CA IDMS™

Reports Guide

Release 18.5.00

CA Technologies Product References

This document references the following CA products:

- CA ADS™
- CA ADS™ for CA IDMS™
- CA Culprit™ for CA IDMS™
- CA IDMS™ Performance Monitor
- CA IDMS™ Presspack
- CA IDMS™/DB
- CA IDMS™/DC
- CA IDMS™ Universal Communications Facility
- CA IDMS™/DC or CA IDMS™ /DB
- CA OLQ™ Online Query for CA IDMS™

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Chapter 1: Introduction

This manual serves as an introduction to CA IDMS™ reports, which include the following CA IDMS Reports:

- CA ADS for CA IDMS dialog reports (AREPORTs)
- CA IDMS/DC and CA IDMS UCF (DC/UCF) system definition reports (CREPORTs)
- Dictionary and CA ICMS catalog reports (DREPORTs)
- ASF row-level security reports (IREPORTs)
- CA IDMS/DB journal reports (JREPORTs)
- CA IDMS/DB SQL Dictionary Reports (QREPORTs)
- CA IDMS/DC and CA IDMS UCF (DC/UCF) system statistics reports (SREPORTs)

The manual is designed as a reference tool for system, dictionary, and database administrators.

This manual provides a chapter for each type of report. The chapters include:

- A description of and uses for each report category
- Instructions for producing the reports, including examples
- A description of each report, including sample output and field descriptions

This section contains the following topics:

Reports Stored as Dictionary Modules (see page 15)
Dictionary Reports (see page 16)
Runtime Reports (see page 17)
Producing CA IDMS Reports (see page 17)
Modifying CA IDMS Reports (see page 28)
CA Culprit for CA IDMS Security Considerations (see page 28)
Syntax Diagram Conventions (see page 29)

Reports Stored as Dictionary Modules

CA IDMS reports are available at all sites where CA IDMS/DB is installed and are stored as modules in the data dictionary during the installation process.

Dictionary Reports

Uses

Dictionary reports help dictionary administrators:

- Monitor the contents of dictionaries
- Identify relationships between dictionary entities

Types of Dictionary Reports

There are five types of dictionary reports:

Type	Description	Chapter
DREPORTs	Document information contained in the DDLDML area of the dictionary, such as basic entities (for example, ELEMENTS) and teleprocessing entities (for example, LINES). DREPORTs also document information about the CA ICMS catalog, a directory of information used by the Information Center Management System and the Automatic System Facility (ASF).	"Standard Dictionary Reports - DREPORTS" and "CA ICMS Catalog Reports - DREPORTS"
CREPORTs	Document information in the dictionary associated with DC/UCF systems; for example, physical terminals defined for a particular system. The DDLDML, DDLDCMSG, and DDLDCLOD areas of the dictionary supply the information for the reports.	"DC/UCF System Reports - CREPORTS"
AREPORTs	Document CA ADS dialogs that are defined to the dictionary and their associated components, such as subschemas, maps, and processes.	"CA ADS Reports - AREPORTS"
QREPORTs	Document entities defined to CA IDMS/DB using SQL commands.	"CA IDMS/DB SQL Dictionary Reports - QREPORTS"
IREPORTs	Document ASF table row-level security.	"ASF Row-Level Security Reports - IREPORTS"

Runtime Reports

Uses

CA IDMS DC/UCF system runtime reports summarize program activity against the database and runtime events. These reports help database administrators (DBAs) and system administrators:

- Monitor database and system performance
- Tune databases and systems
- Research problems, such as broken chains

Types of Runtime Reports

There are two types of system runtime reports:

Type	Description	Chapter
JREPORTs	Document the contents of archived journal files; journal files record program activity against the database, such as the before and after images of updated database records.	CA IDMS/DB Journal Reports - JREPORTS (see page 251)
SREPORTs	Document statistics logged to the DDLDCLOG runtime area and off-loaded to the system log file. The statistics keep track of system runtime events, such as the number of times storage was requested within a certain time period.	DC/UCF Statistics Reports - SREPORTS (see page 299)

Producing CA IDMS Reports

Reports Execute as Batch Jobs

CA IDMS reports run as batch jobs in either local mode or under the central version. The job control statements required for z/OS, z/VSE, z/VM and z/VM/z/VSE operating systems appear in Appendices A through D, respectively.

User-Supplied Input Parameters

Five user-supplied parameters control report execution:

- DATABASE
- PARAM=
- REPORT=
- KEY
- SELECT/BYPASS

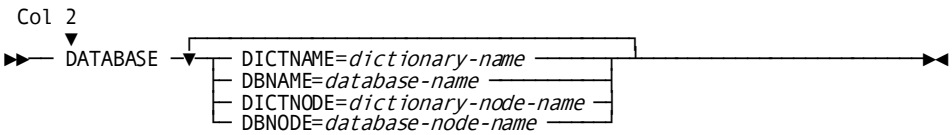
Each of these five parameter types is discussed below, followed by examples. Report-specific considerations are described in the appropriate sections.

DATABASE Parameter

DATABASE is an optional parameter that you can use in a multiple dictionary environment or in a multiple system environment:

- In a multiple dictionary environment, you can retrieve report modules from one dictionary and run those modules against another dictionary; for example, obtain the report modules from the system dictionary and report on an application dictionary.
- In a multiple system environment, you can specify the remote nodes that control the dictionaries that contain either the report modules or the data of interest.

Syntax



Parameters

DATABASE

Identifies the parameter. If used, the DATABASE parameter must be the first parameter submitted and must be coded starting in column 2. Only one DATABASE parameter can be specified per run. Any or all of the DATABASE options described below may be coded in any order.

DICTNAME

Specifies the name (up to 8 characters) of the dictionary in which the report modules are stored. The following considerations apply:

- The default dictionary is the system dictionary.
- If D-, C-, or AREPORT modules are stored in an application dictionary, the application dictionary must contain the source definitions for IDMSNWKA, the subschema required to run these reports.
- If the report is run under the central version, the specified dictionary must be known to the central version.
- If the report is run in local mode, the specified dictionary must be defined in the database name table load module associated with the DMCL used at runtime.

DBNAME

Specifies the name (up to 8 characters) of the dictionary that supplies the input data for D-, C-, and AREPORTs.

DICTNODE

Identifies the name of a system defined to the DC/UCF communications network that controls the dictionary that stores the report modules. *Dictionary-node-name* must be the name (up to 8 characters) of a node defined to the DC/UCF system.

DBNODE

Specifies the name of a DC/UCF system defined to the communications network that controls the dictionary that supplies the input data for D-, C-, and AREPORTs. *Database-node-name* must be the name (up to 8 characters) of a node defined to the DC/UCF system.

PARAM= Parameter

PARAM= is an optional parameter that controls whether report module parameters appear in the two listings associated with report output:

- The Sequential Parameter Listing lists the parameters as they were coded.
- The Input Parameter Listing lists parameter default values and any parameters automatically generated for the report.

By consulting these listings, you can easily code selection criteria for the report and make modifications to the report.

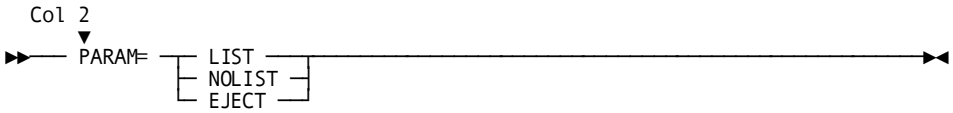
Sample Sequential Parameter Listing:

```
mm/dd/yy                                    SEQUENTIAL PARAMETER LISTING                                    Vnn.n  PAGE  1


00 ** SYSIN **                            DATABASE DICTNAME=CULPDICT DBNAME=DOCUDICT
                                          PARAM=LIST
                                        +  INPUT 10000  DB(D)  SS=IDMSNWKA,IDMSNTWK,1
  INSTALLATION SECURITY OPTION IS YES
  CULPRIT/DIRECTORY INTERFACE - IDMS nn.n CULPRIT nn.n
  DICTIONARY SECURITY OPTION IS OFF
  AUTO-ATTRIBUTES IS OFF
  REPORT REQUEST PARAMETER -              CREPORT=034
                                        +  34$00**** 'C' REPORTS IDMS DC STANDARD   mm/dd/yy  ROUTINE-CRPT034
                                        +  PATHY1 OOAK-012 PANEL-118 MAP-098 MAPRCD-125 RCDSYN-079
                                        +  34OUTPUT D LP=50
                                        +  34SORT RSYN-NAME-079 RSYN-VER-079 1 MAP-NAME-098 0
                                        +  343 IDMS DC MAPPING REPORT
                                        +  34410001 'CREPORT 034'
                                        +  34420056 'LISTING OF MAPS BY RECORD NAME'
                                        +  34430056 'RECORD NAME:'
                                        +  34430072 RSYN-NAME-079
                                        +  34440056 'RECORD VERSION:'
                                        +  34440072 RSYN-VER-079      FM 'ZZZZ9'
                                        +  34450001 ' '
                                        +  3451*001 MAP-NAME-098                  HH 'MAP NAME'
                                        +  3451*002 MAP-VER-098       FM 'ZZZZ9'  HH 'MAP VERSION'
                                        +  3451*004 PANEL-NAME-118                HH 'PANEL NAME'
                                        +  3451*005 PANEL-VER-118     FM 'ZZZZ9'  HH 'PANEL VERSION'
                                        +  347010 IF PATH-ID NE 'Y1' DROP
```

Sample Input Parameter Listing:

```
mm/dd/yy                                        INPUT PARAMETER LISTING                                  Vnn.n  PAGE  1

********
INPUT    RECORD TYPE BLOCK  FILE DESCRIPTION...
********
 INPUT   10000   F   10000  UM(CULLDCLI)        SS=IDMSNWKA,IDMSNTWK,0001

********
PATH     START LVL RECORD-NAME     ID2 SET-NAME         AREA-NAME
********
 Y1      $          OOAK-012 PANEL-118 MAP-098 MAPRCD-125 RCDSYN-079
 Y1 001  00039 001 OOAK-012                             DDLDML
 Y1 002  00271 001 PANEL-118           OOAK-PANEL       DDLDML
 Y1 003  00403 001 MAP-098             PANEL-MAP        DDLDML
 Y1 004  00627 001 MAPRCD-125          MAP-MAPRCD       DDLDML
 Y1 005  00711 001 RCDSYN-079          RCDSYN-MAPRCD    DDLDML

********
REC      START SIZE TYPE DP FIELD-NAME                    RECORD-NAME,LEVEL
********
 REC     00403  008         MAP-NAME-098                   MAP-098       $$ GENERATED
 REC     00411  002   1     MAP-VER-098                    MAP-098       $$ GENERATED
 REC     00271  032         PANEL-NAME-118                 PANEL-118     $$ GENERATED
 REC     00303  002   1     PANEL-VER-118                  PANEL-118     $$ GENERATED
 REC     00001  002         PATH-ID                        $$ GENERATED
 REC     00711  032         RSYN-NAME-079                  RCDSYN-079    $$ GENERATED
 REC     00743  002   1     RSYN-VER-079                   RCDSYN-079    $$ GENERATED
```

Syntax



Parameters

PARAM=

Must be coded starting in column 2. Any report module parameters that follow PARAM= are either printed or not printed according to the option specified. The parameter can appear more than once in a run.

LIST

Prints the parameters on both listings. LIST is the default for SREPORT runs.

NOLIST

Does not print the parameters on either listing, unless a parameter contains an error. Parameters in error are printed along with the associated error messages on both listings. NOLIST is the default for D-, C-, A-, I-, and JREPORT runs.

EJECT

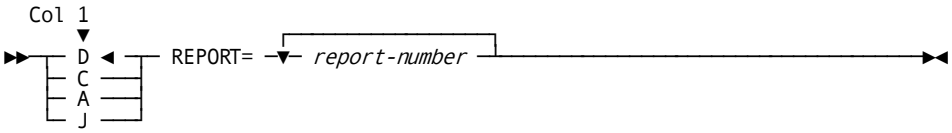
Prints the parameters at the top of a new page in the Sequential Parameter Listing. EJECT does not affect the pagination of the Input Parameter Listing.

REPORT= Parameter

REPORT= is a required parameter for D-, C-, A-, and JREPORTs. The following considerations apply:

- One or more reports of the same type can be specified in a single run.
- When a run specifies one or more D- or CREPORTs, each report must contain PATH parameters that begin with the same database record. A PATH parameter defines a route through the dictionary; The Sequential Parameter Listing above shows a sample PATH parameter.

Syntax



Parameters

D

Identifies a dictionary or catalog report. D is the default. If coded, D must be in column 1.

C

Identifies a DC/UCF system report. C must be coded in column 1.

A

Identifies a CA ADS dialog report. A must be coded in column 1.

J

Identifies a journal report. J must be coded in column 1.

REPORT=

Is a keyword that must appear in columns 2 through 8. REPORT= automatically generates an INPUT parameter for A-, C-, and DREPORTs; the INPUT parameter defines the size of the CA Culprit for CA IDMS input buffer and subschema to be accessed. REPORT= also automatically generates REC parameters, which define the fields referenced in the report modules. The Input Parameter Listing above shows sample REC parameters.

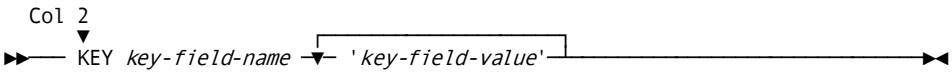
report-number

Identifies one or more three-digit report-module numbers in the range 000 through 999. Leading zeros can be omitted. Report module numbers must be separated by spaces or commas.

KEY Parameter

KEY is a parameter that identifies entity occurrences to be processed. DREPORTs and AREPORTs both include key reports with which you can request detailed information about particular entities. A key report must be the only report specified for the run.

Syntax



Parameters

KEY

(D- and AREPORTS only) Identifies a key report. KEY must be coded starting in column 2. One or more KEY parameters can be coded per report.

key-field-name

Specifies the name of the key field. Each key report has a specific key field; Standard Dictionary Reports - DREPORTS (see page 33) and CA ADS Reports - AREPORTS (see page 203) document the key field names for D- and AREPORTs, respectively.

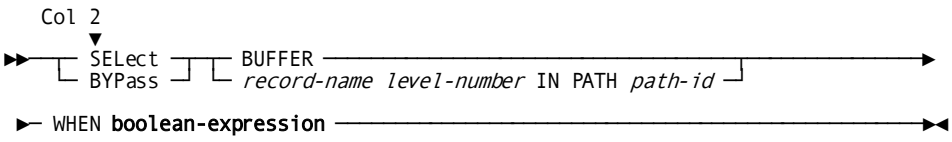
'*key-field-value*'

Specifies one or more values for the key field. *Key-field-value* is an alphanumeric value that must be enclosed in single quotation marks. A list of values must be enclosed in parentheses and values must be separated by spaces or commas.

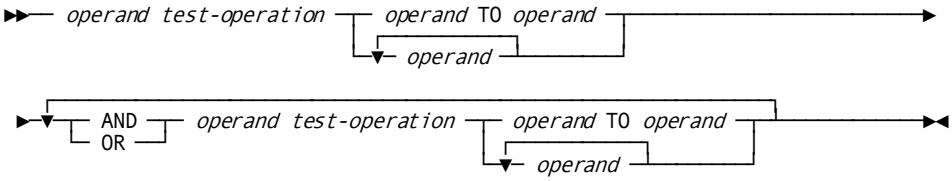
SELECT and BYPASS Parameters

SELECT and BYPASS are optional parameters that select records to be processed based upon specified selection criteria. By using SELECT or BYPASS parameters, you can produce reports that contain only the required information (for example, all programs created after a particular date).

Syntax



Expanded Syntax for boolean-expression



Parameters

SELect

Selects input data. SELECT is coded starting in column 2. One or more SELECT parameters can be specified per run, but you can not use both SELECT and BYPASS (see below) in a run.

BYPass

Bypasses input data. BYPASS is coded starting in column 2. One or more BYPASS parameters can be specified per run, but you can not use both SELECT (see above) and BYPASS in a run.

BUFFER

Applies the selection criteria to the contents of the completed input buffer (rather than to a specific record type).

record-name

(D-, C-, and AREPORTs only) Applies the selection criteria to a specific database record. *Record-name* is the name of a database record, which must also appear on a PATH parameter for the report.

level-number

Identifies the occurrence of record in the path; the default is 1.

IN PATH *path-id*

Identifies the path containing the database record. *Path-id* is a 2-byte primary path identifier. If no path id is specified, the selection criteria apply to all preceding PATH parameters that specify the named record.

WHEN boolean-expression

Specifies the test criteria to be applied to each record.

operand

Specifies an alphanumeric, numeric, or hexadecimal literal or the name of a data item:

- An *alphanumeric literal* is a value (up to 64 characters) that consists of letters, digits, and/or special characters in any combination. An alphanumeric literal must be enclosed in single quotation marks.
- A *numeric literal* is a number (up to 31 digits) that can be preceded by a sign and can contain an embedded or trailing decimal point.

- A *hexadecimal literal* is a hexadecimal string (up to 64 characters) preceded by X and enclosed in single quotation marks (for example, X'0A14').
- A *data-item name* is the name of a field in a record used in report processing. Only names specified in the REC parameter field definitions for the report can be referenced. For sample REC parameters, see the sample Input Parameter Listing earlier in this chapter. For a description of these fields, see the *CA IDMS Dictionary Structure Reference Guide*.

The data type of the left operand must match the data type of the right operand in a boolean expression. To list operands on the right side of the expression:

- Enclose the list in parentheses
- Separate one operand from another with either a blank or a comma

For example:

```
MAP-NAME-098 EQ ('JKDMAP','DEHMAP','TDBMAP').
```

test-operation

Specifies a comparison operator:

- **EQ(E)(=)**—The value of the left operand is equal to the value of the right operand.
- **NE(N)(#)**—The value of the left operand is not equal to the value of the right operand.
- **GT(H)(>)**—The value of the left operand is greater than the value of the right operand.
- **LT(L)(<)**—The value of the left operand is less than the value of the right operand.
- **GE(>=)(=>)**—The value of the left operand is greater than or equal to the value of the right operand.
- **LE(<=)(=<)**—The value of the left operand is less than or equal to the value of the right operand.

operand* TO *operand

Specifies a range of values to which the left operand is to be compared. *Operand* must be a literal value or the name of a data item, as defined under *operand* above. The specified range must be enclosed in parentheses. For example, MAP-NAME-098 EQ ('A' TO 'G').

AND/OR

Allows the specification of additional test criteria:

- **AND**—A record is selected for processing if it meets both criteria connected by AND.
- **OR**—A record is selected for processing if it meets either or both criteria connected by OR.

Continuing a SELECT or BYPASS Parameter

If the SELECT or BYPASS parameter does not fit on one line, code an asterisk (*) in column 1 of each continuation line.

Examples

Example 1

This example requests report modules CREPORT 033 and CREPORT 034 from the CULPDICT dictionary. These IDMS-DC/UCF network system reports list maps defined to the system dictionary. The report module parameters are not listed in the output because the user has not requested them.

```
 DATABASE DICTNAME=CULPDICT
CREPORT=033,034

   or

CREPORT=33
CREPORT=34
```

Both report modules can execute in the same run because each defines a PATH parameter that starts with the same record type (OOAK-012), as shown in the example below:

```
CREPORT 033  PATHX1 OOAK-012 PANEL-118 MAP-098
CREPORT 034  PATHY1 OOAK-012 PANEL-118 MAP-098 MAPRCD-125 RCDSYN-079
```

Example 2

This example is similar to Example 1 except that it selects only those maps defined to the dictionary with a version number of 1 and a name that begins with RQE. (The record and field names for the SELECT parameter can be obtained from either an Input Parameter Listing for CREPORTs 033 and 034 or the *CA IDMS Dictionary Structure Reference Guide*.) Since a path identifier is not specified, the selection criteria apply to both CREPORT 033 and CREPORT 034.

```
 DATABASE DICTNAME=CULPDICT
CREPORT=033,034
 SELECT MAP-098 WHEN MAP-VER-098 EQ 1 AND
*                   MAP-NAME-098 EQ ('RQE' TO 'RQF')
```

Example 3

In this example, DREPORT 018 reports on map occurrences defined to the DOCUDICT dictionary; the report module itself is stored in the CULPDICT dictionary. The SELECT parameter selects only those CA Culprit for CA IDMS input buffers in which users DEH and JKD defined map occurrences. By request, the report outputs the report module parameters.

```
 DATABASE DICTNAME=CULPDICT DBNAME=DOCUDICT
 PARAM=LIST
DREPORT=18
 SELECT BUFFER WHEN PREP-BY-098 EQ ('DEH' 'JKD')
```

Example 4

In this example, report module DREPORT 088 is a key report that documents requested map occurrences defined to the DOCUDICT dictionary. The KEY parameter names map occurrences EMPJOB and JKDMAP. The report module parameters are not listed in the report output because the user has not requested them.

```
 DATABASE DICTNAME=CULPDICT DBNAME=DOCUDICT
DREPORT=88
 KEY MAP-NAME-098 ('EMPJOB' 'JKDMAP')
```

Example 5

In this example, archive journal records with the program name of IDBCAT are selected for processing. The INPUT parameter defines the physical characteristics of the archive journal file. By request, report module parameters for JREPORT 004 appear in the report output.

```
 DATABASE DICTNAME=CULPDICT
 INPUT 4276 4276 UM(CULLJRNL)
JREPORT=2
JREPORT=3
 PARAM=LIST
JREPORT=4
 SELECT PROGRAM-NAME EQ 'IDBCAT'
```

Modifying CA IDMS Reports

CA IDMS reports are stored as report modules in the dictionary established when CA IDMS/DB is installed. With some knowledge of CA Culprit for CA IDMS, users can modify the existing report modules or create new report modules, as described in chapter Modifying CA IDMS Reports (see page 375).

Other reporting tools are available to system and database administrators, including both online and batch facilities. Chapter Other CA IDMS Reporting Facilities (see page 399) identifies these reporting tools.

CA Culprit for CA IDMS Security Considerations

CA Culprit for CA IDMS security is established at several levels. The two main levels to be concerned with to run CA IDMS reports are installation and product security. Each type of security will be discussed below.

Note: For more information on CA Culprit for CA IDMS security, see the *CA Culprit for CA IDMS Reference Guide*.

Installation Security

CA Culprit for CA IDMS is installed with security either on (enabled) or off. The installation parameter that controls CA Culprit for CA IDMS security is CULL-SECURE YES/NO. The default for users who have installed both CA IDMS and CA Culprit for CA IDMS is **No**. CA Culprit for CA IDMS must be reinstalled to change the security option. The default for users who have only installed CA IDMS is **Yes**, which cannot be changed. The Sequential Parameter Listing identifies whether security is in effect with the following statement:

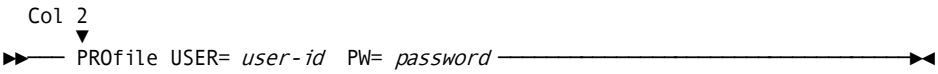
```
C200138 INSTALLATION SECURITY OPTION IS YES (or NO)
```

If security is established at installation time, CA Culprit for CA IDMS automatically checks the data dictionary to determine the security level in effect and to enforce that security. If installation security is not established, security options set in the data dictionary will be ignored.

Product Security

CA Culprit for CA IDMS security is established in the data dictionary with the SECURITY FOR CULPRIT IS ON/OFF clause of the SET OPTIONS FOR DICTIONARY statement; the user submits this statement to the DDDL compiler. When security in the dictionary is enabled, CA Culprit for CA IDMS validates the user ID and checks all user authorizations. Only authorized users can run CA Culprit for CA IDMS jobs that access files or subschemas defined in the data dictionary. A PROFILE parameter must be coded to specify a user ID and password, and must appear before the INPUT parameter.

Syntax



Parameters

USER = *user-id;*

Specifies the name of a user defined in IDD.

PW = *password*

Specifies the security password associated with a user defined to IDD. The password is not printed in any CA Culprit for CA IDMS listings.

Syntax Diagram Conventions

The syntax diagrams presented in this guide use the following notation conventions:

```
UPPERCASE OR SPECIAL CHARACTERS
```

Represents a required keyword, partial keyword, character, or symbol that must be entered completely as shown.

`lowercase`

Represents an optional keyword or partial keyword that, if used, must be entered completely as shown.

`italicized lowercase`

Represents a value that you supply.

`lowercase bold`

Represents a portion of the syntax shown in greater detail at the end of the syntax or elsewhere in the document.

Points to the default in a list of choices.

Indicates the beginning of a complete piece of syntax.

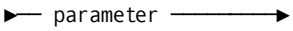
Indicates the end of a complete piece of syntax.

Indicates that the syntax continues on the next line.

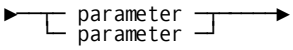
Indicates that the syntax continues on this line.

Indicates that the parameter continues on the next line.

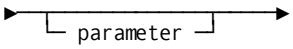
Indicates that a parameter continues on this line.



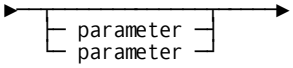
Indicates a required parameter.



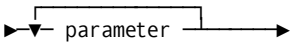
Indicates a choice of required parameters. You must select one.



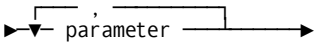
Indicates an optional parameter.



Indicates a choice of optional parameters. Select one or none.



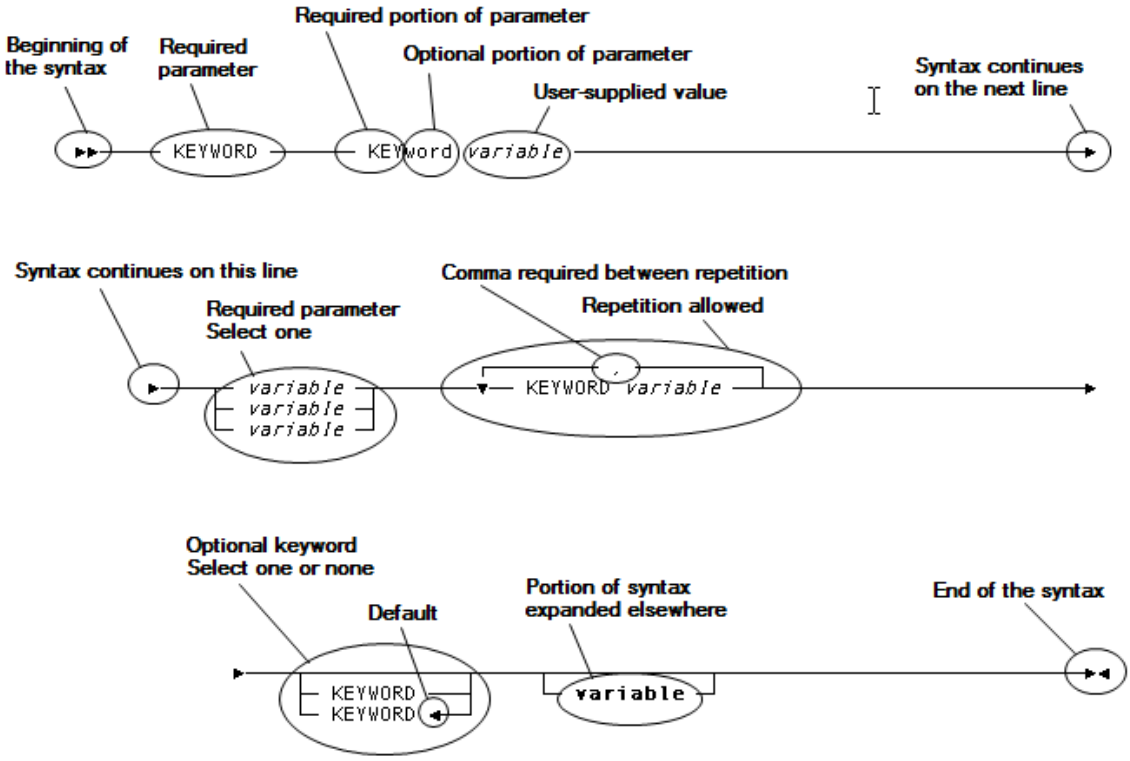
Indicates that you can repeat the parameter or specify more than one parameter.



Indicates that you must enter a comma between repetitions of the parameter.

Sample Syntax Diagram

The following sample explains how the notation conventions are used:



Chapter 2: Standard Dictionary Reports—DREPORTS

This section contains the following topics:

Report on the Dictionary (see page 33)
Information Obtained from the DDLDML Area (see page 33)
Uses for Dictionary Reports (see page 34)
Dictionary Report Categories (see page 34)
Types of Reports (see page 35)
Producing Dictionary Reports (see page 35)
Basic Entity Reports (see page 39)
Site-Specific Entity Reports (see page 70)
Teleprocessing Entity Reports (see page 77)
Cross-Reference Reports (see page 101)
Special-Purpose Report Modules (see page 116)

Report on the Dictionary

Standard dictionary reports provide summary, detail, and cross-reference information about the contents of the dictionary, including information about certain entity relationships.

Information Obtained from the DDLDML Area

Standard dictionary reports document information maintained in the DDLDML area of the dictionary. The records in the DDLDML area of the dictionary are defined and modified by various CA IDMS system software components, such as the Data Dictionary Definition Language (DDDL) compiler and the system generation compiler. Information that is displayed in the fields of the dictionary reports is taken from the corresponding fields in the dictionary records. Note, however, that not all fields in the records are displayed in the standard reports.

Note: For more information about how information is defined to the dictionary and about the structure of the records being reported on, see the *CA IDMS Dictionary Structure Reference Guide*.

Uses for Dictionary Reports

Dictionary reports can do the following:

- Help the MIS department organize and control data by providing an up-to-date source of information about each entity in the dictionary and the relationships between entities
- Help the programmer by providing information such as the names and synonyms of records and their associated elements; task codes and their associated programs; file retention periods; and standardized routines
- Help the DCA manage the communication network by providing information such as the relationship of lines and terminals, the names of programs executed by a task, and the names of users authorized to initiate a task
- Help the systems analyst monitor system performance by providing information on how the existing systems function, whether the systems are being used as originally designed, and the effect a new system could have on an existing system

Dictionary Report Categories

Dictionary reports are grouped into the following categories for the purpose of discussion:

- *Basic entity reports* document the standard data processing entities: system, user, program, module, file, record, and element.
- *Site-specific entity reports* document entities that are defined to meet the needs of a specific site: class, attribute, and user-defined entities. The system-supplied classes, LANGUAGE and MODE, are included in this category.
- *Teleprocessing entity reports* document entities typical of online systems: destination, line, logical terminal, map, panel, physical terminal, queue, and task.
- *Cross-reference reports* document relationships between specific entities.
- *Special-purpose reports* are used to perform administrative functions, such as punching module source to an output file.

Types of Reports

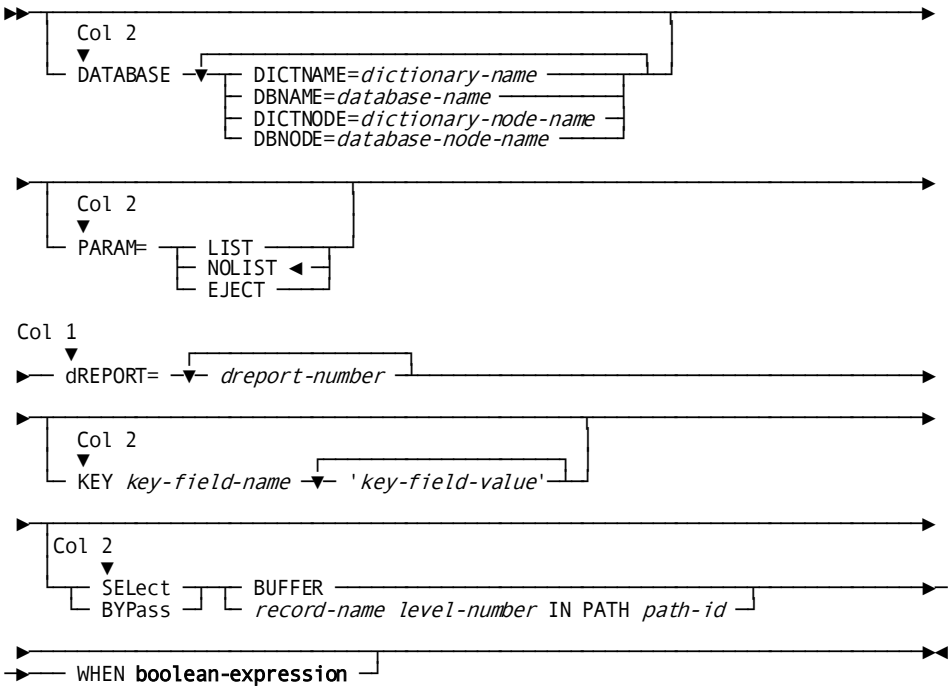
Three types of reports are typically available for each of the basic entity and teleprocessing entity reports:

Type	Number	Description
Summary	053 - 068	List all occurrences of a particular entity type with a minimal amount of supplementary information about each occurrence, such as the version number, description, and the dates the occurrence was defined and updated.
Detail	001 - 019	List every occurrence of a particular entity type with in-depth descriptions of the entity and its relationships with other dictionary entities. You can also run a detail report with a SELECT or BYPASS parameter to report on entities that meet a specified test condition. For example, instead of running a detail report that lists all modules, you could use a SELECT parameter to report on only those entities that were created by a particular user and updated on a particular date.
Key		Are identical to the detail reports in format but list only the entity occurrences specified as key values in the KEY parameter. More than one KEY parameter can be specified for a particular report; each KEY parameter must be specified on a separate line. The syntax for the KEY parameter is described later in this section. The key field names used in the KEY parameter are presented in Key Field Names for Key Reports table.

Producing Dictionary Reports

A dictionary report is produced by submitting a job that includes the standard Job Control Language (JCL) for CA Culprit for CA IDMS report writers and report-specific control statements. JCL for z/OS, z/VSE and z/VM operating systems is shown in Appendixes A through D, respectively.

Syntax



Parameters

General syntax rules for the CA IDMS reports are presented in Chapter 1:. Syntax rules specific to the DREPORTs are described below:

dREPORT *dreport-number*

Identifies the report to be run. DREPORT identifies the report as a dictionary report; the D of DREPORT is optional. If D is specified, DREPORT must begin in column 1; if D is not specified, REPORT must begin in column 2.

Dreport-number is the 3-digit report number. Leading zeros can be omitted. Dictionary report numbers are shown in DREPORT Listing table and in Tables 2-2 through 2-6 in this section.

Multiple reports can be requested in the same job run with the following exceptions:

- KEY reports cannot be requested in the same run with detail, summary, cross-reference, or special-purpose reports.
- DREPORTs 009 and 010 cannot be run together.

KEY

Identifies the key report being requested. KEY must be entered in columns 2-4.

key-field-name

Identifies the key field name of the entity type being reported on. Valid key field names for each entity type are listed in DREPORT Key fields table.

'***key-value***'

Identifies the entity occurrence of the type specified in *key-field-name*; *key-value* must be enclosed in single quotation marks. If the quoted value is smaller than the field length shown in Key Field Names for Key Reports table, CA Culprit for CA IDMS pads the value with spaces on the right; if the value is shorter, CA Culprit for CA IDMS truncates the value to the specified length.

Key Field Names for Key Reports

DREPORT Module	DREPORT Name	Name of Key Field	Field Length
038	Attribute/Record Report	ATTR-NAME-093	40
039	Attribute/Element Report	ATTR-NAME-093	40
051	Module Text to Card Utility	MOD-NAME-067	32
052	Module Text to File Utility	MOD-NAME-067	32
071	Class Report	CLASS-NAME-092	20
072	Attribute Report	ATTR-NAME-093	40
073	System Report	SYS-NAME-041	8
074	User Report	USER-NAME-047	32
075	Program Report	PROG-NAME-051	8
076	Module Report	MOD-NAME-067	32
077	File Report	SA-NAM-018	32
078	Record Report	SR-NAM-036	32
079	Element Report	INQ-NAM-058	32
081	Task Report	TASK-NAME-025	8
082	Queue Report	QUEUE-NAME-030	16
083	Destination Report	DEST-NAME-028	8
084	Logical Terminal Report	LTRM-NAME-106	8
085	Physical Terminal Report	PTRM-NAME-074	8
086	Line Report	LINE-NAME-109	8
087	Panel Report	PANEL-NAME-118	32

DREPORT Module	DREPORT Name	Name of Key Field	Field Length
088	Map Report	MAP-NAME-098	8
089	User-Defined Entity Report	CLASS-NAME-092	20

Examples

Example 1

These control statements can be used to produce a detailed report on the file occurrence ORDER TRANSACTIONS. The report modules used to run the report are found in the default dictionary; data for the report is taken from the DOCUNWK dictionary.

```
 DATABASE DBNAME=DOCUNWK
DREPORT=077
 KEY SA-NAM-018 'ORDER TRANSACTIONS'
```

Example 2

These control statements can be used to produce a file summary report (DREPORT 057) with a parameter listing and a module detail and file detail report without a listing. The report modules used to run the report are in the default dictionary; data for the reports is taken from the DOCUTEST dictionary.

```
 DATABASE DBNAME=DOCUTEST
 PARAM=LIST
DREPORT=57
 PARAM=NOLIST
DREPORT=6,7
```

Example 3

These control statements can be used to produce a class report that lists information about the LANGUAGE and DIVISION class occurrences. The key field name for the class report is CLASS-NAME-092; the key values for the report are LANGUAGE and DIVISION. The report modules used to run the report and the data for the report are in the default dictionary.

```
DREPORT=071
 KEY CLASS-NAME-092 'LANGUAGE'
 KEY CLASS-NAME-092 'DIVISION'
```

Example 4

These control statements can be used to produce a module report that lists the source code for dictionary report modules 1, 2, and 3. The report modules used to run the reports and the data for the reports are in the CULPDICT dictionary.

```
 DATABASE DICTNAME=CULPDICT DBNAME=CULPDICT
DREPORT=076
 KEY MOD-NAME-067 'DREPORT 001'
 KEY MOD-NAME-067 'DREPORT 002'
 KEY MOD-NAME-067 'DREPORT 003'
```

Example 5

These control statements can be used to produce a module detail report that describes only those modules created by user CMH and updated on a specified date. The report modules required to run the report are found in the CULPDICT dictionary; data for the report is taken from the default dictionary.

```
 DATABASE DICTNAME=CULPDICT
DREPORT=006
 SELECT MOD-NAME-067 WHEN PREP-BY-067 EQ 'CMH' AND
*DATE-LU-067 EQ 'mm/dd/yy'
```

What Follows

The remainder of this section describes the standard dictionary reports. The reports are presented by category and entity type. For example, the MODULE summary, MODULE detail, and MODULE key reports are presented together under Basic Entity Reports (see page 39). Tables 2-2 through 2-6 list the dictionary reports by category; DREPORT Listing table in Appendix D lists the DREPORTs by number.

Basic Entity Reports

The basic entity reports provide information about seven entity types: system, user, program, module, file, record, and element. The following Basic Entity Reports table lists the basic entity reports in order of presentation in this section.

DREPORT Module	DREPORT Name
003	System Report—Detail
053	System Report—Summary
073	System Report—Key(1)

DREPORT Module	DREPORT Name
004	User Report—Detail
054	User Report—Summary
074	User Report—Key(1)
005	Program Report—Detail
055	Program Report—Summary
075	Program Report—Key(1)
006	Module Report—Detail
056	Module Report—Summary
076	Module Report—Key(1)
007	File Report—Detail(3)
057	File Report—Summary(3)
077	File Report—Key(1)
008	Record Report—Detail
038	Attribute/Record Report—Key(1)
058	Record Report—Summary
078	Record Report—Key(1)
009	Element Report—Detail(2)
010	Inactive Element Report—Detail(2)
039	Attribute/Element Report—Summary
059	Element Report—Summary
079	Element Report—Key(1)

Notes:

- KEY reports cannot be run with summary or detail reports.
- DREPORTs 009 and 010 cannot be requested in the same run.
- DREPORTs 007 and 057 cannot be run with any other reports.

System Reports (DREPORTs 003, 053, 073)

System reports (DREPORTs 003, 053, and 073) provide information about system occurrences that have been defined to the dictionary. Systems are represented in the dictionary as occurrences of the SYS-041 record.

System Summary Report (DREPORT 053)

Contents

The system summary report provides the following information about systems occurrences:

- System name and version number
- Subsystems associated with the system (indented under the system name
- Associated description
- Date the system occurrence was added and date updated (if updated)

Sample DREPORT 053:

```
REPORT NO. 53                                   DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy       PAGE    1
DREPORT 053                                           SYSTEM REPORT - SUMMARY


*************************************************************************************************************************************
                                                                                                 ---- D A T E ----
SYSTEM                                                   DESCRIPTION                             UPDATED    CREATED
*************************************************************************************************************************************
DCSYSTEM                                      VER    1                                                    mm/dd/yy
DCSYSTEM                                      VER  105                                                    mm/dd/yy
DCSYSTEM                                      VER 9969                                           mm/dd/yy mm/dd/yy
LHNSYSTEM                                     VER    1                                           mm/dd/yy mm/dd/yy
LHNTEST                                       VER    1                                           mm/dd/yy mm/dd/yy
QATAWDICT                                     VER    1  QA TAW SYSTEMNAME                        mm/dd/yy mm/dd/yy
TESTSYSTEM                                    VER    1                                                    mm/dd/yy
```

System Detail and Key Reports (DREPORTs 003 and 073)

Contents

The system detail report provides detailed information about all system occurrences; the system key report provides similar information for selected system occurrences. The fields and format of these two reports are the same.

The following report shows sample output for DREPORT 073. The DREPORT and KEY parameters used to create this sample report are:

```
DREPORT=073
 KEY SYS-NAME-041 'LHNSYSTEM'
```

Sample DREPORT 073:

```
REPORT NO. 73                                  DATA DICTIONARY REPORTER  REL nn.n                      mm/dd/yy        PAGE    1
DREPORT 073                                               SYSTEM REPORT


*****************************************************************************************************************************
                                                                                                   ---- D A T E ----
SYSTEM NAME                                  DESCRIPTION                                           UPDATED    CREATED
*****************************************************************************************************************************


LHNSYSTEM                        VER     1                                                         mm/dd/yy mm/dd/yy
    PREPARED BY           LHN
    REVISED BY            LHN
    PUBLIC ACCESS ALLOWED FOR DISPLAY
    DIVISION              DOCUMENT
    DESTINATION                              TESTDEST                         VER     1
    LINE                                     VTAM234                          VER     1
    LOGICAL TERMINAL                         JESRDR                           VER     1
    PHYSICAL TERMINAL                        TESTERM                          VER     1
    MAP                                      TEST-MAP                         VER     1
    QUEUE                                    TEST                             VER     1
    QUEUE                                    TESTQUEUE                        VER     1
    TASK                                     TESTBYE                          VER     1
  USER LHN
  USER JFD                               RESPONSIBLE FOR CREATION AND UPDATE AND DELETION
    USER WITH ACCESS TO THE SYSTEM           LHN
    PROGRAM                                  EMPSS01                          VER     1
    PROGRAM                                  RHDCBYE                          VER     1
    ASSOCIATED TEST SYSTEM                   TESTSYSTEM                       VER     1
    COMMENT
    00000100 THIS SYSTEM IS USED FOR TEST PURPOSES.  IT WILL BE DELETED mm/dd/yy.
    DEFINITION
    00000100 DELETION DATE
```

Field Descriptions

The format of DREPORTs 003 and 073 depends on the order in which information was defined to the dictionary. A description of the fields in the sample report follows:

SYSTEM NAME

Identifies the name and version number of the system occurrence being described.

DESCRIPTION

Identifies text associated with the system occurrence.

DATE UPDATED/CREATED

Identifies the date the system occurrence was last updated and the date the system occurrence was defined to the dictionary.

PREPARED BY/REVISED BY

Identifies the user who defined the system occurrence to the dictionary and the user who last updated it.

PUBLIC ACCESS

Identifies the level of access allowed for unregistered users.

Class/attribute associations

Identifies class/attribute associations that have been defined for the system occurrence. In this sample report, the attribute DOCUMENT within the class DIVISION is associated with LHNSYSTEM.

Associated entities

Lists associated entities for the system occurrence with any associated text. The following entity types can be associated with a system occurrence: destination, line, logical terminal, map, module, physical terminal, process, program, q-file, queue, table, or task.

USER

Identifies a user who is registered to access the entity and any responsibility code and text associated with the user. If no users are registered for the entity, the USER literal does not appear; if no responsibility code is associated with the user, the RESPONSIBLE FOR literal does not appear.

SAME AS

Identifies the system from which this system definition was copied (if copied).

User-defined nests

Identifies user-defined nests that relate one system occurrence to another. In this sample report, ASSOCIATED TEST SYSTEM is a relational key that relates LHNSYSTEM to TESTSYSTEM.

COMMENT

Identifies comment text associated with the system occurrence through the COMMENTS clause of the DDDL SYSTEM statement.

User-defined comments

Identifies user-defined comments defined through the DEFINITION/*comment-key* clause of the DDDL SYSTEM statement. In this sample report, DELETION DATE is a comment key.

User Reports (DREPORTs 004, 054, 074)

User reports (DREPORTs 004, 054, and 074) provide information about user occurrences that have been defined to the dictionary. Users are represented in the dictionary as occurrences of the USER-047 record.

User Summary Report (DREPORT 054)

Contents

The user summary report includes the following information about user occurrences:

- User name
- Associated description
- Date defined and date updated (if updated)

Sample DREPORT 054:

```
REPORT NO. 54                          DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy        PAGE   1
DREPORT 054                                  USER REPORT - SUMMARY


*************************************************************************************************************************
                                                                          ---- D A T E ----
USER NAME                      DESCRIPTION                                UPDATED   CREATED
*************************************************************************************************************************

BIARI01                                                                           mm/dd/yy
CORP                                                                     mm/dd/yy mm/dd/yy
CULL DBA                                                                 mm/dd/yy mm/dd/yy
ENK                                                                      mm/dd/yy mm/dd/yy
EQA                                                                      mm/dd/yy mm/dd/yy
FQA                                                                      mm/dd/yy mm/dd/yy
HANEL01                                                                           mm/dd/yy
IQA                                                                               mm/dd/yy
JFD                                                                               mm/dd/yy
JLK                                                                      mm/dd/yy mm/dd/yy
LHN                            SYSTEM ADMINISTRATOR                      mm/dd/yy mm/dd/yy
MJH                                                                      mm/dd/yy mm/dd/yy
MQA                                                                               mm/dd/yy
PAGTO01                                                                  mm/dd/yy mm/dd/yy
PROFUSEA                                                                          mm/dd/yy
PROFUSER                                                                          mm/dd/yy
QAE                                                                      mm/dd/yy mm/dd/yy
SQA                                                                               mm/dd/yy
UQA                                                                               mm/dd/yy
VQA                                                                      mm/dd/yy mm/dd/yy
WMF                                                                      mm/dd/yy mm/dd/yy
```

User Detail and Key Reports (DREPORTs 004 and 074)

Contents

The user detail report provides detailed information about all user occurrences; the user key report provides similar information for selected user occurrences. The fields and format of these two reports are the same.

The following report shows sample output for DREPORT 074. The DREPORT and KEY parameters used to create this sample report are:

```
DREPORT=074
 KEY USER-NAME-047 'LHN'
```

Sample DREPORT 074:

```
REPORT NO. 74                                DATA DICTIONARY REPORTER  REL nn.n                     mm/dd/yy       PAGE   1
DREPORT 074                                                 USER REPORT


*****************************************************************************************************************************
                                                                            ---- D A T E ----
USER NAME                                                                   UPDATED   CREATED
*****************************************************************************************************************************

LHN                                                                         mm/dd/yy mm/dd/yy
   PREPARED BY         LHN
   REVISED BY          LHN
   DESCRIPTION         SYSTEM ADMINISTRATOR
   FULL NAME           LAURIE NELSON
   AUTHORITIES :
      PASSWORD           NO AUTHORITY             IDD                                     DC
      CULPRIT            NO AUTHORITY               ELEMENT     NO AUTHORITY                DESTINATION   NO AUTHORITY
      OLQ                NO AUTHORITY               FILE        NO AUTHORITY                LINE          NO AUTHORITY
      ADS                NO AUTHORITY               MODULE      NO AUTHORITY                LTERM         NO AUTHORITY
      LOAD MODULE        NO AUTHORITY               PROCESS     NO AUTHORITY                MAP           NO AUTHORITY
      IDMS                                          QFILE       NO AUTHORITY                MESSAGE       NO AUTHORITY
        SCHEMA           NO AUTHORITY               TABLE       NO AUTHORITY                PANEL         NO AUTHORITY
        SUBSCHEMA        NO AUTHORITY               PROGRAM     NO AUTHORITY                PTERM         NO AUTHORITY
        DMCL             NO AUTHORITY               ENTRY POINT NO AUTHORITY                QUEUE         NO AUTHORITY
      CLASS & ATTRIBUTE                             RECORD      NO AUTHORITY                TASK          NO AUTHORITY
        CLASS            NO AUTHORITY               REPORT      NO AUTHORITY
        ATTRIBUTE        NO AUTHORITY               TRANSACTION NO AUTHORITY
                                                    SYSTEM      NO AUTHORITY
                                                    USER        NO AUTHORITY
   DEFAULT OPTIONS
        NO OLQ HEADER
        INTERRUPT
        WHOLE
        FULL
        NO FILLER
        ECHO
        HEADER
        ALL
        COMMENTS
        NO PATH STATUS
        NO CODE TABLE
        NO EXTERNAL PIC
        TERSE
   &&1.
   QFILE ALLOWED
   SORT ALLOWED
   OVERRIDES ALLOWED
   MRR ALLOWED
   IDD SIGNON ALLOWED
   SUPERVISOR                              JFD
   DIVISION              DOCUMENT
   DATE-OF-HIRE          mm-dd-yy
   PRODUCT               ASF
   SYSTEM             LHNSYSTEM                       VER    1
                        AUTHORIZED TO       ALL AUTHORITY
```

Sample DREPORT 074 - continued:

```
REPORT NO. 74                                      DATA DICTIONARY REPORTER  REL nn.n                        mm/dd/yy        PAGE   2
DREPORT 074                                                        USER REPORT


*****************************************************************************************************************************
                                                                                ---- D A T E ----
USER NAME                                                                       UPDATED    CREATED
*****************************************************************************************************************************
   SYSTEM             LHNTEST                          VER    1
                        AUTHORIZED TO       ALL AUTHORITY
   PROGRAM            EMPSS01                          VER    1
                        AUTHORIZED TO       UPDATE
   ACCESS TO SYSTEM   LHNSYSTEM                        VER    1
   ACCESS TO SUBSCHEMAEMPSS01
   OF SCHEMA          EMPSCHM                          VER    1
   RECORD             EMPOSITION                       VER    1
                        RESPONSIBLE FOR     CREATION AND UPDATE AND DELETION
   RECORD             EMPOSITION                       VER    1
                        AUTHORIZED TO       UPDATE
   ELEMENT            LHN-ELEM                         VER    1
                        RESPONSIBLE FOR     CREATION AND UPDATE AND DELETION
                        AUTHORIZED TO       ALL AUTHORITY
   ELEMENT            DEPT-NAME                        VER    1
                        RESPONSIBLE FOR     CREATION AND UPDATE AND DELETION
                        AUTHORIZED TO       UPDATE
   DESTINATION        TESTDEST                         VER    1
                        RESPONSIBLE FOR     CREATION AND UPDATE AND DELETION
                        AUTHORIZED TO       ALL AUTHORITY
   LINE               VTAM234                          VER    1
                        RESPONSIBLE FOR     CREATION AND UPDATE AND DELETION
   COMMENT
    00000100 USER WAS CREATED FOR TEST PURPOSES
   DEFINITION
    00000100 DELETION DATE
```

Field Descriptions

The format of DREPORTs 004 and 074 depends on the order in which information was defined to the dictionary. A description of the fields in the sample user report follows:

USER NAME

Identifies the name of the user occurrence.

DATE UPDATED/CREATED

Identifies the date the user occurrence was last updated and the date the user occurrence was defined to the dictionary.

PREPARED BY/REVISED BY

Identifies the user who defined the user occurrence to the dictionary and the user who last updated it.

DESCRIPTION

Identifies text associated with the user occurrence.

FULL NAME

Identifies a name associated with the user occurrence (typically the user's full name).

PASSWORD ASSIGNED

Indicates that a password is assigned to the user.

AUTHORITIES

Identifies the user's authority to access secured entities, perform secured operations, or assign or revoke equal authority for another user.

DEFAULT OPTIONS

Identifies values that CA OLQ uses as default options when the user signs on.

CA OLQ options

Identifies additional CA OLQ authorizations.

OVERRIDES ALLOWED

Indicates whether the user can define and update CA Culprit for CA IDMS record layouts and files definitions.

IDD SIGNON ALLOWED

Indicates whether the user can access the DDDL compiler.

IDB ALLOWED

Indicates that the user can access IDB.

ASF ALLOWED

Indicates that the user can access ASF.

WITHIN USER

Identifies a relationship between this user occurrence and another user occurrence.

SAME AS

Identifies the user occurrence from which this user occurrence was copied (if copied).

User-defined nests

Identify user-defined nests that relate one user occurrence to another. In this sample report, the user-defined nest SUPERVISOR relates user LHN to user JFD.

Class/attribute associations

Identifies class/attribute associations that have been defined for the user occurrence. In this sample report, the attribute ASF within class PRODUCT and the attribute mm/dd/yy within class DATE-OF-HIRE are associated with user LHN.

Associated entity occurrences

Identifies associated entity occurrences for the user occurrence. Responsibility codes and text associated with each relationship are also listed.

ACCESS TO

Indicates that the user is authorized to access a CA Culprit for CA IDMS file, a qfile, a signon qfile, a subschema, or a system.

COMMENT

Identifies comments associated with the user occurrence through the COMMENTS clause of the DDDL USER statement.

User-defined comments

Identifies user-defined comments that were defined through the DEFINITION/*comment-key* clause of the DDDL USER statement are listed in this field. In this sample report, DELETION DATE is a comment key.

Program Reports (DREPORTs 005, 055, 075)

Program reports (DREPORTs 005, 055, and 075) provide information about program occurrences that have been defined to the dictionary. Programs are represented in the dictionary as occurrences of the PROG-051 record.

Program Summary Report (DREPORT 055)

Contents

The program summary report includes the following information about program occurrences:

- Program name and version number
- Subordinate programs (if any)
- Associated description
- Date defined, date updated (if updated), and date compiled (if compiled). Program occurrences that were created or updated by the DC/UCF system generation compiler do not have these dates associated with them.
- Language associated with the program

Sample DREPORT 055:

```
REPORT NO. 55                          DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy        PAGE    6
DREPORT 055                                  PROGRAM REPORT - SUMMARY


*************************************************************************************************************************
                                                                          --------- D A T E --------
 PROGRAM                       DESCRIPTION                                COMPILED UPDATED   CREATED  LANGUAGE
*************************************************************************************************************************

EMPSSAD             VER    1                                                                mm/dd/yy
EMPSSLR             VER    1                                                                mm/dd/yy
EMPSSLR1            VER    1                                                                mm/dd/yy
EMPSS01             VER    1                                                       mm/dd/yy mm/dd/yy  ASSEMBLER
EMPSS01A            VER    1                                                                mm/dd/yy
EMPSS02             VER    1                                                                mm/dd/yy
ERPT01M             VER    1                                                       mm/dd/yy mm/dd/yy
GOOD01D             VER    1   ADS DIALOG                                    mm/dd/yy mm/dd/yy mm/dd/yy
GTRL01D             VER    1   ADS DIALOG                                    mm/dd/yy mm/dd/yy mm/dd/yy
GWGAPP01            VER    1
GWGDIA01            VER    1   ADS DIALOG                                    mm/dd/yy mm/dd/yy mm/dd/yy
GWGDIA02            VER    1   ADS DIALOG                                    mm/dd/yy mm/dd/yy mm/dd/yy
GWGDIA03            VER    1   ADS DIALOG                                    mm/dd/yy mm/dd/yy mm/dd/yy
GWGMAP01            VER    1                                                       mm/dd/yy mm/dd/yy
HELP908             VER    1                                                       mm/dd/yy mm/dd/yy
H981924             VER    1                                                       mm/dd/yy mm/dd/yy
IDMS                VER    1                                                                mm/dd/yy
IDMSCOBI            VER    1                                                                mm/dd/yy
IDMSDCCI            VER    1                                                                mm/dd/yy
```

Program Detail and Key Reports (DREPORTs 005 and 075)

Contents

The program detail report provides detailed information about all program occurrences; the program key report provides similar information about selected program occurrences. The fields and format of these two reports are the same.

The report below shows sample output for DREPORT 075. The DREPORT and KEY parameters used to create this sample report are:

```
DREPORT=075
 KEY PROG-NAME-051 'EMPSS01'
```

Sample DREPORT 075:

```
REPORT NO. 75                              DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy        PAGE    1
DREPORT 75                                          PROGRAM REPORT


*************************************************************************************************************************
                          ESTIMATED    TIMES  -------- D A T E --------
PROGRAM                     LINES    COMPILED COMPILE  UPDATED  CREATED
*************************************************************************************************************************


EMPSS01  VER     1            2000           0          mm/dd/yy mm/dd/yy
    PREPARED BY          DPD
    REVISED BY           LHN
    PUBLIC ACCESS ALLOWED FOR ALL AUTHORITY
    LANGUAGE                  ASSEMBLER
    DIVISION                  DOCUMENT
    SYSTEM               LHNSYSTEM                      VER     1
    USER                 LHN
    ASSOCIATED PROGRAM                    EMPSS02      VER     1
    COMMENT
      00000100 THIS IS A TEST PROGRAM OF THE EMPLOYEE DATABASE
    DEFINITION
      00000100 DELETION DATE
    MAP USED             TEST-MAP                       VER     1
```

Field Descriptions

The format of DREPORTs 005 and 075 depends on the order in which information was defined to the dictionary. A description of the fields in the sample report follows:

PROGRAM

Identifies the program name and version number.

ESTIMATED LINES

Identifies the estimated number of source code lines in the program.

TIMES COMPILED

Identifies the number of times that the program has been compiled. The DML processors automatically update the compile-time statistics if the activity log is on and the dictionary is in UPDATE mode at run time.

DATE COMPILED/UPDATED/CREATED

Identifies the date the program occurrence was last compiled or updated and the date the program occurrence was defined to the dictionary.

PREPARED BY/REVISED BY

Identifies the user who defined the program to the dictionary and the user who last updated it.

PUBLIC ACCESS

Identifies the level of access allowed for unregistered users.

DESCRIPTION

Identifies text associated with the program occurrence.

Class/attribute associations

Identifies class/attribute associations that have been defined for the program occurrence. In this sample report, the attribute ASSEMBLER within the class LANGUAGE and the attribute DOCUMENT within class DIVISION are associated with EMPSS01.

SAME AS

Identifies the program occurrence from which this program occurrence was copied (if copied).

SYSTEM

Identifies a system associated with the program and any user-supplied text for the program/system relationship.

USER

Identifies a user who is registered to access the program occurrence and any responsibility codes and associated text defined for the user. If no users are registered, the USER literal does not appear; if no responsibility codes have been assigned, the RESPONSIBLE FOR literal does not appear.

SUBPROGRAM

Identifies a subprogram called by the program.

CALLED BY

Identifies a program that calls this program as a subprogram.

ENTRY

Identifies an entry point for the program.

User-defined nests

Identifies user-defined nests that relate this program occurrence and another program occurrence. In this sample report, the relational key ASSOCIATED PROGRAM relates EMPSS02 to EMPSS01.

MODULE

Identifies a module used by the program and any user-supplied text for this program/module relationship.

RECORD COPIED

Identifies the records and record synonyms that are copied into the program.

INPUT FILE

Identifies the file opened by the program.

SUBSCHEMA OF SCHEMA

Identifies a subschema (and associated schema) used by the program.

Associated logical records, records, sets, and areas

Specifies associated logical records, records, sets, and areas that the program uses or is expected to use are listed in this field. The field can also show the usage mode for the named area and a count of the number of times the function is performed.

COMMENT

Identifies commentary text provided for this program through the COMMENTS clause of the DDDL PROGRAM statement.

MAP USED

Identifies the map used by the program.

User-defined comments

Identifies user-defined comments that were defined through the DEFINITION/*comment-key* clause of the DDDL PROGRAM statement. In this sample report, DELETION DATE is a comment key.

ENTRY POINT

Identifies the program occurrence as an entry point.

WITHIN PROGRAM

Identifies the program that uses the program occurrence as an entry point.

Module Reports (DREPORTs 006, 056, 076)

Module reports (DREPORTs 006, 056, and 076) provide information about module occurrences that have been defined to the dictionary. Modules, processes, functions, q-files, and edit/code tables are represented in the dictionary as occurrences of the MODULE-067 record.

Module Summary Report (DREPORT 056)

Contents

The module summary report provides the following information about module occurrences:

- Entity name and version number
- Associated description
- Associated language
- Date defined and date updated (if updated)

Sample DREPORT 056:

```
REPORT NO. 56                          DATA DICTIONARY REPORTER  REL nn.n              mm/dd/yy        PAGE      8
DREPORT 056                                  MODULE REPORT - SUMMARY


*************************************************************************************************************************
                                                                                                        ---- D A T E ----
MODULE NAME                    VER DESCRIPTION                      LANGUAGE                          UPDATED   CREATED
*************************************************************************************************************************

EMP-COVER-INS-PLAN               1 OLQ                              OLQ                          mm/dd/yy mm/dd/yy
EMP-DEPT-REPORT                  1 OLQ                              OLQ                          mm/dd/yy mm/dd/yy
EMPQFILE                         1 OLQ                              OLQ                          mm/dd/yy mm/dd/yy
ERPT01P                          1                                  PROCESS                             mm/dd/yy
ERPT01R-AAAA                     1                                  PROCESS                             mm/dd/yy
ERPT02P                          1                                  PROCESS                             mm/dd/yy
ERPT02R-BBBB                     1                                  PROCESS                             mm/dd/yy
ERPT03R-BBBB                     1                                  PROCESS                             mm/dd/yy
GROUPBY-HAVING-COUNT             1 OLQ                              OLQ                          mm/dd/yy mm/dd/yy
GROUPBY-HAVING-ERROR             1 OLQ                              OLQ                                 mm/dd/yy
GROUPBY-HAVING-JOB               1 OLQ                              OLQ                          mm/dd/yy mm/dd/yy
GROUPBY-WITH-ERROR               1 OLQ                              OLQ                          mm/dd/yy mm/dd/yy
IDMS DC                          1                                  COBOL                        mm/dd/yy mm/dd/yy
IDMS DC-NONAUTO                  1                                  COBOL                        mm/dd/yy mm/dd/yy
IDMS-SQL-SELECT                  1 OLQ                              OLQ                          mm/dd/yy mm/dd/yy
IDMS-STATUS                      1                                  COBOL                        mm/dd/yy mm/dd/yy
IDMS-STATUS                      2                                  COBOL                        mm/dd/yy mm/dd/yy
IDMS-STATUS                      3                                  COBOL                        mm/dd/yy mm/dd/yy
IDMS-STATUS                      4                                  COBOL                        mm/dd/yy mm/dd/yy
IDMS-WAIT                        1                                  COBOL                        mm/dd/yy mm/dd/yy
IDMS-WAIT                        2                                  COBOL                        mm/dd/yy mm/dd/yy
```

Module Detail and Key Reports (DREPORTs 006 and 076)

Contents

The module detail report provides detailed information about all module occurrences; the module key report provides similar information about selected module occurrences. The fields and format of these two reports are the same.

The following report shows sample output for DREPORT 076. The DREPORT and KEY parameters used to create this sample report are:

```
DREPORT=076
 KEY MOD-NAME-067 'EMPLOYEE'
```

Sample DREPORT 076:

```
REPORT NO. 76                                   DATA DICTIONARY REPORTER  REL nn.n                       mm/dd/yy        PAGE   1
DREPORT 076                                                MODULE REPORT


*****************************************************************************************************************************
                                                                                                     ---- D A T E ----
MODULE NAME                                                                                         UPDATED   CREATED
*****************************************************************************************************************************


EMPLOYEE                         VER    1     LANGUAGE OLQ                                          mm/dd/yy  mm/dd/yy
    PREPARED BY          LHN
    REVISED BY           LHN
    DESCRIPTION          TEST MODULE FOR DOCUMENTATION
    PUBLIC ACCESS ALLOWED FOR ALL AUTHORITY
    USER SQA                               RESPONSIBLE FOR CREATION AND UPDATE AND DELETION OLQ
    USER LHN                               RESPONSIBLE FOR CREATION AND UPDATE AND DELETION
    DIVISION             DOCUMENT
    SYSTEM               LHNSYSTEM                        VER    1
    SAME AS                                  EMP-DEPT-REPORT                 VER    1
                                             LANGUAGE                            OLQ
    ASSOCIATED PRODUCTION PROCESS            EMP-DEPT-REPORT                 VER    1
                                             LANGUAGE                            OLQ
    COMMENT
    00000100 THIS IS A TEST MODULE FOR DOCUMENTATION
    DEFINITION
    00000100 DELETION DATE
    MODULE SOURCE
    00000100
    00000200 SET ACCESS OLQ
    00000300 SET DICTNAME ' '
    00000400 SET UNDERLINE '-'
    00000500 SIGNON SS EMPSS01  SCHEMA EMPSCHM (   1)
    00000600 OPTIONS ALL HEADER ECHO NOFILLER FULL WHOLE INTERRUPT OLQHEADER                -
    00000700 NOPATHSTAT NOSTAT COMMENT VERBOSE NODBKEY PICTURE CODETAB NOSYN
    00000800 SELECT 'DEPARTMENT'.'DEPT-ID-0410' 'EMPLOYEE'.'EMP-ID-0415' 'EMPLOYEE'.'EMP-FI-
    00000900 RST-NAME-0415' 'EMPLOYEE'.'EMP-LAST-NAME-0415' 'EMPOSITION'.'SALARY-AMOUNT-042-
    00001000 0' 'EMPOSITION'.'BONUS-PERCENT-0420' FROM 'DEPARTMENT', 'EMPLOYEE', 'EMPOSITIO-
    00001100 N'  WHERE ('DEPT-EMPLOYEE' AND 'EMP-EMPOSITION')
    00001200 PAGE HEADER BLANK LINES AFTER 1  -
    00001300  LINE 1 'DEPARTMENT/EMPLOYEE/EMPOSITION REPORT'  CENTER -
    00001400  LINE 2 '$DATE'  CENTER
    00001500 PAGE FOOTER BLANK LINES BEFORE 1  -
    00001600  LINE 1 '- $PAGE -'  CENTER
    00001700 EDIT DEPT-ID-0410  -
    00001800       ALIGN RIGHT  -
    00001900       OLQHEADER 'DEPT'-
    00002000       PICTURE '9999'
    00002100 EDIT EMP-ID-0415  -
    00002200       ALIGN RIGHT  -
```

Field Descriptions

The format of DREPORTs 006 and 076 depends on the order in which information was defined to the dictionary. A description of the fields in the sample report follows:

MODULE NAME

Identifies the name and version number of the module occurrence.

DATE UPDATED/CREATED

Identifies the date the module occurrence was last updated and the date the module occurrence was defined to the dictionary.

LANGUAGE

Identifies the language associated with the module occurrence.

PREPARED BY/REVISED BY

Identifies the user who defined the module occurrence to the dictionary and the user who last updated it.

DESCRIPTION

Identifies the text associated with the module occurrence.

PUBLIC ACCESS

Identifies the level of access allowed for unregistered users.

MODE

Identifies the operating mode for the module occurrence. MODE is a system-supplied class.

USER

Identifies a user who is registered to access this entity and any responsibility code and text associated with the user. If no users are registered for this entity, the USER literal does not appear; if no responsibility code is associated with the user, the RESPONSIBLE FOR literal does not appear.

SYSTEM

Identifies the system that includes the module and any user-supplied text associated with the module/system relationship.

SAME AS

Identifies the module occurrence from which this module occurrence was copied (if copied).

PROGRAM

Identifies the program associated with the module and any user-supplied text for the relationship.

User-defined nests

Identify user-defined nests that relate the module occurrence and another module occurrence. In this sample report, the relational key ASSOCIATED PRODUCTION PROCESS is used to relate EMPLOYEE to process EMP-DEPT-REPORT.

COMMENT

Identifies commentary text supplied for this module occurrence through the COMMENTS clause of the DDDL MODULE/PROCESS/QFILE/TABLE statement.

User-defined comments

Identify user-defined comments that were defined through the DEFINITION/*comment-key* clause of the DDDL MODULE/PROCESS/QFILE/TABLE statement. In this sample report, DELETION DATE is a comment key.

MODULE SOURCE

Lists the source code stored within the module occurrence. The numbers are supplied by the DDDL compiler. If the module occurrence is a q-file, Q-FILE SOURCE appears on the report.

CODE TABLE

Identifies the module occurrence as a code table and describes the code table format.

File Reports (DREPORTs 007, 057, 077)

File reports (DREPORTs 007, 057, and 077) provide information about IDD files. IDD files are represented in the dictionary as occurrences of the SA-018 record.

File Summary Report (DREPORT 057)

Contents

The following information is included in the file summary report:

- IDD file name and version number
- Associated text
- Label option
- Date defined and date updated (if updated)

Sample DREPORT 057:

```
REPORT NO. 57                          DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy       PAGE   1
DREPORT 057                                   FILE REPORT - SUMMARY


*************************************************************************************************************************
                                                                                              ---- D A T E ----
FILE NAME                      VER DESCRIPTION                                  LABELS        UPDATED  CREATED
*************************************************************************************************************************

TESTFILE                         1 TEST FILE FOR DOCUMENTATION                                mm/dd/yy mm/dd/yy
```

File Detail and Key Reports (DREPORTs 007 and 077)

Contents

The file detail report provides detailed information about all IDD files; the file key report provides similar information. The fields and format of these two reports are the same.

The report below shows sample output for DREPORT 077. The DREPORT and KEY parameters used to create this sample report are:

```
DREPORT=077
 KEY SA-NAM-018 'TESTFILE'
```

Sample DREPORT 077:

```
REPORT NO. 77                                DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy        PAGE    1
DREPORT 077                                             FILE REPORT


*************************************************************************************************************************
                                        RECORD  BLOCK  RECORD               ---- D A T E ----
FILE NAME                                SIZE   SIZE   FORMAT    LABELS    UPDATED  CREATED
*************************************************************************************************************************


TESTFILE                        VER    1     132    132    F    NOT SPECIFIED  mm/dd/yy mm/dd/yy
    PREPARED BY          LHN
    REVISED BY           LHN
    DESCRIPTION          TEST FILE FOR DOCUMENTATION
    PUBLIC ACCESS ALLOWED FOR  ALL AUTHORITY
    USER LHN                             RESPONSIBLE FOR CREATION AND UPDATE AND DELETION
    FILE-TYPE            PS
    DEVICE-TYPE          3380
    DIVISION             DOCUMENT
    PROGRAM              LHNPROG  VER    1  I-O FILE
    RECORD               LHN-REC                        VER    1
    FILE SYNONYM         TEST-FILE                      VER    1
        RECORD SYNONYM   LHN-REC                        VER    1
    FILE SYNONYM         LHNFILE                        VER    1
    COMMENT
      00000100 THIS IS A DOCUMENTATION TEST FILE
    DEFINITION
      00000100 DELETION DATE
```

Field Descriptions

The format of DREPORTs 007 and 077 depends on the order in which information was defined to the dictionary. A description of the fields in the sample report follows:

FILE NAME

Identifies the name and version number of the IDD file occurrence.

RECORD SIZE

Identifies the maximum record size for this file occurrence.

BLOCK SIZE

Identifies the size (in bytes) of the record blocks on this file.

RECORD FORMAT

Identifies whether the record format is fixed (F), undefined (U), variable (V), or variable spanned (S).

LABELS

Indicates whether the file labels are NOT SPECIFIED, STANDARD, NON-STANDARD, or OMITTED.

DATE UPDATED/CREATED

Identifies the date the IDD file was last updated and the date the file occurrence was defined to the dictionary.

PREPARED BY/REVISED BY

Identifies the user who defined the IDD file to the dictionary and the user who last updated it.

DESCRIPTION

Identifies text associated with the IDD file occurrence.

FILE-TYPE

Identifies the type of IDD file: PS, IS, CARD, VS, or UM.

VSAM-TYPE

Identifies the type of VSAM file (if VSAM file): KS, ES, or RS.

Class/attribute associations

Identify class/attribute associations that have been defined for the IDD file. In this sample report, the attribute DOCUMENT within class DIVISION is associated with TESTFILE.

USER

Identifies a user who is registered to access the file occurrence and indicates any responsibility code and associated text defined for the user. If no users are registered, the USER literal does not appear; if no responsibility codes are associated with a user, the RESPONSIBLE FOR literal does not appear for that user.

SAME AS

Identifies the file occurrence from which this file occurrence was copied (if copied).

PROGRAM

Identifies a program that uses this file occurrence for input/output.

EXTERNAL NAME

Identifies the ddname or file-id of the file used as input to the program, if defined.

RELATED FILE

Identifies a relationship between this file occurrence and another.

RECORD

Identifies a record that is associated with this file.

FILE SYNONYM

Identifies a file synonym for the file occurrence.

RECORD SYNONYM

Identifies record synonym names associated with the last file or file synonym listed.

COMMENT

Identifies commentary text supplied for this file occurrence through the COMMENTS clause of the DDDL FILE statement.

User-defined comments

Identifies user-defined comments that were defined through the DEFINITION/*comment-key* clause of the DDDL FILE statement. In this sample report, DELETION DATE is a comment key.

User-defined nests

Identifies user-defined nests that relate this file occurrence to another file occurrence.

Record Reports (DREPORTs 008, 038, 058, 078)

Record reports (DREPORTs 008, 038, 058, and 078) provide information about record occurrences that have been defined to the dictionary. Elements that are associated with the record are also listed. Record occurrences are represented in the dictionary as occurrences of the SR-036 record.

Types of Record Reports

A summary report, two key reports, and a detail report are provided for record entities. One key report uses the record name as the key value; the other uses an attribute as the key value.

Record Summary Report (DREPORT 058)

Contents

The record summary report provides the following information about record occurrences:

- Record name and version number
- Associated description
- Record length

- Record storage method
- Estimated number of times the record occurs in files or databases
- Date defined and date updated (if updated)

Sample DREPORT 058:

```
REPORT NO. 58                                   DATA DICTIONARY REPORTER  REL nn.n                 mm/dd/yy        PAGE   3
DREPORT 058                                            RECORD REPORT - SUMMARY


*************************************************************************************************************************
                                                                              RECORD                             ---- D A T E ----
RECORD NAME                       VER DESCRIPTION                         LGTH STORAGE           OCCURRENCES     UPDATED    CREATED
*************************************************************************************************************************

EMPOSITION                        100                                        28                                              mm/dd/yy
EXPERTISE                           1                                         8                                              mm/dd/yy
EXPERTISE                         100                                         8                                              mm/dd/yy
HOSPITAL-CLAIM                      1                                       292                                              mm/dd/yy
HOSPITAL-CLAIM                    100                                       292                                              mm/dd/yy
INSURANCE-PLAN                      1                                       132                                              mm/dd/yy
INSURANCE-PLAN                    100                                       132                                              mm/dd/yy
JMAREC                              1                                      4272                                              mm/dd/yy
JMASQLDA                            1                                      2416                                              mm/dd/yy
JOB                                 1                                       299                                              mm/dd/yy
JOB                               100                                       299                                              mm/dd/yy
JOB-IDD                             1                                         4                                              mm/dd/yy
```

Record Detail and Key Report (DREPORTs 008 and 078)

Contents

The record detail report provides detailed information about all record occurrences; the record key report provides similar information about selected record occurrences. The fields and format of these two reports are the same.

The report below shows sample output for DREPORT 078. The DREPORT and KEY parameters used to create this sample report are:

```
DREPORT=078
 KEY SR-NAM-036 'LHNREC'
```

Sample DREPORT 078:

```
REPORT NO. 78                                        DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy        PAGE    1
DREPORT 078                                                    RECORD REPORT


*****************************************************************************************************************************************
                                              RECORD              RECORD                    ---- D A T E ----
RECORD NAME                                  LENGTH  BUILDER        TYPE       OCCURRENCES   UPDATED   CREATED
*****************************************************************************************************************************************


LHNREC                           VER     1    28      D                                     mm/dd/yy mm/dd/yy
    PREPARED BY          LHN
    REVISED BY           LHN
    PUBLIC ACCESS ALLOWED FOR ALL AUTHORITY
    USER LHN                                 RESPONSIBLE FOR CREATION AND UPDATE AND DELETION
    LANGUAGE             COBOL
    LANGUAGE             ASSEMBLER
    ASSOCIATED RECORD
         TEST-REC                                           VER     1
    PRIMARY FILE         TESTFILE                           VER     1
    DEFINITION
             100 DELETION DATE
    RECORD               LHNREC                             VER     1 D
        LANGUAGE             COBOL
        LANGUAGE             ASSEMBLER
        FILE                 TESTFILE                           VER     1
           100   02 START-DATE                         X(6)                                DISPLAY
                         VALUE                 'YYMMDD'
           200   02 FINISH-DATE                                                            DISPLAY
```

Field Descriptions

The format of DREPORTs 008 and 078 depends on the order in which information was defined to the dictionary. A description of the fields in the sample report follows:

RECORD NAME

Identifies the name and version number of the record occurrence.

RECORD LENGTH

Identifies the record length in bytes.

BUILDER

Identifies the compiler last used to add or update the record occurrence. Possible values are D (DDDL compiler), S (schema compiler), C (mapping compiler), and X (IDMSDIRL).

RECORD TYPE

Identifies the record storage mode, if defined.

OCCURRENCES

Identifies the actual or estimated number of times the record occurs in files or databases.

DATE UPDATED/CREATED

Identifies the date the record occurrence was last updated and the date the record occurrence was added to the dictionary.

PREPARED/REVISED BY

Identifies the name of the user who defined the record occurrence and the name of the user who last updated it.

DESCRIPTION

Identifies text associated with the record occurrence.

PUBLIC ACCESS

Identifies the level of access allowed for unregistered users.

USER

Identifies a user who is registered to access the record occurrence and identifies the responsibility code and any associated text defined for the user. If no users are registered, the USER literal does not appear; if no responsibility codes have been defined for the user, the RESPONSIBLE FOR literal does not appear.

Class/attribute associations

Identifies class/attribute associations that have been defined for the record occurrence are listed in this field. In this sample report, the attribute DOCUMENT within class DIVISION is associated with LHNREC.

SAME AS

Identifies the record occurrence from which this record occurrence was copied (if copied).

MODE

Identifies the operating mode for the program in which the record is used.

LANGUAGE

Identifies the language associated with the record occurrence.

User-defined nests

Identify user-defined nests that relate the record occurrence to another record occurrence. In this sample report, the relational key ASSOCIATED RECORD relates record LHNREC to record TEST-REC.

PRIMARY FILE

Identifies the file associated with the record.

COMMENT

Identifies commentary text supplied for the record occurrence through the COMMENTS clause of the DDDL RECORD statement.

User-defined comments

Identify user-defined comments that were defined through the DEFINITION/OLQ HEADER/CULPRIT HEADER/*comment-key* clause of the DDDL RECORD statement are listed in this field. In this sample report, DELETION DATE is a comment key.

RECORD

Identifies a primary record and provides a description of the elements associated with the record. If defined, the language associated with the record and the programs, files, and subschemas associated with the record are displayed.

IN SCHEMA/AREA

Identifies the name and version number of the schema and the area in which the record occurs.

RECORD SYNONYM

Identifies a record synonym and provides a description of the elements associated with the record synonym. The associated language is also displayed, if defined.

SUBSCHEMA

Identifies the subschema in which this record is used and provides a description of the elements associated with the subschema.

SUBSCHEMA VIEW

Indicates that the record is used in a view and provides a description of the elements (fields) used in the view.

Record/Attribute Key Report (DREPORT 038)

Contents

The record/attribute key report provides information about all records associated with a specified attribute. The entries that can appear on this report are identical to those described for the record key report (DREPORT 078) above.

The following report shows sample output for DREPORT 038. The DREPORT and KEY parameters used to create this sample report are:

```
DREPORT=038
 KEY ATTR-NAME-093 'COBOL'
```

Note that the KEY parameter specifies an *attribute* name rather than a *record* name.

Sample DREPORT 038:

```
REPORT NO. 38                             DATA DICTIONARY REPORTED  REL nn.n                   mm/dd/yy       PAGE   1
DREPORT 038                                         RECORD REPORT


*************************************************************************************************************************************
                                           RECORD                RECORD                     ---- D A T E ----
RECORD NAME                               LENGTH  BUILDER         TYPE      OCCURRENCES   UPDATED   CREATED
*************************************************************************************************************************************
KEY ATTRIBUTE: COBOL


DB-STATISTICS                   VER    1    100      C                                    mm/dd/yy mm/dd/yy
    PREPARED BY          PUBLIC
    REVISED BY           MJH
    LANGUAGE             COBOL
    RECORD               DB-STATISTICS                        VER    1  D
        LANGUAGE             COBOL
        COPIED IN PROGRAM    LNTN01D                          VER    1
           100    03 DATE-TODAY                          X(8)                            DISPLAY
           200    03 TIME-TODAY                          X(8)                            DISPLAY
           300    03 PAGES-READ                          S9(8)                           COMP
           400    03 PAGES-WRITTEN                       S9(8)                           COMP
           500    03 PAGES-REQUESTED                     S9(8)                           COMP
           600    03 CALC-TARGET                         S9(8)                           COMP
           700    03 CALC-OVERFLOW                       S9(8)                           COMP
           800    03 VIA-TARGET                          S9(8)                           COMP
           900    03 VIA-OVERFLOW                        S9(8)                           COMP
          1000    03 LINES-REQUESTED                     S9(8)                           COMP
          1100    03 RECS-CURRENT                        S9(8)                           COMP
          1200    03 CALLS-TO-IDMS                       S9(8)                           COMP
          1300    03 FRAGMENTS-STORED                    S9(8)                           COMP
          1400    03 RECS-RELOCATED                      S9(8)                           COMP
          1500    03 LOCKS-REQUESTED                     S9(8)                           COMP
          1600    03 SEL-LOCKS-HELD                      S9(8)                           COMP
          1700    03 UPD-LOCKS-HELD                      S9(8)                           COMP
          1800    03 RUN-UNIT-ID                         S9(8)                           COMP
          1900    03 TASK-ID                             S9(8)                           COMP
          2000    03 LOCAL-ID                            X(8)                            DISPLAY
          2100    03 FILLER                              X(8)                            DISPLAY


EMPOSITION                      VER    1     28      S                                    mm/dd/yy mm/dd/yy
    PREPARED BY          DPD
    REVISED BY           LHN
    USER LHN                                RESPONSIBLE FOR CREATION AND UPDATE AND DELETION
    LANGUAGE             COBOL
    ASSOCIATED RECORD
         TEST-REC                                             VER    1
    IN SCHEMA            EMPSCHM                              VER    1     AREA    EMP-DEMO-REGION
    IN SCHEMA            TEST                                 VER    1     AREA    EMP-DEMO-REGION
    DEFINITION
             100 DELETION DATE
    RECORD               EMPOSITION                           VER    1  S  SUFFIX  -0420
        LANGUAGE             COBOL
        SUBSCHEMA            EMPSS01   OF SCHEMA EMPSCHM      VER    1
        SUBSCHEMA            EMPLR01   OF SCHEMA EMPSCHM      VER    1
        SUBSCHEMA            A202SS01  OF SCHEMA EMPSCHM      VER    1
        SUBSCHEMA            AD210SS2  OF SCHEMA EMPSCHM      VER    1
        SUBSCHEMA            AD210SS3  OF SCHEMA EMPSCHM      VER    1 se:/pg=end.record/attribute
```

Element Reports (DREPORTs 009, 010, 039, 059, 079)

Element reports (DREPORTs 009, 010, 039, 059, and 079) provide information about element occurrences that have been defined to the dictionary. Elements are represented in the dictionary as occurrences of the INQ-058 record. One summary report, two detail reports, and two key reports are provided for the ELEMENT entity type.

Element Summary Report (DREPORT 059)

Contents

The element summary report provides the following information about element occurrences:

- Element name and version number
- The builder code for the element
- Element length
- Element picture
- Element usage mode
- Whether the JUSTIFY option is on
- Whether the BLANK ON ZERO option is in effect
- Whether the SYNC option in on
- The date defined and date updated (if updated)

Sample DREPORT 059:

```
REPORT NO. 59                              DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy       PAGE  16
DREPORT 059                                     ELEMENT REPORT - SUMMARY


*************************************************************************************************************************
                                                                                                        ---- D A T E ----
ELEMENT NAME                    VERSION  BLDR  LGTH  PICTURE                 USAGE      JUST  BONZ  SIGN  UPDATED   CREATED
*************************************************************************************************************************

EMP-ZIP-FIRST-FIVE              VER  100    D      5  X(5)                   DISPLAY                     mm/dd/yy mm/dd/yy
EMP-ZIP-LAST-FOUR               VER    1    D      4  X(4)                   DISPLAY                              mm/dd/yy
EMP-ZIP-LAST-FOUR               VER  100    D      4  X(4)                   DISPLAY                     mm/dd/yy mm/dd/yy
ENTER-HIT                       VER    1    D                                COND                                 mm/dd/yy
ERAREA                          VER    1    D      8                        COMP-2                               mm/dd/yy
ERAREA                          VER    2    D     16  X(16)                  DISPLAY                              mm/dd/yy
EREC                            VER    1    D     16  X(16)                  DISPLAY                              mm/dd/yy
ERRAREA                         VER    1    D     16  X(16)                  DISPLAY                              mm/dd/yy
ERREC                           VER    1    D      8                        COMP-2                               mm/dd/yy
ERREC                           VER    2    D     16  X(16)                  DISPLAY                              mm/dd/yy
ERROR-AREA                      VER    1    D     16  X(16)                  DISPLAY                              mm/dd/yy
```

Element Detail and Key Reports (DREPORTs 009 and 079)

Contents

The element detail report provides detailed information about all element occurrences; the element key report provides similar information about selected element occurrences. The fields and format of these two reports are the same.

The report below shows sample output for DREPORT 079. The DREPORT and KEY parameters used to create this sample report are:

```
DREPORT=079
 KEY INQ-NAM-058 'DEPT-NAME'
```

Sample DREPORT 079:

```
REPORT NO. 79                              DATA DICTIONARY REPORTER  REL nn.n                      mm/dd/yy       PAGE    1
DREPORT 079                                          ELEMENT REPORT


*******************************************************************************************************************************
                                                                                                         BUILD ---- D A T E ----
ELEMENT NAME                                                                                             CODE  UPDATED   CREATED
*******************************************************************************************************************************


DEPT-NAME                        VER     1                                                                D    mm/dd/yy mm/dd/yy
    PREPARED BY                 DPD
    REVISED BY                  LHN
    PUBLIC ACCESS ALLOWED FOR ALL AUTHORITY
    DIVISION                  DOCUMENT
    USER LHN                               RESPONSIBLE FOR CREATION AND UPDATE AND DELETION
    DEFINITION
              100  DELETION DATE
    COMMENT
              100  THIS ELEMENT IS THE DEPARTMENT HEAD IN THE DEPARTMENT RECORD
    ASSOCIATED ELEMENT                      DEPT-NAME                      VER   100
    PICTURE              X(45)                          DISPLAY         LEN=   45
    ELEMENT SYNONYM      DEPT-NAME-0410
        RECORD NAME      DEPARTMENT                     VER     1 IDD BUILT
        RECORD NAME      DEPARTMENT                     VER     1 IN SCHEMA EMPSCHM  VER     1
        RECORD NAME      DEPARTMENT                     VER     1 IN SCHEMA TEST     VER     1
    ELEMENT SYNONYM      DEPTNAME
        RECORD SYNONYM   DEPARTMT                       VER     1
    ELEMENT SYNONYM      DPNAME
        RECORD SYNONYM   DEPT                           VER     1


DEPT-NAME                        VER   100                                                                D    mm/dd/yy mm/dd/yy
    PREPARED BY                 DPD
    REVISED BY                  DPD
```

Field Descriptions

The format of the DREPORTs 009 and 079 depends on the order in which information was defined to the dictionary. A description of the fields in the sample report follows:

ELEMENT NAME

Identifies the name and version of the element occurrence being described.

BUILD CODE

Identifies the compiler that last updated the element occurrence. Possible values are D (DDDL compiler) and S (schema compiler).

DATE UPDATED/CREATED

Identifies the date the element occurrence was last updated and the date the element occurrence was added to the dictionary.

PREPARED BY/REVISED BY

Identifies the user who defined the element occurrence to the dictionary and the user who last updated it.

DESCRIPTION

Identifies text associated with the element occurrence.

PUBLIC ACCESS

Identifies the level of access allowed for unregistered users.

Class/attribute associations

Identifies class/attribute associations that have been defined for the element occurrence. In this sample report, the attribute DOCUMENT within class DIVISION is associated with DEPT-NAME.

USER

Identifies a user who is registered to access the element occurrence and any responsibility codes and text associated with the user. If no users are registered, the USER literal does not appear; if no responsibility codes are assigned to a user, the RESPONSIBLE FOR literal does not appear.

SAME AS

Identifies the element occurrence from which this element occurrence was copied (if copied).

User-defined nests

Identifies user-defined nests that relate the element occurrence to another element occurrence. In this sample report, the relational key ASSOCIATED ELEMENT relates DEPT-NAME to version 100 of DEPT-NAME.

COMMENT

Identifies commentary text associated with the element occurrence through the COMMENTS clause of the DDDL ELEMENT statement.

User-defined comments

Identifies user-defined comments that were defined through the DEFINITION/*comment-key* clause of the DDDL ELEMENT statement are listed in this field. In this sample report, DELETION DATE is a comment key.

SUBORDINATE ELEMENT

Identifies a subordinate element of a group element.

PRIMARY GROUP

Identifies the element as a primary group element and identifies the element usage and length.

ELEMENT/RECORD NAME

Identify the element and the record that contains the element or element synonym.

WITHIN GROUP

Identifies the group element that includes this subordinate element.

PICTURE/RANGE/VALUE

Identify the characteristics of the element.

Inactive Element Detail Report (DREPORT 010)

Contents

The inactive element detail report lists all element occurrences that are not associated with a record occurrence. The entries that can appear on this report are identical to those described for the active element key report (DREPORT 079) above, with the exception of the fields that describe the element/record associations.

Sample DREPORT 010:

```
REPORT NO. 10                              DATA DICTIONARY REPORTER  REL nn.n                mm/dd/yy       PAGE   1
DREPORT 010                                         ELEMENT REPORT


*****************************************************************************************************************
                                                                                                BUILD ---- D A T E ----
ELEMENT NAME                                                                                    CODE  UPDATED   CREATED
*****************************************************************************************************************


ADXXTBIF-MESSAGE                VER     1                                                        D              mm/dd/yy
    PREPARED BY                RSB
    PUBLIC ACCESS ALLOWED FOR ALL AUTHORITY
    PICTURE             X(64)                        DISPLAY        LEN=   64


DATE-ELEM                       VER     1                                                        D              mm/dd/yy
    PREPARED BY                GCH
    PUBLIC ACCESS ALLOWED FOR ALL AUTHORITY
    PICTURE             9(8)                         DISPLAY        LEN=    8


DC-ATTN-INT                     VER     1                                                        D              mm/dd/yy
    PREPARED BY                PUBLIC
    PUBLIC ACCESS ALLOWED FOR ALL AUTHORITY
    VALUE   '4525'
    VALUE   '4625'
    WITHIN GROUP        ERROR-STATUS                 VER     1                    PRIMARY GROUP
    PRIMARY GROUP                                    COND


ERROR-STATUS                    VER     1                                                        D              mm/dd/yy
    PREPARED BY                PUBLIC
    PUBLIC ACCESS ALLOWED FOR ALL AUTHORITY
    VALUE   '1400'
    SUBORDINATE ELEMENT  DB-STATUS-OK                VER     1                    PRIMARY GROUP
```

Attribute/Element Key Report (DREPORT 039)

Contents

The attribute/element key report provides information about all elements that are associated with a specified attribute, regardless of the class association. The entries that can appear on this report are identical to those described for the element key report (DREPORT 079) above.

The report below shows sample output for DREPORT 039. The DREPORT and KEY parameters used to create this sample report are:

```
DREPORT=039
 KEY ATTR-NAME-093 'DOCUMENT'
```

Note that these KEY parameters specify *attribute* names rather than *element* names.

Sample DREPORT 039:

```
REPORT NO. 39                                DATA DICTIONARY REPORTER  REL nn.n                     mm/dd/yy       PAGE   1
DREPORT 039                                            ELEMENT REPORT


******************************************************************************************************************************
                                                                                                          BUILD ---- D A T E ----
ELEMENT NAME                                                                                              CODE  UPDATED   CREATED
******************************************************************************************************************************
KEY ATTRIBUTE: DOCUMENT


DEPT-NAME                        VER    1                                                                  D    mm/dd/yy mm/dd/yy
    PREPARED BY          DPD
    REVISED BY           LHN
    DIVISION             DOCUMENT
    USER LHN                              RESPONSIBLE FOR CREATION AND UPDATE AND DELETION
    DEFINITION
              100  DELETION DATE
    COMMENT
              100  THIS ELEMENT IS THE DEPARTMENT HEAD IN THE DEPARTMENT RECORD
    ASSOCIATED ELEMENT                      DEPT-NAME                      VER  100
    PICTURE              X(45)                        DISPLAY    LEN=   45
    ELEMENT SYNONYM      DEPT-NAME-0410
        RECORD NAME      DEPARTMENT                   VER    1  IDD BUILT
        RECORD NAME      DEPARTMENT                   VER    1  IN SCHEMA EMPSCHM  VER    1
        RECORD NAME      DEPARTMENT                   VER    1  IN SCHEMA TEST     VER    1
    ELEMENT SYNONYM      DEPTNAME
        RECORD SYNONYM   DEPARTMT                     VER    1
    ELEMENT SYNONYM      DPNAME
        RECORD SYNONYM   DEPT                         VER    1
```

Site-Specific Entity Reports

The site-specific entity reports provide information about three entity types: class, attribute, and user-defined entities. These entities are typically used to classify entities and to establish relationships between entities beyond the standard relationships provided through IDD.

Classes Supplied at Installation

Two classes, LANGUAGE and MODE, are supplied at installation. Other classes can be defined to further describe your particular environment.

Note: For more information about classes, attributes, and user-defined entities, see the *CA IDMS IDD DDDL Reference Guide*.

Site-Specific Reports

The following Site-Specific Entity Reports table lists the site-specific reports in order of presentation in this section.

DREPORT Module	DREPORT Name
001	Class Report—Detail
071	Class Report—Key(1)
002	Attribute Report—Detail
072	Attribute Report—Key(1)
019	User-Defined Entity Report—Detail
089	User-Defined Entity Report—Key(1)

Note: Key reports cannot be run with summary or detail reports.

Class Reports (DREPORTs 001 and 071)

Contents

Class reports provide information about class occurrences and their associated attributes. Classes are represented in the dictionary as occurrences of the CLASS-092 record; attributes are represented as occurrences of the ATTRIBUTE-093 record. There is no summary report for the class entity type; the detail report is concise and can be used in its place.

The class detail report provides information for all class occurrences defined to the dictionary; the class key report provides similar information for selected class occurrences. The fields and format of these two reports are the same.

Sample DREPORT 001:

```
REPORT NO. 01                                   DATA DICTIONARY REPORTER  REL nn.n                     mm/dd/yy       PAGE   2
DREPORT 001                                                 CLASS REPORT


*****************************************************************************************************************************
                                        ---- D A T E ----  ATTRI DELETION  CLASS
CLASS/ATTRIBUTE                         UPDATED   CREATED          LOCK    TYPE
*****************************************************************************************************************************


DIVISION                                mm/dd/yy  mm/dd/yy         OFF
      PREPARED BY         LHN
      REVISED BY          LHN
      COMMENT
       00000100 THIS IS A TEST CLASS.
      DEFINITION
       00000100 DELETION DATE
      DEVELOPMENT
      DOCUMENT


ELEMENT DESIGNATOR                      mm/dd/yy  mm/dd/yy  A      OFF
      PREPARED BY         PUBLIC
      REVISED BY          MJH


ENTITY                                  mm/dd/yy  mm/dd/yy         ON
      PREPARED BY         PUBLIC
      REVISED BY          MJH
      ATTRIBUTE
      CLASS
      DESTINATION
      ELEMENT
      FILE
      LINE
      LOGICAL-TERMINAL
      MAP
      MESSAGE
      MODULE
      PANEL
      PHYSICAL-TERMINAL
      PROGRAM
      QUEUE
      RECORD
      SYSTEM
      TASK
      USER


FILE-TYPE                               mm/dd/yy  mm/dd/yy    S    ON
      PREPARED BY         PUBLIC
```

Field Descriptions

The format of DREPORTs 001 and 071 depends on the order in which information was defined to the dictionary. A description of the fields in the sample report follows:

CLASS/ATTRIBUTE

Identifies the class and/or attribute being described.

DATE UPDATED/CREATED

Identifies the date the class occurrence was last updated and the date the class occurrence was defined to the dictionary.

ATTRI

Indicates whether attributes are defined automatically (A) or manually (blank) and whether attributes are singular (S) or plural (blank).

DELETION LOCK

Indicates whether the deletion lock for this class occurrence is ON or OFF.

CLASS TYPE

Indicates whether this class is a CLASS (default) or a user-defined ENTITY.

PREPARED BY/REVISED BY

Identifies the user who defined the class occurrence to the dictionary and the user who last updated it.

COMMENT

Identifies commentary text associated with the class occurrence through the COMMENTS clause of the DDDL CLASS statement.

User-defined comments

Identifies user-defined comments that were defined through the DEFINITION/*comment-key* clause of the DDDL CLASS statement. In this sample report, DELETION DATE is a comment key.

Attributes

Identifies attributes associated with the class occurrence.

Attribute Reports (DREPORTs 002 and 072)

Contents

Attribute reports provide information about attributes defined to the dictionary. Attributes are represented in the dictionary as occurrences of the ATTRIBUTE-093 record. There is no summary report for the attribute entity type; the class detail report may be used in its place.

The attribute detail report provides detailed information about all attribute occurrences; the attribute key report provides similar information about selected attribute occurrences. The fields and format of these two reports are the same.

The following report shows sample output for DREPORT 072. The DREPORT and KEY parameters used to create this report are:

```
DREPORT=072
 KEY ATTR-NAME-093 'DIVISION'
```

Sample DREPORT 072:

```
REPORT NO. 72                                  DATA DICTIONARY REPORTER  REL nn.n                     mm/dd/yy        PAGE    1
DREPORT 072                                              ATTRIBUTE REPORT


*****************************************************************************************************************************
                                             ---- D A T E ----    ATTRI DELETION
CLASS/ATTRIBUTE                              UPDATED   CREATED     A S    LOCK
*****************************************************************************************************************************


DIVISION

    DOCUMENT                                          mm/dd/yy            OFF
    PUBLIC ACCESS ALLOWED FOR ALL AUTHORITY
        USER                 LHN
        SYSTEM               LHNSYSTEM                         VER     1
        PROGRAM              EMPSS01                           VER     1
        ELEMENT              LHN-ELEM                          VER     1
        ELEMENT              DEPT-NAME                         VER     1
        LINE                 VTAM234                           VER     1
        PHYSICAL TERMINAL    TESTERM                           VER     1
        LOGICAL TERMINAL     JESRDR                            VER     1
        DESTINATION          TESTDEST                          VER     1
        QUEUE                TEST                              VER     1
        QUEUE                TESTQUEUE                         VER     1
        TASK                 TESTBYE                           VER     1
        PANEL                TEST-PANEL                        VER     1
        MAP                  TEST-MAP                          VER     1
```

Field Descriptions

The format of DREPORTs 002 and 072 depends on the order in which information was defined to the dictionary. A description of the fields in the sample report follows:

CLASS/ATTRIBUTE

Identifies the class and attribute being described.

DATE UPDATED/CREATED

Identifies the date this attribute occurrence was last updated and the date the attribute occurrence was defined to the dictionary.

ATTRI A/S

Indicates whether attributes in this class are defined automatically (A) or manually (blank) and whether attributes in this class are singular (S) or plural (blank).

DELETION LOCK

Indicates whether the deletion lock for the attribute is ON or OFF.

PREPARED/REVISED BY

Identifies the user who defined the attribute occurrence and the user who last updated it.

PUBLIC ACCESS

Identifies the level of access allowed for unregistered users.

Associated entity occurrences

Identifies associated entity occurrences that have been defined for the attribute occurrence.

COMMENT

Identifies commentary text associated with the attribute occurrence through the COMMENTS clause of the DDDL ATTRIBUTE statement.

User-defined comments

Identifies user-defined comments that were defined through the DEFINITION/*comment-key* clause of the DDDL ATTRIBUTE statement.

User-Defined Entity Reports (DREPORTs 019 and 089)

Contents

User-defined entity reports provide information about user-defined entity occurrences that have been defined to the dictionary. User-defined entities are represented in the dictionary as occurrences of the CLASS-092 record. The user-defined entity detail report provides detailed information about all user-defined entity occurrences; the user-defined entity key report provides similar information about selected user-defined entity occurrences. The fields and format of these two reports are the same.

The report below shows sample output for DREPORT 089. The DREPORT and KEY parameters used to create this sample report are:

```
DREPORT=089
 KEY CLASS-NAME-092 'DIVISION'
```

Sample DREPORT 089:

```
REPORT NO. 89                              DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy        PAGE   1
DREPORT 089                                    DIVISION            REPORT


*************************************************************************************************************************
                                        ---- D A T E ----         DELETION
DIVISION                                UPDATED   CREATED          LOCK
*************************************************************************************************************************


DEVELOPMENT                                        mm/dd/yy           OFF
        PREPARED BY          LHN

DOCUMENT                                mm/dd/yy mm/dd/yy           OFF
        REVISED BY           LHN
        USER                 LHN
        SYSTEM               LHNSYSTEM                     VER     1
        MODULE               EMPLOYEE                      VER     1
                                                  LANGUAGE     OLQ
        PROGRAM              EMPSS01                       VER     1
        PROGRAM              LHNSS01                       VER     1
        FILE                 TEST-FILE                     VER     1
        QUEUE                TESTQUEUE                     VER     1
        TASK                 TESTBYE                       VER     1
        PANEL                TEST-PANEL                    VER     1
        MAP                  TEST-MAP                      VER     1
        PRODUCT              ASF
        PRODUCT              OLQ
        ASSOCIATED ATTRIBUTE
            DOCTYPE              SYSDOC
        DEFINITION
         00000100 DELETION DATE
```

Field Descriptions

The format of DREPORTs 098 and 089 depends on the order in which information was defined to the dictionary. A description of the fields in the sample report follows:

Class name

Identifies the class name of the user-defined entity being described.

DATE UPDATED/CREATED

Identifies the date the user-defined entity occurrence was last updated and the date the user-defined entity occurrence was defined to the dictionary.

DELETION LOCK

Indicates whether the deletion lock is ON or OFF.

Attribute name

Identifies the attribute associated with this user-defined entity.

PREPARED BY/REVISED BY

Identifies the user who defined the user-defined entity occurrence to the dictionary and the user who last updated it.

Associated entities

Identifies associated entities for the user-defined entity.

Class/attribute associations

Identifies class/attribute associations that have been defined for the attribute occurrence. In this sample report, the attributes ASF and OLQ within class PRODUCT are associated with attribute DOCUMENT.

User-defined nests

Identifies user-defined nests that relate one user-defined entity occurrence to another. In this sample report, the relational key ASSOCIATED ATTRIBUTE relates attribute SYSDOC within class DOCTYPE to DOCUMENT.

COMMENT

Identifies commentary text associated with the user-defined entity occurrence through the COMMENTS clause of the DDDL user-defined entity statement.

User-defined comments

Identifies user-defined comments that were defined through the DEFINITION/*comment-key* clause of the DDDL user-defined entity statement. In this sample report, DELETION DATE is a comment key.

Teleprocessing Entity Reports

The teleprocessing entity reports provide information about the following entity types: task, queue, destination, logical terminal, physical terminal, line, panel, and map. These entity types correspond to the standard components for online systems.

Summary of Teleprocessing Entity Reports

The following table lists the teleprocessing entity reports in the order of presentation in this section.

DREPORT Module	DREPORT Name
011	Task Report -- Detail
061	Task Report -- Summary
081	Task Report -- Key(1)
012	Queue Report -- Detail
062	Queue Report -- Summary
082	Queue Report -- Key(1)

DREPORT Module	DREPORT Name
013	Destination Report -- Detail
063	Destination Report -- Summary
083	Destination Report -- Key(1)
014	Logical Terminal Report -- Detail
064	Logical Terminal Report -- Summary
084	Logical Terminal Report -- Key(1)
015	Physical Terminal Report -- Detail
065	Physical Terminal Report -- Summary
085	Physical Terminal Report -- Key(1)
016	Line Report -- Detail
066	Line Report -- Summary
086	Line Report -- Key(1)
017	Panel Report -- Detail
067	Panel Report -- Summary
087	Panel Report -- Key(1)
018	Map Report -- Detail
068	Map Report -- Summary
088	Map Report -- Key(1)

Note: Key reports cannot be run with summary or detail reports.

Task Reports (DREPORTs 011, 061, 081)

Task reports (DREPORTs 011, 061, and 081) provide information about the task occurrences defined to the dictionary. Tasks are represented in the dictionary as occurrences of the TASK-025 record.

Task Summary Report (DREPORT 061)

Contents

The task summary report provides the following information about task occurrences:

- Task name and version number
- Associated text
- Date defined and date updated (if updated)

Sample DREPORT 061:

```
REPORT NO. 61                              DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy        PAGE   1
DREPORT 061                                      TASK REPORT SUMMARY


*************************************************************************************************************************
                                                                                                      ---- D A T E ----
TASK                                                                                                  UPDATED   CREATED
*************************************************************************************************************************

BYE      VER     1                                                                                    mm/dd/yy   mm/dd/yy

CLIST    VER     1                                                                                    mm/dd/yy   mm/dd/yy

CLOD     VER     1                                                                                    mm/dd/yy   mm/dd/yy

COBINPUT VER     1                                                                                               mm/dd/yy

COBTEST  VER     1                                                                                               mm/dd/yy

DCMT     VER     1                                                                                    mm/dd/yy   mm/dd/yy
```

Task Detail and Key Reports (DREPORTs 011 and 081)

Contents

The task detail report provides detailed information about all task occurrences; the task key report provides similar information about selected task occurrences. The fields and format of these two reports are the same.

The report below shows sample output for DREPORT 081. The DREPORT and KEY parameters used to create this sample report are:

```
DREPORT=081
 KEY TASK-NAME-025 'TESTBYE'
```

Sample DREPORT 081:

```
REPORT NO. 81                                    DATA DICTIONARY REPORTER  REL nn.n                     mm/dd/yy        PAGE    1
DREPORT 081                                                 TASK REPORT


*****************************************************************************************************************************
                                                                                                                ---- D A T E ----
TASK                                                                                                            UPDATED   CREATED
*****************************************************************************************************************************


TESTBYE  VER     1                                                                                              mm/dd/yy   mm/dd/yy
    PREPARED BY LHN
    REVISED BY  LHN
    DESCRIPTION TEST TASK
    PUBLIC ACCESS ALLOWED FOR ALL AUTHORITY
  USER LHN                              RESPONSIBLE FOR CREATION AND UPDATE AND DELETION
    WITHIN SYSTEM LHNSYSTEM                        VER     1
        INVOKES PROGRAM RHDCBYE  VER     1
    DIVISION             DOCUMENT
                    COMMENT
                     00000100  THIS IS A TEST TASK OCCURRENCE
```

Field Descriptions

The format of DREPORTs 011 and 081 depends on the order in which information was defined to the dictionary. A description of the fields on the sample report follows:

TASK

Identifies the name and version number of the task occurrence being described.

DATE UPDATED/CREATED

Identifies the date the task occurrence was last updated (if updated) and the date the task occurrence was defined to the dictionary. Task occurrences that are defined through the DC/UCF system generation compiler do not have these dates associated with them.

PREPARED BY/REVISED BY

Identifies the user who defined the task occurrence to the dictionary and the user who last updated it.

DESCRIPTION

Identifies text associated with the task occurrence.

PUBLIC ACCESS

Identifies the level of access allowed for unregistered users.

USER

Identifies a user who is registered to access the task occurrence and identifies any responsibility codes and associated text defined for the user. If no users are registered for the task, the USER literal does not appear; if no responsibility codes are associated with a user, the RESPONSIBLE FOR literal does not appear.

WITHIN SYSTEM...INVOKES PROGRAM

Identifies a system associated with the task occurrence and the initial program invoked by the task.

Class/attribute associations

Identifies class/attribute associations that have been defined for the task. In this sample report, the attribute DOCUMENT within class DIVISION is associated with TESTBYE.

COMMENT

Identifies commentary text associated with the task through the COMMENTS clause of the DDDL TASK statement.

User-defined comments

Identifies user-defined comments that were defined through the DEFINITION/*comment-key* clause of the DDDL TASK statement.

Queue Reports (DREPORTs 012, 062, 082)

Queue reports (DREPORTs 012, 062, and 082) provide information about queue occurrences that have been defined to the dictionary. Queues are represented in the dictionary as occurrences of the QUEUE-030 record.

Queue Summary Report (DREPORT 062)

Contents

The queue summary report provides the following information about queue occurrences:

- Queue name and version number
- Associated description
- Date defined and date updated (if updated)

Sample DREPORT 062:

```
REPORT NO. 62                              DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy       PAGE   1
DREPORT 062                                     QUEUE REPORT SUMMARY


*************************************************************************************************************************
                                                                                                    ---- D A T E ----
QUEUE                                                                                              UPDATED   CREATED
*************************************************************************************************************************


TEST            VER    1   TEST QUEUE FOR DOCUMENTATION                                                        mm/dd/yy
TESTQUEUE       VER    1   TEST QUEUE FOR DOCUMENTATION                                                        mm/dd/yy
```

Queue Detail and Key Reports (DREPORTs 012 and 082)

Contents

The queue detail report provides detailed information about all queue occurrences; the queue key report provides similar information about selected queue occurrences. The fields and format of these two reports are the same.

The report below shows sample output for DREPORT 082. The DREPORT and KEY parameters used to create this sample report are:

```
DREPORT=82
 KEY QUEUE-NAME-030 'TESTQUEUE'
```

Sample DREPORT 082:

```
REPORT NO. 82                                DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy        PAGE    1


DREPORT 082                                             QUEUE REPORT
*****************************************************************************************************************************
                                                                                                           ---- D A T E ----
QUEUE                                                                                                      UPDATED   CREATED
*****************************************************************************************************************************


TESTQUEUE       VER     1                                                                                          mm/dd/yy
    PREPARED BY LHN
    DESCRIPTION             TEST QUEUE FOR DOCUMENTATION
    PUBLIC ACCESS ALLOWED FOR ALL AUTHORITY
  USER LHN                              RESPONSIBLE FOR CREATION AND UPDATE AND DELETION
  USER JFD
    WITHIN SYSTEM LHNSYSTEM                        VER     1
    DIVISION             DOCUMENT
                    COMMENT
                     00000100  THIS IS A TEST QUEUE FOR DOCUMENTATION
                    DEFINITION
                     00000100  DELETION DATE
```

Field Descriptions

The format of DREPORTs 012 and 082 depends on the order in which information was defined to the dictionary. A description of the fields in the sample report follows:

QUEUE

Identifies the name and version number of the queue occurrence being described.

DATE UPDATED/CREATED

Identifies the date on which the queue occurrence was last updated and the date the queue occurrence was defined to the dictionary. Queue occurrences that were defined through the DC/UCF system generation compiler do not have these dates associated with them.

PREPARED BY/REVISED BY

Identifies the user who defined the queue occurrence and the user who last updated it.

DESCRIPTION

Identifies text associated with the queue occurrence.

PUBLIC ACCESS

Identifies the level of access allowed for unregistered users.

USER

Identifies a user who is registered to access the queue occurrence and any responsibility code and associated text defined for the user. If no users are registered, the USER literal does not appear; if no responsibility codes have been defined for a user, the RESPONSIBLE FOR literal does not appear.

WITHIN SYSTEM

Identifies a system that is associated with the queue occurrence.

Class/attribute associations

Identifies class/attribute associations that have been defined for the queue occurrence. In this sample report, the attribute DOCUMENT within class DIVISION is associated with TESTQUEUE.

COMMENT

Identifies commentary text associated with the queue occurrence through the COMMENTS clause of the DDDL QUEUE statement.

User-defined comments

Identifies user-defined comments that were defined though the DEFINITION/*comment-key* clause of the DDDL QUEUE statement. In this sample report, DELETION DATE is a comment key.

Destination Reports (DREPORTs 013, 063, 083)

Destination reports (DREPORTs 013, 063, and 083) provide information about destination occurrences that have been defined to the dictionary. Destinations are represented in the dictionary as occurrences of the DEST-028 record.

Destination Summary Report (DREPORT 063)

Contents

The destination summary report provides the following information about destination occurrences:

- Destination name and version number
- Associated description
- Date defined and date updated (if updated)

Sample DREPORT 063:

```
REPORT NO. 63                              DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy        PAGE    1
DREPORT 063                                    DESTINATION REPORT SUMMARY


*************************************************************************************************************************
                                                                                                    ---- D A T E ----
DESTINATION                                                                                        UPDATED   CREATED
*************************************************************************************************************************


TESTDEST VER    1   TEST DESTINATION                                                               mm/dd/yy   mm/dd/yy
```

Destination Detail and Key Reports (DREPORTs 013 and 083)

Contents

The destination detail report provides detailed information about all destination occurrences; the destination key report provides similar information about selected destination occurrences. The fields and format of these two reports are the same.

The report below shows sample output for DREPORT 083. The DREPORT and KEY parameters used to create this sample report are:

```
DREPORT=083
 KEY DEST-NAME-028 'TESTDEST'
```

Sample DREPORT 083:

```
REPORT NO. 83                                    DATA DICTIONARY REPORTER  REL nn.n                   mm/dd/yy       PAGE    1
DREPORT 083                                                 DESTINATION REPORT


******************************************************************************************************************************
                                                                                                              ---- D A T E ----
DESTINATION                                                                                                   UPDATED   CREATED
******************************************************************************************************************************


TESTDEST VER     1                                                                                            mm/dd/yy   mm/dd/yy
    PREPARED BY LHN
    REVISED BY  LHN
    DESCRIPTION TEST DESTINATION
    PUBLIC ACCESS ALLOWED FOR UPDATE
  USER LHN                              RESPONSIBLE FOR CREATION AND UPDATE AND DELETION
    WITHIN SYSTEM LHNSYSTEM                       VER     1
    DIVISION             DOCUMENT
                    COMMENT
                     00000100  THIS IS A TEST DESTINATION
```

Field Descriptions

The format of DREPORTs 013 and 083 depends on the order in which information was defined to the dictionary. A description of the fields in the sample report follows:

DESTINATION

Identifies the name and version number of the destination being described.

DATE UPDATED/CREATED

Identifies the date the destination occurrence was last updated and the date the destination occurrence was defined to the dictionary.

PREPARED BY/REVISED BY

Identifies the user who defined the destination occurrence to the dictionary and the user who last updated it.

DESCRIPTION

Identifies text associated with this destination occurrence.

PUBLIC ACCESS

Identifies the level of access allowed to unregistered users.

USER

Identifies a user who is registered to access this destination occurrence and any responsibility code and associated text defined for the user. If no users are registered, the USER literal does not appear; if no responsibility codes are assigned to a user, the RESPONSIBLE FOR literal does not appear.

WITHIN SYSTEM

Identifies a system associated with this destination occurrence.

Class/attribute associations

Identifies class/attribute associations that have been defined for this destination occurrence. In this sample report, the attribute DOCUMENT within class DIVISION is associated with TESTDEST.

COMMENT

Identifies commentary text associated with this destination through the COMMENTS clause of the DDDL DESTINATION statement.

User-defined comments

Identifies user-defined comments that were defined through the DEFINITION/*comment-key* clause of the DDDL DESTINATION statement.

Logical Terminal Reports (DREPORTs 014, 064, 084)

Logical terminal reports (DREPORTs 014, 064, and 084) provide information about logical terminal occurrences that have been defined to the dictionary. Logical terminals are represented in the dictionary as occurrences of the LTRM-106 record.

Logical Terminal Summary Report (DREPORT 064)

Contents

The logical terminal summary report provides the following information about logical terminal occurrences:

- Logical terminal name and version number
- Associated description
- Date defined and date updated (if updated)

Sample DREPORT 064:

```
REPORT NO. 64                              DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy        PAGE    1
DREPORT 064                                 LOGICAL TERMINAL REPORT SUMMARY


*************************************************************************************************************************
                                                                                                    ---- D A T E ----
LOGICAL TERMINAL                                                                                   UPDATED   CREATED
*************************************************************************************************************************

CONSOLE  VER    1                                                                                  mm/dd/yy   mm/dd/yy

JESRDR   VER    1   TEST LTERM FOR DOCUMENTATION                                                                mm/dd/yy

UCFLTB1  VER    1                                                                                               mm/dd/yy

UCFLTB2  VER    1                                                                                               mm/dd/yy
```

Logical Terminal Detail and Key Reports (DREPORTs 014 and 084)

Contents

The logical terminal detail report provides detailed information about logical terminal occurrences; the logical terminal key report provides similar information about selected logical terminal occurrences. The fields and format of these two reports are the same.

The report below shows sample output for DREPORT 084. The DREPORT and KEY parameter used to create this sample report are:

```
DREPORT=084
 KEY LTRM-NAME-106 'JESRDR'
```

Sample DREPORT 084:

```
REPORT NO. 84                              DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy        PAGE    1
DREPORT 084                                     LOGICAL TERMINAL REPORT


*************************************************************************************************************************
                                                                                                        ---- D A T E ----
LOGICAL TERMINAL                                                                                       UPDATED   CREATED
*************************************************************************************************************************


JESRDR   VER     1                                                                                                  mm/dd/yy
    PREPARED BY LHN
    DESCRIPTION TEST LTERM FOR DOCUMENTATION
    PUBLIC ACCESS ALLOWED FOR ALL AUTHORITY
    USER LHN                              RESPONSIBLE FOR CREATION AND UPDATE AND DELETION
    WITHIN SYSTEM        LHNSYSTEM                    VER     1
    DIVISION             DOCUMENT
    COMMENT
    00000100  THIS IS A TEST LOGICAL TERMINAL
    DEFINITION
    00000100  DELETION DATE
```

Field Descriptions

The format of DREPORTs 014 and 084 depends on the order in which information was defined to the dictionary. A description of the fields in the sample report follows:

LOGICAL TERMINAL

Identifies the name and version number of the logical terminal being described.

DATE UPDATED/CREATED

Identifies the date the logical terminal occurrence was last updated and the date the logical terminal occurrence was defined to the dictionary.

PREPARED BY/REVISED BY

Identifies the user who defined the logical terminal occurrence to the dictionary and the user who last updated it.

DESCRIPTION

Identifies text associated with the logical terminal occurrence.

PUBLIC ACCESS

Identifies the level of access allowed for unregistered users.

USER

Identifies a user who is registered for access to the logical terminal occurrence and any responsibility code and associated text defined for the user. If no users are registered for this occurrence, the USER literal does not appear; if no responsibility codes have been defined for the user, the RESPONSIBLE FOR literal does not appear.

WITHIN SYSTEM...PHYSICAL TERMINAL

Identifies a system and the physical terminals associated with the logical terminal occurrence.

Class/attribute associations

Identifies class/attribute associations that have been defined for the logical terminal occurrence. In this sample report, the attribute DOCUMENT within class DIVISION is associated with JESRDR.

COMMENT

Identifies commentary text associated with the logical terminal through the COMMENTS clause of the DDDL LOGICAL-TERMINAL statement.

User-defined comments

Identifies user-defined comments that were defined through the DEFINITION/*comment-key* clause of the DDDL LOGICAL-TERMINAL statement. In this sample report, DELETION DATE is a comment key.

Physical Terminal Reports (DREPORTs 015, 065, 085)

Physical terminal reports (DREPORTs 015, 065, and 085) provide information about physical terminal occurrences that have been defined to the dictionary. Physical terminals are represented in the dictionary as occurrences of the PTRM-074 record.

Physical Terminal Summary Report (DREPORT 065)

Contents

The physical terminal summary report provides the following information about physical terminal occurrences:

- Physical terminal name and version number
- Associated text
- Date defined and date updated (if updated)

Sample DREPORT 065:

```
REPORT NO. 65                              DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy        PAGE    1
DREPORT 065                                     PHYSICAL TERMINAL REPORT SUMMARY


*************************************************************************************************************************
                                                                                                    ---- D A T E ----
PHYSICAL TERMINAL                                                                                  UPDATED   CREATED
*************************************************************************************************************************


JESRDR             VER     1                                                                                    mm/dd/yy


OPERATOR           VER     1                                                                          mm/dd/yy  mm/dd/yy


UCFPTB1            VER     1                                                                                    mm/dd/yy


UCFPTB2            VER     1                                                                                    mm/dd/yy
```

Physical Terminal Detail and Key Reports (DREPORTs 015 and 085)

Contents

The physical terminal detail report provides detailed information about physical terminal occurrences; the physical terminal key report provides similar information about selected physical terminal occurrences. The fields and format of these two reports are the same.

The report below shows sample output for DREPORT 085. The DREPORT and KEY parameters used to create this sample report are shown below:

```
DREPORT=085
 KEY PTRM-NAME-074 'TESTTERM'
```

Sample DREPORT 085:

```
REPORT NO. 85                                   DATA DICTIONARY REPORTER  REL nn.n                     mm/dd/yy        PAGE    1
DREPORT 085                                          PHYSICAL TERMINAL REPORT


***********************************************************************************************************************************
                                                                                                                 ---- D A T E ----
PHYSICAL TERMINAL                                                                                                UPDATED    CREATED
***********************************************************************************************************************************


TESTERM  VER     1                                                                                               mm/dd/yy   mm/dd/yy
    PREPARED BY LHN
    REVISED BY  LHN
    DESCRIPTION TEST PHYSICAL TERMINAL FOR DOCUMENTATION
    PUBLIC ACCESS ALLOWED FOR ALL AUTHORITY
    USER LHN                              RESPONSIBLE FOR CREATION AND UPDATE AND DELETION
    WITHIN SYSTEM        LHNSYSTEM                        VER     1
    DIVISION             DOCUMENT
    COMMENT
    00000100  THIS IS A TEST PHYSICAL TERMINAL
    DEFINITION
    00000100  DELETION DATE
```

Field Descriptions

The format of DREPORTs 015 and 085 depends on the order in which the information was defined to the dictionary. A description of the fields in the sample report follows:

PHYSICAL TERMINAL

Identifies the name and version number of the physical terminal being described.

DATE UPDATED/CREATED

Identifies the date the physical terminal occurrence was last updated and the date the physical terminal occurrence was defined to the dictionary. Physical terminal occurrences that are defined through the DC/UCF system generation compiler do not have these dates associated with them.

PREPARED BY/REVISED BY

Identifies the user who defined the physical terminal occurrence to the dictionary and the user who last updated it.

DESCRIPTION

Identifies text associated with the physical terminal occurrence.

PUBLIC ACCESS

Identifies the level of access allowed for unregistered users.

USER

Identifies a user who is registered to access the physical terminal occurrence and any responsibility code and associated text defined for the user. If no users are registered, the USER literal does not appear; if no responsibility codes are assigned, the RESPONSIBLE FOR literal does not appear.

WITHIN SYSTEM ...LINE

Identifies a system associated with the physical terminal and any associated lines.

Class/attribute associations

Identifies class/attribute associations that have been defined for the physical terminal occurrence. In this sample report, the attribute DOCUMENT within class DIVISION is associated with TESTTERM.

COMMENT

Identifies commentary text associated with the physical terminal through the COMMENTS clause of the DDDL PHYSICAL-TERMINAL statement.

User-defined comments

Identifies user-defined comments that were defined through the DEFINITION/*comment-key* clause of the DDDL PHYSICAL-TERMINAL statement are listed in this field. In this sample report, DELETION DATE is a comment key.

Line Reports (DREPORTs 016, 066, 086)

Line reports (DREPORTs 016, 066, and 086) provide information about line occurrences that have been defined to the dictionary. Lines are represented in the dictionary as occurrences of the LINE-109 record.

Line Summary Report (DREPORT 066)

Contents

The line summary report provides the following information about line occurrences:

- Line name and version number
- Associated description
- Date defined and date updated (if updated)

Sample DREPORT 066:

```
REPORT NO. 66                                     DATA DICTIONARY REPORTER  REL nn.n                      mm/dd/yy        PAGE    1
DREPORT 066                                            LINE REPORT SUMMARY


*******************************************************************************************************************************
                                                                                                                ---- D A T E ----
LINE                                                                                                            UPDATED    CREATED
*******************************************************************************************************************************


CONSOLE              VER     1                                                                                  mm/dd/yy   mm/dd/yy


JESRDR               VER     1                                                                                             mm/dd/yy


UCFLINE              VER     1                                                                                  mm/dd/yy   mm/dd/yy


VTAMLIN              VER     1                                                                                  mm/dd/yy   mm/dd/yy
```

Line Detail and Key Reports (DREPORTs 016 and 086)

Contents

The line detail report provides detailed information about all line occurrences defined to the dictionary; the line key report provides similar information about selected line occurrences. The fields and format of these two reports are the same.

The report below shows sample output for DREPORT 086. The DREPORT and KEY parameters used to create this sample report are:

```
DREPORT=86
 KEY LINE-NAME-109 'VTAM234'
```

Sample DREPORT 086:

```
REPORT NO. 86                                  DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy       PAGE    1
DREPORT 086                                               LINE REPORT


*******************************************************************************************************************************
                                                                                                            ---- D A T E ----
LINE                                                                                                        UPDATED   CREATED
*******************************************************************************************************************************


VTAM234  VER     1                                                                                          mm/dd/yy   mm/dd/yy
    PREPARED BY LHN
    REVISED BY  LHN
    DESCRIPTION TEST LINE OCCURRENCE
    PUBLIC ACCESS ALLOWED FOR ALL AUTHORITY
  USER LHN                              RESPONSIBLE FOR CREATION AND UPDATE AND DELETION
    WITHIN SYSTEM LHNSYSTEM                        VER     1
    DIVISION             DOCUMENT
                    COMMENT
                     00000100  THIS IS A TEST LINE OCCURRENCE
```

Field Descriptions

The format of DREPORTs 016 and 086 depends on the order in which information was defined to the dictionary. A description of the fields in the sample report follows:

LINE

Identifies the name and version number of the line being described.

DATE UPDATED/CREATED

Identifies the date the line occurrence was last updated and the date the line occurrence was defined to the dictionary.

PREPARED BY/REVISED BY

Identifies the user who defined the line occurrence to the dictionary and the user who last updated it.

DESCRIPTION

Identifies text associated with the line occurrence.

PUBLIC ACCESS

Identifies the level of access allowed for unregistered users.

USER

Identifies a user who is registered to access the line occurrence and any responsibility code and associated text defined for the user. If no users are registered, the USER literal does not appear; if no responsibility codes are assigned for a user, the RESPONSIBLE FOR literal does not appear.

WITHIN SYSTEM

Identifies a system associated with the line occurrence.

Class/attribute associations

Identifies class/attribute associations that have been defined for the line occurrence. In this sample report, the attribute DOCUMENT within class DIVISION is associated with VTAM234.

COMMENT

Identifies commentary text associated with the line occurrence through the COMMENTS clause of the DDDL LINE statement.

User-defined comments

Identifies user-defined comments that were defined through the DEFINITION/*comment-key* clause of the DDDL LINE statement.

Panel Reports (DREPORTs 017, 067, 087)

Panel reports (DREPORTs 017, 067, and 087) provide information about panel occurrences that have been defined to the dictionary. Panels are represented in the dictionary as occurrences of the PANEL-118 record.

Panel Summary Report (DREPORT 067)

Contents

The panel summary report provides the following information about panel occurrences:

- Panel name and version number
- Associated description
- Date defined and date updated (if updated)

Sample DREPORT 067:

```
REPORT NO. 67                              DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy        PAGE   1
DREPORT 067                                      PANEL REPORT SUMMARY


*************************************************************************************************************************
                                                                                                      ---- D A T E ----
PANEL                                                                                                 UPDATED   CREATED
*************************************************************************************************************************


ABCD01M-OLMPANEL                VER     1                                                             mm/dd/yy   mm/dd/yy
ABIF01M-OLMPANEL                VER     1                                                             mm/dd/yy   mm/dd/yy
ADDS01M-OLMPANEL                VER     1                                                             mm/dd/yy   mm/dd/yy
ADMI01M-OLMPANEL                VER     1                                                             mm/dd/yy   mm/dd/yy
ADMS01M-OLMPANEL                VER     1                                                             mm/dd/yy   mm/dd/yy
ADOLQLNM-OLMPANEL               VER     1                                                             mm/dd/yy   mm/dd/yy
ADOL01M-OLMPANEL                VER     1                                                             mm/dd/yy   mm/dd/yy
```

Panel Detail and Key Reports (DREPORTs 017 and 087)

Contents

The panel detail report provides detailed information about all panel occurrences; the panel key report provides similar information about selected panel occurrences. The fields and format of these two reports are the same.

The report below shows sample output for DREPORT 087. The DREPORT and KEY parameters used to create this sample report are:

```
DREPORT=087
 KEY PANEL-NAME-118 'TEST-PANEL'
```

Sample DREPORT 087:

```
REPORT NO. 87                                   DATA DICTIONARY REPORTER  REL nn.n                      mm/dd/yy       PAGE    1
DREPORT 087                                                PANEL REPORT


*******************************************************************************************************************************
                                                                                                                ---- D A T E ----
PANEL                                                                                                           UPDATED   CREATED
*******************************************************************************************************************************


TEST-PANEL                        VER      1                                                                    mm/dd/yy   mm/dd/yy
    PREPARED BY          LHN
    REVISED BY           LHN
    DESCRIPTION          TEST PANEL FOR DOCUMENTATION
    PUBLIC ACCESS ALLOWED FOR ALL AUTHORITY
    USER LHN                               RESPONSIBLE FOR CREATION AND UPDATE AND DELETION
    MAP                  TEST-MAP                         VER      1
      WITHIN SYSTEM      LHNSYSTEM                        VER      1
    DIVISION             DOCUMENT
    COMMENT
    00000100  THIS IS A TEST PANEL
    DEFINITION
    00000100  DELETION DATE
```

Field Descriptions

The format of DREPORTs 017 and 087 depends on the order in which information was defined to the dictionary. A description of the fields in the sample report follows:

PANEL

Identifies the name and version number of the panel being described. The -OLMPANEL suffix indicates that the panel occurrence was defined to the dictionary by the OLM compiler. The suffix -AUTOPANEL indicates that a panel was defined to the dictionary through the AUTOPANEL option of the DC/UCF mapping compiler.

DATE UPDATED/CREATED

Identifies the date the panel occurrence was last updated and the date the panel occurrence was defined to the dictionary. Panel occurrences that are defined through the DC/UCF system generation compiler do not have these dates associated with them.

PREPARED BY/REVISED BY

Identifies the user who defined the panel occurrence to the dictionary and the user who last updated it.

DESCRIPTION

Identifies text associated with the panel occurrence.

PUBLIC ACCESS

Identifies the level of access allowed for unregistered users.

USER

Identifies a user who is registered to access the panel occurrence and any responsibility codes and associated text defined for the user. If no users are registered, the USER literal does not appear; if no responsibility codes are assigned to the user, the RESPONSIBLE FOR literal does not appear.

MAP...WITHIN SYSTEM

Identifies a map associated with the panel occurrence and the system associated with the map.

Class/attribute associations

Identifies class/attribute associations that have been defined for the panel occurrence. In this sample report, the attribute DOCUMENT within class DIVISION is associated with TEST-PANEL.

COMMENT

Identifies commentary text associated with the panel occurrence through the COMMENTS clause of the DDDL PANEL statement.

User-defined comments

Identifies user-defined comments that were defined through the DEFINITION/*comment-key* clause of the DDDL PANEL statement. In this sample report, DELETION DATE is a comment key.

Map Reports (DREPORTs 018, 068, 088)

Map reports (DREPORTs 018, 068, and 088) provide information about map occurrences that have been defined to the dictionary. Maps are represented in the dictionary as occurrences of the MAP-098 record.

Map Summary Report (DREPORT 068)

Contents

The map summary report provides the following information about map occurrences:

- Map name and version number
- Associated description
- Date defined and date updated (if updated)

Sample DREPORT 068:

```
REPORT NO. 68                                DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy        PAGE   1
DREPORT 068                                         MAP REPORT SUMMARY


*************************************************************************************************************************
                                                                                                      ---- D A T E ----
MAP                                                                                                   UPDATED   CREATED
*************************************************************************************************************************


ABCD01M  VER    1                                                                                     mm/dd/yy   mm/dd/yy
ABIF01M  VER    1                                                                                     mm/dd/yy   mm/dd/yy
ADDS01M  VER    1                                                                                     mm/dd/yy   mm/dd/yy
ADMI01M  VER    1                                                                                     mm/dd/yy   mm/dd/yy
ADMS01M  VER    1                                                                                     mm/dd/yy   mm/dd/yy
ADOLQLNM VER    1                                                                                     mm/dd/yy   mm/dd/yy
ADOL01M  VER    1                                                                                     mm/dd/yy   mm/dd/yy
ADPT01M  VER    1                                                                                     mm/dd/yy   mm/dd/yy
ADRP01M  VER    1   DEFAULT RESPONSE PTF 87-06-1041                                                   mm/dd/yy   mm/dd/yy
ADSL01M  VER    1                                                                                     mm/dd/yy   mm/dd/yy
ADXXMBIF VER    1                                                                                     mm/dd/yy   mm/dd/yy
```

Map Detail and Key Reports (DREPORTs 018 and 088)

Contents

The map detail report provides detailed information about all map occurrences; the map key report provides similar information about selected map occurrences. The fields and format of these two reports are the same.

The report below shows sample output for DREPORT 088. The DREPORT and KEY parameters used to create this sample report are:

```
DREPORT=88
 KEY MAP-NAME-098 'TEST-MAP'
```

Sample DREPORT 088:

```
REPORT NO. 88                                    DATA DICTIONARY REPORTER  REL nn.n                   mm/dd/yy       PAGE    1
DREPORT 088                                                 MAP REPORT


*****************************************************************************************************************************
                                                                                                            ---- D A T E ----
MAP                                                                                                         UPDATED   CREATED
*****************************************************************************************************************************


TEST-MAP VER     1                                                                                                    mm/dd/yy
    PREPARED BY          LHN
    DESCRIPTION          THIS IS A TEST MAP FOR DOCUMENTATION
    PUBLIC ACCESS ALLOWED FOR ALL AUTHORITY
    USER LHN                               RESPONSIBLE FOR CREATION AND UPDATE AND DELETION
    PROGRAM              EMPSS01                          VER      1
    WITHIN SYSTEM        LHNSYSTEM                        VER      1
    DIVISION             DOCUMENT
    COMMENT
    00000100  THIS IS A TEST MAP FOR DOCUMENTATION
    DEFINITION
    00000100  DELETION DATE
```

Field Descriptions

The format of DREPORTs 018 and 088 depends on the order in which information was defined to the dictionary. A description of the fields in the sample report follows:

MAP

Identifies the name and version number of the map being described.

DATE UPDATED/CREATED

Identifies the date the map occurrence was last updated and the date the map occurrence was defined to the dictionary.

PREPARED BY/REVISED BY

Identifies the user who defined the map occurrence to the dictionary and the user who last updated it.

DESCRIPTION

Identifies text associated with the map occurrence.

PUBLIC ACCESS

Identifies the level of access allowed for unregistered users.

USER

Identifies a user who is registered to access the map occurrence and any responsibility codes and associated text defined for the user. If no users are registered, the USER literal does not appear; if no responsibility codes are assigned to the user, the RESPONSIBLE FOR literal does not appear.

PROGRAM

Identifies a program that uses the map occurrence.

WITHIN SYSTEM

Identifies a system associated with the map occurrence.

Class/attribute associations

Identify class/attribute associations that have been defined for the map occurrence. In this sample report, the attribute DOCUMENT within class DIVISION is associated with TEST-MAP.

RECORD

Identifies a record that contains record elements used in the map occurrence.

COMMENT

Identifies commentary text associated with the map occurrence through the COMMENTS clause of the DDDL MAP statement.

User-defined comments

Identifies user-defined comments that were defined through the DEFINITION/*comment-key* clause of the DDDL MAP statement. In this sample report, DELETION DATE is a comment key.

Cross-Reference Reports

The cross-reference reports provide information about:

- Files and areas and their associated records (DREPORT 020)
- Files and their associated synonyms (DREPORT 021)
- Records and their associated synonyms (DREPORT 022)
- Elements and their associated synonyms (DREPORT 023)
- Elements with their associated descriptions (DREPORT 024)
- Element designators/attribute relationships (DREPORT 025)
- Program use of files, sets, records, and areas (DREPORTs 026, 027, 028, 029)
- Program/element relationships (DREPORT 030)

Summary of Cross-Reference Reports

The table below lists the cross-reference reports in order of presentation in this section.

DREPORT Number	DREPORT Name
020	File/Record Cross-Reference Report(1)

DREPORT Number	DREPORT Name
021	File Synonym Cross-Reference Report(1)
022	Record Synonym Cross-Reference Report
023	Element Synonym Cross-Reference Report
024	Element Description Report
025	Element Designator Report
026	File Activity Report(1)
027	IDMS Set Activity Report
028	IDMS Record Activity Report
029	IDMS Area Activity Report
030	Element/Program Cross-Reference Report

(1) DREPORTs 020, 021, and 026 cannot be run with any other reports.

File/Record Cross-Reference Report (DREPORT 020)

Contents

The File/Record Cross-Reference report lists all IDD file/record relationships defined to the dictionary. The file/record relationships are defined through the RECORD SYNONYM FOR FILE SYNONYM clause or the WITHIN FILE clause of the DDDL RECORD statement.

Sample DREPORT 020:

```
REPORT NO. 20                                    DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy        PAGE    1
DREPORT 020                                              FILE/RECORD REPORT


***********************************************************************************************************************************
                                                                                  RECORD  BLOCK                       ---- D A T E ----
FILE NAME                                                                         LENGTH  SIZE     LABELS             UPDATED   CREATED
***********************************************************************************************************************************


TESTFILE                     VER     1  TEST FILE FOR DOCUMENTATION                 132     132                       mm/dd/yy mm/dd/yy
    PRIMARY RECORD                                                RECORD   LHN-REC                          VER     1
```

Field Descriptions

A description of the fields in the sample report follows:

FILE NAME

Identifies the primary name and version number of an IDD file and displays a description if one is defined for this file occurrence.

RECORD LENGTH

Identifies the maximum record length for the file.

BLOCK SIZE

Identifies the block size of the file, if defined.

LABELS

Identifies any labels defined for the file.

DATE UPDATED/CREATED

Identifies the date the file occurrence was last updated and the date the file occurrence was defined to the dictionary.

Description

Identifies text associated with the file occurrence.

PRIMARY RECORD/RECORD

Identifies the names and version numbers of primary records associated with the file.

FILE NAME

Identifies the name and version number of a file associated with the named primary record and any text associated with this file occurrence.

Associated records and elements

Identifies records and elements that are associated with an IDD file occurrence.

File Synonym Cross-Reference Report (DREPORT 021)

Contents

The File Synonym Cross-Reference report lists all IDD file occurrences in the data dictionary with their associated file synonym names. File synonyms are defined through the FILE NAME SYNONYM clause of the DDDL FILE statement or through the schema compiler.

Sample DREPORT 021:

```
REPORT NO. 21                          DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy        PAGE    1
DREPORT 021                            FILE SYNONYM CROSS REFERENCE REPORT


*************************************************************************************************************************
FILE SYNONYM NAME                            PRIMARY FILE NAME
*************************************************************************************************************************

TESTFILE                  VER    1           **SAME**
LHNFILE                   VER    1           TESTFILE                    VER    1
```

Field Descriptions

A description of the fields in the sample report follows:

FILE SYNONYM NAME

Identifies the name and version number of a file synonym.

PRIMARY FILE NAME

Identifies the primary file name and version number for this file synonym or displays **SAME** if the file synonym name is the primary file name.

Record Synonym Cross-Reference Report (DREPORT 022)

Contents

The Record Synonym Cross-Reference report lists all record occurrences defined to the dictionary with their associated record synonym names. Record synonyms are defined through the RECORD NAME SYNONYM clause of the DDDL RECORD statement and through the schema compiler.

Sample DREPORT 022:

```
REPORT NO. 22                              DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy        PAGE    1
DREPORT 022                              RECORD SYNONYM CROSS REFERENCE REPORT


*************************************************************************************************************************
RECORD SYNONYM NAME                              PRIMARY RECORD NAME                          SCHEMA
*************************************************************************************************************************

AD21D008-TEST-RECORD            VER    1         **SAME**
AD68DEMD-MAP-RECORD             VER    1         **SAME**
A20209M6-MAP-RECORD-1           VER    1         **SAME**
A20209M6-MAP-RECORD-2           VER    1         **SAME**
A20209M6-MAP-RECORD-3           VER    1         **SAME**
BIFX01M-REC01                   VER    1         **SAME**
BIFX02M-REC01                   VER    1         **SAME**
BLANK-LINE                      VER    1         **SAME**
CALCAB                          VER    1         **SAME**
CBDCM30M                        VER    1         **SAME**
CBTCF01R                        VER    1         **SAME**
CCFP01DX-RECN                   VER    1         **SAME**
COOB01DX-RECN                   VER    1         **SAME**
COOP01D-RECN                    VER    1         **SAME**
COOP02D-RECN                    VER    1         **SAME**
COUNTING                        VER    1         **SAME**
COVERAGE                        VER    1         **SAME**                     EMPSCHM      1
COVERAGE                        VER    1         **SAME**
COVERAGE                        VER    1         **SAME**                     TEST         1
COVERAGE                        VER  100         **SAME**                     EMPSCHM    100
```

Field Descriptions

A description of the fields in the sample report follows:

RECORD SYNONYM NAME

Identifies the record synonym name and version number.

PRIMARY RECORD NAME

Identifies the primary name and version number for this synonym or displays **SAME** if the record synonym name is the primary record name.

SCHEMA

Identifies the schema that includes the record, if defined.

Element Synonym Cross-Reference Report (DREPORT 023)

Contents

The Element Synonym Cross-Reference report lists element occurrences defined to the dictionary with their associated element synonym names. Element synonyms are defined through the ELEMENT NAME SYNONYM clause of the DDDL ELEMENT or RECORD ELEMENT statements and through the schema compiler.

Sample DREPORT 023:

```
REPORT NO. 23                          DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy       PAGE  19
DREPORT 023                          ELEMENT SYNONYM CROSS REFERENCE REPORT


*************************************************************************************************************************
ELEMENT SYNONYM NAME            PRIMARY ELEMENT NAME                                GROUP SYNONYM NAME
*************************************************************************************************************************

DENTIST-ZIP-LAST-FOUR           **SAME**                      VER   1
DENTIST-ZIP-LAST-FOUR           **SAME**                      VER 100
DENTIST-ZIP-LAST-FOUR-0405      DENTIST-ZIP-LAST-FOUR         VER   1
DENTIST-ZIP-LAST-FOUR-0405      DENTIST-ZIP-LAST-FOUR         VER 100
DENTIST-ZIP-0405                DENTIST-ZIP                   VER   1
DENTIST-ZIP-0405                DENTIST-ZIP                   VER 100
DEOS                            **SAME**                      VER   1
DEP-COST                        **SAME**                      VER   1
DEP-COST                        **SAME**                      VER 100
DEP-COST-0435                   DEP-COST                      VER   1
DEP-COST-0435                   DEP-COST                      VER 100
DEPENDENT                       **SAME**                      VER   1
DEPENDENT                       **SAME**                      VER 100
DEPENDENT-0400                  DEPENDENT                     VER   1
DEPENDENT-0400                  DEPENDENT                     VER 100
DEPT-HEAD-ID                    **SAME**                      VER   1
DEPT-HEAD-ID                    **SAME**                      VER 100
DEPT-HEAD-ID-MAP                DEPT-HEAD-ID                  VER 100
DEPT-HEAD-ID-0410               DEPT-HEAD-ID                  VER   1
DEPT-HEAD-ID-0410               DEPT-HEAD-ID                  VER 100
DEPT-ID                         **SAME**                      VER   1
DEPT-ID                         **SAME**                      VER 100
```

Field Descriptions

A description of the fields in the sample report follows:

ELEMENT SYNONYM NAME

Identifies the name and version number of an element synonym.

PRIMARY ELEMENT NAME

Identifies the primary element name associated with this synonym name or displays **SAME** if the element synonym name is the primary element name.

GROUP SYNONYM NAME

Identifies the group synonym name associated with the element synonym, if defined.

Element Description Report (DREPORT 024)

Contents

The Element Description report lists element descriptions and all elements associated with each description. This report sorts elements by description. Element description text is defined to the dictionary through the ELEMENT DESCRIPTION IS clause of the DDDL ELEMENT statement.

Sample DREPORT 024:

```
REPORT NO. 24                              DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy        PAGE   1
                                               ELEMENT DESCRIPTION REPORT


*************************************************************************************************************************
DESCRIPTION/DATA ELEMENT NAME        VERSION  LGTH  PICTURE                    USAGE      ELEMENT SYNONYM NAME
*************************************************************************************************************************


CALCULATED BONUS
  WK-BONUS-AMOUNT                    VER    1     9  9(7)V99                  DISPLAY    WK-BONUS-AMOUNT

CALCULATED TIME EMPLOYED
  WK-EMP-LENGTH                      VER    1                                 GROUP      WK-EMP-LENGTH
  LHN-ELEM                           VER    1                                 GROUP      EMPID

EMPLOYEE ID WITHIN EMPLOYEE RECORD
  LHN-ELEM                           VER    1                                 GROUP      LHN-ELEM

MONTHS EMPLOYED
  WK-EMP-MONTH                       VER    1     2  99                       DISPLAY    WK-EMP-MONTH

MONTHS IN THE JOB
  WK-POS-MONTH                       VER    1     2  99                       DISPLAY    WK-POS-MONTH

START DATE DAY
  WK-START-DAY                       VER    1     2  99                       COMP-3     WK-START-DAY

START DATE MONTH
  WK-START-MONTH                     VER    1     2  99                       COMP-3     WK-START-MONTH

START DATE YEAR
  WK-START-YEAR                      VER    1     2  99                       COMP-3     WK-START-YEAR

SYSTEM DATE DAY
  WK-SYSTEM-DAY                      VER    1     2  99                       COMP-3     WK-SYSTEM-DAY

SYSTEM DATE MONTH
  WK-SYSTEM-MONTH                    VER    1     2  99                       COMP-3     WK-SYSTEM-MONTH

SYSTEM DATE YEAR
  WK-SYSTEM-YEAR                     VER    1     2  99                       DISPLAY    WK-SYSTEM-YEAR
```

Field Descriptions

A description of the fields in the sample report follows:

DESCRIPTION/DATA ELEMENT NAME

Identifies an element description and all elements with that description.

VERSION

Identifies the version number of the element.

LGTH

Identifies the length in bytes of this data element.

PICTURE

Identifies the picture clause associated with this data element.

USAGE

Identifies the usage mode of the listed element.

ELEMENT SYNONYM NAME

Identifies the element synonym name associated with the element.

Element Designator Report (DREPORT 025)

Contents

The Element Designator report lists all attributes within the element designator class and describes all elements associated with each element designator. Element designator is a system-provided class that allows you to classify similar elements for report purposes. Element/element designator relationships are defined through INCLUDE *class* IS *attribute* clause of the DDDL ELEMENT statement, where the *class* is ELEMENT DESIGNATOR.

Sample DREPORT 025:

```
REPORT NO. 25                              DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy        PAGE    1
DREPORT 025                                    ELEMENT DESIGNATOR REPORT


*************************************************************************************************************************
DESIGNATOR/DATA ELEMENT NAME         VERSION  LGTH  PICTURE                        USAGE      ELEMENT SYNONYM NAME
*************************************************************************************************************************


DOCUMENTATION
  LHN-DEPT-NAME                  VER    1    45  X(45)                          DISPLAY    LHN-DEPT-NAME
```

Field Descriptions

A description of the fields in the sample report follows:

DESIGNATOR

Identifies the name of an attribute associated with the element designator class.

DATA ELEMENT NAME

Identifies the names and version numbers of data elements associated with this element designator.

LGTH

Identifies the length in bytes of the element.

PICTURE

Identifies the picture clause associated with this data element.

USAGE

Identifies the usage mode for the element.

ELEMENT SYNONYM NAME

Identifies a synonym name associated with the element by the ELEMENT NAME SYNONYM clause of the DDDL ELEMENT or RECORD ELEMENT statements, or by the schema compiler.

File Activity Report (DREPORT 026)

Contents

The File Activity report provides information about how IDD files are used by programs. These file/program relationships are defined through the INPUT/I-O/OUTPUT clause of the DDDL PROGRAM statement and through the DML processors if the activity log is on and the dictionary is in UPDATE mode at run time.

Sample DREPORT 026:

```
REPORT NO. 26                          DATA DICTIONARY REPORTER  REL nn.n                  mm/dd/yy        PAGE   1
DREPORT 026                                   FILE ACTIVITY REPORT


*************************************************************************************************************************
FILE NAME                              PROGRAM           USAGE  REFERENCED  SYNONYM NAME
*************************************************************************************************************************

TESTFILE                    VER    1   LHNPROG  VER    1   I-O         1     LHNFILE
```

Field Descriptions

A description of the fields in the sample report follows:

FILE NAME

Identifies the primary name and version number of a file that is opened by a program.

PROGRAM

Identifies the name and version number of a program that accesses this file.

USAGE

Indicates whether the program opens the named file for input, output, or input/output operations.

REFERENCED

Identifies the number of OPEN statements for this file and usage within the named program.

SYNONYM NAME

Identifies the name used by the program to reference the file.

IDMS Set Activity Report (DREPORT 027)

Contents

The IDMS Set Activity report provides information about how programs reference sets. These set/program relationships are defined through the SET clause of the DDDL PROGRAM statement or through the DML processors if the activity log is on and the dictionary is in UPDATE mode at run time.

Sample DREPORT 027:

```
REPORT NO. 27                          DATA DICTIONARY REPORTER  REL nn.n                  mm/dd/yy        PAGE    1
DREPORT 027                                  IDMS SET ACTIVITY REPORT


*************************************************************************************************************************
                                                                                          ---- D A T E ----
SCHEMA   VER   SUBSCHEMA  SET                          PROGRAM  VER   USAGE             TIMES   COMPILED CREATED
*************************************************************************************************************************

EMPSCHM    1   EMPSS01    DEPT-EMPLOYEE                NRDY99D    1   OBTAIN               1 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSS01    DEPT-EMPLOYEE                NRDY97D    1   OBTAIN               1 mm/dd/yy mm/dd/yy
EMPSCHM  100   EMPSS01    CALC                         CBDML01    1   OBTAIN               1 mm/dd/yy mm/dd/yy
EMPSCHM  100   EMPSS01    CALC                         CBDML03    1   FIND                 1 mm/dd/yy mm/dd/yy
EMPSCHM  100   EMPSS01    CALC                         CBDML03    1   FIND                 5 mm/dd/yy mm/dd/yy
EMPSCHM  100   EMPSS01    CALC                         CBDML03    1   OBTAIN               1 mm/dd/yy mm/dd/yy
EMPSCHM  100   EMPSS01    CALC                         CBDML03    1   OBTAIN               4 mm/dd/yy mm/dd/yy
EMPSCHM  100   EMPSS01    DEPT-EMPLOYEE                MCMT03D    1   FIND                 1 mm/dd/yy mm/dd/yy
EMPSCHM  100   EMPSS01    DEPT-EMPLOYEE                MCMT03D    1   IF                   4 mm/dd/yy mm/dd/yy
EMPSCHM  100   EMPSS01    DEPT-EMPLOYEE                MCMT04D    1   FIND                 1 mm/dd/yy mm/dd/yy
```

Field Descriptions

A description of the fields in the sample report follows:

SCHEMA/VER

Identifies the name and version number of a schema that contains a set referenced by a program.

SUBSCHEMA

Identifies the name of the subschema in which the set exists.

SET

Identifies the name of a set associated with a program.

PROGRAM/VER

Identifies the name and version number of the program using this set.

USAGE

Identifies the DML command issued against this set by the named program.

TIMES

Indicates the number of times this DML command is issued against the set within the named program.

DATE COMPILED/CREATED

Identifies the date the program was last compiled and the date the program occurrence was defined to the dictionary.

IDMS Record Activity Report (DREPORT 028)

Contents

The IDMS Record Activity report provides information about how programs use records. These record/program relationships are defined through the RECORD clause of the DDDL PROGRAM statement or through the DML processors if the activity log is on and the dictionary is in UPDATE mode at run time.

Sample DREPORT 028:

```
REPORT NO. 28                                        DATA DICTIONARY REPORTER  REL nn.n                  mm/dd/yy       PAGE    1
DREPORT 028                                              IDMS RECORD ACTIVITY REPORT


*****************************************************************************************************************************
                                                                                                          ---- D A T E ----
SCHEMA    VER   SUBSCHEMA  RECORD                           PROGRAM  VER   USAGE                 TIMES  COMPILED  CREATED
*****************************************************************************************************************************

EMPSCHM    1    AD99SLR    COVERAGE                         LRDA01D    1   BIND                      1 mm/dd/yy mm/dd/yy
EMPSCHM    1    AD99SLR    DEPARTMENT                       LRDA01D    1   BIND                      1 mm/dd/yy mm/dd/yy
EMPSCHM    1    AD99SLR    EMPLOYEE                         LRDA01D    1   BIND                      1 mm/dd/yy mm/dd/yy
EMPSCHM    1    AD99SLR    OFFICE                           LRDA01D    1   BIND                      1 mm/dd/yy mm/dd/yy
EMPSCHM    1    EMPSSLR    DEPARTMENT                       LRTD01D    1   BIND                      1 mm/dd/yy mm/dd/yy
EMPSCHM    1    EMPSSLR    EMPLOYEE                         LRTD01D    1   BIND                      1 mm/dd/yy mm/dd/yy
EMPSCHM    1    EMPSSLR    EMPLOYEE                         RENO01D    1   BIND                      1 mm/dd/yy mm/dd/yy
EMPSCHM    1    EMPSSLR    EMPLOYEE                         RENO01D    1   OBTAIN                    2 mm/dd/yy mm/dd/yy
EMPSCHM    1    EMPSSLR    EMPLOYEE                         RENO02D    1   BIND                      1 mm/dd/yy mm/dd/yy
```

Field Descriptions

A description of the fields in the sample report follows:

SCHEMA/VER

Identifies the name and version number of a schema that contains a record referenced by a program.

SUBSCHEMA

Identifies the subschema in which the record is included.

RECORD

Identifies a record associated with a program.

PROGRAM/VER

Identifies the name and version number of the program using the record.

USAGE

Identifies the DML command issued against the record by the named program.

TIMES

Indicates the number of times the DML command is issued against the record within the named program.

DATE COMPILED/CREATED

Identifies the date the program was last compiled and the date the program occurrence was defined to the dictionary.

IDMS Area Activity Report (DREPORT 029)

Contents

The IDMS Area Activity report provides information about how programs use areas. These area/program relationships are defined through the AREA clause of the DDDL PROGRAM statement or through the DML processors if the activity log is on and the dictionary is in UPDATE mode at run time.

Sample DREPORT 029:

```
REPORT NO. 29                                  DATA DICTIONARY REPORTER  REL nn.n                  mm/dd/yy      PAGE   1
DREPORT 029                                        IDMS AREA ACTIVITY REPORT


*******************************************************************************************************************************
                                                                                                     ---- D A T E ----
SCHEMA   VER   SUBSCHEMA  AREA                             PROGRAM  VER   ACTIVITY           TIMES  COMPILED  CREATED
*******************************************************************************************************************************

EMPSCHM    1   AD99SLR    EMP-DEMO-REGION                  LRDA01D    1   RETRIEVAL              3 mm/dd/yy mm/dd/yy
EMPSCHM    1   AD99SLR    INS-DEMO-REGION                  LRDA01D    1   RETRIEVAL              3 mm/dd/yy mm/dd/yy
EMPSCHM    1   AD99SLR    ORG-DEMO-REGION                  LRDA01D    1   RETRIEVAL              3 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSSLR    EMP-DEMO-REGION                  LRTD01D    1   RETRIEVAL              2 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSSLR    EMP-DEMO-REGION                  LRTD01D    1   UPDATE                 1 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSSLR    EMP-DEMO-REGION                  OTFT03D    1   RETRIEVAL              1 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSSLR    EMP-DEMO-REGION                  RENO01D    1   OBTAIN                 2 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSSLR    EMP-DEMO-REGION                  RENO01D    1   RETRIEVAL              2 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSSLR    EMP-DEMO-REGION                  RENO02D    1   OBTAIN                 2 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSSLR    EMP-DEMO-REGION                  RENO02D    1   RETRIEVAL              2 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSSLR    EMP-DEMO-REGION                  RENO03D    1   OBTAIN                 2 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSSLR    EMP-DEMO-REGION                  RENO03D    1   RETRIEVAL              2 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSSLR    ORG-DEMO-REGION                  LRTD01D    1   RETRIEVAL              2 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSSLR    ORG-DEMO-REGION                  LRTD01D    1   UPDATE                 1 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSSLR    ORG-DEMO-REGION                  OTFT03D    1   RETRIEVAL              1 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSSLR    ORG-DEMO-REGION                  RENO01D    1   RETRIEVAL              2 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSSLR    ORG-DEMO-REGION                  RENO02D    1   RETRIEVAL              2 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSSLR    ORG-DEMO-REGION                  RENO03D    1   RETRIEVAL              2 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSSLR1   EMP-DEMO-REGION                  LRFC01D    1   RETRIEVAL              1 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSSLR1   EMP-DEMO-REGION                  LRFC02D    1   RETRIEVAL              1 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSSLR1   ORG-DEMO-REGION                  LRFC01D    1   RETRIEVAL              1 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSSLR1   ORG-DEMO-REGION                  LRFC02D    1   RETRIEVAL              1 mm/dd/yy mm/dd/yy
EMPSCHM    1   EMPSS01    EMP-DEMO-REGION                  ADMI01D    1   OBTAIN                 2 mm/dd/yy mm/dd/yy
```

Field Descriptions

A description of the fields in the sample report follows:

SCHEMA/VER

Identifies the name and version number of the schema that contains the area referenced by the program.

SUBSCHEMA

Identifies the subschema in which the area exists.

AREA

Identifies the area associated with the named program.

PROGRAM/VER

Identifies the name and version number of the program using this area.

ACTIVITY

Identifies the DML command issued against this area by the named program.

TIMES

Indicates the number of times the DML command is issued against the area within the named program.

DATE COMPILED/CREATED

Identifies the date this program was last compiled and the date the program occurrence was defined to the dictionary.

Element/Program Cross-Reference Report (DREPORT 030)

Contents

The Element/Program Cross-Reference report lists all element/program relationships defined to the dictionary; all elements associated with a record that is referenced by a program are listed. Element/record and record/area relationships are defined automatically for elements, records, and areas stored in a CA IDMS/DB database. For non-database files, element/record and record/file relationships are defined through the DDDL syntax for elements.

Sample DREPORT 030:

```
REPORT NO. 30                          DATA DICTIONARY REPORTER  REL nn.n                    mm/dd/yy        PAGE 1
DREPORT 030                          ELEMENT/PROGRAM CROSS REFERENCE REPORT


*************************************************************************************************************************
PRIMARY ELEMENT NAME                  PROGRAM NAME      USAGE       PROGRAM ELEMENT NAME
*************************************************************************************************************************


ACTIVE                      VER   1  ADMI01D  VER   1  OBTAIN      ACTIVE-0415
                            VER   1  ADMI01D  VER   1  RETURN      ACTIVE-0415
                            VER 100  ADMS01D  VER   1  OBTAIN      ACTIVE-0415
                            VER 100  ADMS01D  VER   1  RETURN      ACTIVE-0415
                            VER 100  ADMS02D  VER   1  OBTAIN      ACTIVE-0415
                            VER 100  ADMS02D  VER   1  PROT UPD    ACTIVE-0415
                            VER 100  ADMS02D  VER   1  RETURN      ACTIVE-0415
```

Field Descriptions

A description of the fields in the sample report follows:

PRIMARY ELEMENT NAME

Identifies the primary name and version number of an element associated with a record used by a program.

PROGRAM NAME

Identifies the name and version number of the program that accesses the record that contains the element.

USAGE

Identifies the usage mode of the area associated with the element. If the element/program relationship is established through a CA IDMS/DB area, the READY mode of the CA IDMS/DB area is displayed. Possible values for the area READY mode are UPDATE, PROTECTED RETRIEVAL, EXCLUSIVE RETRIEVAL, and EXCLUSIVE UPDATE. If the element/program relationship is defined through a non-database file, the OPEN mode of the non-database file is displayed. Possible values for the file OPEN mode are INPUT, OUTPUT, and I-O. Programs that potentially change or reference an element can be identified by the OPEN mode of the file or by the READY mode of the area.

PROGRAM ELEMENT NAME

Identifies the element name used by the program to reference the element. The name can be the primary element name or an element synonym name.

Special-Purpose Report Modules

There are four special-purpose report modules (DREPORTs 000, 050, 051, and 052). These report modules perform specific functions such as providing housekeeping parameters for the other reports, listing dictionary level numbers, punching module source text to cards, or writing source text to disk. DREPORT 050 is the only special-purpose report that produces printed output.

Summary Table

The following table lists the four special-purpose report modules in order of presentation in this section.

DREPORT Module	DREPORT Name
000	Comment/Nest Resolution
050	Level Number Report
051	Module Text to Card Utility(1)
052	Module Text to Output File Utility(1)

Note: DREPORTs 051 and 052 must be run alone.

Comment/Nest Resolution Report Module (DREPORT 000)

Contents

The comment/nest resolution report module performs internal housekeeping functions whenever a dictionary, DC/UCF system, CA ADS, or catalog report module is requested. CA Culprit for CA IDMS parameters for DREPORT 000 are copied the first time a DREPORT=, CREPORT=, or AREPORT= request parameter is encountered in the input stream. There is no printed output for this report module.

Level Number Report (DREPORT 050)

Contents

The level number report lists the current values of all level numbers established in the dictionary. Level numbers are assigned by the dictionary when the element is included in a record. Up to 48 levels of data elements can be established by using the LEVEL NUMBERS ARE clause of the DDDL SET OPTIONS statement.

The report below shows sample output for DREPORT 050. This report lists the 48 level numbers and their current values.

Sample DREPORT 050:

```
REPORT NO. 50                                  DATA DICTIONARY REPORTER  REL nn.n                   mm/dd/yy       PAGE    1
DREPORT 050                                            LEVEL NUMBER REPORT


***************************************************************************************************************************
                                                                            ---- D A T E ----
LEVEL NUMBERS                                                               UPDATED   CREATED
***************************************************************************************************************************


  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25      mm/dd/yy mm/dd/yy
26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49
```

Field Descriptions

A description of the fields in the sample report follows:

LEVEL NUMBERS

Identifies the current values of level numbers within the dictionary. The first 24 levels are listed on line 1; the second 24 levels are listed on line 2.

DATE UPDATED/CREATED

Identifies the date the dictionary was last updated and the date the dictionary was defined.

Module Text to Card Utility (DREPORT 051)

The Module Text to Card utility lets you punch the module source code of a specified module to cards. The DREPORT and KEY parameters used to punch module DREPORT 054 to card are:

```
DREPORT=051
 KEY MOD-NAME-067 'DREPORT 054'
```

How to Run DREPORT 051

To run DREPORT 051, include the following specification in the JCL:

- **For z/OS systems:**

  ```
  //SYSPCH  DD  SYSOUT=B,DCB=BLKSIZE=80
  ```

- **For z/VSE systems:**

  ```
  // ASSGN SYSPCH,X'ccc'
  ```

ccc

device assignment (channel and unit) for punched output

- **For z/VM and z/VM systems:**

  ```
  FILEDEF SYSPCH DISK syspch output a
  ```

syspch output a

file identifier of the card-image output file

- **For z/OS systems:**

  ```
  //SYSPCH  DD  SYSOUT=A
  ```

- **For z/VSE systems:**

  ```
  // ASSGN SYSPCH,X'ppp'
  ```

ppp

printer device assignment

- **For z/VM and z/VM systems:**

  ```
  FILEDEF SYSPCH PRINTER
  ```

Module Text to File Utility (DREPORT 052)

The module text to output file utility (DREPORT 052) lets you output module source code to a disk file. The DREPORT and KEY parameters used to output module DRPT054 to file are shown below:

```
DREPORT=052
 KEY MOD-NAME-067 'DREPORT 054'
```

How to Run DREPORT 052

To run DREPORT 052, add the following specification to the JCL:

- **For z/OS files:**

```
//SYS020  DD  DSN=user.textfile,DISP=(NEW,CATLG),
//            DCB=(RECFM=FB,LRECL=80,BLKSIZE=320),
//            UNIT=disk,VOL=SER=nnnnnn
```

user.textfile

data set name of the output file

disk

symbolic device name of disk

nnnnnn

volume serial number of disk

- **For z/VSE tape files:**

```
// TLBL  SYS020,'user.text'
   ASSGN SYS020,TAPE,VOL=nnnnnn
```

user.text

file-id of tape file

nnnnnn

tape volume serial number

- **For z/VSE disk files:**

```
// DLBL    SYS020,'user.text'
// EXTENT  SYS020,nnnnnn
   ASSGN   SYS020,DISK,VOL=nnnnnn,SHR
```

user.text

file-id of disk file

nnnnnn

volume serial number of the disk file

- **For z/VM and z/VM files:**

  ```
  FILEDEF SYS020 DISK nonprint file a (RECFM FB LRECL 80 BLKSIZE 320
  ```

nonprint file a

filename, filetype, and filemode of the nonprint/nonpunch output file.

Chapter 3: CA ICMS Catalog Reports—DREPORTS

The catalog is a directory of information used by a number of CA ICMS products, including the Automatic System Facility (ASF) and the Information Center Management System. Eight standard catalog reports provide information about the contents of the catalog. These catalog reports are a subset of the standard DREPORTs.

This section contains the following topics:

Information Stored in DDLDML Area of Dictionary (see page 121)
Uses for Catalog Reports (see page 121)
Summary of Catalog Reports (see page 122)
Producing Catalog Reports (see page 122)
DREPORT 090 - Catalog Summary Report (see page 125)
DREPORT 091 - Catalog Detail Report (see page 126)
DREPORT 092 - Group Detail Report (see page 130)
DREPORT 093 - User Detail Report (see page 132)
DREPORT 094 - Folder Detail Report (see page 135)
DREPORT 095 - Object Detail Report (see page 137)
DREPORT 096 - Catalog Summary Key Report (see page 139)
DREPORT 097 - Catalog Detail Key Report (see page 140)

Information Stored in DDLDML Area of Dictionary

Catalog-related records are stored in the DDLDML area of the dictionary. Information displayed in the fields of the catalog reports is taken from the corresponding fields of the dictionary records.

Note: For more information about the structure of the catalog records and how catalog records are defined to the data dictionary, see the *CA IDMS Dictionary Structure Reference Guide*.

Uses for Catalog Reports

Catalog reports can:

- Help the information center administrator monitor the contents of the dictionary and the catalog structure
- Help users monitor their own private data

Summary of Catalog Reports

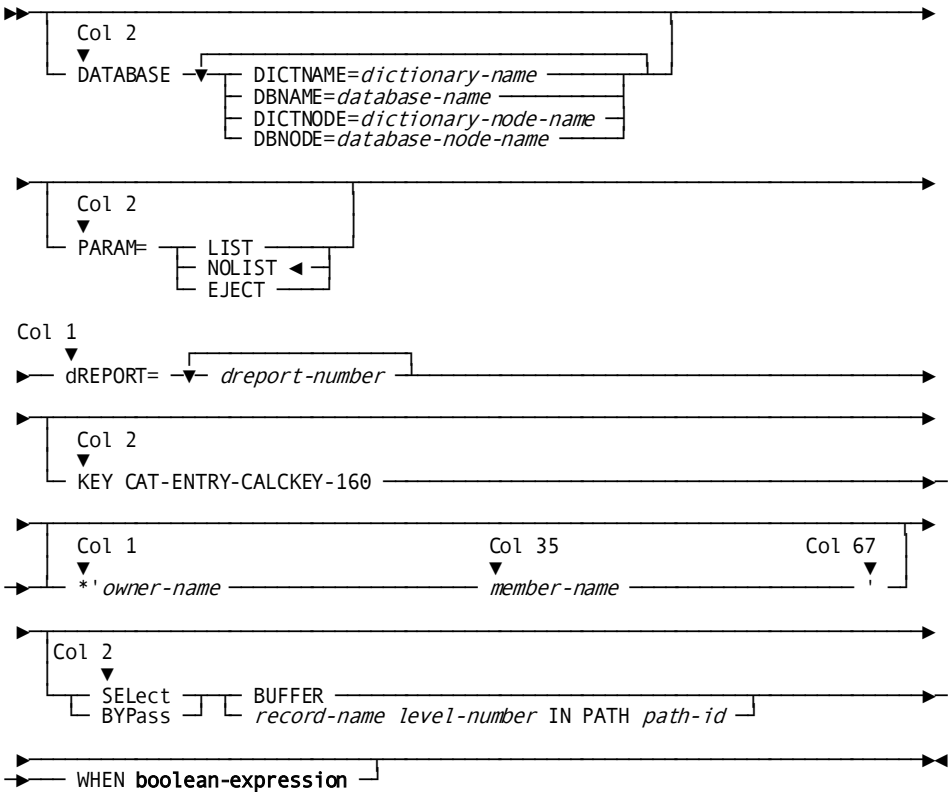
The following table lists the catalog reports in order of presentation in this chapter:

DREPORT Module	DREPORT Name
090	Catalog Summary Report
091	Catalog Detail Report
092	Group Detail Report
093	User Detail Report
094	Folder Detail Report
095	Object Detail Report
096	Catalog Summary Key Report
097	Catalog Detail Key Report

Producing Catalog Reports

A catalog report is produced by submitting a job that includes the standard JCL for CA Culprit for CA IDMS report writers and report-specific control statements. The JCL for z/OS, z/VSE and z/VM operating systems is shown in Appendixes A through D, respectively.

Syntax



Parameters

General syntax rules for DREPORTs are presented in Chapter 1. Syntax rules specific to the catalog reports are described below:

dREPORT=*dreport-number*

Identifies the catalog report that you want to run. The D of DREPORT is optional. If D is specified, DREPORT must begin in column 1; if D is not specified, REPORT must begin in column 2.

Dreport-number is the 3-digit report number. Catalog reports are assigned numbers 090 through 097. Leading zeros can be omitted.

Multiple reports can be requested in the same job run, except for the key reports (DREPORTs 096 and 097), which must be run alone.

KEY CAT-ENTRY-CALCKEY-160

(For DREPORTs 096 and 097 only) Identifies the report as a key report; code the literal starting in column 2.

'*owner-name member-name*'

Specifies the owner and entity name of the selected entity. This field must be exactly 64 characters long and must be enclosed in quotation marks.

Owner-name identifies either a user or the catalog (CORP); it can be up to 32 characters long. If it is less than 32 characters, pad the name with blanks so that the member name starts at character 33 of the literal (that is, within the quotation marks).

Member-name specifies the selected entity. *Member-name* can be up to 32 characters long; it must begin in column 33 of the literal. If *member-name* is less than 32 characters, pad the entry with blanks so that the entry is exactly 32 characters long. The closing quotation mark immediately follows *member-name*. (See the following Example 2.)

Examples

Example 1

These control statements can be used to run a summary catalog report. The report modules used to run the report are in the default dictionary; the data for the report is taken from the ASFDICT dictionary.

```
 DATABASE DBNAME=ASFDICT
DREPORT=90
```

Example 2

These control statements can be used to report on all entities whose path includes CORP.FINANCIAL ANALYSIS DATA. The asterisk is the CULPRIT continuation character. Note that CORP begins in column 3 and FINANCIAL ANALYSIS DATA begins in column 35, the 33rd column of the literal. The closing quotation mark is in column 67.

The report modules used to run this report are in the CULPDICT dictionary; data for the report is taken from the ASFDICT dictionary.

```
 DATABASE DICTNAME=CULPDICT DBNAME=ASFDICT
DREPORT=097
 KEY CAT-ENTRY-CALCKEY-160
*'CORP                              FINANCIAL ANALYSIS DATA         '
```

DREPORT 090 - Catalog Summary Report

Contents

The Catalog Summary report provides information about all entities defined to the catalog, including their entity types and descriptions. The list is presented in hierarchical order to illustrate the relationships between entities. All catalog entities except passkeys are represented in the dictionary as occurrences of the CATENTRY-160 record. Passkeys are represented as occurrences of the CATPASSKEY-162 record.

Sample DREPORT 090:

```
REPORT NO. 90                          DATA DICTIONARY REPORTER   REL nn.n                        mm/dd/yy PAGE   1
DREPORT 090                                      CATALOG SUMMARY

                                      ENTRY
               ENTRY NAME              TYPE      TDN                          DESCRIPTION


CORP                                  CATALOG            DATA DICTIONARY CATALOG
. DBA GROUP                           GROUP              DATABASE ADMINSTRATION GROUP
. . CARNE01                           USER
. . . CULPRITS                        DATATABLE    111   CULPRIT Tests out in ProTesT
. . CULL DBA                          USER               INITIAL DBA GROUP USER
. . IQA                               USER
. . MJH                               USER
. . . THRUSH                          DATATABLE    120
. . PAGT001                           USER
. . . FOLD                            FOLDER
. . . . SP                            DATATABLE    104
. . . NEWVIEW                         DATATABLE    129
. . . P                               DATATABLE    102
. . . S                               DATATABLE    103
. . . SORTFORM                        DATATABLE    106
. . . SORTLRGE                        DATATABLE    105
. . . SORTSMAL                        DATATABLE    107
. . . SYSTABLE                        DATATABLE    113
. . VQA                               USER
. ENK                                 USER
. . DATASF02                          DATATABLE    122
```

Field Descriptions

A description of the fields in the sample report follows:

ENTRY NAME

Identifies the names of all catalog entities.

ENTRY TYPE

Identifies the entity as CORP, GROUP, USER, FOLDER, or an object type. Object types can be GRAPH, DATATABLE, MESSAGE, PROCEDURE, MODEL, WORKSHEET, PICTURE, DOCUMENT, GRAPH FORMAT, SYSTEM, DOS, SYNONYM, or OLQ REPORT.

TDN

Identifies the table definition number of the object.

DESCRIPTION

Identifies the entity description defined to the catalog.

DREPORT 091 - Catalog Detail Report

Contents

The Catalog Detail report provides information about all entities defined to the catalog, including their entity types, descriptions, and passkey allocations.

Sample DREPORT 091:

```
REPORT NO. 91                              DATA DICTIONARY REPORTER  REL nn.n              mm/dd/yy        PAGE  1
DREPORT 091                                    CATALOG DETAIL

ENTRY NAME                          TYPE    DESCRIPTION



CORP                                CATALOG   DATA DICTIONARY CATALOG
                                               OWNER:
                                                           CREATED    mm/dd/yy  hh:mm ss.s   IDMSDDDL
                                                           ACCESSED   mm/dd/yy  hh:mm ss.s
                                                           MODIFIED   mm/dd/yy  hh:mm ss.s
                                                           REDEFINED  mm/dd/yy  hh:mm ss.s
                                                           ALTERED    mm/dd/yy  hh:mm ss.s

                                                PASSKEYS GIVEN:      BROWSE COPY
                                                       TO USER       SQA

                                                PASSKEYS GIVEN:  ADD BROWSE COPY CREATE ERASE LIST MANAGEMENT MODIFY REDEFINE
                                                       TO USER       IQA

                                                PASSKEYS GIVEN:  ADD BROWSE COPY CREATE ERASE LIST MANAGEMENT MODIFY REDEFINE
                                                       TO USER       PAGTO01

                                                PASSKEYS GIVEN:      BROWSE      CREATE            MANAGEMENT
                                                       TO GROUP      DBA GROUP

. DBA GROUP                         GROUP     DATABASE ADMINSTRATION GROUP
                                               OWNER:  CORP
                                               ACCESS:      FOUNDATION
                                                           CREATED    mm/dd/yy  hh:mm ss.s   IDMSDDDL
                                                           ACCESSED   mm/dd/yy  hh:mm ss.s
                                                           MODIFIED   mm/dd/yy  hh:mm ss.s
                                                           REDEFINED  mm/dd/yy  hh:mm ss.s
                                                           ALTERED    mm/dd/yy  hh:mm ss.s

                                                PASSKEYS HELD:                                MANAGEMENT
                                                     FOR OBJECT    $UNSTRUCTURED-IDB-OBJECT$

                                                PASSKEYS HELD:  ADD BROWSE COPY CREATE ERASE LIST MANAGEMENT MODIFY REDEFINE
                                                     FOR FOLDER    DBA FOLDER

                                                PASSKEYS HELD:       BROWSE      CREATE            MANAGEMENT
                                                     FOR CATALOG   CORP

. . CARNE01                         USER
                                               OWNER:  CORP
                                               AFFIL SIZE:   160  STACK SIZE:    64  DIRECTORY:   2048
                                               ACCESS:
                                                           CREATED    mm/dd/yy  hh:mm ss.s   CULL DBA
                                                           ACCESSED   mm/dd/yy  hh:mm ss.s
                                                           MODIFIED   mm/dd/yy  hh:mm ss.s
                                                           REDEFINED  mm/dd/yy  hh:mm ss.s
                                                           ALTERED    mm/dd/yy  hh:mm ss.s

. . . CULPRITS                      DATATABLE CULPRIT Tests out in ProTesT
                                               OWNER:  CARNE01
                                               OBJECT TYPE: DATATABLE   ID:      111
                                               ACCESS:
                                                           CREATED    mm/dd/yy  hh:mm ss.s   NBC
```

Field Descriptions

A description of the fields in the sample report follows:

ENTRY NAME

Identifies the entity names in the catalog.

TYPE

Identifies the entity as CORP, GROUP, USER, FOLDER, or an object type. Object types can be GRAPH, DATATABLE, MESSAGE, PROCEDURE, MODEL, WORKSHEET, PICTURE, DOCUMENT, GRAPH FORMAT, SYSTEM, DOS, SYNONYM, or OLQ REPORT.

DESCRIPTION

Identifies the entity description defined to the catalog.

OWNER

Identifies the name of the owner of each entity.

Date/time stamp

Information, including the user responsible for the time stamp (IDMSDDDL is displayed for catalog foundation entities):

CREATED

Specifies the date the entity was defined to the catalog.

ACCESSED

Specifies the date the object entity was last accessed or, for a user entity, the date the user last signed on.

MODIFIED

Is currently an unused field.

REDEFINED

Is currently an unused field.

ALTERED

Specifies the date the catalog definition for the entity was last modified.

Passkey information

Lists the following:

PASSKEYS GIVEN

Identifies the passkeys given to groups or users for access to the listed entity.

PASSKEYS HELD

Identifies the passkeys held by the listed entity for access to specific entities.

OBJECT TYPE/ID

Identifies the object type and the definition number of each object entity. For a list of object types, see TYPE above.

ACCESS

Identifies the type of access control:

FOUNDATION

Identifies the entity as a member of the catalog foundation; catalog foundation members cannot be deleted or renamed.

NO DUPLICATES

(Users and CORP only) Specifies that duplicate names are not allowed for objects and folders owned by the listed entity.

NO PROPAGATION

(Users and CORP only) Specifies that ambiguous associations that involve duplicate names are not allowed.

ACCESS LOCK

(Users only) Specifies that the user is restricted from signing on.

ENCRYPT

Specifies that the user's password is encrypted.

Memory requirements

Identifies memory requirements for each user entity defined to the catalog:

AFFIL SIZE

Identifies the number of bytes required to hold the list of groups with which the user is affiliated.

STACK SIZE

Identifies the number of bytes required to hold the bill-of-material structure explosion/implosion levels.

DIRECTORY

Is currently an unused field.

DREPORT 092 - Group Detail Report

Contents

The Group Detail report provides information about all groups defined to the catalog.

Sample DREPORT 092:

```
REPORT NO. 92                                DATA DICTIONARY REPORTER  REL nn.n                          mm/dd/yy PAGE   1
DREPORT 092                                            GROUP DETAIL

  GROUP NAME                    OWNER NAME              TIME STAMP:    DATE       TIME        USER


DBA GROUP                       CORP                      CREATED    mm/dd/yy  hh:mm ss.s   IDMSDDDL
                                                          ACCESSED   mm/dd/yy  hh:mm ss.s
                                                          MODIFIED   mm/dd/yy  hh:mm ss.s
                                                          REDEFINED  mm/dd/yy  hh:mm ss.s
                                                          ALTERED    mm/dd/yy  hh:mm ss.s
        DESCRIPTION: DATABASE ADMINISTRATION GROUP
        ACCESS:      FOUNDATION

POSTMASTER                      CORP                      CREATED    mm/dd/yy  hh:mm ss.s   IDBCAT
                                                          ACCESSED   mm/dd/yy  hh:mm ss.s
                                                          MODIFIED   mm/dd/yy  hh:mm ss.s
                                                          REDEFINED  mm/dd/yy  hh:mm ss.s
                                                          ALTERED    mm/dd/yy  hh:mm ss.s
        DESCRIPTION:
        ACCESS:      FOUNDATION

QAGROUP                         CORP                      CREATED    mm/dd/yy  hh:mm ss.s   PAGTO01
                                                          ACCESSED   mm/dd/yy  hh:mm ss.s
                                                          MODIFIED   mm/dd/yy  hh:mm ss.s
                                                          REDEFINED  mm/dd/yy  hh:mm ss.s
                                                          ALTERED    mm/dd/yy  hh:mm ss.s
        DESCRIPTION: QUALITY ASSURANCE GROUP
        ACCESS:
```

Field Descriptions

A description of the fields in the sample report follows:

GROUP NAME

Identifies the group defined to the catalog.

OWNER NAME

Identifies CORP as the owner of each group.

TIME STAMP: DATE/TIME

Identifies the date and time stamps for the group:

CREATED

Specifies the date the group definition was defined to the catalog.

ACCESSED

Is used for object and user entities only.

MODIFIED

Is currently an unused field.

REDEFINED

Is currently an unused field.

ALTERED

Specifies the date the catalog definition for the group was last modified.

USER

Identifies the user responsible for the time stamp. (IDMSDDDL is displayed for DBA GROUP.)

DESCRIPTION

Displays the group description defined to the catalog.

ACCESS

Indicates whether the group is a member of the catalog foundation (FOUNDATION). Catalog foundation members cannot be renamed or deleted.

DREPORT 093 - User Detail Report

Contents

The User Detail report provides information about all user occurrences defined to the catalog, including date/time stamps for the user and the amount of memory required by the user.

Sample DREPORT 093:

```
REPORT NO. 93                                DATA DICTIONARY REPORTER  REL nn.n                          mm/dd/yy PAGE    1
DREPORT 093                                            USER DETAIL

  USER NAME                      OWNER NAME                TIME STAMP:    DATE       TIME        USER


CARNE01                          CORP                          CREATED    mm/dd/yy  hh:mm ss.s   CULL DBA
                                                               SIGNED ON  mm/dd/yy  hh:mm ss.s
         AFFIL SIZE:   160  STACK SIZE:    64  DIRECTORY:   2048  MODIFIED   mm/dd/yy  hh:mm ss.s
                                                               REDEFINED  mm/dd/yy  hh:mm ss.s
                                                               ALTERED    mm/dd/yy  hh:mm ss.s
         DESCRIPTION:
         ACCESS:

CULL DBA                         CORP                          CREATED    mm/dd/yy  hh:mm ss.s   IDMSDDDL
                                                               SIGNED ON  mm/dd/yy  hh:mm ss.s
         AFFIL SIZE:    32  STACK SIZE:   128  DIRECTORY:   2048  MODIFIED   mm/dd/yy  hh:mm ss.s
                                                               REDEFINED  mm/dd/yy  hh:mm ss.s
                                                               ALTERED    mm/dd/yy  hh:mm ss.s
         DESCRIPTION: INITIAL DBA GROUP USER
         ACCESS:

ENK                              CORP                          CREATED    mm/dd/yy  hh:mm ss.s   IDBCAT
                                                               SIGNED ON  mm/dd/yy  hh:mm ss.s
         AFFIL SIZE:   160  STACK SIZE:    64  DIRECTORY:   2048  MODIFIED   mm/dd/yy  hh:mm ss.s
                                                               REDEFINED  mm/dd/yy  hh:mm ss.s
                                                               ALTERED    mm/dd/yy  hh:mm ss.s
         DESCRIPTION:
         ACCESS:

HANEL01                          CORP                          CREATED    mm/dd/yy  hh:mm ss.s   IDBCAT
                                                               SIGNED ON  mm/dd/yy  hh:mm ss.s
         AFFIL SIZE:   160  STACK SIZE:    64  DIRECTORY:   2048  MODIFIED   mm/dd/yy  hh:mm ss.s
                                                               REDEFINED  mm/dd/yy  hh:mm ss.s
                                                               ALTERED    mm/dd/yy  hh:mm ss.s
         DESCRIPTION:
         ACCESS:

IDBSYSTEM                        CORP                          CREATED    mm/dd/yy  hh:mm ss.s   IDBCAT
                                                               SIGNED ON  mm/dd/yy  hh:mm ss.s
         AFFIL SIZE:   160  STACK SIZE:    64  DIRECTORY:   2048  MODIFIED   mm/dd/yy  hh:mm ss.s
                                                               REDEFINED  mm/dd/yy  hh:mm ss.s
                                                               ALTERED    mm/dd/yy  hh:mm ss.s
         DESCRIPTION:
         ACCESS:      FOUNDATION                        ACCESS LOCK
```

Field Descriptions

A description of the fields in the sample report follows:

USER NAME

Identifies the users defined to the catalog.

OWNER NAME

Identifies CORP as the owner of each user.

TIME STAMP: DATE/TIME

Identifies the date and time stamps for the user:

CREATED

Specifies the date the user was defined to the catalog.

SIGNED ON

Specifies the date the user last signed on to ASF or IDB.

MODIFIED

Is currently an unused field.

REDEFINED

Is currently an unused field.

ALTERED

Specifies the date the catalog definition for the user was last modified.

USER

Identifies the user responsible for the time stamp (IDMSDDDL is displayed for CULL DBA).

Memory requirements

Identifies memory requirements for the user:

AFFIL SIZE

Indicates the number of bytes required to hold the list of groups with which the user is affiliated.

STACK SIZE

Indicates the number of bytes required to hold the bill-of-material structure explosion/implosion levels.

DIRECTORY

Is currently an unused field.

DESCRIPTION

Displays the user description defined to the catalog.

ACCESS

Identifies the access control specified for the user:

FOUNDATION

Identifies the user as a member of the catalog foundation; catalog foundation members cannot be deleted or renamed.

NO DUPLICATES

Indicates that duplicate names are not allowed for objects and folders owned by the user.

NO PROPAGATION

Indicates that ambiguous associations involving duplicate names are not allowed.

ACCESS LOCK

Indicates that the user is restricted from signing on.

ENCRYPT

Specifies that the user's password is encrypted.

DREPORT 094 - Folder Detail Report

Contents

The Folder Detail report provides information about all folders defined to the catalog.

Sample DREPORT 094:

```
REPORT NO. 94                                DATA DICTIONARY REPORTER  REL nn.n                          mm/dd/yy PAGE   1
DREPORT 094                                            FOLDER DETAIL

  FOLDER NAME                    OWNER NAME              TIME STAMP:    DATE       TIME        USER


DBA FOLDER                       IDBSYSTEM                 CREATED    mm/dd/yy  hh:mm ss.s   IDBCAT
                                                           ACCESSED   mm/dd/yy  hh:mm ss.s
                                                           MODIFIED   mm/dd/yy  hh:mm ss.s
                                                           REDEFINED  mm/dd/yy  hh:mm ss.s
                                                           ALTERED    mm/dd/yy  hh:mm ss.s
        DESCRIPTION:
        ACCESS:      FOUNDATION

FOLD                             PAGT001                   CREATED    mm/dd/yy  hh:mm ss.s   PAGT001
                                                           ACCESSED   mm/dd/yy  hh:mm ss.s
                                                           MODIFIED   mm/dd/yy  hh:mm ss.s
                                                           REDEFINED  mm/dd/yy  hh:mm ss.s
                                                           ALTERED    mm/dd/yy  hh:mm ss.s
        DESCRIPTION:
        ACCESS:

PRIVATE FOLDER                   IDBSYSTEM                 CREATED    mm/dd/yy  hh:mm ss.s   IDBCAT
                                                           ACCESSED   mm/dd/yy  hh:mm ss.s
                                                           MODIFIED   mm/dd/yy  hh:mm ss.s
                                                           REDEFINED  mm/dd/yy  hh:mm ss.s
                                                           ALTERED    mm/dd/yy  hh:mm ss.s
        DESCRIPTION:
        ACCESS:      FOUNDATION
```

Field Descriptions

A description of the fields in the sample report follows:

FOLDER NAME

Identifies the folders defined to the catalog.

OWNER NAME

Identifies the owner of each folder.

TIME STAMP: DATE/TIME

Identifies date and time stamps for the folder:

CREATED

Specifies the date the folder definition was created in the catalog.

ACCESSED

Is used for object and user entities only.

MODIFIED

Is currently an unused field.

REDEFINED

Is currently an unused field.

ALTERED

Specifies the date the catalog definition for the folder was last modified.

USER

Identifies the user responsible for the time stamp.

DESCRIPTION

Displays the folder description defined to the catalog.

ACCESS

Indicates whether the folder is a member of the catalog foundation (FOUNDATION). Catalog foundation members cannot be deleted or renamed.

DREPORT 095 - Object Detail Report

Contents

The Object Detail report provides information about all objects defined to the catalog.

Sample DREPORT 095:

```
REPORT NO. 95                                  DATA DICTIONARY REPORTER  REL nn.n                          mm/dd/yy PAGE   1
DREPORT 095                                              OBJECT DETAIL

  OBJECT NAME                     OWNER NAME              TIME STAMP:    DATE       TIME        USER


$OBJECT-SECURITY-NAME-TABLE$     IDBSYSTEM                  CREATED    mm/dd/yy  hh:mm ss.s   CULL DBA
                                                            ACCESSED   mm/dd/yy  hh:mm ss.s   CULL DBA
         OBJECT TYPE: DATATABLE    ID:      21             MODIFIED   mm/dd/yy  hh:mm ss.s
                                                            REDEFINED  mm/dd/yy  hh:mm ss.s   CULL DBA
                                                            ALTERED    mm/dd/yy  hh:mm ss.s
         DESCRIPTION:
         ACCESS:

$SECURITY-RUNTIME-TABLE$         IDBSYSTEM                  CREATED    mm/dd/yy  hh:mm ss.s   CULL DBA
                                                            ACCESSED   mm/dd/yy  hh:mm ss.s   CULL DBA
         OBJECT TYPE: DATATABLE    ID:      20             MODIFIED   mm/dd/yy  hh:mm ss.s
                                                            REDEFINED  mm/dd/yy  hh:mm ss.s   CULL DBA
                                                            ALTERED    mm/dd/yy  hh:mm ss.s
         DESCRIPTION:
         ACCESS:

$SRT-OST-CROSS-REFERENCE$        IDBSYSTEM                  CREATED    mm/dd/yy  hh:mm ss.s   CULL DBA
                                                            ACCESSED   mm/dd/yy  hh:mm ss.s   CULL DBA
         OBJECT TYPE: DATATABLE    ID:      22             MODIFIED   mm/dd/yy  hh:mm ss.s
                                                            REDEFINED  mm/dd/yy  hh:mm ss.s   CULL DBA
                                                            ALTERED    mm/dd/yy  hh:mm ss.s
         DESCRIPTION:
         ACCESS:

$UNSTRUCTURED-IDB-OBJECT$        IDBSYSTEM                  CREATED    mm/dd/yy  hh:mm ss.s   IDBCAT
                                                            ACCESSED   mm/dd/yy  hh:mm ss.s   MJH
         OBJECT TYPE: DATATABLE    ID:     101             MODIFIED   mm/dd/yy  hh:mm ss.s
                                                            REDEFINED  mm/dd/yy  hh:mm ss.s   PAGTO01
                                                            ALTERED    mm/dd/yy  hh:mm ss.s
         DESCRIPTION:
         ACCESS:

CULPRITS                         CARNE01                    CREATED    mm/dd/yy  hh:mm ss.s   NBC
                                                            ACCESSED   mm/dd/yy  hh:mm ss.s   CARNE01
         OBJECT TYPE: DATATABLE    ID:     111             MODIFIED   mm/dd/yy  hh:mm ss.s
                                                            REDEFINED  mm/dd/yy  hh:mm ss.s   NBC
                                                            ALTERED    mm/dd/yy  hh:mm ss.s   NBC
         DESCRIPTION: CULPRIT Tests out in ProTesT
         ACCESS:
```

Field Descriptions

A description of the fields in the sample report follows:

OBJECT NAME

Identifies the objects in the catalog.

OWNER NAME

Identifies the owner of each object.

TIME STAMP: DATE/TIME

Identifies date and time stamps for the object:

CREATED

Specifies the date the object definition was defined to the catalog.

ACCESSED

Specifies the date the object was last accessed.

MODIFIED

Is currently an unused field.

REDEFINED

Is currently an unused field.

ALTERED

Specifies the date the catalog definition for the object was last modified.

USER

Identifies the user responsible for the time stamp.

OBJECT TYPE

Identifies the type of object being described as GRAPH, DATATABLE, MESSAGE, PROCEDURE, MODEL, WORKSHEET, PICTURE, DOCUMENT, GRAPH FORMAT, SYSTEM, DOS, SYNONYM, or OLQ REPORT.

ID

Identifies the table definition number.

DESCRIPTION

Displays the object description defined to the catalog.

ACCESS

Indicates whether the object is a member of the catalog foundation (FOUNDATION). Catalog foundation members cannot be renamed or deleted.

DREPORT 096 - Catalog Summary Key Report

Contents

The Catalog Summary Key report provides information about selected entities defined to the catalog. The selection is based on a key, which consists of an owner name and entity name. Any catalog entity except the passkey entity can be used as the key.

The following figure shows sample output for DREPORT 096. The DREPORT and KEY parameters used to create the sample report are:

```
DREPORT=096
 KEY CAT-ENTRY-CALCKEY-160
*'MJH                              BIRDS                          '
```

Sample DREPORT 096:

```
REPORT NO. 96                              DATA DICTIONARY REPORTER  REL nn.n                          mm/dd/yy PAGE   1
DREPORT 096                                        CATALOG SUMMARY

                                    ENTRY
               ENTRY NAME            TYPE      TDN                          DESCRIPTION

MJH                                USER
                                                    OWNER:  CORP
. THRUSH                           DATATABLE    120
```

Field Descriptions

A description of the fields in the sample report follows:

ENTRY NAME

Identifies the entities being described.

ENTRY TYPE

Identifies the entity as CORP, GROUP, USER, FOLDER, or an object type. Object types can be GRAPH, DATATABLE, MESSAGE, PROCEDURE, MODEL, WORKSHEET, PICTURE, DOCUMENT, GRAPH FORMAT, SYSTEM, DOS, or SYNONYM.

TDN

Identifies the table definition number of the object.

DESCRIPTION

Identifies the entity description defined to the catalog.

OWNER

Identifies the owner of the catalog entity.

DREPORT 097 - Catalog Detail Key Report

Contents

The Catalog Detail Key report provides detailed information about selected entities, including their entity types, descriptions, and passkey allocations. The selection is made based on a key, which includes an owner name and member name. Any catalog entity except the passkey entity can be used as the key.

The following figure shows sample output for DREPORT 097. The DREPORT and KEY parameters used to create this sample report are:

```
DREPORT=097
 KEY CAT-ENTRY-CALCKEY-160
*'CORP                          CARNE01                         '
```

Sample DREPORT 097:

```
REPORT NO. 97                              DATA DICTIONARY REPORTER  REL nn.n              mm/dd/yy        PAGE   1
DREPORT 097                                     CATALOG DETAIL

ENTRY NAME                          TYPE    DESCRIPTION




CARNE01                             USER
                                              OWNER:  CORP
                                              AFFIL SIZE:   160  STACK SIZE:    64  DIRECTORY:   2048
                                              ACCESS:      FOUNDATION NO DUPLICATES NO PROPAGATION ACCESS LOCK ENCRYPT
                                                           CREATED    mm/dd/yy  hh:mm ss.s   CULL DBA
                                                           ACCESSED   mm/dd/yy  hh:mm ss.s
                                                           MODIFIED   mm/dd/yy  hh:mm ss.s
                                                           REDEFINED  mm/dd/yy  hh:mm ss.s
                                                           ALTERED    mm/dd/yy  hh:mm ss.s

. CULPRITS                          DATATABLE CULPRIT Tests out in ProTesT
                                              OWNER:  CARNE01
                                              OBJECT TYPE: DATATABLE   ID:      111
                                              ACCESS:
                                                           CREATED    mm/dd/yy  hh:mm ss.s   NBC
                                                           ACCESSED   mm/dd/yy  hh:mm ss.s   CARNE01
                                                           MODIFIED   mm/dd/yy  hh:mm ss.s
                                                           REDEFINED  mm/dd/yy  hh:mm ss.s   NBC
                                                           ALTERED    mm/dd/yy  hh:mm ss.s   NBC
```

Field Descriptions

A description of the fields in the sample report follows:

ENTRY NAME

Identifies the entity being described.

TYPE

Identifies the entity as CORP, GROUP, USER, FOLDER, or an object type. Object types can be GRAPH, DATATABLE, MESSAGE, PROCEDURE, MODEL, WORKSHEET, PICTURE, DOCUMENT, GRAPH FORMAT, SYSTEM, DOS, SYNONYM, or OLQ REPORT.

DESCRIPTION

Displays the entity description defined to the catalog.

OWNER

Identifies the owner of each entity.

Memory requirements

Identifies memory requirements for the user:

AFFIL SIZE

Indicates the number of bytes required to hold the list of groups with which the user is affiliated.

STACK SIZE

Indicates the number of bytes required to hold the bill-of-material structure explosion/implosion levels.

DIRECTORY

Is currently an unused field.

ACCESS

Indicates the access control specified for the entity:

FOUNDATION

Identifies the entity as a member of the catalog foundation; members of the catalog foundation cannot be renamed or deleted.

NO DUPLICATES

(Users and CORP only) Indicates that duplicate names are not allowed for objects and folders owned by the listed entity.

NO PROPAGATION

(Users and CORP only) Indicates that ambiguous associations involving duplicate names are not allowed.

ACCESS LOCK

(Users only) Indicates that the user is restricted from signing on.

ENCRYPT

Specifies that the user's password is encrypted.

Date/time stamp

Information is listed, including the user responsible for the time stamp (IDMSDDDL is displayed for catalog entities):

CREATED

Specifies the date the object was defined to the catalog.

ACCESSED

Specifies the date the object was last accessed.

MODIFIED

Is currently an unused field.

REDEFINED

Is currently an unused field.

ALTERED

Specifies the date the catalog definition for the entity was last modified.

Passkey information

Lists the following:

PASSKEYS GIVEN

Identifies the passkeys given to groups or users for access to the listed entity.

PASSKEYS HELD

Identifies the passkeys held by the listed entity for access to specific entities.

Chapter 4: DC/UCF System Reports—CREPORTS

This section contains the following topics:

Overview (see page 143)
Uses for DC/UCF System Reports (see page 144)
Summary of CREPORTs (see page 144)
Producing DC/UCF System Reports (see page 146)
CA ADS Parameter Reports (CREPORTs 040 and 045) (see page 148)
Defined Devices Report (CREPORT 029) (see page 152)
Defined Messages Report (CREPORT 028) (see page 154)
Destination Reports (CREPORTs 007 and 024) (see page 155)
Load Area Report (CREPORT 050) (see page 156)
Mapping Reports (CREPORTs 030 through 035) (see page 157)
Nodes and Resource Table Reports (CREPORTS 043 and 044) (see page 161)
Module Text to Card Utility (CREPORT 051) (see page 164)
Module Text to File Utility (CREPORT 052) (see page 165)
Network Description Reports (CREPORTs 001-003, 014-018) (see page 166)
CA OLQ Reports (CREPORTs 041 and 046) (see page 174)
Program Description Reports (CREPORTs 004 and 019) (see page 177)
Queue Description Reports (CREPORTs 006, 022, and 023) (see page 181)
SQL CACHE Reports (CREPORTs 047 and 048) (see page 182)
Symbol Table Report (CREPORT 053) (see page 183)
System Options Reports (CREPORTs 011 and 025) (see page 184)
Task Description Reports (CREPORTs 005, 020, and 021) (see page 197)
Builder Codes (see page 202)

Overview

The CA IDMS/DC and CA IDMS UCF (DC/UCF) system reports describe the dictionary entities used to define the characteristics and components of an executable DC/UCF system. The DC/UCF system reports document information maintained in the DDLDML, DDLDCMSG, and DDLDCLOD areas of the dictionary. The records being reported on are defined to the dictionary through various CA IDMS system software components, such as the Data Dictionary Definition Language (DDDL) compiler and the system generation compiler.

Note: For details about the structure of these records and how the records are defined to the dictionary, see the *CA IDMS Dictionary Structure Reference Guide*.

Uses for DC/UCF System Reports

DC/UCF system reports can be used to:

- Provide descriptions of executable systems and of systems that have been defined but not generated.

  DC/UCF system object reports describe executable systems (that is, systems for which GENERATE has been issued in the system generation compile); these reports access dictionary object records. DC/UCF system source reports describe systems that have been defined to the dictionary but not yet generated; these reports access dictionary source records.

  Note: For more information about source and object records, see the *CA IDMS System Generation Guide*.

  Because the dictionary structure includes source and object records, you can modify the system definitions without affecting the runtime definitions. The system source reports can be used to review the proposed modifications before they are implemented. Once you are satisfied with the new configuration, you can update the runtime definitions by issuing a system generation GENERATE command for any system that you want to update.
- Review the screen/data field relationships for mapping operations.
- Monitor the contents of the load area.
- Monitor the messages defined to the DDLDCMSG area of the dictionary.

Summary of CREPORTs

The DC/UCF system reports are presented in alphabetical order, with the following exceptions:

- The Physical Terminal by Line and Logical Terminal by Physical Terminal reports (CREPORTs 016 and 018) are discussed under Network Description Reports (CREPORTs 001-003, 014-018) (see page 166).
- The Listing of Map reports (CREPORTs 032 through 035) are discussed under Mapping Reports (CREPORTs 030 through 035) (see page 157).

The following table lists the CREPORTs in the order of presentation in this chapter. For a list of CREPORTs by report number, see the CREPORT Listing table in Appendix D.

CREPORT Number	CREPORT Name
040	ADS/OnLine Parameters Report (Object)
045	ADS/OnLine Parameters Report (Source)
029	Defined Devices

CREPORT Number	CREPORT Name
028	Defined Messages(1)
007	Destination Report (Object)
024	Destination Report (Source)
050	Load Area Report(1)
030	Map Record Indices
031	Map Field Indices
032	Listing of Maps by Panel
033	Listing of Maps
034	Listing of Maps by Record Name
035	Listing of Maps by Element Name
043	Listing of Nodes
044	Listing of Defined Resources
051	Module Text to Card Utility
052	Module Text to File Utility
001	Network Description by Line (Object)
014	Network Description by Line (Source)
002	Network Description by Physical Terminal (Object)
015	Network Description by Physical Terminal (Source)
003	Network Description by Logical Terminal (Object)
017	Network Description by Logical Terminal (Source)
016	Physical Terminals within Line (Source)
018	Logical Terminal by Physical Terminal (Source)
041	OLQ Report (Object)
046	OLQ Report (Source)
004	Program Description Report (Object)
019	Program Description Report (Source)
006	Queue Description Report (Object)
022	Queue Description Report (Source)
023	Queue Description within Task Report (Source)
047	SQL CACHE Report (Source)

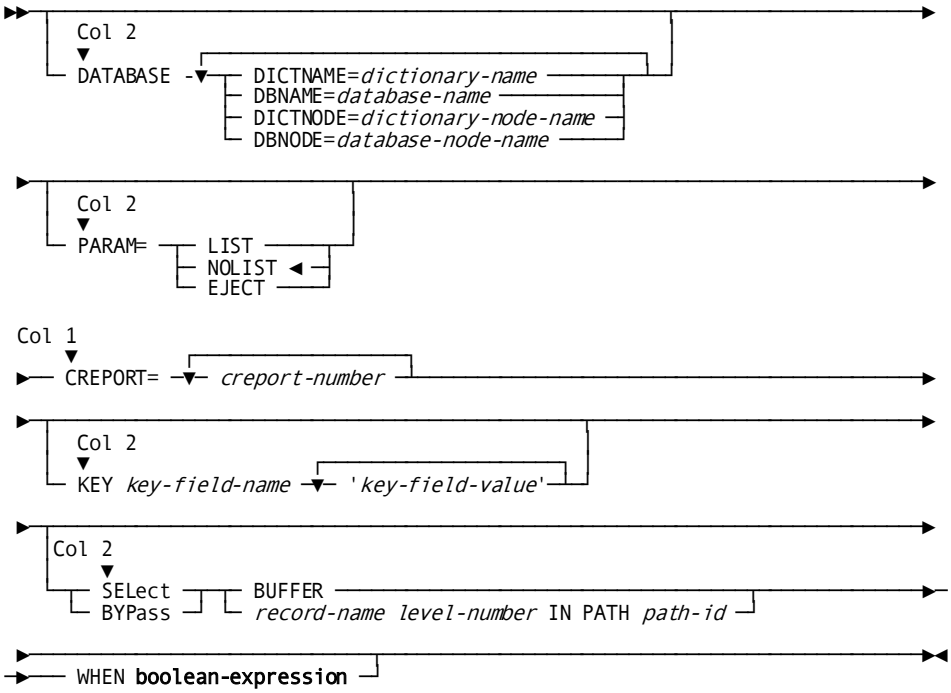
CREPORT Number	CREPORT Name
048	SQL CACHE Report (Object)
053	Symbol Table Report
011	System Options Report (Object)
025	System Options Report (Source)
005	Task Description Report (Object)
020	Task Description Report (Source)
021	Task Description within Program Report (Source)

Note: Reports 28 and 50 must be run alone.

Producing DC/UCF System Reports

A DC/UCF system report is produced by submitting a batch job that includes the standard JCL for the CA Culprit for CA IDMS report writer and report-specific control statements. JCL for z/OS, z/VSE, and z/VM operating systems is shown in Appendixes A through D, respectively.

Syntax



Parameters

General syntax rules for the CA IDMS reports are described in detail in Chapter 1. Syntax rules specific to the CREPORTs are discussed as follows:

CREPORT=*creport-number*

Identifies the DC/UCF system report being requested. CREPORT must begin in column 1; all other parameters begin in column 2.

Creport-number is a 3-digit number that identifies the report module. Leading zeros can be omitted.

With the exception of CREPORTs 028 and 050, which must be run alone, multiple reports can be requested in the same job run.

Examples

Example 1

These control statements can to used to request CREPORTS 001, 010, and 041. Optionally, you can omit leading zeros for the report modules and/or use a blank or equal sign to separate each report. The report modules used to run the reports are in the CULPDICT dictionary; data for the reports is taken from the DOCUDICT dictionary.

```
 DATABASE DICTNAME=CULPDICT DBNAME=DOCUDICT
CREPORT=001,010,041
```

The same reports can be requested by specifying each report on a separate line:

```
CREPORT=1
CREPORT=10
CREPORT=41
```

Example 2

These control statements can be used to produce a report on the task occurrence BYE. The report modules used to produce the report are in the default dictionary; data for the report is taken from the DOCUNWK dictionary.

```
 DATABASE DBNAME=DOCUNWK
CREPORT=005
 SEL BUFFER WHEN TASK-NAME-023 EQ 'BYE'
```

Example 3

These control statements can be used to produce a report on all message occurrences whose id begins with DC301. The report modules used to produce the report are in the CULPDICT dictionary; data for the report is taken from the default dictionary.

```
 DATABASE DICTNAME=CULPDICT
CREPORT=005
 SEL MSG-KEY-116 WHEN MSG-KEYRED-116 EQ 'DC301'
```

Example 4

These control statements can be used to request the three network object reports. A parameter listing is requested for CREPORT 001; parameter listings are not requested for CREPORTs 002 and 003.

```
 DATABASE DICTNAME=CULPDICT DBNAME=TESTDICT
 PARAM=LIST
CREPORT=1
 PARAM=NOLIST
CREPORT=2,3
```

CA ADS Parameter Reports (CREPORTs 040 and 045)

Contents

The CA ADS parameter reports provide information about the CA ADS runtime environment. The CA ADS definitions for each system are represented in the dictionary by the CVGDEFS-142 record, which is a logical extension of the SYS-041 record.

CREPORT 040 describes the CA ADS environment for executable systems; CREPORT 045 describes the CA ADS environment for systems that have been defined but not generated. The fields and format of the two reports are the same.

Sample CREPORT 040:

```
REPORT NO. 40                              CA IDMS/DC ADS ONLINE REPORT   REL nn.n                          mm/dd/yy PAGE   1
CREPORT 040                                    LISTING OF ADS ONLINE PARAMETERS
                                                       OBJECT REPORT


 SYSTEM   AUTO    PRIMARY   SECONDARY     TCF     MAXIMUM    MENU            PRIMARY   SECONDARY  BUILDER     ACTION     ACTIV
VERSION  DIALOG  TASK CODE  TASK CODE  TASK CODE   LINKS      IS               POOL       POOL      CODE       CODE       LOG
   99             ADS        ADS2       ADS2T       10      USER               4084       4084    R                      YES

      DIAGNOSTIC  NEWPAGE  RESOURCES   - - AUTOSTATUS - -   - COBOL MOVE -    - - - DIALOG STATISTICS - - - -RECORD     STORAGE
        SCREEN    MAPOUT      ARE      ENABLED   OPT/MAND ENABLED  OPT/MAND   ON/OFF    SEL/ALL   INTERVAL COMPRESSION    MODE
          YES       NO       FIXED       YES     OPTIONAL   NO     OPTIONAL    OFF        ALL          0       NO       SGENSIZE

        - - FAST MODE THRESHOLD / INTERVAL - -       - - - - - - - - - STATUS DEFINITION RECORD - - - - - - - - -
                    OFF                   1         OPTIONAL   ADSO-STAT-DEF-REC               VERSION    1


 SYSTEM   AUTO    PRIMARY   SECONDARY     TCF     MAXIMUM    MENU            PRIMARY   SECONDARY  BUILDER     ACTION     ACTIV
VERSION  DIALOG  TASK CODE  TASK CODE  TASK CODE   LINKS      IS               POOL       POOL      CODE       CODE       LOG
   105            ADS        ADS2       ADS2T       10      USER               4084      33000    R                      YES

      DIAGNOSTIC  NEWPAGE  RESOURCES   - - AUTOSTATUS - -   - COBOL MOVE -    - - - DIALOG STATISTICS - - - -RECORD     STORAGE
        SCREEN    MAPOUT      ARE      ENABLED   OPT/MAND ENABLED  OPT/MAND   ON/OFF    SEL/ALL   INTERVAL COMPRESSION    MODE
          YES       NO       FIXED       YES     OPTIONAL   NO     OPTIONAL     ON        ALL        200       NO       SGENSIZE

        - - FAST MODE THRESHOLD / INTERVAL - -       - - - - - - - - - STATUS DEFINITION RECORD - - - - - - - - -
                    OFF                   1         OPTIONAL   ADSO-STAT-DEF-REC               VERSION    1
```

Field Descriptions

A description of the fields in the sample report follows:

SYSTEM VERSION

Identifies the system associated with these CA ADS parameters.

AUTO DIALOG

Identifies the mainline dialog that is executed immediately at run time (the mainline dialog menu screen is bypassed).

PRIMARY TASK CODE

Identifies the task code entered by the user to initiate the CA ADS runtime system. This task code must invoke the program ADSORUN1; the default is ADS.

SECONDARY TASK CODE

Identifies the task code that invokes the program ADSOMAIN; the default is ADS2TASK.

TCF TASK CODE

Identifies the task code that invokes the program ADSOMAIN while running under the transfer control facility (TCF). The default is ADS2T.

MAXIMUM LINKS

Identifies the maximum number of dialog levels that can be defined by each respective CA ADS application thread. The default is 10.

MENU IS

Identifies which dialog names will be displayed on the CA ADS menu. USER (default) indicates that only those mainline dialog names for which the current user is authorized will be displayed; ALL indicates that all mainline dialog names known to the DC/UCF system will be displayed.

PRIMARY POOL

Indicates the size of the primary record buffer. The default is 4000.

SECONDARY POOL

Indicates the size of the secondary pool to be allocated from DC storage when the primary pool is full. The default is 2000.

BUILDER CODE

Identifies the builder code for the record that defines the CA ADS parameters. For a description of builder codes, see Builder Codes table at the end of this chapter.

ACTION CODE

Indicates whether the record that defines the CA ADS parameters has been updated (U) or deleted (D). Blank indicates that the CA ADS parameters have not been updated since the last time the system was generated.

ACTIV LOG

Indicates whether the activity log for the database commands in a dialog is on (YES) or off (NO).

DIAGNOSTIC SCREEN

Indicates whether CA ADS bypasses display of the Dialog Abort Information screen when the runtime system abends a dialog. YES indicates that the diagnostic screen will not be displayed; NO indicates that the screen will be displayed.

NEWPAGE MAPOUT

Indicates how a mapout is performed when a dialog's map is already displayed as the result of a previous mapout. NO indicates that CA ADS will transmit only the map's data fields and message field; YES indicates that CA ADS will always perform a new page mapout.

RESOURCES ARE

Specifies whether information from the CA ADS Terminal Block (OTB) and the variable dialog block (VDB) in the storage pool will be written to the scratch area (DDLDCSCR) across a pseudo-converse.

FIXED indicates that the storage is not relocatable; the buffer pools remain in the storage pool provided that the fast mode threshold has not been exceeded. RELOCATABLE indicates that the storage is relocatable; the buffer pools are written to scratch across a pseudo-converse and the storage is freed.

AUTOSTATUS ENABLED

Indicates whether (YES) or not (NO) the AUTOSTATUS setting for dialog generation sessions is enabled.

AUTOSTATUS OPT/MAND

Indicates whether (OPTIONAL) or not (MANDATORY) the application developer is allowed to override the default AUTOSTATUS setting during dialog generation.

COBOL MOVE ENABLED

Indicates how CA ADS moves the result of an arithmetic or assignment command into the target field. YES instructs CA ADS to use COBOL rules; NO instructs CA ADS to use CA ADS rules.

COBOL MOVE OPT/MAND

Indicates whether (OPTIONAL) or not (MANDATORY) the application developer is allowed to change the COBOL MOVE setting on a dialog-by-dialog basis.

DIALOG STATISTICS ON/OFF

Indicates whether (YES) or not (NO) dialog statistics are collected for CA ADS dialogs.

DIALOG STATISTICS SEL/ALL

Indicates whether statistics are collected for dialogs on a dialog-by-dialog basis (SELECTED) or for all dialogs (ALL).

DIALOG STATISTICS INTERVAL

Specifies the interval at which dialog statistics are written to the log file after being accumulated the indicated number of times. 0 indicates that statistics are written to the log file after an application terminates.

RECORD COMPRESSION

Indicates whether (YES) or not (NO) record buffer blocks (RBBs) are compressed across a pseudo-converse when they are retained in the storage pool.

STORAGE MODE

Indicates how storage for record buffer blocks (RBBs) is to be allocated. SGENSIZE uses the buffer sizes specified in the PRIMARY POOL and SECONDARY POOL parameters of the ADSO system generation statement; CALCULATED uses the calculated size of the RBBs for an application or dialog when allocating storage.

FAST MODE THRESHOLD / INTERVAL

Indicates whether (ON) or not (OFF) the CA ADS runtime system writes record buffer blocks (RBBs) and statistics control blocks to scratch across a pseudo-converse. INTERVAL specifies the size of the fast mode threshold.

STATUS DEFINITION RECORD

Specifies the name and version of the status definition record and whether (OPTIONAL) or not (MANDATORY) the application developer is allowed by override the default status definition record specification during dialog generation.

Defined Devices Report (CREPORT 029)

Contents

The Defined Devices report provides information about line and physical terminal device types supported by DC/UCF. CREPORT 029 obtains information from the DCDEVICES-127 dictionary record, which is stored at installation. DC/UCF compilers use DCDEVICES-127 record occurrences when handling device-dependent syntax.

Sample CREPORT 029:

```
REPORT NO. 29                              CA IDMS/DC SYSTEM GENERATION REPORT   REL nn.n                     mm/dd/yy PAGE    1
CREPORT 029                                               DEFINED DEVICES


                                                                                DEVICE     ACCESS
     DEFINED DEVICE     LOWER PARSE MODULE     LINE/TERMINAL     TERMINAL CODE     CODE       METHOD


        ASR33              RHDCP06E              TERM               19

        ASYNC              RHDCL06E              LINE                               6          E

        BSC1               RHDCL0BB              LINE                               B          B

        BSC2               RHDCL0CB              LINE                               C          B

        BSC3               RHDCL0DB              LINE                               D          B

        BULK               RHDCP0LS              TERM               47

        CCI                RHDCL0LS              LINE                               L          S
        CONSOLE            RHDCL04W              LINE                               4          W
```

Field Descriptions

A description of the fields in the sample report follows:

DEFINED DEVICE

Identifies the device type being described.

LOWER PARSE MODULE

Identifies the name of the syntax tree used to handle the device.

LINE/TERMINAL

Indicates whether the device being described is a line or a physical terminal.

TERMINAL CODE

Identifies the terminal type code of the physical terminal. For a list of the possible values, see the *CA IDMS DSECT Reference Guide*.

DEVICE CODE and ACCESS METHOD

Identify the line type code and the line/terminal access method code for each line.

COMMENTS

Displays any comments associated with the occurrence. This field is not shown in the sample report.

Defined Messages Report (CREPORT 028)

Contents

The Defined Messages report provides information about messages that have been defined for the DC/UCF system. Messages are represented in the DDLDCMSG area of the dictionary by the MESSAGE-116 record.

Sample CREPORT 028:

```
REPORT NO. 28                          CA IDMS/DC SYSTEM GENERATION REPORT   REL nn.n                    mm/dd/yy PAGE    29
CREPORT 028                                        DEFINED MESSAGES


MESSAGE ID:   AB030026       BUILDER CODE:  D


SEVERITY: 6   DESTINATIONS:                                          DESTINATION ID:
MESSAGE TEXT  LINE NUMBER     1:
DATA TYPE NOT RECOGNIZED
  COMMENT NUMBER      100:
  COMMENT NUMBER      100:  MODULE(S) = ______
  COMMENT NUMBER      200:
  COMMENT NUMBER      300:  ADDITIONAL INFORMATION ...
  COMMENT NUMBER      400:
  COMMENT NUMBER      500:


MESSAGE ID:   AB030057       BUILDER CODE:  D


SEVERITY: 6   DESTINATIONS:                                          DESTINATION ID:
MESSAGE TEXT  LINE NUMBER     1:
UNDETERMINED SYNTAX ERROR IN INSTRUCTION
  COMMENT NUMBER      100:
  COMMENT NUMBER      100:  MODULE(S) = ______
  COMMENT NUMBER      200:
```

Field Descriptions

A description of the fields in the sample report follows:

MESSAGE ID

Specifies the identifier assigned to the message.

BUILDER CODE

Identifies the builder code for the record that defines the message. For a description of builder codes, see Builder Codes table at the end of this chapter.

SEVERITY

Identifies the severity level assigned to the message.

DESTINATIONS

Identifies the destinations to which the message line is routed.

DESTINATION ID

Identifies the terminal to which the message line is routed when the destination identifier flag is set.

MESSAGE TEXT and LINE NUMBER

Identify the text of the message. When multiple lines are defined for a message, each line is listed separately.

COMMENT NUMBER

Identifies comments associated with the message.

Destination Reports (CREPORTs 007 and 024)

Contents

Destination reports provide information about destination occurrences that have been defined to the dictionary. CREPORT 007 provides destination information for executable systems; these destinations are represented in the dictionary by the DESTLST-027 record. CREPORT 024 provides information for systems that have been defined but not generated; these destinations are represented in the dictionary by the DEST-028 record. The fields and format of the two reports are the same.

Sample CREPORT 007:

```
REPORT NO. 07                          CA IDMS/DC SYSTEM GENERATION REPORT   REL nn.n                    mm/dd/yy PAGE    1
CREPORT 007                                   SYSTEM NAME:   DCSYSTEM
                                              SYSTEM VERSION:  105
                                              DESTINATION REPORT

                DESTINATION                BUILDER        ACTION CODE        VERSION        DISABLED        MEMBER TYPE

                  USWSWDPL                    R                                   1          YES             TERMINAL

       TERMINAL NAME

       USWSWDPL
```

Field Descriptions

A description of the fields in the sample report follows:

SYSTEM NAME and VERSION

Identify the name and version number of the system associated with the destination being described.

DESTINATION

Identifies the destination being described.

BUILDER

Identifies the builder code for the record that defines the destination. For a description of builder codes, see Builder Codes table at the end of this chapter.

ACTION CODE

Indicates whether the destination occurrence has been updated (U) or deleted (D). A blank indicates that the destination has not been changed since that last time the system was generated.

VERSION

Indicates the version number of the destination occurrence.

DISABLED

Indicates whether the destination is disabled at system startup.

MEMBER TYPE

Indicates whether the destination group is made up of users or logical terminals.

USER NAME or TERMINAL NAME

Identifies the users in the destination group. If the destination group is made up of logical terminals, TERMINAL NAME is displayed. If the destination group is made up of users, USER NAME is displayed.

Load Area Report (CREPORT 050)

Contents

The Load Area report provides information about load modules. Load modules are stored in the DDLDCLOD area of the dictionary and are represented in the dictionary by the LOADHDR-156 record.

Sample CREPORT 050:

REPORT NO. 50 CA IDMS/DC LOAD AREA REPORT REL nn.n mm/dd/yy PAGE 1
CREPORT 050 LOAD MODULES

MODULE NAME	VERSION	NUM RLD ENTRIES	ENTRY PT ADDRESS	MODULE LENGTH	COMPILE DATE	COMPILE TIME	DELETE FLAG	MODULE TYPE
$ACF@TAT	1	0	0	118	mm/dd/yy	hhmmss	OFF	TABLE
IDMSCSTB	99	5	0	563	mm/dd/yy	hhmmss	OFF	UNDEFINED
IDMSCSTB	105	5	0	930	mm/dd/yy	hhmmss	OFF	UNDEFINED
IDMSCSTB	777	5	0	563	mm/dd/yy	hhmmss	OFF	UNDEFINED
SQACVSS1	1	121	0	1,640	mm/dd/yy	hhmmss	OFF	SUBSCHEMA
SQACVSS2	1	84	0	1,176	mm/dd/yy	hhmmss	OFF	SUBSCHEMA

Field Descriptions

A description of the fields in the sample report follows:

MODULE NAME and VERSION

Identify the name and version number of the load module being described.

NUM RLD ENTRIES

Identifies the number of entries in the relocation dictionary (RLD) for the load module.

ENTRY PT ADDRESS

Identifies the entry point address of the load module.

MODULE LENGTH

Identifies the length, in bytes, of the object text.

COMPILE DATE

Identifies the date the load module was created.

COMPILE TIME

Identifies the time the load module was created.

DELETE FLAG

Indicates whether the load module has been logically deleted. The flag is set ON when a new module is generated for the load module in use or when a deletion is requested. The module is not eligible for replacement when the flag is OFF.

MODULE TYPE

Identifies the type of load module: access module, subschema, map, CA ADS dialog, edit/code table, or mainline dialog.

Mapping Reports (CREPORTs 030 through 035)

Contents

Mapping reports describe the interrelationships among maps, panels, map fields, and panel fields that have been defined for DC/UCF systems. Maps are represented in the dictionary by the MAP-098 record; map fields are represented by the MAPFLD-124 record. The following table summarizes each report:

Mapping Report ID	Report Type	Description
CREPORT 030	Map Record Indices	Lists map record elements sorted on map name

Mapping Report ID	Report Type	Description
CREPORT 031	Map Field Indices	Lists map panel-fields sorted on map name
CREPORT 032	Maps by Panel	Lists map occurrences sorted on panel name
CREPORT 033	Maps in alphabetic order	Lists all map occurrences in alphabetic order
CREPORT 034	Maps by Record Name	Lists map occurrences by map record name
CREPORT 035	Maps by Element Name	Lists map occurrences sorted on map element name

Sample CREPORT 030:

```
REPORT NO. 30                          CA IDMS/DC MAPPING REPORT   REL nn.n                    mm/dd/yy PAGE   1
CREPORT 030                                  MAP NAME:    ADMI01M
                                             MAP VERSION:     1
                                             MAP RECORD INDICES

              CURSOR                ALARM     UNLOCK     RESET     MAP DATE     MAP TIME     FIELD COUNT     RECORD COUNT
   OLMPF-0003                        NO        YES        YES       mm/dd/yy     hhmmss             4              1

           RECORD NAME              INDEX

   EMPLOYEE                            1
```

Sample CREPORT 031:

```
REPORT NO. 31                          CA IDMS/DC MAPPING REPORT   REL nn.n                    mm/dd/yy PAGE   1
CREPORT 031                                  MAP NAME:    ADMI01M
                                             MAP VERSION:     1
                                             MAP FIELD INDICES

              CURSOR                ALARM     UNLOCK     RESET     MAP DATE     MAP TIME     FIELD COUNT     RECORD COUNT
   OLMPF-0003                        NO        YES        YES       mm/dd/yy     hhmmss             4              1

            FIELD NAME              INDEX

   EMP-ID-0415                         2
   EMP-NAME-0415                       3
```

Sample CREPORT 032:

```
REPORT NO. 32                          CA IDMS/DC MAPPING REPORT   REL nn.n                        mm/dd/yy PAGE   1
CREPORT 032                                   LISTING OF MAPS BY PANEL
                                              PANEL NAME:    ABCD01M OLMPANEL


                                              PANEL VERSION:     1
                                              PANEL BUILDER: G

       MAP NAME        MAP VERSION        BUILDER        MAP DATE        MAP TIME        FIELD COUNT        RECORD COUNT

       ABCD01M              1              G          mm/dd/yy         hhmmss               0                  0
```

Sample CREPORT 033:

```
REPORT NO. 33                          CA IDMS/DC MAPPING REPORT   REL nn.n                        mm/dd/yy PAGE   1
CREPORT 033
                                              LISTING OF MAPS

    MAP NAME     MAP VERSION     MAP BUILDER              PANEL NAME              PANEL VERSION     MAP DATE     MAP TIME

    ABCD01M           1            G          ABCD01M-OLMPANEL                       1          mm/dd/yy      hhmmss
    ABIF01M           1            G          ABIF01M-OLMPANEL                       1          mm/dd/yy      hhmmss
    ADDS01M           1            G          ADDS01M-OLMPANEL                       1          mm/dd/yy      hhmmss
    ADMI01M           1            G          ADMI01M-OLMPANEL                       1          mm/dd/yy      hhmmss
    ADMS01M           1            G          ADMS01M-OLMPANEL                       1          mm/dd/yy      hhmmss
```

Sample CREPORT 034:

```
REPORT NO. 34                          CA IDMS/DC MAPPING REPORT   REL nn.n                        mm/dd/yy PAGE   1
CREPORT 034
                                              LISTING OF MAPS BY RECORD NAME
                                              RECORD NAME:    ACEXE00M-MAP-RECORD
                                              RECORD VERSION:     1

            MAP NAME            MAP VERSION                    PANEL NAME                    PANEL VERSION

            AD21M007                 1             AD21M007-OLMPANEL                             1

            AD21M008                 1             AD21M008-OLMPANEL                             1
            AD21M008                 1             AD21M008-OLMPANEL                             1

            AD21M010                 1             AD21M010-OLMPANEL                             1
```

Sample CREPORT 035:

```
REPORT NO. 35                          CA IDMS/DC MAPPING REPORT   REL nn.n                        mm/dd/yy PAGE   1
CREPORT 035                                   LISTING OF MAPS BY ELEMENT NAME
                                              ELEMENT NAME:   ADMIT-DATE-0430
                                              OF
                                              RECORD NAME:    HOSPITAL-CLAIM
                                              RECORD VERSION:     1

            MAP NAME            MAP VERSION                    PANEL NAME                    PANEL VERSION

            A310M4                   1             A310M4-OLMPANEL                               1
```

Field Descriptions

Because many of the field names on the map reports are the same from report to report, a description of all the fields is presented once in alphabetical order.

ALARM

Indicates whether the terminal's audible alarm will sound automatically when the map is written out to the screen (CREPORTs 030 and 031 only).

BUILDER

Identifies the builder code for the record that defines the map (CREPORT 032 only). For a description of builder codes, see the Builder Codes table at the end of this chapter.

CURSOR

Identifies the name of the panel field in which the cursor appears after a mapout operation (CREPORTs 030 and 031 only).

ELEMENT NAME

Identifies the name of a data field (record element) whose map associations are being described (CREPORT 035 only).

FIELD COUNT

Indicates the number of nonliteral fields in the map (CREPORTs 030, 031, and 032 only).

FIELD NAME

Identifies the panel fields that appear in the map (CREPORT 031 only).

INDEX

Indicates the order in which the record or record fields are used by the map (CREPORTs 030 and 031 only).

MAP BUILDER

Identifies the builder code for the record that defines the map occurrence (CREPORT 033 only). For a description of builder codes, see the Builder Codes table at the end of this chapter.

MAP DATE

Identifies the date the map occurrence was defined to the dictionary (CREPORTs 030, 031, 032, and 033 only).

MAP NAME and MAP VERSION

Identify the map occurrence being described.

MAP TIME

Identifies the time the map was last compiled with critical changes (CREPORTs 030, 031, 032, and 033 only).

PANEL NAME and PANEL VERSION

Identify the panel associated with the map being described (CREPORTs 032, 033, 034, and 035 only).

PANEL BUILDER

Identifies the builder code for the record that defines the panel occurrence (CREPORT 032 only). For a description of builder codes, see the Builder Codes table at the end of this chapter.

RECORD COUNT

Indicates the number of records used by the map.

RECORD NAME

Identifies the record used by the map (CREPORTs 030, 031, and 032 only).

RESET

Indicates whether all modified data tags are reset when the map is mapped out (YES) or remain unchanged (NO) (CREPORTs 030 and 032 only).

UNLOCK

Indicates whether the keyboard will be locked (NO) or unlocked (YES) when the map is mapped out (CREPORTs 030 and 032 only).

Nodes and Resource Table Reports (CREPORTS 043 and 044)

Contents

The Nodes and Resource Table reports provide information on all the resources that have been defined to the systems, including the location where the resource resides and the type of communication method used to access these nodes. The following table below summarizes each report:

CREPORT 043	Listing of Nodes	Lists all the nodes sorted on access type
CREPORT 044	Listing of Defined Resources	Lists all the resources sorted on database or destination name

Sample CREPORT 043 .:

```
REPORT NO. 43                          CA IDMS/DC NODE NAME REPORT   REL nn.n                    mm/dd/yy PAGE   1
CREPORT 043                                    LISTING OF NODES

     SYSTEM VERSION                                                                          BUILDER      ACTION
        NUMBER          NODE NAME      ACCESS TYPE      DEFAULT NODE      CV NUMBER      SVC NUMBER       CODE         CODE

            71          A06IVT12       CCI                                                     R
            71          SYSTEM22       CCI                                                     R
            71          SYSTEM92       CCI                                                     R
            71          DBDCGR         GROUP            NULL                                   R
            71          DBGNOD1        GROUP            NULL                                   R
            71          DBGNOD2        GROUP            LOCAL                                  R
            71          DBGNOD3        GROUP            SYSTEM72                               R
            71          IDMSGR         GROUP            NULL                                   R
            71          SYSTEM71       LOCAL                                                   R
            71          CVNOD1         SVC                                 101          173   R
            71          CVNOD2         SVC                                 102          102   R
            71          SYSTEM72       TCP/IP                                                  R
            71          SYSTEM73       TCP/IP                                                  R
            71          SYSTEM74       VTAM                                                    R
            71          TECHDC99       VTAM                                                    R
```

Sample CREPORT 044:

```
REPORT NO. 44                          CA IDMS/DC RESOURCE TABLE REPORT   REL nn.n                    mm/dd/yy PAGE   1
CREPORT 044                                    LISTING OF DEFINED RESOURCES

         SYSTEM VERSION                                                                  BUILDER          ACTION
            NUMBER          DATABASE NAME          DESTINATION          NODE NAME        CODE             CODE

                71              DBNAM1                                   LOCAL            R
                71              DBNAM2                                   DBGNOD1          R
                71                                     DBGNOD2          LOCAL            R
```

Field Descriptions

A description of the fields in the sample reports follows:

SYSTEM VERSION NUMBER

Identifies the version number of the system associated with the nodes or resources.

NODE NAME

Identifies the name of the node.

ACCESS TYPE

Specifies the communication method used to access the corresponding node.

DEFAULT NODE

For access type GROUP only. Identifies the default node to use if access to the requested group fails.

CV NUMBER

For access type SVC only. Identifies the number of the central version.

SVC NUMBER

For access type SVC only. Identifies the number of the SVC through which the system will send packets to the corresponding node.

BUILDER CODE

Identifies the builder code for the record that defines the node or resource.

For a description of building codes, see Table 4-1 at the end of this chapter.

ACTION CODE

Identifies whether the node or resource occurrence has been updated (U) or deleted (D). A blank indicates that it has not been changed since the last time the system was generated.

DATABASE NAME

Identifies the name of the database that is included in the resource name table.

DESTINATION

Identifies a nodename to which requests for data can be sent.

Module Text to Card Utility (CREPORT 051)

The Module Text to Card utility lets you punch the module source code of a specified module to cards. The CREPORT and KEY parameters used to punch module CREPORT 011 to card are:

```
CREPORT=051
 KEY MOD-NAME-067 'CREPORT 011'
```

How to Run CREPORT 051

You must run CREPORT 051 alone. To run CREPORT 051, include the following specification in the JCL:

- **For z/OS systems:**

  ```
  //SYSPCH  DD  SYSOUT=B,DCB=BLKSIZE=80
  ```

- **For z/VSE systems:**

  ```
  // ASSGN SYSPCH,X'ccc'
  ```

ccc

device assignment (channel and unit) for punched output

- **For z/VM and z/VM systems:**

  ```
  FILEDEF SYSPCH DISK syspch output a
  ```

syspch output a

file identifier of the card-image output file

How to Request Card-Image Listing

No *printed* output is produced by this report other than an accounting of the number of records written. To request a card-image listing of the module instead of punched cards, include the following JCL specification:

- **For z/OS systems:**

  ```
  //SYSPCH  DD  SYSOUT=A
  ```

- **For z/VSE systems:**

  ```
  // ASSGN SYSPCH,X'ppp'
  ```

ppp

printer device assignment

- **For z/VM and z/VM systems:**

  ```
  FILEDEF SYSPCH PRINTER
  ```

Module Text to File Utility (CREPORT 052)

The module text to output file utility (CREPORT 052) lets you output module source code to a disk file. The CREPORT and KEY parameters used to output module CREPORT 011 to file are shown below:

```
CREPORT=052
 KEY MOD-NAME-067 'CREPORT 011'
```

How to Run CREPORT 052

CREPORT 052 must be run alone. To run CREPORT 052, add the following specification to the JCL:

- **For z/OS files:**

```
//SYS020  DD  DSN=user.textfile,DISP=(NEW,CATLG),
//            DCB=(RECFM=FB,LRECL=80,BLKSIZE=320),
//            UNIT=disk,VOL=SER=nnnnnn
```

user.textfile	data set name of the output file
disk	symbolic device name of disk
nnnnnn	volume serial number of disk

- **For z/VSE tape files:**

```
// TLBL  SYS020,'user.text'
   ASSGN SYS020,TAPE,VOL=nnnnnn
```

user.text	file-id of tape file
nnnnnn	tape volume serial number

- **For z/VSE disk files:**

```
// DLBL    SYS020,'user.text'
// EXTENT  SYS020,nnnnnn
   ASSGN   SYS020,DISK,VOL=nnnnnn,SHR
```

user.text	file-id of disk file
nnnnnn	volume serial number of the disk file

- **For z/VM and z/VM files:**

  ```
  FILEDEF SYS020 DISK nonprint file a (RECFM FB LRECL 80 BLKSIZE 320
  ```

nonprint file a	filename, filetype, and filemode of the nonprint/nonpunch output file

Network Description Reports (CREPORTs 001-003, 014-018)

Contents

Network reports (CREPORTs 001, 002, 003, 014, 015, 016, 017, and 018) describe the lines, physical terminals, and logical terminals associated with a DC/UCF system. CREPORTs 001, 002, and 003 describe the networks that have been defined for executable systems; CREPORTs 014 through 018 describe networks for systems that have been defined but not generated.

Summary of Network Description Reports

CREPORT Module	CREPORT Name
001	Network Description by Line (Object Report)
002	Network Description by Physical Terminal (Object Report)
003	Network Description by Logical Terminal (Object Report)
014	Network Description by Line (Source Report)
015	Network Description by Physical Terminal (Source Report)
016	Physical Terminals within Line (Source Report)
017	Network Description by Logical Terminal (Source Report)
018	Logical Terminal by Physical Terminal (Source Report)

Sample Reports

The following figures show sample output for CREPORTs 001, 002, 016, and 018. Sample output for CREPORTs 014, 015, and 017 is not shown; the fields in these three reports are the same as those in CREPORTs 001, 002, and 003, respectively.

```
REPORT NO. 01                          CA IDMS/DC SYSTEM GENERATION REPORT   REL nn.n                    mm/dd/yy PAGE     6
CREPORT 001                                   SYSTEM NAME:   DCSYSTEM
                                              SYSTEM VERSION:  110
                                              NETWORK DESCRIPTION BY LINE

            NAME      BUILDER ACTION VERSION


                                                 TYPE   BUFFSIZE -----DDNAMES----- DISABLED
LINE        CONSOLE      R               1  CONSOLE       0                     NO


                                                TYPE MAX ERR  LINE LEN  PAGE LEN  MODEL DISABL ASCII LNDEL CHRDEL CANCEL PRT CLS RPT CT
  PTERM     OPERATOR     R               1  OPER     3         0         0           NO     NO     00    00     00         1      0


                                              PRIORITY CASE  DISABLED PRINTER  TASK CODE
    LTERM  CONSOLE      R               1       240 UPPER   NO       NO
Sample CREPORT 001:
```

Sample CREPORT 002:

```
REPORT NO. 02                          CA IDMS/DC SYSTEM GENERATION REPORT   REL nn.n                    mm/dd/yy PAGE     3
CREPORT 002                                   SYSTEM NAME:   DCSYSTEM
                                              SYSTEM VERSION:  110
                                         NETWORK DESCRIPTION BY PHYSICAL TERMINAL

  PTRM     LINE    LTERM                      LINE   DEV  MAX  LINE  PAGE                          CHR        PRT          REPEAT
  NAME     NAME     NAME   BLDR ACTION  VERS   TYPE   TYPE ERR  LEN   LEN  MODEL DISABL ASCII LNDEL DEL CANCEL CLS   DEST   COUNT

PDDSVT30 DDSVTAM           R             1 DDSVTAM VTAM    3    0     0        NO     NO     00   00   00     1            0
PDDSVT40 DDSVTAM           R             1 DDSVTAM VTAM    3    0     0        NO     NO     00   00   00     1            0
PDDSVT50 DDSVTAM           R             1 DDSVTAM VTAM    3    0     0        NO     NO     00   00   00     1            0
PDDSVT60 DDSVTAM           R             1 DDSVTAM VTAM    3    0     0        NO     NO     00   00   00     1            0
PDDSVT70 DDSVTAM           R             1 DDSVTAM VTAM    3    0     0        NO     NO     00   00   00     1            0
PDDSVT80 DDSVTAM           R             1 DDSVTAM VTAM    3    0     0        NO     NO     00   00   00     1            0
PDDSVT80 DDSVTAM           R             1 DDSVTAM VTAM    3    0     0        NO     NO     00   00   00     1            0
PDDSVT90 DDSVTAM           R             1 DDSVTAM VTAM    3    0     0        NO     NO     00   00   00     1            0
PDDSV110 DDSVTAM           R             1 DDSVTAM VTAM    3    0     0        NO     NO     00   00   00     1            0
PDDSV111 DDSVTAM           R             1 DDSVTAM VTAM    3    0     0        NO     NO     00   00   00     1            0
PU01C    A44IVTMC LU01C    R             1 VTAMLU  SNALU   3    0     0        NO     NO     00   00   00     1            0
PU01D    A44IVTMD LU01D    R             1 VTAMLU  SNALU   3    0     0        NO     NO     00   00   00     1            0
PU02C    A44IVTMC LU02C    R             1 VTAMLU  SNALU   3    0     0        NO     NO     00   00   00     1            0
PU02D    A44IVTMD LU02D    R             1 VTAMLU  SNALU   3    0     0        NO     NO     00   00   00     1            0
PU03C    A44IVTMC LU03C    R             1 VTAMLU  SNALU   3    0     0        NO     NO     00   00   00     1            0
PU03D    A44IVTMD LU03D    R             1 VTAMLU  SNALU   3    0     0        NO     NO     00   00   00     1            0
PU04C    A44IVTMC LU04C    R             1 VTAMLU  SNALU   3    0     0        NO     NO     00   00   00     1            0
PU04D    A44IVTMD LU04D    R             1 VTAMLU  SNALU   3    0     0        NO     NO     00   00   00     1            0
SIMPTE   SIMLINE  SIMLTE    R             1 S3270Q  S3277   3   80    24   2    NO     NO     00   00   00     1            0
SYSOUTT  SYSOUTL  SYSOUTT   R             1 SYSOUTL SYSOU   3  132    60   0    NO     NO     00   00   00     1            0
TCPLIS01 TCPIP    TCPLIS01  R             1 SOCKET  LISTN   9    0     0        NO     NO     00   00   00     1            0
TCPLIS02 TCPIP    TCPLIS02  R             1 SOCKET  LISTN   9    0     0        NO     NO     00   00   00     1            0
TCPLIS03 TCPIP    TCPLIS03  R             1 SOCKET  LISTN   9    0     0        NO     NO     00   00   00     1            0
TCPLIS04 TCPIP    TCPLIS04  R             1 SOCKET  LISTN   9    0     0        NO     NO     00   00   00     1            0
TCPLIS05 TCPIP    TCPLIS05  R             1 SOCKET  LISTN   9    0     0        NO     NO     00   00   00     1            0
TCPLIS06 TCPIP    TCPLIS06  R             1 SOCKET  LISTN   9    0     0        NO     NO     00   00   00     1            0
```

Sample CREPORT 016:

```
REPORT NO. 16                              CA IDMS/DC SOURCE REPORT   REL nn.n                          mm/dd/yy PAGE   2
CREPORT 016                                      SYSTEM NAME:   DCSYSTEM
                                                 SYSTEM VERSION:   99
                                               PHYSICAL TERMINALS WITHIN LINE

                                                      LINE NAME:     UCFLINE

 PTERM NAME  BUILDER  ACTION  VERSION   TYPE  MAX-ERR  LINE-LEN  PAGE-LEN  MODEL  DISABLED  ASCII  LNDEL  CHRDEL  CANCEL  P-CLASS

  UCFPTB1       G                 1    2F         3         0         0     00     NO        NO     00     00      00         1

  UCFPTB2       G                 1    2F         3         0         0     00     NO        NO     00     00      00         1

  UCFPTB3       G                 1    2F         3         0         0     00     NO        NO     00     00      00         1

  UCFPTB4       G                 1    2F         3         0         0     00     NO        NO     00     00      00         1

  UCFPTB5       G                 1    2F         3         0         0     00     NO        NO     00     00      00         1
```

Sample CREPORT 018:

```
REPORT NO. 18                              CA IDMS/DC SOURCE REPORT   REL nn.n                          mm/dd/yy PAGE   1
CREPORT 018                                      SYSTEM NAME:   DCSYSTEM
                                                 SYSTEM VERSION:   99
                                               LOGICAL TERMINAL BY PHYSICAL TERMINAL

    PTERM NAME      LTERM NAME      BUILDER      ACTION      VERSION      PRIORITY      CASE      DISABLED      PRINTER      TASK CODE

     OPERATOR       CONSOLE           G                        1           240        UPPER       NO           NO

     UCFPTB1        UCFLTB1           G                        1                      UPPER       NO           NO

     UCFPTB2        UCFLTB2           G                        1                      UPPER       NO           NO

     UCFPTB3        UCFLTB3           G                        1                      UPPER       NO           NO

     UCFPTB4        UCFLTB4           G                        1                      UPPER       NO           NO
```

Field Descriptions

Because many of the field names in the network reports are the same from report to report, all the fields in the sample reports are described once, in alphabetical order:

ACTION

Indicates whether the entity occurrence being described has been updated (U) or deleted (D) or remain unchanged (blank) since the most recent generate.

APPLICATION ID

Defines the VTAM application id used by the system at run time to sign the line on to VTAM (CREPORTs 001 and 014 only).

APPLICATION PW

Identifies the optional password used by the system to sign on to VTAM (CREPORTs 001 and 014 only).

ASCII

Indicates whether the physical terminal supports the ASCII character set (CREPORTs 001, 002, 014, 015, and 016 only).

BACKLOG

Identifies the maximum length for the queue of pending connections TCP/IP allows before disallowing connection requests (CREPORTs 001 and 014 only).

BUFFSIZE

Identifies the line I/O page buffer size, in bytes, for the line (CREPORTs 001 and 014 only).

BUILDER

Identifies the builder code for the record that defines the entity occurrence. For a description of builder codes, see Builder Codes table at the end of this chapter.

CANCEL

Identifies the control character used as the attention key by the physical terminal device type (CREPORTs 001, 002, 014, 015, and 016 only).

CASE

Identifies the character set the logical terminal uses on input (CREPORTs 001, 003, 014, 017, and 018 only).

CHRDEL

Identifies the control character that is used to delete characters (CREPORTs 001, 002, 014, 015, and 016 only).

DDNAMES

Identifies the ddname and/or file id for the line, as specified in the system startup JCL (CREPORTs 001 and 014 only).

DEST

Specifies the line destination.

DEV TYPE or TYPE

(Lines only) Identifies the generic linetype for the terminals that are included in the line group (CREPORTs 001, 002, 014, 015, and 016 only).

HOST NAME/ADDRESS

Identifies the name or the IP address of the host (CREPORTs 001 and 014 only).

IDLE

Identifies the time interval a non-permanent DDS connection stays in an idle state after the corresponding DDS request has finished. (CREPORTs 001 and 014 only).

LINE-LEN

Identifies the maximum line length in characters for the physical terminal (CREPORTs 001, 002, 014, 015, and 016 only).

DISABLED/DISABL

Indicates whether the line group, physical terminal, or logical terminal is disabled when the system is started.

LNDEL

Identifies the control character (flush character) that is used to delete lines (CREPORTs 001, 002, 014, 015, and 016 only).

MAX ERR

Indicates the number of retries allowed after a terminal I/O error before the teleprocessing monitor disables the physical terminal (CREPORTs 001, 002, 014, 015, and 016 only).

MAX CON

For a DDSTCPIP type PTERM, identifies the maximum number of active connections allowed from the local system. For a LISTENER type PTERM, identifies the maximum number of active BULK PTERM that can be started from that listener (CREPORTs 001 and 014 only).

MODE

Indicates whether the mode of the task attached by the listener. Valid values are SYSTEM or USER. (CREPORTs 001 and 014 only)

MODEL

Identifies the model number of the physical terminal (CREPORTs 001, 002, 014, 015, and 016 only).

NAME

Identifies the entity being described (can be preceded by SYSTEM, LINE, LTERM, or PTERM).

PAGE LEN

Identifies the maximum page size, in text lines, for the physical terminal (CREPORTs 001, 002, 014, 015, and 016 only).

PARM

Identifies a string that is passed to the task attached by generic listening (CREPORTs 001 and 014 only).

PERM CON

Identifies the number of permanent DDS connections that can exist between the host and the target system (CREPORTs 001 and 014 only).

PLUG-IN

Identifies the name of the plug-in module that implements support for specific TCP/IP stack implementations (CREPORTs 001 and 014 only).

PORT

Indicates the number of the listener port (CREPORTs 001 and 014 only).

PORT-RANGE

Identifies the range of port numbers that are used to BIND the local sockets explicitly. Each time a new DDS connection is established, the first free port from the range is selected and associated (bound) with the corresponding socket. If no free port is found, the request is aborted.(CREPORTs 001 and 014 only).

PRINTER/PRINT

(IDMS DC only) Indicates whether the logical terminal is a 3280-type printer (CREPORTs 001, 003, 014, 017, and 018 only).

PRINTER CLASS(ES)/PRT CLS

(IDMS DC only) Defines the default printer class for the physical terminal.

PRIORITY/PRIOR

Identifies the dispatching priority for requests to IDMS DC from the logical terminal (CREPORTs 001, 003, 014, 017, and 018 only).

REPEAT COUNT/RPT CT

Indicates the number of times to clone the physical and eventual associated logical terminal when a central version is started.

REQUEST PARAM LIST

Indicates the number of write-only input/output requests that can be handled at one time by the local VTAM line group (CREPORTs 001 and 014 only).

STACK NAME

Identifies the job name of the TCP/IP stack (CREPORTs 001 and 014 only).

TARGET NAME/ADDRESS

Identifies the name or the IP address of the target host (CREPORTs 001 and 014 only).

TASK CODE

Identifies the name of the task code to start when a connection request arrives at a listener PTERM (CREPORTs 001 and 014 only).

TGT PORT

Identifies the number of the target port (CREPORTs 001 and 014 only).

TYPE

(Physical terminals only) Identifies the device type of the physical terminal. See DEV TYPE above for a description of line type.

VERSION

Identifies the version number of the entity occurrence being described.

CA OLQ Reports (CREPORTs 041 and 046)

Contents

CA OLQ reports provide information about CA OLQ runtime parameters that have been defined for each system. CA OLQ parameters are represented in the dictionary by the CVGDEFS-142 record, which is a logical extension of the SYS-041 record.

CREPORT 041 describes CA OLQ parameters for executable systems; CREPORT 046 describes CA OLQ parameters for systems that have been defined but not generated. The fields and format of the two reports are the same.

Sample CREPORT 041:

```
REPORT NO. 41                              CA IDMS/DC OLQ REPORT   REL nn.n                          mm/dd/yy PAGE   1
CREPORT 041                                   LISTING OF OLQ PARAMETERS
                                                 OBJECT REPORT

 SYSTEM   OLQ
VERSION TRANS ID

    99  OLQ      PFKEY MOD BUILDER ACTION    PRINT       PRINT   INTERUPT INT STORAGE  REPORT FILE     INPUT     REPORT   MAXIMUM
                    NAME     CODE   CODE   LINE SIZE   PAGE SIZE  COUNT    PAGE SIZE    PAGE SIZE    LINE SIZE RETENTION RETENTION
                                R                80          60      100      1,920        4,000           4         1         5

                  REPORT    SQL   BATCH  CONTINUATION SEPARATOR COMMENT      MENU         MAX        MAX REP   MAX REP   MAX SORT
                   DICT    ACCESS CLASS      CHAR        CHAR     CHAR       MODE       INTERRUPT      PAGES     COUNT   STORAGE
                          OLQSQL     0        -           !        ;      ALLOWED                0       30         5        40

   105  OLQ      PFKEY MOD BUILDER ACTION    PRINT       PRINT   INTERUPT INT STORAGE  REPORT FILE     INPUT     REPORT   MAXIMUM
                    NAME     CODE   CODE   LINE SIZE   PAGE SIZE  COUNT    PAGE SIZE    PAGE SIZE    LINE SIZE RETENTION RETENTION
                                R                80          60      100      1,920        4,000           4         1         5

                  REPORT    SQL   BATCH  CONTINUATION SEPARATOR COMMENT      MENU         MAX        MAX REP   MAX REP   MAX SORT
                   DICT    ACCESS CLASS      CHAR        CHAR     CHAR       MODE       INTERRUPT      PAGES     COUNT   STORAGE
                          OLQSQL     0        -           !        ;      ALLOWED                0       30         5        40
```

Field Descriptions

A description of the fields in the sample report follows:

SYSTEM VERSION

Identifies the system whose OLQ runtime definitions are being described.

OLQ TRANS ID

Identifies the task code used to invoke the CA OLQ runtime system.

PFKEY MOD NAME

Identifies the module that contains the default control key assignments for CA OLQ.

BUILDER CODE

Identifies the builder code for the record that defines the CA OLQ parameters. For a description of builder codes, see Builder Codes table at the end of this chapter.

ACTION CODE

Indicates whether the record that defines the CA OLQ parameters has been updated (U) or deleted (D) or remains unchanged (blank) since the most recent generate.

PRINT LINE SIZE

Identifies the line length, in characters, for CA OLQ report output on TTY-type terminals.

PRINT PAGE SIZE

Identifies the page length, in lines, for CA OLQ report output on TTY-type terminals.

INTERRUPT COUNT

Indicates the maximum number of records that will be read by CA OLQ before requesting further terminal input.

INT STORAGE PAGE SIZE

Indicates the size, in bytes, of the CA OLQ internal storage pages used to store control data across a pseudo-converse.

REPORT FILE PAGE SIZE

Indicates the size, in bytes, for CA OLQ report file pages written to the DDLDCRUN area.

INPUT LINE SIZE

Identifies the number of lines on the screen that are available for input.

REPORT RETENTION

Identifies the default report retention time, in days.

MAXIMUM RETENTION

Identifies the maximum report retention time, in days.

REPORT DICT

Identifies the name of the dictionary in which catalog information about CA OLQ saved reports is stored.

SQL ACCESS

Indicates how SQL statements used to access a CA IDMS/DB database will be processed. OLQSQL indicates CA OLQ will process the statements; IDMSSQL indicates CA IDMS/DB will process the statements.

BATCH CLASS

(z/OS only) Identifies the print class used by CA OLQ when submitting batch jobs.

CONTINUATION CHAR

Identifies the continuation character for CA OLQ.

SEPARATOR CHAR

Identifies the separation character for CA OLQ.

COMMENT CHAR

Identifies the comment character for CA OLQ.

MENU MODE

Indicates whether menu mode is allowed.

MAX INTERRUPT

Indicates the maximum interrupt count that a user can specify at run time.

MAX REP PAGES

Indicates the maximum report size, in pages.

MAX REP COUNT

Indicates the maximum number of reports each user can save in the DDLDCRUN area.

MAX SORT STORAGE

Indicates the maximum amount of storage, in K bytes, that CA OLQ can use for sort operations.

Program Description Reports (CREPORTs 004 and 019)

Contents

Program description reports provide information about programs that have been included in a DC/UCF system. System-supplied programs, subschemas, database procedures, maps, edit and code tables, CA ADS dialogs, and user programs written in COBOL, PL/I, and Assembler are represented in the dictionary as program occurrences.

CREPORT 004 describes programs associated with executable systems; these programs are represented in the dictionary by the PROGLST-049 record. CREPORT 019 describes programs associated with systems that have been defined but not generated; these programs are represented by the PROG-051 record. The fields and format of the two reports are the same.

Sample CREPORT 004:

```
REPORT NO. 04                          CA IDMS/DC SYSTEM GENERATION REPORT   REL nn.n                    mm/dd/yy PAGE     1
CREPORT 004                                   SYSTEM NAME:   DCSYSTEM
                                              SYSTEM VERSION:  110
                                              PROGRAM DESCRIPTION

PROGRAM     TYPE         BUILDER ACTION VERSION


                                                        ERROR      DUMP                          SAVE
                                                ISA-SIZE  THRESHOLD  THRESHOLD  LOAD FROM  LANGUAGE  AREA  RESIDENT
$ACF@GEN  TABLE            R              1         0         5          0     LOADLIB    ASSEMBLER  NO     NO

                                              CONCURRENT  REUSABLE  REENTRANT  OVERLAYABLE DISABLED PROTECT  NEW COPY
                                                  YES       YES     REENTRANT      NO          NO      NO       NO

                                              MAINLINE   EXCLUDE     DIALOG                      MULTIPLE
                                              DIALOG    FROM MENU   STATS ON   DYNAMIC   MPMODE   ENCLAVE
                                                  NO        NO         NO        YES     SYSTEM     YES

                                                        ERROR      DUMP                          SAVE
                                                ISA-SIZE  THRESHOLD  THRESHOLD  LOAD FROM  LANGUAGE  AREA  RESIDENT
$ACF@TAT  TABLE            R              1         0         5          0     LOADLIB    ASSEMBLER  NO     NO

                                              CONCURRENT  REUSABLE  REENTRANT  OVERLAYABLE DISABLED PROTECT  NEW COPY
                                                  YES       YES     REENTRANT      NO          NO      NO       NO

                                              MAINLINE   EXCLUDE     DIALOG                      MULTIPLE
                                              DIALOG    FROM MENU   STATS ON   DYNAMIC   MPMODE   ENCLAVE
                                                  NO        NO         NO        YES     SYSTEM     YES
```

Field Descriptions

A description of the fields in the sample report follows:

SYSTEM NAME and VERSION

Identify the name and version of the system associated with the program occurrences being described.

PROGRAM

Identifies the program being described.

TYPE

Identifies the program occurrence as a PROGRAM, MAP, SUBSCHEMA, TABLE, DIALOG, ACCESS MODULE, or MAP HELP.

BUILDER

Identifies the builder code for the record that defines the program occurrence. For a description of builder codes, see Builder Codes table at the end of this chapter.

ACTION

Indicates whether the program occurrence has been updated (U) or deleted (D) or remains unchanged (blank) since the most recent generate.

VERSION

Identifies the version number associated with the program occurrence.

ISA-SIZE

(IDMS DC only) Indicates the amount of storage, in bytes, that is allocated for the program's initial storage area (ISA) (applies to Assembler and PL/I programs only).

ERROR THRESHOLD

(IDMS DC only) Indicates the number of program check errors that can occur before the program is disabled by the system.

DUMP THRESHOLD

(IDMS DC only) Indicates the maximum number of dumps to be taken for program check errors that occur in the program.

LOAD FROM

Indicates whether the program resides in a load library (LOADLIB) or in the load area of the dictionary (DICTIONARY).

LANGUAGE

Identifies the source language of the program.

SAVE AREA

Indicates whether a save area is acquired automatically before each execution of the program.

RESIDENT

Indicates whether the program is made resident when the DC/UCF system is started (YES) or whether the program is a nonresident program that is loaded into the storage pool on request (NO).

CONCURRENT

Indicates whether the program can process more than one request concurrently.

REUSABLE

Indicates whether the program is reusable.

REENTRANT

Indicates whether the program is fully reentrant, quasi-reentrant, or nonreentrant.

OVERLAYABLE

(IDMS DC only) Indicates whether the program can be overlaid in the program pool.

DISABLED

Indicates whether the program is disabled when the DC/UCF system is started.

PROTECT

Indicates whether the DC/UCF storage protection feature is in effect for the program.

NEW COPY

Indicates whether the new copy facility is enabled.

MAINLINE DIALOG

Indicates whether (YES) or not (NO) the program is a CA ADS mainline dialog.

EXCLUDE FROM MENU

For a CA ADS dialog, indicates whether (YES) or not (NO) the dialog will appear on the CA ADS menu screen.

DIALOG STATS ON

For a CA ADS dialog, indicates whether (YES) or not (NO) statistics are collected.

DYNAMIC

Indicates whether (YES) or not (NO) users are allowed to define additional versions of the program at run time either by means of the DCMT VARY DYNAMIC PROGRAM command or, if the program is eligible for automatic definition, through definition of null PDEs on the SYSTEM system generation statement.

MPMODE

Identifies the multiprocessing mode (MPMODE) for the program. SYSTEM directs DC/UCF to assign a mode to the program at execution time. ANY specifies an MPMODE of ANY.

MULTIPLE ENCLAVE

Indicates whether this program is eligible to use the same high level Language Environment process/enclave when multiple programs are executed in the same task.

Queue Description Reports (CREPORTs 006, 022, and 023)

Contents

Queue description reports provide information about queue occurrences associated with a DC/UCF system. CREPORT 006 describes queues associated with executable systems; these queues are represented in the dictionary by the QUEUELST-029 record. CREPORTs 022 and 023 describe queues associated with systems that have been defined but not generated; these queues are represented by the QUEUE-030 record. The fields and format of the three reports are almost identical.

Sample CREPORT 006:

```
REPORT NO. 06                              CA IDMS/DC SYSTEM GENERATION REPORT   REL nn.n                     mm/dd/yy PAGE    1
CREPORT 006                                       SYSTEM NAME:   DCSYSTEM
                                                  SYSTEM VERSION:    99
                                                  QUEUE DESCRIPTION


                                                                              THRESHOLD    UPPER                   QUEUE
          QUEUE          PROGRAM      TASK      BUILDER    ACTION    VERSION      VALUE      LIMIT    DISABLED    RETENTION


     OLQQNOTE            OLQSNOTE    OLQTNOTE      R          U           1           1          0       NO            1
```

Field Descriptions

A description of the fields in the sample report follows:

SYSTEM NAME and VERSION

Identifies the name and version number of the system associated with the queues being described.

QUEUE

Identifies the queue being described.

PROGRAM

Identifies the name of the initial program invoked by the task associated with the queue.

TASK

Identifies the task code for the task invoked when the number of entries in the queue reaches the limit defined with the THRESHOLD VALUE parameter (below).

BUILDER

Identifies the builder code for the record that defines the queue occurrence. For a description of builder codes, see the Dictionary Builder Codes table at the end of this chapter.

ACTION

Indicates whether the queue occurrence has been updated (U) or deleted (D) or remains unchanged (blank) since the most recent generate.

VERSION

Indicates the version number of the queue being described.

THRESHOLD VALUE

Indicates the number of entries that must be in the queue before the system invokes the task associated with the queue.

UPPER LIMIT

Indicates the maximum number of records that can be directed to the queue.

DISABLED

Indicates whether the queue is disabled at system startup.

QUEUE RETENTION

Indicates the queue retention period in days.

SQL CACHE Reports (CREPORTs 047 and 048)

Contents

SQL CACHE reports provide information about SQL CACHE parameters that have been defined for each system. SQL CACHE parameters are represented in the dictionary by the CVGDEFS-142 record, which is a logical extension of the SYS-041 record.

CREPORT 047 describes SQL CACHE parameters for systems that have been defined but not generated; CREPORT 048 describes SQL CACHE parameters for executable systems. The fields and the formats of the two reports are the same.

Sample CREPORT 048:

```
REPORT NO. 48                          CA IDMS SQL CACHE REPORT   REL nn.n                    mm/dd/yy PAGE     1
CREPORT 048                              LISTING OF SQL CACHE PARAMETERS
                                                OBJECT REPORT

         SYSTEM VERSION    99          DEFAULT CACHING IS OFF                          STATEMENTS


         SYSTEM VERSION   110          DEFAULT CACHING IS ON                       700 STATEMENTS
                                       EXCEPT CONNECT TO APPLDICT
                                       EXCEPT CONNECT TO TSTDICT
```

Field Descriptions

A description of the fields in the sample report follows:

SYSTEM VERSION

Identifies the system whose SQL CACHE runtime definitions are being described.

DEFAULT CACHING

Specifies whether caching of dynamic SQL statements is enable by default.

n STATEMENTS

Specifies the maximum number (n) of SQL statements that can be placed in SQL CACHE.

EXCEPT CONNECT TO

Identifies the name of a dictionary/catalog to which a user of the CV can connect. The connect-names form an exception list to the default caching specification.

Symbol Table Report (CREPORT 053)

Contents

The symbol table report lists information about symbol table load modules stored in the system dictionary DDLDCLOD area.

Sample CREPORT 053:

```
REPORT NO. 53                          CA IDMS/DC LOAD AREA REPORT    REL nn.n                    mm/dd/yy PAGE     1
CREPORT 053                                        SYMBOL TABLES

                                NUM RLD     ENTRY PT      MODULE      COMPILE      COMPILE
     MODULE NAME     VERSION    ENTRIES     ADDRESS       LENGTH        DATE         TIME

       ADMI01D           1          7           0          5,036     mm/dd/yy      hhmmss
       ADOLFIX           1          8           0          6,008     mm/dd/yy      hhmmss
       ADOL01D           1          7           0          7,976     mm/dd/yy      hhmmss
       ADRP01D           1         14           0          2,768     mm/dd/yy      hhmmss
       ANSI01D           1          7           0          6,144     mm/dd/yy      hhmmss
       BIFX01D3          1         21           0          3,408     mm/dd/yy      hhmmss
       BIFX02D           1         21           0          4,600     mm/dd/yy      hhmmss
       CLSTAX1           1          7           0          3,424     mm/dd/yy      hhmmss
       CLSTOX1           1          7           0          3,424     mm/dd/yy      hhmmss
       CLSTRHDX          1          7           0          3,424     mm/dd/yy      hhmmss
       CLSTRHDY          1          7           0          3,424     mm/dd/yy      hhmmss
```

Field Descriptions

A description of the fields in the sample report follows:

MODULE NAME

Name of the symbol table load module.

VERSION

Version number of the symbol table load module.

NUM RLD ENTRIES

Number of entries in the relocation dictionary (RLD) for the symbol table load module.

ENTRY PT ADDRESS

Entry point address of the symbol table load module.

MODULE LENGTH

Length, in bytes, of the object text for the symbol table load module.

COMPILE DATE

Date the symbol table load module was compiled (*mm/dd/yy*).

COMPILE TIME

Time the symbol table load module was compiled (*hhmmss*).

System Options Reports (CREPORTs 011 and 025)

Contents

System options reports provide detailed information about DC/UCF systems that have been defined to the dictionary. CREPORT 011 describes the options defined for executable systems; these systems are represented in the dictionary by the SYSMO-170 record. CREPORT 025 describes options defined for systems that have been defined but not generated; these systems are represented by the SYS-041 record. The fields and format of the two reports are the same.

Sample CREPORT 011:

```
REPORT NO. 11                                CA IDMS/DC SYSTEM GENERATION REPORT  REL nn.n    mm/dd/yy            PAGE     1
CREPORT 011                                       DC SYSTEM OPTIONS - SYSGEN

SYSTEM NAME                   VERSION  BUILDER  GENERATION ID  SYSTEM ID  OPERATING SYSTEM           DESCRIPTION
DCSYSTEM                        110        R       TECHD110    TECHD110        OS/MVS

DATE CREATED:   mm/dd/yy  PREPARED BY:  MET       DATE LAST USED:  mm/dd/yy  REVISED BY:  JOS

DC PARAMETERS:
   STORAGE ALLOCATION:   CWA   PROGRAM   STORAGE    STORAGE  REENTRANT  XA PROGRAM  XA STORAGE  XA REENTRANT   RELOCATABLE
                         SIZE  POOL(K)  CUSHION(K)  POOL(K)    POOL(K)    POOL(K)     POOL(K)      POOL(K)     THRESHOLD(%)
                        32000     600       100        700       400       1000        50000         9000          100

   RUNTIME ENVIRONMENT:  MAXIMUM        - - - - - - - - - - SYSTEM RUN UNITS - - - - - - - - - -          STORAGE   ALTERNATE  TICKER
                        TASKS  MSGDICT  SCRATCH/QUEUE  SIGNON/DEST  LOADER  SECURITY  SYSTEM/DEST  PROTECTION  PROT KEY  INTERVAL
                          113        4              4            4       4         4            4         YES          0         1

                         AUTOMATIC     - - - - - UNDEFINED LOADABLE - - -- - -      PRINTED   PRINTER  - - RESOURCE TIMEOUT - -
                         NEW COPY  SUBSCHEMAS  MAPS  TABLES  DIALOGS  ACCESS MODULES  REP RET CHECKPOINT INTERVAL PROGRAM VERSION
                           YES         YES       YES    YES     YES          YES          7       OFF        OFF    RHDCBYE    1

                                                                                    XA     MULTIPLE    TRANS
                         OLQ  ADSO  PF KEYS  OLM KEYS  PAGE REL  LOADLIST  SCRATCH   ENCLAVE    SHARING
                         YES  YES     YES      YES       NO      SYSLOAD      YES       NO        OFF

   INTERNAL              STG        LOCK       CALL       DBIO      EXTERNAL         STG        LOCK       CALL       DBIO
    LIMITS:             LIMIT      LIMIT      LIMIT      LIMIT       LIMITS:        LIMIT      LIMIT      LIMIT      LIMIT
     OFF                    0          0          0          0       OFF              0          0          0          0

   OPERATING SYSTEM      LOG TO      - - LOGGING INFORMATION - -        LOG      SVC
         INTERFACE       DATABASE  FILE 1  COUNT 1    FILE 2  COUNT 2  DEVICE   NUMBER
                          YES    CDMSLOGA        0                 0  DOS ONLY     175

                         3270 PRINT
                             KEY       WTO DESCRIPTION CODES                       WTO ROUTE CODES
                             PF12      NONE                                        01,02,11

   ERROR HANDLING:       INACTIVE   RUNAWAY   SYSTEM  SYSTEM   TRACE   USER  USERTRACE  ABRU  DEADLOCK
                         INTERVAL   INTERVAL   DUMP   TRACE   ENTRIES  TRACE  ENTRIES   SNAP  INTERVAL
                          NONE         10       YES     ON       9999   OFF        0     YES       1

   SYSTEM INTERNALS:         ABEND       DPE      ECB      RCE    RLE   STACKSIZE    PRIMARY    SECONDARY
                           STORAGE(WDS)   COUNT  LIST(WDS)  COUNT  COUNT    (WDS)      NULL PDES  NULL PDES
                                 1000     3000       226     4000  32000    2000            64         64

   STATISTICS OPTIONS:   TIME INTERVAL        BY TASK    BY TRAN    BY LINE    BY USER
                                    0           YES        YES        NO         YES          COLLECT

DB PARAMETERS:   JOURNAL   MAXIMUM     AREA      AREA   RETRIEVAL  UPDATE     SCRATCH/QUEUE     JOURNAL     JOURNAL
                RETRIEVAL  SYSLOCKS  THRESHOLD   RETRY   LOCKING   LOCKING JOURNAL BEFORE ONLY  FRAGMENT  TRANSACTION
                  NOJOUR     150000       1     FOREVER   NOLOCK    NOLOCK         YES            OFF          0

               ON COMMIT WRITE COMT                 ON ROLLBACK RETAIN ID

CV PARAMETERS:    CHKUSER           EXTERNAL  INTERNAL  MAXIMUM
                   TASKS   CVNUMBER    WAIT      WAIT     ERUS    RUPRTY
                     50      110     FOREVER   FOREVER      50        0

SYSCTL PARAMETERS:      DD NAME   DB NAME              NODE NAME
                       SYSCTL             DEFAULT                 DEFAULT
```

Field Descriptions

A description of the fields in the sample report follows:

SYSTEM NAME and VERSION

Identifies the DC/UCF system being described.

BUILDER

Identifies the builder code for the record that defines the system occurrence. For a description of builder codes, see the Dictionary Builder Codes table at the end of this chapter.

GENERATION ID

Identifies the unique identifier for the system, as defined in the system options table at startup.

SYSTEM ID

Indicates the name (nodename) by which the DC/UCF system is known to other nodes in the DC/UCF communications network.

OPERATING SYSTEM

Identifies the name of the host operating system under which the DC/UCF system runs.

DESCRIPTION

Identifies the system description defined to the dictionary.

DATE CREATED

Identifies the date the system occurrence was added to the dictionary.

PREPARED BY

Identifies the user who added the system occurrence to the dictionary.

DATE LAST USED

Identifies the date the system occurrence was last accessed.

REVISED BY

Identifies the user who last modified the system occurrence.

STORAGE ALLOCATION

Describes the storage allocation parameters:

CWA SIZE

Identifies size, in kilobytes, of the Common Work Area (CWA).

PROGRAM POOL(K)

Identifies the amount of storage, in kilobytes, that is available for loading nonresident programs, subschemas, maps, database procedures.

STORAGE CUSHION(K)

Identifies the amount of storage, in kilobytes, that is available in the storage pool for currently executing tasks.

STORAGE POOL(K)

Identifies the amount of storage, in kilobytes, that is provided for subschema work areas, COBOL working storage sections, user variable storage, packet-data-movement buffers, and SPF work areas (SPF users only).

REENTRANT POOL(K)

Indicates the size, in kilobytes, of an optional secondary program pool reserved for reentrant programs and tables (for example, subschemas, database procedures, and IDMS DC maps).

XA PROGRAM POOL

For systems supporting 31-bit addressing, identifies the size, in kilobytes, of the 31-bit program pool.

XA STORAGE POOL

For systems supporting 31-bit addressing, identifies the size, in kilobytes, of storage pool number 255 (the 31-bit storage pool).

XA REENTRANT POOL

For systems supporting 31-bit addressing, indicates the size, in kilobytes, of the 31-bit reentrant pool.

RELOCATABLE THRESHOLD (%)

Indicates that the system should write relocatable storage to the scratch area across a pseudo-converse when the amount of space used in the storage pool reaches the indicated percentage.

RUNTIME ENVIRONMENT

Describes the runtime parameters:

MAXIMUM TASKS

Indicates the maximum number of user tasks that can be active concurrently. This number does not include external request units or the IDMS-DC system tasks. For users executing under the central version, the value includes tasks invoked by online IDD, the online subschema compiler, and CA OLQ.

SYSTEM RUN UNITS

Indicates the number of system run units initiated at startup to service:

```
Message dictionary requests (MSGDICT)
Queue requests (SCRATCH/QUEUE)
Signon requests (SIGNON/DEST)
Dictionary load requests (LOADER)
Security requests on system-level resources (SECURITY)
Destination requests (SYSTEM/DEST)
```

STORAGE PROTECTION

(IDMS DC only) Indicates whether the storage protection feature is enabled for the system.

ALTERNATE PROT KEY

(IDMS DC only) Indicates the number of the alternate storage protect key used by the IDMS DC system storage protection feature.

TICKER INTERVAL

Indicates how frequently, in wall-clock seconds, the system checks for the occurrence of timer-related events.

AUTOMATIC NEW COPY

Indicates the action taken if, in loading a program from the load area, the system finds that the program has been deleted. YES indicates that the system attempts to load the program from the system load library. NO indicates that the system does not attempt to load the program from the system load library until a DCMT VARY PROGRAM NEW COPY or an IDMS CV operator VARY SUBSCHEMA NEW COPY is issued.

UNDEFINED LOADABLE

Indicates whether SUBSCHEMAS, MAPS, TABLES, DIALOGS, and ACCESS MODULES can be automatically defined to the dictionary at run time.

PRINTED REP RET

(IDMS DC only) Identifies the amount of time, in days, that the DC system retains a report in the scratch/queue area.

PRINTER CHECKPOINT

(IDMS DC only) Identifies the page count (printer checkpoints) for all active reports. A value of 0 or OFF indicates that interrupted reports are reprinted from the beginning. Any other value indicates that printing is resumed at the last checkpoint.

RESOURCE TIMEOUT INTERVAL

(IDMS DC only) Identifies the amount of time, in wall-clock seconds, that the IDMS DC system permits a terminal to be inactive before freeing the terminal resources.

RESOURCE TIMEOUT PROGRAM/VERSION

(IDMS DC only) Identifies the name and version number of the program invoked by IDMS DC to handle the resources of an inactive terminal that has exceeded the timeout interval.

OLQ

Indicates whether the system includes CA OLQ.

ADSO

Indicates whether the system includes CA ADS.

PF KEYS

Indicates whether the system includes at least one keys table.

OLM KEYS

Indicates whether a key table is defined for OLM.

PAGE REL

Indicates whether the system invokes operating system services when one or more virtual pages are no longer required and the contents of those pages need not be saved.

LOADLIST

Identifies the default load list to be used by the system when searching for programs.

XA SCRATCH

Indicates whether or not the scratch area (DDLDCSCR) uses a 31-bit storage pool.

MULTIPLE ENCLAVE

Indicates whether the programs in this system are eligible to use the same high level Language Environment process/enclave when multiple programs are executed in the same task.

TRAN SHARING

Specifies whether to activate the Transaction Sharing option for all tasks.

INTERNAL LIMITS

Indicates whether DC/UCF controls limits on all tasks defined to the system during system generation or at run time. ENABLED indicates that limits are enforced; DISABLED indicates that limits are not enforced except by means of a DCMT VARY LIMITS command. OFF indicates that limits are not enforced.

STG LIMIT

Indicates the storage limit, in kilobytes, that a task can hold at one time.

LOCK LIMIT

Indicates the limit of record locks that a task can set.

CALL LIMIT

Indicates the limit of system service calls (for example, #GETSTG, #LOAD) a task can issue.

DBIO LIMIT

Indicates the limit of database I/O operations (for example, reads and writes) that are performed for a task.

EXTERNAL LIMITS

Indicates whether DC/UCF controls limits on all tasks associated with external request units (that is, ERUS tasks). ENABLED indicates that limits are enforced; DISABLED indicates that limits are not enforced except by means of a DCMT VARY LIMITS command. OFF indicates that limits are not enforced.

STG LIMIT

Indicates the storage limit, in kilobytes, that a task can hold at one time.

LOCK LIMIT

Indicates the limit of record locks that a task can set.

CALL LIMIT

Indicates the limit of system service calls (for example, #GETSTG, #LOAD) a task can issue.

DBIO LIMIT

Indicates the limit of database I/O operations (for example, reads and writes) that are performed for a task.

OPERATING SYSTEM INTERFACE

Describes the parameters that define how the DC/UCF system and the operating system interact.

LOG TO DATABASE

Indicates whether log records are written to the DDLDCLOG area of the dictionary.

LOGGING INFORMATION

Identifies the system log file and the maximum number of records that can be written to FILE 1, the primary file, and FILE 2, the alternate log file. If COUNT 1 is 0, a maximum number of records was not defined. If COUNT 2 is -1, an alternate log file was not defined. If COUNT 1 and COUNT 2 are both 0, log records are written to the DDLDCLOG area of the dictionary.

LOG DEVICE

(z/VSE only) Identifies the device type for the log file.

SVC NUMBER

Identifies the number of the SVC used for communication between IDMS CV and external request units.

3270 PRINT KEY

Identifies the PF key used to print screen contents.

WTO DESCRIPTION CODES

(z/OS only) Identifies the z/OS operator message codes, which are used to identify the values supplied to the DESC parameter for write-to operator (WTO) macros issued by the system.

WTO ROUTE CODES

(z/OS only) Identifies the z/OS operator message routing codes, which are used to identify values for the ROUTCDE parameter for write-to-operator (WTO) macros issued by the system.

ERROR HANDLING

Describes error handling procedures.

INACTIVE INTERVAL

(IDMS DC only) Indicates the time, in wall-clock seconds, that the system allows an internal task to wait for a resource before abnormally terminating the task.

RUNAWAY INTERVAL

Indicates the maximum time, in wall-clock seconds, that the system allows a task or transaction to execute between interval waits before abnormally terminating the task or transaction.

SYSTEM DUMP

Indicates whether the DC/UCF system takes a memory dump for all system abend codes.

SYSTEM TRACE

(IDMS DC only) Indicates whether the IDMS DC system trace facility is enabled to trace system events during program development and debugging.

TRACE ENTRIES

(IDMS DC only) Indicates the number of entries allocated to the trace table buffer.

USER TRACE

(IDMS DC only) Indicates whether the user trace facility is enabled to trace program requests for IDMS DC system services.

USERTRACE ENTRIES

Indicates the number of entries allocated to the user trace buffer.

ABRU SNAP

Indicates whether a snap dump is written to the log when an external request unit terminates abnormally.

DEADLOCK INTERVAL

Indicates the amount of time, in wall-clock seconds, that elapses before the system searches for deadlocked tasks.

SYSTEM INTERNALS

Describe the internal characteristics of the system.

ABEND STORAGE(WDS)

(IDMS DC only) Indicates the amount of storage, in fullwords, available to the IDMS DC system for processing abends.

DPE COUNT

(IDMS DC only) Indicates the number of deadlock prevention elements (DPEs) allocated to the IDMS DC system at startup.

ECB LIST(WDS)

(IDMS DC only) Indicates the size, in fullwords, of the storage allocated for the Event Control Block list.

RCE COUNT

(IDMS DC only) Indicates the number of resource control elements (RCEs) allocated to the IDMS DC system at startup.

RLE COUNT

Indicates the number of resource link elements (RLEs) allocated to the DC/UCF system at startup.

STACKSIZE (WDS)

(IDMS DC only) Indicates the size, in fullwords, of the work storage stack within the task control element (TCE) of the IDMS DC system.

PRIMARY NULL PDES

Indicates the number of null program definition elements (PDEs) allocated at system startup for the automatic definition of programs not defined in PROGRAM statements. The default 0 indicates that automatic definition is disallowed.

SECONDARY NULL PDES

Indicates the number of additional PDEs that can be allocated from the storage pool when the primary null PDEs have been used.

STATISTICS OPTIONS

Describe how system statistics are logged.

TIME INTERVAL

Indicates how frequently (in seconds) histograms and system statistics are collected.

BY TASK

Indicates whether the DC/UCF system collects CPU-time statistics for each task.

BY TRAN

Indicates whether the DC/UCF system collects statistics on a transaction-by-transaction basis for all tasks.

BY LINE

Specifies whether the DC/UCF system collects by-line histograms.

BY USER

Indicates whether the DC/UCF system collects separate by-task CPU time statistics for system-mode time and user-mode time.

COLLECT/WRITE

Indicates whether the system is collecting by-task histograms or task statistics. COLLECT (the default) indicates collection of by-task histograms; WRITE indicates collection of task statistics.

DB PARAMETERS

Describe database access, journaling, and locking parameters.

JOURNAL RETRIEVAL

Indicates whether the system is writing BGIN and ENDJ checkpoints to the journal file for retrieval transactions.

MAXIMUM SYSLOCKS

Indicates the maximum number of record that the system is to maintain for all run units at a given time.

AREA THRESHOLD

Indicates the point at which, during ready processing, the system will begin to accumulate area locks for a database transaction. OFF directs the system not to accumulate area locks until the system can acquire all areas needed by a database transaction.

AREA RETRY

Indicates the number of times the system will continue trying to gain access to all areas without accumulating area locks. FOREVER directs the system to keep trying until it acquires all areas or until operating system resource and time limits are exceeded.

RETRIEVAL LOCKING

Indicates whether the system is to maintain locks automatically for records in areas accessed in shared retrieval mode.

UPDATE LOCKING

Indicates whether the system is to maintain locks automatically for records in areas accessed in protected update mode.

SCRATCH/QUEUE JOURNAL BEFORE ONLY

Indicates whether the system performs partial journaling. NO indicates that full journaling is taking place (that is, both before and after images are being written to the journal file).

JOURNAL FRAGMENT

Indicates the maximum number of journal blocks to write to the journal file before the system writes a dummy segment (DSEG) record to the journal file. OFF indicates that the journal fragment interval is off.

JOURNAL TRANSACTION

Indicates the number of active transactions that must be running in a DC/UCF system to defer the writing of a journal block.

ON COMMIT

Specifies options that control commit behavior for all tasks in the system. Valid values are:

WRITE COMT

Writes a COMT journal record.

WRITE ENDJ

Writes an ENDJ journal record.

NEW ID

Assigns a new local transaction ID.

RETain ID

Retains the existing local transaction ID.

ON ROLLBACK

Specifies options that control rollback behavior for tasks in this system. These options apply only to rollback operations in which the transaction is continued. Valid values are:

RETAIN ID

Retains the existing local transaction ID on a rollback.

NEW ID

Assigns a new local transaction ID on a rollback.

CV PARAMETERS

Describe abend handling and time parameters for the central version.

CHKUSER TASKS

(z/OS only) Indicates the number of tasks started by the system at run time to detect abnormally terminated z/OS batch transactions. The value also represents the maximum number of batch transactions that can access the database concurrently, overriding the MAXIMUM ERUS parameter.

CVNUMBER

Indicates the number of the DC/UCF system to the CA IDMS SVC.

EXTERNAL WAIT

Indicates the time, in wall-clock seconds, that the system waits for an external request unit to issue a database request before abnormally terminating the transaction.

INTERNAL WAIT

Indicates the time, in wall-clock seconds, that the system permits an external request unit to wait for a database or system resource before abnormally terminating the transaction.

MAXIMUM ERUS

Indicates the maximum number of external request units (ERUs) that can be active concurrently.

RUPRTY

Indicates the default execution priority for all transactions.

SYSCTL PARAMETERS

Describes parameters for the system control file used by programs executing outside the system region/partition.

DDNAME

(z/OS only) Identifies the ddname of the system control (SYSCTL) file used by the system.

DBNAME

Identifies the dictionary or database to which the system will route requests from programs using the SYSCTL file.

ALWAYS/DEFAULT

Indicates which database/dictionary is accessed by programs at run time. ALWAYS indicates that programs always use the database named in the SYSCTL file regardless of IDMSOPTI or program specifications. DEFAULT indicates that programs use the database/dictionary named in the SYSCTL file only if a dictionary/database name is not specified in the IDMSOPTI module or in the program.

NODE NAME

Identifies the name of a DC/UCF system defined to DC/UCF communications network to which the system will route requests from programs using the SYSCTL file.

ALWAYS/DEFAULT

Indicates which node is accessed by programs at run time. ALWAYS indicates that programs use the node named in the SYSCTL file, regardless of the IDMSOPTI or program specifications. DEFAULT indicates that programs use the node named in the SYSCTL file only if a node is not specified in the IDMSOPTI module or in the program.

Task Description Reports (CREPORTs 005, 020, and 021)

Contents

Task description reports provide information about tasks that have been associated with a DC/UCF system. CREPORT 005 describes tasks associated with executable systems; these tasks are represented in the dictionary by the TASKLST-023 record. CREPORTs 020 and 021 describe tasks associated with systems that have been defined but not generated; these tasks are represented by the TASK-025 record.

The fields and format of the three task reports are almost identical. In CREPORTs 005 and 020, task/program relationships are listed in alphabetical order by task name. In CREPORT 020 task/program relationships are listed in alphabetical order by program name.

Sample CREPORT 005:

```
REPORT NO. 05                          CA IDMS/DC SYSTEM GENERATION REPORT   REL nn.n                    mm/dd/yy PAGE     1
CREPORT 005                                   SYSTEM NAME:   DCSYSTEM
                                              SYSTEM VERSION:  110
                                              TASK DESCRIPTION



TASK      TASK          PROG                    TCF     TCF                                                    SAVE    STG
NAME      VERS   PROGRAM  VERS BUILDER   ACTION  TASKCODE  VERS PRIORITY   INPUT      MAP      INTERNAL  DISABLED  SCREEN   LOC

ADAI         1   ADAPMAIN    1    R                          1   100       YES        NO         NO         NO      YES     ANY

               ---RESOURCE TIMEOUT---  --AREA ACQUIRE--  MAX  INACTIVE   - - - - - - RESOURCE LIMITS - - - - - -  PRODUCT PRINT
        PROTOCOL PROGRAM  VERS INTERVAL  RETRY  THRESHOLD TASKS INTERVAL   CALLS      DBIO      LOCKS    STORAGE    CODE    KEY

        DEFRESP             1 SYSTEM   FOREVER    OFF     OFF   SYSTEM    SYSTEM     SYSTEM     SYSTEM    SYSTEM

        ON COMMIT SYSTEM                ON ROLLBACK SYSTEM       TRAN SHARING SYSTEM


TASK      TASK          PROG                    TCF     TCF                                                    SAVE    STG
NAME      VERS   PROGRAM  VERS BUILDER   ACTION  TASKCODE  VERS PRIORITY   INPUT      MAP      INTERNAL  DISABLED  SCREEN   LOC

ADS          1   ADSORUN1    1    R                          1   100       YES        NO         NO         NO      YES     ANY

               ---RESOURCE TIMEOUT---  --AREA ACQUIRE--  MAX  INACTIVE   - - - - - - RESOURCE LIMITS - - - - - -  PRODUCT PRINT
        PROTOCOL PROGRAM  VERS INTERVAL  RETRY  THRESHOLD TASKS INTERVAL   CALLS      DBIO      LOCKS    STORAGE    CODE    KEY

        DEFRESP             1 SYSTEM   FOREVER    OFF     OFF   SYSTEM    SYSTEM     SYSTEM     SYSTEM    SYSTEM

        ON COMMIT SYSTEM                ON ROLLBACK SYSTEM       TRAN SHARING SYSTEM
```

Field Descriptions

A description of the fields in the sample report follows:

SYSTEM NAME and VERSION

Identify the name and version of the system associated with the tasks being described.

TASK and TASK VERS

Identify the name and version number of the task being described.

PROGRAM and PROG VERS

Identify the name and version number of the initial program invoked by the system for the task being described.

BUILDER

Identifies the builder code for the record that defines the task occurrence. For a description of builder codes, see the Builder Codes table at the end of this chapter.

ACTION

Indicates whether the task occurrence has been updated (U) or deleted (D) or remains unchanged (blank) since the most recent generate of the system.

TCF TASKCODE

Identifies the code that invokes the transfer control facility (TCF) control program (RHDCUMBR) under which this task will run.

TCF VERS

Identifies the version of the TCF task code.

PRIORITY

Identifies the dispatching priority for the task.

INPUT

Indicates whether the terminal input buffer associated with the task contains data in addition to the task code at run time.

MAP

Indicates whether a mapout operation is performed automatically when the task is invoked.

INTERNAL

Indicates whether the task can be invoked internally and/or externally. YES indicates that the task can only be invoked internally; NO indicates that the task can be invoked internally or externally.

DISABLED

Indicates whether the task is disabled when the system is started.

SAVE SCREEN

Indicates whether screen contents associated with the task are saved before an immediate-write data stream is written to the terminal.

STG LOC

Indicates whether programs that run under the task can reside anywhere in the DC/UCF region (ANY) or whether programs must reside below 16 megabytes (BELOW).

PROTOCOL

Indicates the response protocol to be used by the task when communicating with terminals associated with a VTAMLIN type line. Possible values are DEFRESP and EXPRESP.

RESOURCE TIMEOUT PROGRAM/ VERS

Identifies the name and version of the resource timeout program, which the system invokes to handle the resources owned by an inactive terminal following the expiration of the resource timeout interval.

RESOURCE TIMEOUT INTERVAL

Specifies the amount of time the system is to permit a terminal to be inactive before invoking the terminal resource program. SYSTEM directs the system to use the INTERVAL IS value specified on the RESOURCE TIMEOUT parameter of the SYSTEM system generation statement.

AREA ACQUIRE RETRY

Identifies the limit on the number of times the system will continue trying to gain access to all areas without accumulating area locks. FOREVER directs the system to keep trying until it acquires all areas or until operating system resource and time limits are exceeded. SYSTEM directs the system to use the value specified on the AREA ACQUISITION THRESHOLD parameter of the SYSTEM system generation statement.

AREA ACQUIRE THRESHOLD

Indicates the number of times, during ready processing, that the system will wait on an area lock before it starts to accumulate area locks for a transaction. OFF directs the system not to accumulate area locks. SYSTEM directs the system to use the values specified in the AREA ACQUISITION THRESHOLD parameter of the SYSTEM system generation statement.

MAX TASKS

Indicates the limit of maximum concurrent threads for a task. OFF indicates the system does not limit the number of concurrent threads.

INACTIVE INTERVAL

Indicates the amount of time the system is to permit an internal task to wait for a resource before abnormally terminating the task. SYSTEM directs the system to use the value specified on the INACTIVE INTERVAL parameter of the SYSTEM system generation statement.

RESOURCE LIMIT CALLS

Indicates the limit of system service calls (for example, OBTAIN CALC), that can be issued by an online task. SYSTEM directs the system to use the limit specified in the CALL LIMIT FOR ONLINE TASKS parameter on the SYSTEM system generation statement.

RESOURCE LIMIT DBIO

Indicates the limit of database I/O operations (reads and writes) that can be issued by an online task. SYSTEM directs the system to use the limit specified in the DBIO LIMIT FOR ONLINE TASKS parameter on the SYSTEM system generation statement.

RESOURCE LIMIT LOCKS

Indicates the limit of record locks allocated to an online task during the life of the task. SYSTEM directs the system to use the limit specified in the LOCK LIMIT FOR ONLINE TASKS parameter on the SYSTEM system generation statement.

RESOURCE LIMIT STORAGE

Indicates the limit of storage, in kilobytes, that an online task can hold at one time. SYSTEM directs the system to use the limit specified in the STORAGE LIMIT FOR ONLINE TASKS parameter on the SYSTEM system generation statement.

PRODUCT CODE

Indicates a generic name for a product and related task codes.

PRINT KEY

Indicates the print-screen key assignment. SYS directs the system to use the print key assignment specified on the PRINT KEY parameter of the SYSTEM system generation statement.

ON COMMIT

Specifies options that control commit behavior for the task. Valid values are:

WRITE COMT

Writes a COMT journal record.

WRITE ENDJ

Writes an ENDJ journal record.

NEW ID

Assigns a new local transaction ID.

RETain ID

Retains the existing local transaction ID.

ON ROLLBACK

Specifies options that control rollback behavior for tasks in this system. These options apply only to rollback operations in which the transaction is continued. Valid values are:

RETAIN ID

Retains the existing local transaction ID on a rollback.

NEW ID

Assigns a new local transaction ID on a rollback.

TRAN SHARING

Specifies whether to activate the Transaction Sharing option for the task or whether the option for the task is based on the SYSTEM statement (SYSTEM).

Builder Codes

The following Dictionary Builder Codes table presents the builder codes that are referenced in the DREPORTs and CREPORTs.

Builder Code	Input Source
D	DDDL compiler
S	Schema compiler
C	DC/UCF mapping compilers
V	Subschema compiler
G	DC/UCF system generation compiler, before GENERATE command
R	DC/UCF system generation compiler, after GENERATE command
M	DML processors
A	ADS/ONLINE dialog generator
X	IDMSDIRL utility

Note: The builder code identifies the component that defined the entity occurrence to the dictionary or the component that last updated the entity occurrence.

Chapter 5: CA ADS Reports—AREPORTS

This section contains the following topics:

Overview (see page 203)
Summary Table (see page 203)
Uses for CA ADS Reports (see page 204)
Producing CA ADS Reports (see page 204)
AREPORT 001 and 002 - ADS Dialogs and Their Components (see page 206)
AREPORT 003 - ADS Dialogs by Process Key (see page 210)
AREPORT 004 - ADS Dialogs by Record Key (see page 212)
AREPORT 005 - ADS Dialogs by Subschema Key (see page 214)
AREPORT 006 - ADS Dialogs by Map Key (see page 215)

Overview

CA ADS reports list detail information about online or batch dialogs and their components, which include subschemas, maps, processes, work records, map records, database records, and logical records. Information about the dialogs and their components is stored in the data dictionary.

There are six available CA ADS reports: AREPORTs 001 through 006. AREPORT 001 reports on all the dialogs defined to the data dictionary and their associated components. AREPORTs 002 through 005 are key reports, which document each dialog associated with a particular component.

Summary Table

The following table lists the CA ADS reports in order by report module number:

AREPORT Module	Report Title	KEY Parameter
001	ADS Dialogs and Their Components (Detail)	
002	ADS Dialogs and Their Components (Key)	KEY PROG-NAME-051 'dialog-name'
003	ADS Dialogs by Process Key	KEY MOD-NAME-067 'process-name'
004	ADS Dialogs by Record Key	KEY RSYN-NAME-079 'record-name'

AREPORT Module	Report Title	KEY Parameter
005	ADS Dialogs by Subschema Key	KEY SS-NAM-026 'subschema-name'
006	ADS Dialogs by Map Key	KEY MAP-NAME-098 'map-name'

Uses for CA ADS Reports

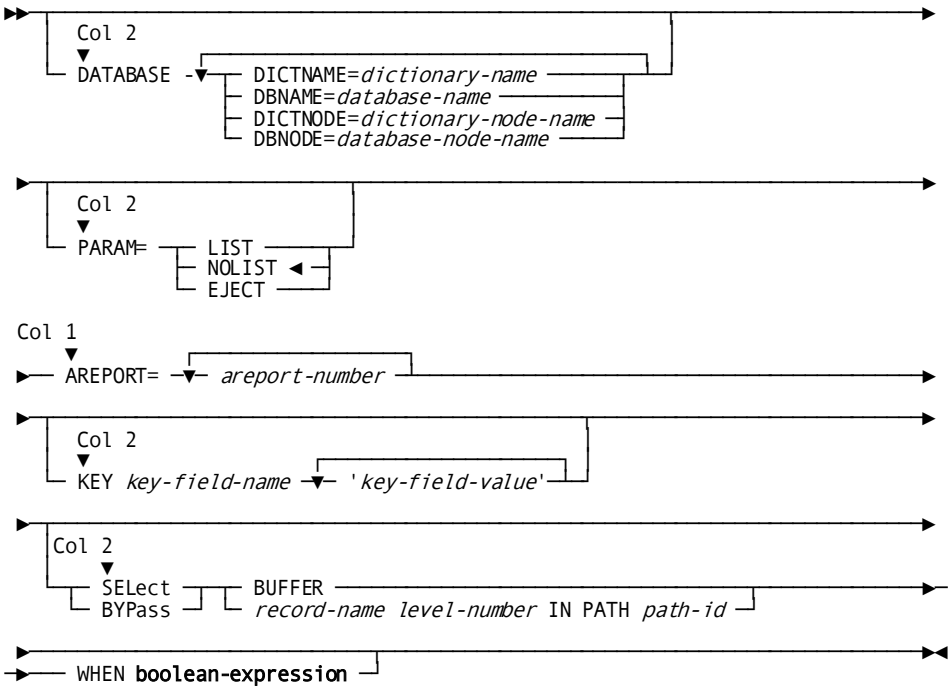
CA ADS reports document dialogs defined to the data dictionary and identify associated components. CA ADS reports can be used to:

- Assist in test to production migration (for example, AREPORT 002 identifies all the components associated with a particular dialog that must be migrated along with the dialog)
- Determine what dialogs have to be regenerated when a particular component changes (for example, AREPORT 005 lists all dialogs associated with a particular subschema)

Producing CA ADS Reports

CA ADS reports are produced by submitting a job that includes the standard JCL shown in Appendices A through D and user-supplied control parameters. Syntax for the control parameters is shown below, followed by examples. Coding is freeform except for the starting column of each parameter.

Syntax



Parameters

Syntax rules appear in Chapter 1:, except as follows:

AREPORT=*areport-number*

Identifies the report module name, where *areport-number* is a value in the range 001 through 006; leading zeros can be omitted. The parameter must be coded starting in column 1. Only one report module can be specified per run.

KEY

Specifies the parameter type, starting in column 2. A KEY parameter is required for AREPORTs 002 through 006. More than one KEY parameter can be specified per report.

key-field-name

Identifies the key field. The Summary Table lists possible values for each report.

'***key-field-value***'

Specifies a value or a list of values for the key field. Each value must be enclosed in single quotation marks. A list of items must be enclosed in parentheses and each item must be separated from another by a space or a comma.

Examples

Example 1

Data dictionary CULPDICT contains report module AREPORT 001, which is requested to report on dialogs defined to data dictionary DOCUDICT. The SELECT parameter selects only those dialogs that were created on a specified date. By request, the input parameters will appear on the Sequential and Input Parameter Listings for the report.

```
 DATABASE DICTNAME=CULPDICT DBNAME=DOCUDICT
 PARAM=LIST
AREPORT=001
 SELECT BUFFER WHEN DATE-CREATED-051 EQ 'mm/dd/yy'
```

Example 2

AREPORT reports on all dialogs associated with the EMPLOYEE and DEPARTMENT records. The SELECT parameter selects only those dialogs that were created on a specified date. By default, the input parameters will not appear on the report listings.

```
 DATABASE DICTNAME=CULPDICT DBNAME=DOCUDICT
AREPORT=004
 KEY RSYN-NAME-079 ('EMPLOYEE' 'DEPARTMENT')
 SELECT PROG-051 WHEN DATE-CREATED-051 EQ 'mm/dd/yy'
```

AREPORT 001 and 002 - ADS Dialogs and Their Components

Contents

The ADS Dialogs and Their Components reports list information about dialogs that have been generated within the DC/UCF system. AREPORT 001 is a detail report that lists every dialog; AREPORT 002 is a key report that lists selected dialogs. For each dialog, the reports provide information about the following components, if applicable:

- Subschema
- Map
- Processes
- Database records
- Logical records

The fields and format of the two reports are the same.

Sample AREPORT 002:

```
REPORT NO. 02                          CA ADS DIALOG REPORTER                Rnn.n                    mm/dd/yy PAGE    1

                                             CA ADS DIALOGS AND THEIR COMPONENTS

 DIALOG...: LRTD01D        VERS.:     1     DATE CREATED:  mm/dd/yy     DATE LAST UPDATED: mm/dd/yy  MAINLINE DIALOG


         SUBSCHEMA NAME: EMPSSLR      SCHEMA NAME: EMPSCHM      SCHEMA VERSION:    1

  MAP: LRTD01M  V    1  TYPE: ONL  DATE: mm/dd/yy  TIME: hhmmss  DDNAME-IN:          OUT:           SUSP:


         PROCESS NAME: LRTD01P                             VERSION:    1           PROCESS TYPE: PREMAP
                                  DATE CREATED: mm/dd/yy   BY: MAD      DATE LAST UPDATED:           BY:


         PROCESS NAME: LRTD01R-PF1                         VERSION:    1           PROCESS TYPE: RESPONSE
                                  DATE CREATED: mm/dd/yy   BY: MAD      DATE LAST UPDATED:           BY:
                             CONTROL KEY/EVENT: PF1                  RESPONSE FIELD VALUE:


         PROCESS NAME: LRTD01R-PF2                         VERSION:    1           PROCESS TYPE: RESPONSE
                                  DATE CREATED: mm/dd/yy   BY: MAD      DATE LAST UPDATED:           BY:
                             CONTROL KEY/EVENT: PF2                  RESPONSE FIELD VALUE:


         RECORD NAME: EMPLOYEE                         VERSION:    1        *SUBSCHEMA*                        *IN LR* *ONLMAP
         RECORD NAME: ADSO-STAT-DEF-REC                VERSION:    1                                 *STATUS*
         RECORD NAME: DEPARTMENT                       VERSION:    1        *SUBSCHEMA*                        *IN LR*
         RECORD NAME: OFFICE                           VERSION:    1        *SUBSCHEMA*                        *IN LR*
         RECORD NAME: EMPLOYEE-TABLE       SUBSCHEMA NAME: EMPSSLR     * LOGICAL RECORD *
```

Field Descriptions

A description of the fields in AREPORTs 001 and 002 follows:

DIALOG, VERS

Name and version number of the dialog.

DATE CREATED

Date the dialog was added to the data dictionary.

DATE LAST UPDATED

Date the dialog was last modified.

MAINLINE DIALOG

A literal that appears if the dialog is a mainline dialog.

SUBSCHEMA NAME

Name of the subschema associated with the dialog. If no subschema is associated with the dialog, the following message appears:

```
* * NO SUBSCHEMA FOR THIS WK-DIALOG * *
```

SCHEMA NAME, SCHEMA VERSION

Name and version number of the schema associated with the subschema.

MAP

Name and version number of the map associated with the dialog. If no map is associated with the dialog, the following message appears:

```
* * MAPLESS DIALOG * *
```

TYPE

Indicates the type of map associated with the dialog:

- ONL is the dialog's online map.
- IN is the dialog's input file map.
- OUT is the dialog's output file map.

DATE

Date stamp for the map.

TIME

Time stamp for the map.

DDNAME-IN

(CA ADS Batch only) Indicates the ddname of an input file map.

OUT

(CA ADS Batch only) Indicates the ddname of an output file map.

SUSP

(CA ADS Batch only) Indicates the ddname of the suspense file associated with a dialog.

MAP ENTRY PT

Indicates that the map is the entry point for the dialog. This is true even if the dialog has a premap process.

PROCESS NAME, VERSION

Name and version number of a process associated with the dialog. If no processes are associated with the dialog, the following message appears:

```
* * NO PROCESSES FOR THIS WK-DIALOG * *
```

PROCESS TYPE

Indicates whether the process is used as a premap or response process for the dialog.

EXECUTE ON EDIT ERRORS

A literal that appears beside the response processes designated to execute even when there are map input errors.

DATE CREATED, BY

Date the process was added to the data dictionary and the ID of the user who created it.

DATE LAST UPDATED, BY

Date the process was last modified and the ID of the user who modified it.

CONTROL KEY/EVENT

Either of the following:

- (CA ADS) The control key, if any, that causes the process to be executed if the process is a response process for the dialog.
- (CA ADS Batch) A batch control event (EOF or IOERR), associated with a batch dialog, that causes a process to be executed when its associated condition (end-of-file, I/O error) is met.

RESPONSE FIELD VALUE

The response field value, if any, that causes the process to be executed if the process is a response process for the dialog.

RECORD NAME, VERSION

Name and version number of each record associated with the dialog. The following descriptors appear next to the records, as applicable:

- ***SUBSCHEMA*** indicates that the record is associated with the dialog as a subschema record.
- ***WORK*** indicates that the record is associated with the dialog as a work record.
- ***N/C*** indicates that the record is associated with the dialog as a new copy record.
- ***STATUS*** indicates that the record is associated with the dialog as a status definition record.
- ***IN LR*** indicates that the record is included in a logical record associated with the dialog.

- ***INMAP*, *I/OMAP, *ONLMAP, *OUTMAP** indicate a record associated with a dialog's:
  - Input map file
  - Input and output map file
  - Online map
  - Output map file

If no records are associated with the dialog, the following message appears:

* * NO DATABASE RECORDS FOR THIS WK-DIALOG * *

RECORD NAME, SUBSCHEMA NAME

Record name and subschema name for each logical record associated with the dialog, along with a * LOGICAL RECORD * flag. If no logical records are associated with the dialog, the following message appears:

* * NO LOGICAL RECORDS FOR THIS WK-DIALOG * *

AREPORT 003 - ADS Dialogs by Process Key

Contents

AREPORT 003, the ADS Dialogs by Process Key report, lists all dialogs associated with one or more specified processes.

Sample AREPORT 003:

```
REPORT NO. 03                          CA ADS DIALOG REPORTER                Rnn.n                        mm/dd/yy PAGE    1

                                              CA ADS DIALOGS BY PROCESS KEY


PROCESS: LRTD01P                        VERS.:    1  DATE CREATED: mm/dd/yy   BY: MAD       LAST UPDATED:           BY:

    DIALOG    DIALOG    DATE    DATE LAST MAINLINE PROCESS            CONTROL KEY/EVENT       RESPONSE FIELD VALUE        EXECUTE ON
     NAME    VERSION CREATED    UPDATED    DIALOG    TYPE               FOR PROCESS             FOR PROCESS             EDIT ERRORS

   LRTD01D       1  mm/dd/yy   mm/dd/yy     X      PREMAP
```

Field Descriptions

A description of the fields in AREPORT 003 follows:

PROCESS, VERS

Name and version number of the process specified in the KEY parameter.

DATE CREATED, BY

Date the process was added to the data dictionary and the ID of the user who created it.

LAST UPDATED, BY

Date the process was last modified and the ID of the user who modified it.

DIALOG NAME, DIALOG VERSION

Name and version number of all dialogs associated with the process. If no dialogs are associated with the process specified in a KEY parameter, the following message appears:

```
* * NO DIALOGS USE THIS MODULE * *
```

DATE CREATED

Date the dialog was added to the data dictionary.

DATE LAST UPDATED

Date the dialog was last modified.

MAINLINE DIALOG

Indicates (with an X) whether the dialog is a mainline dialog.

PROCESS TYPE

Indicates whether the process is used as a premap or response process for the dialog.

CONTROL KEY/EVENT FOR PROCESS

Indicates either of the following:

- (CA ADS) The control key, if any, that causes the process to be executed if the process is used as a response process for the dialog.
- (CA ADS Batch) A batch control event (EOF or IOERR), associated with a batch dialog, that causes a process to be executed when its associated condition (end-of-file, I/O error) is met.

RESPONSE FIELD VALUE FOR PROCESS

The response field value, if any, that causes the process to be executed if the process is a response process for the dialog.

EXECUTE ON EDIT ERRORS

Indicates (with an X) whether a response process is designated to execute even when there are map input errors.

AREPORT 004 - ADS Dialogs by Record Key

Contents

AREPORT 004, the ADS Dialogs by Record Key report, lists all dialogs associated with one or more specified records.

Sample AREPORT 004:

REPORT NO. 04 CA ADS DIALOG REPORTER Rnn.n mm/dd/yy PAGE 1

CA ADS DIALOGS BY RECORD KEY

RECORD NAME...: EMPLOYEE VERSION...: 1

DIALOG NAME	DIALOG VERSION	DATE CREATED	DATE LAST UPDATED	MAINLINE DIALOG	MAP RECORD	SUBSCHEMA RECORD	WORK RECORD	NEW COPY RECORD	IN LOGICAL RECORD	STATUS RECORD
ADMI01D	1	mm/dd/yy	mm/dd/yy	X	ONL	X				
DLRU01AD	1	mm/dd/yy	mm/dd/yy			X				
DLRU01D	1	mm/dd/yy	mm/dd/yy	X	ONL	X				
DRPP01D	1	mm/dd/yy	mm/dd/yy	X	ONL	X				
LDCT01D	1	mm/dd/yy	mm/dd/yy	X	ONL	X				
LDCT02D	1	mm/dd/yy	mm/dd/yy		ONL					
LDTD01AD	1	mm/dd/yy	mm/dd/yy			X				
LDTD01BD	1	mm/dd/yy	mm/dd/yy			X				
LDTD01D	1	mm/dd/yy	mm/dd/yy	X	ONL	X				
LNTN01D	1	mm/dd/yy	mm/dd/yy	X	ONL	X				
LNTN03D	1	mm/dd/yy	mm/dd/yy			X				
LRDA01D	1	mm/dd/yy	mm/dd/yy	X		X			X	
LRFC01D	1	mm/dd/yy	mm/dd/yy	X		X			X	
LRFC02D	1	mm/dd/yy	mm/dd/yy	X		X			X	
LRTD01D	1	mm/dd/yy	mm/dd/yy	X	ONL	X			X	

Field Descriptions

A description of the fields in AREPORT 004 follows:

RECORD NAME, VERSION

Name and version number of the subschema record, map record, or work record specified in the KEY parameter. If multiple versions of the record exist in the data dictionary, they are listed in ascending order.

DIALOG NAME, DIALOG VERSION

Names and version numbers of all dialogs associated with the record. If no dialogs are associated with a particular version of a record, the following message appears:

* * NO DIALOGS USE THIS RECORD * *

DATE CREATED

Date the dialog was added to the data dictionary.

DATE LAST UPDATED

Date the dialog was last modified.

MAINLINE DIALOG

Indicates (with an X) whether the dialog is a mainline dialog.

MAP RECORD

Indicates the type of map associated with the dialog:

- ONL is an online map.
- IN is an input map file.
- OUT is an output map file.
- I/O is an input and output map file.

SUBSCHEMA RECORD

Indicates (with an X) whether the record is associated with the dialog as a subschema record.

WORK RECORD

Indicates (with an X) whether the record is associated with the dialog as a work record.

NEW COPY RECORD

Indicates (with an X) whether the record is associated with the dialog as a new copy record.

IN LOGICAL RECORD

Indicates (with an X) whether the record is included in a logical record associated with the dialog.

STATUS RECORD

Indicates (with an X) whether the record is associated with the dialog as a status definition record.

AREPORT 005 - ADS Dialogs by Subschema Key

Contents

AREPORT 005, the ADS Dialogs by Subschema Key report, lists all dialogs associated with one or more specified subschemas.

Sample AREPORT 005:

```
REPORT NO. 05                      CA ADS DIALOG REPORTER                 Rnn.n                   mm/dd/yy PAGE    1

                                             CA ADS DIALOGS BY SUBSCHEMA KEY

          SUBSCHEMA NAME...: EMPSSLR            SCHEMA NAME...: EMPSCHM            SCHEMA VERSION...:     1

                              DIALOG       DIALOG         DATE          DATE LAST      MAINLINE
                               NAME        VERSION       CREATED         UPDATED        DIALOG

                             OTFT03D          1          mm/dd/yy        mm/dd/yy
                             RENO01D          1          mm/dd/yy        mm/dd/yy          X
                             RENO02D          1          mm/dd/yy        mm/dd/yy          X
                             RENO03D          1          mm/dd/yy        mm/dd/yy          X
```

Field Descriptions

A description of the fields in AREPORT 005 follows:

SUBSCHEMA NAME

Name of the subschema in the KEY parameter.

SCHEMA NAME, SCHEMA VERSION

Name and version number of the schema to which the subschema belongs.

DIALOG NAME, DIALOG VERSION

Names and version numbers of all dialogs associated with the subschema. If no dialogs are associated with the subschema named in the KEY parameter, the following message appears:

`* * NO DIALOGS USE THIS SUBSCHEMA * *`

DATE CREATED

Date the dialog was added to the data dictionary.

DATE LAST UPDATED

Date the dialog was last modified.

MAINLINE DIALOG

Indicates (with an X) whether the dialog is a mainline dialog.

AREPORT 006 - ADS Dialogs by Map Key

Contents

AREPORT 006, the ADS Dialogs by Map Key report, lists all dialogs associated with one or more specified maps.

Sample AREPORT 006:

```
REPORT NO. 06                          CA ADS DIALOG REPORTER                Rnn.n                        mm/dd/yy PAGE   1

                                              CA ADS DIALOGS BY MAP KEY


******** MAP NAME,,,: LRTD01M    VERS:    1        MAP-DATE,,,,,:  mm/dd/yy         MAP-TIME,,,,,: hhmmss            ********
          DIALOG...: LRTD01D    VERS:    1    MAP USE: ONL     DATE CREATED: mm/dd/yy    LAST UPDATED: mm/dd/yy   MAINLINE DIALOG
```

Field Descriptions

A description of the fields in AREPORT 006 follows:

MAP NAME, VERS

Name and version number of the map specified in the KEY parameter.

DIALOG, VERS

Name and version number of a dialog associated with the map. If no dialogs are associated with the map named in the KEY parameter, the following message appears:

```
* * NO DIALOGS USE THIS MAP * *
```

MAP-DATE

Date stamp for the map.

MAP-TIME

Time stamp for the map.

MAP USE

Indicates the type of map associated with the dialog:

- ONL is an online map.
- IN is an input map file.
- OUT is an output map file.

DATE CREATED

Date the dialog was added to the data dictionary.

LAST UPDATED

Date the dialog was last modified.

MAINLINE DIALOG

A literal that appears if the dialog is a mainline dialog.

Chapter 6: CA IDMS/DB SQL Dictionary Reports—QREPORTS

This section contains the following topics:

Overview (see page 218)
Summary Table (see page 218)
QREPORT 001 -SQL Column Name Report (see page 219)
QREPORT 002 -Table and Column Report (see page 221)
QREPORT 003 -Schema and Table Report (see page 228)
QREPORT 004 -SQL Access Module Information (see page 231)
QREPORT 005 -SQL Table Access Report (see page 234)
QREPORT 006 -SQL Table Syntax Report (see page 236)
QREPORT 007 -SQL Table Index Report (see page 238)
QREPORT 008 -SQL Table Constraint Report (see page 241)

Overview

CA IDMS/DB SQL Dictionary Reports present information about entities defined to CA IDMS/DB using SQL commands. These reports provide Database Administrators with detailed information about the contents of the SQL Dictionary, and allow application programmers to obtain selected information from the SQL Dictionary.

QREPORTS consist of CA Culprit for CA IDMS syntax that is stored in either a partitioned data set or as modules of language CULPRIT in the CA IDMS/DB Integrated Data Dictionary. You can execute them, one at a time, by submitting a CA Culprit for CA IDMS job in batch. Because each QREPORT has its own unique SQL Select clause for database retrieval, each report must be run separately.

You submit QREPORTS using the USE parameter. Enclosing the report name in double quotes on a CA Culprit for CA IDMS USE statement has a very explicit meaning. The syntax *USE "QRPT001"* tells CA Culprit for CA IDMS to read the highest version of module QRPT001 with language CULPRIT from the CA IDMS/DB IDD.

The syntax *USE QRPT001* (without double quotes) tells CA Culprit for CA IDMS to read the QRPT001 member from the partitioned dataset named by the CULLIB DD statement in the JCL.

The optional WITH VALUES clause of the USE syntax allows you to override the default values of symbolic parameters embedded in the QREPORT syntax. Since the reports are coded with the LIKE predicate, wildcards may be used when specifying these symbolic parameters. If wildcards are not used, however, the LIKE behaves as the equivalent of a comparison using an equal sign, with the restriction that the lengths of the two values being compared must be identical. Each QREPORT is documented with the symbolic parameters available and their lengths. For more information on the LIKE predicate, see the *CA IDMS SQL Reference Guide*.

There are eight available CA IDMS/DB Dictionary Reports: QREPORTs 001 through 008.

Summary Table

The following table lists the QREPORTS in order by report module number:

QREPORT Module	Report Title
001	SQL Column Name Report
002	SQL Table Information Report
003	SQL Schema Information Report
004	SQL Access Module Information Report

QREPORT Module	Report Title
005	SQL Table Access Report
006	SQL Table Syntax Report
007	SQL Table Index Report
008	SQL Table Constraint Report

QREPORT 001 -SQL Column Name Report

QREPORT 001, the *Column Name Report*, provides detailed information about each SQL column selected. The tabular report format lists the column names in alphabetical order.

QREPORT 001 is useful when you need to find out which tables contain a specific SQL column. It also lists the important attributes of each column.

Symbolic Parameter Overrides

REQUESTED_DICTIONARY (&&1)

Specify the 1 to 8 character name of a specific dictionary.

REQUESTED_SCHEMA (&&2)

Specify the 1 to 18 character name of a specific SQL schema.

REQUESTED_COLUMN (&&3)

Specify the 1 to 32 character name of a specific column or use a *like-predicate pattern* to request more than one column.

Job Submission

This syntax will list all of the columns from the SYSTEM schema of the TSTDICT SQL dictionary.

```
DATABASE DICTNAME=dictionary-name
USE "QRPT001"  WITH VALUES (REQUESTED_DICTIONARY='TSTDICT'
                            REQUESTED_SCHEMA='SYSTEM            '
                            REQUESTED_COLUMN='%')
```

Sample QREPORT 001:

```
QREPORT 001                         SQL  COLUMN NAME  REPORT                         mm/dd/yy       PAGE      3


                                                                      COLUMN / NULL                 COL NUM
                             SCHEMA NAME /     DATATYPE /                   INTERNAL  DEFAULT        IN
  COLUMN NAME                TABLE NAME        NULL ATTR.    PREC. SCALE  OFFSET  LENGTH    VALUE      TABLE
  ___________                _____________     ___________   _____ _____  ______  ______   _______     ______

NUMBER                       SYSTEM            SMALLINT        15           130      2        NO           5
                             RESOURCE          NOT NULL

NUMBLOCKS                    SYSTEM            INTEGER         31            92      4        NO           9
                             JOURNAL           NOT NULL

NUMBUFFERS                   SYSTEM            SMALLINT        15            94      2        NO           9
                             DMCL              NOT NULL

NUMCOLS                      SYSTEM            SMALLINT        15           162      2        NO          26
                             TABLE             NOT NULL

NUMCOLUMNS                   SYSTEM            SMALLINT        15           116      2        NO           8
                             CONSTRAINT        NOT NULL

NUMCOLUMNS                   SYSTEM            SMALLINT        15            92      2        NO           8
                             INDEX             NOT NULL

NUMDADS                      SYSTEM            SMALLINT        15            96      2        NO          12
                             SEGMENT           NOT NULL

NUMDBNAMES                   SYSTEM            SMALLINT        15            62      2        NO           7
                             DBTABLE           NOT NULL

NUMFILEMAPS                  SYSTEM            SMALLINT        15            96      2        NO          11
                             AREA              NULLS ALLOWED                 95      1
```

Field Descriptions

A description of the fields in QREPORT 001 follows:

COLUMN NAME The name of the column included in the schema table.

SCHEMA NAME / TABLE NAME The schema and table name associated with the column.

DATATYPE / NULL ATTR. The data type of the named column, and an indicator to specify whether the column can or cannot contain null values.

PREC. The number of digits in a numeric value.

SCALE The number of digits to the right of the decimal point in a numeric value.

COLUMN / OFFSET The offset within a row to the data for the named column and the offset within a row to the null indicator value for the column. Offsets are relative to zero.

NULL INTERNAL LENGTH The internal length of the data for the named column and the internal length of the null indicator value for the column.

DEFAULT VALUE Indicates whether the WITH DEFAULT clause was specified for the column.

COL NUM IN TABLE The relative position of the column in the table.

QREPORT 002 -Table and Column Report

QREPORT 002, the *Table and Column Report*, provides detailed information about each SQL Table selected, and also lists summary information about each column contained in the table.

This information is especially useful to application developers who need to know the names and attributes of each column in a table.

Symbolic Parameter Overrides

REQUESTED_DICTIONARY (&&1)

Specify the 1 to 8 character name of a specific dictionary.

REQUESTED_SCHEMA (&&2)

Specify the 1 to 18 character name of a specific SQL schema, or use a *like-predicate pattern* to request more than one schema.

CREATED_BY (&&3)

Specify the 1 to 18 character name of a specific user or use a *like-predicate pattern* to request more than one user.

REQUESTED_TABLE (&&4)

Specify the 1 to 18 character name of a specific table or use a *like-predicate pattern* to request more than one table.

Job Submission

The following syntax will produce an SQL Table Report for the SYSTEM.COLUMN table that resides in dictionary TSTDICT.

```
DATABASE DICTNAME=dictionary-name
USE "QRPT002"  WITH VALUES (REQUESTED_DICTIONARY='TSTDICT'
                            REQUESTED_SCHEMA='SYSTEM            '
                            CREATED_BY='%'
                            REQUESTED_TABLE='COLUMN            ')
```

Sample QREPORT 002:

```
QREPORT 002                        SQL TABLE INFORMATION            mm/dd/yy          PAGE    1

                                    SCHEMA NAME: SYSTEM
                                     TABLE NAME: COLUMN



    TIMESTAMP:          yyyy-mm-dd-hh.mm      TABLE OWNER:  MET
    DATE CREATED:       yyyy-mm-dd-hh.mm      BY USER:      MET
    DATE LAST USED:     yyyy-mm-dd-hh.mm      BY USER:      MET


    SEGMENT NAME:       SYSCAT                TABLE ID:      1028          TABLE LENGTH:          184
    AREA NAME:          DDLCAT                TABLE TYPE:    TABLE         DATA  LENGTH:          164
                                              LOC. MODE:     CLUSTERED     PREFIX LENGTH:          20
    PUT ROUTINE:                              COMPRESS:      NO            CONTROL LENGTH:         36
    GET ROUTINE:                              FORMAT:        FIXED         FIXED LENGTH:          164
                                              UPDATABLE:                   SECTION LENGTH:          0
                                              CHECKOPT:                    NUMBER OF SYNTAX:        0
    NUMBER OF COLUMNS:              19                                     DISPLACEMENT:            0
    NUMBER OF INDEXES:               0                                     ESTIMATED ROWS:          0
    NUMBER OF TIMES REFERENCED:      0                                     NUMBER PAGES:           41
    REFERENCES TO OTHER TABLES:      2                                     NUMBER ROWS:           516
                                                                           ROWS PER PAGE:           0


COL                                                                 COLUMN  COLUMN   DEFAULT
NUM    COLUMN NAME                    DATATYPE    PREC. SCALE      OFFSET  LENGTH    VALUE    NULL ATTR.
---    -----------                    --------    ----- -----      ------  ------   -------   ----------

  1    NAME                           CHARACTER                        0      32      NO       NOT NULL
  2    NUMBER                         SMALLINT       15                32       2      NO       NOT NULL
  3    SCHEMA                         CHARACTER                       34      18      NO       NOT NULL
  4    TABLE                          CHARACTER                       52      18      NO       NOT NULL
  5    TYPE                           CHARACTER                       70      18      NO       NOT NULL
  6    TYPECODE                       SMALLINT       15               88       2      NO       NOT NULL
  7    PRECISION                      SMALLINT       15               90       2      NO       NOT NULL
  8    SCALE                          SMALLINT       15               92       2      NO       NOT NULL
  9    NULLS                          CHARACTER                       94       1      NO       NOT NULL
 10    DEFAULT                        CHARACTER                       95       1      NO       NOT NULL
 11    VOFFSET                        SMALLINT       15               96       2      NO       NOT NULL
 12    VLENGTH                        SMALLINT       15               98       2      NO       NOT NULL
 13    NOFFSET                        SMALLINT       15              100       2      NO       NOT NULL
 14    NLENGTH                        SMALLINT       15              102       2      NO       NOT NULL
 15    NUMVALUES                      INTEGER        31              104       4      NO       NOT NULL
 16    SECLOWVAL                      BINARY                         108       8      NO       NOT NULL
 17    SECHIGHVAL                     BINARY                         116       8      NO       NOT NULL
 18    PROCPARMTYPE                   CHARACTER                      124       1      NO       NOT NULL
 19    FILLER                         BINARY                         125      39      NO       NOT NULL
```

Field Descriptions

A description of the fields in QREPORT 002 follows:

SCHEMA NAME

The name of the schema.

TABLE NAME

The name of the table.

TIMESTAMP

Table timestamp, used for synchronization with access module definitions.

TABLE OWNER

The owner of the schema in which this table resides.

DATE CREATED, BY USER

The userid of the person who submitted the SQL CREATE TABLE DDL, and the date and time the table was created.

DATE LAST UPDATED, BY USER

The userid of the person who last altered the table definition, and the date and time it occurred.

SEGMENT NAME

Name of the segment associated with the area where table rows are stored.

TABLE ID

Internal table identifier which identifies the rows of the table within an area.

TABLE LENGTH

The total length of a row of tables.

AREA NAME

Name of area where table rows are stored.

TABLE TYPE

The type of table. Valid values are:

- Base table
- Function
- Procedure
- Record in a non-SQL defined schema
- Table procedure
- View

DATA LENGTH

Internal length of the data portion of a table row (including 4-byte RDW for a compressed table).

LOC. MODE

The valid location modes are:

- CALC
- CLUSTERED
- DIRECT
- ROW ID INDEXED
- UNIQUE CALC

KEY LENGTH

Internal length of the non-data portion (the prefix length) of a table row.

PUT ROUTINE

CA IDMS Presspack data characteristic table (DCT) name.

COMPRESS

Compress indicator:

- 'Y' - Compressed
- 'N' - Uncompressed
- 'P' - Compressed with CA IDMS Presspack

CONTROL LENGTH

Internal length of the control portion (without the prefix) of a table row.

FORMAT

Format of the table row:

- 'F' - Fixed length
- 'V' - Variable length (compressed tables only)

FIXED LENGTH

Internal length of the fixed portion (without the prefix) of the table row.

UPDATABLE

When TYPE is 'V', updatable view indicator:

- 'Y' - Updatable
- 'N' - Not updatable

SECTION LENGTH

Length of the I-tree stored in the associated section table rows.

CHECKOPT

When TYPE is 'V', WITH CHECK OPTION indicator:

- 'Y' - View defined with WITH CHECK OPTION
- 'N' - View defined without WITH CHECK OPTION

NUMBER OF SYNTAX

Number of the "create view" or "create/alter table" DDL syntax records stored in the SYNTAX table. Create and alter table syntax is present only if it contains a CHECK clause.

NUMBER OF COLUMNS

Number of columns in the table or view.

DISPLACEMENT

Displacement, in pages, from clustering index or referenced row in a clustering constraint.

NUMBER OF INDEXES

Number of indexes on the table.

ESTIMATED ROWS

Estimated number of rows in the table.

NUMBER OF TIMES REFERENCED

Number of constraints in which the table is the referenced table.

NUMBER PAGES

Number of pages containing rows of the table when statistics were last updated.

REFERENCES TO OTHER TABLES

Number of constraints where this table is the referencing table.

NUMBER ROWS

Actual number of rows in the table when statistics were last updated.

ROWS PER PAGE

Number of table rows per page when statistics were last updated.

EXTERNAL NAME

Specifies the name of the program which will be called to process references to the procedure.

LOCAL WORK AREA

Represents the size of a local storage area that CA IDMS allocates at runtime and passes to each invocation of a procedure.

TRANSACTION SHARING

Specifies whether to enable transaction sharing for database sessions started by the procedure. Valid values are:

- ON—enable transaction sharing
- OFF—disable transaction sharing
- DEFAULT—retain the transaction sharing option in effect when the procedure is invoked

MODE

The mode in which the procedure executes. Valid values are:

- USER
- SYSTEM

GLOBAL WORK AREA

Represents the size of a global storage area that CA IDMS allocates at runtime and passes to each invocation of a procedure.

DEFAULT DATABASE

Specifies whether to establish a default database for database sessions started by the procedure. Valid values are:

- NULL—specifies not to establish a default database
- CURRENT—specifies to establish the database to which the SQL session is connected as the default database

PROTOCOL

Specifies the protocol to use to invoke the procedure. Valid values are:

- IDMS—for procedures written in COBOL, PL/I, or Assembler
- ADS—for procedures written in CA ADS

SHARED KEY

Specifies an identifier for the global storage area.

COL NUM

The column number in the table.

COLUMN NAME

The relative position of the column in the table.

DATATYPE

The data type for the named column.

PREC.

The number of digits in a numeric value.

SCALE

The number of digits to the right of the decimal point in a numeric value.

COLUMN OFFSET

The offset within a row into the data value of the column.

COLUMN LENGTH

The internal length of the column data value.

DEFAULT VALUE

Indicates whether or not the WITH DEFAULT clause was specified for this column.

NULL ATTR.

Indicates whether or not nulls are allowed.

QREPORT 003 -Schema and Table Report

QREPORT 003, the *Schema and Table Report*, provides a one page detailed listing of each SQL schema that in a dictionary. It also includes summary information about each table that belongs to the schema.

Not all schemas have associated tables. Therefore, QREPORT 003 uses an SQL "outer join" to provide information about all SQL schemas in the dictionary.

Symbolic Parameter Overrides

REQUESTED_DICTIONARY (&&1)

Enter the 1 to 8 character name of the dictionary you wish to report on.

REQUESTED_SCHEMA (&&2)

Specify a 1 to 18 character schema name, or use a *like-predicate pattern* to request multiple schemas.

Job Submission

The following example reports on all schemas residing in the TESTDICT dictionary whose schema name begins with EMP:

```
DATABASE DICTNAME=dictionary-name
USE "QRPT003"  WITH VALUES (REQUESTED_DICTIONARY='TSTDICT'
                            REQUESTED_SCHEMA='EMP%')
```

Sample QREPORT 003 (Page 1):

```
QREPORT 003                      SQL SCHEMA INFORMATION              mm/dd/yy              PAGE     1

                                  SCHEMA NAME: EMPLDEMO



                                                 SCHEMA OWNER: MET
    DATE CREATED:      yyyy-mm-dd-hh.mm          BY USER:      MET
    DATE LAST UPDATED:                           BY USER:

    SEGMENT NAME:                                SCHEMA TYPE:  RELATIONAL
    AREA NAME:


                       TABLE                                    TOTAL  NUMBER   NUMBER      TIMES       REFERENCES
      TABLE NAME        ID    TABLE TYPE  CREATED BY            LENGTH COLUMNS  INDEXES   REFERENCED   OTHER TABLES
      ----------       -----  ----------  ----------            ------ -------  -------   ----------   ------------

    BENEFITS            1028   TABLE      MET                  112      19        1          0            0
    COVERAGE            1029   TABLE      MET                   28       5        1          0            0
    DEPARTMENT          1028   TABLE      MET                   52       4        1          0            0
    DIVISION            1029   TABLE      MET                   48       3        1          0            0
    EMPLOYEE            1030   TABLE      MET                  172      15        1          0            0
    INSURANCE_PLAN      1030   TABLE      MET                  160      13        1          0            0
    JOB                 1031   TABLE      MET                  180       9        1          0            0
    POSITION            1031   TABLE      MET                   52       9        1          0            0
```

Sample QREPORT 003 (Page 2):

```
QREPORT 003                      SQL SCHEMA INFORMATION              mm/dd/yy              PAGE     2

                                  SCHEMA NAME: EMPSCHM



                                                 SCHEMA OWNER:
    DATE CREATED:      yyyy-mm-dd-hh.mm          BY USER:
    DATE LAST UPDATED:                           BY USER:

    SEGMENT NAME:     EMPDEMO                    SCHEMA TYPE:  NON-SQL REFERENCING
    AREA NAME:

    NON-SQL NODE:                                REFERENCED NON-SQL SCHEMA:  EMPSCHM
    NON-SQL DICTNAME: APPLDICT                   SCHEMA VERSION:               100


                                 THIS SCHEMA HAS NO TABLES CURRENTLY DEFINED
```

Field Descriptions

A description of the fields in QREPORT 003 follows:

SCHEMA NAME

Identifies the name of the schema.

SCHEMA OWNER

Identifies the owner of the schema.

DATE CREATED, BY USER

Identifies the date and time the schema was created, and the user who created it.

DATE LAST UPDATED, BY USER

Identifies the date and time the schema was last updated, and the user who last updated it.

SEGMENT NAME

Name of the segment associated with the default area for relational schemas. For non-SQL schemas, it is the name of the database or segment containing the data that the non-SQL schema defines.

AREA NAME

Name of the default area for relational schemas.

SCHEMA TYPE

The type of schema. Valid values are:

- RELATIONAL
- NON-SQL REFERENCING
- SQL REFERENCING

NON-SQL NODE

Reserved for future use.

REFERENCED NON-SQL SCHEMA

Name of the non-SQL schema.

NON-SQL DICTNAME

Name of the dictionary in which the referenced non-SQL schema is defined.

SCHEMA VERSION

Version number of the non-SQL schema.

REFERENCED SQL SCHEMA

Name of the SQL schema referenced by this schema.

RREFERENCED SQL DICTNAME

Name of the dictionary in which the referenced SQL schema is defined.

TABLE NAME

Name of the table.

TABLE ID

Internal table identifier which identifies the rows of the table within an area.

TABLE TYPE

The type of table. The following are the Valid values:

- Base table
- Function
- Procedure
- Record in a non-SQL defined schema
- Table procedure
- View

CREATED BY

Identifies the user who created the table.

TOTAL LENGTH

The total length of a table row.

NUMBER COLUMNS

Number of columns in the table.

NUMBER INDEXES

Number of indexes on the table.

TIMES REFERENCED

Number of constraints in which the table is the referenced table.

REFERENCES OTHER TABLES

Number of constraints where this table is the referencing table.

QREPORT 004 -SQL Access Module Information

QREPORT 004, the *SQL Access Module Information* report, lists detail information about each access module defined in a dictionary, along with the names of all tables referenced by each access module. This report also uses an outer join to list access modules that do not reference any tables.

Symbolic Parameter Overrides

REQUESTED_DICTIONARY (&&1)

Enter the 1 to 8 character name of the dictionary you wish to report on.

REQUESTED_SCHEMA (&&2)

Enter the 1 to 18 character name of an SQL schema or use a *like-predicate pattern* to specify multiple schemas.

REQUESTED_AM (&&3)

Enter the 1 to 18 character name of an access module, or use a *like-predicate pattern* to specify multiple access modules.

Job Submission

The following example reports on all Access Modules defined for the JMA schema in TSTDICT.

```
DATABASE DICTNAME=dictionary-name
USE "QRPT004"  WITH VALUES (REQUESTED_DICTIONARY='TSTDICT'
                            REQUESTED_SCHEMA='JMA              '
                            REQUESTED_AM='%')
```

Sample QREPORT 004:

```
QREPORT 004                        SQL ACCESS MODULE INFORMATION          mm/dd/yy       PAGE      1
.sp
.sp
                                                                          TABLES ACCESSED
 AM NAME    VERSION      SCHEMA        TIME OF CREATION    LENGTH    SCHEMA NAME          TABLE NAME
 ________   ________     ______        ________________    ______    ___________          __________
.sp
 DYNDIAL1         1  JMA               yyyy-mm-dd-hh.mm         0   DEMO                 TAB1
.sp
 EXTCURS          1  JMA               yyyy-mm-dd-hh.mm         0   DEMO                 TAB1
.sp
 EXTCURSA         1  JMA               yyyy-mm-dd-hh.mm         0   DEMO                 TAB1
.sp
 JMAAUG01         1  JMA               yyyy-mm-dd-hh.mm     4,900   EMPDEMO              EMPLOYEE
.sp
 JMABAT02         1  JMA               yyyy-mm-dd-hh.mm     4,900   EMPDEMO              EMPLOYEE
.sp
 JMABAT03         1  JMA               yyyy-mm-dd-hh.mm     4,900   EMPDEMO              EMPLOYEE
.sp
 JMADYN1          1  JMA               yyyy-mm-dd-hh.mm         0   DEMO                 TAB1
.sp
 JMANEST          1  JMA               yyyy-mm-dd-hh.mm         0   EMPDEMO              EMPLOYEE
.sp
 JMAPREP          1  JMA               yyyy-mm-dd-hh.mm     4,800   EMPDEMO              EMPLOYEE
.sp
 JMAPREP4         1  JMA               yyyy-mm-dd-hh.mm         0   EMPDEMO              EMPLOYEE
.sp
 JMASQL           1  JMA               yyyy-mm-dd-hh.mm         0   EMPDEMO              EMPLOYEE
.sp
 JMASQLB          1  JMA               yyyy-mm-dd-hh.mm     4,900   EMPDEMO              EMPLOYEE
.sp
 JMASQLD          1  JMA               yyyy-mm-dd-hh.mm         0   EMPDEMO              EMPLOYEE
.sp
 JMASQLIV         1  JMA               yyyy-mm-dd-hh.mm         0   INV                  PART
.sp
 JMASQLI2         1  JMA               yyyy-mm-dd-hh.mm         0   INV                  COMPONENT

                                                                    INV                  PART
.sp
 JMASQL2          1  JMA               yyyy-mm-dd-hh.mm     4,900   EMPDEMO              EMPLOYEE
.sp
 JMASQL2A         1  JMA               yyyy-mm-dd-hh.mm     4,900   EMPDEMO              EMPLOYEE
.sp
 JMASQL30         1  JMA               yyyy-mm-dd-hh.mm     4,900   EMPDEMO              EMPLOYEE
.sp
 PREPARE          1  JMA               yyyy-mm-dd-hh.mm         0
.sp
 TSTSQL           1  JMA               yyyy-mm-dd-hh.mm         0   EMPDEMO              EMPLOYEE
.sp
 TSTSQLAM         1  JMA               yyyy-mm-dd-hh.mm         0   EMPDEMO              EMPLOYEE
```

Field Descriptions

A description of the fields in QREPORT 004 follows:

AM NAME

Specifies the name of the access module.

VERSION

Specifies the version number of the access module.

SCHEMA

Specifies the schema associated with the access module.

TIME OF CREATION

Specifies the time and date the access module was created.

LENGTH

Number of bytes in the access module.

TABLES ACCESSED

Identifies the tables accessed by this access module.

SCHEMA NAME

Specifies the name of the schema to which the table being accessed belongs.

TABLE NAME

Specifies the name of the table being accessed.

QREPORT 005 -SQL Table Access Report

QREPORT 005, the *SQL Table Access* report, lists each SQL table referenced by an access module, along with the names of all access modules that reference it. The report is sorted by schema name, table name, access module name, and access module version.

Tables with no referencing access modules are omitted from this report.

Symbolic Parameter Overrides

REQUESTED_DICTIONARY (&&1)

Enter the 1 to 8 character name of the dictionary you wish to report on.

REQUESTED_SCHEMA (&&2)

Enter the 1 to 18 character name of an SQL schema, or use a *like-predicate pattern* to request more than one schema.

REQUESTED_TABLE (&&3)

Enter the 1 to 18 character name of an SQL table, or use a *like-predicate pattern* to request more than one table.

Job Submission

The following example lists all tables in all schemas of the TSTDICT dictionary that have referencing access modules.

The use of the DICTNAME clause on the DATABASE parameter allows CA Culprit for CA IDMS to retrieve QRPT005 syntax from the DIRLDICT dictionary.

```
DATABASE DICTNAME=dirldict
USE "QRPT005"  WITH VALUES (REQUESTED_DICTIONARY='TSTDICT'
                            REQUESTED_SCHEMA='%'
                            REQUESTED_TABLE='%' )
```

Sample QREPORT 005:

```
.sp
 QREPORT 005                        SQL TABLE ACCESS REPORT                    mm/dd/yy       PAGE      1
.sp
.sp
                                              ACCESS MODULES THAT REFERENCE TABLE
    SCHEMA.TABLE NAME                         AM NAME     VERSION      AM SCHEMA
    ________________                          _______     _______      _________
.sp
    DEMO.TAB1                                 DYNDIAL1          1      JMA
                                              EXTCURS           1      JMA
                                              EXTCURSA          1      JMA
                                              INSBDIAL          1      DEMO
                                              JMADYN1           1      JMA
.sp
    DEMOEMPL.DBCSTAB2                         DBCSDIA2          1      DEMOEMPL
.sp
    DEMOEMPL.DBCSTAB3                         DBCSDIA5          1      DEMOEMPL
.sp
    DEMOEMPL.DIVISION                         AMDCSQLT          1      DEMOEMPL
.sp
    EMPDEMO.EMPLOYEE                          JMAAUG01          1      JMA
                                              JMABAT02          1      JMA
                                              JMABAT03          1      JMA
                                              JMANEST           1      JMA
                                              JMAPREP           1      JMA
                                              JMAPREP4          1      JMA
                                              JMASQL            1      JMA
                                              JMASQLB           1      JMA
                                              JMASQLD           1      JMA
                                              JMASQL2           1      JMA
                                              JMASQL2A          1      JMA
                                              JMASQL30          1      JMA
                                              SQLDEMOD          1
                                              TSTSQL            1      JMA
                                              TSTSQLAM          1      JMA
.sp
    INV.COMPONENT                             JMASQLI2          1      JMA
.sp
    INV.PART                                  JMASQLIV          1      JMA
                                              JMASQLI2          1      JMA
.sp
```

Field Descriptions

A description of the fields in QREPORT 005 follows:

SCHEMA.TABLE NAME

The name of the schema and the table.

ACCESS MODULES THAT REFERENCE TABLE

Specifies the AM Name, Version, and AM Schema used to reference the named table.

AM NAME

Specifies the name of the access module.

VERSION

Specifies the version number of the access module.

AM SCHEMA

Specifies the schema that owns the access module.

QREPORT 006 -SQL Table Syntax Report

QREPORT 006, the *SQL Table Syntax Report*, lists the syntax used to create or alter check constraints within a table. It also lists the SQL "Create View" syntax for every view requested. Base tables without check constraints do not appear on this report.

Symbolic Parameter Overrides

REQUESTED_DICTIONARY (&&1).

Enter the 1 to 8 character name of the SQL dictionary you wish to report on.

REQUESTED_SCHEMA (&&2).

Enter the 1 to 18 character name of an SQL schema, or use a *like-predicate pattern* to request more than one schema.

REQUESTED_TABLE (&&3).

Enter the 1 to 18 character name of an SQL table, or use a *like-predicate pattern* to request more than one table.

Job Submission

The following example lists syntax for all qualifying tables and views in the TSTDICT dictionary.

```
DATABASE DICTNAME=dictionary-name
USE "QRPT006"  WITH VALUES (REQUESTED_DICTIONARY='TSTDICT'
                            REQUESTED_SCHEMA='%'
                            REQUESTED_TABLE='%')
```

Sample QREPORT 006:

```
.sp
 QREPORT 006                        SQL TABLE SYNTAX REPORT          mm/dd/yy          PAGE     1
.sp
.sp
  SCHEMA NAME          TABLE NAME              SYNTAX
  ———————————          ——————————              ——————

.sp
DEMOEMPL           EMPLOYEE          ( ( EMP_ID <= 8999 ) AND (STATUS IN ('A', 'S', 'L', 'T') ) )
.sp
.sp
DEMOEMPL           POSITION          ( (HOURLY_RATE IS NOT NULL AND SALARY_AMOUNT IS NULL)
                                      OR (HOURLY_RATE IS NULL AND SALARY_AMOUNT IS NOT NULL) )
.sp
.sp
SYSCA              ACCESSIBLE_TABLES  SELECT SCHEMA,
                                             NAME,
                                             TYPE
                                        FROM SYSTEM.TABLE
                                       WHERE TYPE <> 'N'
                                         AND ACCESS(SCHEMA, NAME) = 'Y'
                                      UNION
                                      SELECT NAME,
                                             SUBSTR(RSYN_NAME_079, 1, 18),
                                             'N'
                                        FROM SYSTEM.SCHEMA,
                                             SYSDICT."S-010",
                                             SYSDICT."SRCD-113",
                                             SYSDICT."RCDSYN-079"
                                       WHERE DICTIONARY = CURRENT DATABASE
                                         AND NTWKSCHEMA <> ' '
                                         AND S_NAM_010 = NTWKSCHEMA
                                         AND S_SER_010 = VERSION
                                         AND RSYN_NAME_079 NOT BETWEEN 'SR0' AND 'SR9'
                                         AND ACCESS(NAME, RSYN_NAME_079) = 'Y'
                                         AND "S-SRCD"
                                         AND "RCDSYN-SRCD"
```

Field Descriptions

A description of the fields in QREPORT 006 follows:

SCHEMA NAME

The schema name associated with the table.

TABLE NAME

The name of the table.

SYNTAX

Specifies the syntax used to create each SQL table defined with a check constraint, and each SQL view.

QREPORT 007 -SQL Table Index Report

QREPORT 007, the *SQL Table Index* report, provides information about each index that is associated with the schema and table requested. For requests involving multiple schemas and tables, the report is sorted by schema name, table name, and index name.

Indexes with a name of *HASH* represent calc keys defined on a base table using the SQL CREATE CALC key syntax. On the final release of QRPT007, the word CALC will appear in column 9 instead of INDEX HASH.

The report layout is generated in the form of syntax which is similar to that used to create the index.

Symbolic Parameter Overrides

REQUESTED_DICTIONARY (&&1).

Enter the 1 to 8 character name of the SQL dictionary you wish to report on.

REQUESTED_SCHEMA (&&2).

Enter the 1 to 18 character name of an SQL schema, or use a *like-predicate pattern* to request more than one schema.

REQUESTED_TABLE (&&3).

Enter the 1 to 18 character name of an SQL table, or use a *like-predicate pattern* to request more than one table.

Job Submission

The following example will retrieve QRPT007 syntax from the DIRLDICT dictionary of IDD and will provide an index report of all tables in the SYSTEM schema of the TSTDICT dictionary.

```
DATABASE DICTNAME=dictionary-name
USE "QRPT007"  WITH VALUES (REQUESTED_DICTIONARY='TSTDICT'
                            REQUESTED_SCHEMA='SYSTEM            '
                            REQUESTED_TABLE='%')
```

Sample QREPORT 007:

```
 QREPORT 007                          SQL TABLE INDEX REPORT            mm/dd/yy       PAGE     1

                                      SCHEMA NAME: SYSTEM


                          SCHEMA.TABLE /
               INDEX NAME INDEX COLUMNS                    ORDER   OTHER SPECIFICATIONS
               __________ ______________                   _____   ____________________

UNIQUE INDEX   HASH       ON SYSTEM.AM
                          (NAME                            ASC,
                           VERSION                         ASC)
                                                                   UNCOMPRESSED
                                                                   CLUSTERED

UNIQUE INDEX   HASH       ON SYSTEM.AREA
                          (NAME                            ASC,
                           SEGMENT                         ASC)
                                                                   UNCOMPRESSED
                                                                   CLUSTERED

UNIQUE INDEX   IX-AREA    ON SYSTEM.AREA
                          (NAME                            ASC,
                           SEGMENT                         ASC)
                                                                   UNCOMPRESSED
                                                                   IN SYSCAT.DDLCATX
                                                                   INDEX BLOCK CONTAINS    10 KEYS
                                                                   DISPLACEMENT IS     3 PAGES

UNIQUE INDEX   IX-BUFFER  ON SYSTEM.BUFFER
                          (NAME                            ASC,
                           DMCL                            ASC)
                                                                   UNCOMPRESSED
                                                                   IN SYSCAT.DDLCATX
                                                                   INDEX BLOCK CONTAINS    10 KEYS
                                                                   DISPLACEMENT IS     3 PAGES

UNIQUE INDEX   IX-CONSTRAINT ON SYSTEM.CONSTRAINT
                          (SCHEMA                          ASC,
                           NAME                            ASC)
                                                                   UNCOMPRESSED
                                                                   IN SYSCAT.DDLCATX
                                                                   INDEX BLOCK CONTAINS    10 KEYS
                                                                   DISPLACEMENT IS     3 PAGES

UNIQUE INDEX   IX-DBNAME  ON SYSTEM.DBNAME
                          (DBTABLE                         ASC,
                           NAME                            ASC)
                                                                   UNCOMPRESSED
                                                                   IN SYSCAT.DDLCATX
                                                                   INDEX BLOCK CONTAINS    10 KEYS
                                                                   DISPLACEMENT IS     2 PAGES

UNIQUE INDEX   HASH       ON SYSTEM.DBTABLE
                          (NAME                            ASC)
```

Field Descriptions

A description of the fields in QREPORT 007 follows:

SCHEMA NAME

The schema which owns the indexes listed as follows.

INDEX NAME

The name of the index that was created.

SCHEMA.TABLE

The schema and table name for which this index is defined.

INDEX COLUMNS

Specifies the column(s) used to create the index key.

ORDER

Indicates the sort order of the values in the named column(s), ascending or descending.

OTHER SPECIFICATIONS

Lists other specifications used to create the index, such as compressed/uncompressed, clustered, displacement.

QREPORT 008 -SQL Table Constraint Report

QREPORT 008, the *SQL Table Constraint* report, lists all of the referential constraints in which each table participates. This report is sorted first by the schema and table names that were requested on the WITH VALUES clause, then the constraint relationship, and finally the constraint name. Constraints where the table being reported is the referencing table are listed first, followed by constraints where the table being reported is the referencing table.

Two tables are involved in each referential constraint. The dependent table is called the *referencing table*. Data values for certain columns of the referencing table are restricted to only those values that exist in corresponding columns of the *table being referenced*. These columns in the referencing table are often referred to as *foreign key columns*; they correspond to *referenced columns* in the referenced table.

Constraints where the table being reported is the referencing table are listed first in QREPORT 008. Finally, QREPORT 008 lists the constraints where the table being reported is the table being referenced.

Symbolic Parameter Overrides

REQUESTED_DICTIONARY (&&1).

Enter the 1 to 8 character name of the SQL dictionary you wish to report on.

REQUESTED_SCHEMA (&&2).

Enter the 1 to 18 character name of an SQL schema, or use a *like-predicate pattern* to request more than one schema.

REQUESTED_TABLE (&&3).

Enter the 1 to 18 character name of an SQL table, or use a *like-predicate pattern* to request more than one table.

Job Submission

The following example retrieves QRPT008 syntax from the CULLIB copybook library, and produces a Table Constraint Report for those tables in SYSTEM schema of TSTDICT that begin with the letter **D**.

```
DATABASE DICTNAME=dictionary-name
USE "QRPT008"  WITH VALUES (REQUESTED_DICTIONARY='TSTDICT'
                            REQUESTED_SCHEMA='SYSTEM          '
                            REQUESTED_TABLE='D%')
```

Sample QREPORT 008:

```
.sp
 QREPORT 008                          SQL TABLE CONSTRAINT REPORT          mm/dd/yy       PAGE     1
.sp
.sp
 TABLE NAME                      CONSTRAINT NAME      TABLE REFERENCED                 REFERENCING TABLE
 ——————————                      ———————————————      ————————————————                 ————————————————


 SYSTEM.DBNAME                   DBTABLE-DBNAME       SYSTEM.DBTABLE
                                 DBNAME-DBSEGMENT                                      SYSTEM.DBSEGMENT
                                 DBNAME-DBSSC                                          SYSTEM.DBSSC

.sp
.sp
 SYSTEM.DBSEGMENT                DBNAME-DBSEGMENT     SYSTEM.DBNAME

.sp
.sp
 SYSTEM.DBSSC                    DBNAME-DBSSC         SYSTEM.DBNAME

.sp
.sp
 SYSTEM.DBTABLE                  DBTABLE-DBNAME                                        SYSTEM.DBNAME

.sp
.sp
 SYSTEM.DMCL                     DMCL-BUFFER                                           SYSTEM.BUFFER
                                 DMCL-DMCLSEGMENT                                      SYSTEM.DMCLSEGMENT
                                 DMCL-JOURNAL                                          SYSTEM.JOURNAL

.sp
.sp
 SYSTEM.DMCLAREA                 AREA-DMCLAREA        SYSTEM.AREA
                                 DMCLSEG-DMCLAREA     SYSTEM.DMCLSEGMENT

.sp
.sp
 SYSTEM.DMCLFILE                 DMCLSEG-DMCLFILE     SYSTEM.DMCLSEGMENT
                                 FILE-DMCLFILE        SYSTEM.FILE

.sp
.sp
 SYSTEM.DMCLSEGMENT              DMCL-DMCLSEGMENT     SYSTEM.DMCL
                                 SEGMENT-DMCLSEG      SYSTEM.SEGMENT
                                 DMCLSEG-DMCLAREA                                      SYSTEM.DMCLAREA
                                 DMCLSEG-DMCLFILE                                      SYSTEM.DMCLFILE
.sp
```

Field Descriptions

A description of the fields in QREPORT 008 follows:

TABLE NAME

The name of the table which participates in constraints.

CONSTRAINT NAME

The name of the referential constraint.

TABLE REFERENCED

Specifies the table being referenced.

REFERENCING TABLE

Specifies the dependent table in the constraint.

Chapter 7: ASF Row-Level Security Reports—IREPORTS

This section contains the following topics:

Overview (see page 245)
Producing ASF Row-Level Security Reports (see page 245)
ASF Row-Level Security Reports (see page 247)

Overview

IREPORTs provide summary and detail information about ASF tables that enforce row-level security. For example, with these reports, you can determine the security name associated with the ASF table, the users that can access the table, and the criteria that determine which rows of the table a particular user is allowed to see.

Note: For more information about row-level security, see the *CA IDMS ASF User Guide*.

Producing ASF Row-Level Security Reports

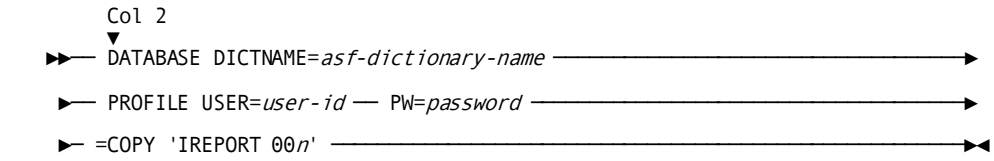
To obtain summary and detail reports about tables that enforce row-level security, follow these steps:

1. By using ASF, obtain the required passkey and authority:
   a. *Obtain a READ passkey* to the $SRT-OST-CROSS-REFERENCE$ table.
   b. *Obtain authority* to access the $SECURITY-RUNTIME-TABLE$ table.

   Note: For information about assigning passkeys and authority, see the *CA IDMS ASF User Guide*.
2. Run an IREPORT report, under the IDMS DC/UCF central version, that contains the following input parameters. The source code for the IREPORTs must be stored in the ASF dictionary as modules named IREPORT 001, IREPORT 002, and so on.

Syntax

The following syntax and syntax rules for the CA Culprit for CA IDMS parameters required to run row-level security reports appear, followed by examples.



Parameters

DICTNAME=*asf-dictionary-name*

Specifies the name of the dictionary that contains the CA Culprit for CA IDMS source modules and to which the $SRT-OST-CROSS-REFERENCE$ table is defined.

PROFILE USER=*user-id*

Specifies the ID of the user running the IREPORT. The user must have a READ passkey to the $SRT-OST-CROSS-REFERENCE$ table and must be authorized to access the $SECURITY-RUNTIME-TABLE$ table.

PW=*password*

Specifies the password of the user running the CA Culprit for CA IDMS reports. The user must have a READ passkey to the $SRT-OST-CROSS-REFERENCE$ table and must be authorized to access the $SECURITY-RUNTIME-TABLE$ table.

IREPORT 00*n*

Specifies the report number as described in the following summary table.

Summary Table

IREPORT	Title	Sorted by
IREPORT 001	Row Level Security Summary Report	Table name
IREPORT 002	Row Level Security Detail Report	Table name
IREPORT 003	Row Level Security Summary Report by User	User id
IREPORT 004	Row Level Security Detail Report by User	User id

IREPORT	Title	Sorted by
IREPORT 005	Row Level Security Summary Report by Owner/Security Name	Security name within user id

Example

In this example, user BEAR has a READ passkey to the $SRT-OST-CROSS-REFERENCE$ table and authority to access the $SECURITY-RUNTIME-TABLE$ table. The user requests a report that lists detailed information about each table in ASFDICT that enforces row-level security.

```
 DATABASE DICTNAME=ASFDICT
 PROFILE USER=BEAR PW=CUB
=COPY 'IREPORT 002'
```

ASF Row-Level Security Reports

Sample IREPORT 001:

```
REPORT NO.  01                          INFORMATION CENTER MANAGEMENT SYSTEM                    mm/dd/yy  PAGE   1
IREPORT 001                               ROW LEVEL SECURITY SUMMARY REPORT

TABLE.:  BUDGET2                         TDN...:     247                    SECURITY NAME:      QALPASS
OWNER.:  QAL

USER                      WHERE CLAUSE
----                      ------------
QAD                       JAN GT 10000
```

Sample IREPORT 002:

```
REPORT NO.  02                          INFORMATION CENTER MANAGEMENT SYSTEM                    mm/dd/yy  PAGE   1
IREPORT 002                               ROW LEVEL SECURITY DETAIL REPORT

TABLE.:  BUDGET2                         TDN...:     247                    SECURITY NAME:      QALPASS
OWNER.:  QAL

    USER..:  QAD                             GROUP.:
    STATUS:  (V) VALIDATED
    WHERE.:  JAN GT 10000
```

Sample IREPORT 003:

```
REPORT NO.  03                              INFORMATION CENTER MANAGEMENT SYSTEM                    mm/dd/yy  PAGE   1
IREPORT 003                               ROW LEVEL SECURITY SUMMARY REPORT BY USER

ROW LEVEL SECURITY ACCESS FOR USER.:      QAC                                          SECURITY NAME:      QALPASS

TABLE             OWNER               SECNAME      TDN  WHERE CLAUSE
-----             -----               -------- -------  ------------
DEMO              JSS                 DEMO123      137  LNAME = 'ABC'

REPORT NO.  03                              INFORMATION CENTER MANAGEMENT SYSTEM                    mm/dd/yy  PAGE   2
IREPORT 003                               ROW LEVEL SECURITY SUMMARY REPORT BY USER

ROW LEVEL SECURITY ACCESS FOR USER.:      QUAD                                         SECURITY NAME:      DEMO123

TABLE             OWNER               SECNAME      TDN  WHERE CLAUSE
-----             -----               -------- -------  ------------
BUDGET2           QAL                 QALPASS      247  JAN GT 10000
SMALLTAB          QAL                 QALPASS2     260  ACCOUNT EQ '1'

REPORT NO.  03                              INFORMATION CENTER MANAGEMENT SYSTEM                    mm/dd/yy  PAGE   3
IREPORT 003                               ROW LEVEL SECURITY SUMMARY REPORT BY USER

ROW LEVEL SECURITY ACCESS FOR USER.:      QAG                                        SECURITY NAME:      SECURROW

TABLE             OWNER               SECNAME      TDN  WHERE CLAUSE
-----             -----               -------  -------  ------------
ROW LEVEL         QAP                 SECURROW     223  COL1 = 69
```

Sample IREPORT 004:

```
REPORT NO.  04                              INFORMATION CENTER MANAGEMENT SYSTEM                    mm/dd/yy  PAGE   2
IREPORT 004                               ROW LEVEL SECURITY DETAIL REPORT BY USER

ACCESS FOR USER.:  QAD                            GROUP:

TABLE.:  BUDGET2                                                      TDN:     247        SECNAME    QALPASS
OWNER.:  QAL
WHERE.:  JAN GT 10000
STATUS:  (V) VALIDATED

TABLE.:  SMALLTAB                                                     TDN:     260        SECNAME:   QALPASS2
OWNER.:  QAL
WHERE.:  ACCOUNT EQ '1'
STATUS:  (V) VALIDATED
```

Sample IREPORT 005:

```
REPORT NO.  05                              INFORMATION CENTER MANAGEMENT SYSTEM                        mm/dd/yy  PAGE   1
IREPORT 005                          ROW LEVEL SECURITY SUMMARY REPORT BY OWNER/SECURITY NAME

OWNER.........:  QAC
SECURITY NAME.:  DEMO123

TABLE NAME            TDN  USER                  WHERE CLAUSE
----------         ------ ------                  ------------
DEMO                  137  QAC                   LNAME = 'ABC'

REPORT NO.  05                              INFORMATION CENTER MANAGEMENT SYSTEM                        mm/dd/yy  PAGE   2
IREPORT 005                          ROW LEVEL SECURITY SUMMARY REPORT BY OWNER/SECURITY NAME

OWNER.........:  QAD
SECURITY NAME.:  QALPASS

TABLE NAME            TDN  USER                  WHERE CLAUSE
----------          -----  ---                   ------------
BUDGET2               247  QAD                   JAN GT 10000
```

Field Descriptions

TABLE

Name of a table for which row-level security is established.

OWNER

Owner of the table.

TDN

Table definition number of the table.

SECURITY NAME (SECNAME)

Security name assigned to the table.

USER

Id of a user authorized to access certain rows of the table.

WHERE

Specifies criteria that define the data that the user is permitted to see. If a user has unlimited access to the table (that is, no WHERE clause exists), the following literal appears:

*** NO RESTRICTIONS ***

STATUS

Specifies whether the $SECURITY-RUNTIME-TABLE$ entry has been validated; that is, whether user, owner, security name, and WHERE criteria are entered correctly in the $SECURITY-RUNTIME-TABLE$ table. The report generates the following messages:

- (V) VALIDATED
- (I) REQUIRES VALIDATION
- (E) ERROR IN VALIDATION

GROUP

Name of the group that has authority to access the table.

Chapter 8: CA IDMS/DB Journal Reports—JREPORTS

This section contains the following topics:

Overview (see page 251)
Summary of Journal Reports (see page 252)
Uses for Journal Reports (see page 253)
Types of Journal Records (see page 253)
Summary of Records Required for Journal Reports (see page 265)
Producing Journal Reports (see page 266)
JREPORT 001 - Transaction Summary (see page 271)
JREPORT 002 - Program Termination Statistics (see page 273)
JREPORT 003 - Program I/O Statistics (see page 276)
JREPORT 004 - Program Summary (see page 277)
JREPORT 005 - Detail Area/Transaction (see page 280)
JREPORT 006 - Detail Program/Area (see page 282)
JREPORT 007 - Area Summary (see page 284)
JREPORT 008 - Formatted Record Dump (see page 286)
JREPORT 009 - User ID (see page 293)
JREPORT 010 - External User Identity (see page 295)
JREPORT 011 - Count By Journal Record Type Report (see page 296)

Overview

When an application program accesses and updates a database, CA IDMS/DB logs backup information to a journal file, which records program activity against the database. The journal file contains:

- A *time record* that describes when journal records are written
- *Checkpoints* that describe the status of transactions accessing the database
- *Journal record entries* that contain the before and after images of database records

The journal file also contains CKPT and USER records; however, these records are not used in journal reports.

Summary of Journal Reports

A journal report describes the contents of the journal file. The following table lists the journal reports in order by report module number.

JREPORT Module	Report Title
000	No listing (contains journal record field descriptions)
001	Transaction Summary
002	Program Termination Statistics
003	Program I/O Statistics
004	Program Summary
005	Detail Area/Transaction
006	Detail Program/Area
007	Area Summary
008	Formatted Record Dump
009	User ID
010	External User Identity
011	Count By Journal Record Type

This chapter discusses types of journal records, report-specific input parameters required to process a journal report, and sample output.

Note: For more information about journaling, see the *CA IDMS Database Administration Guide*.

Uses for Journal Reports

Journal reports produce statistics that can be used to monitor CA IDMS/DB database and DC/UCF system performance. As a DBA, journal statistics allow you to monitor the following performance features for each program that accesses the database:

- *Database page access statistics*, such as the number of pages written, read, and requested by each program and the number of records requested and made current of the transaction
- *CALC and VIA overflow statistics*, such as the number of CALC records stored on pages other than the target page
- *Variable-length record statistics*, such as the number of variable-length record fragments stored on pages other than the target page
- *Area usage statistics*, such as the name and usage modes of areas accessed by each application program

Reports Help You Monitor Performance

By running journal reports frequently, a DBA can monitor trends in database and system performance.

Other Reporting Facilities

Other tools available to the DBA are the Database Analysis Utility (IDMSDBAN) and the BACKUP utility.

Note: For more information about these utilities, see Other CA IDMS Reporting Facilities (see page 399).

Types of Journal Records

Journal reports use the following journal record types:

Record type	Description
TIME	Time record TIME records the date and time the contents of the journal buffer are written to the journal file. A TIME record is created each time a journal buffer is initialized; however, the date and time fields contain binary zeros until the contents of the journal buffer are written to the journal file.

Record type	Description
BGIN	Checkpoint BGIN checkpoints mark the beginning of local work done by a transaction branch. They are written to the journal file when a database transaction is initiated if JOURNAL RETRIEVAL is specified in the system definition or when the first update occurs otherwise. Starting with r16 SP4, for compliance and audit reporting, the BGIN checkpoint record contains the user ID of the user signed on who executed the application causing the BGIN to be written. Starting with IDMS Server r16.1 (or IDMS r16 SP6),the BGIN checkpoint record contains the external identity from a multitiered application such as a web application.
AREA	Checkpoint AREA checkpoints record transaction access to a database area. One AREA checkpoint is written to the journal file for each area readied by an explicit DML READY statement or readied automatically by the DBMS. AREA checkpoints are written to the journal file as follows: ■ **Under the central version**, AREA checkpoints are written to the journal file at the time of the first functional call issued by the application program. ■ **In local mode**, AREA checkpoints for areas readied in update mode are written to the journal file as each READY statement is processed. AREA checkpoints for areas readied in retrieval mode are written to the journal file at the time of the first functional call.
COMT	Checkpoint COMT checkpoints are written during a commit operation to mark the successful completion of a transaction branch. A COMT checkpoint is similar to an ENDJ checkpoint except that it enables work done after the commit to be recorded on the journal file under the same local identifier (LID). It is only written in response to a COMMIT or COMMIT WORK CONTINUE statement and then only if ON COMMIT WRITE COMT is specified in the system definition.
ENDJ	Checkpoint ENDJ checkpoints are written during a commit operation to mark the successful completion of a transaction branch.
RTSV	Checkpoint RTSV checkpoints mark an SQL statement whose updates must be rolled out. An RTSV checkpoint is written to the journal file whenever an error is encountered while processing an SQL statement and that statement has updated the database.

Record type	Description
ABRT	Checkpoint ABRT checkpoints are written during a backout operation to mark the abnormal completion of a transaction branch. If running under the central version, ABRT checkpoints are written only after CA IDMS/DB automatically recovers a failing transaction.
BFOR	Journal record entry BFOR entries record the before image of a database record. A BFOR entry is created when a CA IDMS/DB application program issues a request to update information in the database. When a new record is stored, the BFOR entry contains a null before image, indicating the previous absence of the record in the database. When a BFOR entry contains a null before image, the record-image-length field in the entry is set to zero.
AFTR	Journal record entry AFTR entries record the after image of a database record. An AFTR entry is created when a CA IDMS/DB application program issues a request to update information in the database. When an existing record is removed, the AFTR entry contains a null after image, indicating the deletion of the record from the database. When an AFTR entry contains a null after image, the record-image-length field in the entry is set to zero.
DIND	Distributed checkpoint (In doubt) DIND entries are written by a two-phase commit participant after it has successfully prepared its resources for commit and prior to returning an OK response to its coordinator. The DIND entry contains the Local Transaction Identifiers (LIDs) identifying the work done by the local transaction branches that participated in the distributed transaction. It also contains information about a participant's coordinator and about a coordinator's participants. The specific information that is recorded varies depending on the type of the coordinator or participant.
DCOM	Distributed checkpoint (Commit) DCOM entries are written by a two-phase commit coordinator to signify that a distributed transaction's changes will be committed. Its existence demarcates the first and second phases of the commit process. A participant also writes a DCOM entry immediately upon receiving a Commit request from its coordinator. The DCOM entry contains the Local Transaction Identifiers (LIDs) identifying the work done by the local transaction branches that participated in the distributed transaction. It also contains information about a participant's coordinator and about a coordinator's participants. The specific information that is recorded varies depending on the type of the coordinator or participant.

Record type	Description
DBAK	Distributed checkpoint (Backout) DBAK entries are written be a two-phase commit coordinator to signify that a transaction's changes will be backed out. Its existence demarcates the first and second phases of the commit process. A participant also writes a DBAK entry immediately upon receiving a Backout request from its coordinator but only if a DIND had previously been written. The DBAK entry contains the Local Transaction Identifiers (LIDs) identifying the work done by the local transaction branches that participated in the distributed transaction. It also contains information about a participant's coordinator and about a coordinator's participants. The specific information that is recorded varies depending on the type of the coordinator or participant.
DPND	Distributed checkpoint (Pending) DPND entries are written by a two-phase commit coordinator during the second phase of a commit operation if a participant is unable to complete its commit processing due to a failure. By writing this entry, the coordinator is able to forget some participants while remembering others. It is written by a participant if it is forced to heuristically complete its portion of a distributed transaction. The DPND entry contains information about a participant's coordinator and about a coordinator's participants. The specific information that is recorded varies depending on the type of the coordinator or participant.
DFGT	Distributed checkpoint (Forget) DFGT entries are written by two-phase commit coordinators and participants when they have completed their two-phase commit processing for a distributed transaction. A DFGT entry is written only if some other distributed checkpoint entry was previously written for the transaction.

Relating Local and Distributed Journal Entries

BGIN, COMT, ENDJ, and ABRT checkpoints and BFOR and AFTR journal entries log work done by a transaction branch within the local system. They contain a 4-byte local identifier (LID) that uniquely identifies this work. In order to associate work done locally with a distributed transaction, DIND, DCOM, and DBAK checkpoints contain a list of LID values representing the local work units that are part of the distributed work unit.

The following illustrates the sequence in which local and distributed journal records can be written to a journal file for a distributed transaction:

- BGIN - indicates the start of work done locally
- BFOR/AFTR - one or more pairs
- DIND - on a participant only
- DCOM or DBAK - on a participant and a coordinator
- COMT or ENDJ - if a DCOM was written
- ABRT - if a DBAK was written
- DPND - on a coordinator if the commit operation was interrupted; on a participant if the transaction was heuristically completed
- DFGT - on a participant and a coordinator if any other distributed checkpoint was written

Special Considerations for BFOR and AFTR Entries

- BFOR and AFTR entries are also written when CA IDMS/DB brings relocated records back to the home page or physically deletes logically deleted records. These actions can occur during *any* operation; therefore, BFOR and AFTR entries can appear for retrieval-only transactions that have readied the applicable area in update mode.
- Corresponding BFOR and AFTR entries are not necessarily contiguous in the journal file. For example, the BFOR record for one transaction may be immediately followed by an AFTR record for a different transaction. The BFOR and AFTR entries for a database record contain either the whole record or a portion of the record, as follows:
  - If the data portion of the record has been changed, the journal record entries contain the entire database record (that is, the dbkey, prefix, and data portions).
  - If only pointers in the record prefix have been changed, only the dbkey and prefix portions of the record are written to the journal file.
- BFOR and AFTR entries can also span journal blocks. A record that spans a journal block appears as two records with the second portion offset by the length of the first portion. For example, if 200 bytes remain in a journal block, a 500-byte BFOR record is journaled as one 200-byte and one 300-byte BFOR journal entry; the 300-byte entry has an offset of 200.

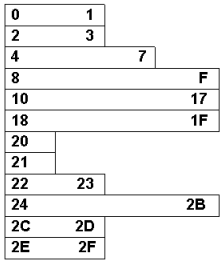
Special Considerations for Distributed Checkpoint Entries

- Distributed Checkpoint entries (types DIND, DCOM, DBAK, DPND, and DFGT) can be larger than a single disk journal block. If this is the case, they are split into as many journal blocks as necessary to hold the entire record.
- Distributed Checkpoint entries can also be split across disk journal files and, hence, across archive files.

The following figures show the record layouts for the journal record types.

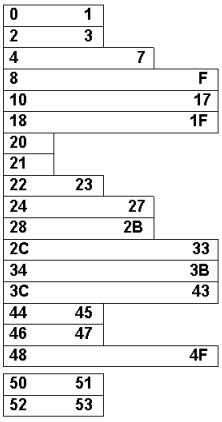
°1=Retrieval 2=Update
°°1=Shared 2=Exclusive
3=Protected

TIME JOURNAL RECORD TYPE



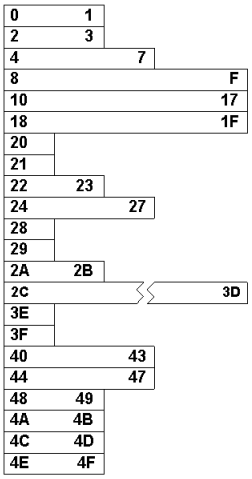
Field	Data Type	Length (in bytes)
Journal record length	binary	2 (Halfword)
Reserved (initialized to zeroes)	binary	2 (Halfword)
Journal record type (TIME)	alphanumeric	4
UTC date/time stamp	binary	8 (2 Fullwords)
Journal record sequence number	binary	8 (2 Fullwords)
Journal record qualifier	binary	8 (2 Fullwords)
CV number (central version only)	binary	1
Journaling version	binary	1
Reserved	binary	2 (Halfword)
date/time stamp	binary	8 (2 Fullwords)
Journal record length	binary	2 (Halfword)
Reserved (initialized to zeroes)	binary	2 (Halfword)

BGIN JOURNAL RECORD TYPE



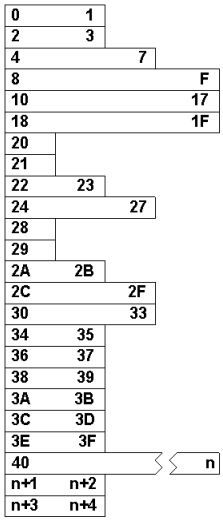
Field	Data Type	Length (in bytes)
Journal record length	binary	2 (Halfword)
Reserved (initialized to zeroes)	binary	2 (Halfword)
Journal record type (BGIN)	alphanumeric	4
UTC date/time stamp	binary	8 (2 Fullwords)
Journal record sequence number	binary	8 (2 Fullwords)
Journal record qualifier	binary	8 (2 Fullwords)
CV number (central version only)	binary	1
Journaling version	binary	1
Reserved	binary	2 (Halfword)
Local transaction ID (LID)	binary	4 (Fullword)
Address of VIB	address	4
Program name	alphanumeric	8
date/time stamp	binary	8 (2 Fullwords)
Reserved (initialized to zeroes)	binary	8 (2 Fullwords)
Transaction update quiesce level	binary	2 (Halfword)
Transaction quiesce level	binary	2 (Halfword)
Local task ID for transaction or savepoint sequence number	binary	8 (2 Fullwords)
Journal record length	binary	2 (Halfword)
Reserved (initialized to zeroes)	binary	2 (Halfword)

AREA JOURNAL RECORD TYPE



Field	Data Type	Length (in bytes)
Journal record length	binary	2 (Halfword)
Reserved (initialized to zeroes)	binary	2 (Halfword)
Journal record type (AREA)	alphanumeric	4
UTC date/time stamp	binary	8 (2 Fullwords)
Journal record sequence number	binary	8 (2 Fullwords)
Journal record qualifier	binary	8 (2 Fullwords)
CV number (central version only)	binary	1
Journaling version	binary	1
Reserved	binary	2 (Halfword)
Local transaction ID (LID)	binary	4 (Fullword)
Area type	binary	1
DBMS verb number	binary	1
Schema page group identifier	binary	2 (Halfword)
Area name	alphanumeric	18
Area flag byte	binary	1
Reserved	binary	1
Low page of area	binary	4 (Fullword)
High page of area	binary	4 (Fullword)
*OPEN mode	binary	2 (Halfword)
**OPEN access	binary	2 (Halfword)
Journal record length	binary	2 (Halfword)
Reserved (initialized to zeroes)	binary	2 (Halfword)

BFOR and AFTR JOURNAL RECORD TYPE



Field	Data Type	Length (in bytes)
Journal record length	binary	2 (Halfword)
Reserved (initialized to zeroes)	binary	2 (Halfword)
Journal record type (BFOR or AFTR)	alphanumeric	4
UTC date/time stamp	binary	8 (2 fullwords)
Journal record sequence number	binary	8 (2 fullwords)
Journal record qualifier	binary	8 (2 fullwords)
CV number (central version only)	binary	1
Journaling version	binary	1
Reserved	binary	2 (Halfword)
Local transaction ID (LID)	binary	4 (Fullword)
Area type	binary	1
DBMS verb number	binary	1
Schema page group identifier	binary	2 (Halfword)
Schema DBKey format word	binary	4 (Fullword)
Database key	binary	4 (Fullword)
Record ID	binary	2 (Halfword)
Page displacement	binary	2 (Halfword)
Record image length	binary	2 (Halfword)
Prefix length	binary	2 (Halfword)
Offset into DBMS of call	binary	2 (Halfword)
Spanned record offset	binary	2 (Halfword)
User record (prefix and data)	variable	
Journal record length	binary	2 (Halfword)
Reserved (initialized to zeroes)	binary	2 (Halfword)

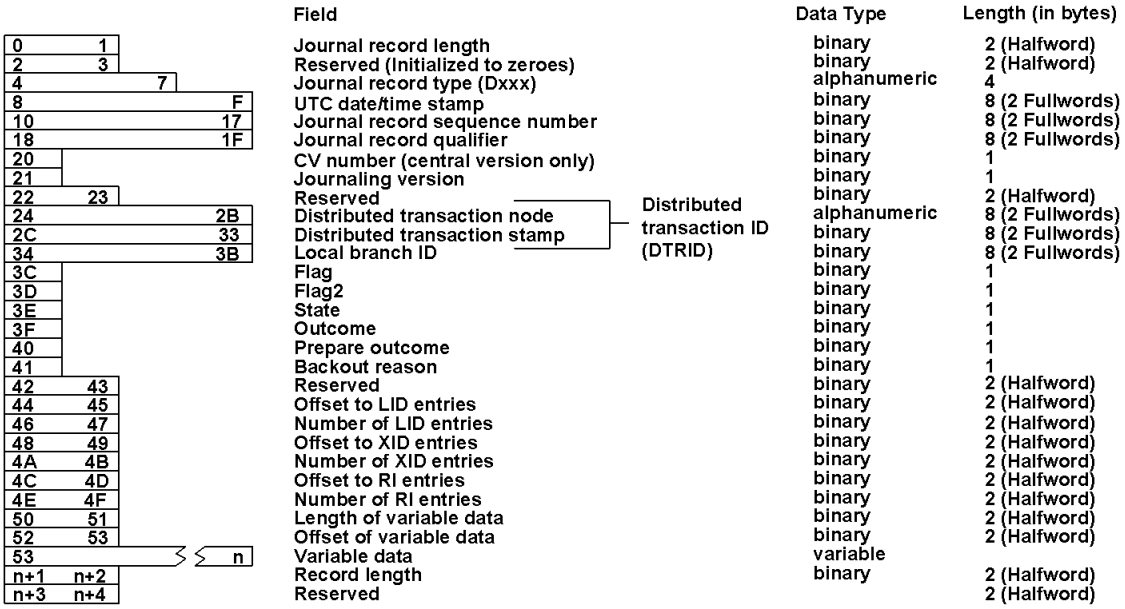
line index of record

*Central Version Only

COMT, ENDJ, ABRT, RTSV, Journal Record Type

			Field	Data Type	Length (in bytes)
0	1		Journal record length	binary	2 (Halfword)
2	3		Reserved (intialized to zeroes)	binary	2 (Halfword)
4	7		Journal record type (BGIN)	alphanumeric	4
8	F		UTC date/time stamp	binary	8 (2 Fullwords)
10	17		Journal record sequence number	binary	8 (2 Fullwords)
18	1F		Journal record qualifier	binary	8 (2 Fullwords)
20			CV number (central version only)	binary	1
21			Journaling version	binary	1
22	23		Reserved	binary	2 (Halfword)
24	27		Local transaction ID (LID)	binary	4 (Fullword)
28	2B		Address of VIB	address	4
2C	33		Program name	alphanumeric	8
34	3B		date/time stamp	binary	8 (2 Fullwords)
3C	43		Reserved (intialized to zeroes)	binary	8 (2 Fullwords)
44	45		Transaction update quiesce level	binary	2 (Halfword)
46	47		Transaction quiesce level	binary	2 (Halfword)
48	4F		Local task ID for transaction or savepoint sequence number	alphanumeric or binary	8
50	53		Number of user records updated	binary	4 (Fullword)
54	57		Number of pages read from database	binary	4 (Fullword)
58	5B		Number of pages written to database	binary	4 (Fullword)
5C	5F		Total pages requested by DBMS	binary	4 (Fullword)
60	63		Number of times calc record stored on target page	binary	4 (Fullword)
64	67		Number of times calc record not stored on target page	binary	4 (Fullword)
68	6B		Number of times via record stored on target page	binary	4 (Fullword)
6C	6F		Number of times via record not stored on target page	binary	4 (Fullword)
70	73		Number of records requested from DBMS	binary	4 (Fullword)
74	77		Number of current-of-transaction records	binary	4 (Fullword)
78	7B		Number of calls to DBMS	binary	4 (Fullword)
7C	7F		Number of record fragments stored	binary	4 (Fullword)
80	83		Number of record fragments returned to home page	binary	4 (Fullword)
84	87		*Total locks acquired	binary	4 (Fullword)
88	8B		*Number of shared DB-key locks held	binary	4 (Fullword)
8C	8F		*Number of non-shared DB-key locks held	binary	4 (Fullword)
90	93		Transaction ID	binary	4 (Fullword)
94	97		Task ID	binary	4 (Fullword)
98	9F		Local task ID for transaction	binary	8 (2 Fullwords)
A0	A3		Number of SR8 splits	binary	4 (Fullword)
A4	A7		Number of SR8 spawns	binary	4 (Fullword)
A8	AB		Number of SR8 records stored	binary	4 (Fullword)
AC	AF		Number of SR8 records erased	binary	4 (Fullword)
B0	B3		Number of SR7 records stored	binary	4 (Fullword)
B4	B7		Number of SR7 records erased	binary	4 (Fullword)
B8	BB		Number of B-Tree searches	binary	4 (Fullword)
BC	BF		Number of B-Tree levels searched	binary	4 (Fullword)
C0	C3		Number of orphans adopted	binary	2 (Halfword)
C4	C5		# index levels Searched - best case	binary	2 (Halfword)
C6	C7		# index levels searched - worst case	binary	2 (Halfword)
C8	C9		Journal record length	binary	2 (Halfword)
CA	CB		Reserved (initialized to zeroes)	binary	2 (Halfword)

DISTRIBUTED CHECKPOINT JOURNAL RECORD TYPE



Field Definitions for JREPORT 000

The journal record field definitions as they appear in the JREPORT 000 parameter module appear as follows. The parameters show the actual names (and synonyms) of the journal record fields.

```
REC$0**** 'J' REPORTS IDMS JOURNAL FILE   volser    REC PARAMETERS
REC REC-LEN                             1  2 1
REC TYPE                                5  4
REC GMT                                 9  8
REC SEQ                                17  8 1
REC SEQ-A                              17  8    $IDMS/2882 HEX COMPARE
REC QUAL                               25  8 1  $qualifier:
REC QUAL-CV                            25  8       $CV: node
REC QUAL-LOCAL                         25  8 1     $Local: GMT
REC CVNO                               33  1
REC VERS                               34  1
REC RSV1                               35  2    $Reserved
REC $ BGIN,COMT,ENDJ,ABRT,RTSV, Plus AREA,BFOR,AFTR RECORDS ********
REC TRANSACT-ID                        37  4 1
REC TRANSACT-IDC                       37  4
```

```
REC $ BGIN,COMT,ENDJ,ABRT,RTSV, Plus AREA RECORDS *****************
REC VIB                           41  4 1
REC $ BGIN,COMT,ENDJ,ABRT,RTSV RECORDS*****************************
REC PROGRAM-NAME                  45  8
REC DTESTAMP                      53  8
REC DTESTAMPX                     53  8 1
REC OLDTIM                        61  8 2  $not used
REC UPDATE-QUIESE                 69  2 1
REC QUIESCE                       71  2 1
REC SAVEPOINT-SEQ                 73  8 1  $RTSV only.
REC TASK-ID                       73  8    $Local Task id.
REC LT-P1                         73  4
REC LT-P2                         77  4 1
REC $ COMT,ENDJ,ABRT RECORDS ONLY *********************************
REC UPDATED                       81  4 1
REC DB-STATS                      85 60
REC READ                          85  4 1
REC WRITTEN                       89  4 1
REC PAGE-REQUESTS                 93  4 1
REC CALC-ON                       97  4 1
REC CALC-NOT-ON                  101  4 1
REC VIA-ON                       105  4 1
REC VIA-NOT-ON                   109  4 1
REC REC-REQUESTED                113  4 1
REC CURR-OF-TR                   117  4 1
REC CALLS                        121  4 1
REC FGMT-STORED                  125  4 1
REC FGMT-RETURNED                129  4 1
REC LOCKS-REQUESTED              133  4 1
REC SHARED-LOCKS-HELD            137  4 1
REC EXCLUSIVE-LOCKS-HELD         141  4 1
REC TR-ID-CV                     145  4 1    $TRANSACTION ID.
REC TASK-ID-CV                   149  4 1    $TCE address.
REC LOCAL-TASK-ID-CV             153  8
```

```
REC LT-PART1                        153  4
REC LT-PART2                        157  4 1
REC LT-PART2A                       157  3 1    $ IDMS/2549
REC LT-PART2B                       160  1 1    $ IDMS/2549
REC IX-STATS                        161 40
REC IX-SR8-SPLITS                   161  4 1
REC IX-SR8-SPAWNS                   165  4 1
REC IX-SR8-STORED                   169  4 1
REC IX-SR8-ERASED                   173  4 1
REC IX-SR7-STORED                   177  4 1
REC IX-SR7-ERASED                   181  4 1
REC IX-BTREE-SEARCHES               185  4 1
REC IX-BTREE-LEVELS-SEARCHED        189  4 1
REC IX-ORPHANS-ADOPTED              193  4 1
REC IX-LEVELS-SEARCHED-BEST         197  2 1
REC IX-LEVELS-SEARCHED-WORST        199  2 1
REC $ TIME RECORD ONLY ******************************************
REC T-DATESTMP                       37  8 1
REC $ BGIN RECORD ONLY ******************************************
REC USER-ID                          81 32
REC EXTERNAL-ID                     113 32
REC $ AREA RECORD ONLY ******************************************
REC AREA                             45 18
REC RESERVED2                        63  2
REC LOW-PAGE                         65  4 1
REC HIGH-PAGE                        69  4 1
REC MODE                             73  2 1
REC ACCESS                           75  2 1
REC $ BFOR & AFTR RECORDS ONLY ***********************************
REC IDMS-VSAM-FLAG                   41  1 1
REC AREA-TYPE                        41  1 1
REC VERB-NUM                         42  1 1
REC VERB                             42  1 1
REC PAGE-GROUP                       43  2 1
REC DBK-FORMAT                       45  4 1
REC DBK-LINES                        48  1 1
REC DB-KEY                           49  4 1
REC DB-KEY1                          49  3 1    $IDMS/1209
REC DB-KEY2                          52  1 1    $IDMS/1209
REC DB-KEY-A                         49  4      $Hex compares IDMS/2721
```

```
REC USER-REC-ID                      53  2 1
REC USER-REC-ID-A                    53  2      $Hex compares IDMS/1893
REC PG-DISPL                         55  2 1
REC IMAGE-LEN                        57  2 1
REC PREFIX-LEN                       59  2 1
REC DISPLACEMENT                     61  2 1
REC SPAN-OFFSET                      63  2 1
REC USER-RECORD                      65  2 1
REC $ Rnn.n DXXX RECORDS: DIND,DCOM,DBAK,DPND,DFGT ****************
REC DTRIDQ                           37 24
REC DTRID                            37 16
REC DNODE                            37  8
REC DID                              45  8
REC DBRANCH-ID                       53  8
REC DFLAG1                           61  1
REC DFLAG2                           62  1
REC STATE                            63  1
REC OUTCOME                          64  1
REC PREPARE-OUTCOME                  65  1
REC BACKOUT-REASON                   66  1
REC DRESERVED                        67  2
REC LIDOFF                           69  2 1
REC LIDNUM                           71  2 1
REC XIDOFF                           73  2 1
REC XIDNUM                           75  2 1
REC RIOFF                            77  2 1
REC RICNT                            79  2 1
REC DVLEN                            81  2 1
REC DVOFF                            83  2 1
REC DXXX-RECORD                      85  2 1
```

Summary of Records Required for Journal Reports

The following table lists the journal reports and journal records from which each report extracts data. Columns 3 through 10 are the journal record types, as follows:

- T - TIME
- B - BGIN
- A - AREA
- C - COMT
- E - ENDJ
- AB - ABRT
- BF - BFOR
- AF - AFTR
- D - DIND, DCOM, DBAK, DPND, DFGT

Report no. and title	T	B	A	C	E	AB	BF	AF	D
01 Transaction Summary		X		X	X	X			
02 Program Termination Statistics					X	X			
03 Program I/O Statistics					X	X			
04 Program Summary					X	X			
05 Detail Area/Transaction		X	X		X	X			
06 Detail Program/Area		X	X		X	X			
07 Area Summary		X	X		X	X			

Report no. and title	T	B	A	C	E	AB	BF	AF	D
08 Formatted Record Dump	X	X	X	X	X	X	X	X	X
09 User ID		X							
10 External User Identity		X							
11 Count By Journal	X	X	X	X	X	X	X	X	X

Producing Journal Reports

Uses Archive Journal File as Input

A journal report uses an archive journal file as input. The archive journal file is created by off-loading the disk journal file(s) to a tape or disk backup file using the ARCHIVE JOURNAL utility, as described in *CA IDMS Utilities Guide*. If the journal file is written directly to tape, the tape journal file can be used as input in place of the archive journal file. *Disk journal files that have not been offloaded cannot be used as the input file*.

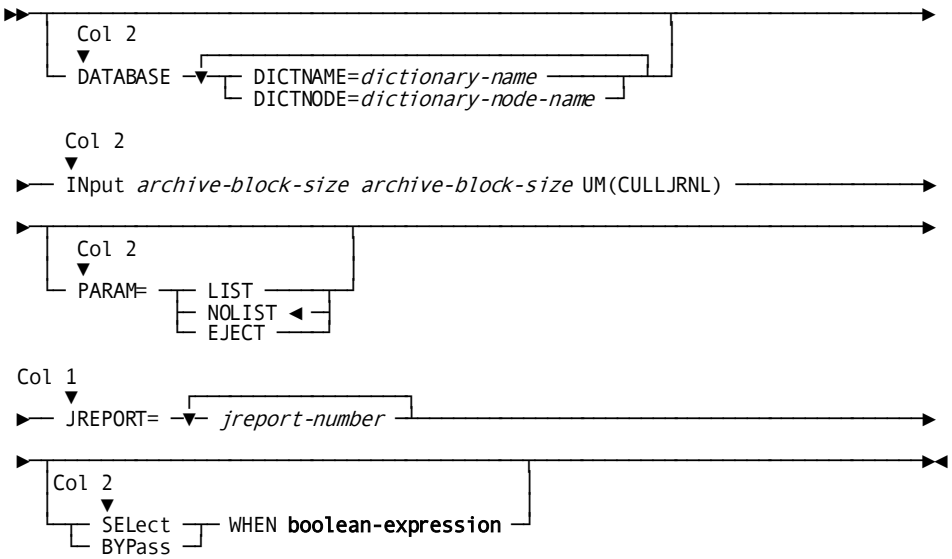
Required CA Culprit for CA IDMS Modules

The following CA Culprit for CA IDMS modules, which are stored in the start-up dictionary at installation, are required to report on journal files:

- One input module (CULLJRNL) consisting of an Assembler routine that reads and deblocks the archive journal file and passes individual records to the CA Culprit for CA IDMS buffer
- One module (JREPORT 000) that provides REC parameters defining all fields contained in the journal records
- One of eight report modules (JREPORT 001 to JREPORT 008) that process and format information extracted from the journal file

Syntax

Syntax for the CA Culprit for CA IDMS input parameters is shown as follows, followed by examples. Coding is freeform, except for the starting column of the initial keyword in each parameter. JREPORT= begins in column 1; all other parameters begin in column 2.



Parameters

Syntax rules appear in Chapter 1, "Introduction," except as follows:

INPUT

Specifies the record size and block size of the input archive journal file and also names the CA Culprit for CA IDMS input module required to execute journal reports.

archive=block-size

Specifies the record size and block size of the archive journal file. *Archive-block-size* must equal the archive journal block size specified in the physical DDL ARCHIVE JOURNAL statement.

Note: *Archive-block-size* must be specified twice.

UM(CULLJRNL)

Specifies the name of the CA Culprit for CA IDMS input module.

JREPORT=*jreport-number*

Identifies the reports to be printed. Multiple JREPORT statements can be submitted in a single run; each statement can specify one or more report numbers. The JREPORT statement must be coded starting in column 1.

Jreport-number specifies a journal report number in the range 001 through 008; leading zeros can be omitted. Multiple journal report numbers must be separated by blanks or commas.

SELECT/BYPASS WHEN boolean-expression

Specifies selection criteria to be applied to every journal record during the extract phase of processing.

The CA Culprit for CA IDMS buffer contains one journal record at a time. Selection criteria are applied to each record. Therefore, if the selection criteria pertain to a field in one journal record type, additional selection criteria must be specified to select (rather than bypass) other journal record types required for a particular report.

Note: To determine which fields are contained in a journal record, refer to JREPORT-000. If a field is not in all journal record types, you must select the type in conjunction with the field to ensure correct record addressing. Field TYPE will be equal to one of the four-character journal record types documented under Types of Journal Records (see page 253).

Examples

Example 1

CA Culprit for CA IDMS retrieves JREPORT 002 and JREPORT 004 from the CULPDICT dictionary. The archived journal file contains 19068-byte, fixed-length records. By default, the CA Culprit for CA IDMS is not printed in the Sequential and Input Parameter Listings generated for the report.

```
 DATABASE DICTNAME=CULPDICT
 INPUT 19068 19068 UM(CULLJRNL)
JREPORT=2,4
```

Example 2

In this example, selected records are printed in JREPORT 008 (Formatted Record Dump). The SELECT parameter selects only those BFOR and AFTR records that have a dbkey of X'000CEB08'.

```
 DATABASE DICTNAME=CULPDICT
 INPUT 4276 4276 UM(CULLJRNL)
JREPORT=008
 SELECT TYPE EQ ('BFOR' 'AFTR') AND
*       DBKEY-A EQ (X'000CEB08')
```

Example 3

In this example, JREPORTs 005 and 006 are requested. By default, CA Culprit for CA IDMS retrieves the journal report modules from the system dictionary. For both reports, the CA Culprit for CA IDMS code is printed on the Sequential Parameter Listing and on the Input Parameter Listing.

```
 INPUT 19068 19068 UM(CULLJRNL)
 PARAM=LIST
JREPORT=05
JREPORT=06
```

Example 4

This example prints JREPORT 008 (Formatted Record Dump). The report includes only the BFOR and AFTR records within the specified sequence for run unit 44248. By default, the CA Culprit for CA IDMS code for the report is not printed in the parameter listings.

```
 INPUT 19068 19068 UM(CULLJRNL)
JREPORT=008
 SEL WHEN TYPE EQ ('BFOR' 'AFTR')
*   AND TRANSACT-ID EQ 44248
*   AND SEQ EQ (1755732 TO 1755749)
```

Example 5

This example prints selected information for JREPORT 007, the Area Summary report. The SELECT parameter selects all AREA records that specify DDLDML or DDLDCLOD. The SELECT parameter also selects record types BGIN, ENDJ, and ABRT, which are required for JREPORT 007.

```
 INPUT 4276 4276 UM(CULLJRNL)
JREPORT=007
 SELECT WHEN (TYPE EQ 'AREA' AND AREA EQ ('DDLDML' DDLDCLOD'))
*   OR TYPE EQ ('ABRT' 'BGIN' 'ENDJ')
```

Example 6

This example prints JREPORT 008 (Formatted Record Dump). The report includes the distributed checkpoint records for the distributed transaction ID, SYSTEM74::01650C9509CE38A3.

```
 INPUT 19068 19068 UM(CULLJRNL)
JREPORT=008
 SELECT WHEN TYPE EQ ('DIND' 'DCOM' 'DBAK' 'DPND' 'DFGT')
*   AND DNODE = 'SYSTEM74'
*   AND DID = x'01650C9509CE38A3'
```

Operating System Considerations

Journal reports can run either in local mode or under central version. The JCL to run journal reports appears in Appendices A through D for z/OS, z/VSE, z/VM and z/VM operating systems, respectively. The archived journal file must be defined with ddname/filename/linkname SYS010, as follows:

- **For z/OS operating systems**, modify ddname SYS010 in Appendix A, as follows:

```
//SYS010   DD  DSN=idms.archive,DISP=OLD,UNIT=tape,VOL=SER=nnnnnn
```

idms.archive	data set name of the archive journal file
tape	symbolic device name of the archive journal file
nnnnnn	volume serial number of the archive journal file

- **For z/VSE operating systems**, modify filename SYS010 in Appendix B, as follows:

```
//TLBL   SYS010,'idms.archive'
//ASSGN  SYS010,TAPE,VOL=nnnnnn
```

idms.archive	file-id of the archive journal file
nnnnnn	volume serial number

- **For z/VM and z/VM operating systems**, modify ddname SYS010 in Appendix C, as follows:

```
For tape file: FILEDEF  SYS010 TAP1 SL VOLID nnnnnn
                        (RECFM FB LRECL lll BLKSIZE bbbb

For disk file: FILEDEF  SYS010 DISK input file a
```

nnnnnn	volume serial number of the archive journal file
lll	record length of the archive journal file

bbbb	block size of the archive journal file
input file a	filename, filetype, and filemode of the archive journal file

JREPORT 001 - Transaction Summary

JREPORT 001, the Transaction Summary report:

- Lists every program for which activity is recorded in the journal file
- Provides information on the duration and disposition of each transaction associated with the programs
- Extracts statistics from the BGIN, COMT, ENDJ, and ABRT journal records for each transaction.

The output is sorted by transaction identifier within program name.

The following report shows one page of a sample report:

Sample JREPORT 001:

```
REPORT NO. 01                                       IDMS JOURNAL REPORT       Rnn.n                      mm/dd/yy       PAGE      1
JREPORT 001                                                TRANSACTION SUMMARY

   PROGRAM            TRANSACTION                              ------- START -------          -------- END --------    TRM.
     NAME       NODE       ID        TASK-ID  -- ORIGIN ID --    DATE         TIME           DATE         TIME     REC.        COMMITS

   DBCRUPD     SYSTEM72       0043           67 DBDC          67 mm/dd/yy  hh.mm.ss.ht     mm/dd/yy  hh.mm.ss.ht   ENDJ              0

   DBCRUPD     SYSTEM72       0046          111 DBDC         111 mm/dd/yy  hh.mm.ss.ht     mm/dd/yy  hh.mm.ss.ht   ENDJ              0

   DBCRUPD     SYSTEM72       0048          159 DBDC         159 mm/dd/yy  hh.mm.ss.ht     mm/dd/yy  hh.mm.ss.ht   ENDJ              0

   DBCRUPD     SYSTEM72       0051          186 DBDC         186 mm/dd/yy  hh.mm.ss.ht     mm/dd/yy  hh.mm.ss.ht   ENDJ              0

   DBCRUPD     SYSTEM72       0052          217 DBDC         217 mm/dd/yy  hh.mm.ss.ht     mm/dd/yy  hh.mm.ss.ht   ENDJ              0

   DBCRUPD     SYSTEM72       0055          233 DBDC         233 mm/dd/yy  hh.mm.ss.ht     mm/dd/yy  hh.mm.ss.ht   ENDJ              0

   DBCRUPD     SYSTEM72       0059          229 DBDC         229 mm/dd/yy  hh.mm.ss.ht     mm/dd/yy  hh.mm.ss.ht   ENDJ              0

   DBCRUPD     SYSTEM72       0058          230 DBDC         230 mm/dd/yy  hh.mm.ss.ht     mm/dd/yy  hh.mm.ss.ht   ENDJ              0

   DBCRUPD     SYSTEM72       0062          227 DBDC         227 mm/dd/yy  hh.mm.ss.ht     mm/dd/yy  hh.mm.ss.ht   ENDJ              0

   DBCRUPD     SYSTEM72       0064          225 DBDC         225 mm/dd/yy  hh.mm.ss.ht     mm/dd/yy  hh.mm.ss.ht   ENDJ              0

   DBCRUPD     SYSTEM72       0060          241 DBDC         241 mm/dd/yy  hh.mm.ss.ht     mm/dd/yy  hh.mm.ss.ht   ENDJ              0

   DBCRUPD     SYSTEM72       0057          231 DBDC         231 mm/dd/yy  hh.mm.ss.ht     mm/dd/yy  hh.mm.ss.ht   ENDJ              0
```

Field Descriptions

A description of the fields in the Transaction Summary report follows:

PROGRAM NAME

Indicates the name of the program to which the information applies.

Note: For non-SQL transactions, the subschema control supplies the name of the program. If the program name is blank, then the program issued a BIND RUN UNIT before moving its name to the name field in the subschema control.

For SQL transactions, the RCM for the program initiating the transaction supplies the name of the program.

NODE

Specifies the node name of the central version on which the transaction executed. If the journal being analyzed was created in local mode, this field will contain *local*.

TRANSACT ID

Specifies the unique identifier (LID) assigned to each transaction associated with the program.

TASK

Specifies the identifier of the task with which the transaction is associated. The task identifier is assigned by the DC/UCF system at run time.

ORIGINATOR ID

Specifies the identifier consisting of a 4-character name that designates the originating interface (for example, BATC, DBDC, or CICS) and a numeric identifier assigned to the transaction by the interface.

START DATE/START TIME

Specifies the date and time the transaction started.

END DATE/END TIME

Specifies the date and time the transaction ended.

TERMINATION RECORDS

Specifies the journal record type (ENDJ or ABRT) marking the termination of the transaction.

COMMITS

Identifies the number of COMT records written for the transaction. (That is, the number of COMMIT or COMMIT WORK CONTINUE statements issued by the transaction).

JREPORT 002 - Program Termination Statistics

JREPORT 002, the Program Termination Statistics report:

- Lists every program for which activity is recorded in the journal file.
- Contains detailed information on the database processing activities of each transaction associated with the programs.
- Extracts statistics from the ENDJ and ABRT journal records for each transaction.

The output is sorted by transaction identifier within program name.

The following report shows one page of a sample report.

Sample JREPORT 002:

```
REPORT NO. 02                              IDMS JOURNAL REPORT       Rnn.n                    mm/dd/yy       PAGE      1
JREPORT 002                                 PROGRAM TERMINATION STATISTICS

                                SHARED   EXCLUSIVE -- CALC RECORDS --  -- VIA RECORDS --   ---- RECORDS ----          --FRAGMENTS--
PROGRAM/    TRANSACT    LOCKS     LOCKS    LOCKS     STORED  NOT STORED  STORED  NOT STORED REQUESTED  CURRENT  CALLS
   NODE       ID     REQUESTED   HELDS    HELDS   ON TARGET ON TARGET ON TARGET ON TARGET  FROM DB   OF TRANS  TO DB STORED RETND

 DBCRUPD
  SYSTEM72     0043        17        6        7                          1                11         4     15

 DBCRUPD
  SYSTEM72     0044        17        6        7                          1                11         4     15

 DBCRUPD
  SYSTEM72     0045        17        6        7                          1                11         4     15

 DBCRUPD
  SYSTEM72     0046        17        6        7                          1                11         4     15

 DBCRUPD
  SYSTEM72     0047        17        6        7                          1                11         4     15

 DBCRUPD
  SYSTEM72     0048        21        6        7                          1                11         4     16

 DBCRUPD
  SYSTEM72     0050        17        6        7                          1                11         4     15

 DBCRUPD
  SYSTEM72     0051        17        6        7                          1                11         4     15

 DBCRUPD
  SYSTEM72     0052        21        6        7                          1                11         4     16

 DBCRUPD   ** ABORT **
  SYSTEM72     0053        12        4        5                          1                 6         3     11

 DBCRUPD
  SYSTEM72     0054        17        6        7                          1                11         4     15

 DBCRUPD
  SYSTEM72     0055        17        6        7                          1                11         4     15
```

Field Descriptions

A description of the fields in the Program Termination Statistics report follows:

PROGRAM/NODE

Identifies the name of the program to which the information applies and the node name on which it executed. Transactions that terminate abnormally are flagged as ABORT.

Note: For non-SQL transactions, the subschema control supplies the name of the program. If the program name is blank, then the program issued a BIND RUN UNIT before moving its name to the name field in the subschema control.

For SQL transactions, the RCM for the program initiating the transaction supplies the name of the program.

TRANSACT ID

Specifies the unique identifier (LID) assigned to each transaction.

LOCKS REQUESTED

Indicates the number of locks acquired by the transaction.

SHARED LOCKS HELD

Indicates the number of shared locks held by the transaction at the time the transaction ended.

EXCLUSIVE LOCKS HELD

Indicates the number of exclusive locks held by the transaction at the time the transaction ended.

CALC RECORDS STORED ON TARGET/NOT STORED ON TARGET

Indicates the number of CALC records stored/not stored on their target page.

Interpretation: The ratio of CALC records stored on target to the total number stored (that is, hits plus overflows) is the *CALC cluster ratio*. The ratio reflects the efficiency of the CALC algorithm. Ideally, the value should be 1, which indicates no overflow. Values less than 1 or less than the norm indicate space utilization is getting high and database tuning should be performed.

VIA RECORDS STORED ON TARGET/NOT STORED ON TARGET

Identifies the number of VIA and/or DIRECT records stored/not stored on their target page.

Interpretation: The ratio of VIA records stored on target to the total number stored (that is, hits plus overflows) is the *VIA cluster ratio.* The ratio reflects how well VIA records cluster around their owner. Ideally, the value should be 1, which indicates no overflow. Values less than 1 or less than the norm indicate very large data clusters, high utilization of space, or small page size.

RECORDS REQUESTED FROM DB

Indicates the number of database records requested by IDMSDBMS.

RECORDS CURRENT OF TRANS

Indicates the number of times the current-of-transaction field in the subschema control block for the transaction was updated.

Interpretation: The ratio of records requested to records current-of-transaction is the *effectiveness ratio*. The ratio measures the amount of work CA IDMS/DB is doing for the programmer (that is, how many records the DBMS has to examine to find the one requested). The information in JREPORT 002 indicates whether the ratio is constant for all executions of the program or only for certain transactions.

The value should be as low as possible. If the value is high, examine set options (for example, sorted order) for appropriateness. If the options are correct, examine the program logic for accurate use of currency.

CALLS TO DB

Indicates the number of calls to IDMSDBMS issued by the transaction. Execution of each navigational DML request involves one call; execution of each LRF and SQL request typically involves multiple calls.

FRAGMENTS STORED

Indicates the number of noncontiguous segments (fragments) stored for variable-length records.

Interpretation: If the number of stored fragments is large or increasing, increase the page size to accommodate larger records. The condition of the databases and areas involved with the program should be analyzed further with the Database Analysis Utility (IDMSDBAN), described in Other CA IDMS Reporting Facilities (see page 399).

FRAGMENTS RETND

Indicates the number of records relocated from their home page.

JREPORT 003 - Program I/O Statistics

JREPORT 003, the Program I/O Statistics report:

- Lists every program for which activity is recorded in the journal file
- Provides information on the I/O services requested by and performed for each transaction associated with the programs
- Extracts statistics from the ENDJ and ABRT journal records for each transaction.

The output is sorted by transaction identifier within program name.

The following report shows one page of a sample report:

Sample JREPORT 003:

```
REPORT NO. 03                              IDMS JOURNAL REPORT       Rnn.n                    mm/dd/yy       PAGE      1
JREPORT 003                                    PROGRAM I/O STATISTICS
                                              ----------- PAGES ------------

    PROGRAM     NODE    TRANSACTION ID                  READ    WRITTEN  REQUESTED

    DBCRUPD   SYSTEM72        0043                        2          2          7
    DBCRUPD   SYSTEM72        0044                        2          2          7
    DBCRUPD   SYSTEM72        0045                        2          2          7
    DBCRUPD   SYSTEM72        0046                        2          2          7
    DBCRUPD   SYSTEM72        0047                        2          2          7
    DBCRUPD   SYSTEM72        0048                        2          2          7
    DBCRUPD   SYSTEM72        0050                        2          2          7
    DBCRUPD   SYSTEM72        0051                        2          2          7
    DBCRUPD   SYSTEM72        0052                        2          2          7
    DBCRUPD   SYSTEM72        0053     ** ABORT **        2          1          4
    DBCRUPD   SYSTEM72        0054                        2          2          7
    DBCRUPD   SYSTEM72        0055                        2          2          7
```

Field Descriptions

A description of the fields in the Program I/O Statistics report follows:

PROGRAM

Identifies the name of the program to which the information applies.

Note: For non-SQL transactions, the subschema control supplies the name of the program. If the program name is blank, then the program issued a BIND RUN UNIT before moving its name to the name field in the subschema control.

For SQL transactions, the RCM for the program initiating the transaction supplies the name of the program.

NODE

Specifies the node name of the central version on which the transaction executed. If the journal being analyzed was created in local mode, this field will contain *local*.

TRANSACTION ID

Is the unique identifier (LID) assigned to each transaction associated with the program. Transactions that terminate abnormally are flagged as ABORT.

PAGES READ

Indicates the number of pages physically read from disk for the transaction.

PAGES WRITTEN

Indicates the number of pages physically written to disk for the transaction. A page can be updated several times before it is actually written back to the database.

PAGES REQUESTED

Indicates the number of pages requested by IDMSDBMS (including pages found in a buffer). A page request does not result in a page read if the page is in the buffer pool.

Interpretation: The ratio of pages requested to pages read is the *buffer utilization ratio*. It measures the effectiveness of the buffer-pool size and design of the database (for example, CALC and VIA clustering). The higher the ratio the better. Ratios consistently below 2.0 indicate that processing is random or that the buffer-pool size is too small. The information in JREPORT 003 indicates whether the ratio is constant for all executions of the program or only for certain transactions.

Note: The buffer utilization ratio may be artificially high for transactions that keep locks. IDMSDBMS cannot hold a buffer while waiting for a lock; therefore, when locks are kept, IDMSDBMS must free and request a page each time a lock is requested for which a wait must occur.

JREPORT 004 - Program Summary

JREPORT 004, the Program Summary report:

- Lists every program for which activity is recorded in the journal file
- Provides summary information on the database processing activities of the program
- Compiles statistics from information extracted from the ENDJ and ABRT journal records for transactions associated with each program
- Indicates the averages and ratios for all programs combined

The output is sorted by program name.

The following report shows one page of a sample report:

Sample JREPORT 004:

```
REPORT NO. 04                                         IDMS JOURNAL REPORT       Rnn.n                    mm/dd/yy       PAGE      1
JREPORT 004                                                   PROGRAM SUMMARY
                   ------------------ AVERAGES -----------------    -------------------------- RATIOS -----------------------

   PROGRAM    TIMES      PAGES      PAGES                   RECORDS       BUFFER                           CALC       SPACE          VIA
    NAME       RUN       READ      WRITTEN        CALLS    REQUESTED   UTILIZATION EFFECTIVENESS         CLUSTER   MANAGEMENT     CLUSTER

  DBCRUPD      881          2           2           15          12          4.03         2.99                         7.04          1.00
     TOTAL     881          2           2           15          12          4.03         2.99                         7.04          1.00
```

Field Descriptions

A description of the fields in the Program Summary report follows:

PROGRAM NAME

Identifies the name of the program to which the information applies.

Note: For non-SQL transactions, the subschema control supplies the name of the program. If the program name is blank, then the program issued a BIND RUN UNIT before moving its name to the name field in the subschema control.

For SQL transactions, the RCM for the program initiating the transaction supplies the name of the program.

TIMES RUN

Indicates the number of times the program was run.

AVERAGES/ PAGES READ

Indicates the average number of pages physically read from disk for each run of the program.

AVERAGES/ PAGES WRITTEN

Indicates the average number of pages physically written to disk for each run of the program.

AVERAGES/ CALLS

Indicates the average number of calls to IDMSDBMS issued for each run of the program.

AVERAGES/ RECORDS REQUESTED

Indicates the average number of database records requested by IDMSDBMS for each run of the program.

RATIOS/ BUFFER UTILIZATION

Indicates the ratio of number of pages requested to pages read.

Interpretation: This ratio indicates the effectiveness of the buffer-pool size and design of the database (for example, CALC and VIA clustering). The higher the ratio, the better. Ratios consistently below 2.0 indicate that processing may be random or that the buffer-pool size may be too small.

Particular attention should be given to frequently used programs. If the ratio for a program is below 2.0, users can look at the statistics generated by JREPORT 003 to determine whether the number of pages requested and pages read were constant for all executions of the program or only for certain transactions.

Note: The buffer utilization ratio may be artificially high for transactions that keep locks. IDMSDBMS cannot hold a buffer while waiting for a lock; therefore, when locks are kept, IDMSDBMS must free and request a page each time a lock is requested for which a wait must occur.

RATIOS/ EFFECTIVENESS

Indicates the ratio of records requested to records made current-of-run-unit.

Interpretation: The effectiveness ratio indicates the amount of work CA IDMS/DB is doing for the programmer (that is, how many records IDMSDBMS has to examine to find the one requested). The lower the ratio the better. If the ratio is very high, examine set options (for example, sort order or next pointers only) for appropriateness. If the options are correct, examine the program logic for accurate use of currency.

RATIOS/ CALC CLUSTER

Indicates the ratio of the number of CALC records stored on their target page to the total stored (that is, hits plus overflows). The ratio reflects the efficiency of the CALC algorithm.

Interpretation: The CALC cluster ratio is especially important when the database is loaded or restructured. Ideally, the ratio should be 1, which indicates no overflow. Ratios less than 1 or less than the norm indicate that space utilization is getting high and database tuning should be performed.

RATIOS/ SPACE MANAGEMENT

Indicates the ratio of records requested by IDMSDBMS to pages read from the database.

Interpretation: The space management ratio measures how well space is allocated (for example, VIA options, CALC distribution, and buffering). The higher the ratio the better. Ratios less than 4 or less than the norm indicate that the size of the buffer should be increased and database tuning should be performed.

Note: The space management ratio may be artificially high for transactions that keep locks. IDMSDBMS cannot hold a buffer while waiting for a lock; therefore, when locks are kept, IDMSDBMS must free and request a page each time a lock is requested for which a wait must occur.

RATIOS/ VIA CLUSTER

Specifies the ratio of VIA records stored on the same page as their owner to the total number of VIA records stored (that is, hits plus overflows). The ratio reflects how well VIA records cluster around their owner.

Interpretation: The VIA cluster ratio gives an indication of VIA storage requirements and is an indirect measure of the amount of space still available in the area. Ideally, the ratio should be 1, which indicates no overflow. Ratios less than 1 or less than the norm indicate very large data clusters, high utilization of space, or small page size. The cause may be a database design in which there are too many VIA records (of a particular record type) or in which the VIA records are too large.

JREPORT 005 - Detail Area/Transaction

JREPORT 005, the Detail Area/Transaction report:

- Lists every database area identified in the journal file
- Provides detailed information on transaction access to the area
- Extracts information from the BGIN, AREA, ENDJ, and ABRT journal records for each transaction

The output is sorted by transaction identifier within program name within area name.

The following report shows one page of a sample Detail Area/Transaction report:

Sample JREPORT 005:

```
REPORT NO. 05                          IDMS JOURNAL REPORT       Rnn.n                    mm/dd/yy       PAGE      1
JREPORT 005                                 DETAIL AREA/TRANSACTION

          AREA NAME          PROGRAM NAME          NODE          TRANSACT ID       OPEN ACCESS         OPEN MODE

       ACCTHIST              DBCRUPD          SYSTEM72              0043          SHARED              UPDATE
                                              SYSTEM72              0044          SHARED              UPDATE
                                              SYSTEM72              0045          SHARED              UPDATE
                                              SYSTEM72              0046          SHARED              UPDATE
                                              SYSTEM72              0047          SHARED              UPDATE
                                              SYSTEM72              0048          SHARED              UPDATE
                                              SYSTEM72              0050          SHARED              UPDATE
                                              SYSTEM72              0051          SHARED              UPDATE
                                              SYSTEM72              0052          SHARED              UPDATE
                                              SYSTEM72              0053          SHARED              UPDATE
                                              SYSTEM72              0054          SHARED              UPDATE
                                              SYSTEM72              0055          SHARED              UPDATE

       BRNCHTEL              DBCRUPD          SYSTEM72              0043          SHARED              UPDATE
                                              SYSTEM72              0044          SHARED              UPDATE
                                              SYSTEM72              0045          SHARED              UPDATE
                                              SYSTEM72              0046          SHARED              UPDATE
                                              SYSTEM72              0047          SHARED              UPDATE
                                              SYSTEM72              0048          SHARED              UPDATE
                                              SYSTEM72              0050          SHARED              UPDATE
                                              SYSTEM72              0051          SHARED              UPDATE
                                              SYSTEM72              0052          SHARED              UPDATE
                                              SYSTEM72              0053          SHARED              UPDATE
                                              SYSTEM72              0054          SHARED              UPDATE
                                              SYSTEM72              0055          SHARED              UPDATE
```

Field Descriptions

A description of the fields in the Detail Area/Transaction report follows:

AREA NAME

Specifies the subschema name of the area to which the access information applies.

PROGRAM NAME

Specifies the name of each program that accesses the area.

Note: The subschema name field supplies the name of the program. If the program name is blank, then the program issued a BIND RUN UNIT before moving its name to the subschema name field.

NODE

Specifies the node name of the central version on which the transaction executed. If the journal being analyzed was created in local mode, this field will contain *local*.

TRANSACT ID

Identifies the unique identifier (LID) assigned to each transaction associated with the program.

OPEN ACCESS

Identifies area usage mode options that prevent update or retrieval of an area by other transaction executing concurrently under the central version. Possible options are SHARED (default), PROTECTED, and EXCLUSIVE.

OPEN MODE

Identifies the mode in which the transaction opened the area. Possible modes are:

- UPDATE - The transaction can issue all DML functions for records in the area
- RETRIEVAL - The transaction cannot issue DML or DDL requests that result in updates to data in the area

JREPORT 006 - Detail Program/Area

JREPORT 006, the Detail Program/Area report:

- Lists every program for which activity is recorded in the journal file
- Provides detailed information on the areas accessed by each transaction associated with the programs
- Extracts information from the BGIN, AREA, ENDJ, and ABRT journal records for each transaction

With this report, you can identify what areas are used exclusively by certain programs and are therefore not available to concurrently running programs. The output is sorted by area name within transaction identifier within program name.

The following report shows one page of a sample Detail Program/Area report:

Sample JREPORT 006:

```
REPORT NO. 06                          IDMS JOURNAL REPORT       Rnn.n                    mm/dd/yy       PAGE      1
JREPORT 006                                 DETAIL PROGRAM/AREA

        PROGRAM NAME          NODE          TRANSACT ID          AREA NAME          OPEN ACCESS          OPEN MODE

          DBCRUPD          SYSTEM72             0043          ACCTHIST                SHARED             UPDATE
                           SYSTEM72             0043          BRNCHTEL                SHARED             UPDATE
                           SYSTEM72             0044          ACCTHIST                SHARED             UPDATE
                           SYSTEM72             0044          BRNCHTEL                SHARED             UPDATE
                           SYSTEM72             0045          ACCTHIST                SHARED             UPDATE
                           SYSTEM72             0045          BRNCHTEL                SHARED             UPDATE
                           SYSTEM72             0046          ACCTHIST                SHARED             UPDATE
                           SYSTEM72             0046          BRNCHTEL                SHARED             UPDATE
                           SYSTEM72             0047          ACCTHIST                SHARED             UPDATE
                           SYSTEM72             0047          BRNCHTEL                SHARED             UPDATE
                           SYSTEM72             0048          ACCTHIST                SHARED             UPDATE
                           SYSTEM72             0048          BRNCHTEL                SHARED             UPDATE
                           SYSTEM72             0050          ACCTHIST                SHARED             UPDATE
                           SYSTEM72             0050          BRNCHTEL                SHARED             UPDATE
                           SYSTEM72             0051          ACCTHIST                SHARED             UPDATE
                           SYSTEM72             0051          BRNCHTEL                SHARED             UPDATE
                           SYSTEM72             0052          ACCTHIST                SHARED             UPDATE
                           SYSTEM72             0052          BRNCHTEL                SHARED             UPDATE
                           SYSTEM72             0053          ACCTHIST                SHARED             UPDATE
                           SYSTEM72             0053          BRNCHTEL                SHARED             UPDATE
                           SYSTEM72             0054          ACCTHIST                SHARED             UPDATE
                           SYSTEM72             0054          BRNCHTEL                SHARED             UPDATE
                           SYSTEM72             0055          ACCTHIST                SHARED             UPDATE
                           SYSTEM72             0055          BRNCHTEL                SHARED             UPDATE
```

Field Descriptions

A description of the fields in the Detail Program/Area report follows:

PROGRAM NAME

Identifies the name of the program to which the information applies.

Note: The subschema name field supplies the name of the program. If the program name is blank, then the program issued a BIND RUN UNIT before moving its name to the subschema name field.

NODE

Specifies the node name of the central version on which the transaction executed. If the journal being analyzed was created in local mode, this field will contain *local*.

TRANSACT ID

Identifies the unique identifier (LID) assigned to each transaction associated with the program.

AREA NAME

Identifies the subschema name of each area accessed by the transaction.

OPEN ACCESS

Identifies the area usage mode options that prevent update or retrieval of an area by other transactions executing concurrently under the central version. Possible options are SHARED (default), PROTECTED, and EXCLUSIVE.

OPEN MODE

Identifies the mode in which the transaction opened the area. Possible modes are:

- UPDATE - The transaction can issue all DML functions for records in the area
- RETRIEVAL - The transaction cannot issue DML or DDL requests that result in updates to data in the area

JREPORT 007 - Area Summary

JREPORT 007, the Area Summary report:

- Lists every area identified in the journal file
- Provides summary information on program access to the area
- Extracts statistics from the BGIN, AREA, ENDJ, and ABRT journal records for each transaction
- Indicates the total number of times all areas were readied in each mode.

The output is sorted by program name within area name.

The following report shows one page of a sample Area Summary report:

Sample JREPORT 007:

```
REPORT NO. 07                              IDMS JOURNAL REPORT       Rnn.n                  mm/dd/yy       PAGE     1
JREPORT 007                                        AREA SUMMARY

                                                 --------- RETRIEVAL ---------    ---------- UPDATE ----------
          AREA NAME       PROGRAM NAME          SHARED   EXCLUSIVE  PROTECTED    SHARED   EXCLUSIVE  PROTECTED

       ACCTHIST           DBCRUPD                                                  881

       BRNCHTEL           DBCRUPD                                                  881
                                                                                  _______
TOTAL FOR ALL AREAS                                                               1762
```

Field Descriptions

A description of the fields in the Area Summary report follows:

AREA NAME

Identifies the subschema name of the area to which the information applies.

PROGRAM NAME

Identifies the name of each program that accesses the area.

Note: For non-SQL transactions, the subschema control supplies the name of the program. If the program name is blank, then the program issued a BIND RUN UNIT before moving its name to the name field in the subschema control.

For SQL transactions, the RCM for the program initiating the transaction supplies the name of the program.

SHARED RETRIEVAL

Indicates the number of times transactions associated with the program readied the area in shared retrieval mode.

EXCLUSIVE RETRIEVAL

Indicates the number of times transactions associated with the program readied the area in exclusive retrieval mode.

PROTECTED RETRIEVAL

Indicates the number of times transactions associated with the program readied the area in protected retrieval mode.

SHARED UPDATE

Indicates the number of times transactions associated with the program readied the area in shared update mode.

EXCLUSIVE UPDATE

Indicates the number of times transactions associated with the program readied the area in exclusive update mode.

PROTECTED UPDATE

Indicates the number of times transactions associated with the program readied the area in protected update mode.

JREPORT 008 - Formatted Record Dump

JREPORT 008, the Formatted Record Dump:

- Produces a formatted dump of TIME, BGIN, AREA, COMT, ENDJ, ABRT, BFOR, and AFTR journal records, allowing the user to inspect the entire contents of the journal file.
- Provides a character and hexadecimal dump of the user record portion of BFOR and AFTR journal entries.
- Provides a character and hexadecimal dump of the distributed checkpoint journal records, as well as formats the distributed transaction ID.
- Includes JSEG (journal segment) dumps in character and hexadecimal format. For the layout of the JSEG journal header record, see DSECT #JTRDS in the *CA IDMS DSECT Reference Guide*.

The following report shows one page from a sample Formatted Record Dump:

```
REPORT NO. 08                                  IDMS JOURNAL REPORT        Rnn.n                    mm/dd/yy       PAGE     8
JREPORT 008                                       FORMATTED RECORD DUMP
                                                                                                    TRANSACT          LOCAL
JOURNAL    NODE      UTC         UTC         JOURNAL       TRANSACT    PG   PROGRAM   LOCAL      LOCAL    QUIESCE           TASK
 RECORD    NAME      DATE        TIME        SEQUENCE         ID       GRP     NAME     DATE       TIME     LEVEL             ID


  DFGT   TECHDC70  mm/dd/yy  hh.mm.ss.ss           1161
         DTRID-BID  TECHDC70::016529322EF64F26-0165292E9B89C601

           JOURNAL RECORD

               CHAR       DFGT     Y          TECHDC70    TECHDC70     6|       F -
               ZONE   0500CCCE06233E9B00000008ECCCCCFF3600ECCCCCFF06232F42062298C06000000005000500050000000500
               NUMR   0800467315922880000004935384370970035384370159 2E6F6159EB96100A000000400040004000000000800
                    01...5...10...5...20....5...30...5...40....5...50...5...60....5...70....5...80....5...

  TIME   TECHDC70  mm/dd/yy  hh.mm.ss.ht           1162                             mm/dd/yy hh.mm.ss.ht


  BGIN   TECHDC70  mm/dd/yy  hh.mm.ss.ht           1163        930       MBINDSBO mm/dd/yy hh.mm.ss.ht      1  DBDC         281
         USER ID               EXTERNAL ID
         USERA01               BILL2007


  AREA   TECHDC70  mm/dd/yy  hh.mm.ss.ht           1164        930
           EMP-DEMO-REGION      75001 LOW PAGE            75050 HIGH PAGE                    SHARED ACCESS    UPDATE


  AREA   TECHDC70  mm/dd/yy  hh.mm.ss.ht           1165        930
           INS-DEMO-REGION      75101 LOW PAGE            75125 HIGH PAGE                    SHARED ACCESS    UPDATE


  AREA   TECHDC70  mm/dd/yy  hh.mm.ss.ht           1166        930
           ORG-DEMO-REGION      75151 LOW PAGE            75175 HIGH PAGE                    SHARED ACCESS    UPDATE


  BFOR   TECHDC70  mm/dd/yy  hh.mm.ss.ht           1167        930

          THIS IS A NATIVE IDMS RECORD
       16  PG DISPLACEMENT         72 PREFIX LENGTH
      415  USER RECORD ID         188 USER RECD LENGTH        35 VERB NUMBER


        USER RECORD   DB KEY 0124FF01     (PAGE      75007 LINE     1)  DISPLACEMENT OF CALL 31C6

               CHAR                                                                                0023KATHERINE O'HEARN
               ZONE   02F002F00200022002900 2F002900290026002600 2F002F002F002F002F00200020 0FFFFDCECCDCDC4D7CCCDD4444444
               NUMR   14F814F01551150115E114A2156A1562152215 2114F314F214F614F714F114F115AA15EF00232138599550 6D851950000000
                    01...5...10....5...20....5...30....5...40....5...50....5...60....5...70....5...80....5...90....5...00

               CHAR    12 EAST SPEEN ST    NATICK         MA02364    6092221919010195567127805040000005404 07
               ZONE   4FF4CCEE4EDCCD4EE4444DCECCD444444444DCFFFFF4444FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF00
               NUMR   0120512302755502300005139320000000004102364000060922219190101955671278050400000054040700
                    101...5...10...5...20....5...30....5...40....5...50....5...60....5...70....5...80....5...

  AFTR   TECHDC70  mm/dd/yy  hh.mm.ss.ss           1168        930
         THIS IS A NATIVE IDMS RECORD
       16  PG DISPLACEMENT         72 PREFIX LENGTH
      415  USER RECORD ID         188 USER RECD LENGTH        35 VERB NUMBER


        USER RECORD   DB KEY 0124FF01     (PAGE      75007 LINE     1)  DISPLACEMENT OF CALL 3204
```

```
                CHAR                                                                  0023KATHERINE O'HEARN
                ZONE    02F002F00200022002900 2F002900290026002 6002F002F002F002F002F002000200FFFFDCECCDCDC4D7CCCDD4444444
                NUMR    14F814F01551150115E114A2156A1562152215211 4F314F214F614F714F114F115AA15EF00232138599550 6D851950000000
                      01...5...10...5...20....5...30...5...40....5...50...5...60....5...70...5...80....5...90...5...00

                CHAR     12 EAST SPEEN ST    NATICK         MA02364    6092221919010195567127805040000000540407
                ZONE    4FF4CCEE4EDCCD4EE4444DCECCD444444444DCFFFFF4444FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF00
                NUMR    01205123027555023000051393200000000041023640000609222191901019556712780504000000540407 00
                     101...5...10...5...20....5...30...5...40....5...50...5...60....5...70...5...80....5...
Sample JREPORT 008:
```

Field Descriptions

A description of the fields in the Formatted Record Dump follows:

JOURNAL RECORD

Identifies the type of journal record (TIME, BGIN, AREA, COMT, ENDJ, ABRT, BFOR, or AFTR).

NODE NAME

Specifies the node name of the central version on which the transaction executed. If the journal being analyzed was created in local mode, this field will contain *local*.

UTC DATE

Identifies the UTC date on which the journal record was written to the journal file (TIME record only) or placed into the journal buffer (all other records). The date is given in the same form as LOCAL DATE.

UTC TIME

Identifies the UTC time at which the journal record was written to the journal file (TIME record only) or placed into the journal buffer (all other records). The time is given in the same form as LOCAL TIME.

JOURNAL SEQUENCE

Identifies the sequence number assigned to the journal record.

TRANSACT ID

Identifies the unique identifier (LID) assigned to the transaction for which the journal record was written.

VERB NUM.

(BFOR and AFTR records only) Identifies the function code of the navigational DML verb issued by an application program or the SQL or LRF runtime processor.

PG GRP

(AREA, BFOR and AFTR records only) Identifies the page group associated with the area in which the user record is stored.

PROGRAM NAME

(BGIN, COMT, ENDJ, and ABRT records only) Identifies the name of the program with which the transaction is associated.

LOCAL DATE

Identifies the date on which the journal record was either written to the journal file (TIME record only) or placed into the journal buffer (BGIN, COMT, ENDJ, and ABRT records only). The date is given in the form *mm/dd/yy*, where *mm* is the month, *dd* is the day, and *yy* is the last two digits of the year.

LOCAL TIME

Identifies the time at which the journal record was either written to the journal file (TIME record only) or placed into the journal buffer (BGIN, COMT, ENDJ, and ABRT records only). The time is given in the form *hhmmssht*, where *hh* is hours on a 24-hour clock, *mm* is minutes, *ss* is seconds, and *ht* is hundredths of a second.

TRANSACT QUIESCE LEVEL

(BGIN, COMT, ENDJ, and ABRT records only) Identifies the number of open transactions after the journal record was written to the journal file.

LOCAL TASK ID

(BGIN, COMT, ENDJ, and ABRT records only) Is the identifier consisting of a 4-character name that designates the originating interface (for example, BATC, DBDC, or CICS) and a numeric identifier assigned to the transaction by the interface.

USER ID

The user ID of the user signed on who executed the application causing the BGIN to be written.

EXTERNAL ID

The external identity of the user signed on to web based application. This field and title will not be displayed if the external identity is equal to spaces.

CALLS TO DB

(COMT, ENDJ, and ABRT records only) Indicates the number of calls to IDMSDBMS issued by the transaction. Execution of each navigational DML request involves one call; execution of each LRF or SQL request typically involves multiple calls. On COMT checkpoints, this value is a running total for the transaction.

PAGES REQUESTED

(COMT, ENDJ, and ABRT records only) Indicates the number of pages requested by the transaction (including pages found in a buffer). A page request does not result in a page read if the page is in the buffer pool. On COMT checkpoints, this value is a running total for the transaction.

PAGES READ

(COMT, ENDJ, and ABRT records only) Indicates the number of pages physically read from disk. On COMT checkpoints, this value is a running total for the transaction.

PAGES WRITTEN

(COMT, ENDJ, and ABRT records only) Indicates the number of pages physically written to disk. On COMT checkpoints, this value is a running total for the transaction.

RECDS REQUESTED

(COMT, ENDJ, and ABRT records only) Indicates the number of database records requested by IDMSDBMS for the transaction. On COMT checkpoints, this value is a running total for the transaction.

RECORDS UPDATED

(COMT, ENDJ, and ABRT records only) Indicates the number of records updated by the transaction. On COMT checkpoints, this value is a running total for the transaction.

CURRENT OF TR

(COMT, ENDJ, and ABRT records only) Indicates the number of times the current-of-transaction field in the subschema control block for the transaction was updated. On COMT checkpoints, this value is a running total for the transaction.

CALC ON TARGET

(COMT, ENDJ, and ABRT records only) Identifies the number of CALC records stored on their target page. On COMT checkpoints, this value is a running total for the transaction.

CALC NOT TARGET

(COMT, ENDJ, and ABRT records only) Identifies the number of CALC records not stored on their target page. On COMT checkpoints, this value is a running total for the transaction.

VIA ON TARGET

(COMT, ENDJ, and ABRT records only) Identifies the number of VIA and/or DIRECT records stored on their target page. On COMT checkpoints, this value is a running total for the transaction.

VIA NOT TARGET

(COMT, ENDJ, and ABRT records only) Identifies the number of VIA and/or DIRECT records not stored on their target page. On COMT checkpoints, this value is a running total for the transaction.

FRAGMNTS STORED

(COMT, ENDJ, and ABRT records only) Identifies the number of noncontiguous segments stored for variable-length records. On COMT checkpoints, this value is a running total for the transaction.

RECDS RELOCATED

(COMT, ENDJ, and ABRT records only) Identifies the number of records relocated from their home page. On COMT checkpoints, this value is a running total for the transaction.

LOCKS REQUESTED

(COMT, ENDJ, and ABRT records only) Indicates the number of locks acquired by the transaction. On COMT checkpoints, this value is a running total for the transaction.

SHARED LOCKS

(COMT, ENDJ, and ABRT records only) Indicates the number of shared locks held by the transaction at the time the checkpoint record was written.

EXCLUSIVE LOCKS

(COMT, ENDJ, and ABRT records only) Indicates the number of exclusive locks held by the transaction at the time the checkpoint record was written.

Area name

(AREA records only) Identifies the name of the area for which the checkpoint record was written.

LOW PAGE

(AREA records only) Identifies the page number of the first page in the area.

HIGH PAGE

(AREA records only) Identifies the page number of the last page in the area.

Open access

(AREA records only) Identifies the mode in which the transaction accessed the area (SHARED, PROTECTED, or EXCLUSIVE).

Open mode

(AREA records only) Identifies the mode in which the transaction opened the area (RETRIEVAL or UPDATE).

THIS IS A NATIVE IDMS RECORD

(BFOR and AFTR records only) Indicates that the user record is a CA IDMS/DB database record. For native VSAM records, this field reads THIS IS A NATIVE VSAM RECORD.

PG DISPLACEMENT

(BFOR and AFTR records only) Specifies the location of the user record occurrence relative to the beginning of the database page (given as a decimal offset).

PREFIX LENGTH

(BFOR and AFTR records only) Specifies the length in bytes of the prefix portion of the user record.

USER RECORD ID

(BFOR and AFTR records only) Indicates the record id of the user record. An asterisk following the record id indicates that this is a logically deleted record.

USER RECD LNGTH

(BFOR and AFTR records only) Specifies the length in bytes of the entire user record (prefix and data portion) as found in the database record line index.

VERB NUMBER

(BFOR and AFTR records only) Specifies the function code of the navigational DML verb issued by an application program or the SQL or LRF runtime processor.

USER RECORD DB KEY

(BFOR and AFTR records only) Specifies the database key of the user record occurrence in hexadecimal format.

PAGE/LINE

(BFOR and AFTR records only) Specifies the page and line number, in decimal format, of the database key of the user record occurrence.

DISPLACEMENT OF CALL

(BFOR and AFTR records only) Specifies a trace entry indicating the IDMSDBMS routine that issued the database call (for CA internal use only).

CHAR

Identifies the contents of the user record in decimal (display) format.

ZONE NUMR

Identifies the contents of the user record in hexadecimal format.

SPANNED OFFSET

(Not on sample report) Indicates that the journal entry is a continuation of the previous BFOR or AFTR image for the transaction. The number is the displacement of this portion of the record image relative to the entire image.

DTRID-BID

(DIND, DCOM, DBAK, DPND, and DFGT records only) Identifies the distributed transaction identifier (DTRID) and the branch identifier (BID) of the top-level branch of the distributed transaction for which the journal record was written.

JREPORT 009 - User ID

JREPORT 009, the User ID report enables compliance and audit reporting. JREPORT 009:

- Lists the user ID from every transaction with the date, time, and program associated with that transaction.
- Considerations:
  - If you want to capture information about retrieval only transactions, you must specify JOURNAL RETRIEVAL.
  - If you want to capture information from local batch jobs, you must capture the journal records (many sites take a backup of their database for recovery purposes when running a local mode update job rather than writing the local mode journal file.)
  - Many CICS applications or web-based applications capture the user ID on the client side of the application and use a generic user ID to access the data from the database. In these cases, the generic user ID is captured in the BGIN checkpoint record.

The following report shows one page from a sample User ID report:

Sample JREPORT 009:

```
REPORT NO. 09                          IDMS JOURNAL REPORTS       Rnn.n                    mm/dd/yy      PAGE    1
JREPORT 009                                USER ID JOURNAL REPORT
         USER              UTC         UTC       TRANSACT    PROGRAM     LOCAL       LOCAL
          ID               DATE        TIME         ID         NAME       DATE        TIME

  USERA01                mm/dd/yy  hh.mm.ss.ht           5  RHDCRUAL  mm/dd/yy  hh.mm.ss.ht
  USER ID NOT CAPTURED   mm/dd/yy  hh.mm.ss.ht           6  IDMSDDDL  mm/dd/yy  hh.mm.ss.ht
  USERA01                mm/dd/yy  hh.mm.ss.ht           7  RHDCRUAL  mm/dd/yy  hh.mm.ss.ht
  NO USER SIGNON         mm/dd/yy  hh.mm.ss.ht           8  RHDCRUAL  mm/dd/yy  hh.mm.ss.ht
  USERA01                mm/dd/yy  hh.mm.ss.ht           1  WFAUPDAT  mm/dd/yy  hh.mm.ss.ht
  C750009 RECORDS WRITTEN FOR REPORT 09 --          8
```

Field Descriptions

A description of the fields in the User ID report follows:

USER ID

Identifies the user ID of the user who executed the application that created the BGIN checkpoint record. The user ID is reported on as follows:

- If JREPORT 009 is run against journal files created prior to r16 SP4 (the user ID is not present in the BGIN), JREPORT 009 displays USER ID NOT CAPTURED.
- If JREPORT 009 is run against journal files created after r16 SP4, but the user does not signon, the user ID field in the BGIN is filled with spaces, and JREPORT 009 displays NO USER SIGNON.

UTC DATE

Identifies the UTC date on which the journal record was written to the journal file. The date is given in the same form as LOCAL DATE.

UTC TIME

Identifies the UTC time at which the journal record was written to the journal file. The date is given in the same form as LOCAL TIME.

TRANSACT ID

Identifies the unique identifier (LID) assigned to the transaction for which the journal record was written.

PROGRAM NAME

Identifies the name of the program with which the transaction is associated.

LOCAL DATE

Identifies the date on which the journal record was placed into the journal buffer. The date is given in the form *mm/dd/yy*, where *mm* is the month, *dd* is the day, and *yy* is the last two digits of the year.

LOCAL TIME

Identifies the time at which the journal record was placed into the journal buffer. The time is given in the form *hh.mm.ss.ht*, where *hh* is hours on a 24-hour clock, *mm* is minutes, *ss* is seconds, and *ht* is hundredths of a second.

JREPORT 010 - External User Identity

JREPORT 010, the External User Identity report enables compliance and audit reporting. JREPORT 010:

- Lists the user ID from every transaction with the external user ID, program name, date and time associated with that transaction.
- Considerations:
  - If you want to capture information about retrieval only transactions, you must specify JOURNAL RETRIEVAL.
  - If this transaction was the result of a web-based application and if CA SiteMinder (or similar product) is being used and it passes the identity of the user signed on the web-based application, the EXT ID field on the report will contain the external user identity. If no external user identity was passed, or the BGIN record was the result of other than a web-based application, the EXT ID field will contain the text 'EXT ID NOT CAPTURED'.

The following report shows one page from a sample External User Identity report:

Sample JREPORT 010:

```
REPORT NO. 10             IDMS JOURNAL REPORTS              R16.0
JREPORT 010        EXTERNAL USER IDENTITY JOURNAL REPORT
   USER              EXT        TRANSACT   PROGRAM   LOCAL    LOCAL
    ID               ID          IDX       NAME      DATE     TIME

USERA01             JACK2006          5   IDMSJDBC  06/01/07 14.19.29.66
USER ID NOT CAP.    EXT ID NOT CAP.   6   IDMSDDDL  06/01/07 14.19.29.67
USERB01             EXT ID NOT CAP.   7   RHDCRUAL  06/01/07 14.19.29.68
NO USER SIGNON      EXT ID NOT CAP.   8   RHDCRUAL  06/01/07 14.19.29.69
USERC01             SUSAN888          9   JAVAPROG  06/01/07 14.19.29.70
C750009 RECORDS WRITTEN FOR REPORT 10 --  8 Figure 8-10. Sample JREPORT 010
```

Field Descriptions

A description of the fields in the External User Identity report follows:

USER ID

Identifies the user ID of the user who executed the application that created the BGIN checkpoint record. The user ID is reported on as follows:

- If JREPORT 010 is run against journal files created prior to r16 SP4 (the user ID is not present in the BGIN), JREPORT 010 displays 'USER ID NOT CAPTURED'.
- If JREPORT 010 is run against journal files created from r16 SP4, or later but prior to the IDMS Server r16.1 or prior to r16 SP6 (the user ID is present in the BGIN but the External user ID is not), and the user does not signon, the user ID field in the BGIN is filled with spaces, and JREPORT 010 displays NO USER SIGNON.

EXT ID

Identifies the external user ID of the user signed on to the web-based application that has caused the application that created the BGIN checkpoint record on the backend system - if that external user ID was passed to the backend IDMS system. The external user ID is reported on as follows:

- If JREPORT 010 is run against journal files created prior to IDMS Server r16.1 or IDMS SP6 (the external user ID is not present in the BGIN), JREPORT 010 displays 'EXT ID NOT CAPTURED'. displays spaces for the external user id.
- If JREPORT 010 is run against journal files created after IDMS Server r16.1 or after IDMS r16 SP6. JREPORT 010 will display the contents of the external user ID field in the BGIN checkpoint which will be the external user identity passed from the web- based application or spaces.

TRANSACT IDX

Identifies the unique identifier (LID) assigned to the transaction for which the journal record was written.

PROGRAM NAME

Identifies the name of the backend program with which the transaction is associated.

LOCAL DATE

Identifies the date on which the journal record was placed into the journal buffer. The date is given in the format mm/dd/yy, where mm is the month, dd is the day, and yy is the last two digits of the year.

LOCAL TIME

Identifies the time at which the journal record was placed into the journal buffer. The time is given in the form hh.mm.ss.ht, where hh is hours on a 24-hour clock, mm is minutes, ss is seconds, and ht is hundredths of a second.

JREPORT 011 - Count By Journal Record Type Report

JREPORT 011, the count by journal record type report:

- Lists every journal record type found in an archive journal file
- Provides a count of each record type and a total count of all records

The report is sorted by journal record type.

The following report shows a sample Count By Journal Record Type report:

Sample JREPORT 011:

```
REPORT NO. 11        IDMS JOURNAL REPORTS  R16.0    01/11/07 PAGE 1
JREPORT 011    COUNT BY JOURNAL RECORD TYPE REPORT
       TYPE              DESCRIPTION            COUNT

       ABRT          ABORT                          0
       AFTR          AFTER                        617
       AREA          AREA                          42
       BFOR          BEFORE                       621
       BGIN          BEGIN                         22
       COMT          COMMIT                         0
       DBAK          DISTRIBUTED BACKOUT            0
       DCOM          DISTRIBUTED COMMIT             0
       DFGT          DISTRIBUTED FORGET             0
       DIND          DISTRIBUTED IN DOUBT           0
       DPND          DISTRIBUTED PENDING            0
       DSEG          DUMMY SEGMENT                  1
       ENDJ          END JOB                       23
       JSEG          JOURNAL SEGMENT                3
       JSGX          JOURNAL SEGMENT EXT            0
       RTSV          ROLLBACK TO SAVEPOINT          0
       TIME          TIME                         126
       USERUSER      JOURNAL RECORD                 0
                     UNKNOWN                        0
                     TOTAL RECORD COUNT         1,455
C750009 RECORDS WRITTEN FOR REPORT 11 -- 23 Figure 9-11. Sample JREPORT 011
```

Field Descriptions

A description of the fields in the Count By Journal Record Type report follows:

TYPE

Specifies the journal record type.

DESCRIPTION

Provides a text description of the journal record type.

COUNT

The number of records of the specific journal record type.

Chapter 9: DC/UCF Statistics Reports—SREPORTS

This section contains the following topics:

Overview (see page 299)
Summary of Statistics Reports (see page 300)
Uses for Statistics Reports (see page 301)
Other Tools Available (see page 301)
Types of Statistics Records (see page 301)
Producing Statistics Reports (see page 306)
DC/UCF System Statistics Reports (see page 312)
Task and External Request Unit Service (ERUS) Statistics Reports (see page 340)
Transaction Statistics Reports (see page 354)
CA ADS Dialog Statistics (see page 359)
Histogram Report (see page 367)
Record Summary Statistics Report (see page 371)

Overview

CA IDMS/DC and CA IDMS UCF (DC/UCF) collect the following runtime statistics:

- *System statistics*, which record resource usage for an entire system
- *Task and external request unit service (ERUS) statistics*, which record resource usage by task
- *Transaction statistics*, which record resource usage by transaction
- *CA ADS dialog statistics*, which record dialog activity associated with an application
- *Histogram statistics*, which record resource usage by frequency of occurrence within a value range
- *Record statistics*, which document the types of statistics records in the archived log file

Summary of Statistics Reports

The following table lists the reports that document these statistics in order by report module number:

SREPORT Module	SREPORT Category	Statistics Report Title
000		Startup Records Read (required with remaining modules)
001	Histogram	IDMS Statistics Histogram Report (system and task)
003	System	IDMS DC System Statistics
005	Task	IDMS DC Task Statistics by User Id
006	Task	IDMS DC Task Statistics by Lterm Id
007	Task	IDMS DC Task Statistics by Task Code
008	Task	IDMS DC ERUS Task Statistics by Accounting Data
009	Task	IDMS DC ERUS Task Statistics by Program Name
010	Transaction	IDMS DC Transaction Statistics by User Id
011	Transaction	IDMS DC Transaction Statistics by Lterm Id
012	System	IDMS DC Task Summary
013	System	IDMS DC Program Summary
014	System	IDMS DC Queue Summary
015	System	IDMS DC Line Summary
016	System	IDMS DC Physical Terminal Summary
017	Record	Summary of Records Read
018	CA ADS	ADS OnLine Statistics by User Id
019	CA ADS	ADS OnLine Statistics by Dialog and Version Number
020	CA ADS	ADS OnLine Statistics by Logical Terminal Id
021	Transaction	IDMS DC Transaction Statistics by Dialog
099		No listing (creates an output file of archive statistics records)

Uses for Statistics Reports

Systems administrators use statistics reports to monitor system activity. Statistics reports can be used to:

- Assist in system tuning and maintenance
- Evaluate processing efficiency at the system level, task level, transaction level, and dialog level
- Monitor system activity within certain time intervals

Other Tools Available

Other tools available to monitor system activity are the PRINT LOG utility, PLOG, and DCMT STATISTICS commands. These tools are discussed in more detail in Other CA IDMS Reporting Facilities (see page 399).

What Follows

This chapter discusses types of statistics records, input parameters needed to process a statistics report, and sample output.

Note: For more information about statistics, see the *CA IDMS System Operations Guide*.

Types of Statistics Records

Statistics Record Type

DC/UCF logs six types of records to the system log file. One of these record types is a statistics record. A statistics record is variable in length and has two parts. The first part contains information such as the date and time. The second part contains statistical data for the 35 types of statistics records. Three DSECTS (documented in the *CA IDMS DSECT Reference Guide*) define the layout of the statistics records, as follows:

DSECT	Description
#LGRDS	The log record header DSECT
#STLDS	The statistics log record header DSECT. DSECT #STLDS redefines 256 bytes of #LGRDS starting at offset X '14' and contains a description of 35 statistics record subtypes.
#STRDS	The statistics record DSECT (#STRDS). #STRDS describes the layout of the statistics in the log record.

DSECT	Description
#HSTDS	The histogram record DSECT (#HSTDS). #HSTDS describes the layout of histogram data in the log record. Histogram log records are variable length. The DSECT redefines 244 bytes of #STLDS starting at offset X '0C'.

Note: Each of these DSECTs is presented in the *CA IDMS DSECT Reference Guide*.

Layout of Statistics Log Records

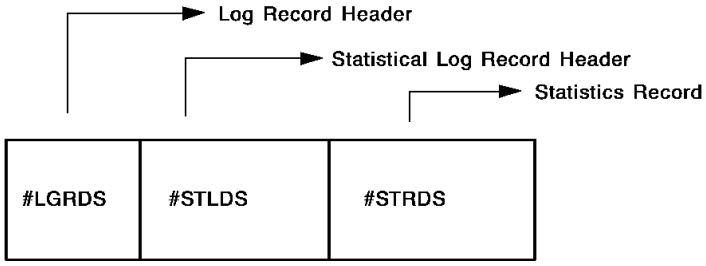
The layout of statistics log records varies depending on the type of statistics being saved. For all statistics log records, the first two DSECTs are:

- #LGRDS
- #STLDS

These two DSECTs are followed by one or more occurrences of #STRDS and, for histogram log records, by #HSTDS.

The following figure illustrates the order of DSECTs for all statistics log records *except*:

- Task and transaction statistics
- System statistics
- Histograms



For more information about a list of statistics log records, see the Histogram Records table.

Task or Transaction Statistics

For task or transaction statistics, there are three #STRDS DSECTs:

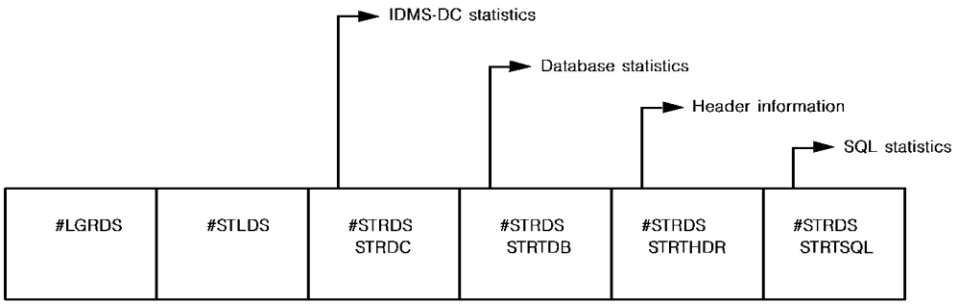
- The first DSECT describes the layout of DC statistics.
- The second DSECT describes the layout of database statistics.
- The third DSECT describes header information.
- The fourth DSECT describes the layout of SQL statistics.

To determine whether the current log record is for task or transaction statistics, check the STLTYPE field in #STLDS:

Transaction statistics	STLTYPE=STLTTSB
Task statistics	STLTYPE=STLTTST

Order of DSECTs for Task and Transaction Statistics

The following figure illustrates the order of DSECTs for task and transaction statistics log records:



System Statistics

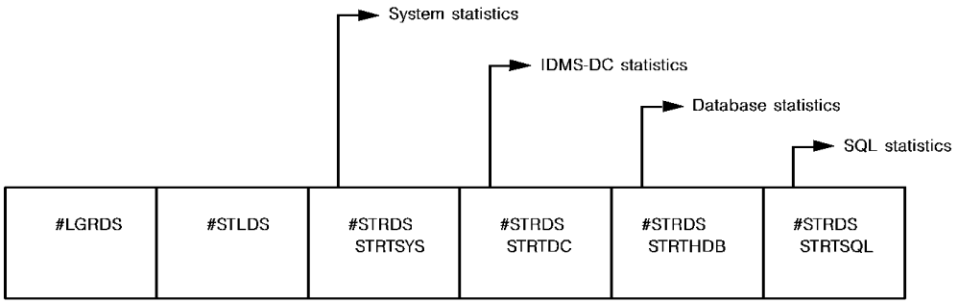
For system statistics, there are three #STRDS DSECTs:

- The first DSECT describes the layout of system statistics.
- The second DSECT describes the layout of IDMS-DC statistics.
- The third DSECT describes the layout of database statistics.
- The fourth DSECT describes the layout of SQL statistics.

To determine whether the current log record is for system statistics, check the STLTYPE field in #STLDS. For system statistics, STLTYPE=STLTCST.

Order of DSECTs for System Statistics

The following figure illustrates the order of DSECTs for system statistics log records:



Histograms

For histograms, there is one #STRDS DSECT followed by one #HSTDS DSECT.

To determine whether the current log record is for a histogram:

1. Check the STLTYPE field in #STLDS. It should be either STLTCST or STLTPLE.
2. Check the STRTYPE field in #STRDS. It should be STRTHIS.

Order of DSECTs for Histograms

The following figure illustrates the order of DSECTs for histogram log records:

Release Level

The #STRDS DSECT contains a field that indicates the release level of the DC/UCF system for the statistics log record.

To determine the release level, check the STRRID field in #STRDS. For example, STRRID=C'Rnnn', where nnn is the release level.

Number of Statistics Log Records

A statistics block can contain more data than can be written in one log record. When this occurs, DC/UCF uses two log records to write the statistics to the log.

To determine whether a particular statistics log record contains only part of the data from a statistics block, check the LGRTYPE field in #LGRDS:

- *If LGRTYPE=X'76'*, this is the first of two log records used to write one statistics block.
- *If LGRTYPE=X'F6'*, this log record is one of the following:
  - The only log record used for that particular statistics block
  - The second of two log records used to write one statistics block

Note: Statistics log records have a maximum length of 276 bytes. Programs that read statistics from the DC/UCF log should reserve twice that amount of space to handle statistics that span two log records.

Output of SREPORT 099

Statistics records output by SREPORT 099 are 280-byte fixed-length records with the same layout as records written to the archived system log file. CA Culprit for CA IDMS copies the RDW associated with the variable-length records to bytes 1 through 4 of the fixed-length records.

SREPORT 000

SREPORT 000 contains the CA Culprit for CA IDMS REC parameters that define the fields in each type of statistics record. Each REC parameter defines the start position, length, and data type of a field within the record. The following considerations apply:

- The field names assigned in the CA Culprit for CA IDMS report are not always the same as those assigned in the DSECTS.
- Each field defined by a CA Culprit for CA IDMS REC parameter has a start position 5 bytes more than in the DSECT.

Producing Statistics Reports

SYSTEM Statements Determine How to Log Statistics

DC/UCF can log system resource statistics to the database, to a single file, or to alternate files as defined at system configuration by the LOG clause of the SYSTEM statement. When statistics are logged to the database, they are stored in DDLDCLOG, the log area of the data dictionary.

Reports Document Statistics Logged to Database

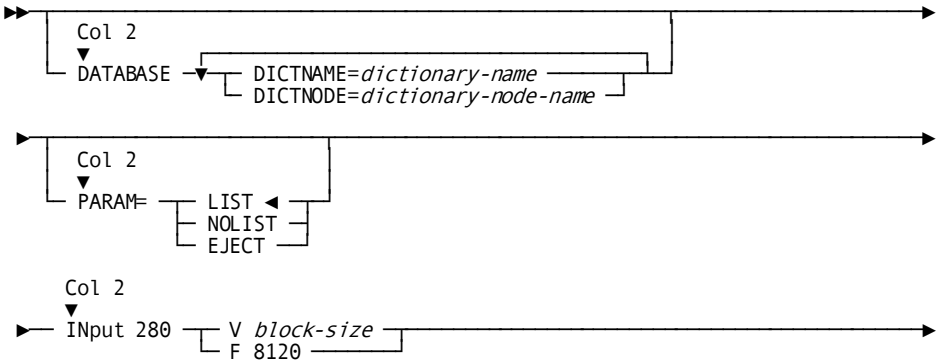
Statistics reports document statistics logged to the database. The ARCHIVE LOG utility offloads the statistics from the DDLDCLOG area to an archived system log file; for more information about this utility, see the *CA IDMS Utilities Guide*.

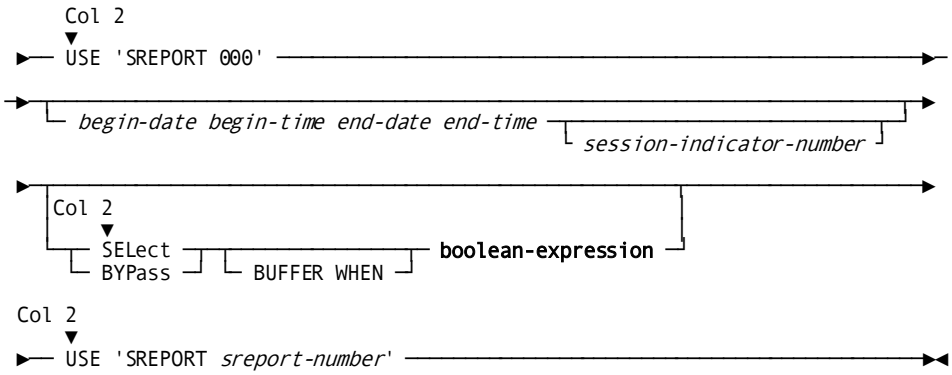
Input to Statistics Reports

Input to the statistics reports is either the archived system log file or a file created by executing SREPORT 099. SREPORT 099 reads the archived system log file and creates a file of archived statistics records.

Syntax

Syntax for the CA Culprit for CA IDMS parameters is shown followed by examples of CA Culprit for CA IDMS code. Coding is freeform except that each parameter must be coded starting in column 2.





Parameters

Syntax rules appear in Chapter 1, "Introduction," except as described as follows:

INput

Specifies the CA Culprit for CA IDMS parameter that designates the physical characteristics of the input file.

280

Specifies the record length, in bytes.

V *block-size*

Specifies the record type (variable length) and the block size if the archived system log file is used as input:

- In z/OS systems, the block size is informational
- In z/VSE systems, *block-size-n* must match the actual block size of the archived log file (the default block size of the archive file is 6000).

Note: For more information about creating output files with CA IDMS utilities in a z/VSE environment, see the *CA IDMS Utilities Guide*.

Block-size must be greater than or equal to the actual block size. (The block size for the archived log file is specified within the JCL used by the ARCHIVE LOG utility to create the file.)

F 8120

Specifies the record type (fixed length) and the block size (8120) if the output file produced by SREPORT 099 is used as input.

Note: In z/OS systems, the block size can be omitted.

USE 'SREPORT 000'

Requests SREPORT 000; SREPORT 000 contains CA Culprit for CA IDMS REC parameters that define fields used in other statistics report modules. This parameter must be included in all statistics report runs.

begin-date

Specifies the begin date for the period to be covered by the requested reports. If no time period is specified, the requested reports will cover the entire period represented by the input archive file or by the input file from SREPORT 099.

Note: A time period and a nonzero session indicator are required for SREPORTs 001, 003, and 012 through 016.

Begin-date must be in the Julian form *yyddd*, where *yy* is the last two digits of the year and *ddd* is the day.

begin-time

Specifies the begin time for the period to be covered by the requested reports. *Begin-time* must be in the form *hhmm*, where *hh* is hours based on a 24-hour clock, and *mm* is minutes.

end-date

Specifies the end date for the period to be covered by the requested reports. *End-date* must be in the Julian form *yyddd*, where *yy* is the last two digits of the year and *ddd* is the day.

end-time

Specifies the end time for the period to be covered by the requested reports. *End-time* must be in the form *hhmm*, where *hh* is hours based on a 24-hour clock, and *mm* is minutes.

session-indicator-number

Specifies that the requested reports are to cover the indicated occurrence of a DC/UCF session within the specified time period. A DC/UCF session is the period of time from one system startup to the next; the first session within a specified time period begins with the first startup record. SREPORT 000 lists each startup record that exists in the archive file and when the record was logged.

Session-indicator-number must be an integer in the range 0 through 9999. If *session-indicator-number* is not specified or is equal to zero, the requested reports will cover the entire period specified.

Note: A time period and a nonzero session indicator are required for SREPORTs 001, 003, and 012 through 016.

SELECT/BYPASS BUFFER WHEN boolean-expression

Specifies optional selection criteria to be applied during the extract phase of processing. If a SELECT or BYPASS parameter is coded, it must follow the USE 'SREPORT 000' parameter.

USE 'SREPORT *sreport-number*'

Specifies a report module name. *Sreport-number* must be a report number, as specified in the module name. Multiple USE parameters can be included; however, each one must be specified on a separate line.

Examples

Example 1

SREPORT 003 is requested for the first DC/UCF session occurring between 8:30 and 9:50 PM on March 5, 1999.

```
DATABASE DICTNAME=CULPDICT
INPUT 280 F 8120
USE 'SREPORT 000' (99064 2030 99064 2150 1)
USE 'SREPORT 003'
```

As shown in the output generated for SREPORT 000, the first session within this time frame begins at 20:32 PM with startup record number 5703.

```
  THE FILE BEGINS AT THE FOLLOWING DATE AND TIME: 99064 19:13

  RECORD NUMBER          JULIAN DATE          TIME

       1,289              99064               19:36
       2,415              99064               19:49
       5,703              99064               20:32
       7,905              99064               21:07
```

Example 2

SREPORT 012 is requested for the second DC/UCF session occurring in the period beginning at 6:00 AM on 10/19/99 and ending at 6:00 PM on 10/19/99. Input consists of the archived system log file created by means of the ARCHIVE LOG utility. Input parameters will not be listed.

```
PARAM=NOLIST
IN 280 V
USE 'SREPORT 000' (99292 0600 99292 1800 2)
USE 'SREPORT 012'
```

Example 3

SREPORTs 010 and 005 are requested for all DC/UCF sessions in the period beginning at 8:00 AM on 11/22/99 and ending at 4:00 PM on 11/22/99. Input consists of the output file created by a previous run of SREPORT 099; PS indicates a sequential file. By default, input parameters will be listed.

```
IN 280 F 8120 PS
USE 'SREPORT 000' (99326 0800 99326 1600)
USE 'SREPORT 010'
USE 'SREPORT 005'
```

Example 4

Statistics report modules SREPORT 000 and SREPORT 012 are stored in the CULPDICT data dictionary. The SELECT parameter selects only those records stored in the input buffer that specify user ids TAF and TNC. The code for SREPORT 012 identifies TSTUSID as the user-id field name.

```
DATABASE DICTNAME=CULPDICT
IN 280 V
USE 'SREPORT 000'
SELECT BUFFER WHEN TSTUSID EQ ('TAF' 'TNC')
USE 'SREPORT 012'
```

Operating System Considerations

JCL Coding Considerations

Statistics reports can run either in local mode or under the central version. The JCL to run statistics reports appears in Appendixes A through D for z/OS, z/VSE and z/VM operating systems, respectively. The following considerations apply to coding the JCL for running statistics reports:

- The input file containing the statistics records must be defined with ddname/filename/linkname SYS010 (the input file can be either the archived DC/UCF system log file or the output file produced by SREPORT 099).
- When SREPORT 099 is run, the output file must be defined with ddname/filename/linkname SYS020.

Input File JCL Modifications

For the input file, modify the JCL in Appendices A through D, as follows:

- **For z/OS operations systems**, modify ddname SYS010 in Appendix A as follows:

  ```
  //SYS010  DD DSN=user.inputfil,DISP=OLD,UNIT=tape,VOL=SER=nnnnnn
  ```

user.inputfil	data set name of the archived system log file or SREPORT 099 output file
tape	symbolic device name of a disk or tape input file
nnnnnn	volume serial number of the input file

- **For z/VSE operating systems**, modify filename SYS010 in Appendix B as follows:

```
// TLBL  SYS010,'user.inputfil',,nnnnnn,,f
// ASSGN SYS010,X'ttt'
```

user.inputfil	file-id of the archived system log file or SREPORT 099 output file
nnnnnn	volume serial number of the input file
f	file number of the input file
ttt	device assignment (channel and unit) for tape files (files may be disk instead of tape, in which case a device assignment, DLBL and EXTENT information are also required)

- **For z/VM and z/VM operating systems**, modify the SYS010 command in Appendix C, as follows:
  - For input from the archived system log file:

```
For tape files: FILEDEF  SYS010 TAP1 SL VOLID nnnnnn
                         (RECFM VB LRECL 280 BLKSIZE bbbb

For disk files: FILEDEF  SYS010 DISK input file a
                         (RECFM VB LRECL 280 BLKSIZE bbbb
```

nnnnnn	volume serial number of the archived system log file
bbbb	block size of the input file
input file a	filename, filetype, filemode of archived system log file

  - For input from the file created by SREPORT 099:

```
FILEDEF  SYS010 DISK input file a
                (RECFM FB LRECL 280 BLKSIZE 8120
```

input file a	filename, filetype, filemode of archived system log file

SREPORT 099 Output File JCL Modifications

To create a file of statistics records using SREPORT 099, modify the JCL in Appendices A through D, as follows:

- **For z/OS operations systems**, modify ddname SYS020 in Appendix A, as follows:

```
//SYS020  DD DSN=user.nonprint,DISP=(NEW,CATLG),
           SPACE=(TRK,(10,10)),UNIT=tape,VOL=SER=nnnnnn
           DCB=(DSORG=PS,RECFM=FB,LRECL=280,BLSIZE=8120)
```

user.nonprint	data set name for nonprint output
tape	symbolic device name of the nonprint output file
nnnnnn	volume serial number of the nonprint output file

- **For z/VSE operating systems** modify file name SYS020 in Appendix B as follows:

```
// ASSGN SYS020,X'ttt'
// TLBL  SYS020,'user.nonprint',15
```

ttt	device assignment (channel and unit) for tape files (files may be disk instead of tape, in which case a device assignment, DLBL, and EXTENT information are also required.)
user.nonprint,15	file-id and retention period for nonprint/nonpunch output

- **For z/VM and z/VM operating systems**, modify the SYS020 command in Appendix C as follows:

```
FILEDEF  SYS020 nonprint file a (RECFM FB LRECL 280 BLKSIZE 8120
```

nonprint file a	filename, filetype, filemode of nonprint output

DC/UCF System Statistics Reports

Record Systemwide Data

System statistics record systemwide data. DC/UCF always collects system statistics (they are not optional) because they require minimal overhead and provide valuable information for tuning and maintaining the DC/UCF system.

When Statistics Are Logged

System statistics are logged to the DC/UCF log file at the following times:

- At normal system shutdown
- At the statistics interval established at system generation by the STATISTICS parameter of the SYSTEM statement. The statistics interval can be varied at run time by means of the DCMT VARY STATISTICS command.
- Upon explicit request by means of a DCMT WRITE STATISTICS command.

Summary of System Statistics Reports

System statistics are collected and written for six categories:

General systemwide statistics	SREPORT 003
Systemwide task statistics	SREPORT 012
Systemwide program statistics	SREPORT 013
Systemwide queue statistics	SREPORT 014
Systemwide line statistics	SREPORT 015
Systemwide physical terminal (including UCF PTERMs) statistics	SREPORT 016

SREPORT 003 - IDMS DC System Statistics

Contents

SREPORT 003, the IDMS DC System Statistics report, summarizes all systemwide statistics and thus provides an overview of system performance.

Sample SREPORT 003:

```
REPORT NO. 03                  IDMS-DC SYSTEM STATISTICS  Rnn.n            mm/dd/yy PAGE     1

          SELECTED FROM:  yyddd  hh:mm      TO:  yyddd  hh:mm

        CV SYSTEM START:  yyddd  hh:mm      TO:  yyddd  hh:mm

           CV JOB NAME:  jobname

             CV NUMBER:  nnn


    SYSTEM STATISTICS
```

```
                        116 TOTAL TASKS                          0 STD PGMPOOL LOADS
                         72 TOTAL SYSTEM TASKS                   0 STD PGMPOOL WAITS
                          0 TASKS ABENDED                        0 STD PGM PAGES LOADED
                          0 RUNAWAY TASKS ABORTED               29 RENTPOOL LOADS
                          0 TIMES AT MAX TASK                    0 RENTPOOL WAITS
                          0 SHORT ON STORAGE                   842 RENT PGM PGS LOADED
                          0 OVER RLE THRESH                      0 XA PGMPOOL LOADS
                          0 OVER RCE THRESH                      0 XA PGMPOOL WAITS
                          0 OVER DPE THRESH                      0 XA PGM PGS LOADED
                          0 OVER ILE THRESH                    169 XA RENTPOOL LOADS
                          0 STORAGE POOL WAITS                   0 XA RENTPOOL WAITS
                      1,624 STG REQS - PASS 1                 24,987 XA RENT PGS LOADED
                      1,103 STG REQS - PASS 2                    0 PAGE RELEASE RQSTS
                          0 PUT JOURNALS                         0 PAGES RELEASED
                          0 SET TIME WAITS                       0 PAGE FIX RQSTS
                        236 SET TIME POSTS                       0 PAGES PFIXED
                          1 SET TIME STRTTASKS                   0 PAGE FREE RQSTS
                        234 SET TIME CANCELS                     0 PAGES PGFREED
                          0 AUTOSTART TASKS

DC STATISTICS
                     19.8805 USER MODE CPU TIME                3.8358 SYSTEM MODE CPU TIME
                    659,356 DC SERVICE REQUESTS                   64 GET SCRATCHES
                    659,928 DB SERVICE REQUESTS                  106 PUT SCRATCHES
                        245 PROGRAMS CALLED                       64 DELETE SCRATCHES
                        375 MAX # RLE'S USED                      10 GET QUEUES
                        329 MAX # RCE'S USED                       0 PUT QUEUES
                        308 MAX # DPE'S USED                       0 DELETE QUEUES
                      1,337 STACK HI WATERMARK                     8 GET TIMES
                      2,727 GET STORAGES                           0 SET TIMES
```

```
                  2,494 FREE STORAGES

DC EXTENDED STATISTICS

               40.806072 SYSTEM MODE CPU                    .000000 ZIIP ON CP CPU

                 .000000 ZIIP ON ZIIP CPU                 22.013726 USER MODE CPU

               62.819799 TOTAL TCB CPU                      .000000 ENCLAVE CPU

DB STATISTICS

               2,336,618 PAGES REQUESTED                          0 CALC RECS NO OFLOW

               1,041,703 PAGES READ                               0 CALC RECS OFLOW

                       0 PAGES WRITTEN                            0 VIA RECS NO OFLOW

               1,319,871 CALLS TO DBMS                            0 VIA RECS OFLOW

               1,296,108 RECORDS REQUESTED                        0 FRAGMENTS STORED

               1,294,797 RECORDS CURRENT OF RU                    0 RECORDS RELOCATED

                     330 TOTAL LOCKS                              0 RECORDS UPDATED

                       0 PAGES FOUND IN CACHE                     0 PAGES IN PREFETCH BUFF

INDEX STATISTICS

                       0 SR8 SPLITS                               0 SR8 STORES

                       0 SR8 SPAWNS                               0 SR8 ERASES

                       0 ORPHANS ADOPTED                          0 SR7 STORES

                       0 BTREE SEARCHES                           0 SR7 ERASES

                       0 MIN LEVELS SEARCHED                      0 TOTAL LEVELS SEARCHED

                       0 MAX LEVELS SEARCHED

SQL STATISTICS

                       0 SQL COMMANDS                             0 TUPLES FETCHED

                       0 SORTS                                    0 ROWS INSERTED

                       0 TUPLES SORTED                            0 ROWS UPDATED

                       0 MIN SORT                                 0 ROWS DELETED

                       0 MAX SORT                                 0 AM RECOMPILES
```

Field Descriptions

A description of the fields in the IDMS DC System Statistics report follows:

SELECTED FROM/TO

Specifies the time period specified on the USE 'SREPORT 000' parameter where SELECTED FROM specifies the beginning date and time and SELECTED TO specifies the ending date and time. The date is in Julian form, yyddd, where yy is the last two digits of the year and ddd is the day. The time is in hh:mm form, where hh is hours based on a 24-hour clock and mm is minutes.

CV SYSTEM START/INTERVAL START/TO

Specifies the actual time period for the report generated. If the USE 'SREPORT 000' parameter does not specify a time range, CV SYSTEM START/INTERVAL START and TO represent the time range for the entire input archive file or input file created by SREPORT 099. When the input file contains cumulative statistics, the CV SYSTEM START date and time will be displayed. When the input file contains interval based statistics, the INTERVAL START date and time will be displayed.

CV JOB NAME

Specifies the starting job name of Central Version which collected the statistics.

CV NUMBER

Specifies the number of Central Version which collected the statistics.

TOTAL TASKS

Indicates the total number of system and user tasks, including external request units, executed for this session.

TOTAL SYSTEM TASKS

Indicates the number of system tasks active at the conclusion of this session. System-initiated tasks include FACTOTUM, MASTER, DBRC, print, and line drivers.

TASKS ABENDED

Indicates the number of tasks that abended during this session.

RUNAWAY TASKS ABORTED

Indicates the number of tasks that terminated abnormally because their execution time exceeded the maximum amount of time defined in the RUNAWAY INTERVAL clause of the SYSTEM statement.

TIMES AT MAX TASK

Indicates the number of times a new task could not start because the system was processing the maximum number of tasks specified at system generation in the MAXIMUM ERUS and MAXIMUM TASK clauses of the SYSTEM statement.

Interpretation: Generally, this value should be close to 0. Values equal to 0 may indicate that the overall system size is larger than necessary; values greater than 0 may represent peaks in system loads or chronic system overload.

To reduce the number of times at maximum tasks, make one or more of the following system adjustments:

- Increase the MAX ERUS and MAX TASKS thresholds
- Decrease the limit specified for the MAXIMUM CONCURRENT THREADS clause of the TASK statement at system generation

SHORT ON STORAGE

Indicates the number of times program storage requests were not satisfied. Generally, the value should be close to zero; values greater than zero should represent peaks in storage utilization, rather than chronic shortages.

Interpretation: Values consistently greater than zero indicate the size of the storage pool or storage cushion is too small. The size of the storage pool is defined at system generation with the STORAGE POOL and XA STORAGE POOL clauses of the SYSTEM system generation statement; the size of the cushion is defined with the CUSHION clause of the same statement.

OVER RLE THRESH

Indicates how many times the number of resource link elements (RLEs) exceeded the value allocated in the SYSTEM statement at system generation. When the threshold is reached, the task that is executing abends; if the task is a system task, the system abends. Ideally, this value should be 0.

OVER RCE THRESH

Indicates how many times the number of resource control elements (RCEs) exceeded the value allocated in the SYSTEM statement at system generation. When the threshold is reached, the task that is executing abends; if the task is a system task, the system abends. Ideally, this value should be 0.

OVER DPE THRESH

Indicates how many times the number of deadlock prevention elements (DPEs) exceeded the value allocated in the SYSTEM statement at system generation. When the threshold is reached, the task that is executing abends; if the task is a system task, the system abends. Ideally, this value should be 0.

OVER ILE THRESH

Indicates the number of time the internal lock elements (ILEs) exceeded their allocated value. When the threshold is reached, the task that is executing abends. If the task is a system task, the system abends. Ideally, this value should be zero (0).

STORAGE POOL WAITS

Indicates the number of times tasks had to wait for a sufficient amount of contiguous storage. This value should be as low as possible; if the value is large or increasing, increase the size of the storage cushion in the CUSHION clause of the STORAGE POOL statement at system generation.

STG REQS - PASS 1

Indicates the number of storage requests that allocated space on a previously allocated page.

STG REQS - PASS 2

Indicates the number of storage requests that allocated space on a previously allocated page and on a contiguous new page.

SET TIME WAITS

Indicates the number of program requests to place a task in a wait state. The program issues the request with a SET TIMER WAIT DML statement.

SET TIME POSTS

Indicates the number of program requests to post a user-specified event control block (ECB) after the specified time interval elapses. The program issues the request with a SET TIMER POST DML statement.

SET TIME STRTTASKS

Indicates the number of program requests to initiate a user-specified task after the specified time interval elapses. The program issues the request with a SET TIMER START DML statement.

SET TIME CANCELS

Indicates the number of program requests to cancel the effect of a previously issued SET TIMER request. The program issues the request with a SET TIMER CANCEL DML statement.

AUTOSTART TASKS

(DC/UCF only) Indicates the number of times the associated task of each queue was invoked to process queue records. The task is invoked each time the queue threshold is exceeded. The threshold is defined with the THRESHOLD clause of the QUEUE system generation statement; the task is identified by the INVOKES TASK clause of the same statement.

STD PGMPOOL LOADS

Indicates the number of nonresident modules loaded into the 24-bit program pool; nonresident modules include programs, CA ADS and CA ADS batch dialogs, maps (DC/UCF only), and tables.

STD PGMPOOL WAITS

Indicates the number of times program loads were delayed due to insufficient space in the 24-bit program pool. Ideally, this value should be zero; a value greater than zero indicates insufficient space in the program pool for the volume of program load activity in the system.

Interpretation: If this value is high, the size of the 24-bit program pool should be increased or nonresident programs should be redefined as either resident or reentrant. Program pool usage can be observed dynamically by means of the OPER WATCH PR command. For more information about program pools, see the *CA IDMS System Operations Guide*.

STD PGM PAGES LOADED

Indicates the number of pages used by programs loaded into the 24-bit program pool. The size of a page equals 4K. Only one program can occupy a program pool page; that is, a 4.5K program uses two pages of program pool.

RENTPOOL LOADS

Indicates the number of reentrant programs loaded into the 24-bit reentrant pool; reentrant programs include CA ADS dialogs and subschemas.

RENTPOOL WAITS

Indicates the number of times reentrant program loads were delayed due to insufficient space in the 24-bit reentrant pool. Ideally, this value should be zero; a value greater than zero indicates the size of the reentrant pool should be increased.

RENT PGM PGS LOADED

Indicates the number of pages used by reentrant programs loaded into the 24-bit reentrant pool. A page is 512 bytes (0.5K).

XA PGMPOOL LOADS

(Extended addressing only) Indicates the number of nonresident modules loaded into the 31-bit XA program pool; nonresident modules include programs, subschemas, maps, database procedures, and tables that have been assigned an RMODE of ANY.

XA PGMPOOL WAITS

(Extended addressing only) Indicates the number of times program loads were delayed due to insufficient space in the 31-bit XA program pool. Ideally, this value should be zero; a value greater than zero indicates insufficient space in the XA program pool for the volume of program load activity in the system.

XA PGM PGS LOADED

(Extended addressing only) Indicates the number of pages used by nonresident modules loaded into the 31-bit XA program pool. The size of a page equals 4K. Only one program can occupy a program pool page; that is, a 4.5K program uses two pages of program pool.

XA RENTPOOL LOADS

(Extended addressing only) Indicates the number of reentrant modules loaded into the 31-bit XA reentrant pool; reentrant modules include reentrant programs, subschemas, CA ADS dialogs, and DC/UCF maps that have been assigned an RMODE of ANY.

XA RENTPOOL WAITS

(Extended addressing only) Indicates the number of times program loads were delayed due to insufficient space in the 31-bit XA reentrant pool. Ideally, this value should be zero; a value greater than zero indicates insufficient space in the XA reentrant pool for the volume of program load activity in the system.

XA RENT PGS LOADED

(Extended addressing only) Indicates the number of pages used by reentrant modules loaded into the 31-bit XA reentrant pool. The size of a page equals 512 bytes (0.5K).

PAGE RELEASE RQSTS

Indicates the number of requests to release 4K virtual pages.

PAGES RELEASED

Indicates the number of 4K byte pages actually released.

PAGE FIX RQSTS

(VS systems only) Indicates the number of requests to fix 4K virtual pages allocated to storage pools defined to the system.

PAGES PFIXED

(VS systems only) Indicates the number of 4K virtual pages fixed in storage pools defined to the system.

PAGE FREE RQSTS

Indicates the number of requests to release 4K fixed virtual pages allocated to storage pools defined to the system, thereby making storage eligible for paging out.

PAGES PGFREED

Indicates the number released of 4K fixed virtual pages allocated to system storage pools.

PUT JOURNALS

Indicates the number of program requests to write statistics to the journal file with the WRITE JOURNAL DML statement.

USER MODE CPU TIME

Indicates the amount of CPU time (in ten-thousandths seconds) spent in executing user code.

DC SERVICE REQUESTS

Indicates the number of times user programs requested DC/UCF services (for example, GET STORAGE requests). This value also includes both explicit and implicit requests for database services. For example, OBTAIN *record-name* is an explicit program request. PUT QUEUE is an implicit request for database services because the DC/UCF system must store the queue record.

DB SERVICE REQUESTS

Indicates the number of times a user or system program requests database services (for example, OBTAIN *record-name*).

For LRF and SQL programs, DB SERVICE REQUESTS should be less than or equal to the number of CALLS TO DBMS. You can use these values to evaluate how efficiently the LRF or SQL path extracts data. For example, a program OBTAIN *logical-record* command increments DB SERVICE REQUESTS by one, but may greatly increment the CALLS TO DBMS value, especially if an area sweep occurs due to the NULL SELECT clause.

PROGRAMS CALLED

Indicates the number of programs called (for example, the number of #LOAD PGM requests issued).

MAX # RLE'S USED

Indicates the highest number of resource link elements (RLEs) used during this session. If this value approximates the threshold established at system generation, increase the threshold.

MAX # RCE'S USED

Indicates the highest number of resource control elements (RCEs) used during this session. If this value approximates the threshold established at system generation, increase the threshold.

MAX # DPE'S USED

Indicates the highest number of deadlock prevention elements (DPEs) used during this session. If this value approximates the threshold established at system generation, increase the threshold.

STACK HI WATERMARK

Indicates the largest amount of the task control element (TCE) stack area used by any task. The stack size is defined at system generation with the STACKSIZE clause of the SYSTEM statement.

GET STORAGES

Indicates the number of program requests to acquire variable storage dynamically from a DC/UCF storage pool or obtain the address of a previously acquired storage area. The program issues the request with the GET STORAGE DML statement.

FREE STORAGES

Indicates the number of program requests to free all or part of a DC/UCF storage area. The program issues the request with the FREE STORAGE DML statement.

SYSTEM MODE CPU TIME

Indicates the amount of CPU time (in ten-thousandths seconds) spent in executing system code.

GET SCRATCHES

Indicates the number of program requests for scratch records from the DDLDCSCR area. The program issues the request with the GET SCRATCH DML statement.

PUT SCRATCHES

Indicates the number of program requests to store or replace a scratch record in the DDLDCSCR area. The program issues the request with the PUT SCRATCH DML statement.

DELETE SCRATCHES

Indicates the number of program requests to delete scratch records from the DDLDCSCR area. The program issues the request with the DELETE SCRATCH DML statement.

GET QUEUES

Indicates the number of program requests to retrieve a queue record from the DDLDCRUN area and place it in a storage area associated with the issuing program. The program issues the request with the GET QUEUE DML statement.

PUT QUEUES

Indicates the number of program requests to store a queue record in the DDLDCRUN area. The program issues the request with the PUT QUEUE DML statement.

DELETE QUEUES

Indicates the number of program requests to delete queue records from the DDLDCRUN area. The program issues the request with the DELETE QUEUE DML statement.

GET TIMES

Indicates the number of program requests for the system date and time. The program issues the request with the GET TIME DML statement.

SET TIMES

Indicates the number of SETTIME requests to define an event that is to occur after a specified time interval.

SYSTEM MODE CPU

Indicates the amount of CPU time (in microseconds) spent in executing system code.

USER MODE CPU

Indicates the amount of CPU time (in microseconds) spent in executing user code.

ZIIP on ZIIP CPU

Indicates the amount of CPU time (in microseconds) spent on zIIP.

ZIIP on CP CPU

Indicates the amount of CPU time (in microseconds) spent on CP, while qualified for zIIP.

TOTAL TCB CPU TIME

Indicates the amount of CPU time (in microseconds) spent on CP in either system mode or user mode.

ENCLAVE CPU

Indicates the amount of CPU time (in microseconds) spent on CP or zIIP, while qualified for zIIP.

PAGES REQUESTED

Indicates the number of pages requested by IDMSDBMS (including pages found in a buffer). A page request does not result in a page read if the page is in the buffer pool.

Interpretation: The ratio of PAGES REQUESTED/PAGES READ is the *buffer utilization ratio*. It measures the effectiveness of the buffer-pool size and design of the database (for example, CALC and VIA clustering). The higher the ratio the better. Ratios consistently below 2.0 indicate that processing is random or that the buffer-pool size is too small.

The buffer utilization ratio may be artificially high for transactions that keep locks, due to the nature of the internal locking mechanism. IDMSDBMS cannot hold a buffer while requesting a lock; therefore, when locks are kept, IDMSDBMS must free and request a page each time a record is requested.

PAGES READ

Indicates the number of database pages read from disk.

PAGES WRITTEN

Indicates the number of database pages physically written to disk. A page can be updated several times before it is actually written back to the database.

CALLS TO DBMS

Indicates the number of calls to the database management system.

Note: Execution of each navigational DML request involves one call; execution of each logical record facility (LRF) and SQL request typically involves multiple calls.

RECORDS REQUESTED

Indicates the number of database records requested by IDMSDBMS.

Interpretation: The ratio of RECORDS REQUESTED to PAGES READ is the *space management ratio*. The space management ratio measures how well space is allocated (for example, VIA options, CALC distribution, and buffering). The higher the ratio the better. Ratios less than 4 or less than the norm indicate that the size of the buffer should be increased and database tuning should be performed.

The space management ratio may be artificially high for transactions that keep locks, due to the nature of the internal locking mechanism. IDMSDBMS cannot hold a buffer while requesting a lock; therefore, when locks are kept, IDMSDBMS must free and request a page each time a record is requested.

RECORDS CURRENT OF RU

Indicates the number of records made current of transaction.

Interpretation: The ratio of RECORDS REQUESTED to RECORDS CURRENT is the *effectiveness ratio*. The effectiveness ratio measures the amount of work CA IDMS/DB is doing for the programmer (that is, how many records the DBMS has to examine to find the one requested). The lower the ratio the better. If the ratio is high, examine set options (for example, sorted order or next pointers only) for appropriateness. If the options are correct, examine the program logic for accurate use of currency.

TOTAL LOCKS

Indicates the number of all locks acquired and released by all completed transactions. This is NOT a count of locks currently held.

PAGES FOUND IN CACHE

Indicates the number of requested database pages that have been found in a shared cache or an ESA dataspace.

CALCRECS NO OFLOW

Indicates the number of CALC records stored on the target page.

CALC RECS OFLOW

Indicates the number of CALC records not stored on the target page.

Interpretation: The ratio of CALC records stored on their target page to the total number stored (that is, hits plus overflows) is the *CALC cluster ratio*. The ratio reflects the efficiency of the CALC algorithm.

The CALC cluster ratio is especially important when the database is loaded or restructured. Ideally, the ratio should be 1, which indicates no overflow. Ratios consistently less than 1 or less than the norm indicate that space utilization is getting high and the database should be tuned.

VIA RECS NO OFLOW

Indicates the number of VIA and/or DIRECT records stored on the target page.

VIA RECS OFLOW

Indicates the number of VIA and/or DIRECT records not stored on the target page.

Interpretation: The ratio of VIA records stored on their target page to the total number of VIA records stored (that is, hits plus overflows) is the *VIA cluster ratio*. The ratio reflects how well VIA records cluster around their owner.

Ideally, the ratio should be 1, which indicates no overflow. Ratios less than 1 or less than the norm indicate very large data clusters, high utilization of space, or small page size.

FRAGMENTS STORED

Indicates the number of noncontiguous segments (fragments) stored for variable-length records.

RECORDS RELOCATED

Indicates the number of records relocated from their home page.

PAGES IN PREFETCH BUFF

Indicates the number of database pages that have been directly found in a prefetch buffer.

SR8 SPLITS

Indicates the number of SR8 splits.

SR8 SPAWNS

Indicates the number of SR8 spawns.

ORPHANS ADOPTED

Indicates count of Index members or SR8s whose up-level pointers were corrected to point to the actual SR8 in which they appear.

BTREE SEARCHES

Indicates number of Btree index probes.

MIN LEVELS SEARCHED

Indicates least number of levels descended.

MAX LEVELS SEARCHED

Indicates highest number of levels descended.

SR8 STORES

Indicates count of SR8s created.

SR8 ERASES

Indicates count of SR8s erased.

SR7 STORES

Indicates count of SR7s created.

SR7 ERASES

Indicates count of SR7s erased.

TOTAL LEVELS SEARCHED

Indicates total number of levels descended.

SQL COMMANDS

Indicates the number of SQL commands executed.

SORTS

Indicates the number of SQL sorts performed.

TUPLES SORTED

Indicates the number of rows participating in all sorts.

MIN SORT

Indicates the least number of rows sorted.

MAX SORT

Indicates the largest number of rows sorted.

TUPLES FETCHED

Indicates number of tuples FETCHed.

ROWS INSERTED

Indicates the number of rows INSERTed.

ROWS UPDATED

Indicates the number of rows UPDATed.

ROWS DELETED

Indicates the number of rows DELETEd.

AM RECOMPILES

Indicates the number of automatic access module recompilations.

For a detailed explanation of DML commands, see the *CA IDMS Navigational DML Programming Guide*. For more information about system generation statements, see the *CA IDMS System Generation Guide*.

SREPORT 012 - IDMS DC Task Summary

Contents

SREPORT 012, the IDMS DC Task Summary report, summarizes systemwide task statistics, indicating the number of times each task was invoked. Systems administrators can use SREPORT 012 to monitor trends in task usage; for example, watching for peaks in task usage over a set time period.

The following figure shows one page of a sample IDMS DC Task Summary report:

Sample SREPORT 012:

```
REPORT NO. 12                    IDMS-DC TASK SUMMARY  Rnn.n        mm/dd/yy PAGE     3
```

```
   SELECTED FROM:  yyddd  hh:mm      TO:  yyddd  hh:mm
 CV SYSTEM START:  yyddd  hh:mm      TO:  yyddd  hh:mm
     CV JOB NAME:  jobname
       CV NUMBER:  nnn

                    TASK                          TIMES INVOKED

                  S                                       0

                  SCHEMA                                  0

                  SCHEMAT                                 0

                  SEND                                    0

                  SHOWMAP                                 0

                  SIGNOFF                                 0

                  SIGNON                                  0

                  SSC                                     0

                  SSCT                                    0

                  SUSPEND                                 0

                  SYSGEN                                  0
```

```
                SYSGENT                             0


                TCF                                 0




                  TOTAL                             4
```

Field Descriptions

A description of the fields in the IDMS DC Task Summary report follows:

SELECTED FROM/TO

Specifies the time period specified on the USE 'SREPORT 000' parameter where SELECTED FROM specifies the beginning date and time and SELECTED TO specifies the ending date and time. The date is in Julian form, *yyddd*, where *yy* is the last two digits of the year and *ddd* is the day. The time is in *hh:mm* form, where *hh* is hours based on a 24-hour clock and *mm* is minutes.

CV SYSTEM START/INTERVAL START/TO

Specifies the actual time period for the report generated. If the USE 'SREPORT 000' parameter does not specify a time range, CV SYSTEM START/INTERVAL START and TO represent the time range for the entire input archive file or input file created by SREPORT 099. When the input file contains cumulative statistics, the CV SYSTEM START date and time will be displayed. When the input file contains interval based statistics, the INTERVAL START date and time will be displayed.

CV JOB NAME

Specifies the starting job name of Central Version which collected the statistics.

CV NUMBER

Specifies the number of Central Version which collected the statistics.

TASK

Specifies the task identifier that is used at run time by a terminal operator or program to invoke the task. A task is the basic unit of work under DC/UCF. It consists of a main program and one or more additional programs. A task is identified to the system by a unique name (such as OLM) that is usually identical to the task code used by the teleprocessing system.

TIMES INVOKED

Specifies the number of times the task was invoked for the session.

SREPORT 013 - IDMS DC Program Summary

Contents

SREPORT 013, the IDMS DC Program Summary report, summarizes systemwide program statistics. System administrators can use SREPORT 013 to monitor program activity relative to available storage.

Available Program Pools

A program can be assigned to any one of the following pools:

- 24-bit program pool
- 24-bit reentrant pool
- 31-bit program pool (Extended addressing only)
- 31-bit reentrant pool (Extended addressing only)

Note: A program can be put into both a 24-bit pool and a 31-bit pool depending on the LOC= parameter used to invoke the task.

The following figure shows one page of a sample IDMS DC Program Summary report:

Sample SREPORT 013:

```
REPORT NO. 13                              IDMS-DC PROGRAM SUMMARY  Rnn.n                          mm/dd/yy PAGE  40


          SELECTED FROM:  yyddd  hh:mm      TO:  yyddd  hh:mm

        CV SYSTEM START:  yyddd  hh:mm      TO:  yyddd  hh:mm

            CV JOB NAME:  jobname

              CV NUMBER:  nnn


      PROGRAM      PGM                                TIMES        TIMES         RATIO OF        TIMES        TIMES
        NAME       VER      DICTNAME     DICTNODE     CALLED       LOADED      CALLED/LOADED     WAITED      CHECKED


      RHDCWAIT       1                                    0    1         0.0000


      RHDCWTL        1                                    0    1         0.0000
```

RM000121	1	ASFDICT	1	1	1.0000		
RM000122	1	ASFDICT	1	1	1.0000		
RM000123	1	ASFDICT	1	1	1.0000		
RM000124	1	ASFDICT	18	4	4.5000		
RU000121	1	ASFDICT	3	3	1.0000		
RU000122	1	ASFDICT	3	3	1.0000		
RU000123	1	ASFDICT	3	3	1.0000		
RU000124	1	ASFDICT	20	8	2.5000		
TSTDNWKA	1		42	1	42.0000		
TSTDNWKS	1		2	1	2.0000		
UMBRMAP	1		0	0	0.0000		
UMBRMAPE	1		0	0	0.0000		
XASFNWKS	1		1	1	1.0000		
TOTALS			1,458	181	8.0552	0	0

Field Descriptions

A description of the fields in the IDMS DC Program Summary report follows:

SELECTED FROM/TO

Specifies the time period specified on the USE 'SREPORT 000' parameter where SELECTED FROM specifies the beginning date and time and SELECTED TO specifies the ending date and time. The date is in Julian form, *yyddd*, where *yy* is the last two digits of the year and *ddd* is the day. The time is in *hh:mm* form, where *hh* is hours based on a 24-hour clock and *mm* is minutes.

CV SYSTEM START/INTERVAL START/TO

Specifies the actual time period for the report generated. If the USE 'SREPORT 000' parameter does not specify a time range, CV SYSTEM START/INTERVAL START and TO represent the time range for the entire input archive file or input file created by SREPORT 099. When the input file contains cumulative statistics, the CV SYSTEM START date and time will be displayed. When the input file contains interval based statistics, the INTERVAL START date and time will be displayed.

CV JOB NAME

Specifies the starting job name of Central Version which collected the statistics.

CV NUMBER

Specifies the number of Central Version which collected the statistics.

PROGRAM NAME

Specifies the name of the program load module.

PGM VER

Indicates the version number associated with the named program.

DICTNAME

Names the dictionary in which the program resides.

DICTNODE

Names the DC/UCF system that controls the dictionary in which the program resides.

TIMES CALLED

Indicates the number of times the program was called.

TIMES LOADED

Indicates the number of times the program was loaded from disk to a pool.

Interpretation: The ratio of TIMES CALLED to TIMES LOADED measures the effectiveness of the program pool size. The higher the ratio the better. A low ratio for a frequently called program indicates that the size of the program pool should be enlarged or that the program should be made resident, reentrant, or reusable.

RATIO OF CALLED/LOADED

Measures the effectiveness of the program pool size. The higher the ratio the better. A low ratio for a frequently called program indicates that the size of the program pool should be enlarged or that the program should be made resident, reentrant, or reusable.

TIMES WAITED

Indicates the number of times the program waited to be loaded.

TIMES CHECKED

Indicates the number of program check errors that occurred.

SREPORT 014 - IDMS DC Queue Summary

Contents

SREPORT 014, the IDMS DC Queue Summary report, summarizes systemwide queue statistics. System administrators can use SREPORT 014 to monitor queue activity.

Sample SREPORT 014:

```
REPORT NO. 14                    IDMS-DC QUEUE SUMMARY  Rnn.n              mm/dd/yy PAGE     1


           SELECTED FROM:  yyddd  hh:mm      TO:  yyddd  hh:mm

         CV SYSTEM START:  yyddd  hh:mm      TO:  yyddd  hh:mm

             CV JOB NAME:  jobname

              CV NUMBER:  nnn


                    QUEUE NAME                    TIMES AUTOTASK STARTED


                     OLQQNOTE                                    0




                        TOTAL                                    0
```

Field Descriptions

A description of the fields in the IDMS DC Queue Summary report follows:

SELECTED FROM/TO

Specifies the time period specified on the USE 'SREPORT 000' parameter where SELECTED FROM specifies the beginning date and time and SELECTED TO specifies the ending date and time. The date is in Julian form, *yyddd*, where *yy* is the last two digits of the year and *ddd* is the day. The time is in *hh:mm* form, where *hh* is hours based on a 24-hour clock and *mm* is minutes.

CV SYSTEM START/INTERVAL START/TO

Specifies the actual time period for the report generated. If the USE 'SREPORT 000' parameter does not specify a time range, CV SYSTEM START/INTERVAL START and TO represent the time range for the entire input archive file or input file created by SREPORT 099. When the input file contains cumulative statistics, the CV SYSTEM START date and time will be displayed. When the input file contains interval based statistics, the INTERVAL START date and time will be displayed.

CV JOB NAME

Specifies the starting job name of Central Version which collected the statistics.

CV NUMBER

Specifies the number of Central Version which collected the statistics.

QUEUE NAME

Specifies the queue identifier. A queue is a database work area shared by tasks on all DC/UCF terminals and by batch programs. Queue records can be transferred between tasks or applications or from one terminal to another.

TIMES AUTOTASK STARTED

Indicates the number of times each queue's associated task was invoked to process queue records. If the value is consistently zero, review the threshold level assigned in the THRESHOLD IS clause of the QUEUE system generation statement; For more information, see the *CA IDMS System Generation Guide*.

SREPORT 015 - IDMS DC Line Summary

Contents

SREPORT 015, the IDMS DC Line Summary report, summarizes systemwide line statistics. Systems administrators can use SREPORT 015 to monitor the quality of lines in the system.

Sample SREPORT 015:

```
REPORT NO. 15                    IDMS-DC LINE SUMMARY  Rnn.n              mm/dd/yy PAGE     1


          SELECTED FROM:  yyddd  hh:mm      TO:  yyddd  hh:mm

        CV SYSTEM START:  yyddd  hh:mm      TO:  yyddd  hh:mm

            CV JOB NAME:  jobname

              CV NUMBER:  nnn


           LINE                                          READ            WRITE
           NAME            READS            WRITES       ERRORS          ERRORS


         CONSOLE                 0                 0


         CTCQA10                 0                 0


         CTCQA21                 0                 0


         CTCQA35                 0                 0


         JESRDR                  0                 0


         S3270Q1                 0                 0


         UCFLINE                 0                 0
```

```
VTAM91              0             0

 TOTALS             0             0             0             0
```

Field Descriptions

A description of the fields in the IDMS DC Line Summary report follows:

SELECTED FROM/TO

Specifies the time period specified on the USE 'SREPORT 000' parameter where SELECTED FROM specifies the beginning date and time and SELECTED TO specifies the ending date and time. The date is in Julian form, *yyddd*, where *yy* is the last two digits of the year and *ddd* is the day. The time is in *hh:mm* form, where *hh* is hours based on a 24-hour clock and *mm* is minutes.

CV SYSTEM START/INTERVAL START/TO

Specifies the actual time period for the report generated. If the USE 'SREPORT 000' parameter does not specify a time range, CV SYSTEM START/INTERVAL START and TO represent the time range for the entire input archive file or input file created by SREPORT 099. When the input file contains cumulative statistics, the CV SYSTEM START date and time will be displayed. When the input file contains interval based statistics, the INTERVAL START date and time will be displayed.

CV JOB NAME

Specifies the starting job name of Central Version which collected the statistics.

CV NUMBER

Specifies the number of Central Version which collected the statistics.

LINE NAME

Specifies the line identifier. A line is a system component that defines the method of communication for physical terminals that use the same access method.

READS

Indicates the number of reads performed for each line.

WRITES

Indicates the number of writes performed for each line.

READ ERRORS

Indicates the number of read errors that occurred for each line. A large value indicates problems in the line.

WRITE ERRORS

Indicates the number of write errors that occurred for each line. A large value indicates problems in the line.

SREPORT 016 - IDMS DC Physical Terminal Summary

Contents

SREPORT 016, the IDMS DC Physical Terminal Summary report, summarizes system wide line statistics.

Sample SREPORT 016:

```
REPORT NO. 16              IDMS-DC PHYSICAL TERMINAL SUMMARY  Rnn.n          mm/dd/yy PAGE     2


          SELECTED FROM:  yyddd  hh:mm      TO:  yyddd  hh:mm

        CV SYSTEM START:  yyddd  hh:mm      TO:  yyddd  hh:mm

           CV JOB NAME:  jobname

             CV NUMBER:  nnn


                                                        CUMULATIVE  AVERAGE

   PHYSICAL                      READ     WRITE            RESPONSE   RESPONSE  CUMULATIVE

   TERMINAL   READS     WRITES    ERRORS    ERRORS  RESPONSES    TIME      TIME     I/O TIME


   VP91007          0         0                          0    0.0000     0.0000      0.0000


   VP91008          0         0                          0    0.0000     0.0000      0.0000


   VP91009          0         0                          0    0.0000     0.0000      0.0000
```

```
VP91010          0         0                          0    0.0000     0.0000      0.0000

VP91011          0         0                          0    0.0000     0.0000      0.0000

VP91012          0         0                          0    0.0000     0.0000      0.0000

VP91013          0         0                          0    0.0000     0.0000      0.0000

VP91014          0         0                          0    0.0000     0.0000      0.0000

VP91015          0         0                          0    0.0000     0.0000      0.0000


  TOTALS       312       238          0         0         0
```

Field Descriptions

A description of the fields in the IDMS DC Physical Terminal Summary report follows:

SELECTED FROM/TO

Specifies the time period specified on the USE 'SREPORT 000' parameter where SELECTED FROM specifies the beginning date and time and SELECTED TO specifies the ending date and time. The date is in Julian form, *yyddd*, where *yy* is the last two digits of the year and *ddd* is the day. The time is in *hh:mm* form, where *hh* is hours based on a 24-hour clock and *mm* is minutes.

CV SYSTEM START/INTERVAL START/TO

Specifies the actual time period for the report generated. If the USE 'SREPORT 000' parameter does not specify a time range, CV SYSTEM START/INTERVAL START and TO represent the time range for the entire input archive file or input file created by SREPORT 099. When the input file contains cumulative statistics, the CV SYSTEM START date and time will be displayed. When the input file contains interval based statistics, the INTERVAL START date and time will be displayed.

CV JOB NAME

Specifies the starting job name of Central Version which collected the statistics.

CV NUMBER

Specifies the number of Central Version which collected the statistics.

PHYSICAL TERMINAL

Specifies the physical terminal identifier. A physical terminal is a physical device such as a CRT (3270-type device), TTY, or printer that exists within a teleprocessing system.

READS

Indicates the number of reads performed for each physical terminal.

WRITES

Indicates the number of writes performed for each physical terminal.

READ ERRORS

Indicates the number of read errors that occurred for each physical terminal.

WRITE ERRORS

Indicates the number of write errors that occurred for each physical terminal.

RESPONSES

Indicates the number of physical terminal responses. A response begins when a physical terminal issues a read request and ends when the next read request is issued.

CUMULATIVE RESPONSE TIME

Indicates the cumulative response time, in hundredths of a second, for the physical terminal. Response time is the total non-I/O time measured from the one read request to the next.

AVERAGE RESPONSE TIME

Specifies the ratio of CUMULATIVE RESPONSE TIME to RESPONSES. Systems administrators can monitor this value to determine the impact of system configuration changes upon response time.

CUMULATIVE I/O TIME

Specifies the cumulative I/O time, in hundredths of a second, for the physical terminal.

Task and External Request Unit Service (ERUS) Statistics Reports

Overview

Task statistics and external request unit service (ERUS) statistics record the resource usage of individual tasks and external request units. The following considerations apply:

- Task and ERUS statistics, including database statistics, incorporate statistics of system run units (RHDCRUAL/IDMSXTAL) when these run units do work for the task. For example, loading a load module from a load area requires database requests which show up in the task statistics.
- Task and ERUS statistics include system-mode statistics; that is, when DC/UCF does work for the task. For example, when a program issues a BIND RUN UNIT, the system obtains variable storage; the storage requests show up in the task statistics.

Uses for Task and ERUS Statistics

Task and ERUS statistics are useful for monitoring and tuning individual application programs.

Statistics Collected Only Upon Request

DC/UCF collects task and ERUS statistics only when requested to do so by the user, because the statistics require additional overhead and, when written to the log file, generate a large volume of data.

Note: For more information about collecting these statistics, see the *CA IDMS System Operations Guide*.

Summary of Task Statistics Reports

Five statistics reports summarize task and external request unit activity:

SREPORT 005	Summarizes task statistics by user identifier.
SREPORT 006	Summarizes task statistics by logical terminal identifier.
SREPORT 007	Summarizes task statistics by task code.
SREPORT 008	Summarizes ERUS statistics by accounting data.
SREPORT 009	Summarizes ERUS statistics by program name.

Sample SREPORT 005:

```
REPORT NO. 05                    IDMS-DC TASK STATISTICS BY USER ID  Rnn.n                    mm/dd/yy PAGE     1
```

```
          SELECTED FROM:  yyddd  hh:mm      TO:  yyddd  hh:mm

        CV SYSTEM START:  yyddd  hh:mm      TO:  yyddd  hh:mm

           CV JOB NAME:  jobname

             CV NUMBER:  nnn


USER ID:  JEJ


                       13         NUMBER TASK EXECUTIONS


                       20         NUMBER PROGRAMS CALLED                          1        NUMBER PROGRAMS LOADED
                       11         NUMBER TERMINAL READS                         159        NUMBER TERMINAL WRITES
                        0         NUMBER TERMINAL ERRORS                        471        NUMBER GETSTG REQUESTS
                        0         NUMBER GETSCR REQUESTS                          0        NUMBER PUTSCR REQUESTS
                        0         NUMBER DELSCR REQUESTS                          2        NUMBER GETQUE REQUESTS
                        0         NUMBER PUTQUE REQUESTS                          0        NUMBER DELQUE REQUESTS
                      151         NUMBER GETTIME REQUESTS                         5        NUMBER SETTIME REQUESTS
                      128         NUMBER DB SERVICES RQSTS                        7        NUMBER PAGES READ
                    .0010         TASK USER MODE TIME                        .0536         TASK SYSTEM MODE TIME
                7,573.0212        TASK WAIT TIME
                        0         NUMBER PAGES WRITTEN                           50        NUMBER PAGES REQUESTED
                        0         NUMBER CALC RECS NO OFLOW                       0        NUMBER CALC RECS OFLOW
                        0         NUMBER VIA RECS NO OFLOW                        0        NUMBER VIA RECS OFLOW
                       85         NUMBER RECORDS REQUESTED                       33        NUMBER RECS CURRENT OF RU
                        0         NUMBER FRAGMENTS STORED                         0        NUMBER RECORDS RELOCATED
                      160         NUMBER CALLS TO DBMS                           16        TOTAL LOCKS ACQUIRED
                        0         NUMBER SR8 SPLITS                               0        NUMBER SR8 STORES
                        0         NUMBER SR8 SPAWNS                               0        NUMBER SR8 ERASES
                        0         NUMBER ORPHAN ADOPT                             0        NUMBER SR7 STORES
                        0         NUMBER BTREE SEARCHES                           0        NUMBER SR7 ERASES
                        0         NUMBER SQL COMMANDS                             0        NUMBER SQL SORTS
```

```
                    0       NUMBER TUPLES FETCHED                       0       NUMBER TUPLES SORTED

                    0       NUMBER ROWS INSERTED                        0       NUMBER AM RECOMPILES

                    0       NUMBER ROWS UPDATED

                    0       NUMBER ROWS DELETED


                 .060329    TASK SYSTEM MODE CPU                     .000000    TASK ZIIP ON CP CPU

                 .000000    TASK ZIIP ON ZIIP CPU                    .001081    TASK USER MODE CPU

                 .061410    TOTAL TASK TCB CPU                       .000000    ENCLAVE CPU
```

Sample SREPORT 006:

```
REPORT NO. 06                          IDMS-DC TASK STATISTICS BY LTERM ID  Rnn.n                    mm/dd/yy PAGE     1

          SELECTED FROM:  yyddd  hh:mm      TO:  yyddd  hh:mm

        CV SYSTEM START:  yyddd  hh:mm      TO:  yyddd  hh:mm

           CV JOB NAME:  jobname

             CV NUMBER:  nnn


LTERM ID:  VL71001


                   13       NUMBER TASK EXECUTIONS


                   20       NUMBER PROGRAMS CALLED                     1       NUMBER PROGRAMS LOADED

                   11       NUMBER TERMINAL READS                    159       NUMBER TERMINAL WRITES

                    0       NUMBER TERMINAL ERRORS                   471       NUMBER GETSTG REQUESTS

                    0       NUMBER GETSCR REQUESTS                     0       NUMBER PUTSCR REQUESTS

                    0       NUMBER DELSCR REQUESTS                     2       NUMBER GETQUE REQUESTS

                    0       NUMBER PUTQUE REQUESTS                     0       NUMBER DELQUE REQUESTS

                  151       NUMBER GETTIME REQUESTS                    5       NUMBER SETTIME REQUESTS

                  128       NUMBER DB SERVICE RQSTS                    7       NUMBER PAGES READ

                .0010       TASK USER MODE TIME                    .0536       TASK SYSTEM MODE TIME

            7,573.0212      TASK WAIT TIME
```

```
                    0       NUMBER PAGES WRITTEN                    50       NUMBER PAGES REQUESTED

                    0       NUMBER CALC RECS NO OFLOW                0       NUMBER CALC RECS OFLOW

                    0       NUMBER VIA RECS NO OFLOW                 0       NUMBER VIA RECS OFLOW

                   85       NUMBER RECORDS REQUESTED                33       NUMBER RECS CURRENT OF RU

                    0       NUMBER FRAGMENTS STORED                  0       NUMBER RECORDS RELOCATED

                  160       NUMBER CALLS TO DBMS                    16       TOTAL LOCKS ACQUIRED

                    0       NUMBER SR8 SPLITS                        0       NUMBER SR8 STORES

                    0       NUMBER SR8 SPAWNS                        0       NUMBER SR8 ERASES

                    0       NUMBER ORPHAN ADOPT                      0       NUMBER SR7 STORES

                    0       NUMBER BTREE SEARCHES                    0       NUMBER SR7 ERASES

                    0       NUMBER SQL COMMANDS                      0       NUMBER SQL SORTS

                    0       NUMBER TUPLES FETCHED                    0       NUMBER TUPLES SORTED

                    0       NUMBER ROWS INSERTED                     0       NUMBER AM RECOMPILES

                    0       NUMBER ROWS UPDATED

                    0       NUMBER ROWS DELETED


                 .060329    TASK SYSTEM MODE CPU                 .000000    TASK ZIIP ON CP CPU

                 .000000    TASK ZIIP ON ZIIP CPU                .001081    TASK USER MODE CPU

                 .061410    TOTAL TASK TCB CPU                   .000000    ENCLAVE CPU
```

Sample SREPORT 007:

```
REPORT NO. 07                          IDMS-DC TASK STATISTICS BY TASK CODE  Rnn.n                    mm/dd/yy PAGE     1

          SELECTED FROM:  yyddd  hh:mm     TO:  yyddd  hh:mm

        CV SYSTEM START:  yyddd  hh:mm     TO:  yyddd  hh:mm

           CV JOB NAME:  jobname

             CV NUMBER:  nnn


TASK CODE:  USGAFIX


                    1       NUMBER TASK EXECUTIONS
```

5	NUMBER PROGRAMS CALLED	3	NUMBER PROGRAMS LOADED
0	NUMBER TERMINAL READS	0	NUMBER TERMINAL WRITES
0	NUMBER TERMINAL ERRORS	13	NUMBER GETSTG REQUESTS
0	NUMBER GETSCR REQUESTS	0	NUMBER PUTSCR REQUESTS
0	NUMBER DELSCR REQUESTS	0	NUMBER GETQUE REQUESTS
0	NUMBER PUTQUE REQUESTS	0	NUMBER DELQUE REQUESTS
12	NUMBER GETTIME REQUESTS	0	NUMBER SETTIME REQUESTS
11	NUMBER DB SERVICE RQSTS	1	NUMBER PAGES READ
.0003	TASK USER MODE TIME	.0016	TASK SYSTEM MODE TIME
.2276	TASK WAIT TIME		
0	NUMBER PAGES WRITTEN	3	NUMBER PAGES REQUESTED
0	NUMBER CALC RECS NO OFLOW	0	NUMBER CALC RECS OFLOW
0	NUMBER VIA RECS NO OFLOW	0	NUMBER VIA RECS OFLOW
6	NUMBER RECORDS REQUESTED	0	NUMBER RECS CURRENT OF RU
0	NUMBER FRAGMENTS STORED	0	NUMBER RECORDS RELOCATED
14	NUMBER CALLS TO DBMS	2	TOTAL LOCKS ACQUIRED
0	NUMBER SR8 SPLITS	0	NUMBER SR8 STORES
0	NUMBER SR8 SPAWNS	0	NUMBER SR8 ERASES
0	NUMBER ORPHAN ADOPT	0	NUMBER SR7 STORES
0	NUMBER BTREE SEARCHES	0	NUMBER SR7 ERASES
0	NUMBER SQL COMMANDS	0	NUMBER SQL SORTS
0	NUMBER TUPLES FETCHED	0	NUMBER TUPLES SORTED
0	NUMBER ROWS INSERTED	0	NUMBER AM RECOMPILES
0	NUMBER ROWS UPDATED		
0	NUMBER ROWS DELETED		
.001747	TASK SYSTEM MODE CPU	.000000	TASK ZIIP ON CP CPU
.000000	TASK ZIIP ON ZIIP CPU	.000285	TASK USER MODE CPU

```
                .002032       TOTAL TASK TCB CPU                      .000000       ENCLAVE CPU
```

Sample SREPORT 008:

```
REPORT NO. 08                          IDMS-DC ERUS TASK STATISTICS BY ACCTG DATA  Rnn.n                    mm/dd/yy PAGE     1

          SELECTED FROM:  yyddd  hh:mm      TO:  yyddd  hh:mm

        CV SYSTEM START:  yyddd  hh:mm      TO:  yyddd  hh:mm

           CV JOB NAME:  jobname

             CV NUMBER:  nnn


ACCOUNTING DATA:   KRCJA020..111400030


                        3       NUMBER TASK EXECUTIONS


                        6       NUMBER PROGRAMS CALLED                      1       NUMBER PROGRAMS LOADED
                        0       NUMBER TERMINAL READS                       0       NUMBER TERMINAL WRITES
                        0       NUMBER TERMINAL ERRORS                     43       NUMBER GETSTG REQUESTS
                        0       NUMBER GETSCR REQUESTS                      0       NUMBER PUTSCR REQUESTS
                        0       NUMBER DELSCR REQUESTS                      0       NUMBER GETQUE REQUESTS
                        0       NUMBER PUTQUE REQUESTS                      0       NUMBER DELQUE REQUESTS
                       45       NUMBER GETTIME REQUESTS                     0       NUMBER SETTIME REQUESTS
                       42       NUMBER DB SERVICE RQSTS               519,761       NUMBER PAGES READ
                    .0000       TASK USER MODE TIME                    2.5343       TASK SYSTEM MODE TIME
                  390.7796      TASK WAIT TIME
                        0       NUMBER PAGES WRITTEN                1,166,589       NUMBER PAGES REQUESTED
                        0       NUMBER CALC RECS NO OFLOW                   0       NUMBER CALC RECS OFLOW
                        0       NUMBER VIA RECS NO OFLOW                    0       NUMBER VIA RECS OFLOW
                  646,839       NUMBER RECORDS REQUESTED              646,806       NUMBER RECS CURRENT OF RU
                        0       NUMBER FRAGMENTS STORED                     0       NUMBER RECORDS RELOCATED
                  658,413       NUMBER CALLS TO DBMS                       39       TOTAL LOCKS ACQUIRED
                        0       NUMBER SR8 SPLITS                           0       NUMBER SR8 STORES
```

```
                        0       NUMBER SR8 SPAWNS                       0       NUMBER SR8 ERASES

                        0       NUMBER ORPHAN ADOPT                     0       NUMBER SR7 STORES

                        0       NUMBER BTREE SEARCHES                   0       NUMBER SR7 ERASES

                        0       NUMBER SQL COMMANDS                     0       NUMBER SQL SORTS

                        0       NUMBER TUPLES FETCHED                   0       NUMBER TUPLES SORTED

                        0       NUMBER ROWS INSERTED                    0       NUMBER AM RECOMPILES

                        0       NUMBER ROWS UPDATED

                        0       NUMBER ROWS DELETED


                   24.249488    TASK SYSTEM MODE CPU                 .000000    TASK ZIIP ON CP CPU

                     .000000    TASK ZIIP ON ZIIP CPU                .000000    TASK USER MODE CPU

                   24.249488    TOTAL TASK TCB CPU                   .000000    ENCLAVE CPU
```

Sample SREPORT 009:

```
REPORT NO. 09                          IDMS-DC ERUS TASK STATISTICS BY PGM NAME  Rnn.n                    mm/dd/yy PAGE     1

          SELECTED FROM:  yyddd  hh:mm     TO:  yyddd  hh:mm

        CV SYSTEM START:  yyddd  hh:mm     TO:  yyddd  hh:mm

           CV JOB NAME:  jobname

             CV NUMBER:  nnn


PROGRAM NAME:   ERZPTMSF


                        1       NUMBER TASK EXECUTIONS


                        2       NUMBER PROGRAMS CALLED                  0       NUMBER PROGRAMS LOADED

                        0       NUMBER TERMINAL READS                   0       NUMBER TERMINAL WRITES

                        0       NUMBER TERMINAL ERRORS                 14       NUMBER GETSTG REQUESTS

                        0       NUMBER GETSCR REQUESTS                  0       NUMBER PUTSCR REQUESTS

                        0       NUMBER DELSCR REQUESTS                  0       NUMBER GETQUE REQUESTS

                        0       NUMBER PUTQUE REQUESTS                  0       NUMBER DELQUE REQUESTS
```

15	NUMBER GETTIME REQUESTS	0	NUMBER SETTIME REQUESTS
14	NUMBER DB SERVICE RQSTS	371,254	NUMBER PAGES READ
.0000	TASK USER MODE TIME	1.9449	TASK SYSTEM MODE TIME
280.8358	TASK WAIT TIME		
0	NUMBER PAGES WRITTEN	833,263	NUMBER PAGES REQUESTED
0	NUMBER CALC RECS NO OFLOW	0	NUMBER CALC RECS OFLOW
0	NUMBER VIA RECS NO OFLOW	0	NUMBER VIA RECS OFLOW
462,013	NUMBER RECORDS REQUESTED	462,002	NUMBER RECS CURRENT OF RU
0	NUMBER FRAGMENTS STORED	0	NUMBER RECORDS RELOCATED
470,271	NUMBER CALLS TO DBMS	13	TOTAL LOCKS ACQUIRED
0	NUMBER SR8 SPLITS	0	NUMBER SR8 STORES
0	NUMBER SR8 SPAWNS	0	NUMBER SR8 ERASES
0	NUMBER ORPHAN ADOPT	0	NUMBER SR7 STORES
0	NUMBER BTREE SEARCHES	0	NUMBER SR7 ERASES
0	NUMBER SQL COMMANDS	0	NUMBER SQL SORTS
0	NUMBER TUPLES FETCHED	0	NUMBER TUPLES SORTED
0	NUMBER ROWS INSERTED	0	NUMBER AM RECOMPILES
0	NUMBER ROWS UPDATED		
0	NUMBER ROWS DELETED		
17.487940	TASK SYSTEM MODE CPU	.000000	TASK ZIIP ON CP CPU
.000000	TASK ZIIP ON ZIIP CPU	.000000	TASK USER MODE CPU
17.487940	TOTAL TASK TCB CPU	.000000	ENCLAVE CPU

Field Descriptions

A description of the fields common to SREPORTs 005 through 009 follows:

SELECTED FROM/TO

Specifies the time period specified on the USE 'SREPORT 000' parameter where SELECTED FROM specifies the beginning date and time and SELECTED TO specifies the ending date and time. The date is in Julian form, *yyddd*, where *yy* is the last two digits of the year and *ddd* is the day. The time is in *hh:mm* form, where *hh* is hours based on a 24-hour clock and *mm* is minutes.

CV SYSTEM START/INTERVAL START/TO

Specifies the actual time period for the report generated. If the USE 'SREPORT 000' parameter does not specify a time range, CV SYSTEM START/INTERVAL START and TO represent the time range for the entire input archive file or input file created by SREPORT 099. When the input file contains cumulative statistics, the CV SYSTEM START date and time will be displayed. When the input file contains interval based statistics, the INTERVAL START date and time will be displayed.

CV JOB NAME

Specifies the starting job name of Central Version which collected the statistics.

CV NUMBER

Specifies the number of Central Version which collected the statistics.

NUMBER TASK EXECUTIONS

Indicates the total number of tasks executed within the actual time frame of the report. This label appears on SREPORTs 005, 006, 007, 008, and 009.

NUMBER OF TRANSACTIONS

Indicates the total number of transactions executed within the actual time frame of the report. This label appears on SREPORTs 010, 011, and 021.

NUMBER PROGRAMS CALLED

Indicates the number of programs called.

NUMBER PROGRAMS LOADED

Indicates the number of programs loaded from disk (either a load area or a load/core-image library).

NUMBER TERMINAL READS

Indicates the number of terminal reads performed.

NUMBER TERMINAL WRITES

Indicates the number of terminal writes performed.

NUMBER TERMINAL ERRORS

Indicates the number of terminal I/O errors.

NUMBER GETSTG REQUESTS

Indicates the number of requests to acquire storage dynamically from storage pool.

NUMBER GETSCR REQUESTS

Indicates the number of requests to retrieve scratch records from the DDLDCSCR area.

NUMBER PUTSCR REQUESTS

Indicates the number of requests to place scratch records in the DDLDCSCR area.

NUMBER DELSCR REQUESTS

Indicates the number of requests to delete scratch records from the DDLDCSCR area.

NUMBER GETQUE REQUESTS

Indicates the number of requests to get queue records from the DDLDCRUN area.

NUMBER PUTQUE REQUESTS

Indicates the number of requests to store or replace queue records in the DDLDCRUN area.

NUMBER DELQUE REQUESTS

Indicates the number of requests to delete queue records from the DDLDCRUN area.

NUMBER GETTIME REQUESTS

Indicates the number of requests for the date and time of day.

NUMBER SETTIME REQUESTS

Indicates the number of requests to define an event that is to occur after a specified time interval.

NUMBER DB SERVICE RQSTS

Indicates the number of times requests for database services (for example, OBTAIN *record-name*) were issued by the task.

For LRF and SQL programs, this value should be less than or equal to the number of CALLS TO DBMS. You can use these values to evaluate how efficiently the LRF or SQL path extracts data. For example, a program OBTAIN *logical-record* command increments NUMBER DB SERVICE RQSTS by one, but may greatly increment the CALLS TO DBMS value, especially if an area sweep occurs due to the NULL SELECT clause.

NUMBER PAGES READ

Indicates the number of database pages read from disk.

TASK USER MODE TIME

Indicates the amount of CPU time (in ten-thousandths seconds) spent executing user code. DC/UCF collects user-mode time statistics if enabled in the STATISTICS TASK clause of the SYSTEM system generation statement.

TASK SYSTEM MODE TIME

Indicates the amount of CPU time (in ten-thousandths seconds) spent performing DC/UCF services for the task. DC/UCF collects system-mode time statistics if enabled in the STATISTICS TASK clause of the SYSTEM system generation statement.

TASK WAIT TIME

Indicates the amount of time spent on I/O requests and waiting for other system resources. The value is the difference between wall-clock and CPU time for the task.

NUMBER PAGES WRITTEN

Indicates the number of database pages physically written to disk for the transaction. A page can be updated several times before it is actually written back to the database.

NUMBER PAGES REQUESTED

Indicates the number of database pages requested by IDMSDBMS (including pages found in a buffer). A page request does not result in a page read if the page is in the buffer pool.

Interpretation: The ratio of NUMBER PAGES REQUESTED to NUMBER PAGES READ is the *buffer utilization ratio*. The buffer utilization ratio measures the effectiveness of the buffer-pool size and design of the database (for example, CALC and VIA clustering). The higher the ratio the better. Ratios consistently below 2.0 indicate that processing is random or that the buffer-pool size is too small.

The buffer utilization ratio may be artificially high for transactions that keep locks, due to the nature of the internal locking mechanism. IDMSDBMS cannot hold a buffer while requesting a lock; therefore, when locks are kept, IDMSDBMS must free and request a page each time a record is requested.

NUMBER CALC RECS NO OFLOW

Indicates the number of CALC records stored on the target page.

NUMBER CALC RECS OFLOW

Indicates the number of CALC records not stored on the target page.

Interpretation: The ratio of NO OVERFLOW records to the total number of CALC records stored is the *CALC cluster ratio*. Ideally, the ratio should be 1, which indicates no overflow. Ratios less than 1 or less than the norm indicate space utilization is getting high and the database should be tuned.

NUMBER VIA RECS NO OFLOW

Indicates the number of VIA and/or DIRECT records stored on the target page.

NUMBER VIA RECS OFLOW

Indicates the number of VIA and or DIRECT records not stored on the target page.

Interpretation: The ratio of NO OVERFLOW records to the total number of VIA records stored is the *VIA cluster ratio.* Ideally, the ratio should be 1, which indicates no overflow. A value less than 1 or less than the norm indicates very large data clusters, high utilization of space, or small page size.

NUMBER RECORDS REQUESTED

Indicates the number of records requested by the DBMS.

Interpretation: The ratio of NUMBER RECORDS REQUESTED to NUMBER PAGES REQUESTED is the *space management ratio.* The space management ratio measures how well space is allocated (for example, VIA options, CALC distribution, and buffering). The higher the ratio the better. Ratios less than 4 or less than the norm indicate the size of the buffer should be increased and database tuning should be performed.

The space management ratio may be artificially high for transactions that keep locks, due to the nature of the internal locking mechanism. IDMSDBMS cannot hold a buffer while requesting a lock; therefore, when locks are kept, IDMSDBMS must free and request a page each time a record is requested.

NUMBER RECORDS CURRENT OF RU

Indicates the number of records made current of the transaction.

Interpretation: The ratio of NUMBER RECORDS REQUESTED to NUMBER RECORDS CURRENT OR RU is the *effectiveness ratio.* The effectiveness ratio measures how much work the CA IDMS/DB has to do to find the requested record. The lower the ratio the better. If the ratio is high, examine set options (for example, sorted order or next pointers only) for appropriateness. If the options are correct, examine the program logic for accurate use of currency.

NUMBER FRAGMENTS STORED

Indicates the number of noncontiguous segments stored for variable-length records.

NUMBER RECORDS RELOCATED

Indicates the number of records relocated from the home page.

NUMBER CALLS TO DBMS

Indicates the number of calls to the database management system.

Note: Execution of each navigational DML request involves one call; execution of each logical record facility (LRF) or SQL request typically involves multiple calls.

NUMBER SR8 SPLITS

Indicates the number of SR8 splits.

NUMBER SR8 SPAWNS

Indicates the number of SR8 spawns.

NUMBER ORPHAN ADOPT

Indicates count of Index members or SR8s whose up-level pointers were corrected to point to the actual SR8 in which they appear.

NUMBER BTREE SEARCHES

Indicates number of Btree index probes.

NUMBER SQL COMMANDS

Indicates the number of SQL commands executed.

NUMBER TUPLES FETCHED

Indicates number of tuples FETCHed.

NUMBER ROWS INSERTED

Indicates the number of rows INSERTed.

NUMBER ROWS UPDATED

Indicates the number of rows UPDATed.

NUMBER ROWS DELETED

Indicates the number of rows DELETEd.

NUMBER TOTAL LOCKS

Indicates the number of all locks acquired and released by all completed transactions. This is NOT a count of locks currently held.

NUMBER SR8 STORES

Indicates count of SR8s created.

NUMBER SR8 ERASES

Indicates count of SR8s erased.

NUMBER SR7 STORES

Indicates count of SR7s created.

NUMBER SR7 ERASES

Indicates count of SR7s erased.

NUMBER SORTS

Indicates the number of SQL sorts performed.

NUMBER TUPLES SORTED

Indicates the number of rows participating in all sorts.

NUMBER AM RECOMPILES

Indicates the number of automatic access module recompilations.

TASK SYSTEM MODE CPU

Indicates the amount of CPU time (in microseconds) spent in executing system code.

TASK USER MODE CPU

Indicates the amount of CPU time (in microseconds) spent in executing user code.

TASK ZIIP on ZIIP CPU

Indicates the amount of CPU time (in microseconds) spent on zIIP.

TASK ZIIP on CP CPU

Indicates the amount of CPU time (in microseconds) spent on CP, while qualified for zIIP.

TASK TOTAL TCB CPU TIME

Indicates the amount of CPU time (in microseconds) spent on CP in either system mode or user mode.

ENCLAVE CPU

Indicates the amount of CPU time (in microseconds) spent on CP or zIIP, while qualified for zIIP.

Transaction Statistics Reports

Overview

Transaction statistics record resource usage by transaction (that is, across tasks). At run time, IDMS DC accumulates transaction statistics when requested to do so by a user program.

The program initiates collection with a BIND TRANSACTION STATISTICS statement and terminates collection with an END TRANSACTION STATISTICS statement. The END TRANSACTION STATISTICS and ACCEPT TRANSACTION STATISTICS statements write statistics to the DC/UCF log file.

Note: For more information about transaction statistics and how to collect transaction statistics, see the *CA IDMS System Operations Guide*.

Summary of Transaction Statistics Reports

Three statistics reports summarize transaction activity:

SREPORT 010	Summarizes transaction statistics by user identifier.
SREPORT 011	Summarizes transaction statistics by logical terminal identifier.
SREPORT 021	Summarizes transaction statistics by dialog.

Sample SREPORT 010:

```
REPORT NO. 10                        IDMS-DC TRANSACTION STATISTICS BY USER ID  Rnn.n                    mm/dd/yy PAGE   4



          SELECTED FROM:  yyddd  hh:mm      TO:  yyddd  hh:mm

        CV SYSTEM START:  yyddd  hh:mm      TO:  yyddd  hh:mm

            CV JOB NAME:  jobname

              CV NUMBER:  nnn


USER ID:  CMH


         NUMBER PROGRAMS CALLED                        404       NUMBER PROGRAMS LOADED                       20

         NUMBER TERMINAL READS                          22       NUMBER TERMINAL WRITES                       22

         NUMBER TERMINAL ERRORS                          0       NUMBER GETSBG REQUESTS                    1,200

         NUMBER GETSCR REQUESTS                         61       NUMBER PUTSCR REQUESTS                       71

         NUMBER DELSCR REQUESTS                         19       NUMBER GETQUE REQUESTS                       48

         NUMBER PUTQUE REQUESTS                         33       NUMBER DELQUE REQUESTS                       11

         NUMBER GETTIME REQUESTS                       313       NUMBER SETTIME REQUESTS                       0

         NUMBER DB SERVICE RQSTS                        42       NUMBER PAGES READ                           180

         TASK USER MODE TIME                          .8382      TASK SYSTEM MODE TIME                     2.7998

         TASK WAIT TIME                             18.2473

         NUMBER PAGES WRITTEN                           15       NUMBER PAGES REQUESTED                    2,556

         NUMBER CALC RECS NO OFLOW                      11       NUMBER CALC RECS OFLOW                        0
```

```
          NUMBER VIA RECS NO OFLOW                    33       NUMBER VIA RECS OFLOW                     0

          NUMBER RECORDS REQUESTED                 2,737       NUMBER RECORDS CURRENT OF RU            920

          NUMBER FRAGMENTS STORED                     0        NUMBER RECORDS RELOCATED                  0

          NUMBER CALLS TO DBMS                      581        TOTAL LOCKS ACQUIRED                  7,466

          NUMBER SR8 SPLITS                          56        NUMBER SR8 STORES                        44

          NUMBER SR8 SPAWNS                           4        NUMBER SR8 ERASES                        44

          NUMBER ORPHAN ADOPT                        18        NUMBER SR7 STORES                         2

          NUMBER BTREE SEARCHES                     381        NUMBER SR7 ERASES                         2

          NUMBER SQL COMMANDS                        27        NUMBER SQL SORTS                          1

          NUMBER TUPLES FETCHED                     785        NUMBER TUPLES SORTED                    728

          NUMBER ROWS INSERTED                        0        NUMBER AM RECOMPILES                      0

          NUMBER ROWS UPDATED                         0

          NUMBER ROWS DELETED                         0


          TASK SYSTEM MODE CPU                17.487940        TASK ZIIP ON CP CPU                .000000

          TASK ZIIP ON ZIIP CPU                .000000        TASK USER MODE CPU                 .000000

          TOTAL TASK TCB CPU                  17.487940        ENCLAVE CPU                        .000000
```

Sample SREPORT 011:

```
REPORT NO. 11                          IDMS-DC TRANSACTION STATISTICS BY LTERM ID  Rnn.n                  mm/dd/yy PAGE  13



            SELECTED FROM:  yyddd  hh:mm      TO:  yyddd  hh:mm

          CV SYSTEM START:  yyddd  hh:mm      TO:  yyddd  hh:mm

              CV JOB NAME:  jobname

                CV NUMBER:  nnn


 LTERM ID:  LT12022


          NUMBER PROGRAMS CALLED                    404        NUMBER PROGRAMS LOADED                   20
```

NUMBER TERMINAL READS	22	NUMBER TERMINAL WRITES	22
NUMBER TERMINAL ERRORS	0	NUMBER GETSBG REQUESTS	1,200
NUMBER GETSCR REQUESTS	61	NUMBER PUTSCR REQUESTS	71
NUMBER DELSCR REQUESTS	19	NUMBER GETQUE REQUESTS	48
NUMBER PUTQUE REQUESTS	33	NUMBER DELQUE REQUESTS	11
NUMBER GETTIME REQUESTS	313	NUMBER SETTIME REQUESTS	0
NUMBER DB SERVICE RQSTS	42	NUMBER PAGES READ	180
TASK USER MODE TIME	.8382	TASK SYSTEM MODE TIME	2.7998
TASK WAIT TIME	18.2473		
NUMBER PAGES WRITTEN	15	NUMBER PAGES REQUESTED	2,556
NUMBER CALC RECS NO OFLOW	11	NUMBER CALC RECS OFLOW	0
NUMBER VIA RECS NO OFLOW	33	NUMBER VIA RECS OFLOW	0
NUMBER RECORDS REQUESTED	2,737	NUMBER RECORDS CURRENT OF RU	920
NUMBER FRAGMENTS STORED	0	NUMBER RECORDS RELOCATED	0
NUMBER CALLS TO DBMS	581	TOTAL LOCKS ACQUIRED	7,466
NUMBER SR8 SPLITS	56	NUMBER SR8 STORES	44
NUMBER SR8 SPAWNS	4	NUMBER SR8 ERASES	44
NUMBER ORPHAN ADOPT	18	NUMBER SR7 STORES	2
NUMBER BTREE SEARCHES	381	NUMBER SR7 ERASES	2
NUMBER SQL COMMANDS	27	NUMBER SQL SORTS	1
NUMBER TUPLES FETCHED	785	NUMBER TUPLES SORTED	728
NUMBER ROWS INSERTED	0	NUMBER AM RECOMPILES	0
NUMBER ROWS UPDATED	0		
NUMBER ROWS DELETED	0		
TASK SYSTEM MODE CPU	17.487940	TASK ZIIP ON CP CPU	.000000
TASK ZIIP ON ZIIP CPU	.000000	TASK USER MODE CPU	.000000
TOTAL TASK TCB CPU	17.487940	ENCLAVE CPU	.000000

Sample SREPORT 021:

```
REPORT NO. 21                        IDMS-DC TRANSACTION STATISTICS BY DIALOG  Rnn.n                    mm/dd/yy PAGE   7



          SELECTED FROM:  yyddd  hh:mm      TO:  yyddd  hh:mm

         CV SYSTEM START:  yyddd  hh:mm      TO:  yyddd  hh:mm

            CV JOB NAME:  jobname


 DIALOG:   ASFRDEFD


          NUMBER PROGRAMS CALLED                      404       NUMBER PROGRAMS LOADED                    20
          NUMBER TERMINAL READS                        22       NUMBER TERMINAL WRITES                    22
          NUMBER TERMINAL ERRORS                        0       NUMBER GETSBG REQUESTS                 1,200
          NUMBER GETSCR REQUESTS                       61       NUMBER PUTSCR REQUESTS                    71
          NUMBER DELSCR REQUESTS                       19       NUMBER GETQUE REQUESTS                    48
          NUMBER PUTQUE REQUESTS                       33       NUMBER DELQUE REQUESTS                    11
          NUMBER GETTIME REQUESTS                     313       NUMBER SETTIME REQUESTS                    0
          NUMBER DB SERVICE RQSTS                      42       NUMBER PAGES READ                        180
          TASK USER MODE TIME                        .8382      TASK SYSTEM MODE TIME                 2.7998
          TASK WAIT TIME                            18.2473
          NUMBER PAGES WRITTEN                         15       NUMBER PAGES REQUESTED                 2,556
          NUMBER CALC RECS NO OFLOW                    11       NUMBER CALC RECS OFLOW                     0
          NUMBER VIA RECS NO OFLOW                     33       NUMBER VIA RECS OFLOW                      0
          NUMBER RECORDS REQUESTED                  2,737       NUMBER RECORDS CURRENT OF RU             920
          NUMBER FRAGMENTS STORED                       0       NUMBER RECORDS RELOCATED                   0
          NUMBER CALLS TO DBMS                        581       TOTAL LOCKS ACQUIRED                   7,466
          NUMBER SR8 SPLITS                            56       NUMBER SR8 STORES                         44
          NUMBER SR8 SPAWNS                             4       NUMBER SR8 ERASES                         44
          NUMBER ORPHAN ADOPT                          18       NUMBER SR7 STORES                          2
          NUMBER BTREE SEARCHES                       381       NUMBER SR7 ERASES                          2
```

NUMBER SQL COMMANDS	27	NUMBER SQL SORTS	1
NUMBER TUPLES FETCHED	785	NUMBER TUPLES SORTED	728
NUMBER ROWS INSERTED	0	NUMBER AM RECOMPILES	0
NUMBER ROWS UPDATED	0		
NUMBER ROWS DELETED	0		
TASK SYSTEM MODE CPU	17.487940	TASK ZIIP ON CP CPU	.000000
TASK ZIIP ON ZIIP CPU	.000000	TASK USER MODE CPU	.000000
TOTAL TASK TCB CPU	17.487940	ENCLAVE CPU	.000000

Field Descriptions

SREPORTs 010, 011, and 021 have fields in common with task and ERUS reports; for a description of each field, see Task and External Request Unit Service (ERUS) Statistics Reports (see page 340) earlier in this chapter.

CA ADS Dialog Statistics

Overview

If CA ADS dialog and transaction statistics are enabled, statistics are collected for all or selected dialogs that execute during an application program. DC/UCF collects the following types of dialog statistics each time a dialog issues a control command:

- Statistics for explicitly coded control commands issued by the dialog
- Statistics for implicitly coded control commands issued by the ADS runtime system on behalf of the dialog
- Dialog execution statistics
- Statistics for record buffer block (RBB) usage

Statistics are written to the system log when the number of statistics accumulations equals the checkpoint interval established at system generation and when the application terminates.

Note: For more information about collecting these statistics, see the *CA ADS Reference Guide* and *CA IDMS System Operations Guide*.

Note: Statistics for dialogs executed in batch mode can be collected in a separate log file associated with the batch dialog. For more information, see the *CA ADS Batch User Guide*.

Summary of ADS Statistics Reports

Three statistics reports summarize dialog runtime activity:

SREPORT 018	Summarizes CA ADS dialog statistics by user.
SREPORT 019	Summarizes CA ADS dialog statistics by dialog and version number.
SREPORT 020	Summarizes CA ADS dialog statistics by logical terminal.

Sample SREPORT 018:

```
REPORT NO. 018                          ADS STATISTICS BY USER - Rnn.n                    mm/dd/yy        PAGE  1

USER ID       :  ACM


DATE          :         yyddd TIME          :         hh:mm DIALOG NAME    : ASFASELD       VERSION NUMBER :             1
DATE BIND     :         yyddd TIME BIND     :         hh:mm LTERM ID       : LT12002
DISPLAY COMMAND:            4 DISPLAY CONTINU:             2 INVOKES        :             0 LINK TO DIALOGS:             0
LNKS TO PROGRAM:            7 RETURNS        :             0 RETURN CONTINUE:             0 TRANSFERS      :             0
LEAVE ADS     :             1 LEAVE APPLICATN:             0 ABORTS         :             0 IMPL DISPLAYS  :             0
IMPL INVOKE   :             0 IMPL LINK DLGS :             0 IMPL LINK PGMS :             0 IMPL RETURNS   :             0
IMPL RET CONT :             0 IMPL TRANSFERS :             1 IMPL LEAVE ADS :             0 IMPL LEAVE PGMS:             0
IMPL ABORTS   :             0 PREMAP PROCESS :             4 RESPONSE PROCES:             4 STAT ACCUM CALL:            15
EXPL GET SCRS :             4 EXPL PUT SCRS  :             3 EXPL DEL SCRS  :            11 WRTE PRINT REQS:             0
PUT NEW DETAILS:            0 PUT CUR DETAILS:             0 GET DETAILS    :             0 SIZE OF FDB    :        50,688
SIZE OF VDB   :         1,228 HIGHEST LNK LEV:             0 LOWEST LNK LEVL:             0 RBB PUT TO SCR :             0
RBB STG HI MARK:        5,144 RBB FREE HI    :         3,024 RBB STG LOW MK :         5,144 RBB FREE LOW   :         3,024
MOST RBB ACQ  :         3,080 LEAST RBB ACQ  :         3,080 HICOUNT RBB USE:             2 LOCOUNT RBB USE:             2


DATE          :         yyddd TIME          :         hh:mm DIALOG NAME    : ASFASFD        VERSION NUMBER :             1
DATE BIND     :         yyddd TIME BIND     :         hh:mm LTERM ID       : LT12002
DISPLAY COMMAND:            0 DISPLAY CONTINU:             0 INVOKES        :             0 LINK TO DIALOGS:             0
LNKS TO PROGRAM:            2 RETURNS        :             0 RETURN CONTINUE:             0 TRANSFERS      :             0
LEAVE ADS     :             0 LEAVE APPLICATN:             0 ABORTS         :             0 IMPL DISPLAYS  :             0
IMPL INVOKE   :             0 IMPL LINK DLGS :             0 IMPL LINK PGMS :             0 IMPL RETURNS   :             0
IMPL RET CONT :             0 IMPL TRANSFERS :             1 IMPL LEAVE ADS :             0 IMPL LEAVE PGMS:             0
IMPL ABORTS   :             0 PREMAP PROCESS :             1 RESPONSE PROCES:             0 STAT ACCUM CALL:             3
EXPL GET SCRS :             0 EXPL PUT SCRS  :             0 EXPL DEL SCRS  :             9 WRTE PRINT REQS:             0
PUT NEW DETAILS:            0 PUT CUR DETAILS:             0 GET DETAILS    :             0 SIZE OF FDB    :         5,272
SIZE OF VDB   :           300 HIGHEST LNK LEV:             0 LOWEST LNK LEVL:             0 RBB PUT TO SCR :             0
RBB STG HI MARK:        2,240 RBB FREE HI    :         1,844 RBB STG LOW MK :         2,240 RBB FREE LOW   :         1,844
MOST RBB ACQ  :           200 LEAST RBB ACQ  :           200 HICOUNT RBB USE:             1 LOCOUNT RBB USE:             1


                                      ****   USER  TOTAL  ****


DISPLAY COMMAND:            4 DISPLAY CONTINU:             2 INVOKES        :             0 LINK TO DIALOGS:             0
LNKS TO PROGRAM:            9 RETURNS        :             0 RETURN CONTINUE:             0 TRANSFERS      :             0
LEAVE ADS     :             1 LEAVE APPLICATN:             0 ABORTS         :             0 IMPL DISPLAYS  :             0
IMPL INVOKE   :             0 IMPL LINK DLGS :             0 IMPL LINK PGMS :             0 IMPL RETURNS   :             0
IMPL RET CONT :             0 IMPL TRANSFERS :             2 IMPL LEAVE ADS :             0 IMPL LEAVE PGMS:             0
IMPL ABORTS   :             0 PREMAP PROCESS :             5 RESPONSE PROC  :             4 STAT ACCUM CALL:            18
EXPL GET SCRS :             4 EXPL PUT SCRS  :             3 EXPL DEL SCRS  :            20 WRTE PRINT REQS:             0
PUT NEW DETAILS:            0 PUT CUR DETAILS:             0 GET DETAILS    :             0 RECORD COUNT   :             2
```

Sample SREPORT 019:

```
REPORT NO. 019                  ADS STATISTICS BY DIALOG AND VERSION NUMBER - Rnn.n                  mm/dd/yy        PAGE  8

DIALOG NAME   :  ADSOAFNC                                                  VERSION NUMBER:      1



DATE          :          yyddd TIME          :          hh:mm USER ID       : SMT
DATE BIND     :          yyddd TIME BIND     :          hh:mm LTERM ID      : LT12011
DISPLAY COMMAND:            21 DISPLAY CONTINU:             21 INVOKES       :              3 LINK TO DIALOGS:            18
LNKS TO PROGRAM:            18 RETURNS       :              0 RETURN CONTINUE:              0 TRANSFERS      :            18
LEAVE ADS     :             0 LEAVE APPLICATN:              0 ABORTS         :              0 IMPL DISPLAYS  :             0
IMPL INVOKE   :             0 IMPL LINK DLGS :              0 IMPL LINK PGMS :              0 IMPL RETURNS   :             0
IMPL RET CONT :             0 IMPL TRANSFERS :              0 IMPL LEAVE ADS :              0 IMPL LEAVE PGMS:             0
IMPL ABORTS   :             0 PREMAP PROCESS :             42 RESPONSE PROCES:             21 STAT ACCUM CALL:            99
EXPL GET SCRS :             0 EXPL PUT SCRS  :              0 EXPL DEL SCRS  :              0 WRTE PRINT REQS:             0
PUT NEW DETAILS:            0 PUT CUR DETAILS:              0 GET DETAILS    :              0 SIZE OF FDB    :        23,080
SIZE OF VDB   :           836 HIGHEST LNK LEV:              1 LOWEST LNK LEVL:              1 RBB PUT TO SCR :             0
RBB STG HI MARK:        3,176 RBB FREE HI    :            908 RBB STG LOW MK :          3,176 RBB FREE LOW   :           908
MOST RBB ACQ  :           304 LEAST RBB ACQ  :            304 HICOUNT RBB USE:              1 LOCOUNT RBB USE:             1


                                        ****  DIALOG TOTAL  ****


DISPLAY COMMAND:            21 DISPLAY CONTINU:             21 INVOKES       :              3 LINK TO DIALOGS:            18
LNKS TO PROGRAM:            18 RETURNS       :              0 RETURN CONTINUE:              0 TRANSFERS      :            18
LEAVE ADS     :             0 LEAVE APPLICATN:              0 ABORTS         :              0 IMPL DISPLAYS  :             0
IMPL INVOKE   :             0 IMPL LINK DLGS :              0 IMPL LINK PGMS :              0 IMPL RETURNS   :             0
IMPL RET CONT :             0 IMPL TRANSFERS :              0 IMPL LEAVE ADS :              0 IMPL LEAVE PGMS:             0
IMPL ABORTS   :             0 PREMAP PROCESS :             42 RESPONSE PROC  :             21 STAT ACCUM CALL:            99
EXPL GET SCRS :             0 EXPL PUT SCRS  :              0 EXPL DEL SCRS  :              0 WRTE PRINT REQS:             0
PUT NEW DETAILS:            0 PUT CUR DETAILS:              0 GET DETAILS    :              0 RECORD COUNT   :             1
```

Sample SREPORT 020:

```
REPORT NO. 020                    ADS STATISTICS BY LOGICAL TERMINAL  Rnn.n                    mm/dd/yy        PAGE 15

TERMINAL ID   : LT12003


DATE          :       yyddd TIME          :       hh:mm DIALOG NAME    : ASFASELD      VERSION NUMBER :            1
DATE BIND     :       yyddd TIME BIND     :       hh:mm USER ID        : CMH
DISPLAY COMMAND:          3 DISPLAY CONTINU:           2 INVOKES        :           0 LINK TO DIALOGS:            0
LNKS TO PROGRAM:          8 RETURNS        :           0 RETURN CONTINUE:           0 TRANSFERS      :            0
LEAVE ADS     :           1 LEAVE APPLICATN:           0 ABORTS         :           0 IMPL DISPLAYS  :            0
IMPL INVOKE   :           0 IMPL LINK DLGS :           0 IMPL LINK PGMS :           0 IMPL RETURNS   :            0
IMPL RET CONT :           0 IMPL TRANSFERS :           1 IMPL LEAVE ADS :           0 IMPL LEAVE PGMS:            0
IMPL ABORTS   :           0 PREMAP PROCESS :           4 RESPONSE PROCES:           3 STAT ACCUM CALL:           15
EXPL GET SCRS :           4 EXPL PUT SCRS  :           3 EXPL DEL SCRS  :          12 WRTE PRINT REQS:            0
PUT NEW DETAILS:          0 PUT CUR DETAILS:           0 GET DETAILS    :           0 SIZE OF FDB    :       50,688
SIZE OF VDB   :       1,228 HIGHEST LNK LEV:           0 LOWEST LNK LEVL:           0 RBB PUT TO SCR :            0
RBB STG HI MARK:      5,144 RBB FREE HI    :       3,024 RBB STG LOW MK :       5,144 RBB FREE LOW   :        3,024
MOST RBB ACQ  :       3,080 LEAST RBB ACQ  :       3,080 HICOUNT RBB USE:           2 LOCOUNT RBB USE:            2


DATE          :       yyddd TIME          :       hh:mm DIALOG NAME    : ASFASFD       VERSION NUMBER :            1
DATE BIND     :       yyddd TIME BIND     :       hh:mm USER ID        : CMH
DISPLAY COMMAND:          0 DISPLAY CONTINU:           0 INVOKES        :           0 LINK TO DIALOGS:            0
LNKS TO PROGRAM:          2 RETURNS        :           0 RETURN CONTINUE:           0 TRANSFERS      :            0
LEAVE ADS     :           0 LEAVE APPLICATN:           0 ABORTS         :           0 IMPL DISPLAYS  :            0
IMPL INVOKE   :           0 IMPL LINK DLGS :           0 IMPL LINK PGMS :           0 IMPL RETURNS   :            0
IMPL RET CONT :           0 IMPL TRANSFERS :           1 IMPL LEAVE ADS :           0 IMPL LEAVE PGMS:            0
IMPL ABORTS   :           0 PREMAP PROCESS :           1 RESPONSE PROCES:           0 STAT ACCUM CALL:            3
EXPL GET SCRS :           0 EXPL PUT SCRS  :           0 EXPL DEL SCRS  :           9 WRTE PRINT REQS:            0
PUT NEW DETAILS:          0 PUT CUR DETAILS:           0 GET DETAILS    :           0 SIZE OF FDB    :        5,272
SIZE OF VDB   :         300 HIGHEST LNK LEV:           0 LOWEST LNK LEVL:           0 RBB PUT TO SCR :            0
RBB STG HI MARK:      2,240 RBB FREE HI    :       1,844 RBB STG LOW MK :       2,240 RBB FREE LOW   :        1,844
MOST RBB ACQ  :         200 LEAST RBB ACQ  :         200 HICOUNT RBB USE:           1 LOCOUNT RBB USE:            1


                                        **** LOGICAL TERMINAL TOTAL ****


DISPLAY COMMAND:          3 DISPLAY CONTINU:           2 INVOKES        :           0 LINK TO DIALOGS:            0
LNKS TO PROGRAM:         10 RETURNS        :           0 RETURN CONTINUE:           0 TRANSFERS      :            0
LEAVE ADS     :           1 LEAVE APPLICATN:           0 ABORTS         :           0 IMPL DISPLAYS  :            0
IMPL INVOKE   :           0 IMPL LINK DLGS :           0 IMPL LINK PGMS :           0 IMPL RETURNS   :            0
IMPL RET CONT :           0 IMPL TRANSFERS :           2 IMPL LEAVE ADS :           0 IMPL LEAVE PGMS:            0
IMPL ABORTS   :           0 PREMAP PROCESS :           5 RESPONSE PROCES:           3 STAT ACCUM CALL:           18
EXPL GET SCRS :           4 EXPL PUT SCRS  :           3 EXPL DEL SCRS  :          21 WRTE PRINT REQS:            0
PUT NEW DETAILS:          0 PUT CUR DETAILS:           0 GET DETAILS    :           0 RECORD COUNT   :            2
```

Field Descriptions

A description of the fields common to SREPORTs 018 through 020 follows:

DATE

Specifies the date the statistics were written to the system log; the date is in Julian form, *yyddd*, where *yy* is the last two digits of the year and *ddd* is the Julian day.

TIME

Specifies the time the statistics were written to the system log.

DATE BIND

Specifies the date the TSB BIND command was issued; the date is in Julian form, *yyddd*, where *yy* is the last two digits of the year and *ddd* is the Julian day.

TIME BIND

Specifies the time the TSB BIND command was issued.

DISPLAY COMMAND

Specifies the number of explicit DISPLAY commands issued by the dialog.

DISPLAY CONTINU

Specifies the number of explicit DISPLAY CONTINUE commands issued by the dialog.

INVOKES

Specifies the number of explicit INVOKE commands issued by the dialog.

LINKS TO DIALOGS

Specifies the number of explicit LINK TO DIALOG commands issued by the dialog.

LNKS TO PROGRAM

Specifies the number of explicit LINK TO PROGRAM commands issued by the dialog.

RETURNS

Specifies the number of explicit RETURN commands issued by the dialog.

RETURN CONTINUE

Specifies the number of explicit RETURN CONTINUE commands issued by the dialog.

TRANSFERS

Specifies the number of explicit TRANSFER commands issued by the dialog.

LEAVE ADS

Specifies the number of explicit LEAVE ADS commands issued by the dialog.

LEAVE APPLICATN

Indicates number of explicit LEAVE APPLICATION commands issued by the dialog.

ABORTS

Indicates the number of explicit ABORT commands issued by the dialog.

IMPL DISPLAYS

Indicates the number of implicitly generated DISPLAY commands issued during the application.

IMPL INVOKE

Specifies the number of implicitly generated INVOKE commands issued during the application.

IMPL LINK DLGS

Indicates the number of implicitly generated LINK TO DIALOG commands issued during the application.

IMPL LINK PGMS

Indicates the number of implicitly generated LINK TO PROGRAM commands issued during the application.

IMPL RETURNS

Indicates the number of implicitly generated RETURN commands issued during the application.

IMPL RET CONT

Indicates the number of implicitly generated RETURN CONTINUE commands issued during the application.

IMPL TRANSFERS

Indicates the number of implicitly generated TRANSFER commands issued during the application.

IMPL LEAVE ADS

Indicates the number of implicitly generated LEAVE ADS commands issued during the application.

IMPL LEAVE PGMS

Indicates the number of implicitly generated LEAVE APPLICATION commands issued during the application.

IMPL ABORTS

Indicates the number of implicitly generated ABORT commands issued during the application.

PREMAP PROCESS

Indicates the number of dialog premap process executions.

RESPONSE PROCES

Indicates the number of dialog response process executions.

STAT ACCUM CALL

Indicates the number of calls to IDMS DC to accumulate dialog transaction statistics.

EXPL GET SCRS

Specifies the number of explicit dialog requests to retrieve scratch records from the DDLDCSCR area.

EXPL PUT SCRS

Specifies the number of explicit dialog requests to place scratch records in the DDLDCSCR area.

EXPL DEL SCRS

Specifies the number of explicit dialog requests to delete scratch records from the DDLDCSCR area.

WRTE PRINT REQS

Indicates the number of dialog WRITE PRINTER commands.

PUT NEW DETAILS

Indicates the number of dialog PUT NEW DETAIL commands.

PUT CUR DETAILS

Indicates the number of dialog PUT CURRENT DETAIL commands.

GET DETAILS

Indicates the number of dialog GET DETAIL commands.

SIZE OF FDB

Specifies the size of the fixed dialog block in bytes. The FDB is the dialog load module generated by the dialog generator.

SIZE OF VDB

Specifies the size of the variable dialog block in bytes. The VDB is created dynamically for the issuing dialog at runtime and contains runtime variable information about the dialog.

HIGHEST LNK LEV

Indicates the highest level within an application thread at which the dialog was executed. The value for the highest link level is zero.

LOWEST LNK LEVL

Indicates the lowest level within an application thread at which the dialog was executed. The higher the value the lower the link level.

RBB PUT TO SCR

Indicates the number of record buffer blocks placed as scratch records in the DDLDCSCR area.

RBB STG HI MARK

Indicates the most record buffer block storage allocated for all dialogs.

RBB FREE HI

Indicates the amount of free record buffer block space when the most storage is allocated for all dialogs.

RBB STG LOW MK

Indicates the least record buffer block storage allocated for all dialogs.

RBB FREE LOW

Indicates the amount of free space in the record buffer block when the least storage is used.

MOST RBB ACQ

Indicates the most space acquired in the record buffer block for the dialog.

LEAST RBB ACQ

Indicates the least space acquired in the record buffer block for the dialog.

HICOUNT RBB USE

Indicates the highest number of record buffer blocks used.

LOCOUNT RBB USE

Indicates the lowest number of record buffer blocks used.

RECORD COUNT

(Total summary only) Indicates the total number of dialog statistics records written.

Note: For a detailed explanation of the CA ADS commands, see the *CA ADS Reference Guide*.

Histogram Report

Overview

Histograms show statistical data for events (for example, program loads into the program pool) in terms of frequency of occurrence within predefined value ranges (for example, number of program loads smaller than 250 bytes, between 250 to 500 bytes, and so on).

Note: For a detailed discussion of histogram categories, classes, default values, and the #HSTDEF macro that overrides default values, see *CA IDMS System Operations Guide*.

When Statistics Are Written to Log

Like system statistics, histograms are written to the DC/UCF log file at the following times:

- At normal system shutdown
- At the statistics interval established at system generation by the STATISTICS parameter of the SYSTEM statement. The statistics interval can be varied at run time with the DCMT VARY STATISTICS command.
- Upon explicit request by means of a DCMT WRITE STATISTICS command.

Summary of Histogram Record Subtypes

SREPORT 001, IDMS Statistics-Histogram Report, produces a histogram for each of 25 histogram record subtypes. The following Histogram Records table lists each histogram record subtype by identifier and descriptor.

Subtype Identifier	Description
01	PUT JOURNAL request size
02	Program size in bytes
03	Queue record sizes
04	Scratch record sizes
05	User storage size
06	Total size of GET STORAGE requests
07	Programs called by task
08	Programs loaded by task
09	Terminal reads by task
10	Terminal writes by task
11	Terminal errors by task
12	Number of GET STORAGE requests by task
13	Number of GET SCRATCH requests by task
14	Number of PUT SCRATCH requests by task
15	Number of DELETE SCRATCH requests by task
16	Number of GET QUEUE requests by task
17	Number of PUT QUEUE requests by task
18	Number of DELETE QUEUE requests by task

Subtype Identifier	Description
19	Number of GET TIME requests by task
20	Number of SET TIME requests by task
21	Number of database calls by task
22	Number of high stacks by task
23	Total time (in ten-thousandths seconds) spent in user mode by task
24	Total time (in ten-thousandths seconds) spent in system mode by task
25	Total wait time by task

The following report illustrates a page of a sample histogram report; it contains a histogram of the number of programs loaded by task (subtype 8).

Sample SREPORT 001:

```
REPORT NO. 01                          IDMS STATSITICS  -  HISTOGRAM REPORT  Rnn.n                    mm/dd/yy PAGE   8


         SELECTED FROM:  yyddd  hh:mm      TO:  yyddd  hh:mm
                ACTUAL:  yyddd  hh:mm      TO:  yyddd  hh:mm

                                                                                                        STAT     STAT
                                                                                                      RECORD   RECORD
                      SUB-TYPE       GW-DESCRIPTION       BINS   LOW END  INCREMENT  LOW VALUE  HIGH VALUE   DATE     TIME


  HISTOGRAM FOR SUB-TYPE     08     PROGRAMS LOADED BY TASK       10        1         2        292          0    yyddd   hh:mm

                                        BELOW      1          292

                                    1     TO      2           38

                                    3     TO      4            7

                                    5     TO      6            3

                                    7     TO      8            0

                                    9     TO     10            1

                                   11     TO     12            0

                                   13     TO     14            0

                                   15     TO     16            1

                                   17     TO     18            0

                                   19     TO     20            0

                                   21   AND ABOVE...           0

                                        TOTAL:               342
```

Field Descriptions

A description of the fields for the 25 histograms produced by SREPORT 001 follows:

SELECTED FROM/TO

Specifies the time period specified on the USE 'SREPORT 000' parameter where SELECTED FROM specifies the beginning date and time and SELECTED TO specifies the ending date and time. The date is in Julian form, *yyddd*, where *yy* is the last two digits of the year and *ddd* is the day. The time is in *hh:mm* form, where *hh* is hours based on a 24-hour clock and *mm* is minutes.

ACTUAL/TO

Specifies the actual time period for the report generated. If the USE 'SREPORT 000' parameter does not specify a time range, ACTUAL and TO represent the time range for the entire input archive file or input file created by SREPORT 099.

SUB-TYPE

Specifies the identifier of the histogram record subtype.

GW-DESCRIPTION

Specifies the descriptor for the histogram record subtype.

BINS

Indicates the number of bins in the histogram; a bin has finite limits. The default is 10.

LOW END

Indicates the low end of the range of values of the histogram.

INCREMENT

Specifies the increment added to range values for successive bins.

LOW VALUE

Indicates the number of occurrences below the value specified for LOW END.

HIGH VALUE

Indicates the number of occurrences greater than the high end of the histogram's range of values.

STAT RECORD DATE

Specifies the date, in Julian form, the histogram record was written to the DC/UCF log file.

STAT RECORD TIME

Specifies the time, in *hh:mm* form, the histogram was written to the DC/UCF log file.

TOTAL

Indicates the total of the bin occurrences.

Record Summary Statistics Report

Overview

DC/UCF logs 35 types of statistics records to the system log file. Particular statistic reports require specific record types. For example, statistics record 30 provides the statistics summarized in SREPORT 013, IDMS DC Program Summary.

Summary of Statistics Records

The following table lists each type of statistics record. The record ID numbers correspond to numbers shown in column 1 of SREPORT 017, Summary of Records Read:

Record Number	Statistics Record Type
00	System startup marker record
01/01	Histogram record of PUT JOURNAL DML requests
01/02	Histogram record of program size in pages
01/03	Histogram record of queue record size
01/04	Histogram record of scratch record size
01/05	Histogram record of user storage size
01/06	Histogram record of total requested storage
01/07	Histogram record of programs called by task
01/08	Histogram record of programs loaded by task
01/09	Histogram record of terminal reads by task
01/0A	Histogram record of terminal writes by task
01/0B	Histogram record of terminal errors by task
01/0C	Histogram record of storage requests by task

Record Number	Statistics Record Type
01/0D	Histogram record of GET SCRATCH requests by task
01/0E	Histogram record of PUT SCRATCH requests by task
01/0F	Histogram record of DELETE SCRATCH requests by task
01/10	Histogram record of GET QUEUE requests by task
01/11	Histogram record of PUT QUEUE requests by task
01/12	Histogram record of DELETE QUEUE requests by task
01/13	Histogram record of GET TIME requests by task
01/14	Histogram record of SET TIME requests by task
01/15	Histogram record of database calls by task
01/16	Histogram record of high stacks by task
01/17	Histogram record of user time by task
01/18	Histogram record of system time by task
01/19	Histogram record of wait time by task
01/1A	Histogram record of high RCE count
01/1B	Histogram record of high RLE count
01/1C	Histogram record of high DPE count
07/01	Histogram record of response time by line
01	System-wide statistics record
02	Task statistics record
03	Transaction statistics record
04	Task code statistics record
05	Program statistics record
06	Queue statistics record
07	Line statistics record
08	Physical terminal statistics record
09	CA ADS dialog statistics record

Contents of SREPORT 017

SREPORT 017, the Summary of Records Read report, itemizes the number of each type of statistics record written to the log file within a defined period of time. Systems administrators can use SREPORT 017 to determine which statistics reports can be run based upon available statistics records.

Sample SREPORT 017:

```
REPORT NO. 17                              SUMMARY OF RECORDS READ  Rnn.n                          mm/dd/yy PAGE   1


         SELECTED FROM:  yyddd  hh:mm      TO:  yyddd  hh:mm
                ACTUAL:  yyddd  hh:mm      TO:  yyddd  hh:mm

    STATISTICS                    BELOW          BEFORE          PASSED TO          DATES/TIMES OF 1ST AND
    RECORD TYPES                 DATE/TIME       TRIGGER         STATISTICS         LAST RECS OF EACH TYPE
    STL/HST                        RANGE         STARTUP         ROUTINES           PASSED TO THE ROUTINES
                                                 RECORDS
    00    - START UP                   0                0             1           yyddd hh:mm    yyddd hh:mm

    01/01 - PUTJRNL REQ SIZE           0                0             6           yyddd hh:mm    yyddd hh:mm
    01/02 - LOADED PGM SIZE            0                0             6           yyddd hh:mm    yyddd hh:mm
    01/03 - QUEUE RECORD SIZE          0                0             6           yyddd hh:mm    yyddd hh:mm
    01/04 - SCRATCH REC SIZE           0                0             6           yyddd hh:mm    yyddd hh:mm
    01/05 - USER STG SIZE              0                0             6           yyddd hh:mm    yyddd hh:mm
    01/06 - TOTAL GETSTG SIZE          0                0             6           yyddd hh:mm    yyddd hh:mm
    01/07 - PGMS CALLED                0                0             0
    01/08 - PGMS LOADED                0                0             0
    01/09 - TERMINAL READS             0                0             0
    01/0A - TERMINAL WRITES            0                0             0
    01/0B - TERMINAL ERRORS            0                0             0
    01/0C - GET STORAGES               0                0             0
    01/0D - GET SCRATCHES              0                0             0
    01/0E - PUT SCRATCHES              0                0             0
    01/0F - DEL SCRATCHES              0                0             0
    01/10 - GET QUEUE                  0                0             0
    01/11 - PUT QUEUE                  0                0             0
    01/12 - DEL QUEUE                  0                0             0
    01/13 - GET TIMES                  0                0             0
    01/14 - SET TIMES                  0                0             0
    01/15 - DB CALLS                   0                0             0
    01/16 - STACK HIWATER              0                0             0
    01/17 - USER-MODE TIME             0                0             0
    01/18 - SYSTEM-MODE TIME           0                0             0
    01/19 - WAIT TIME                  0                0             0
    01/1A - HIGH RCE COUNT             0                0             0
    01/1B - HIGH RLE COUNT             0                0             0
    01/1C - HIGH DPE COUNT             0                0             0
    07/01 - LINE RESPONSE              0                0            40           yyddd hh:mm    yyddd hh:mm


    01    - SYSTEM STATS               0                0             6           yyddd hh:mm    yyddd hh:mm
    02    - TASK STATS                 0                0           115           yyddd hh:mm    yyddd hh:mm
    03    - TRANSACTION STATS          0                0             0
    04    - TASK CODE STATS            0                0           376           yyddd hh:mm    yyddd hh:mm
    05    - PROGRAM STATS              0                0         5,903           yyddd hh:mm    yyddd hh:mm
    06    - QUEUE STATS                0                0             6           yyddd hh:mm    yyddd hh:mm
    07    - LINE STATS                 0                0            44           yyddd hh:mm    yyddd hh:mm
    08    - PTERM STATS                0                0           199           yyddd hh:mm    yyddd hh:mm
    09    - ADS STATS                  0                0             0

         TOTALS                        0                0         6,726
```

Field Descriptions

A description of the fields in the Summary of Records Read report follows:

SELECTED FROM/TO

Gives the time period specified on the USE 'SREPORT 000' parameter where SELECTED FROM represents the beginning date and time and SELECTED TO represents the ending date and time. The date is in Julian form, *yyddd*, where *yy* is the last two digits of the year and *ddd* is the day. The time is in *hh:mm* form, where *hh* is hours based on a 24-hour clock and *mm* is minutes.

ACTUAL/TO

Specifies the actual time period for the report generated. If the USE 'SREPORT 000' parameter does not specify a time range, ACTUAL and TO represent the time range for the entire input archive file or input file created by SREPORT 099.

COUNTS FOR STATISTICS RECORDS

Specifies the type of statistic record. The table above lists each type of statistics record, as defined in DSECT #STLDS; for more information, see the *CA IDMS DSECT Reference Guide*.

BELOW DATE/TIME RANGE

Indicates the number of records of each type logged to the log file before the date and time specified in the SELECTED FROM field.

BEFORE TRIGGER STARTUP RECORDS

Indicates the number of records of each type logged to the log file after the date and time specified in the SELECTED FROM field, but before the system startup marker record (type 00) corresponding to the session indicator specified on the USE 'SREPORT 000' parameter.

PASSED TO STATISTICS ROUTINES

Indicates the number of records processed by statistics routines.

DATES/TIMES OF 1ST AND LAST RECS OF EACH TYPE PASSED TO THE ROUTINES

Specifies the date and time of the first record of each type passed to a statistics routine and the date and time of the last record passed to a statistics routine. If no records were passed to a routine, the field is blank.

Chapter 10: Modifying CA IDMS Reports

This section contains the following topics:

Common Modifications (see page 375)
Steps to Modify Reports (see page 375)
Obtaining Report Module Listings (see page 376)
Coding in CA Culprit for CA IDMS (see page 377)
Temporary Modifications (see page 384)
Permanent Modifications (see page 391)

Common Modifications

CA IDMS reports can be modified, either temporarily or permanently, to suit site-specific needs. Some common modifications users make are:

- Reformatting a report (for example, sorting the data differently, changing column sequence, reducing the number of characters per line)
- Changing report content (for example, adding or deleting columns, rewording headings, and modifying process operations)
- Selecting specific information for a report (for example, reporting on all occurrences after a certain date)

Steps to Modify Reports

To modify report output, proceed with the following steps:

1. Obtain a sample of the report to be modified.
2. Obtain a listing of the report module.
3. Plan the modifications.

For modifying D-, C-, and AREPORTs, see the *Data Dictionary Network Diagram* and *CA IDMS Dictionary Structure Reference Guide* to determine which records to select and which elements in those records are needed.

For modifying J- and SREPORTS, see the record layouts described in Chapter 8: (see page 251) and DC/UCF Statistics Reports - SREPORTS (see page 299).

4. Code the modifications.
5. Obtain a sample of the modified report.

The rest of this chapter explains how to perform Steps 2 and 4.

Obtaining Report Module Listings

Types of Listings

The user can obtain a printed listing, an online listing, or a listing output to punched cards or a disk file.

Printed Listing

To obtain a printed listing, use Method 1 or Method 2 as follows:

- **Method 1**—Include PARAM=LIST with the report-specific control statements submitted to run the report. PARAM=LIST lists the CA Culprit for CA IDMS parameters in the Sequential and Input Parameter Listings associated with report output.
- **Method 2**—Run DREPORT 076, Module Key Report, using the DICTNAME and DBNAME options on the DATABASE parameter to name the dictionary that stores the report modules, and specifying the name of the report module in the KEY parameter.

  In the following example, DREPORT 008 is requested; the report module is stored in the CULPDICT dictionary:

```
 DATABASE DICTNAME=CULPDICT DBNAME=CULPDICT
DREPORT=076
 KEY MOD-NAME-067 'DREPORT 008'
```

Online Listing

To obtain an online listing, sign on to the Integrated Data Dictionary (IDD) and submit the DISPLAY MODULE statement to the DDDL compiler, as shown in the following example:

```
DISPLAY MODULE 'DREPORT 008' AS SYNTAX.
```

Output to Cards or Disk

To output the report module to punched cards or a disk file, run DREPORTs 051 or 052, respectively. An example appears as follows. For more information about submitting these reports, see Special-Purpose Report Modules (see page 116).

```
 DATABASE DICTNAME=CULPDICT
DREPORT=051
 KEY MOD-NAME-067 'DREPORT 008'
```

Coding in CA Culprit for CA IDMS

Because all CA IDMS report modules are coded using CA Culprit for CA IDMS parameters, some knowledge of CA Culprit for CA IDMS is required to modify the reports. This is a brief introduction to CA Culprit for CA IDMS. For more information about CA Culprit for CA IDMS, see the following manuals:

- *CA Culprit for CA IDMS Reference Guide*
- *CA Culprit for CA IDMS User Guide*

CA Culprit for CA IDMS Coding Guidelines

CA Culprit for CA IDMS parameters are coded in an 80-column format. These general rules apply to all CA Culprit for CA IDMS parameters:

- All parameters must be coded in uppercase letters.
- Column 1 is always blank, except on a continuation line or a USE parameter. An asterisk (*) in column 1 designates a continuation line.

- CA Culprit for CA IDMS parameters must not extend past column 72.
- Comments are introduced by a dollar ($) sign.
- The USE parameter cannot appear in any run that includes REPORT=, =MACRO, or =COPY parameters.

Types of CA Culprit for CA IDMS Parameters

There are five major categories of CA Culprit for CA IDMS parameters:

- Input definition parameters
- Output definition parameters
- Process definition parameters
- Work field definition parameters
- CA IDMS/DB retrieval parameters

Parameters Within Each Category

Each category has a function and includes several types of parameters, as follows:

- *Input definition parameters* define the source of input for the run:

INPUT	Defines the physical characteristics of the input file or identifies the subschema for the database to be accessed. A REPORT= request automatically generates an INPUT parameter. Runs that call report modules with the USE parameter must supply an INPUT parameter.
REC	Defines the location, length, and data type of fields that appear in the CA Culprit for CA IDMS code. REC parameters are generated automatically for CA IDMS report modules.
SELECT or BYPASS	Defines criteria by which records are selected for processing.

- *Output definition parameters* define the format of the report output:

OUTPUT	Defines the physical characteristics of the output; for example, the number of characters per line. By default, output is a printed report with 132 characters per line and 55 lines per page.
SORT	Defines the order in which records are output.
3	Identifies a title parameter. A title parameter outputs a title at the top of each page.
4	Identifies a heading parameter. Headings are output under the title line, if any, at the top of each page.
5	Identifies a detail line.
6	Identifies a total line.

- *Process definition parameters* define report-specific process operations, such as arithmetic and data comparisons:

7	Identifies a process parameter applied to input data.
8	Identifies a process parameter applied to data in CA Culprit for CA IDMS's output phase of processing.

- *Work field definition parameters* define work fields required for report processing. Identifiers for work field parameters are **0**, **1**, and **15**.
- *CA IDMS/DB retrieval parameters* define methods to access CA IDMS/DB database records:

PATH	Identifies record retrieval routes through the database.
KEY	Identifies a key field by which to access database records directly, rather than by an area sweep.

Report-Specific and Global Parameters

Output and process definition parameters are report-specific. A 2-digit report number, starting in column 2, must precede each parameter identifier. Work field definition parameters are either report-specific or global; GW must appear in columns 2 through 3 for a global work field.

Edit Parameters

Parameters 4, 5, and 6 are collectively known as edit parameters. Edit parameters define where a field is output in a report. The following figure illustrates the fixed format portion of an edit parameter.

BGIN JOURNAL RECORD TYPE

		Field	Data Type	Length (in bytes)
0	1	Journal record length	binary	2 (Halfword)
2	3	Reserved (initialized to zeroes)	binary	2 (Halfword)
4	7	Journal record type BGIN	alphanumeric	4
8	F	UTC date/time stamp	binary	8 (2 Fullwords)
10	17	Journal record sequence number	binary	8 (2 Fullwords)
18	1F	Journal record qualifier	binary	8 (2 Fullwords)
20		CV number (central version only)	binary	1
21		Journaling version	binary	1
22	23	Reserved	binary	2 (Halfword)
24	27	Local transaction ID (LID)	binary	4 (Fullword)
28	2B	Address of VIB	address	4
2C	33	Program name	alphanumeric	8
34	3B	Date/time stamp	binary	8 (2 Fullwords)
3C	43	Reserved (initialized to zeroes)	binary	8 (2 Fullwords)
44	45	Transaction update quiesce level	binary	2 (Halfword)
46	47	Transaction quiesce level	binary	2 (Halfword)
48	4F	Local task ID for transaction or savepoint sequence number	binary	8 (2 Fullwords)
50	6F	User ID	alpha	32
70	8F	**Exernal Identity**	alpha	32
90	97	**Filler**	alpha	8
98	99	Journal record length	binary	2 (Halfword)
9A	9B	Reserved (initialized to zeroes)	binary	2 (Halfword)

Functions of Each Column

The columns in the figure above function as follows:

- *Columns 2 and 3* identify the 2-digit report number.
- *Column 4* identifies the type of edit line: a heading, detail, or total line.

- *Column 5* identifies a particular definition of an edit line. Each type of edit line can have up to eight different definitions. For example, the code shown in the following figure specifies six heading lines for DREPORT 028.
- *Columns 6 through 9* identify the location of the output field on the edit line. The location can be *absolute*, with a value in the range 0001 through 0132 for a printed report, or *relative*, with a value in the range *000 to *999.
- *Column 10* identifies spacing associated with the edit lines. Possible values for printed output are:
  - Blank—no blank lines
  - 0—one blank line
  - Hyphen—two blank lines
  - 1—page eject

Summary of Parameter Types

The following table summarizes the CA Culprit for CA IDMS parameters and indicates what each can do in modifying CA IDMS reports.

Identifier	Function	Modifications
INPUT	Defines input	Modify the CA Culprit for CA IDMS buffer size or subschema name
REC	Defines fields	Modify the name, start position, length, or data type of a field
SELECT or BYPASS	Selects records	Select only records that meet certain criteria
OUTPUT	Defines output	Modify the report's line size or number of lines per page
SORT	Sorts	Modify the order in which the report presents information

Identifier	Function	Modifications
3	Outputs a title	Add/delete/change the report title
4	Outputs a heading	Add/delete/change report headings
5	Outputs a detail line	Add/delete/change columns of information
6	Outputs a total line	For summary reports, add/delete/change columns of information
7	Defines input processing	Modify or add processing applied to input data
8	Defines total processing	For summary reports, modify or add processing applied to total-time data
0, 1, or 15	Defines work fields	Add if required for additional processing
PATH	Accesses database records	Modify or add to access different database records
KEY	Accesses specified database records	Add to access particular database records

The following are the CA Culprit for CA IDMS parameters that produced the sample report:

Sample CA Culprit for CA IDMS source code and output:

```
 PATHU1 OOAK-012,S-010,SS-026,SSR-032,RCDACT-059,PROG-051
 280 FUNC-TBL.13 'CONNECT          ' 'OBTAIN           '
*                'DISCONNECT       ' 'FIND             '
*                'STORE            ' 'ERASE            '
*                'CURRENCY ACCEPTED' 'MODIFY           '
*                'GET              ' 'BIND             '
*                'FIND KEEP        ' 'OBTAIN KEEP      '
*                '                 '           $ FUNCTIONS
 280 KEY-TBL.12 7 43 11 3 12 2 15 8 5 14 23 63 $ KEY TO FUNCTION TBL
 28OUTPUT D LP=51
 28SORT S-NAME-010 SS-NAM-026 SSR-NAM-032
* PROG-NAME-051 PROG-VER-051 FUNC-TBL.DISP           STAR-HD
 283 DATA DICTIONARY REPORTER
 28410001 'DREPORT 028'
 28410053 'IDMS RECORD ACTIVITY REPORT'
 28420001-STAR-HD
 28420045 STAR-HD
 28420089 STAR-HD
 28430102 '---- D A T E ----'
 28440001 'SCHEMA'
 28440010 'VER'
 28440016 'SUBSCHEMA'
 28440027 'RECORD'
 28440060 'PROGRAM'
 28440069 'VER'
 28440075 'USAGE'
 28440095 'TIMES'
 28440102 'COMPILED'
 28440112 'CREATED'
 28450001 STAR-HD
 28450045 STAR-HD
 28450089 STAR-HD
 28460001 '  '
 28510001 S-NAM-010
 28510009 S-SER-010         FM 'ZZZZZ9'
 28510016 SS-NAM-026
 28510027 SSR-NAM-032
 28510060 PROG-NAME-051
 28510068 PROG-VER-051      FM 'ZZZZZ9'
 28510075 FUNC-TBL.DISP
 28510095 RA-COUNT-059      FM 'ZZZZZ9'
 28510102 PROG-DATE-051
 28510111 DATE-CREATED-051
 287010 IF PATH-ID   NE 'U1'       DROP $ DROP N/A PATHS
 287020 IF S-NAM-010 EQ 'NON IDMS' DROP $ NON IDMS FILES ONLY
 287100 $ TABLE LOOKUP TO DETERMINE SUBSCRIPT FOR FUNCTION TABLE
 287    MOVE RA-FUNCT-059 TO IND         $ KEY FOR LOOKUP
 287110 CALL US62 (KEY-TBL 'N' 8 12 'S' IND DISP)
 287120 IF DISP NE 0 150                 $ IF FOUND, TAKE
 287    MOVE 13 TO DISP                  $ ELSE SET TO BLANKS
 287150 TAKE
```

Sample report:

```
 REPORT NO. 28                                 DATA DICTIONARY REPORTER                                  mm/dd/yy.
PAGE  1
 DREPORT 028                                       IDMS RECORD ACTIVITY REPORT


*******************************************************************************************************
****************
                                                                                                       ---- D A T E
----
 SCHEMA   VER  SUBSCHEMA  RECORD                      PROGRAM  VER  USAGE          TIMES  COMPILED  CREATED

*******************************************************************************************************
****************

 EMPSCHM    100 EMPSS01    COVERAGE                    EMPINQ      1 BIND                 1 mm/dd/yy mm/dd/yy
 EMPSCHM    100 EMPSS01    DENTAL-CLAIM                EMPINQ      1 BIND                 1 mm/dd/yy mm/dd/yy
 EMPSCHM    100 EMPSS01    DEPARTMENT                  D3          1 BIND                 1 mm/dd/yy mm/dd/yy
 EMPSCHM    100 EMPSS01    DEPARTMENT                  D4          1 BIND                 1 mm/dd/yy mm/dd/yy
 EMPSCHM    100 EMPSS01    DEPARTMENT                  D6          1 BIND                 1 mm/dd/yy mm/dd/yy
 EMPSCHM    100 EMPSS01    DEPARTMENT                  D6          1 OBTAIN               1 mm/dd/yy mm/dd/yy
 EMPSCHM    100 EMPSS01    DEPARTMENT                  EMPINQ      1 BIND                 1 mm/dd/yy mm/dd/yy
 EMPSCHM    100 EMPSS01    DEPARTMENT                  TESTPROG    1 BIND                 1          mm/dd/yy
 EMPSCHM    100 EMPSS01    DEPARTMENT                  TESTPROG    1 OBTAIN               2          mm/dd/yy
 EMPSCHM    100 EMPSS01    EMPLOYEE                    D3          1 BIND                 1 mm/dd/yy mm/dd/yy
 EMPSCHM    100 EMPSS01    EMPLOYEE                    D3          1 FIND                 1 mm/dd/yy mm/dd/yy
 EMPSCHM    100 EMPSS01    EMPLOYEE                    D3          1 MODIFY               1 mm/dd/yy mm/dd/yy
 EMPSCHM    100 EMPSS01    EMPLOYEE                    D4          1 BIND                 1 mm/dd/yy mm/dd/yy
 EMPSCHM    100 EMPSS01    EMPLOYEE                    D4          1 ERASE                1 mm/dd/yy mm/dd/yy
 EMPSCHM    100 EMPSS01    EMPLOYEE                    D4          1 FIND                 1 mm/dd/yy mm/dd/yy
```

Temporary Modifications

Runtime Modifications

When a report module is modified at run time, the modifications apply only to the run for which they are specified. You can make the following types of runtime modifications:

- Delete or change the parameters that define the report modules with a CA Culprit for CA IDMS USE parameter.
- Add new CA Culprit for CA IDMS parameters after the REPORT= request parameter or in conjunction with the USE parameter.

Copying the Report Module

USE Parameter

To make temporary changes or deletions to the code of a report module, a USE parameter is required. A USE parameter replaces the REPORT= parameter in the user-supplied code. Additionally, the following parameters must be supplied:

- An INPUT parameter that defines the subschema of the dictionary to be accessed (D-, C-, and AREPORTs only); INPUT parameters are always required for J- and SREPORTs.
- A report module that performs initial processing and field definitions (D- and JREPORTs only)

USE Parameter Clauses

USE parameter clauses perform several functions. The three most useful clauses are:

- *DROP*, which drops parameters
- *KEEP*, which retains parameters and drops any that are not specified
- *CHANGE*, which modifies parameters

Example

The following code copies in DREPORT modules 000 and 028. The INPUT parameter allocates a 10,000-byte buffer and accesses information defined by subschema IDMSNWKA.

```
DATABASE DICTNAME=CULPDICT DBNAME=DOCUDICT
INPUT 10000 DB SS=IDMSNWKA
USE 'DREPORT 000'
USE 'DREPORT 028'
```

Deleting Columns

DROP Clause of the USE Parameter

The following code deletes the SCHEMA, VER, and SUBSCHEMA columns shown in the sample report above. Each character string begins with 5, which designates an edit parameter for detail lines. The 1 that follows designates the edit line number. The remaining four numbers designate the absolute column position for each field.

```
DROP '510001' AND     $DROP SCHEMA
     '510009' AND     $DROP VER
     '510016'         $DROP SUBSCHEMA
```

The following figure shows DREPORT 038 modified by this code:

```
 REPORT NO. 28                                    DATA DICTIONARY REPORTER                                  mm/dd/yy
PAGE   1
 DREPORT 028                                           IDMS RECORD ACTIVITY REPORT


*****************************************************************************************************
****************
                                                                                                      ---- D A T E
----
 SCHEMA   VER   SUBSCHEMA  RECORD                      PROGRAM  VER   USAGE           TIMES  COMPILED  CREATED

*****************************************************************************************************
****************

                           COVERAGE                     EMPINQ       1 BIND                  1 mm/dd/yy mm/dd/yy
                           DENTAL-CLAIM                 EMPINQ       1 BIND                  1 mm/dd/yy mm/dd/yy
                           DEPARTMENT                   D3           1 BIND                  1 mm/dd/yy mm/dd/yy
                           DEPARTMENT                   D4           1 BIND                  1 mm/dd/yy mm/dd/yy
                           DEPARTMENT                   D6           1 BIND                  1 mm/dd/yy mm/dd/yy
                           DEPARTMENT                   D6           1 OBTAIN                1 mm/dd/yy mm/dd/yy
                           DEPARTMENT                   EMPINQ       1 BIND                  1 mm/dd/yy mm/dd/yy
                           DEPARTMENT                   TESTPROG     1 BIND                  1          mm/dd/yy
                           DEPARTMENT                   TESTPROG     1 OBTAIN                2          mm/dd/yy
                           EMPLOYEE                     D3           1 BIND                  1 mm/dd/yy mm/dd/yy
                           EMPLOYEE                     D3           1 FIND                  1 mm/dd/yy mm/dd/yy
```

Changing Headings

CHANGE clause of the USE parameter

In the following code, the headings for the columns just deleted are modified as follows:

- The first CHANGE clause modifies the literals SCHEMA, VER, and SUBSCHEMA to indicate a specific schema and subschema. Note that double quotation marks enclose the literals, which include single quotation marks.
- The second CHANGE clause changes the edit line number for the headings from 4 to 3.

```
CHANGE "'SCHEMA'" TO "'EMPSCHM VERSION 100'" AND
       "'SUBSCHEMA'" TO "'SUBSCHEMA EMPSS01'"
CHANGE '440001' TO '430001' AND
       '440016' TO '430023'
DROP   '440010'                    $DROP SCHEMA VERSION HEADING
```

The following figure shows DREPORT 028 as it appears after these changes in the code.

```
 REPORT NO. 28                              DATA DICTIONARY REPORTER                                    mm/dd/yy
PAGE  1
 DREPORT 028                                      IDMS RECORD ACTIVITY REPORT



************************************************************************************************************
***************
 EMPSCHM VERSION 100   SUBSCHEMA EMPSS01                                                        ---- D A T E
----
                         RECORD                        PROGRAM  VER   USAGE            TIMES  COMPILED  CREATED

************************************************************************************************************
***************

                         COVERAGE                      EMPINQ      1 BIND                 1 mm/dd/yy mm/dd/yy
                         DENTAL-CLAIM                  EMPINQ      1 BIND                 1 mm/dd/yy mm/dd/yy
                         DEPARTMENT                    D3          1 BIND                 1 mm/dd/yy mm/dd/yy
                         DEPARTMENT                    D4          1 BIND                 1 mm/dd/yy mm/dd/yy
                         DEPARTMENT                    D6          1 BIND                 1 mm/dd/yy mm/dd/yy
                         DEPARTMENT                    D6          1 OBTAIN               1 mm/dd/yy mm/dd/yy
```

Selecting Specific Data

To agree with the headings modified above, the code must select those records associated with subschema EMPSS01 and version 100 of EMPSCHM. The process parameter shown below specifies sequence number 030; CA Culprit for CA IDMS positions this parameter between existing process parameters with sequence numbers 020 and 100.

```
 287030 IF S-NAM-010 NE 'EMPSCHM' AND
*          S-SER-010 NE 100 AND
*          SS-NAM-026 NE 'EMPSCHM'      DROP
```

Specifying a New Sort Sequence

The following code replaces the existing SORT parameter with a new SORT parameter. The new SORT parameter orders the report contents by verb usage within program name.

```
DROP SORT
 -
 -
28SORT PROG-NAME-051 PROG-VER-051 FUNC-TBL.DISP STAR-HD
```

The following figure shows DREPORT 028 with a new sort sequence:

```
 REPORT NO. 28                              DATA DICTIONARY REPORTER                                  mm/dd/yy
PAGE  1
 DREPORT 028                                      IDMS RECORD ACTIVITY REPORT



**********************************************************************************************************
***************
 EMPSCHM VERSION 100   SUBSCHEMA EMPSS01                                                  ---- D A T E
----
                         RECORD                      PROGRAM  VER   USAGE            TIMES  COMPILED  CREATED

**********************************************************************************************************
***************

                         OFFICE                      D3         1 BIND                 1 mm/dd/yy mm/dd/yy
                         EMPLOYEE                    D3         1 BIND                 1 mm/dd/yy mm/dd/yy
                         DEPARTMENT                  D3         1 BIND                 1 mm/dd/yy mm/dd/yy
                         EMPLOYEE                    D3         1 FIND                 1 mm/dd/yy mm/dd/yy
                         EMPLOYEE                    D3         1 MODIFY               1 mm/dd/yy mm/dd/yy
                         OFFICE                      D4         1 BIND                 1 mm/dd/yy mm/dd/yy
                         EMPLOYEE                    D4         1 BIND                 1 mm/dd/yy mm/dd/yy
                         DEPARTMENT                  D4         1 BIND                 1 mm/dd/yy mm/dd/yy
                         EMPLOYEE                    D4         1 ERASE                1 mm/dd/yy mm/dd/yy
                         EMPLOYEE                    D4         1 FIND                 1 mm/dd/yy mm/dd/yy
                         OFFICE                      D6         1 BIND                 1 mm/dd/yy mm/dd/yy
                         EMPLOYEE                    D6         1 BIND                 1 mm/dd/yy mm/dd/yy
                         DEPARTMENT                  D6         1 BIND                 1 mm/dd/yy mm/dd/yy
```

Moving Columns

Use CHANGE Clause of the USE Parameter

Since the report contents are sorted by program name, the program name should appear in the left-most column. The following code rearranges the columns and column headings so that they appear as in the following report output.

```
-
-
CHANGE '0060' TO '0001' AND   $MOVE PROGRAM TO COLUMN 1
       '0068' TO '0010' AND   $MOVE VER TO COLUMN 10
       '0069' TO '0010' AND
       '0075' TO '0018' AND   $MOVE USAGE TO COLUMN 18
       '0095' TO '0038' AND   $MOVE TIMES TO COLUMN 38
       '0027' TO '0048' AND   $MOVE RECORD TO COLUMN 48
       '0102' TO '0085' AND   $MOVE DATE COMPILED TO COLUMN 85
       '0111' TO '0095' AND   $MOVE DATE CREATED TO COLUMN 95
       '0112' TO '0095'
```

```
 REPORT NO. 28                              DATA DICTIONARY REPORTER                                mm/dd/yy
PAGE  1
 DREPORT 028                                      IDMS RECORD ACTIVITY REPORT



**********************************************************************************************************
***************
 EMPSCHM VERSION 100   SUBSCHEMA EMPSS01                                          ---- D A T E ----
 PROGRAM  VER     USAGE              TIMES     RECORD                            COMPILED  CREATED

**********************************************************************************************************
***************

 D3           1  BIND                   1    OFFICE                            mm/dd/yy mm/dd/yy
 D3           1  BIND                   1    EMPLOYEE                          mm/dd/yy mm/dd/yy
 D3           1  BIND                   1    DEPARTMENT                        mm/dd/yy mm/dd/yy
 D3           1  FIND                   1    EMPLOYEE                          mm/dd/yy mm/dd/yy
 D3           1  MODIFY                 1    EMPLOYEE                          mm/dd/yy mm/dd/yy
 D4           1  BIND                   1    OFFICE                            mm/dd/yy mm/dd/yy
 D4           1  BIND                   1    EMPLOYEE                          mm/dd/yy mm/dd/yy
 D4           1  BIND                   1    DEPARTMENT                        mm/dd/yy mm/dd/yy
 D4           1  ERASE                  1    EMPLOYEE                          mm/dd/yy mm/dd/yy
 D4           1  FIND                   1    EMPLOYEE                          mm/dd/yy mm/dd/yy
 D6           1  BIND                   1    OFFICE                            mm/dd/yy mm/dd/yy
 D6           1  BIND                   1    EMPLOYEE                          mm/dd/yy mm/dd/yy
```

Permanent Modifications

Modify Dictionary Module

To permanently modify an existing module in the data dictionary, use one of the methods shown below:

Method 1

Use the DDDL compiler online in command mode:

- Display the module to be modified:

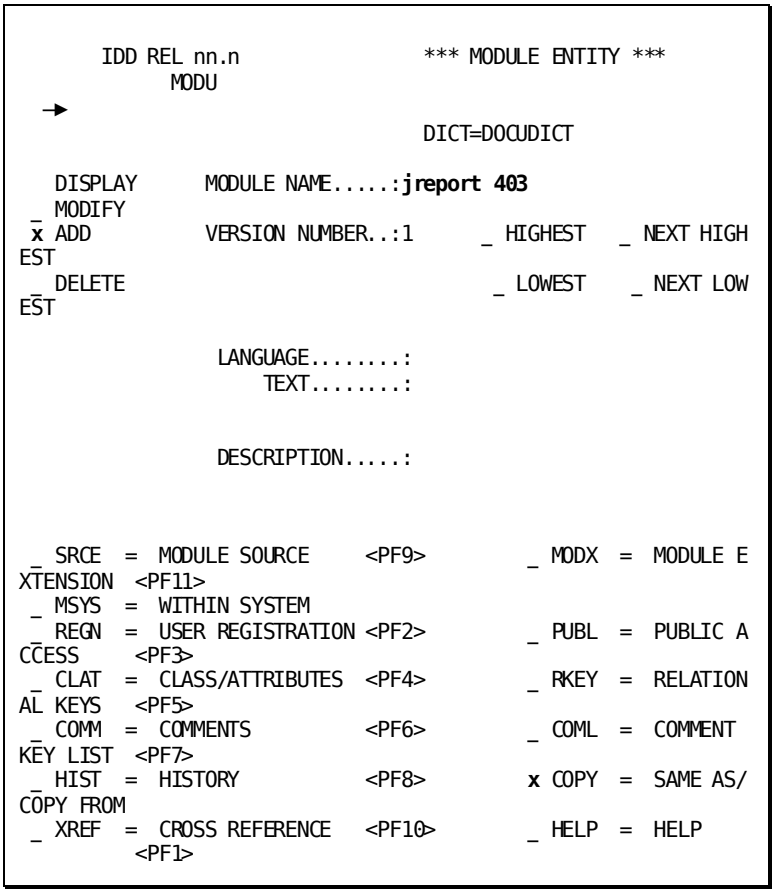
  ```
  DISPLAY MODULE NAME IS 'JREPORT 003' AS SYNTAX.
  ```

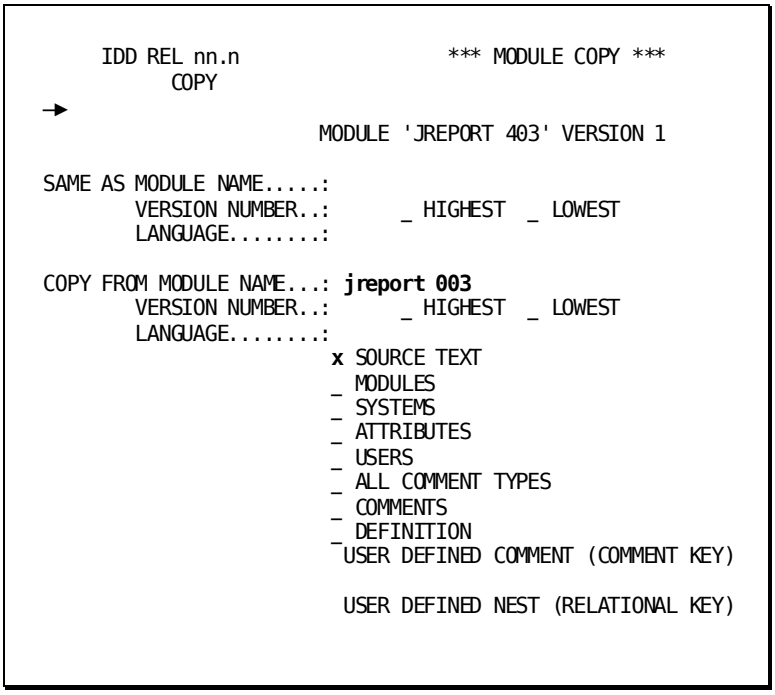
- Change the module name in the ADD MODULE statement; for example, JREPORT 103.
- Use full screen editing to modify the report.
- Press ENTER to store the new module in the dictionary.

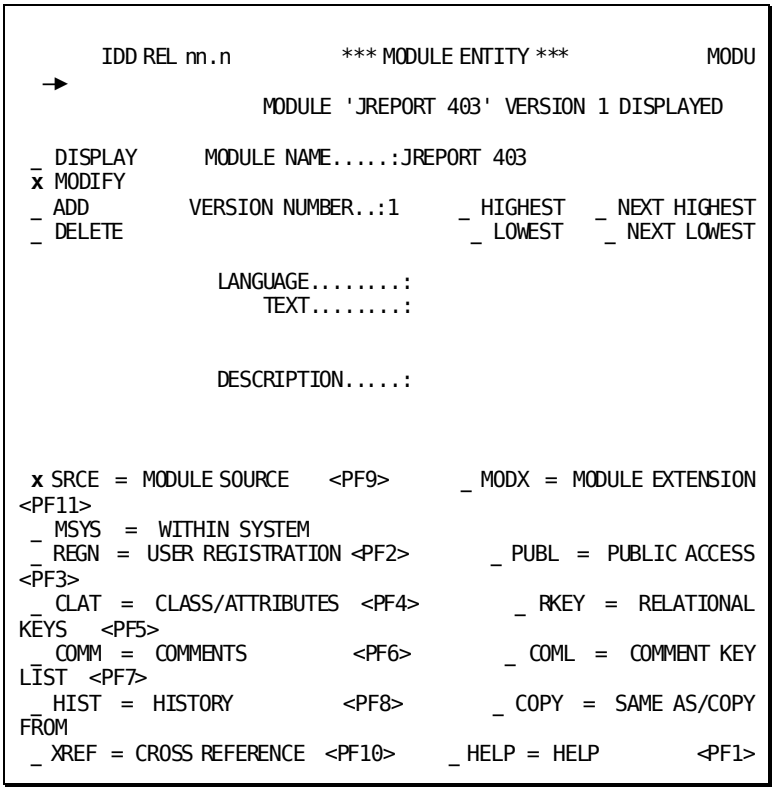
Method 2

Use the DDDL compiler online in menu mode, as shown in the following series of screens:

```
                                        CA
      IDD REL nn.n              *** MASTER SELECTION ***
            TOP
 →


             DICTIONARY NAME...:DOCUDICT     NODE NAME..:

             USER NAME.........:lhn
             PASSWORD..........:

             USAGE MODE........:X UPDATE   _ RETRIEVAL

             PFKEY SIMULATION..:X OFF      _ ON


_ ATTR  =  ATTRIBUTE     <PF2>            _ PROC  =  PROCESS
      <PF3>
_ CLAS  =  CLASS         <PF4>            _ PROG  =  PROGRAM
      <PF5>
_ ELEM  =  ELEMENT       <PF6>            _ RECD  =  RECORD
      <PF7>
_ FILE  =  FILE          <PF8>            _ TABL  =  TABLE
      <PF9>
x MODU  =  MODULE        <PF10>           _ USER  =  USER
      <PF11>
_ ENTL  =  USER DEFINED ENTITY LIST       _ SYST  =  SYSTEM
_ MSGS  =  MESSAGE
_ QFIL  =  QFILE                          _ OPTI  =  OPTIONS
_ DISP  =  DISPLAY ALL                    _ HELP  =  HELP
      <PF1>
```


IDD REL nn.n
MODU
*** MODULE ENTITY ***
DICT=DOCUDICT
DISPLAY
MODIFY
x ADD
DELETE
MODULE NAME.....:jreport 403
VERSION NUMBER..:1
HIGHEST
NEXT HIGHEST
LOWEST
NEXT LOWEST
LANGUAGE.....:
TEXT.....:
DESCRIPTION.....:
SRCE = MODULE SOURCE <PF9>
MODX = MODULE EXTENSION <PF11>
MSYS = WITHIN SYSTEM
REGN = USER REGISTRATION <PF2>
PUBL = PUBLIC ACCESS <PF3>
CLAT = CLASS/ATTRIBUTES <PF4>
RKEY = RELATIONAL KEYS <PF5>
COMM = COMMENTS <PF6>
COML = COMMENT KEY LIST <PF7>
HIST = HISTORY <PF8>
x COPY = SAME AS/COPY FROM
XREF = CROSS REFERENCE <PF10>
HELP = HELP <PF1>


IDD REL nn.n
COPY
*** MODULE COPY ***
MODULE 'JREPORT 403' VERSION 1
SAME AS MODULE NAME.....:
VERSION NUMBER..: _ HIGHEST _ LOWEST
LANGUAGE.....:
COPY FROM MODULE NAME...: jreport 003
VERSION NUMBER..: _ HIGHEST _ LOWEST
LANGUAGE.....:
x SOURCE TEXT
_ MODULES
_ SYSTEMS
_ ATTRIBUTES
_ USERS
_ ALL COMMENT TYPES
_ COMMENTS
_ DEFINITION
_ USER DEFINED COMMENT (COMMENT KEY)
USER DEFINED NEST (RELATIONAL KEY)


IDD REL nn.n *** MODULE ENTITY *** MODU
MODULE 'JREPORT 403' VERSION 1 DISPLAYED
_ DISPLAY MODULE NAME.....:JREPORT 403
x MODIFY
_ ADD VERSION NUMBER..:1 _ HIGHEST _ NEXT HIGHEST
_ DELETE _ LOWEST _ NEXT LOWEST
LANGUAGE.....:
TEXT.....:
DESCRIPTION.....:
x SRCE = MODULE SOURCE <PF9> _ MODX = MODULE EXTENSION <PF11>
_ MSYS = WITHIN SYSTEM
_ REGN = USER REGISTRATION <PF2> _ PUBL = PUBLIC ACCESS <PF3>
_ CLAT = CLASS/ATTRIBUTES <PF4> _ RKEY = RELATIONAL KEYS <PF5>
_ COMM = COMMENTS <PF6> _ COML = COMMENT KEY LIST <PF7>
_ HIST = HISTORY <PF8> _ COPY = SAME AS/COPY FROM
_ XREF = CROSS REFERENCE <PF10> _ HELP = HELP <PF1>

```
IDD REL nn.n           *** MODULE SOURCE ***
     SRCE
  →                                              PAGE 1 LINE 1
         1/22
                          MODULE 'JREPORT 403' VERSION 1

  ---+----1----+----2----+----3----+----4----+----5----+----6--
--+----7----+----
  03$00**** 'J' REPORTS IDMS JOURNAL FILE  mm/dd/yy  ROUTINE-JR
PT003
  030 WK-ABRT-FLAG '12345678901'   $ FLAG ABNORMALLY ENDED RUN
UNITS
  030 WK-CNTR 1                    $ AUTOMATIC COUNTER
  03OUTPUT D
  03SORT PROGRAM-NAME       TRANSACT-ID  DDR-HD
  03410001 'REPORT NO. 03'
  03410051 DDR-HD
  03410106 DATE
  03410122 'PAGE'
  03410127 PAGE
  03420001 'JREPORT 003'
  03420055 'PROGRAM I/O STATISTICS'
  034200460 '------------ PAGES ------------- '
  0351*010 PROGRAM-NAME               HH 'PROGRAM'
  0351*020 TRANSACT-ID   FM 'ZZZZZ9999' HH 'TRANSACTION ID'
  0351*030 WK-ABRT-FLAG
  0351*040 READ          FM 'ZZZZZZZZZ' HH '     READ'
  0351*050 WRITTEN       FM 'ZZZZZZZZZ' HH '  WRITTEN'
  0351*060 PAGE-REQUESTS FM 'ZZZZZZZZZ' HH 'REQUESTED'
  0351*070 '                                                    '
  037010 IF  TYPE        NE  ('ENDJ' 'ABRT') DROP
  037015 IF  TYPE        EQ  'ABRT'     030
  037020 MOVE  ' '            TO   WK-ABRT-FLAG
  037025  TAKE
  037030 MOVE  '** ABORT **'  TO   WK-ABRT-FLAG
  037035  TAKE
                          * * *   END OF DATA   * * *
```

Method 3

Copy the report module to cards using DREPORT 051, as follows:

```
REPORT=051
KEY MOD-NAME-067 'JREPORT 003'
```

Add, delete, or replace cards as required, using the modified cards as input to the DDDL compiler.

Method 4

Copy the report to a disk file using DREPORT 052, as follows:

```
REPORT=52
KEY MOD-NAME-067 'JREPORT 003'
```

Edit the file as necessary, using the edited module as input to the DDDL compiler.

Retrieve Module Using REPORT= or USE Parameters

Once the modified module is stored in the data dictionary, it can be retrieved by specifying its module number on a REPORT= parameter or a USE parameter. A good rule of thumb is to base the name of the modified module on the existing module name; for example, DREPORT **xyy**, where *x* is a digit in the range 1 through 9 and *yy* represents the last two digits of the original module number.

Chapter 11: Other CA IDMS Reporting Facilities

This section contains the following topics:

Overview (see page 399)
Online reporting facilities (see page 399)
Batch reporting facilities (see page 404)

Overview

In addition to the information supplied by CA IDMS reports, other CA IDMS-supplied facilities generate reports or online displays that provide data dictionary definitions and runtime statistics. This chapter describes these online and batch reporting facilities.

Online reporting facilities

Users can display information online with the following tools:

- CA OLQ
- IDMS DC/UCF OnLine PLOG
- IDMS DC/UCF DCMT commands
- IDMS DC/UCF OPER commands
- IDD DDDL DISPLAY commands
- CA IDMS Performance Monitor

Each item is discussed separately as follows.

CA OLQ

Generate reports on dictionary data

CA OLQ can be used to generate reports on information contained in a DC/UCF dictionary. The following screen shows an example of a CA OLQ-generated report:

```
                    CURRENT REPORT
MAP-NAME-098 PREP-BY-098 PROG-NAME-051 DATE-CREATED-051

   EMPMAP      MAPR10.0     EMPINQ          mm/dd/yy
   JKDMAP1     JKD          D6              mm/dd/yy
   EMPJOB      DEH          EMPOBTD         mm/dd/yy
   JKDTEST1    JKD          JKDDIAL1        mm/dd/yy
   JKDTEST1    JKD          JKDDIAL         mm/dd/yy
   JKDMAP      JKD          D4              mm/dd/yy
   JKDMAP      JKD          D2              mm/dd/yy
     END OF REPORT - PAGE       1
```

CA OLQ reports supplement information supplied by dictionary (DREPORT), IDMS DC/UCF (CREPORT), and CA ADS (AREPORT) reports.

Note: For more information about CA OLQ, see the *CA OLQ Reference Guide*.

IDMS DC/UCF OnLine PLOG (OLP)

Displays current contents of the log area

OLP displays the current contents of the DDLDCLOG area of the dictionary. OLP can be used to display system messages, system trace information, and snap dumps.

The following screen shows information displayed by OLP.

```
   FROM   ON    TO    ON   COL PRT SKIP  LOG TYPES            ROLL STATUS
 hh:mm:ss yyyy-mm-dd hh:mm:ss yyyy-mm-dd 010 OFF 2345 (WT/TR/DU/   ) 040

  hh:mm   IDMS DC258003 Vnn USER KYM SIGNED ON LTERM LT12002 AT hh.mm.ss.ht yy.d
dd
  hh:mm   IDMS DC402009 Vnn DICTNAME CORPDICT HAS BEEN SET
  hh:mm   IDMS DC258003 Vnn USER BXP SIGNED ON LTERM LT12003 AT hh.mm.ss.ht yy.d
dd
  hh:mm   IDMS DC402009 Vnn DICTNAME MIDADICT HAS BEEN SET
  hh:mm   IDMS DC258003 Vnn USER ALP SIGNED ON LTERM LT12004 AT hh.mm.ss.ht yy.d
dd
  hh:mm   IDMS DC402009 Vnn DICTNAME CORPDICT HAS BEEN SET
  hh:mm   IDMS DC402009 Vnn PRINT CLASS HAS BEEN SET
  hh:mm   IDMS DC259001 Vnn USER KYM SIGNED OFF LTERM LT12002 AT hh.mm.ss.ht yy.
ddd
  hh:mm   IDMS DC259001 Vnn USER ALP SIGNED OFF LTERM LT12004 AT hh.mm.ss.ht yy.
ddd
  hh:mm   IDMS DC075102 Vnn T5 REQUESTING TERM PRT12051(CT013007)  LINE VTAM12
  hh:mm   IDMS DC258003 Vnn USER LHN SIGNED ON LTERM LT12002 AT hh.mm.ss.ht yy.d
dd
  hh:mm   IDMS DC402009 Vnn DICTNAME DOCUDICT HAS BEEN SET
  hh:mm   IDMS DC258003 Vnn USER RPM SIGNED ON LTERM LT12004 AT hh.mm.ss.ht yy.d
dd
  hh:mm   IDMS DC402009 Vnn DICTNAME CORPDICT HAS BEEN SET
  hh:mm   IDMS DC258003 Vnn USER GAF SIGNED ON LTERM LT12005 AT hh.mm.ss.ht yy.d
dd
  hh:mm   IDMS DC402009 Vnn PRINT CLASS HAS BEEN SET
```

Note: For more information about this reporting tool, see the *CA IDMS System Operations Guide*.

DC/UCF DCMT DISPLAY commands

Display definitions and runtime statistics

DC/UCF DCMT DISPLAY commands display definitions and runtime statistics associated with DC/UCF systems.

DCMT commands complement information supplied by IDMS DC/UCF system (CREPORT) and statistics (SREPORT) reports.

Note: For more information about DCMT commands, see the *CA IDMS System Tasks and Operator Commands Guide*.

IDMS DC/UCF OPER WATCH commands

Display dynamic system runtime statistics

IDMS DC/UCF OPER WATCH commands display dynamic system runtime statistics associated with IDMS DC/UCF systems.

OPER WATCH commands complement information supplied by IDMS DC/UCF system (CREPORT) and statistics (SREPORT) reports.

Note: For more information about OPER WATCH commands, see the *CA IDMS System Tasks and Operator Commands Guide*.

IDD DDDL DISPLAY commands

Display entity occurrences defined to dictionary

DDDL can be used in command mode or menu mode to display entity occurrences defined to the data dictionary. The following screen shows the contents displayed by submitting the following command to IDD:

```
DISPLAY MAP NAME IS SYBMAP AS SYNTAX.
```

```
DISPLAY MAP NAME IS SYBMAP AS SYNTAX.
     ADD
     MAP NAME IS SYBMAP VERSION IS 1
     WITHIN PANEL SYBMAP-OLMPANEL VERSION IS 1
         DATE CREATED IS      mm/dd/yy
         DATE LAST UPDATED IS mm/dd/yy
         PREPARED BY SYB
         REVISED  BY SYB
         PUBLIC ACCESS IS ALLOWED FOR ALL
         DATE LAST COMPILED IS mm/dd/yy
         TIME LAST COMPILED IS mm/dd/yy
         MAP RELEASE I.D. IS R2
         NUMBER OF NON LITERAL FIELDS IS 1
         NUMBER OF RECORDS IN MAP IS 1
         PFLD NAME TO SET CURSOR AT IS OLMPF-0003
         ASSOCIATED WITH RECORD SYBREC VERSION 1
         .
```

Information display using DDDL in command mode or menu mode complements information supplied by data dictionary (DREPORT), IDMS DC/UCF system (CREPORT), and CA ADS (AREPORT) reports.

Note: For more information on this reporting tool, see the *CA IDMS IDD DDDL Reference Guide*.

CA IDMS Performance Monitor

Display system statistics

The CA IDMS Performance Monitor is a performance and tuning tool you can use to monitor hardware and software utilization in a DC/UCF system.

Three components

The CA IDMS Performance Monitor consists of three components:

- Realtime monitor—Displays specific system-resource statistics at the time of the request
- Interval monitor—Displays system-wide, wait-time statistics for a unit of time
- Application monitor—Displays statistics about resource usage by individual program

Note: For more information about the online component of CA IDMS Performance Monitor, see the *CA IDMS Performance Monitor User Guide*.

Batch reporting facilities

You can display information with the following batch reporting tools:

- CA IDMS/DB utilities
- CA IDMS Performance Monitor reports

The utilities are described below. A brief overview of the CA IDMS Performance Monitor appears earlier in this chapter. For more information about the batch component of the Performance Monitor, see the *CA IDMS Performance Monitor System Administration Guide*.

Summary of utilities reports

Utilities are batch facilities that perform system services and frequently generate report output. The table below lists CA IDMS-supplied utilities that supplement CA IDMS reports.

Utility	Information in Report Output
ADSORPTS(1)	CA ADS dialog and application statistics: ■ Dialog reports—summary dialog information, process module source statements, dialog-associated records, contents of fixed dialog block (FDB) ■ Application reports—application task codes, global records, functions, responses
ADSOBPLG	Runtime CA ADS Batch application and dialog statistics (also called CA ADS Batch Print Log Utility in the *CA ADS Batch User Guide*.)
IDMSDBAN(2)	Database structure statistics: ■ Area statistics ■ Set statistics ■ Record statistics Set analysis data for four types of sets

Utility	Information in Report Output
IDMSRPTS(2)	Data dictionary definitions for schemas, subschemas, physical databases, and nonschema created entities: ■ Schema reports—areas, files, subschemas, record types, and sets defined in a specific schema ■ Subschema reports—record types, sets, areas, logical records, including paths and program activity, in a specified subschema ■ Schema-independent reports—module, IDD-built record, protocol, user, and q-file definitions ■ Physical database definition reports—segment and DMCL listings; physical database definitions
PRINT INDEX(2)	Structure of system-owned indexes and indexed sets
PRINT JOURNAL(2)	Journal file statistics ■ Status of disk journal files ■ Journal page utilization
PRINT LOG(2)	System statistics logged to DDLDCLOG area of the data dictionary
PRINT PAGE(2)	Database page content in hexadecimal/decimal format
PRINT SPACE(2)	Space utilization in one or more areas or segments
RHDCMPUT	Definition, screen image, and source code of map and panel occurrences (also called the Mapping Batch Utility in the IDMS DC/UCF Mapping Facility)
ROLLBACK and ROLLFORWARD(2)	Journal record statistics: ■ Checkpoints and ENDJ checkpoint statistics for each transaction ■ Before and after database record images in hexadecimal/decimal format

Notes:

(1) See the *CA ADS Reference Guide.*

(2) See the *CA IDMS Utilities Guide.*

Chapter 12: Compliance Reporting

This section contains the following topics:

Overview (see page 407)
Examples (see page 407)
Considerations (see page 408)

Overview

In recent years, organizations have been faced with many new compliance and audit reporting requirements such as the Sarbanes-Oxley Act, the Health Insurance Portability and Accountability Act (HIPAA), and various other government and state regulations. These regulations often require that organizations be able to identify who is accessing and/or updating information on their databases.

As of r16 SP4, the CA IDMS journal files have contained the user ID on the BGIN checkpoint journal records and as of IDMS Server r16.1, the journal files have contained the external user ID from web-based applications (if passed to the backend CA IDMS system) allowing for the identification of the actual user of an application where the web-based application signed on to the backend CA IDMS system with a generic user ID. JREPORT 008 and the CA IDMS Journal Analyzer Chronological Event Report report the user ID and external user ID (when available), and JREPORT 009 and JREPORT 010 provide reports specifically on the user ID and external user ID respectively.

These enhanced reports can be used to determine which user has made changes to database records and what was changed.

Examples

Example 1

In this example, JREPORT 009 is used to determine who used CA IDMS DMLO to make updates to the database. The SELECT parameter selects only those BGIN records that have USDMAIN0 as the program name.

```
 INPUT 19068 19068 UM(CULLJRNL)
JREPORT=009
 SELECT PROGRAM EQ &sdq.USDMAIN0&sdq.
```

Example 2

Having run JREPORT 009, you found that CA IDMS DMLO was used to update the database, and the Transaction ID was 44568. You can find out what changes were made by running JREPORT 008. The SELECT parameter selects all the journal records for Transaction ID 44568.

```
 INPUT 19068 19068 UM(CULLJRNL)
JREPORT=008
 SELECT TRANSACT-ID EQ 44568
```

Example 3

You have a web-based application that uses a generic user ID to sign on to the backend CA IDMS system. You need to know the identities of the actual users of that web-based application. You can find this information out by running JREPORT 010 using a SELECT parameter to select only those BGIN journal records that contain the generic user ID used by that web-based application.

```
 INPUT 19068 19068 UM(CULLJRNL)
JREPORT=010
 SELECT TYPE EQ 'BGIN' AND USER-ID EQ 'WEB-USER'
```

Considerations

The following are considerations for journal record processing:

- If you want to capture information about retrieval only transactions, you must specify JOURNAL RETRIEVAL. While this will allow you to see what programs were used for retrieval activity, you will not be able to see what records were viewed.
- If you want to capture information from local batch jobs, you must capture the journal records (many sites take a backup of their database for recovery purposes when running a local mode update job rather than writing the local mode journal file.)
- Many web-based applications capture the user ID on the client side of the application and use a generic user ID to access the data from the database. In these cases, the actual user ID as captured on the client side can be captured and reported if a product like SiteMinder is used on the client side to make the actual user ID available to the backend system for recording in the BGIN journal checkpoint record.

Appendix A: z/OS JCL

This section contains the following topics:

Running in Local Mode (see page 410)

Running in Local Mode

JCL for executing CA IDMS reports in *local mode* is shown as follows.

CULPRIT (z/OS)

```
//CULPRIT  EXEC PGM=CULPRIT,REGION=1024K
//STEPLIB  DD   DSN=idms.dba.loadlib,DISP=SHR
//         DD   DSN=idms.custom.loadlib,DISP=SHR
//         DD   DSN=idms.cagjload,DISP=SHR
//SORTLIB  DD   DSN=sys1.sortlib,DISP=SHR
//SYSOUT   DD   SYSOUT=A
//SYSPRINT DD   SYSOUT=A
//SORTPRNT DD   SYSOUT=A
//SORTMSG  DD   SYSOUT=A
//SYS004   DD   SYSOUT=A,DCB=(RECFM=FBA,LRECL=133,BLKSIZE=1330)
//SYS005   DD   DSN=&&SPRMWORK.,DISP=(NEW,DELETE),
//              UNIT=disk,SPACE=(CYL,(5,2)),
//              DCB=(RECFM=FB,LRECL=320,BLKSIZE=1600)
//SYS006   DD   DSN=&&SEXTWORK.,DISP=(NEW,DELETE),
//              UNIT=disk,SPACE=(CYL,(5,2)),
//              DCB=(RECFM=VB,LRECL=2044,BLKSIZE=4628)
//SYS007   DD   DSN=&&SRTPWORK.,DISP=(NEW,DELETE),
//              UNIT=disk,SPACE=(TRK,(1,1)),
//              DCB=(RECFM=F,LRECL=80,BLKSIZE=80)
//SYS008   DD   DSN=&&NSRTWORK.,DISP=(NEW,DELETE),
//              UNIT=disk,SPACE=(CYL,(5,2)),
//              DCB=(RECFM=VB,LRECL=512,BLKSIZE=4628)
//SORTWK01 DD   DSN=&&WRKAWORK.,
//              UNIT=disk,SPACE=(CYL,(5,2))
//SORTWK02 DD   DSN=&&WRKBWORK.,
//              UNIT=disk,SPACE=(CYL,(5,2))
//SORTWK03 DD   DSN=&&WRKCWORK.,
//              UNIT=disk,SPACE=(CYL,(5,2))
//SORTWK04 DD   DSN=&&WRKDWORK.,
//              UNIT=disk,SPACE=(CYL,(5,2))
//CULSRT1I DD   *
SORT FIELDS=(1,69,A),FORMAT=BI
RECORD TYPE=F,LENGTH=(320,,320)
/*
//SYSIN4   DD   DUMMY,DCB=BLKSIZE=80
//VSAMCTRL DD   DUMMY
//CULLIB   DD   DSN=yourHLQ.CAGJSRC,DISP=SHR
//SYS002   DD   DSN=user.keyfile,DISP=SHR
//SYS010   DD   DSN=user.inputfil,DISP=OLD,
//              UNIT=tape,VOL=SER=vvvvvv

//SYS020   DD   DSN=user.nonprint,DISP=(NEW,CATLG),
//              UNIT=tape,VOL=SER=vvvvvv,
```

```
//             DCB=(DSORG=PS,LRECL=llll,BLKSIZE=bbbb)
//dictdb   DD   DSN=idms.appldict.ddldml,DISP=SHR
//dloddb   DD   DSN=idms.appldict.ddldclod,DISP=SHR
//dccat    DD   DSN=idms.appldict.ddlcat,DISP=SHR
//dccatx   DD   DSN=idms.appldict.ddlcatx,DISP=SHR
//dccatl   DD   DSN=idms.appldict.ddlcatlod,DISP=SHR
//dirldb   DD   DSN=idms.sysdirl.ddldml,DISP=SHR
//dcmsg    DD   DSN=idms.sysmsg.ddldcmsg,DISP=SHR
//asfdml   DD   DSN=idms.asfdict.ddldml,DISP=SHR
//asflod   DD   DSN=idms.asfdict.ddldclod,DISP=SHR
//asfdefn  DD   DSN=idms.asfdict.asfdefn,DISP=SHR
//asfdata  DD   DSN=idms.asfdict.asfdata,DISP=SHR
//sysjrnl  DD   DUMMY
//syspch   DD   SYSOUT=B,DCB=BLKSIZE=80
/*
//SYSIDMS  DD   *
DMCL=dmcl-name
Other SYSIDMS parameters, as appropriate
/*
//SYSIN    DD   *
 CULPRIT parameters
/*
//*
```

appldict	Name of the application dictionary
asfdata	DDname of the ASF data (IDMSR-AREA2) area; required to execute IREPORTs
ASFDEFN	DDname of the ASF data definition (IDMSR-AREA) area; required to execute IREPORTs
asfdml	DDname of the ASF dictionary definition (DDLDML) area; required to execute IREPORTs
asflod	DDname of the ASF dictionary definition load (DDLDCLOD) area; required to execute IREPORTs
bbbb	Blocksize of the file
dcmsg	DDname of the system message (DDLDCMSG) area
dictdb	DDname of the application dictionary definition area
dirldb	DDname of the IDMSDIRL definition (DDLDML) area; to execute A, C, and DREPORTs, use a dictionary built by IDMSDIRL
disk	Symbolic device name for work files
dloddb	DDname of the application dictionary definition load area; required for CREPORT 053

dccat	DDname of the SQL application dictionary catalog (DDLCAT) area
ddcatx	DDname of the SQL application dictionary catalog index (DDLCATX) area
ddcatl	DDname of the SQL application dictionary catalog load (DDLCATLOD) area
dmcl-name	Name of the DMCL used by the central version
idms.appldict.ddldclod	Data set name of the application dictionary definition load (DDLDCLOD) area; required for CREPORT 053
idms.appldict.ddldml	Data set name of the application dictionary definition (DDLDML) area
idms.asfdict.asfdata	Data set name of the ASF data (IDMSR-AREA2) area; required for IREPORTs
idms.asfdict.asfdefn	Data set name of the ASF data definition (IDMSR-AREA) area; required for IREPORTs
idms.asfdict.ddldclod	Data set name of the ASF data definition load (DDLDCLOD) area; required for IREPORTs
idms.asfdict.ddldml	Data set name of the ASF dictionary definition (DDLDML) area; required for IREPORTs
idms.custom.loadlib	Data set name of the load library containing customized CA IDMS executable modules
idms.dba.loadlib	Data set name of the load library containing the DMCL and database name table load modules
idms.cagjload	Data set name of the load library containing the CA IDMS executable modules that do not require customization
yourHLQ.CAGJSRC	Data set name of PDS containing parameters to be copied (necessary only if USE, =COPY, or =MACRO features are being used)
yourHLQ.CAGJSRC(sort1)	Data set name and member name of stored sort parameters, as established during installation
idms.sysdirl.ddldml	Data set name of the IDMSDIRL definition (DDLDML) area
idms.sysmsg.ddldcmsg	Data set name of the system message (DDLDCMSG) area
sysdirl	Name of the IDMSDIRL dictionary
sysjrnl	DDname of the tape journal file

syspch	Punched card output (required for DREPORT 051 and CREPORT 051, omitted otherwise)
sys1.sortlib	Data set name of system sort library
tape	Symbolic device name for tape file
user.inputfil	Data set name for primary input file (required for JREPORT and SREPORT runs)
user.keyfile	Data set name of a key file (necessary only if a keyfile is input)
user.nonprint	Data set name for nonprint/nonpunch output (required for SREPORT 099, DREPORT 052, CREPORT 052; omitted otherwise)
vvvvvv	Volume serial number

Note: If the user's subschema is not in the CA IDMS/DB load library, then the load library that contains the module must also be included in the STEPLIB concatenation when running in local mode.

Central Version Modifications

To run CA IDMS reports under *central version*:

1. Remove the following DD statements:

```
//dictdb   DD   DSN=idms.appldict.ddldml,DISP=SHR
//dloddb   DD   DSN=idms.appldict.ddldclod,DISP=SHR
//dirldb   DD   DSN=idms.sysdirl.ddldml,DISP=SHR
//asfdml   DD   DSN=idms.asfdict.ddldml,DISP=SHR
//asflod   DD   DSN=idms.asfdict.ddldclod,DISP=SHR
//ASFDEFN  DD   DSN=idms.asfdict.asfdefn,DISP=SHR
//asfdata  DD   DSN=idms.asfdict.asfdata,DISP=SHR
//sysjrnl  DD   DUMMY
```

2. Add the following DD statement for the system control file anywhere after STEPLIB:

```
//sysctl  DD  DSN=idms.sysctl,DISP=SHR
```

sysctl	ddname of the SYSCTL file
idms.sysctl	data set name of SYSCTL file

Appendix B: z/VSE JCL

This section contains the following topics:

Running in Local Mode (see page 416)
IDMSLBLS Procedure (see page 418)
IDMSLBLS Procedure Listing (see page 419)

Running in Local Mode

JCL for executing CA IDMS reports in *local mode* is shown below:

CULPRIT (z/VSE)

```
// JOB     CULPRIT
// DLBL    idmsnnn,'idmsnnn.library'
// EXTENT SYSnnn,nnnnnn,,,ssss,llll
// ASSGN  SYSnnn,DISK,VOL=nnnnnn,SHR
// LIBDEF *,SEARCH=CA IDMS. nn.n libraries
// EXEC    PROC=IDMSLBLS
// OPTION  LOG,CATAL,DUMP
// ASSGN   SYS009,IGN
// ASSGN   SYS001,nnnnnn,,,ssss,llll
// DLBL    SORTWK1,'WORK',0
// EXTENT  SYS001,nnnnnn,,,ssss,llll
// ASSGN   SYS004,X'ppp'
// ASSGN   SYS005,X'ddd'
// DLBL    SYS005,'PARMS',0
// EXTENT  SYS005,nnnnnn,,,ssss,llll
// ASSGN   SYS006,X'ddd'
// DLBL    SYS006,'EXTRACT',0
// EXTENT  SYS006,nnnnnn,,,ssss,llll
// ASSGN   SYS007,X'ddd'
// DLBL    SYS007,'SORTCARD',0
// EXTENT  SYS007,nnnnnn,,,ssss,llll
// ASSGN   SYS008,X'ddd'
// DLBL    SYS008,'NOSORT',0
// EXTENT  SYS008,nnnnnn,,,ssss,llll
// ASSGN   SYS002,X'ttt'
// TLBL    SYS002,'user.keyfile'
// ASSGN   SYS010,X'ttt'
// TLBL    SYS010,'user.inputfil'
// ASSGN   SYSPCH,X'ccc'
// ASSGN   SYS020,X'ttt'
// TLBL    SYS020,'user.nonprint',15
// EXEC    CULPRIT
CULPRIT parameters
/*
user input file, if on cards
/*
optional restart parameter
/*
/&
```

idmsnnn	dtfname of the CA IDMS library

'idmsnnn.library'	data set name of CA IDMS libraries, as established during installation
SYS*nnn*	Logical unit of the volume for which the extent is effective
ccc	device assignment (channel and unit) for punched output (required for DREPORT 051 and CREPORT 051)
culprit.srclib	file-id of system library that contains parameters to be copied (ASSGN necessary if USE, =COPY, or =MACRO is used; DLBL and EXTENT necessary if the parameters are maintained on a private library)
ddd	device assignment (channel and unit) for disk files
IDMSLBLS	Name of the procedure provided at installation that contains the file definitions for CA IDMS dictionary, database, disk journal, and SYSIDMS file definition **Note:** For a complete listing of IDMSLBLS, see IDMSLBLS Procedure (see page 418) later in this section
llll	number of tracks assigned for file
nnnnnn	serial number for disk storage device
ppp	device assignment (channel and unit) for printed output
ssss	starting track of file
SYS009	logical unit of the CA IDMS tape journal file
SYS020	logical unit for first tape or disk output file
ttt	device assignment (channel and unit) for tape files (files may use disk instead of tape, in which case a device assignment, DLBL and EXTENT information are also required)
nnnnnn	volume serial number
user.inputfil	file-id of the input file (required for JREPORTS and SREPORTS)
user.keyfile	file-id of the key file (necessary only if a key file is input
user.nonprint,15	file-id and retention period for nonprint/nonpunch output (required for SREPORT 099, DREPORT 052, and CREPORT 052; otherwise omitted)

Central Version Modifications

To run CA IDMS reports under the *central version*, add a SYSCTL file to your job control; for example:

```
// ASSGN   SYSnnn,DISK,VOL=vvvvvv,SHR
// DLBL    SYSCTL,'idms.sysctl',2099/365,SD
// EXTENT  SYSnnn,nnnnnn,,,ssss,2
```

IDMSLBLS Procedure

The following chapter discusses about IDMSLBLS procedure.

What Is the IDMSLBLS Procedure?

IDMSLBLS is a procedure provided during a CA IDMS z/VSE installation. It contains file definitions for the CA IDMS components listed below. These components are provided during installation:

- Dictionaries
- Sample databases
- Disk journal files
- SYSIDMS file

Tailor the IDMSLBLS procedure to reflect the filenames and definitions in use at your site and include this procedure in z/VSE JCL job streams.

The sample z/VSE JCL provided in this document includes the IDMSLBLS procedure. Therefore, individual file definitions for CA IDMS dictionaries, sample databases, disk journal files, and SYSIDMS file are not included in the sample JCL.

IDMSLBLS Procedure Listing

```
* ———————— LIBDEFS ————————
// LIBDEF  *,SEARCH=idmslib.sublib
// LIBDEF  *,CATALOG=user.sublib
/*  ———————————————————— LABELS ————————————————————
// DLBL    idmslib,'idms.library',2099/365
// EXTENT  ,nnnnnn,,,ssss,1500
// DLBL    dccat,'idms.system.dccat',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,31
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    dccatl,'idms.system.dccatlod',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,6
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    dccatx,'idms.system.dccatx',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,11
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    dcdml,'idms.system.ddldml',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,101
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    dclod,'idms.system.ddldclod',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,21
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    dclog,'idms.system.ddldclog',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,401
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    dcrun,'idms.system.ddldcrun',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,68
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    dcscr,'idms.system.ddldcscr',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,135
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    dcmsg,'idms.sysmsg.ddldcmsg',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,201
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    dclscr,'idms.sysloc.ddlocscr',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,6
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    dirldb,'idms.sysdirl.ddldml',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,201
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    dirllod,'idms.sysdirl.ddldclod',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,2
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    empdemo,'idms.empdemo1',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,11
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    insdemo,'idms.insdemo1',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,6
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    orgdemo,'idms.orgdemo1',2099/365,DA
```

```
// EXTENT  SYSnnn,nnnnnn,,,ssss,6
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    empldem,'idms.sqldemo.empldemo',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,11
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    infodem,'idms.sqldemo.infodemo',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,6
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    projdem,'idms.projseg.projdemo',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,6
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    indxdem,'idms.sqldemo.indxdemo',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,6
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    sysctl,'idms.sysctl',2099/365,SD
// EXTENT  SYSnnn,nnnnnn,,,ssss,2
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    secdd,'idms.sysuser.ddlsec',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,26
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    dictdb,'idms.appldict.ddldml',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,51
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    dloddb,'idms.appldict.ddldclod',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,51
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    sqldd,'idms.syssql.ddlcat',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,101
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    sqllod,'idms.syssql.ddlcatl',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,51
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    sqlxdd,'idms.syssql.ddlcatx',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,26
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    asfdml,'idms.asfdict.ddldml',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,201
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    asflod,'idms.asfdict.asflod',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,401
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    asfdata,'idms.asfdict.asfdata',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,201
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    ASFDEFN,'idms.asfdict.asfdefn',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,101
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    j1jrnl,'idms.j1jrnl',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,54
```

```
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    j2jrnl,'idms.j2jrnl',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,54
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    j3jrnl,'idms.j3jrnl',2099/365,DA
// EXTENT  SYSnnn,nnnnnn,,,ssss,54
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
// DLBL    SYSIDMS,'sysidms.parms'
// EXTENT  SYSnnn,nnnnnn,,,ssss,ttt
// ASSGN   SYSnnn,DISK,VOL=nnnnnn,SHR
/+
/*
```

idmslib.sublib	Name of the sublibrary within the library containing CA IDMS modules
user.sublib	Name of the sublibrary within the library containing user modules
idmslib	Filename of the file containing CA IDMS modules
idms.library	File-ID associated with the file containing CA IDMS modules
SYS*nnn*	Logical unit of the volume for which the extent is effective
nnnnnn	Volume serial identifier of appropriate disk volume
ssss	Starting track (CKD) or block (FBA) of disk extent
dccat	Filename of the system dictionary catalog (DDLCAT) area
idms.system.dccat	File-ID of the system dictionary catalog (DDLCAT) area
dccatl	Filename of the system dictionary catalog load (DDLCATLOD) area
idms.system.dccatlod	File-ID of the system dictionary catalog load (DDLCATLOD) area
dccatx	Filename of the system dictionary catalog index (DDLCATX) area
idms.system.dccatx	File-ID of the system dictionary catalog index (DDLCATX) area
dcdml	Filename of the system dictionary definition (DDLDML) area
idms.system.ddldml	File-ID of the system dictionary definition (DDLDML) area

dclod	Filename of the system dictionary definition load (DDLDCLOD) area
idms.system.ddldclod	File-ID of the system dictionary definition load (DDLDCLOD) area
dclog	Filename of the system log area (DDLDCLOG) area
idms.system.ddldclog	File-ID of the system log (DDLDCLOG) area
dcrun	Filename of the system queue (DDLDCRUN) area
idms.system.ddldcrun	File-ID of the system queue (DDLDCRUN) area
dcscr	Filename of the system scratch (DDLDCSCR) area
idms.system.ddldcscr	File-ID of the system scratch (DDLDCSCR) area
dcmsg	Filename of the system message (DDLDCMSG) area
idms.sysmsg.ddldcmsg	File-ID of the system message (DDLDCMSG) area
dclscr	Filename of the local mode system scratch (DDLOCSCR) area
idms.sysloc.ddlocscr	File-ID of the local mode system scratch (DDLOCSCR) area
dirldb	Filename of the IDMSDIRL definition (DDLDML) area
idms.sysdirl.ddldml	File-ID of the IDMSDIRL definition (DDLDML) area
dirllod	Filename of the IDMSDIRL definition load (DDLDCLOD) area
idms.sysdirl.dirllod	File-ID of the IDMSDIRL definition load (DDLDCLOD) area
empdemo	Filename of the EMPDEMO area
idms.empdemo1	File-ID of the EMPDEMO area
insdemo	Filename of the INSDEMO area
idms.insdemo1	File-ID of the INSDEMO area
orgdemo	Filename of the ORGDEMO area
idms.orgdemo1	File-ID of the ORDDEMO area
empldem	Filename of the EMPLDEMO area
idms.sqldemo.empldemo	File-ID of the EMPLDEMO area
infodem	Filename of the INFODEMO area
idms.sqldemo.infodemo	File-ID of the INFODEMO area
projdem	Filename of the PROJDEMO area

idms.projseg.projdemo	File-ID of the PROJDEMO area
indxdem	Filename of the INDXDEMO area
idms.sqldemo.indxdemo	File-ID of the INDXDEMO area
sysctl	Filename of the SYSCTL file
idms.sysctl	File-ID of the SYSCTL file
secdd	Filename of the system user catalog (DDLSEC) area
idms.sysuser.ddlsec	File-ID of the system user catalog (DDLSEC) area
dictdb	Filename of the application dictionary definition area
idms.appldict.ddldml	File-ID of the application dictionary definition (DDLDML) area
dloddb	Filename of the application dictionary definition load area
idms.appldict.ddldclod	File-ID of the application dictionary definition load (DDLDCLOD) area
sqldd	Filename of the SQL catalog (DDLCAT) area
idms.syssql.ddlcat	File-ID of the SQL catalog (DDLCAT) area
sqllod	Filename of the SQL catalog load (DDLCATL) area
idms.syssql.ddlcatl	File-ID of SQL catalog load (DDLCATL) area
sqlxdd	Filename of the SQL catalog index (DDLCATX) area
idms.syssql.ddlcatx	File-ID of the SQL catalog index (DDLCATX) area
asfdml	Filename of the asf dictionary definition (DDLDML) area
idms.asfdict.ddldml	File-ID of the asf dictionary definition (DDLDML) area
asflod	Filename of the asf dictionary definition load (ASFLOD) area
idms.asfdict.asflod	File-ID of the asf dictionary definition load (ASFLOD) area
asfdata	Filename of the asf data (ASFDATA) area
idms.asfdict.asfdata	File-ID of the asf data area (ASFDATA) area
ASFDEFN	Filename of the asf data definition (ASFDEFN) area
idms.asfdict.asfdefn	File-ID of the asf data definition area (ASFDEFN) area
j1jrnl	Filename of the first disk journal file
idms.j1jrnl	File-ID of the first disk journal file

j2jrnl	Filename of the second disk journal file
idms.j2jrnl	File-ID of the second disk journal file
j3jrnl	Filename of the third disk journal file
idms.j3jrnl	File-ID of the third disk journal file
sysidms.parms	Filename of the SYSIDMS parameter file

Appendix C: z/VM and z/VM Commands

This section contains the following topics:

Running in Local Mode (see page 427)

Running in Local Mode

Commands to execute CA IDMS reports in *local mode* are shown as follows. To execute the reports in local mode, take one of the following actions:

- Code LOCAL as an option on the DATABASE parameter. For more information about this option, see the *CA Culprit for CA IDMS Reference Guide*.
- Code PARM='*LOCAL*' on the OSRUN command used to invoke the program. This option is valid only if the OSRUN command is issued from the System Product Interpreter or an EXEC2 file.
- Link edit the program with an IDMSOPTI module that specifies CENTRAL=NO.

CULPRIT (z/VM)

```
*------------ CA IDMSRPTS ————————————————————*
GLOBAL TXTLIB sortlib
FILEDEF SYS004 PRINTER (RECFM FBA LRECL 133 BLKSIZE 133
FILEDEF SYS005 DISK uprmwork file a (RECFM FB LRECL 320 BLKSIZE 1600
FILEDEF CULSRT1I DISK IDMSLIB MACLIB A (MEMBER SORT1
FILEDEF SYS006 DISK uextwork file a (RECFM VB LRECL 1024 BLKSIZE 4096
FILEDEF SYS007 DISK srtpwork file a (RECFM F LRECL 80 BLKSIZE 80
FILEDEF SYS008 DISK nsrtwork file a (RECFM VB LRECL 1024 BLKSIZE 4096
FILEDEF SYS010 DISK input file a
FILEDEF SYS020 DISK nonprint file a
FILEDEF SYSPCH DISK card output a
FILEDEF SYSIPT DISK sysipt data a
FILEDEF SYSIN4 DISK restart file a
FILEDEF CULLIB DISK srclib MACLIB a
FILEDEF sysjrnl DUMMY
FILEDEF SYSIDMS DISK sysidms parms a (RECFM F LRECL pppp BLKSIZE pppp
EXEC    IDMSFD
OSRUN   CULPRIT
```

card output a	filename, filetype, and filemode of the file that contains the card output (required for DREPORT 051 and CREPORT 051)
IDMSFD	Name of the exec provided at installation that contains the file definitions for CA IDMS dictionaries, sample databases, and disk journal files, TXTLIBs, and LOADLIBs

input file a	filename, filetype, and filemode of the primary input file (required for SREPORTs and JREPORTs)
nnnn	number of pages in the file
nonprint file a	filename, filetype, and filemode of the nonprint/nonpunch output (required for SREPORT 099, DREPORT 052 and CREPORT 052; otherwise omitted)
nsrtwork file a	filename, filetype, and filemode of the unsorted extract output data set
pppp	page size of the file
restart file a	filename, filetype, and filemode of the file that contains the optional restart parameter; if there is no restart parameter, code DUMMY in place of the filename, filetype, and filemode
sortlib	file name to run external sort package
srclib	file name of PDS containing parameters to be copied (necessary only if USE, =COPY, or =MACRO is used)
srtpwork file a	filename, filetype, and filemode of the sort control parameter file
sysipt data a	filename, filetype, and filemode of the file that contains the CULPRIT parameters for the run **Note:** Information about creating this file appears later in this appendix.
sysidms parms a	filename, filetype, and filemode of the SYSIDMS parameters file **Note:** Information about creating this file appears later in this appendix.
sysjrnl	file name for the tape journal file, as assigned in the DMCL definition
uextwork file a	filename, filetype, and filemode of the unsorted extracted item data set
uprmwork file a	filename, filetype, and filemode of the unsorted parameter file

Note: CULPRIT requires an external sort package (other than the z/VM and z/VM SORT command) that can be loaded dynamically.

Central Version Modifications

CA IDMS reports that run under central version can access an IDMS CV/DC system that is running in a z/VM and z/VM virtual machine. To identify the IDMS DC/UCF system to be accessed, take one of the following actions:

Specify CVMACH=*cv-machine-name* on the DATABASE parameter, where *cv-machine-name* is a 1- through 8-character user identifier of the z/VM and z/VM virtual machine in which the DC/UCF system is executing. For more information, see the *CA Culprit for CA IDMS Reference Guide*.

Code PARM='CVMACH=*cv-machine-name*' in the OSRUN command used to invoke the program. This option is valid only if the OSRUN command is issued from the System Product Interpreter or from an EXEC2 file.

Link edit the utility with an IDMSOPTI module that specifies CVMACH=*cv-machine-name*.

Creating the SYSIPT or SYSIDMS file

To create the SYSIPT file, enter these z/VM and z/VM commands:

```
XEDIT sysipt data a (NOPROF
INPUT
 .
 .
 .
Source statements
 .
 .
 .
FILE
```

To create the SYSIDMS parameter file, substitute *sysidms parms a* in the example above.

Note: For more information on all SYSIDMS parameters, see the *CA IDMS Common Facilities Guide*.

Appendix D: CA IDMS Module Listing

This appendix lists all the CA IDMS AREPORTs, CREPORTs, DREPORTs, IREPORTs, JREPORTs, and SREPORTs in order by module number.

This section contains the following topics:

AREPORT Listing (see page 431)
CREPORT Listing (see page 432)
DREPORT Listing (see page 433)
IREPORT Listing (see page 436)
JREPORT Listing (see page 436)
QREPORT Listing (see page 437)
SREPORT Listing (see page 437)

AREPORT Listing

The following table lists AREPORTs by module number.

AREPORT Module	Report Name	KEY Parameter
001	ADS Dialogs and Their Components—Detail	
002	ADS Dialogs and Their Components—Key	KEY PROG-NAME-051 'dialog-name'
003	ADS Dialogs by Process Key	KEY MOD-NAME-067 'process-name'
004	ADS Dialogs by Record Key	KEY RSYN-NAME-079 'record-name'
005	ADS Dialogs by Subschema Key	KEY SS-NAM-026 'subschema-name'
006	ADS Dialogs by Map Key	KEY MAP-NAME-098 'map-name'

CREPORT Listing

The following table lists CREPORTs by module number.

Module Number	Report Name
001	Network Description by Line(1)
002	Network Description by Physical Terminal(1)
003	Network Description by Logical Terminal(1)
004	Program Description(1)
005	Task Description(1)
006	Queue Description(1)
007	Destination Report(1)
011	System Options(1)
014	Network Description by Line(2)
015	Network Description by Physical Terminal(2)
016	Physical Terminals Within Line(2)
017	Network Description by Logical Terminal(2)
018	Logical Terminal by Physical Terminal(2)
019	Program Description(2)
020	Task Description(2)
021	Task Description Within Program(2)
022	Queue Description(2)
023	Queue Description Within Task(2)
024	Destination Report(2)
025	System Options(2)
028	Defined Messages
029	Defined Devices
030	Map Record Indices
031	Map Field Indices
032	Listing of Maps by Panel
033	Listing of Maps
034	Listing of Maps by Record Name

Module Number	Report Name
035	Listing of Maps by Element Name
040	ADS OnLine Report(1)
041	OLQ Report(1)
043	Listing of Nodes
044	Listing of Defined Resources
045	ADS OnLine Report(2)
046	OLQ Report(2)
047	SQL CACHE Report(2)
048	SQL CACHE Report(1)
050	Load Area Modules
051	Module Text to Output File Utility
052	Module Text to Output File Utility
053	Symbol Table Report

Note:

(1) Object reports (2) Source reports

DREPORT Listing

The following table lists DREPORTs by module number.

Module Number	Report Name
00	Housekeeping Module
001	Class Report—Detail
002	Attribute Report—Detail
003	System Report—Detail
004	User Report—Detail
005	Program Report—Detail
006	Module Report—Detail
007	File Report—Detail
008	Record Report—Detail

Module Number	Report Name
009	Element Report—Detail
010	Inactive Element Report— Detail
011	Task Report—Detail
012	Queue Report—Detail
013	Destination Report—Detail
014	Logical Terminal Report—Detail
015	Physical Terminal Report—Detail
016	Line Report—Detail
017	Panel Report—Detail
018	Map Report—Detail
019	User-Defined Entity Report—Detail
020	File/Record Cross-Reference Report
021	File Synonym Cross-Reference Report
022	Record Synonym Cross-Reference Report
023	Element Synonym Reference Report
024	Element Description Cross-Reference Report
025	Element Designator Cross-Reference Report
026	File Activity Report
027	IDMS Set Activity Report
028	IDMS Record Activity Report
029	IDMS Area Activity Report
030	Element/Program Cross-Reference Report
038	Record/Attribute Report—Key
039	Element/Attribute Report—Detail
050	Level Number Report
051	Module Text to Card Utility
052	Module Text to Output File Utility
053	System Report—Summary
054	User Report—Summary
055	Program Report—Summary

Module Number	Report Name
056	Module Report—Summary
057	File Report—Summary
058	Record Report—Summary
059	Element Report—Summary
061	Task Report—Summary
062	Queue Report—Summary
063	Destination Report—Summary
064	Logical Terminal Report—Summary
065	Physical Terminal Report—Summary
066	Line Report—Summary
067	Panel Report—Summary
068	Map Report—Summary
071	Class Report—Key
072	Attribute Report—Key
073	System Report—Key
074	User Report—Key
075	Program Report—Key
076	Module Report—Key
077	File Report—Key
078	Record Report—Key
079	Element Report—Key
081	Task Report—Key
082	Queue Report—Key
083	Destination Report—Key
084	Logical Terminal Report—Key
085	Physical Terminal Report—Key
086	Line Report—Key
087	Panel Report—Key
088	Map Report—Key
089	User-Defined Entity Report—Key

Module Number	Report Name
090	Catalog Summary Report
091	Catalog Detail Report
092	Group Detail Report
093	User Detail Report
094	Folder Detail Report
095	Object Detail Report
096	Catalog Summary Key Report
097	Catalog Detail Key Report

IREPORT Listing

The following table lists IREPORTs by module number.

Module Number	Report Name
001	Row Level Security Summary Report
002	Row Level Security Detail Report
003	Row Level Security Summary Report by User
004	Row Level Security Detail Report by User
005	Row Level Security Summary Report by Owner/Security Name

JREPORT Listing

The following table lists JREPORTs by module number.

Module Number	Report Name
000	Housekeeping Module
001	Transaction Summary
002	Program Termination Statistics
003	Program I/O Statistics
004	Program Summary
005	Detail Area/Transaction

Module Number	Report Name
006	Detail Program/Area
007	Area Summary
008	Formatted Record Dump
009	User ID
010	External User Identity
011	Count By Journal Record Type

QREPORT Listing

The following table lists QREPORTs by module number.

Module Number	Report Name
001	SQL Column Name Report
002	SQL Table Information Report
003	SQL Schema Information Report
004	SQL Access Module Information Report
005	SQL Table Access Report
006	SQL Table Syntax Report
007	SQL Table Index Report
008	SQL Table Constraint Report

SREPORT Listing

The following table lists SREPORTs by module number.

Module Number	Report Name
00	Housekeeping Module
001	IDMS Statistics - Histogram Report
003	IDMS DC System Statistics
005	IDMS DC Statistics by User Id
006	IDMS DC Statistics by Lterm Id

Module Number	Report Name
007	IDMS DC Task Statistics by Task Code
008	IDMS DC ERUS Task Statistics by Accounting Data
009	IDMS DC ERUS Task Statistics by Program
010	IDMS DC Transactions Statistics by User Id
011	IDMS DC Transaction Statistics by Lterm Id
012	IDMS DC Task Summary
013	IDMS DC Program Summary
014	IDMS DC Queue Summary
015	IDMS DC Line Summary
016	IDMS DC Physical Terminal Summary
017	Summary of Records Read
018	ADS OnLine Statistics by User Id
019	ADS OnLine Statistics by Dialog and Version Number
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