page*)

Reason:

The indicated record's Record Level Selection Criteria following this message contains page numbers that fall outside of the record's from/thru page range for the current dbname/segment. The most likely cause of this error is that the specification was created with a different dbname/segment than the one you are attempting to use with the extract component.

Action:

1. Specify a dbname/segment on the SYSIDMS file that contains the proper page range for all records in the specification.
2. Use the CA IDMS Extractor online Selection Criteria Specification Component to modify the page numbers in the specification.
3. Resubmit the job.

PARM001E

THE PROCESS PARAMETER STATEMENT MUST BE THE FIRST STATEMENT ENTERED

Reason:

The first statement in the input stream was not a PROCESS statement.

1. The PROCESS keyword is misspelled.

Action:

1. Correct the input stream so the first statement is a PROCESS statement and resubmit the job.
2. Correct the spelling of the PROCESS keyword and resubmit the job.

PARM002I

NO PARAMETER ERRORS DETECTED

Reason:

A complete parameter statement was processed and no parameter errors were detected.

Action:

None.

PARM003E

DUPLICATE MAJOR KEYWORD DETECTED: *keyword*

Reason:

More than one occurrence of the indicated parameter statement was encountered.

Action:

Delete all but one occurrence of the parameter statement and resubmit the job.

PARM004E

THE REST OF THE PARAMETER STATEMENTS ARE FLUSHED

Reason:

A previous error has made execution of CA IDMS Extractor impossible. All remaining parameter statements are displayed but NOT processed.

Action:

Review the associated error messages. Correct the errors and resubmit the job.

PJCL001E

INPUT USER-ID NOT FOUND ON THE DBX DATABASE: *user-id*

Reason:

1. The named user ID was not found on the CA IDMS Extractor database.
2. The EXTRACT step accessed an incorrect CA IDMS Extractor database.

Action:

1. Enter a valid user ID and resubmit the job.
2. Revise the JCL to access the correct CA IDMS Extractor database. Resubmit the job.

PJCL002E

JCL MEMBER *name* NOT FOUND ON THE DBX DATABASE FOR USER-ID*user-id*

Reason:

The indicated JCL member *name* was not found on the CA IDMS Extractor database for the indicated user ID.

1. The EXTRACT step accessed an incorrect CA IDMS Extractor database.

Action:

1. Verify that the correct user ID was specified. Correct the JCL member *name* or user ID and resubmit the job.
2. Revise the JCL to access the correct CA IDMS Extractor database. Resubmit the job.

PSUB001E

source/target DMCL NOT FOUND

Reason:

The indicated DMCL could not be found in the load/core image library allocated to the CA IDMS Extractor job.

Action:

Check that the correct DMCL was specified on the SYSIDMS file and that the correct load/core image library was allocated. Correct the situation as necessary. Resubmit the job.

PSUB002E

INVALID source/target SUBSCHEMA *name* AND/OR DBNAME *name*

Reason:

1. The subschema could not be found in the dictionary or load/core image library allocated to the CA IDMS Extractor job.
2. The indicated dbname could not be found in the DB table or is not a valid segment in the DMCL being used.

Action:

1. Check that the correct SYSCTL, dictionary, and/or load/core image library was allocated. Correct the situation as necessary.
2. Enter a valid dbname or segment as the SYSIDMS file.
3. Resubmit the job.

PSUB003I

source/target PSUB STORAGE REQUIRED ... nnnnBYTES

Reason:

The amount of storage required to create the indicated pseudo subschema table is displayed.

Action:

None.

PSUB004E

ERROR BUILDING THE *source/target* PSEUDO SUBSCHEMA(*name*) - *diagnostics*

Reason:

CA IDMS Extractor encountered an unrecoverable error while building the indicated subschema table.

Action:

Contact Technical Support with this message.

RETS001I

THE SPECIFICATION WAS SUCCESSFULLY RETRIEVED

Reason:

CA IDMS Extractor successfully retrieved the Selection Criteria Specification from the CA IDMS Extractor database.

Action:

None.

RETS002E

THE CLUSTER RECORD WAS NOT FOUND: *system id/user id*

Reason:

1. The CLUSTER record for the indicated user ID was not found on the CA IDMS Extractor database.
2. The EXTRACT step accessed an incorrect CA IDMS Extractor database.

Action:

1. Enter a valid user ID and resubmit the job.
2. Revise the JCL to access the correct CA IDMS Extractor database. Resubmit the job.

RETS003E

THE CRITERIA RECORD WAS NOT FOUND: *specification name*

Reason:

1. The CRITERIA record for the indicated Selection Criteria Specification was not found on the CA IDMS Extractor database.
2. The EXTRACT step accessed an incorrect CA IDMS Extractor database.

Action:

1. Ensure that the correct user ID was entered. Correct the Selection Criteria Specification name or user ID as necessary. Resubmit the job.
2. Revise the JCL to access the correct CA IDMS Extractor database. Resubmit the job.

RETS004E

SPEC *name* WAS SAVED BY A RELEASE OF THE SYSTEM(*release*) NOT COMPATIBLE WITH THE CURRENT RELEASE

Reason:

You are attempting to use a release of CA IDMS Extractor that is not compatible with the indicated prior release.

Action:

Ensure that you have successfully preformed the conversion process when moving from one release of CA IDMS Extractor to a more recent release. Do not attempt to go from a recent release to an older release. Correct the situation as necessary. Resubmit the job.

RETS005I

RETRIEVING SUBSCHEMA*name*; **USING DICTNAME***name*;**DICTNODE** *name*; **DBNAME**
name; **DBNODE** *name*; **DMCL** *name*

Reason:

CA IDMS Extractor is attempting to retrieve the indicated subschema.

Action:

None.

RETS006E

***record/set/mbrset/area name* NOT FOUND IN THE SUBSCHEMA**

Reason:

CA IDMS Extractor retrieved a specification from its database and was attempting to update the subschema with the Record Level Selection Criteria for the named item. The record, set, or area could not be found, however. The most likely cause of this error is that the subschema used to create the specification was modified after the specification was saved. The named record, set, or area was deleted from the subschema. You cannot use the specification if the subschema no longer contains records, sets, or areas referenced in any path in the specification.

Action:

Delete the specification and recreate it using the updated subschema.

SPRS001E

A REQUEST OF *request-code* WAS PASSED TO GSISPRS

Reason:

"request-code" is an invalid value for the online job submission program. This is a problem internal to the system from which online job submission was requested.

Action:

Make note of the request code and the screen from which you attempted to submit the job, then notify the CA Product Support group responsible for this product.

SPRS002E

AN INVALID REQUEST SEQUENCE WAS ENCOUNTERED IN GSISPRS

Reason:

The online job submission program expects to be invoked iteratively with request codes in a particular sequence. On this occasion, this sequence has been violated. This is a problem internal to the system from which online job submission was requested.

Action:

Make note of the screen from which you attempted to submit the job, then notify the CA Product Support group responsible for this product.

SPRS003E

THE GET OF (USER, LONG) STORAGE FAILED WHEN IN GSISPRS

Reason:

The online job submission program requires an USER, LONG storage in 400-byte blocks for the duration of the submit process. A #GETSTG for this amount of storage has failed.

Action:

This situation is likely to be temporary. Reissue the submit request. If the problem persists, notify your Database Administrator (DBA) of this situation so that sufficient storage can be made available for this request.

SPRS004E

NOTHING SUBMITTED

Reason:

The JCL member being submitted appears to be empty.

Action:

Ensure that the submit function is chosen appropriately. Correct as necessary and retry.

SPRS005E

AN INVALID OPERATING SYSTEM OF *operating-system* WAS PASSED TOGSISPRS

Reason:

The online job submission facility encountered the indicated operating-system abbreviation.

Acceptable abbreviations must begin with, SVS, VS1, CMS, or DOS. The operating system has been determined by accessing the OPSYS field of the CSA (CA IDMS/DC Common System Area).

Action:

If your operating system can reasonably be identified by one of those listed above, notify your Database Administrator (DBA) of this situation so that CSAOPSYS can be updated. Otherwise, notify the Technical Support group responsible for this product of your unsupported operating system.

SPRS006E

SUBMIT RESOURCES TEMPORARILY UNAVAILABLE. RETRY

Reason:

The online job submission facility allows only one SUBMIT request to be in process at a time. Another user is currently SUBMITting.

Action:

This situation is likely to be temporary. Reissue the submit request. If the problem persists, notify your Database Administrator (DBA) of this situation.

SPRS007E

***operating-system* ALLOCATE INTRDR FAILEDRC=*return-code* ERR
CDE=*error-reason-code* INFO CDE=*info-code***

Reason:

The online job submission facility was unable to dynamically allocate a dataset for the internal reader. Variable information in the message depends on the operating system being used. (ERR CDE and INFO CDE are only present for z/OS or SVS. See the IBM manual *System Programming Library: Job Management*, topic SVC 99.)

Action:

This situation may be temporary. Reissue the submit request. If the problem persists, make note of all information in the message and notify your Database Administrator (DBA) of the situation.

SPRS008E

XPCC IDENT/CONNECT FAILED. ID CDE=*id-code* ERRCODE=*error-code* INFO CDE=*info-code*

Reason:

The online job submission facility received an unsuccessful return code from VSE macro XPCC invoking the IDENTIFY or CONNECT function. The ID CDE indicates which macro call and situation occurred. Further information can be determined from the ERR CDE and INFO CDE values. See the *IBM-VSE Power Application Programming* manual for further details.

Action:

This situation may be temporary. Re-issue the submit request. If the problem persists, make note of all information in the message and notify your DBA of the situation.

SPRS009E

XPCC DISCONN/TERMIN FAILED. ID CDE=*id-code*

Reason:

The online job submission facility received an unsuccessful return code from VSE macro XPCC invoking the DISCONNECT or TERMINATE function. The ID CDE indicates which macro call and situation occurred.

Action:

This situation can only occur after the JCL has successfully been submitted. If the problem persists, make note of all information in the message and notify your DBA of the situation.

SPRS010E

XPCC PUT FAILED. ERR CDE=*error-code* INFOCDE=*info-code*

Reason:

The online job submission facility received an unsuccessful return code from VSE macro XPCC invoking the SENDR function. Further information can be determined from the ERR CDE and the INFO CDE values. See the *IBM-VSE Power Application Programming* manual for further details.

Action:

This situation may be temporary. Re-issue the submit request. If the problem persists, make note of all information in the message and notify your DBA of the situation.

STAT001I

IDMS STATISTICS FOLLOW . . .

Reason:

CA IDMS Extractor displays CA IDMS statistics following this message.

Action:

None.

SUBZ001I

SUBSCHEMA ZAP UTILITY STARTED

Reason:

The job step to create the transient subschema has begun.

Action:

None.

SUBZ008I

SUBSCHEMA ZAP UTILITY ENDED, CC=*condition-code*

Reason:

The subschema zap utility has ended based upon the reason given in the condition code.

Action:

Possible condition codes include:

0- Normal completion with no errors detected.

4- Normal completion but warning messages were issued.

8- A parameter input error has been detected. The output is unusable.

16- A fatal or internal error has been detected. The output is unusable.

SUBZ010E

GSSFILE RETURNED AN ERROR DURING file-function WITH FILE file-name, RETURN CODES ARE n1,n2,n3,n4

Reason:

The indicated file function could not be performed with the specified file.

Action:

See :tref refid=A6001T. for an explanation of specific codes with appropriate actions.

SUBZ012E

SUBSCHEMA INPUT FILE EMPTY

Reason:

No subschema was found in the input file.

Action:

Place the subschema to be changed in the INPUT file and resubmit the job.

SUBZ013E

SUBSCHEMA INPUT FILE DOES NOT CONTAIN ANY TXT STATEMENTS

Reason:

The subschema in the INPUT file is in the wrong format. The subschema zap utility can only process subschemas in the object format (that is, ESD, TXT, or END).

Action:

Place the correct format of the subschema in the INPUT file and resubmit.

SUBZ014E

INTERNAL ERROR program-name - xxxxxxxxxxxxxxx.

Reason:

An internal program error has been detected where xxxxxxxxxxxxxxx is an error-specific message.

Action:

Call Technical Support and tell them the message number indicated in the message.

SUBZ015E

SOURCE TEXT NOT A SUBSCHEMA - PROCESSING TERMINATED

Reason:

The object code in the INPUT file is not a subschema.

Action:

Place a subschema object deck in the INPUT file and resubmit the job.

SUBZ020E

OUTPUT SUBSCHEMA MODULE INVALID DUE TO INPUT ERRORS. DO NOT USE THIS MODULE FOR ANY PROCESSING

Reason:

A previous error has occurred, causing the output module to be invalid or incomplete.

Action:

Correct all other errors and resubmit the job.

SUBZ021E

INPUT MODULE TXT RECORDS OUT OF ORDER. JOB ABORTED

Reason:

The text records in the input module are out of order.

Action:

Correct the format of the subschema in the input file and resubmit the job.

SUBZ022E

INPUT MODULE LENGTH DOES NOT EQUAL OUTPUT MODULE LENGTH

Reason:

The length of the output module does not equal the length of the input module.

Action:

Correct all other errors and resubmit the job. If the message appears again, contact CA Product Support.

SUBZ023E

FIRST INPUT TXT RECORD DOES NOT HAVE ZERO DISPLACEMENT. INVALIDINPUT

Reason:

1. The displacement of the first TXT record is not set to zero.
2. The input module is out of order or missing a TXT statement.

Action:

Correct the format of the subschema in the input file and resubmit the job.

UJCL001I

ADMINISTRATOR USER-ID (admin id) ADDED TO DATABASE

Reason:

A CLUSTER record for the CA IDMS Extractor administrator was successfully added to the CA IDMS Extractor database.

Action:

None.

UJCL002W

THE *name* FILE WAS NOT FOUND - JCL MEMBER *adminid/member name* NOT CHANGED

Reason:

The indicated file name was not found in the JCL stream. Therefore, the associated JCL member for the CA IDMS Extractor administrator was not modified.

Action:

If you want to update the indicated JCL member, allocate the appropriate file to the indicated file name, add the file to the JCL stream, and resubmit the job.

UJCL003W

THE *name* FILE IS EMPTY - JCL MEMBER *admin id/membername* NOT CHANGED

Reason:

The indicated file name did not contain any records. The associated JCL member for the CA IDMS Extractor administrator on the CA IDMS Extractor database was not modified.

Action:

If you want to update the indicated JCL member, allocate a non-empty file to the indicated file name, add the file to the JCL stream, and resubmit the job.

UJCL004I

JCL MEMBER *admin id/member name action...nnnn* RECORDSUPLOADED

Reason:

The indicated JCL member was successfully added or modified for the CA IDMS Extractor administrator.

Action:

None.

UJCL005I

THE PROCESS PARAMETER STATEMENT WAS NOT UPLOADED FROM THE *name* FILE

Reason:

The upload JCL utility did not copy the PROCESS parameter statement found in the indicated file to the CA IDMS Extractor database because the online JCL Submission Component creates a PROCESS parameter statement for you.

Action:

None.

USXD002E

INVALID COMMAND

Reason:

An invalid primary command was encountered. The cursor is on the command.

Action:

Check the syntax of the command. Correct and reenter the command.

USXD202E

INVALID PARAMETER ON COMMAND

Reason:

A valid command has been entered with an unrecognizable parameter.

Action:

Check the syntax of command parameter. Correct and reenter the parameter.

USXD204E

ENTER LOCATE PARAMETER

Reason:

A line number was not included as a parameter in the LOCATE command.

Action:

Check the syntax of the command. Correct the command (include line number parameter) and resubmit.

USXD206E

ONLY A NUMBER, MAX, HALF, CSR, OR PAGE IS ALLOWED

Reason:

An illegal option has been used with the LEFT, RIGHT, UP, or DOWN command.

Action:

Check the syntax of the parameter. Correct the parameter (you may have included some erroneous characters in the syntax line) and resubmit.

USXD208E

ONLY "ON" OR "OFF" IS ALLOWED. "ON" IS THE DEFAULT

Reason:

An illegal option has been used with the NULLS command or CAPS command.

Action:

Check the syntax of the parameter. Correct the parameter (you may have included some erroneous characters in the syntax line) and reexecute.

USXD210E

NO PARAMETER IS ALLOWED ON COMMAND

Reason:

A parameter has been included in the syntax of the CANCEL command that excludes parameters.

Action:

Check the syntax of the command. Correct the command (delete the parameter) and resubmit.

USXF001I

FOUND CHARS string

Reason:

The string indicated has been found in the text. The cursor is positioned at the beginning of the found string.

Action:

None.

USXF003I

REP string WITH *replacement-string*

Reason:

The string indicated has been replaced with the replacement string. The cursor is positioned at the replacement string.

Action:

None.

USXF004E

MUST ENTER A FIND OR CHANGE COMMAND FIRST

Reason:

The RFIND (repeat find) or RCHANGE (repeat change) command was entered without a FIND or a CHANGE command being entered first.

Action:

Be sure to enter the FIND command or the CHANGE command before the RFIND command or the RCHANGE command.

USXF005I

BOTTOM OF DATA REACHED

Reason:

The bottom of the text was reached before the string was found. If you enter an RFIND (repeat find) or an RCHANGE (repeat change) at this time, the editor begins searching for the string at the top of the text.

Action:

None.

USXF006E

ENCLOSE STRING IN QUOTES

Reason:

A single quotation mark was found where a pair is required or embedded blanks were found in the search string.

Action:

Check quotation marks, correct, and reenter the command. If a string has embedded blanks, enclose it in quotation marks.

USXF007E

INVALID FIND SYNTAX

Reason:

The string specified in the FIND command is invalid. If the string has embedded blanks or quotation marks, it may appear to the editor to be more than one string; you can only specify one string in the FIND command.

Action:

Check the syntax of the command. If the string has embedded blanks, enclose it in quotation marks. If the string has embedded single quotation marks, enclose it in double quotation marks. If the string has embedded double quotation marks, enclose it in single quotation marks. Then reenter the command.

USXF008E

INVALID CHANGE SYNTAX

Reason:

A string specified in the CHANGE command is invalid. If one of the strings has embedded blanks or quotation marks, it may appear to the editor that you are entering more than two strings; you can only specify two strings in the CHANGE command.

Action:

Check the syntax of the command. If a string has embedded blanks, enclose it in quotation marks. If a string has embedded single quotation marks, enclose it in double quotation marks. If a string has embedded double quotation marks, enclose it in single quotation marks. Then reenter the command.

USXF009I

NO CHAR *string* FOUND

Reason:

The editor has searched the entire text without finding the indicated string.

Action:

None.

USXF010W

ERROR CHARACTERS *string*

Reason:

The string used to replace the one found is too long.

Action:

Adjust the length of the found string or reduce the length of the replacement string to match the length of the one found.

USXF012I

FOUND *nnn* OCCURRENCES OF *string*

Reason:

A string specified in the FIND ALL command has been found the specified number of times.

Action:

None.

USXF014I

CHANGED *nnn* OCCURRENCES OF *string*

Reason:

A string specified in the CHANGE ALL command has been changed in the text the specified number of times.

Action:

None.

USXF016E

CHANGE COMMAND NOT ENABLED IN BROWSE MODE

Reason:

The CHANGE command was used in the Browse Option to search for and change the next occurrence of a string.

Action:

None. The CHANGE command can only be used when editing text (Edit Option) and not while in Browse mode.

USXF018W

CHANGED *nnn* OCCURRENCES WITH *nnn* ERRORS OF string

Reason:

The string *i* identified in the CHANGE ALL command has been changed successfully (*nnn* OCCURRENCES) with (*nnn* ERRORS).

Action:

Look for the error message on the line number field(s) and make the necessary correction(s).

USXI002E

INVALID COMMAND

Reason:

An invalid line command has been entered.

Action:

Check the syntax of the line command on the line number field. Correct and reenter the command.

USXI006E

INVALID ON THIS LINE

Reason:

A line command has been entered on a line for which the command is invalid.

Action:

Reenter the line command on an appropriate line.

USXI008E

INVALID SCROLL AMOUNT

Reason:

An invalid Scroll Option was entered in the SCROLL field.

Action:

Check the syntax of the Scroll Option next to the word SCROLL. Be sure the option starts in the left-most position of the field. Correct syntax or position.

USXL002W

BLOCK COMMAND INCOMPLETE

Reason:

A partial sequence of Line Commands, in block form, is incomplete and cannot be executed.

Action:

If you are just scrolling or using the FIND command to locate the line to complete the block command, this message serves as a warning. Complete the command and execute. Otherwise, check the syntax of the commands to be sure all commands in block form are in pairs. Correct the commands and resubmit.

USXL004E

COMMAND CONFLICT

Reason:

A sequence of Line Commands cannot be executed.

Action:

Check the order of the commands. Correct the commands and resubmit.

USXL006W

MOVE/COPY PENDING

Reason:

A move or copy cannot be executed because of a missing 'A'(after), 'B' (before), 'C' (copy), or 'M' (move) line command or COPY Primary command.

Action:

Enter the missing command.

USXL008E

ITERATION COUNT MISMATCH

Reason:

Block (RR) line command iterations have conflicting values.

Action:

Check the syntax of the command. Make sure that the values of the iterations match (one or both may be left blank).

USXL009E

LINE COMMAND RANGE CONFLICT

Reason:

A sequence of Line Commands cannot be executed because the range of one line command overlaps the range of another.

Action:

Check the order of the commands. Correct the commands and reexecute.

W2001

MODIFIED DATA ENTERED, COMMAND IGNORED

Reason:

This message is displayed when data has been entered in the unprotected area and in the command input area. The data entered in the unprotected area always takes precedence over any command entered. (Refer to the GSIRECEL online help for a detailed discussion.)

Action:

To enter the command, key in the first character in the displayed command and press the ENTER key.

Note: This will not occur if MAPIN mode is FAST.

W2003

OCCURS DEPENDING ON CONTROL FIELD ALTERED - REDISPLAY RECORD

Reason:

A control field in an 'OCCURS DEPENDING ON' clause has been changed.

Action:

GSIRECEL has changed the field in the record data buffer. If you want to add or delete data in a field, enter 'DISPLAY record-name'. This reformats the record to allow data to be added or deleted in the display record buffer area.

W2004

A REDEFINING FIELD WAS MODIFIED

Reason:

This message indicates that a field in a redefined group has been changed.

Action:

GSIRECEL has changed the field in the record data buffer. To view the record in its new format enter the 'DISPLAY record-name' command. This avoids possible confusion when the display is different.

W2008

RECORD DISPLAY INCOMPLETE - TOO MANY (FIELDS/OCCURS)

Reason:

The record to be displayed could not fit into the display buffer area. The display buffer area ran out of line storage space.

Action:

Enter the 'DISPLAY record-name CONTINUE' command to view the remaining fields.

W2009

RECORD DISPLAY INCOMPLETE - FIELD TOO LONG

Reason:

The record to be displayed could not fit into the display buffer area. The display buffer area ran out of line storage space.

Action:

Enter the 'DISPLAY record-name CONTINUE' command to view the remaining fields. (If you were displaying a field, the entire record must be displayed to use the CONTINUE option.)

W2010

USAGE MODE MAY NOT BE CHANGED FOR A BIT FIELD

Reason:

The usage mode can be changed for any type of field except bit.

Action:

None.

W5001

MODIFIED DATA ENTERED, PF KEY IGNORED

Reason:

Record data was changed at the same time that a PF key associated with a command was pressed, and MAPIN mode was not FAST.

Action:

None.

XRPT001E

THERE IS NO RECORD LEVEL SELECTION CRITERIA FOR THIS RECORD

Reason:

The record immediately preceding this message does not have any Record Level Selection Criteria specified for it. You may have selected Field Level Selection Criteria on the Record Level Selection Criteria screen, but failed to complete the Field Level Selection Criteria. The specification cannot be used until it is completed.

Action:

Use the CA IDMS Extractor online Selection Criteria Specification component to complete the specification.

XRPT002E

THE FROM/TO PAGE NUMBER OR DIRECT DBKEY IS OUTSIDE THE RECORD'S FROM/THRU PAGE RANGE(from-page/thru-page)

Reason:

The Record Level Selection Criteria immediately preceding this message contains a page number that falls outside the record's from/thru page range for the current dbname/segment. The most likely cause of this error is that the specification was created with a different dbname/segment than the one you are attempting to use with the Database Extract Component.

Action:

1. Specify a dbname/segment on the SYSIDMS file that contains the proper page range for all records in the specification.
2. Use the CA IDMS Extractor online Selection Criteria Specification Component to modify the page numbers in the specification.
3. Resubmit the job.

XTRC001I

USING SUBSCHEMA *name*; COMPILED *date time*; DBNAME *name*

Reason:

The subschema and associated information for the EXTRACT step are displayed.

Action:

None.

XTRC002I

EXTRACT STEP STARTED ... *date time*

Reason:

The date and time the EXTRACT step started are displayed.

Action:

None.

XTRC003I

STORAGE POOL SIZE...*nnnn* BYTES

Reason:

The amount of storage, in bytes, required for the extract record and internal tables is displayed.

Action:

See the chapter "Operations" for information about CA IDMS Extractor storage requirements.

XTRC004I

INITIATING RECORD BINDS

Reason:

CA IDMS Extractor prepares to bind all records that are to be extracted.

Action:

None.

XTRC005I

INITIATING READIES

Reason:

CA IDMS Extractor prepares to ready all areas participating in the extract process. The names of all readied areas and the ready mode follow this message.

Action:

None.

XTRC006I

BEGINNING SWEEP OF AREA *name* ... *date time*

Reason:

The date and time CA IDMS Extractor began sweeping the indicated area are displayed.

Action:

None.

XTRC007I

END OF AREA SWEEP ... *date time*

Reason:

The date and time CA IDMS Extractor ended the area sweep of the area named in the previous XTRC006I message are displayed.

Action:

None.

XTRC008I

BEGINNING WALK OF INDEX *name* ... *date time*

Reason:

The date and time CA IDMS Extractor began retrieving the indicated index are displayed.

Action:

None.

XTRC009I

END OF INDEX WALK ... *date time*

Reason:

The date and time CA IDMS Extractor ended the retrieval of indexes for the index named in the previous XTRC008I message are displayed.

Action:

None.

XTRC010I

BEGINNING DIRECT DBKEY RETRIEVAL FOR AREA *name ...date time*

Reason:

The date and time CA IDMS Extractor began retrieving records by Direct DBKEY for the indicated area are displayed.

Action:

None.

XTRC011I

END OF DIRECT DBKEY RETRIEVAL FOR AREA ... *date time*

Reason:

The date and time CA IDMS Extractor ended the retrieval of records by Direct DBKEY for the area named in the previous XTRC010I message are displayed.

Action:

None.

XTRC012I

EXTRACT STEP ENDED ... *date time*

Reason:

The date and time the EXTRACT step ended are displayed.

Action:

None.

XTRC013I

EXTRACT STATISTICS. . .

Reason:

Statistics for the EXTRACT step follow this message.

Action:

Refer to **Error! Reference source not found.** for information regarding the statistics.

XTRC014E

DBKEY_STACK OVERFLOW

Reason:

CA IDMS Extractor was attempting to save set information in a stack area. No more room was available, however. Generally, one stack entry is needed for each set in a path. When a very complex specification is created, the default value is insufficient.

Action:

Contact Technical Support with this message.

XTRC015E

SHORT ON STORAGE...*number* BYTES REQUESTED

Reason:

The number of bytes required for executing the TRACT step was not available in the region/partition.

Action:

Increase the region/partition size and resubmit the job. See **Error! Reference source not found.** for information about CA IDMS Extractor storage requirements.

XTRC016E

BEGINNING CALC KEY RETRIEVAL FOR AREA *name ...datetime*

Reason:

The date and time CA IDMS Extractor began retrieving records by CALC keys for the indicated area are displayed.

Action:

None.

XTRC017I

END OF CALC KEY RETRIEVAL FOR AREA *name ... datetime*

Reason:

The date and time CA IDMS Extractor ended the retrieval of records by CALC keys for the area indicated in the previous XTRC016I message are displayed.

Action:

None.

XTRC018I

BEGINNING KEY RETRIEVAL FOR INDEX *name ... datetime*

Reason:

The date and time CA IDMS Extractor began retrieving records by sort keys for the indicated index are displayed.

Action:

None.

XTRC019I

END OF KEY RETRIEVAL FOR INDEX ... *date time*

Reason:

The date and time CA IDMS Extractor ended the retrieval of records by sort keys for the index named in the previous XTRC018I message are displayed.

Action:

None.

XTRC020I

USEREXIT *name* COULD NOT BE LOADED; RC=*code:reason*

Reason:

The named user exit module could not be loaded and processing could not continue for the indicated reason.

Action:

IF code equals:

- **004** - Make sure the named module was link edited into the load/core image library being used.
- **008** - Increase the amount of storage for the job stop. If the module name is USVTPARM, refer to the chapter "Operations".
- Any other number - Contact CA Product Support with this message.

XTRC022E

SUBSCHEMA CONTAINS AREAS WITH MIXED PAGE GROUPS OR MIXED RADIX --NOT SUPPORTED

Reason:

An attempt was made to ready an area with a different page group from those already readied.

Action:

Database Extractor cannot be run against a subschema that contains mixed page groups or mixed radius.

XXXX001E

INTERNAL ERROR - *diagnostics*

Reason:

An internal processing error, indicated by the diagnostics message, was detected by CA IDMS Extractor.

Action:

Contact Technical Support with this message and diagnostics text.

XXXX002E

INVALID DBKEY/PAGE# *hex-dbkey/hex-number*; MAX PAGE NUMBERFOR SUBSCHEMA IS *hex-number*

Reason:

CA IDMS Extractor was attempting to convert a DBKEY into its associated page and line number. The converted page number, however, was larger than the maximum page number for the subschema. The most likely cause of this error is that the specification was created with a different dbname/segment than the one you are attempting to use currently.

Action:

1. Specify a dbname/segment on the SYSIDMS file that contains the proper page range for all records in the specification.
2. Use the CA IDMS Extractor online Selection Criteria Specification Component to modify the page numbers in the specification.
3. Resubmit the job.

XXXX003E

AN UNRECOVERABLE *type* ERROR HAS OCCURRED *text*

Reason:

An unexpected error prevents processing from completing normally. A dump is forced in the event that more information is needed. Possible type values with their corresponding z/OS abend codes are:

- U002 UNKNOWN
- U004 DML
- U008 GSSPRINT
- U012 GSSFILE
- U016 GSSCALL
- U020 PROCESSING

Possible text values are:

- CHECK AUDIT REPORT FOR DIAGNOSTICS
- R5 POINTS TO DIAGNOSTIC MESSAGE

Action:

Proceed as indicated by the audit report diagnostic message or the message in the dump pointed to by register 5. If neither message is present, contact CA Product Support with this message.

2R12001I

RETRIEVING SELECTION CRITERIA SPECIFICATIONS FOR USER:*name*

Reason:

CA IDMS Extractor prepares to retrieve and convert all specifications for the indicated user ID.

Action:

None. .

2R12002I

RETRIEVING SPEC: *name*

Reason:

CA IDMS Extractor prepares to retrieve the named specification so that it may be converted to Release 16.0.

Action:

None.

2R12003I

SPECIFICATION *name* SUCCESSFULLY CONVERTED; UPDATED WITHDMCL=*name* DBNAME=*name*

Reason:

CA IDMS Extractor successfully converted the named specification to Release 16.0. The specification is owned by the user ID named in the previous 2R12001I message.

Action:

None.

2R12004E

SPECIFICATION *name* WAS **NOT CONVERTED**

Reason:

CA IDMS Extractor did not convert the named specification to Release 16.0 due to a prior error noted on the Audit Report.

Action:

Correct the situation that caused the error and rerun the Convert to Release 16.0 job again. CA IDMS Extractor converts only those specifications that have not already been converted.

2R12005E

SPECIFICATION *name* IS AT RELEASE *release*; IT MUST AT RELEASE I10.00 TO BE CONVERTED

Reason:

If the release number is:

1. x03.5x - You are attempting to run USV2R12 against the CA IDMS Extractor Release 3.5 database without first executing USVCVTX.
2. X16.0x - The specification has already been converted.
3. Other than x3.5x or x16.0x - An unknown release has been encountered.

Action:

Contact Technical Support with this message.

2R12006E

INVALID PSUB BLOCK DETECTED: *name*

Reason:

An internal error was detected while CA IDMS Extractor was converting a specification.

Action:

Ensure that CA IDMS Extractor was installed and linked successfully, and is being executed from the proper library.

Appendix A: JCL Editing Commands

This appendix provides a guide to the JCL editing commands that are available in the CA IDMS Extractor JCL editor. This appendix describes each command and its syntax.

This section contains the following topics:

[Editing Commands](#) (see page 231)

[Program Function Keys](#) (see page 232)

[Entering Commands](#) (see page 232)

Editing Commands

There are the following types of editing commands:

- Scroll Options
- Primary Commands
- Line Commands

Scroll Options

Scroll options are used to determine how many lines or columns of the JCL to scroll up, down, right, or left when using a primary command or a PF key.

Primary Commands

Primary commands are used to:

- Locate the desired line of the JCL
- Find the next occurrence of a string
- Reset the screen display to remove all line commands, column markers, and extraneous messages
- Cancel changes made with the editor to the JCL
- Turn the CAPS Mode on or off
- Display the time and date
- Terminate EDITOR session, save changes made to the JCL, and return to CA IDMS Extractor
- Save changes made to the JCL and remain in EDITOR session

Line Commands

Line commands are used to:

- Copy source lines within the JCL
- Move source lines within the JCL
- Specify the location at which source lines are to be copied or moved
- Repeat source lines in the JCL
- Delete source lines
- Insert blank source lines
- Display a line with column markings across the screen

Program Function Keys

PF keys are set to many frequently used commands. Therefore, you can enter a command from any position on the Edit screen with one keystroke. In addition, the PA1, PA2, and CLEAR keys are set to redisplay the screen. Use the KEYS primary command to change EDITOR PF key settings.

To execute a single command set for a PF key, press that key. The command executes when you press the PF key.

Entering Commands

The following are descriptions of where commands are entered:

- **Scroll Options**-Enter these options at the far right side of the second line on the screen, after the word SCROLL.
- **Primary Commands**-Enter these commands at the left side of the second line, after the word COMMAND. This field is called the COMMAND line.
- **Line Commands**-Enter these commands in the line number fields at the left of the source.

Notation Conventions

Example	Function
RESet	Keywords appear in mixed case. The minimum required portion of each keyword appears in uppercase.

Find string	Variables appear in lowercase. You substitute an appropriate value for each variable.
Up [number-of-lines]	Brackets indicate optional clauses or commands.
<pre> ┌ ┐ CAPS <ON > └\ OFF / ┘ </pre>	Braces enclose two or more options. Select an option.
<pre> ┌ ┐ CAPS <ON ◀ > └\ OFF / ┘ </pre>	A left arrow indicates the default value.

Command Syntax Rules

Item	Rule
Order of Commands	You must enter a B (before) or an A (after) line command in conjunction with the COPY primary command and the C (copy) and M (move) line commands to indicate where to copy or move the lines.
Entering Blanks in Commands	Blanks (character spaces) are ignored in line command sequences, so you can enter blanks between a command and a value without affecting processing. You must enter at least one blank (character space) between a primary command and a primary command value. You cannot embed blanks in a keyword.
Command Stacking	You can enter multiple primary and line commands. Primary commands must be separated by a semicolon (;).

Scroll Options

```
[ Page
  Half
  Csr
  number-of-lines ]
```

Page

Specifies that a whole screen is to be scrolled whenever an UP, DOWN, RIGHT, or LEFT command is used.

Half

Specifies that a half screen is to be scrolled whenever an UP, DOWN, RIGHT, or LEFT command is used.

Csr

Specifies that the line with the cursor on it is to become: the bottom line displayed whenever the UP command is used, the top line whenever the DOWN command is used, the left-most column whenever the RIGHT command is used, or the right-most column whenever the LEFT command is used.

number-of-lines

Specifies that this number of lines are to be scrolled whenever an UP, DOWN, RIGHT, or LEFT command is used.

Use scroll options to specify how much of the screen is scrolled when you use an UP, DOWN, RIGHT, or LEFT primary command (or corresponding PF key) by itself.

At the far-right side of the second line on the Edit screen, the word SCROLL appears followed by one of the scroll options. To change the current setting, enter one of the other options over the current setting. The scroll option you set remains in effect until you enter a different setting.

Primary Commands

Primary commands are entered on the second line of the Edit screen after the word COMMAND. You can enter more than one primary command at a time. Use the following syntax:

command;command

BOTTOM Command

BOTtom

The BOTTOM command displays the last full screen at the bottom of the JCL.

BOUNDS Command

BOUNds [lb rb]

The BOUNDS command sets the left and right column bounds. These bounds are saved in the edit profile. In addition, the BOUNDS command alters the action of the FIND, CHANGE, Line Shifts, and other commands that are column-sensitive.

You must specify left and right bounds, or neither, and the left bound must be smaller than the right bound. If bounds are specified incorrectly or without an operand, the default is the data set minimum.

lb

Specifies the left bound.

rb

Specifies the right bound.

CANCEL Command

CANcel

Use the CANCEL command to cancel all changes made to the JCL since the last SAVE and to exit the Edit JCL screen. You are returned to the previous display.

CAPS Command

CAPS $\left[\begin{array}{l} \langle \text{ON} \blacktriangleleft \rangle \\ \backslash \text{OFF} \ / \end{array} \right]$

Use the CAPS command to turn the CAPS Mode on and off. With the CAPS ON, all new alphabetic data is translated into uppercase. With the CAPS OFF, the data remains unaffected. Data that is entered with CAPS Off remains in lowercase unless you edit the field.

CHANGE Command

CHANGE $\left[\begin{array}{l} \langle \text{ALL} \rangle \\ \backslash \text{FIRST} \ / \end{array} \right] \left[\begin{array}{l} \langle \text{string} \rangle \\ \backslash * \ / \end{array} \right] \left[\begin{array}{l} \langle \text{replacement-string} \rangle \\ \backslash * \ / \end{array} \right] [\text{lb}[\text{rb}]] \left[\begin{array}{l} \langle \text{X} \rangle \\ \backslash \text{NX} \ / \end{array} \right]$

Use the CHANGE command to search for and change the next occurrence of a string in the JCL.

The EDITOR begins searching at the position of the cursor when you enter the command, and it searches downward until the string is found. If the cursor is on the COMMAND line when you enter the command, the editor begins searching at the top line displayed.

If the string is not found, it is changed to the replacement string.

string

Specifies the string of characters to find and replace by *replacement-string*.

replacement-string

Specifies the string of characters used to replace *string*.

*** (asterisk)**

Specifies the string value from the last FIND or CHANGE command entered.

ALL

Specifies that all occurrences of a string are to be replaced in scanned lines.

lb rb

Specifies left and right bounds (column positions) for the find. If specifying just the left bound, the string can be found anywhere within those bounds.

X

Specifies only excluded lines are to be scanned.

NX

Specifies only non-excluded lines are to be scanned.

Change Command Rules

- ALL, FIRST, and the 'lb rb' can appear in any order, but the *replacement-string* must follow *string*.

If a string has embedded blanks, enclose the string in single or double quotes. For example:

```
CHANGE 'program nmae' 'program name'
```

```
CHANGE 'program nmae' 'program name'
```

- If a string has a single asterisk (*), number, ALL, or FIRST, enclose *string* in quotation marks:

```
CHANGE '*' 'comments'
```

- If a string has leading quotation mark (single or double) enclose the string in quotation marks of the opposite kind. For example:

```
CHANGE '"t' t
```

- If CAPS Mode is OFF, enter the *string* as it appears in the text and the *replacement-string* as it should appear in the text. If CAPS Mode is ON, all lowercase characters are translated to uppercase characters.

CURSOR Command

CURsor

The CURSOR command moves the cursor directly to the COMMAND line. It functions in the same way as the home key.

The default keys are PF12 and PF24.

DOWN Command

DOWN $\left[\begin{array}{l} / \text{ number-of-lines } \backslash \\ | \text{ Max} \\ < \text{ Half} \\ \backslash \text{ Page} \end{array} \right]$

Use the DOWN (scroll down) command to display source lines below your current view. The amount you scroll is determined by the Scroll setting. The setting can be overridden at any time.

The default keys are PF8 and PF20.

Max

Specifies the last full screen at the bottom of the text.

Half

Specifies to scroll down half a screen.

Page

Specifies to scroll down a full screen.

EDITOR-ID Command

EDITOR-ID

The EDITOR-ID command displays the release number for the version of the EDITOR invoked. The release is displayed in message format.

END Command

END

Use the END command to save the current JCL (if changed) and return to the CA IDMS Extractor session.

ENTER Command

ENTER

The ENTER command redisplay the current screen with any changes made.

The default key is ENTER.

EXCLUDE Command

EXCLUDE [/ first-line \
 < last-line >
 \ ALL /]

The EXCLUDE command limits your display to specific lines within the text being edited. Display the excluded lines with the RESET command.

first line

Specifies that the first line number is to be excluded from the display.

last-line

Specifies that the last line in the block of lines is to be excluded from the display. If this field is left blank, the default is the last line in the text.

ALL

Specifies that all lines in the text are excluded from the display.

FIND Command

FIND [/ ALL >
 FIRST /] [/ string >
 * /] [lb[rb]] [/ X >
 \ MX >]

Use the FIND command to search for a string in the JCL. The EDITOR begins searching at the position of the cursor when you enter the command. It searches downward until the string is found. If the cursor is on the COMMAND line when you enter the command, the EDITOR begins searching at the top line displayed.

The operands of this command can appear in any order.

ALL

Specifies that all occurrences of a string are to be found in scanned lines.

FIRST

Specifies that the first occurrence of a string is to be found.

string

Specifies the string is to be found.

* (asterisk)

Specifies the string value from the last FIND command entered.

lb rb

Specifies the left and right bounds (column positions) for the find. If specifying just the left bound, the string to be found must begin in that same column. If specifying both left and right bounds, the string to be found can appear anywhere within those bounds.

X

Specifies only excluded lines are to be scanned.

NX

Specifies only non-excluded lines are to be scanned.

FIRST Command**FIRst**

The FIRST command displays the first screen of the JCL.

KEYS Command**KEYS**

Use the KEYS command to view or change EDITOR PF key settings.

LAST Command**LAST**

The LAST command presents the last screen of the JCL.

LEFT Command**LEft [number-of-columns]**

The LEFT command scrolls the current display to the left the specified number of columns. If the number parameter is blank, the Scroll Options are used.

LOCATE Command**Locate line-number**

Use the LOCATE command to move the display to a specific source line or to the beginning or the end of the JCL.

line-number

Specifies the number of the line to which you want to move. The line you specify is the top line displayed on the screen.

Using the LOCATE Command

To move to a specific line, you specify the line number of the line you want displayed.

To move to the beginning of the JCL, you can specify 0 as the line number, and the first line of the JCL is the top line displayed.

To move to the end of the JCL, you can specify the last line number or any larger number, and the last line of the JCL is displayed on the top line. For example, if the last line of the JCL is numbered 307 and you use 999, line number 307 is the top line displayed.

MEMORY Command

MEMory [/ < STATIC > \]
 [\ DYNAMIC /]

Internal storage is determined by the MEMORY command.

STATIC

Specifies to obtain storage one time and track until the end of the session.

DYNAMIC

Specifies to obtain new storage and free it each time the EDITOR driver module is called.

NULLS Command

Nulls [/ < ON > \]
 [\ OFF /]

Use the NULLS command to turn the NULLS Mode on and off. ON is the default. In the NULLS ON Mode, null characters replace all but the first blank in a line. If the line is completely blank, null characters are not substituted.

To use the keyboard insert mode key to insert characters, turn NULLS Mode ON so that edit automatically inserts trailing nulls in each data line in the display.

Normally, each data line is one field on the display. However, by using the TABS Mode, 3270 tab characters can be created in selected columns and is a way to break up a line into several fields. NULLS replaces trailing blanks in each field.

If edit places the cursor into a field, only blanks that follow the cursor on the line are changed to NULLS. If a character is deleted with the DELETE key, all of the characters in the field are shifted left one position and a null character is inserted into the last position in the field. If the ERASE EOF key is pressed, null characters fill the field on which the cursor is located from the cursor to the end of the field.

PROFILE Command

PROFile

Use the PROFILE command to display the environmental parameters under which your Edit session is operating.

The PROFILE identifiers that are displayed correspond to the primary commands. When you change parameters that are unique to your profile, the changes are saved to the CA IDMS/DC user sign-on.

Use the RESET command to clear the display of any line commands, column markers, or extraneous messages.

RCHANGE Command

RCHANGE

The RCHANGE command repeats the last CHANGE command that was executed.

The EDITOR begins searching at the first line of the display. When it reaches the bottom of data, the message "BOTTOM OF DATA REACHED" appears in the top line of the screen.

The default keys are PF6 and PF18.

Using the RCHANGE and RFIND PF Keys to Selectively Change Strings

You can use the RFIND PF key in conjunction with the RCHANGE PF key to selectively change strings. For example, consider the following sequences:

First Sample RFIND-RCHANGE Sequence

Part	Command	Description
Part 1	CHANGE Work-Name-1 Work-Name-2	In Part 1, you enter the CHANGE command to change the next occurrence of Work-Name-1 to Work-Name-2.
Part 2	RFIND key	In Part 2, you want to find the next occurrence of Work-Name-1, but you are not sure if you want to change the string. By pressing the RFIND key, the next occurrence of Work-Name-1, which was specified in the CHANGE command during Part 1 is found.
Part 3	RCHANGE key	In Part 3, you want to change the occurrence of Work-Name-1 that was found during Part 2 to Work-Name-2. By pressing the RCHANGE key, the occurrence is changed.
Part 4	RFIND key RFIND key	In Part 4, you press the RFIND key to find the next occurrence of Work-Name-1. This time you do not want to change the string, so instead of pressing the RCHANGE key, you press the RFIND key again. The next occurrence of Work-Name-1 is found.

Second Sample RFIND-RCHANGE Sequence

Part	Command	Description
Part 1	CHANGE Work-Name-1 Work-Name-2 RFIND key	In Part 1, you want to find the next occurrence of Work-Name-1, but if you are not sure if you want to change it to Work-Name-2. If you key in the CHANGE command and press the RFIND key instead of the ENTER key, the RFIND is executed. The next occurrence of Work-Name-1 that was specified in the CHANGE command is found.
Part 2	RFIND key	In Part 2, you decide that you do not want to change the string that was found during Part 1, press the RFIND key. The next occurrence of Work-Name-1 is found.
Part 3	RCHANGE key	In Part 3, you want to change the string that was found during Part 2, press the RCHANGE key. This changes Work-Name-1 to Work-Name-2.

RESET Command

RESet

Use the RESET command to clear the display of any line commands, column markers, or extraneous messages.

The default keys are PF9 and PF21.

RESHOW Command

RESHOW

Use the RESHOW command to redisplay the original contents of a screen. This command is only valid when you have typed a screen of data but have **not** pressed the ENTER key.

Note: If you use the RESHOW command, you overlay the current screen with the previous screen.

RFIND Command

RFIND

The RFIND command repeats the last FIND command that was entered.

The RFIND search begins at the position of the cursor. when it reaches the end of the file, it reaches the bottom and the message line states, BOTTOM OF DATA REACHED. Entering RFIND again resumes the search at the top of the file. Then if the string is not found in the file, the message line displays **NO CHAR: *string* Found**. Entering the RFIND command has no effect.

To selectively change strings, use the RFIND PF key in conjunction with the RCHANGE PF key.

The default keys are PF5 and PF17.

RIGHT Command

Right [number-of-columns]

The RIGHT (scroll right) command scrolls the current display to the right the specified number of columns. If the number parameter is blank, the scroll options are used.

The default keys are PF11 and PF23.

SAVE Command

SAVE

Use the SAVE command to save the current JCL (if changed). The EDITOR session remains active.

TABB Command

TABB

Use the TABB (tab backward) command to move to the previous tab setting when TABS Mode is ON.

This command is invoked more efficiently if you assign it a PF key value.

TABF Command

TABF

Use the TABF (tab forward) command is used to move to the next tab setting when TABS Mode is ON.

This command is invoked more efficiently if you assign it a PF key value.

TABS Command

```
TABS [ / ON \ ]  
      [ < OFF > ]  
      [ \ tab-character \ ]  
      [ / operand / ]
```

The TABS command sets software tabbing. Use the commands TABF (tab forward) and TABB (tab backward) to move a tab setting within the text. To customize tab settings, use the TABS line command.

tab-character

Specifies any character used to signify a tab.

operand

Specifies any of the following and their settings:

- ADS- specifies every five positions from 1 through 65.
- ASM- specifies the positions 1, 10, 16, and 36.
- COBOL- specifies the positions 8, 12, 16, and 20.
- STND- specifies the positions 1, 10, 16, and 36.

TIME Command

TIME

The TIME command displays the time-of-day and the date in the message area of the screen. The TIME is given in military hh:mm:ss format. The date is given in standard mm/dd/yy format.

TOP Command

TOP

The TOP command displays the first full screen at the top of the source.

UP Command

```
UP [ / number-of-lines \ ]  
    [ | Max | ]  
    [ < Half > ]  
    [ \ Page / ]
```

Use the UP (scroll up) command to display source lines above your current view. The amount you scroll is determined by the scroll option setting. You can override the setting at any time.

The default keys are PF7 and PF19.

number-of lines

Specifies the number of lines to scroll. If this is blank, then scrolling is determined by the scroll option.

Max

Specifies that you want to scroll to the first screen of text.

Page

Specifies that you want to scroll a full screen of text.

Line Commands

Line commands are entered in Edit Mode with the cursor positioned to the left of the source lines, in the line number fields. To use a line command, type over the line numbers.

Entering Line Commands

Line commands are entered within the line number at the left of the line data. A line command is considered to be any characters entered at or to the left of the cursor in the line sequence number fields.

How to Use Line Commands

If you wanted to repeat the line 10 times, here is how the line would appear:

```
000003 Before entering R (repeat) command
R10003 After entering R (repeat) command
```

For the EDITOR to read the command as R10:

Type 'R10' in the line number field and press the ENTER key

- Position the cursor immediately after R10 (type 'R1' and move the cursor to the right one position) and press the ENTER key.

A (after) Command

A

Use the A (after) line command in conjunction with the C (copy) and M (move) line commands.

B (before) Command

B

Use the B (before) line command in conjunction with the C (copy) and M (move) line commands.

BNDS (bounds) Command

BNDS

The BNDS command displays and allows changes to the current boundary settings. The bounds line is displayed at the line where you entered the command.

Change the current bounds setting by using the < character to define the left bound and the > character to define the right bound.

To remove the bounds line from the display, use the D (delete) line command or the RESET primary command.

COLS (columns) Command

COLS

The COLS command displays a line with the column markings for you to use as a reference. This line is for reference purposes only. It is not given a line number and is not saved with the text.

The column markings line appears before the line in which you enter the COLS command.

To remove the COLS line from the display, use the D (delete) line command or the RESET primary command.

C (copy) Command

C[number-of-lines]

Use the C (copy) line command to copy one line or block of lines. The B (before) and A (after) line commands are used to specify the destination of the line or block to be copied. No other line commands can be entered on the lines to be copied.

number-of-lines

specifies the number of lines to be copied. The default is 1.

C

Specifies a single line to be copied.

Cn

Specifies the first of *n* lines to be copied.

CC...CC

Specifies the first and last lines of a block of lines to be copied.

Rules for Using the Copy Line Command

When using the *C number-of-lines* or the CC form of the command, you cannot enter any other commands on the lines being copied.

- Each CC must be paired with another CC.
- You must pair a B (before) or an A (after) line command with every C or pair of CC commands.

D (delete) Command

D[number-of-lines]

Use the D (delete) command to delete a line or block of lines. No other line commands can be entered on the lines to be deleted.

number-of-lines

Specifies the number of lines to be deleted.

D

Specifies a single line to be deleted.

Dn

Specifies the first of *n* lines to be deleted.

DD...DD

Specifies the first and last lines of a block of lines to be deleted.

Rules for Using the D (delete) Line Command

- When using the *D number-of-lines* or the DD form of the command, you cannot enter any other commands on the lines being deleted.
- Each DD must be paired with another DD.

X (exclude) Command

X[number-of-lines]

Use the X (exclude) command to exclude lines from the display.

number-of-lines

Specifies the number of lines excluded.

X

Specifies a single line to be excluded.

Xn

Specifies the first of *n* lines to be excluded.

XX...XX

Specifies the first and last lines of a block of lines to be excluded.

I (insert) Command

I[number-of-lines]

Use the I (insert) command to insert blank lines after the line in which the I command is entered. The I command is not used with the A (after) and B (before) line commands. If no data is typed on an inserted line, the blank inserted line is deleted from the display after the ENTER key is pressed or the RESET, UP, or DOWN primary command is entered.

number-of-lines

Specifies the number of lines to be inserted. The default is 1.

M (move) Command

M[number-of-lines]

Use the M (move) command to move a line or block of lines. The B (before) or A (after) line commands are used to specify the destination of the lines to be moved. No other commands can be entered on the lines to be moved.

number-of-lines

Specifies the number of lines to be moved. The default is 1.

M

Specifies a single line to be moved.

Mn

Specifies the first of *n* lines to be moved.

MM...MM

Specifies the first and last lines of a block.

Rules for Using the Move Line Command

When using the M *number-of-lines* or the MM form of the command, you cannot enter any other commands on the lines being moved.

- Each MM must be paired with another MM.
- You must pair a B (before) or an A (after) line command with every M or pair of MM commands.

R (repeat) Command

R[number-of-times]

Use the R (repeat) line command to repeat a line or block of lines directly after the last line to be repeated.

number-of-times

Specifies the number of times a line or block of lines is repeated. The default is 1.

R

Specifies a single line to be repeated.

Rn

Specifies a single line to be repeated *n* times.

RR

Specifies the first and last lines of a block to be repeated one time.

Rules for Using the R (repeat) Line Command

Pair each RR *number-of-lines* with another RR *number-of-lines* to complete a block command.

- If *number-of-lines* specified in the RR block command differ, the greater number is used.
- No other line commands can be used on lines being repeated.

TABS Command

TABS

Typing TABS in the line number field to view the current tab settings. You can also use the TABS command to change the tabs by overstriking the current setting (indicate by tab character) with the new positions you choose.

The TABS line may be deleted from the display by the D (delete) line command or the RESET primary command.

Text Manipulation Line Commands

The text manipulation line commands are used when entering or altering text data. These commands are especially useful when used in combinations. For example, use TS (text split), enter a word or phrase, and then use TF (text flow) to reformat the paragraph.

Text Split Command

TS number-of-lines

The TS line command splits the text at the cursor so that you can insert text. The text following the cursor is moved to the left margin of the paragraph and an additional line is inserted. The default is 1.

number-of-lines

Specifies the number of lines to be inserted between the splitline.

See the online documentation for examples of the TS line command.

Text Flow Command

TF rb

The TF command starts processing at the current line and flows text upward to the end of a paragraph. The end of a paragraph may be indicated by a:

- Blankline
- Change in indentation
- Special characters

Temporary lines such as COLS or BNDS are deleted before text is flowed.

A single blank separates existing text from the words that are flowed upward from a lower line. When the end of a sentence is detected, two blanks are inserted.

rb

Specifies the right bound for the text.

See the online documentation for examples of Text Flow parameters.

Text Entry Command

TE number-of-lines

The TE line command formats the screen with an unnumbered open text entry area that may be used without regard for line overflow. The cursor is positioned at the beginning of the first line and the remainder of the screen is blank. After you type the data and press the ENTER key, the text is flowed into a paragraph format.

If you type a number after the TE command, open the text entry area provided for only that number of lines.

See the online documentation for examples of TE command examples.

number-of-lines

Specifies the number of blank lines requested.

Destructive Line Shift Command

```
[[number-of-columns]
][number-of-columns] ([[number-of-columns]. .)((
)][number-of-columns]. . .))
```

Destructive lineshift moves the text a specified number of columns to the right-) or left-(. When the shift causes text to exceed the bound position, that text is discarded.

See the online documentation for lineshift examples.

number-of-columns

Specifies the number of columns to shift. The default is 1.

```
(
)
```

Specifies that the line be shifted to the left or right one column.

```
(n
)n
```

Specifies that the line be shifted to the left or right *n* columns.

```
((
))
```

Specifies the first and last lines of a block to be shifted to the left or right one column.

```
((n
))n
```

Specifies the first line of a block to be shifted to the left or right *n* columns. Use a ((or)) to mark the last line of the block.

Protective Line Shift Command

```
<[number-of-columns]
>[number-of-columns]
<<[number-of-columns]. . .<<
>>[number-of-columns]. . .>>
```

Protective lineshift moves the text a specified number of columns to the right-> or left-<. When the shift causes the text to exceed the bound position, that text is retained and the shift operation is not completed.

See the online documentation for protective line shift examples.

number-of-columns

Specifies the number of columns to shift. The default is 1.

<

>

Specifies that the line be shifted to the left or right one column.

<n

>n

Specifies that the line be shifted to the left or right *n* columns.

<<

>>

Specifies the first and last lines of a block to be shifted to the left or right one column.

<<n

>>n

Specifies the first line of a block to be shifted to the left or right *n* columns. Use a << or >> to mark the last line of the block.

Glossary

Bill-of-Material (BOM)

CA IDMS Extractor defines a BOM structure as one record type owning another record type through two sets, one of which has a manual connection, the other an automatic.

CA IDMS Extractor Database

The database created when CA IDMS Extractor is installed. It contains the Selection Criteria Specifications and JCL members that you save.

Communication File

File used to pass information between the CA IDMS Extractor Batch Components.

Copy Utility

CA IDMS Extractor allows you to copy saved JCL members and Selection Criteria Specifications from other CA IDMS Extractor users.

Database Entry Point

Defines the beginning of a database path. An entry point can be either a record or an index that is used to retrieve a record.

Database Extract Component

The Batch Component that accesses the source database to extract record and set information.

Database Load Component

The Batch Component that loads the target database with information extracted from the source database.

Database Path

Tells the Extract Component how to walk through your source database and look for records to be extracted that are then loaded onto your target database.

Deselection

To remove all selection criteria from the record.

Documentation Component

The Online Component that provides information about using CA IDMS Extractor screens, command syntax, PF keys, the Transfer Facility, and the Online Message Facility.

Entry Index

A type of database entry point that defines the beginning of a database path. If you tell CA IDMS Extractor to use an entry index, records are retrieved without performing an area sweep. Extraction with an entry index usually takes less time than the same path definition with an Entry Record.

Entry Record

A type of database entry point that defines the beginning of a database path. When you tell CA IDMS Extractor to use an entry record, the Extract Component sweeps the area in which the record resides in order to retrieve the record. If you specify CALC keys in the Field Level Selection Criteria for the record, however, CA IDMS Extractor performs an

OBTAIN CALC to retrieve the record.

Extract File

Contains information extracted from the source database by the Database Extract Component.

Field Level Selection Criteria

The field values and conditions that you want CA IDMS Extractor to test for when determining if a record should be extracted from the source database. For example, you can tell CA IDMS Extractor to extract a DEPT record if the DEPT-NAME field contains the value 'HISTORY'.

Hierarchical Index Selection

All records indexed by the named index are selected. The selected records are handled exactly like a hierarchical record selection.

Hierarchical Record Selection

Begins with the named record that CA IDMS Extractor marks as the entry record. All records that are members of sets owned by the entry record, do not already participate in a path, and are not indexed by an entry index, are selected in the path. All selected records that are owners of sets are subject to the same selection process as the entry record.

JCL Editor Component

The online component used to create and modify JCL members.

JCL Member Print Utility

The batch component that allows you to print a JCL member you created and saved using the JCL Editor Component.

JCL Submission Component

The online component used to submit JCL to your batch machine, and optionally, to insert parameters for the Batch Extract and Load Components of CA IDMS Extractor.

JCL Utilities Component

The online component used to copy, delete, print, and rename JCL members.

Network Index/Record Selection

Function exactly like a hierarchical selection. In addition, all owners of sets in which a selected record participates as a member are also selected.

A hierarchical selection selects all records going down in the hierarchy, whereas a network selection selects all records in the network.

Record Level Selection Criteria

The information you specify with the online Selection Criteria Specification Component that CA IDMS Extractor uses at EXTRACT time to determine if a record in the source database should be extracted.

Recursive Data Structure

A structure is considered to be recursive if a record type is retrieved by more than one set type in the same path. A Bill-of-Materials (BOM) structure is an example of a recursive data structure.

Selection Criteria Specification

The instructions that tell CA IDMS Extractor what records to extract from the source database.

Selection Criteria Specification Component

The online component used to describe the existing source database, describe the database path(s), describe Selection Criteria Specifications, and save the Specifications under a name of your choice.

Source Database

An existing database from which you extract records in order to create a new test database.

Specification Name

A name you give to the Selection Criteria Specification which is saved in the CA IDMS Extractor database.

Specification Print Utility

The batch component that allows you to print Selection Criteria Specifications that you created and saved.

Specification Utilities Component

The online component used to copy, delete, print, and rename your Selection Criteria Specifications.

Syntax File

The file used to pass appropriate CA IDMS DDDL syntax between the CA IDMS Extractor batch components, and the CA IDMS DDDL utility.

Target Database

A new or existing database that CA IDMS Extractor loads with records extracted from a source database.

User Profile Component

The online component used to tailor PF key assignments to suit your needs.

Workfile

A temporary file used by the Database Load Component. Information is saved in the Workfile between sort exits.

Index

A

- A Sample Selection Criteria Specification Session • 31
- Additional Screens • 48

B

- Bill-of-Material (BOM) • 253

C

- CA IDMS Extractor Audit Reports • 67
- CA IDMS Extractor Components • 9
- CA IDMS Extractor Database • 253
- CA IDMS Extractor Database Paths • 16
- CA IDMS Extractor Implementation • 15
- CA IDMS Extractor Requirements • 78
- CA IDMS Extractor Screens • 29
- Communication File • 253
- Consider a Test Database • 15
- Copy Utility • 253
- Creating CA IDMS Extractor Database Paths • 22
- Customizing the CA IDMS Extractor Environment--USVTPARM • 121

D

- Database Entry Point • 253
- Database Extract Component • 253
- Database Load Component • 253
- Database Path • 253
- Deselection • 253
- Documentation Component • 253

E

- Editing Commands • 231
- Entering Commands • 232
- Entry Index • 253
- Entry Record • 254
- Executing CA IDMS Extractor • 81
- Extract Audit Report • 68
- Extract File • 254

F

- Field Level Selection Criteria • 254

G

- Getting Started • 27

H

- Hierarchical Index Selection • 254
- Hierarchical Record Selection • 254

J

- JCL Editor Component • 254
- JCL Member Print Utility • 254
- JCL Submission Component • 254
- JCL Utilities Component • 254

L

- Line Commands • 245
- Load Audit Report • 74

N

- Network Index/Record Selection • 254

O

- Online Documentation • 28
- Operational Considerations • 77

P

- Performing the EXTRACT and LOAD Steps--USVEXEC • 88
- Primary Commands • 234
- Printing a Selection Criteria Specification--USVPSPC • 114
- Printing JCL--USVPJCL • 109
- Printing Online Documentation--USVPRINT • 120
- Program Function Keys • 232

R

- Record Level Selection Criteria • 255
- Recovery Procedure • 81
- Recursive Data Structure • 255

S

- Scroll Options • 233
- Selection Criteria Specification • 255

Selection Criteria Specification Component • 255
Signing on to CA IDMS Extractor • 27
Source Database • 255
Specification Name • 255
Specification Print Utility • 255
Specification Utilities Component • 255
Syntax File • 255

T

Target Database • 255
Text Manipulation Line Commands • 249
The PROCESS Parameter • 85
The Transfer Facility • 29
Typical Session Activities • 30

U

User Profile Component • 255

W

What is CA IDMS Extractor? • 9
Workfile • 256
Writing a User Exit Module--CUVUSRXA • 124