

E-SRF

**EKC Security
Reporting Facility**

Access Analysis Reports Guide for ACF2



E-SRF V2R1
EKC Inc.
E9808106-1

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- 3) the Software does not introduce any MVS integrity exposures. The program code, with the exception of one utility, runs totally in non-authorized, problem state. The one utility, EKCRXCAT, requires APF-authorization to read the MVS System Catalogs.
- 4) the software shall be year 2000 compliant, and shall function correctly in the next century according to published specifications as long as regular software maintenance is applied.

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Chapter 1 : E-SRF ACF2 Access Analysis Reports

Introduction

For data owners, determining who can access their datasets, and under what conditions, is a challenge with ACF2.

To begin with, ACF2 uses an algorithmic technique for determining access, which means that individual datasets are usually not listed in the ACF2 access rules, but masks and patterns are used to describe which rules apply to which datasets. Compounding that is the extensive use of the ACF2 NEXTKEY facility, which allows the ACF2 rule sets to jump from one to another during access determination.

All this makes it very difficult for a data owner to relate who can access his or her data and under what conditions. Similarly, the same condition exists for which users can access a resource owner's resources such as a CICS transaction.

On the other hand, it is important for a manager or supervisor to be able to determine what datasets or resources those people working for him or her can access and under what conditions. Also, in cases where individuals are assigned multiple Logonids with a common field that uniquely identifies the user (such as Social Security Number or Employee ID Number), E-SRF reports can display all of the datasets and resources an individual can access with all of his or her Logonids.

For Security Administrators, changing ACF2 rules involves the analysis of exactly what effect the change will have on access and also what potential side effects can be caused. E-SRF provides the capability to display which different accesses will be allowed for a potential rule set change.

For Security Administrators and Auditors, E-SRF provides the capability to display which different accesses are allowed between two different versions of the ACF2 databases. These different versions can be an original and a proposed version, as is used in the case of the proposed access or resource rule sets or between the versions on two different dates – such as the analysis of all different access authority between the 1st of this month versus the 1st of last month. This report can be useful to both the supervisory security administrators and to auditors.

E-SRF supplies several utilities necessary for creating the input for the access analysis report generators. These are:

- EKCRXCAT - Generates the dataset names from the system catalogs
- EKCRDMSK - Generates the dataset name masks from the ACF2 access rules
- EKCR RMSK - Generates the resource name masks from the ACF2 resource rules

The seven E-SRF analysis reports provide the needed information.

- EKCRADDS - DataOwner Dataset Report
- EKCRADRS - DataOwner Resource Report
- EKCRALDS - LogonidOwner Dataset Report
- EKCRALRS - LogonidOwner Resource Report
- EKCRAPRC - Proposed Rule Processor
- EKCRASDF - System Differences Report
- EKCRADDR - Database Differences Report

Note on User Identification String Displays

When the reports display the ACF2 UID string, it is in several different formats. If the UID string is presented as a mask, as it would be used in an ACF2 rule, the trailing asterisks are truncated, exactly as ACF2 would do. In all displays of User Identification Strings, blanks within a UID string are replaced with an underscore (_).

Note on Logonid Displays

Most Logonid displays are of the form S-LOGONID. If the "S-" portion of the display is blank, then the Logonid is active. If it contains an S, E, or C, the Logonid is Suspended, Expired, or Canceled.

Export Data Files

Optionally, the E-SRF/ACF2 Access Analysis system can produce data files in either Personal Computer Data Interchange Format or in mainframe type fixed field width records. See the section on Export Data Files for further information. These files can then be used as input to subsequent installation-developed reporting facilities or exported to a PC-type file server for use in a database.

Access Analysis Report Exits

The Access Analysis Report Exits were created because some installations use the ACF2 Pre-validation exit to actually change the dataset or resource name or to force a rule set key. If you are using the Pre-validation exit in ACF2, review the section on exits later in this guide to determine if you need to use them.

Wrapper Definitions

The Access Analysis Reports (EKCRADDS, EKCRADRS, EKCRALDS, EKCRALRS, EKCRAPRC, EKCRASDF, and EKCRADDR) have the capability of producing a front and back page “wrapper” that contains installation specified information. If you want to invoke this feature, review the section on Wrappers.

ACF2 Release 6.2 Resource Controls for Logonid Privileges

E-SRF fully supports ACF2 Release 6.2 Resource Controls for Logonid Privileges (See the CA-ACF2 6.2 MVS Release Guide for more information on its function). Please review the section on Resource Controls for Logonid Privileges for more information.

Chapter 2 : EKCRXCAT – Catalog Dataset Name Generator

Description

This program reads the MVS Master Catalog and User Catalogs and produces a sequential dataset with an entry for each dataset found in the catalogs. This listing can then be used as input for the DataOwner and LogonidOwner Reports.

The DDNAME **CATALOGS** may be specified as an output file containing a list of the catalogs processed. To use this DDNAME, you must specify a JCL PARM field of "DASD". In this case, certain output fields are modified and an additional output dataset is created to make the output more usable by DASD managers.

JCL Statements

```
//EKCRXCAT EXEC PGM=EKCRXCAT,REGION=2048K
//SYSPRINT DD  SYSOUT=A
//DSNAMES DD   DSN=output dataset for a list of dataset names
//CATALOGS DD  DSN=optional output dataset for a list of catalogs
//SYSUT1 DD   UNIT=VIO,SPACE=(TRK,(5,5))
//SYSUT2 DD   UNIT=VIO,SPACE=(TRK,(5,5))
```

Note: The output of the EKCRXCAT service program must be sorted so that the dataset names are in alphabetical order prior to being usable by DataOwner or LogonidOwner Dataset Reports. The dataset name begins in Column 17 of the output. Use SORT FIELDS=(17,44,CH,A).

Output Format - Standard

- | | |
|-------------------|---|
| Col 1-8 | SYSID (SMF system identifier) of the system that EKCRXCAT ran on. |
| Col 9-16 | Volser that dataset resides on or *GDG in the case of a GDG (generation data group). The "generic" use of "*****" (six asterisks) to indicate the IPL volume will be replaced with the actual Volser of the IPL volume in use. Eight asterisks indicate that EKCRXCAT was unable to locate the Volser in the catalog records. For Alias entries, EKCRXCAT will set Volser to the actual Volser of the real dataset. |
| Col 17-... | variable length, with a minimum of 44 characters. The dataset name from the catalog entry. |

Sample Output

```
                                ESRF:  CATALOG DATASET NAME GENERATOR
MON, JUNE 3, 1996                                PAGE...1
PROCESSING JOURNAL:
EKCRXCAT-900 PROCESSING CATALOG: MVS55.MASTER.CATALOG
EKCRXCAT-900 PROCESSING CATALOG: USERCAT.MVS5D
EKCRXCAT-901 CATALOG STATISTICS:
  CATALOGS PROCESSED:           2
  RECORDS READ:                 4,356
  RECORDS SKIPPED:              10
  NONVSAM ENTRIES:             2,142
  CLUSTER ENTRIES:             63
  GDG ENTRIES:                  1
  ALIAS ENTRIES:                1,113
  USER CATALOGS:                2
  DSNAMES WRITTEN:             3,978
EKCRXCAT-902 PROCESSING COMPLETE -- OUTPUT MUST BE STORED PRIOR TO USE BY DATAOWNER REPORTS
EKCRXCAT-903 SORTING SHOULD BE DONE USING:  SORT FIELDS=(17,44,CH,A)
```

Output Format - DASD Request

To invoke the DASD Request format output, use the following EXEC Statement:

```
//EKCRXCAT EXEC PGM=EKCRXCAT,REGION=2048K,PARM='DASD'
```

- Col 1-4** nnnn - the sequence number of the catalog being processed. The Master Catalog will begin with 0000 and subsequent catalogs processed will be 0001, 0002, etc.
- Col 5** The dataset type:
- A** Alias entry
 - C** Catalog entry - defines the name of the catalog being processed
 - X** Catalog entry index name - the index component name of the catalog entry
 - U** User Catalog Name
 - N** Non-VSAM dataset
 - V** VSAM Cluster Name
 - D** VSAM Cluster Data Component Name
 - I** VSAM Cluster Index Component Name
- Col 6-8** blank
- Col 9-16** The Volser that the dataset resides on. With the following exceptions:
- *GDG** For Generation Data Group definitions
 - *ALIAS** For Alias definitions
 - ******* For datasets cataloged on the "generic" IPL volume
- Col 17-...** variable length, with a minimum of 44 characters. The dataset name from the catalog entry.

Output Files

Standard Standard format records are written to the DSNAMES ddname.

DASD In DASD mode, all of the records are written to the DSNAMES ddname and, additionally, the “C” records are also written to the CATALOGS ddname.

Chapter 3 : EKCRDMSK - Access Rule Dataset Mask Generator

Description

This program reads the ACF2 Access Rules backup sequential dataset and produces a sequential dataset containing an entry for each unique access rule mask that it finds. Note that it skips access rule masks in which the high-level index is -. or *-. since these are not usable for input to the DataOwner Reports. These masks would be produced by the use of an ACF2 **NEXTKEY** with the target rule set not having a specific **\$PREFIX** specified. A warning message is issued each time this type of entry is skipped.

Note: The output of the EKCRDMSK program is an excellent, quick tool to use for testing the system. Because of the condition mentioned above that may ignore some dataset names, it is recommended that you use EKCRXCAT when you are performing actual analysis using the reports.

JCL Statements

```
//EKCRDMSK EXEC PGM=EKCRDMSK
//SYSPRINT DD   SYSOUT=A
//BKRULES  DD   DISP=SHR,DSN= ACF2 backup rules dataset
              (sequential)
//DSNAMES  DD   DISP=OLD,DSN=output dataset for list of access rule
              dataset masks
```

This dataset should be BLKSIZE=4096, VB, LRECL=267.

Sample Output

ESRF: ACF2 DATASET NAME GENERATOR		
MON, JUNE 3, 1996		PAGE...1
PROCESSING JOURNAL:		
ACCESS RULES - RECORDS READ:	14,360	
RULE MASKS READ:	18,649 -- KEPT:	13,802
DATASET MASKS WRITTEN:	13,802	
CPUI	DATASET	ACCTNG.-
CPUI	DATASET	PAYROLL.-
CPUI	DATASET	SYS1.-
CPUI	DATASET	SYS2.-
CPUI	DATASET	SYS3.-
CPUI	DATASET	TEST.-

Chapter 4 : EKCRMSK - Resource Rule Mask Generator

Description

This program reads the ACF2 Information Storage Database backup sequential dataset and produces a resource name listing for each unique resource name mask it encounters.

JCL Statements

```
//EKCRMSK EXEC PGM=EKCRMSK
//STEPLIB DD DSN=E-SRF LOAD LIBRARY
//SYSPRINT DD SYSOUT=A
//BKINFO DD DISP=SHR,DSN= ACF2 backup information storage dataset
           (sequential)
//RSNAMES DD DISP=OLD,DSN=output dataset for list of resource rule
           masks
```

This dataset should be BLKSIZE=4096, VB, LRECL=267.

Sample Output

ESRF: ACF2 RESOURCE NAME GENERATOR		
MON, JUNE 3, 1996		PAGE...1
PROCESSING JOURNAL:		
INFOSTORAGE - RECORDS READ:	15,942	
RESOURCE RULES - RECORDS READ:	4,321	
RULE MASKS READ:	22,901 -- KEPT:	17,620
RESOURCE MASKS WRITTEN:	17,620	
CPUI	CKC	ACC-
CPUI	CKC	PA-
CPUI	CKC	ST-

Chapter 5 : EKCRADDS - DataOwner Dataset Report

☞ Who Can Access My Datasets?

Description

The E-SRF DataOwner Dataset Report provides the Data Owner an overview of who can access his or her datasets, under what conditions, and who has the authority to modify the ACF2 Access Rules that determine those access conditions.

The input control keywords are as follows:

TITLE(title) - the title that will appear on the top of each page of the report output. If this is not specified, a generic title will be used describing the dataset group being processed.

GROUP(groupname-mask1, groupname-mask2, ...) - the dataset groups to be processed. The groupnames are based upon the E-SRF Grouping Rules. If no grouping rules exist for the Groupname specified, datasets with the same high level index as the Groupname specified will be selected. Multiple **GROUP** parameters are allowed.

UGROUP(groupname-mask1,groupname-mask2, ...) – This allows selection of the users to be processed based upon the EKC Grouping Rules (*see the E-SRF Grouping Facility Guide*). The EKC Grouping Rules allow the selection of Users based upon algorithmic rules. Multiple disparate users can be combined to form a single group. Multiple **UGROUP** keywords may be specified

INDEX(high-level-index-mask) - If the **INDEX** keyword is specified, the **GROUP** keyword is ignored and datasets matching the high-level-index will be selected. References to the Grouping Rule database are not made. If you wish to select based upon more than one index, or via the second or third level indices, Grouping Rules should be used.

SELECT(Lidrec Field 1, Lidrec Field 2, ...) - A list of Logonid Field Names and Masks that will be used to limit the processing to selected Logonid Records.

Example: **SELECT(DEPARTMENT(A), AREA(C*),-SECURITY)**

The Logonid Records are read and Logonids that match all of the specified criteria will be selected. Character and bit fields are supported. A negative test can be done as in **SELECT(-SECURITY)** indicated by a leading minus sign. Many **SELECT** keywords may be specified and any number of fields may be specified within a single **SELECT** keyword as long as the total number of fields selected upon is no more than 16.

The SELECT keyword can also be used to select Logonid Records by the Resource Grouping Rules. In this case, the format of the SELECT keyword is:

```
SELECT(GROUPUSER(class,imageid))
```

where “class” specifies the resource class (usually USERS) and “imageid” specifies the security image that users are to be selected from. In a single image system, imageid is usually irrelevant, but something must be specified. If the Logonid Record is a member of one of the Groups specified in the **GROUP** keyword, then the user will be selected.

Example: **SELECT(GROUPUSER(USERS,CHICAGO))**

INCCANCELED - Normally, Logonids that are in CANCELED status (the CANCEL bit is on) will be excluded from further processing. This option forces the report to include them.

INCSUSPENDED - Normally, Logonids that are in SUSPENDED status (the SUSPEND bit is on) will be excluded from further processing. This option forces the report to include them.

INCEXPIRED - Normally, Logonids that have expired (the EXPIRE date in the Logonid Record has passed) will be excluded from further processing. This option forces the report to include them.

INCFIRECALL - Include the accesses allowed by the ETF/A Firecall UID String.

DSNAMES(ddname1,ddname2, ... ,ddname8) - a list of the DDnames which contain the dataset names and volume-serial number to be processed. The default, if no **DSNAMES** keyword is specified, is **DSNAMES**. E-SRF supplies a program (**EKCRGCAT** or **EKCRXCAT**) that reads the catalog or the **EKCRDMSK** program to read the ACF2 Access Rules and produces a dataset suitable for input to this report processor. Installations may want to supplement the list supplied by the catalog by generating dataset names from the Tape Management System Catalog, etc.

DSL**LIST** - a card-image file to be used as input. See file description below for details. Do not use **GROUP** or **INDEX** selection. All datasets described in the DSLIST file are used for processing.

COMMENTS - indicates that the Grouping Rule Comments, if any, are to be displayed along with each dataset name.

LIDFIELDS(lidfield1,lidfield2, ... , lidfield8) - a list of additional fields to be displayed when this report displays a Logonid Record. The report always displays the Logonid, User Identification String, and the Name fields. Additional defined Character, Binary, Date and Switch fields may be displayed along with these fields as long as the total displayed length fits on one print line. Currently, the default available space is 50 characters. The keywords NONAME and NOUID can be used to eliminate printing of these fields to provide additional space.

SORTBY(lidfield1,lidfield2, ... , lidfieldn) - a list of Logonid Record Fields that are used to generate a sort key that will be used to sort the Logonid Records in the report displays. The maximum length of the Sort Key is 256 characters and it may be composed of Character, Binary, Date, or Bit fields in the Logonid Record.

COMPRESS(mask1,mask2,...,mask16) - a mask that will be used to compress groups of datasets, such as Generation Data Groups or DB2 archive datasets, down to a single dataset for the purposes of this report. Digits in the mask indicate numbers in the index segment. The default compression masks are: G0000V00, A0000000, and B0000000. Parameters specified in this field will add to the defaults, not replace them.

LINES(n-lines) - the number of lines per page of output - 55 is default.

LISTSELECT - List the Logonids selected by the SELECT keyword options.

LISTUPGD – list the Logonid Records Upgraded due to Resource Controls for Logonid Records.

MAXUSERS(m-users) - the number of Logonid Records to display at any one point in the output. If this limit is reached, a message indicating this is produced and the remainder of the Logonid Record displays are skipped. The maximum value for this field is 9999, although the letter “U” can be used for “unlimited.” The default value is 50. If zero is specified, no Logonid Records will be displayed in sections 2-4 of the report.

MODIFYONLY - specifies that the report output include only dataset accesses of WRITE or ALLOCATE. Any access that is READ or EXECUTE only will be ignored.

RULEPRINT(ALL|REF|NONE) - Section 4 of the report prints the rules and rule lines that have been referenced in addition to the number of references they have had. **ALL**, which is the default, prints all of the rule lines in each rule set with the text “**UNREFERENCED**” next to rule lines that have not been referenced. **REF** prints the rule set control lines (\$ and % lines) and only those rule lines with a non-zero reference count. **NONE** skips section 4 reporting altogether.

NORULEMOD - When printing Section 4 of the report, which displays the rule sets accessed, bypass printing of the list of Logonids that can modify the rule sets.

NOSEC0LIDS - skip printing of Canceled, Suspended, and Expired Logonids in the Processing Journal portion of the output.

NOSEC1 - skip Section 1 of the Report -- Access without ACF2 rules and without generating Loggings.

NOOWNEDPFX - causes Logonids where the owned dataset prefix is equal to the Logonid not to be printed in section 1.

NOSEC2 - skip Section 2 of the Report -- Access without ACF2 rules, but with Loggings.

NOSEC4 - skip Section 4 of the Report -- display of rule sets used. Same functionality as **RULEPRINT(NONE)** keyword.

PRELOAD - Preload all dataset access rules at initialization time. This saves run time if a great many rule sets are accessed. This is the default if **INDEX(-)** is specified.

SEPARATE - No operands. Do not combine datasets with identical access patterns. Generates a separate listing for each dataset to be printed.

SUMMARY - No operands. Generate SUMMARY report for Section 3 -- access via the ACF2 rules -- rather than listing environments, etc.

EXPORT(DIF|RECORD) - produces an export dataset to the dataset defined in the EXPORT DD card in either DIF (comma delimited - data interchange format) or RECORD (fixed field width format) formats (see the section on EXPORT for more information). Note that if EXPORT is requested, SUMMARY output will also be produced.

EXIT(exitname)/NOEXIT - a module name that will be called to change a dataset name or force a rule set key prior to processing.

NULLRUN – Allow null export dataset when EXPORT is specified.**UID(uid data)** – UID string data that will be compared to the UID string in your rules. Select only rule lines with UID strings that **exactly** match the specified **uid data** for special processing. This is not a masked compare, although the uid data may be a mask.

Only one UID parameter is permitted be specified. UID may be specified in three ways as described below:

When specified alone, all users allowed access by rule lines that **exactly** match **UID(uid data)** will be represented on the report by a single line indicated by *****All UID***** and the uid mask, instead of a separate line for each user. Use the **UID()** parameter in this way to condense long lists of known users to single lines in your reports.

When specified with the **BYPASS** parameter, you can exclude reporting of accesses allowed by rule lines specifying **UID(uid data)**.

When specified with **ONLY**, you can restrict reporting to only those accesses allowed by rule lines specifying **UID(uid mask)**.

BYPASS – Use with the UID parameter to exclude processing of rule lines that specify that **exact** uid mask. All other rule lines, including rule lines specifying UID(*), will be processed. Use this parameter to tailor your report to exclude accesses by a specific subset of your users.

ONLY – Use with the UID parameter to include only rule lines that specify that **exact** uid mask. All other rule lines, including rule lines specifying UID(*) will **not** be processed. Use this parameter to tailor your report to accesses by a specific subset of your users.

Examples:

Specifying **ONLY UID(EKC*****)**

Will include processing for the rule line:

UID(EKC***) ALLOW**

But not rule lines:

UID(EKC***ABC) ALLOW**

UID(*) ALLOW

Specifying BYPASS UID(*****ABC)

Will include processing for all rule lines except:

UID(*****ABC) ALLOW

And will include processing for:

UID(*) ALLOW

Specifying UID(**ACT*****)

Will include processing for all rule lines, but will format the report so that all accesses granted by the rule line:

UID(**ACT*****) ALLOW

Will be condensed to a single report line for each set of resources with:

Logonid UID

** ALL UID** **ACT*****

Optional input file definition: DSLIST

DSLIST defines a card-image file that contains a list of datasets whose access patterns are to be analyzed. No selection is made via either the GROUP or INDEX processes -- all datasets within the DSLIST file are processed. Duplicates are eliminated.

Input is defined as:

Asterisk or blank in column 1 -- a comment.

Dataset names -- one per card, beginning in column 1.

```
//DSLIST DD *  
  
*  
  
* This is the data input stream from the DSLIST ddname  
  
*  
  
ACF2.BKUP.INFO  
ACF2.BKUP.LIDS  
ACF2.BKUP.RULES  
  
*  
  
* End of input stream  
  
*  
  
/*
```

Report Sections

The output report is divided into five sections -- section 0 to section 4.

Section 0 - Processing Log

UID String Definition: the installation defined User Identification String as a list of the ACF2 Logonid Record Fields that make up the string.

ETF/A Presence: If an alternative ETF/A Identification String has been defined in the Logonid Record, it will be used for Access Permission processing.

Installation Exit Presence: Some installations, via an ACF2 supported exit, either modify the dataset names themselves prior to ACF2 processing or select an initial Access Rule Set Key to be used. This report supports an exit with similar functions. The report will indicate when an installation exit is active.

Input Control Cards: a listing of the input control cards read from the SYSIN dataset.

INFOSTORAGE Statistics: The report process reads the ACF2 Infostorage Backup Dataset in order to accumulate the **SCOPELISTS**. Only **SCOPELISTS** with **DSNSCOPES** are kept. The statistics show how many information storage records were read and how many were kept.

DATASET NAMES Statistics: The report process reads the datasets defined by the **DSNAMES** DDnames. As each dataset name is read, it is passed to the E-SRF Grouping Rule Interpreter. The Groupname returned is compared to the Group specified in the **GROUP** keyword. If there is a match, the dataset name is kept. If no Group is defined, the Grouping Rule Interpreter will return a groupname equal to the high level index. Note that the total number of dataset names displayed later in the report may be less than the number indicated as kept since duplicate names will not be displayed.

LOGONID DATABASE Statistics: If the **SELECT** parameter was used, this will indicate the number of Logonid Records that were read and the number that was available for processing after selection.

CANCELED Logonids: As the report process goes through the Logonid Records to determine whether they have access to the datasets in the group, a final check is made to determine whether the Logonid is in **CANCEL** or **SUSPEND** status or has **EXPIRED**. To bypass printing of these Logonids, use the **NOSEC0LIDS** keyword.

Note: If the Logonid is in **CANCEL** or **SUSPEND** status, or has **EXPIRED**, it cannot be used. However, these Logonids may at some time in the future become “uncanceled” and therefore have the ability to access datasets in the group. This is an informational warning for the DataOwner to be aware of this possibility.

```

                                ESRF:  ACF2 DATAOWNER DATASET REPORT
MON, JUNE 3, 1996 12:24
PAGE...1
INPUT PARAMETERS AND JOURNAL:

UID STRING DEFINED AS:  DIVISON, DEPT, AREA, FUNCTION, SITE, TYPE, LID

INPUT CONTROL CARDS:

GROUP(SYSTEMS)
LID(AREA,DEPT,EMPID)  MAXUSER(25)
EXCLUDE(SYS1)

INFOSTORAGE: RECORD READ: 14,495 -- SCOPELIST RECORDS WITH DSNSCOPES KEPT: 22

DATASET NAMES:  RECORDS READ: 10,325 -- MATCHING DATASET NAMES KEPT: 6 -- NUMBER WITHOUT DUPLICATES: 6

THE FOLLOING WERE ELIMINATED BECAUSE THEY WERE CANCELLED OR SUSPENDED.  THEY WOULD HAVE HAD ACCESS TO ONE OR
MORE DATASETS:

  STATUS          LOGONID  USER ID(UID) STRING  NAME          AREA  DEPT  EMPID
CANCELLED        USER01   ARPTXXCLKC1USER01   BROWN, JAY   XX    RPT   46210
SUSPENDE        USER46   ASYSRDPRGC4USER46   JONES, TOM   RD    SYS   20358
SUSPENDE        USER68   ASYSRDMGRC5USER68   TIMKIN, SALLY RD    SYS   34298

```

Section 1 - Access without Rules and without any Loggings

Access in this section is controlled by high-level index. ACF2 will allow a Logonid to access a dataset if the high-level index of the dataset matches the **PREFIX** field in the Logonid Record.

Additionally, special installation Logonids with the **MAINT** privilege are able to access all datasets in the installation if they are using special dataset maintenance programs (such as backup, restore, disk maintenance, etc.).

Section 2 - Access without Rules but with Loggings

In ACF2 processing, the Access Rules will be interpreted first. If the Logonid has some access permission defined in the rules, that access permission will be used (as in Read or Read and Log). However, if the Logonid is not allowed access under the rules, a check is made for a series of authorities such as Security Officer, Non-cancelable, Read-all, etc. If the Logonid has the one of these special authorities, the access is allowed and a special access permission logging record is generated.

For each Logonid with one of these permissions, the Logonid is displayed with the reason for the access permission.

Note: Access in this section may be controlled by the use of SCOPELISTS.

ESRF: ACF2 DATAOWNER DATASET REPORT						
MON, JUNE 3, 1996	PROCESSING FOR RESOURCES IN GROUP: SYSTEMS					PAGE...4
ACCESS WITHOUT RULES BUT WITH LOGGINGS:						
ACCESS PERMISSIONS FOR ALL DATASETS:						
STATUS	LOGONID	USER ID(UID) STRING	NAME	AREA	DEPT	EMPID
NON-CANCEL PRIV	USER01	ARPTXXCLKC1USER01	BROWN, JAY	XX	RPT	46210
NON-CANCEL PRIV	USER46	ASYSRDPRGC4USER46	JONES, TOM	RD	SYS	20358
SECURITY PRIV	USER68	ASYSRDMGRC5USER68	TIMKIN, SALLY	RD	SYS	34298

Section 3 - Access via ACF2 Rules – Summary

This report determines all of the access environments for each dataset processed. It then groups together datasets with an identical set of access environments.

Users are listed in the following format:

```
MLT RD WT AL EX      S-LOGONID  . . .
```

MLT - if blank, then only one path allowed the users access to the data. If “M”, there were multiple paths.

RD - read access. A=allow, L=log. If followed by an asterisk, there were conditions placed upon this access. Run the full report for details.

WT - write access. A=allow, L=log. If followed by an asterisk, there were conditions placed upon this access. Run the full report for details.

AL - allocate access. A=allow, L=log. If followed by an asterisk, there were conditions placed upon this access. Run the full report for details.

EX - execute access. A=allow, L=log. If followed by an asterisk, there were conditions placed upon this access. Run the full report for details.

ESRF: ACF2 DATAOWNER DATASET REPORT										
MON, JUNE 3, 1996 PROCESSING FOR DATASETS IN GROUP: SYSTEMS										PAGE...6
ACCESS VIA ACF2 RULES. FIRST DATASET IN GROUP: SYS2.BKUP										
DATASETS IN THIS GROUP:										
SYS2.BKUP			SYS2.DATA				SYS2.INFO			
SYS2.TEST										
MLT	RD	WT	AL	EX	S-LOGONID	UID	NAME	AREA	DEPT	EMPID
	A	A	A	A	USER11	ASYSRDPGRC1USER11	HOLT, ROY	RD	SYS	16537
	A	A	.	A	USER87	ASYSRDPGRC1USER87	RILEY, CINDY	RD	SYS	46290
	A	A	.	A	USER92	ASYSRDPGRC1USER92	JACOBSEN, DAVE	RD	SYS	38450
	A	A	.	A	USER96	ASYSRDPGRC1USER96	HACKETT, TIM	RD	SYS	38691

Section 3 - Access via ACF2 Rules - Detail

This report determines all of the access environments for each dataset processed. It then groups together datasets with an identical set of access environments.

Then, by sub-group, the report displays all of the datasets in each sub-group and each access environment with the Logonids that match the UID string defined in the environment.

ESRF: ACF2 DATAOWNER DATASET REPORT							
MON, JUNE 3, 1996		PROCESSING FOR DATASETS IN GROUP: SYSTEMS				PAGE...6	
ACCESS VIA ACF2 RULES.		FIRST DATASET IN GROUP: SYS2.BKUP					
DATASETS IN THIS GROUP:							
SYS2.BKUP		SYS2.DATA			SYS2.INFO		

UIDMASK:	ASYSRD	PROGRAM:	SOURCE:	SHIFT:	UNTIL:		
VOLSER:		WRITE:	DDNAME:	LIBRARY:			
READ:	ALLOW	ALLOW	ALLOC:	EXEC:	ALLOW	DATA:	
			PREVENT				
STATUS	LOGONID	USER ID(UID) STRING	NAME	AREA	DEPT	EMPID	
	USER11	ASYSRDPGRC1USER11	HOLT, ROY	RD	SYS	16537	
	USER87	ASYSRDPGRC1USER87	RILEY, CINDY	RD	SYS	46290	
	USER92	ASYSRDPGRC1USER92	JACOBSEN, DAVE	RD	SYS	38450	
	USER96	ASYSRDPGRC1USER96	HACKETT, TIM	RD	SYS	38691	

UIDMASK:	ISDADS	PROGRAM:	SOURCE:	SHIFT:	UNTIL:		
VOLSER:		WRITE:	DDNAME:	LIBRARY:			
READ:	ALLOW	ALLOW	ALLOC:	EXEC:	ALLOW	DATA:	
			ALLOW				
STATUS	LOGONID	USER ID(UID) STRING	NAME	AREA	DEPT	EMPID	
*** NO USERS MATCH SPECIFIED UID MASK ***							

Section 4 - Rule Sets Accessed

As each dataset is processed, for every rule line in the ACF2 Access Rule Sets that matches, the reference count for that line is incremented. This section displays all of the rule sets accessed and the reference count for each line.

Additionally, for each rule set displayed, the list of users who can modify the rule set is listed along with the reason why ACF2 would allow that modification.

ESRF: ACF2 DATAOWNER DATASET REPORT							
MON, JUNE 3, 1996		PROCESSING FOR DATASETS IN GROUP: SYSTEMS					PAGE...6
RULE SET ACCESSED:		SYS2					
REF COUNT	LINE						
	1	ACCESS RULE SYS2 STORED BY USER68 ON 06/14/94-11:10					
	2	\$KEY(SYS2)					
	3	\$OWNER(USER49)					
1	4	SYS2.- UID(-) NEXTKEY(SYSTEMS)					
THE FOLLOWING USERS CAN MODIFY THIS RULE SET							
STATUS	LOGONID	USER ID(UID)	STRING	NAME	AREA	DEPT	EMPID
SECURITY OFFICER	USER49	ASYSRDPGRC5	USER49	SMITH, ROGER	RD	SYS	11194
RULE SET ACCESSED:		SYSTEMS					
REF COUNT	LINE						
	1	ACCESS RULE SYSTEMS STORED BY USER68 ON 06/14/94-14:35					
	2	\$KEY(SYSTEMS)					
	3	\$PREFIX(SYS2)					
UNREFERENCED	4	SYS2.JCL UID(ASYSTP) READ(A) WRITE(A) ALLOC(A) EXEC(A)					
1	5	SYS2.- UID(ASYSRD) READ(A) WRITE(A)					
1	6	SYS2.- UID(ISDADS) READ(A) WRITE(A) ALLOC(A) EXEC(A)					
THE FOLLOWING USERS CAN MODIFY THIS RULE SET							
STATUS	LOGONID	USER ID(UID)	STRING	NAME	AREA	DEPT	EMPID
SECURITY OFFICER	USER49	ASYSRDPGRC5	USER49	SMITH, ROGER	RD	SYS	11194

JCL Statements for DataOwner Dataset Report

```
//EKCRADDS EXEC PGM=EKCRADDS
//SYSPRINT DD   SYSOUT=A
//BKRULES  DD   DISP=SHR,DSN= ACF2 backup rules dataset
                        (sequential)
//BKLIDS   DD   DISP=SHR,DSN= ACF2 backup Logonid dataset
                        (sequential)
//BKINFO   DD   DISP=SHR,DSN= ACF2 backup information storage dataset
                        (sequential)
//GRPRULES DD   DISP=SHR,DSN= E-SRF grouping rule compiler object
dataset
                                (optionally leave out GRPRULES if you are
not                                using the GROUP keyword)
//DSNAMES  DD   DISP=SHR,DSN= input list of dataset names or masks
                        created by                                the EKCRGECAT, EKCRXCAT or
                        EKCRDMSK programs                        (default DDNAME)
//EXPORT   DD   DISP=OLD,DSN= output file for Data Interchange Format
                        records
//SYSIN    DD   *
      INDEX(      ) or GROUP(      )
/*
```

Chapter 6 : EKCRADRS - DataOwner Resource Report

☞ Who Can Access My Resources?

Description

The E-SRF DataOwner Resource Report provides the Data Owner an overview of who can access his or her resources such as transactions, under what conditions, and who has the authority to modify the ACF2 Resource Rules that determine the access conditions.

The input control keywords are as follows:

TITLE(title) - the title that will appear on the top of each page of the report output. If this is not specified, a generic title will be used describing the dataset group being processed.

GROUP(groupname-mask1, groupname-mask2, ...) - the resource groups to be processed. The groupnames are based upon the E-SRF Grouping Rules. If no grouping rules exist for the groupname specified, transactions within the same type (or class) as the groupname specified will be selected. Multiple **GROUP** keywords are allowed.

UGROUP(groupname-mask1,groupname-mask2, ...) - This allows selection of the users to be processed based upon the EKC Grouping Rules (*see the E-SRF Grouping Facility Guide*). The EKC Grouping Rules allow the selection of Users based upon algorithmic rules. Multiple disparate users can be combined to form a single group. Multiple **UGROUP** keywords may be specified

RSGROUP(groupname-mask1, groupname-mask2, ...) - the resource groups to be processed. The groupnames are based upon the E-SRF Grouping Rules. If no grouping rules exist for the groupname specified, transactions within the same type (or class) as the groupname specified will be selected. Multiple **RSGROUP** keywords are allowed. **This parameter is the same as GROUP.** **CLASS**(resource type-mask) - if the **CLASS** keyword is specified, the **GROUP** keyword is ignored and all resources within the specified class will be selected. References to the Grouping Rule database are not made.

RESOURCES(ddname1,ddname2, ... ,ddname8) - a list of the DDnames which contain the resource names and classes to be processed. The default, if no **RESOURCES** keyword is specified, is **RSNAME**. E-SRF supplies a program (**EKCRMSK**) that reads the ACF2 resource rules and produces a dataset suitable for input to this report processor. Installations may want to supplement the list supplied by the catalog by generating resource names from transaction tables, etc.

RSLIST - use RSLIST file (ddname), a card-image file, as input. See file description below for details. Do not use **GROUP** or **CLASS** selection. All resources described in the RSLIST file are used for processing.

COMMENTS - indicates that the Grouping Rule Comments, if any, are to be displayed along with each resource name.

LIDFIELDS(lidfield1,lidfield2, ... , lidfield8) - a list of additional fields to be displayed when this report displays a Logonid Record. The report always displays the Logonid, User Identification String, and the Name fields. Additional Defined Character, Binary, Date and Switch fields may be displayed along with these fields as long as the total displayed length fits on one print line. Currently, the default available space is 50 characters. The keywords **NONAME** and **NOUID** can be used to eliminate printing of these fields to provide additional space.

SORTBY(lidfield1,lidfield2, ... , lidfieldn) - a list of Logonid Record Fields that are used to generate a sort key which will be used to sort the Logonid Records in the report displays. The maximum length of the Sort Key is 256 characters and it may be composed of Character, Binary, Date, or Bit fields in the Logonid Record.

SELECT(Lidrec Field 1, Lidrec Field 2, ...) - A list of Logonid Field Names and Masks that will be used to limit the processing to selected Logonid Records.

Example: **SELECT(DEPARTMENT(A), AREA(C*),-SECURITY)**

The Logonid Records are read and Logonids that match all of the specified criteria will be selected. Character and Switch fields are supported. A negative test can be done as in **SELECT(-SECURITY)** indicated by the leading minus sign. Any number of **SELECT** keywords may be specified and any number of fields may be specified within a single **SELECT** keyword as long as the total number of fields selected upon is no greater than 16.

The **SELECT** keyword can also be used to select Logonid Records by the Resource Grouping Rules. In this case, the format of the **SELECT** keyword is:

SELECT(GROUPUSER(class,imageid))

Where "class" specifies the resource class (usually **USERS**) and "imageid" specifies the security image that users are to be selected from. In a single image system, imageid is usually irrelevant, but something must be specified. If the Logonid Record is a member of one of the Groups specified in the **GROUP** keyword, then the user will be selected.

Example: **SELECT(GROUPUSER(USERS,CHICAGO))**

INCCANCELED - Normally, Logonids that are in **CANCELED** status (the **CANCEL** bit is on) will be excluded from further processing. This option forces the report to include them.

INCSUSPENDED - Normally, Logonids that are in **SUSPENDED** status (the **SUSPEND** bit is on) will be excluded from further processing. This option forces the report to include them.

INCEXPIRED - Normally, Logonids that have expired (the **EXPIRE** date in the Logonid Record has passed) will be excluded from further processing. This option forces the report to include them.

INCFIRECALL - Include the accesses allowed by the ETF/A Firecall UID String.

SKIP(cls1,cls2,...,cls16) - a list of classes to be skipped when processing. Use of this for resource classes that can be ignored (such as **TAC** - TSO Account Codes) can speed up processing considerably.

NOTE11 - Prior to supporting the **NEXTKEY** keyword on rule lines, ACF2 supported a **NOTE** extension that used a **\$KEY** value in the rule-data field. This keyword indicates to the DataOwner report that it should look in the **DATA** field of a rule for the **\$KEY** field.

LINES(n-lines) - the number of lines per page of output - 55 is default.

LISTGROUPS - List the ACF2 Resource Groups used to process each individual resource.

LISTSELECT - List the Logonids selected by the **SELECT** keyword options.

LISTUPGD – list the Logonid Records Upgraded due to Resource Controls for Logonid Records.

MAXUSERS(m-users) - the number of Logonid Records to display at any one point in the output. If this limit is reached, a message indicating this is produced and the remainder of the Logonid Record displays are skipped. The maximum value for this field is 9999, although the letter “U” can be used for “unlimited.” The default value is 50. If zero is specified, no Logonid Records will be displayed in Sections 2 and 3 of this report.

MODIFYONLY - specifies that the report output not include resource accesses of **SERVICE(READ)**. Only those accesses that modify the resource (**ADD**, **DELETE**, **UPDATE**) will be included. An access rule that does not specify a **SERVICE** will always be included.

PRELOAD - Preload all resource rules at initialization time. This saves run time if a great many rule sets are accessed.

PRIV-DEFS(type) - Process the ACF2 Resource Rules in type “type” that define the dynamic privilege upgrades for ACF2 beginning with Release 6.2. The output will be placed in the dataset defined by the **EXPORT** ddname and this dataset can be used in all subsequent reports as being defined by the **PRIVUPG** ddname. All of the reports will use this dataset of privilege upgrades in its processing.

RULEPRINT(ALL|REF|NONE) - Section 4 of the report prints the rules and rule lines that have been referenced in addition to the number of references they have had. **ALL**, which is the default, prints all of the rule lines in each rule set with the text “**UNREFERENCED**” next to rule lines that have not been referenced. **REF** prints the rule set control lines (**\$** and **%** lines) and only those rule lines with a non-zero reference count. **NONE** skips section 4 reporting altogether.

NORULEMOD - When printing Section 4 of the report, which displays the rule sets accessed, bypass printing of the list of Logonids that can modify the rule sets.

NOSEC0LIDS - Skip printing of Canceled, Suspended, and Expired Logonids in the Processing Journal portion of the output.

NOSEC2 - Skip Section 2 of the Report -- Access without ACF2 rules, but with Loggings.

NOSEC4 - Skip Section 4 of the Report -- display of rule sets used. Same functionality as **RULEPRINT(NONE)** keyword.

SEPARATE - Do not combine resources with identical access patterns. Generates a separate listing for each dataset to be printed.

SUMMARY - Generate **SUMMARY** report for Section 3 -- access via the ACF2 rules -- rather than listing environments, etc.

EXPORT(DIF|RECORD) - produces an export dataset to the dataset defined in the EXPORT DD card in either DIF (comma delimited - data interchange format) or RECORD (fixed field width format) formats (see the section on EXPORT for more information). Note that if EXPORT is requested, SUMMARY output will also be produced.

EXIT(exitname)/NOEXIT - a module name that will be called to change a resource name or force a rule set key prior to processing. This is the ESRF AA interface for your installation exit.

NULLRUN – Allow null export dataset when EXPORT is specified.

UID(uid data) – UID string data that will be compared to the UID string in your rules. Select only rule lines with UID strings that **exactly** match the specified **uid data** for special processing. This is not a masked compare, although the uid data may be a mask.

Only one UID parameter is permitted be specified. UID may be specified in three ways as described below:

When specified alone, all users allowed access by rule lines that **exactly** match **UID(uid data)** will be represented on the report by a single line indicated by *****All UID***** and the uid mask, instead of a separate line for each user. Use the **UID()** parameter in this way to condense long lists of known users to single lines in your reports.

When specified with the **BYPASS** parameter, you can exclude reporting of accesses allowed by rule lines specifying **UID(uid data)**.

When specified with **ONLY**, you can restrict reporting to only those accesses allowed by rule lines specifying **UID(uid mask)**.

BYPASS – Use with the UID parameter to exclude processing of rule lines that specify that **exact** uid mask. All other rule lines, including rule lines specifying UID(*), will be processed. Use this parameter to tailor your report to exclude accesses by a specific subset of your users.

ONLY – Use with the UID parameter to include only rule lines that specify that **exact** uid mask. All other rule lines, including rule lines specifying UID(*) will **not** be processed. Use this parameter to tailor your report to accesses by a specific subset of your users.

Examples:

Specifying `ONLY UID(EKC*****)`

Will include processing for the rule line:

```
UID(EKC***** ) ALLOW
```

But not rule lines:

```
UID(EKC*****ABC) ALLOW
```

```
UID(*) ALLOW
```

Specifying `BYPASS UID(*****ABC)`

Will include processing for all rule lines except:

```
UID(*****ABC) ALLOW
```

And will include processing for:

```
UID(*) ALLOW
```

Specifying `UID(**ACT*****)`

Will include processing for all rule lines, but will format the report so that all accesses granted by the rule line:

```
UID(**ACT*****) ALLOW
```

Will be condensed to a single report line for each set of resources with:

```
Logonid UID
```

```
** ALL UID** **ACT*****
```

Optional input file definition: RSLIST

RSLIST defines a card-image file that contains a list of resources whose access patterns are to be analyzed. No selection is made via either the GROUP or CLASS processes -- all resources within the RSLIST file are processed. Duplicates are eliminated.

Input is defined as:

Asterisk or blank in column 1 -- a comment.

Resource names -- one per card, beginning in column 1.

The Resource names MUST be in the following format:

```
1 45          . . .          71
```

```
t t t - n a m e
```

where: Cols 1-3: t t t = ACF2 Resource Type (always leave 3 characters)
 Col 4: - dash
 Cols 5-71: n a m e = ACF2 Resource Name

Blanks are allowed in the specification but the format must be followed exactly.

Report Sections

The output report is divided into four sections -- section 0 to section 3.

Section 0 - Processing Log

UID String Definition: The installation defined User Identification String as a list of the ACF2 Logonid Record Fields that make up the string.

ETF/A Presence: If an alternative ETF/A User Identification String has been defined in the Logonid Record, it will be used for Access Permission processing.

Installation Exit Presence: Some installations, via an ACF2 supported exit, modify the resource names themselves prior to ACF2 processing. This report supports an exit with similar functions. The report will indicate when an installation exit is active.

Input Control Cards: A listing of the input control cards read from the **SYSIN** dataset.

INFOSTORAGE Statistics: The report process reads the ACF2 Infostorage Backup Dataset in order to accumulate the **SCOPELISTS** and ACF2 resource rules. Only **SCOPELISTS** with Infostorage scopes are kept. The statistics show how many information storage records were read and how many were kept.

RESOURCE NAMES Statistics: The report process reads the resource names defined by the **RESOURCE** DDnames. As each resource name is read, it is passed to the E-SRF Grouping Rule Interpreter. The Groupname returned is compared to the Group specified in the **GROUP** keyword. If there is a match, the resource name is kept. If no Group is defined, the Grouping Rule Interpreter will return a groupname equal to the class name of the resource. Note that the total number of resource names displayed later in the report may be less than the number indicated as kept since duplicate names will not be displayed.

LOGONID DATABASE Statistics: If the **SELECT** parameter was used, this will indicate the number of Logonid Records that were read and the number that was available for processing after selection.

CANCELED Logonids: As the report process goes through the Logonid Records to determine whether they have access to the resources in the group, a final check is made to determine whether the Logonid is in **CANCEL** or **SUSPEND** status, or has **EXPIRED**. If the Logonid is in **CANCEL** or **SUSPEND** status, or has **EXPIRED**, it cannot be used. However, these Logonids may at some time in the future become "uncanceled" and therefore have the ability to access resources in the group. This is just an informational warning. To bypass printing of these Logonids, use the **NOSECOLIDS** keyword.

MON, JUNE 3, 1996 10:11
 INPUT PARAMETERS AND JOURNAL:

UID STRING DEFINED AS: DIVISON, DEPT, AREA, FUNCTION, SITE, TYPE, LID

INPUT CONTROL CARDS:

GROUP(SYSTEMS)
 LID(AREA, DEPT, EMPID) MAXUSER(25)
 EXCLUDE(SYS1)

INFOSTORAGE: RECORD READ: 14,493 -- SCOPELIST RECORDS WITH INFOSTORAGE-SCOPES KEPT: 18
 INFOSTORAGE: RESOURCE RULES EXCLUDED BY REQUEST: 11,652
 INFOSTORAGE: RESOURCE RULES KEPT: 2,304

RESOURCE NAMES: RECORDS READ: 13,955 -- MATCHING RESOURCE NAMES KEPT: 3 -- NUMBER WITHOUT DUPLICATES: 3

THE FOLLWOING ERE ELIMINATED BECAUSE THEY WERE CANCELLED OR SUSPENDED. THEY WOULD HAVE HAD ACCESS TO ONE OR MORE RESOURCES:

STATUS	LOGONID	USER ID(UID) STRING	NAME	AREA	DEPT	EMPID
CANCELLED	USER01	ARPTXXCLKC1USER01	BROWN, JAY	XX	RPT	46210
SUSPENDED	USER46	ASYSRDPRGC4USER46	JONES, TOM	RD	SYS	20358
SUSPENDED	USER68	ASYSRDMGRC5USER68	TIMKIN, SALLY	RD	SYS	34298

Section 2 - Access without Rules but with Loggings

Note: To stay compatible with the section numbering in EKCRADDS, there is no Section 1 in EKCRADRS. The Section 1 in EKCRADDS is for an analysis of the Owner Dataset Prefix field of the Logonid Record.

In ACF2 processing, the Resource rules will be interpreted first. If the Logonid has some access permission defined in the rules, that access permission will be used (as in Allow or Log). However, if the Logonid is not allowed access under the rules, a check is made for a series of authorities such as Security Officer, Non-cancelable, etc. If the Logonid has one of these special authorities, the access is allowed and a special access permission logging record is generated.

For each Logonid with one of these permissions, the Logonid is displayed with the reason for the access permission.

Note: Access in this section may be controlled by a information storage SCOPELISTS.

```
ESRF: ACF2 DATAOWNER RESOURCE REPORT
MON, JUNE 3, 1996 PROCESSING FOR RESOURCES IN GROUP: SYSTEMS PAGE...4
ACCESS WITHOUT RULES BUT WITH LOGGINGS:
ACCESS PERMISSIONS FOR ALL RESOURCES:

```

STATUS	LOGONID	USER ID(UID) STRING	NAME	AREA	DEPT	EMPID
NON-CANCEL PRIV	USER01	ARPTXXCLKC1USER01	BROWN, JAY	XX	RPT	46210
NON-CANCEL PRIV	USER46	ASYSRDPGRC4USER46	JONES, TOM	RD	SYS	20358
SECURITY PRIV	USER68	ASYSRDMGRC5USER68	TIMKIN, SALLY	RD	SYS	34298

```
RESOURCES IN THIS GROUP:
AKC-SSA1 PKC-SSP1 TKC-SST1
-----

```

STATUS	LOGONID	USER ID(UID) STRING	NAME	AREA	DEPT	EMPID
NON-CANCEL PRIV	USER32	ASYSRDPGRC4USER32	NELSON, DIANE	RD	SYS	20679
SECURITY OFFICER	USER49	ASYSRDPGRC5USER49	SMITH, ROGER	RD	SYS	11194

Section 3 - Access via ACF2 Rules - Summary

This report determines all of the access environments for each resource processed. It then groups together resources with an identical set of access environments.

Users are listed in the following format:

```
M PRM R A U D S-LOGONID . . .
```

M - if blank, then only one path allowed the users access to the data. If "M", there were multiple paths.

PRM - access permission. ALW=allow, LOG=log. If followed by an asterisk, there were conditions placed upon this access (other than the SERVICE keyword). Run the full report for details.

R - Read was specified in the SERVICE keyword.

A - Add was specified in the SERVICE keyword.

U - Update was specified in the SERVICE keyword.

D - Delete was specified in the SERVICE keyword.

ESRF: ACF2 DATAOWNER RESOURCE REPORT											
MON, JUNE 3, 1996 PROCESSING FOR RESOURCES IN GROUP: SYSTEMS							PAGE...6				
ACCESS VIA ACF2 RULES. FIRST RESOURCE IN GROUP: AKC-SSAL											
RESOURCES IN THIS GROUP:											
AKC-SSAL											
M	PRM	R	A	U	D	S-LOGONID	UID	NAME	AREA	DEPT	EMPID
	ALW	.	.	.	.	**ALL USERS**					
	ALW	R	.	.	.	USER11	ASYSRDPGRCLUSER11	HOLT, ROY	RD	SYS	16537
	ALW	R	A	.	.	USER87	ASYSRDPGRCLUSER87	RILEY, CINDY	RD	SYS	46290
	ALW	R	A	.	.	USER92	ASYSRDPGRCLUSER92	JACOBSEN, DAVE	RD	SYS	38450
	ALW	R	A	U	D	USER96	ASYSRDPGRCLUSER96	HACKETT, TIM	RD	SYS	38691

Section 3 - Access via ACF2 Rules - Detail

This report determines all of the access environments for each resource processed. It then groups together resources with an identical set of access environments.

Then, by group, the report displays all of the resources in each group and each access environment with the Logonids that match the UID string defined in the environment.

```
ESRF: ACF2 DATAOWNER RESOURCE REPORT
MON, JUNE 3, 1996 PROCESSING FOR RESOURCES IN GROUP: SYSTEMS PAGE...6
ACCESS VIA ACF2 RULES. FIRST RESOURCE IN GROUP: AKC-SSAL

RESOURCES IN THIS GROUP:
AKC-SSAL
-----
UIDMASK: ASYSRD SOURCE: SHIFT: UNTIL:
SERVICE: VERIFY: NO RECCECK:
ACCESS: ALLOW DATA:

STATUS LOGONID USER ID(UID) STRING NAME AREA DEPT EMPID
USER11 ASYSRDPGCLUSER11 HOLT, ROY RD SYS 16537
USER87 ASYSRDPGRC1USER87 RILEY, CINDY RD SYS 46290
USER92 ASYSRDPGRC1USER92 JACOBSEN, DAVE RD SYS 38450
USER96 ASYSRDPGRC1USER96 HACKETT, TIM RD SYS 38691
-----
UIDMASK: ISDADS SOURCE: SHIFT: UNTIL:
SERVICE: VERIFY: NO RECCECK:
ACCESS: ALLOW DATA:

STATUS LOGONID USER ID(UID) STRING NAME AREA DEPT EMPID
*** NO USERS MATCH SPECIFIED UID MASK ***
```

Section 4 - Rule Sets Accessed

As each resource is processed, for every rule line in the ACF2 Resource Rule Sets that matches, the reference count for that line is incremented. This section displays all of the rule sets accessed and the reference count for each line.

Additionally, for each rule set displayed, the list of users who can modify the rule set is listed along with the reason why ACF2 would allow that modification.

ESRF: ACF2 DATAOWNER RESOURCE REPORT							
MON, JUNE 3, 1996		PROCESSING FOR RESOURCES IN GROUP: SYSTEMS					PAGE...6
RULE SET ACCESSED:		AKC-SSA1					
REF COUNT	LINE						
	1	RESOURCE RULE SSA1 STORED BY USER68 ON 06/14/94-11:10					
	2	\$KEY(SSA1) TYPE(AKC)					
1	3	UID(ASYSRD) ALLOW					
1	4	UID(ISDADS) ALLOW					
THE FOLLOWING USERS CAN MODIFY THIS RULE SET							
STATUS	LOGONID	USER ID(UID) STRING	NAME	AREA	DEPT	EMPID	
SECURITY OFFICER	USER49	ASYSRDPGRC5USER49	SMITH, ROGER	RD	SYS	11194	

JCL Statements for DataOwner Resource Report

```
//EKCRADRS EXEC PGM=EKCRADRS
//SYSPRINT DD SYSOUT=A
//BKLIDS DD DISP=SHR,DSN= ACF2 backup Logonid dataset
           (sequential)
//BKINFO DD DISP=SHR,DSN= ACF2 backup information
           storage dataset (sequential)
//GRPRULES DD DISP=SHR,DSN= E-SRF grouping rule compiler object dataset
           (optionally leave out GRPRULES if you are not using the GROUP
           keyword)
//RSNAMES DD DISP=SHR,DSN= input list of resource names or masks created by
           the EKCRMSK program
           (default DDNAME)
//EXPORT DD DISP=OLD,DSN= output file for Data Interchange Format records
//SYSUT1 DD UNIT=SYSDA,SPACE=(TRK,(50,10)),DISP=(NEW,DELETE)
//SYSIN DD *
          CLASS( ) or GROUP( )
/*

/* SAMPLE REPORT USING RSLIST INPUT
/*
//EKCRADRS EXEC PGM=EKCRADRS
//SYSPRINT DD SYSOUT=A
//BKLIDS DD DISP=SHR,DSN= ACF2 backup Logonid dataset
//BKINFO DD DISP=SHR,DSN= ACF2 backup Information Storage dataset
//SYSUT1 DD UNIT=SYSDA,SPACE=(TRK,(50,10))
//SYSIN DD *
          TITLE(SAMPLE OF RSLIST INPUT)
          RSLIST
/*
//RSLIST DD *
CKC-ACFM
/*
```

Chapter 7 : EKCRALDS - LogonidOwner Dataset Report

☛ What Datasets Can My Employees Access?

Description

The E-SRF LogonidOwner Dataset Report provides the Department or Area Manager an overview of what datasets the employees within his or her department can access. It can also be used to determine what datasets an individual can access via multiple Logonids if there is a field within the Logonid Record that contains a unique person identifier such as a Social Security Number or Employee ID Number.

The input control keywords are as follows:

TITLE(title) - the title that will appear at the top of each page of the report output. If this is not specified, no title will appear.

COMMENTS - indicates that the Grouping Rule Comments, if any, are to be displayed along with each dataset name.

LIDFIELDS(lidfield1,lidfield2, ... , lidfield8) - a list of additional fields to be displayed when this report displays a Logonid Record. The report always displays the Logonid, User Identification String, and the Name fields. Additional defined Character, Binary, Date and Switch fields may be displayed along with these fields as long as the total displayed length fits on one print line. Currently, the default available space is 50 characters. The keywords NONAME and NOUID can be used to eliminate printing of these fields to provide additional space.

SORTBY(lidfield1,lidfield2, ... , lidfieldn) - a list of Logonid Record Fields that are used to generate a sort key which will be used to sort the Logonid Records in the report displays. The maximum length of the Sort Key is 256 characters and it may be composed of Character, Binary, Date, or Bit fields in the Logonid Record.

COMPRESS(mask1,mask2,...,mask16) - a mask that will be used to compress groups of datasets, such as Generation Data Groups or DB2 archive datasets, down to a single dataset for the purposes of this report. Digits in the mask indicate numbers in the index segment. The default compression masks are: G0000V00, A0000000, and B0000000. Parameters specified in this field will add to, not replace, the default compression masks.

EXCLUDE(mask1,mask2,...,maskn) - a list of high-level index masks. If a user has access to a dataset via a rule line that allows all users access (**UID(*)**), the access will **not** be reported on. This allows the reduction of the size of the report by eliminating reporting on datasets such as SYS1.MACLIB, SYS1.COBLIB, etc. To eliminate all listing of accesses via an ACF2 UID(*) rule, use EXCLUDE(*****).

LINES(n-lines) - the number of lines per page of output - 55 is default.

LISTSELECT - List the Logonids selected by the SELECT keyword options.

LISTUPGD – list the Logonid Records Upgraded due to Resource Controls for Logonid Records.

MAXUSERS(m-users) - the number of Logonid Records to display at any one point in the output. If this limit is reached, a message indicating this is produced and the remainder of the Logonid Record displays are skipped. The maximum value for this field is 9999, although the letter "U", indicating "unlimited" can be used. 25 is the default.

MAXDSNS(m-dsns) - the maximum number of dataset names to report on within a high level index. The remainder of the datasets within the high-level index will be skipped and the datasets within the next index will be processed. The maximum value for this field is 9999, although the letter "U", indicating "unlimited" can be used. The value of 25 is the default. If zero is specified, only the Logonid Groups will be listed without their access permissions.

MODIFYONLY - specifies that the report output include only dataset accesses of WRITE or ALLOCATE. Any access that is READ or EXECUTE only will be ignored.

RULEPRINT(ALL|REF|NONE) - Section 4 of the report prints the rules and rule lines that have been referenced in addition to the number of references they have had. **NONE**, which is the default, prints all of the rule lines in each rule set with the text "**UNREFERENCED**" next to rule lines that have not been referenced. **REF** prints the rule set control lines (\$ and % lines) and only those rule lines with a non-zero reference count. **NONE** skips section 4 reporting altogether

Note: If printed, this will produce voluminous amounts of information since many rule sets will have been referenced during processing of the report.

NORULEMOD - When printing Section 4 of the report, which displays the rule sets accessed, bypass printing of the list of Logonids that can modify the rule sets.

SELECT(Lidrec Field 1, Lidrec Field 2, ...) - A list of Logonid Field Names and Masks that will be used to limit the processing to selected Logonid Records.

Example: **SELECT(DEPARTMENT(A), AREA(C*),-SECURITY)**

The Logonid Records are read and Logonids that match all of the specified criteria will be selected. Character and switch fields are supported. A negative test can be done as in **SELECT(-SECURITY)** indicated by the leading minus sign. Any number of **SELECT** keywords may be specified and any number of fields may be specified within a single **SELECT** keyword as long as the total number of fields selected upon is no greater than 16.

The **SELECT** keyword can also be used to select Logonid Records by the Resource Grouping Rules. In this case, the format of the **SELECT** keyword is:

SELECT(GROUPUSER(class,imageid))

Where "class" specifies the resource class (usually **USERS**) and "imageid" specifies the security image that users are to be selected from. In a single image system, imageid is usually irrelevant, but something must be specified. If the Logonid Record is a member of one of the Groups specified in the **GROUP** keyword, then the user will be selected.

Example: **SELECT(GROUPUSER(USERS,CHICAGO))**

GROUP(groupname-mask1,groupname-mask2, ...) - the dataset groups to be used to limit processing. The groupnames are based upon the E-SRF Grouping Rules. If no grouping rules exist for the Groupname specified, datasets with the same high level index as the Groupname specified will be selected. If neither **GROUP** nor **INDEX** is specified, the accesses for all datasets will be analyzed. Multiple Group keywords are allowed.

UGROUP(groupname-mask1,groupname-mask2, ...) - This allows selection of the users to be processed based upon the EKC Grouping Rules (*See the E-SRF Grouping Facility Guide*). The EKC Grouping Rules allow the selection of Users based upon algorithmic rules. Multiple disparate users can be combined together to form a single group. Multiple **UGROUP** keywords may be specified

INDEX(high-level-index-mask) - if the **INDEX** keyword is specified, processing will be restricted to a single high-level index. If neither **GROUP** nor **INDEX** is specified, the accesses for all datasets will be analyzed.

INCCANCELED - Normally, Logonids that are in **CANCELED** status (the **CANCEL** bit is on) will be excluded from further processing. This option forces the report to include them.

INCSUSPENDED - Normally, Logonids that are in **SUSPENDED** status (the **SUSPEND** bit is on) will be excluded from further processing. This option forces the report to include them.

INCEXPIRED - Normally, Logonids that have expired (the **EXPIRE** date in the Logonid Record has passed) will be excluded from further processing. This option forces the report to include them.

INCFIRECALL - Include the accesses allowed by the ETF/A Firecall UID String.

NOSEC0LIDS - skip printing of Canceled, Suspended, and Expired Logonids in the Processing Journal portion of the output.

NOSEC1 - Skip Section 1 of the Report -- Access without ACF2 rules and without generating Loggings.

NOOWNEDPFX - causes Logonids where the owned dataset prefix is equal to the Logonid not to be printed in this section.

NOSEC2 - Skip Section 2 of the Report -- Access without ACF2 rules, but with Loggings.

NOSEC4 - Skip Section 4 of the Report -- display of rule sets used. Same functionality as **RULEPRINT(NONE)** keyword.

SEPARATE - Do not combine datasets with identical access patterns. Generates a separate listing for each dataset to be printed.

SUMMARY - Generate **SUMMARY** report for Section 3 -- access via the ACF2 rules -- rather than listing environments, etc.

EXPORT(DIF|RECORD) - produces an export dataset to the dataset defined in the **EXPORT** DD card in either **DIF** (comma delimited - data interchange format) or **RECORD** (fixed field width format) formats (see the section on **EXPORT** for more information). Note that if **EXPORT** is requested, **SUMMARY** output will also be produced.

EXIT(exitname)/NOEXIT - a module name that will be called to change a dataset name or force a rule set key prior to processing.

Report Sections

The output report is divided into five sections -- section 0 to section 4.

Section 0 - Processing Log

UID String Definition: the installation defined User Identification String as a list of the ACF2 Logonid Record Fields that make up the string.

ETF/A Presence: If an alternative ETF/A User Identification String has been defined in the Logonid Record, it will be used for Access Permission processing.

Installation Exit Presence: Some installations, via an ACF2 supported exit, either modify the dataset names themselves prior to ACF2 processing or select an initial Access Rule Set Key to be used. This report supports an exit with similar functions. The report will indicate when an installation exit is active.

Input Control Cards: A listing of the input control cards read from the **SYSIN** dataset.

INFOSTORAGE Statistics: The report process reads the ACF2 Infostorage Backup Dataset in order to accumulate the **SCOPELISTS**. Only **SCOPELISTS** with **DSNSCOPEs** are kept. The statistics show how many information storage records were read and how many were kept.

LOGONID Statistics: The report process reads the ACF2 Logonid Backup Dataset in order to accumulate the Logonids that will be reported on. The statistics show the number of Logonid Records read and the number that matched all of the selection criteria in the **SELECT** statement.

ACCESS RULE Statistics: The report process reads the ACF2 Access Rule Backup Dataset in order to ascertain which Access Rule Sets reference the UID or ETF/A UID strings of the selected Logonid Records. Those Access Rule Sets that reference the selected UID strings are kept in storage for later processing.

COMPRESS Statistics: Generation Data Group or DB2 Backup datasets that are similar except for changing numeric digits are numerous and add complexity and confusion to the output reports. The report process compresses the dataset names, replacing all numbers with zeros and then eliminates duplicate dataset names.

EXCLUDE Statistics: This shows the number of accesses that were excluded from the report because the dataset had a high-level index that matched the masks specified by the **EXCLUDE** keyword and/or were allowed because of a rule line that specified **(UID(*))**.

DATASET NAMES Statistics: The report process reads the datasets defined by the **DSNAMES** DDnames. As each dataset name is read, it is compressed and compared to the prior dataset name. Duplicates (virtually all Generation Data Group names) are skipped (this is dependent upon the input data being sorted). The number of datasets where at least one user had access is listed in the number of datasets processed.

CANCELED Logonids: As the report process goes through the Logonid Records to determine whether they have access to the datasets in the group, a final check is made to determine whether the Logonid is in **CANCEL** or **SUSPEND** status. If the Logonid is in **CANCEL** or **SUSPEND** status, it cannot be used. However, these Logonids may at some time in the future become “uncanceled” and therefore have the ability to access datasets in the group. This is just an informational warning. To bypass printing of these Logonids, use the **NOSECOLIDS** keyword.

Section 1 - Access without Rules and without any Loggings

Access in this section is controlled by high-level index. ACF2 will allow a Logonid to access a dataset if the high-level index of the dataset matches the **PREFIX** field in the Logonid Record. The high-level indices that the report program found as it processed the datasets, which match the prefix field, are listed.

Additionally, special installation Logonids with the **MAINT** privilege are able to access all datasets in the installation if they are using special dataset maintenance programs (such as backup, restore, disk maintenance, etc.)

```
ESRF: ACF2 LOGONID-OWNER DATASET REPORT
MON, JUNE 3, 1996 12:24
INPUT PARAMETERS AND JOURNAL:
UID STRING DEFINED AS: DIVISON, DEPT, AREA, FUNCTION, SITE, TYPE, LID
ETF/A SECONDARY UID STRING DEFINED - WILL PROCESS
INPUT CONTROL CARDS:
TITLE(USERS IN PAYROLL DEPARTMENT)
EXCLUDE(ACC*) RULEPRINT(REF)
LIDFIELDS(DEPT,JOBFUN)
SELECT(LID(PAY-))
INFOSTORAGE: RECORD READ: 5,353 -- SCOPELIST RECORDS WITH DSNSCOPES KEPT: 12
LOGONID DATASET: RECORDS READ: 3,442 -- RECORDS KEPT: 6
ACCESS RULES: RECORDS READ: 2,001 -- RULES WITH MATCHING UID STRINGS KEPT: 594
NUMBER OF DATASETS COMPRESSED USING MASKS: 405
DATASET NAMES: RECORDS READ: 4,566 -- REFERENCED DATASET NAMES PROCESSED: 633
PAGE...1
```

Section 2 - Access without Rules but with Loggings

In ACF2 processing, the Access Rules will be interpreted first. If the Logonid has some access permission defined in the rules, that access permission will be used (as in Read, or Read and Log). However, if the Logonid is not allowed access under the rules, a check is made for a series of authorities such as Security Officer, Non-cancelable, Read-all, etc. If the Logonid has one of these special authorities, the access is allowed and a special access permission logging record is generated.

For each Logonid with one of these permissions, the Logonid is displayed with the reason for the access permission.

Note: Accesses in this section may be controlled by SCOPELISTS.

ESRF: ACF2 LOGONID-OWNER DATASET REPORT						
USERS IN PAYROLL DEPARTMENT						
MON, JUNE 3, 1996						PAGE...2
ACCESS WITHOUT RULES AND WITHOUT LOGGINGS:						
STATUS	LOGONID	USER ID(UID)	STRING	NAME	DEPT	JOBFUN
PREFIX: USER46	USER46	ASYSRDPRGC4	USER46	JONES, TOM	SYS	PROGMR
INDICES: USER46						
PREFIX: USER68	USER68	ASYSRDMGRC5	USER68	TIMKIN, SALLY	SYS	MANAGER
INDICES: USER68						
ACCESS WITHOUT RULES BUT WITH LOGGINGS:						
STATUS	LOGONID	USER ID(UID)	STRING	NAME	DEPT	JOBFUN
NON-CANCEL PRIV	USER01	ARPTXXCLKC1	USER01	BROWN, JAY	RPT	46210

Section 3 - Access via ACF2 Rules - Summary

This report determines all of the access environments for each dataset processed. It then groups together Logonids and datasets with identical sets of access environments.

For each group of Logonids, all the datasets are listed, one per line. The output is in the following format:

```
MULT READ WRITE ALLOC EXEC DATASET NAME
mult prm  prm  prm  prm  dataset-name
```

where:

mult - If there is only one rule line referencing the dataset, then this will be blank. If there is more than one that can be interpreted by the ACF2 rules, then the keyword "MULT" will be specified.

prm - If the appropriate access (read, write, allocate, or execute) is allowed, then the keyword "ALW" will be displayed. If the access is allowed, but logged, then "LOG" will be displayed. If no access is allowed, three periods "..." will be displayed.

If the access is conditional, then the ALW or LOG keywords will be followed by an asterisk. Conditional accesses are those rules that include a restriction by specifying specific programs, libraries, shifts, etc.

ESRF: ACF2 LOGONID-OWNER DATASET REPORT						
USERS IN PAYROLL DEPARTMENT						
MON, JUNE 3, 1996						PAGE...4
ACCESS VIA ACF2 RULES. FIRST LOGONID IN GROUP: USER87						
LOGONIDS IN THIS GROUP:						
STATUS	LOGONID	USER ID(UID)	STRING	NAME	DEPT	JOBFUN
	USER87	ASYSRDCLK1	USER87	RILEY, CINDY	ACT	CLERK
	USER92	ASYSRDCLK1	USER92	JACOBSEN, DAVE	ACT	CLERK
	USER96	ASYSRDCLK1	USER96	HACKETT, TIM	ACT	CLERK

MULT	READ	WRITE	ALLOC	EXEC	DATASET NAME	
	ALW	LOG	...	ALW	PAYROLL.BACKUP	
	ALW	...	...	ALW	PAYROLL.FEB.DATA	
	ALW	ALW	ALW	ALW	PAYROLL.JAN.DATA	
	ALW	...	...	ALW	PAYROLL.MAR.DATA	
	LOG	...	...	LOG	PAYROLL.MASTER	
	ALW	LOG	LOG	ALW	PAYROLL.MASTER.BKUP	
	ALW	ALW	ALW	ALW	PAYROLL.TEST.DATA	

Section 3 - Access via ACF2 Rules - Detail

This report determines all of the access environments for each dataset processed. It then groups together Logonids and datasets with identical sets of access environments.

Then, by group, the report displays all of the Logonids within each group, datasets in each group, and each access environment.

ESRF: ACF2 LOGONID-OWNER DATASET REPORT						
USERS IN PAYROLL DEPARTMENT						
MON, JUNE 3, 1996						PAGE...4
ACCESS VIA ACF2 RULES. FIRST LOGONID IN GROUP: USER87						
LOGONIDS IN THIS GROUP:						
STATUS	LOGONID	USER ID(UID)	STRING	NAME	DEPT	JOBFUN
	USER87	ASYSRDCLK1	USER87	RILEY, CINDY	ACT	CLERK
	USER92	ASYSRDCLK1	USER92	JACOBSEN, DAVE	ACT	CLERK
	USER96	ASYSRDCLK1	USER96	HACKETT, TIM	ACT	CLERK

DATASETS FOR WHICH ALL LOGONIDS IN THE GROUP HAD IDENTICAL ACCESS:						
PAYROLL.BACKUP	PAYROLL.FEB.DATA	PAYROLL.JAN.DATA	PAYROLL.MAR.DATA			
PAYROLL.MASTER	PAYROLL.MASTER.BKUP	PAYROLL.TEST.DATA				
ENVIRONMENT(S) UNDER WHICH THE LOGONIDS HAD ACCESS:						
1	READ: ALLOW	WRITE: ALLOW	ALLOC: PREVENT	EXEC: ALLOW	VOLSER:	UNTIL:
	SOURCE:	SHIFT:	PROGRAM:	DDNAME:	LIBRARY:	

Section 4 - Rule Sets Accessed

As each dataset is processed, for every rule line in the ACF2 Access Rule Sets that matches, the reference count for that line is incremented. This section displays all of the rule sets accessed and the reference count for each line. Note that the reference count is updated once per Logonid per dataset where the rule line allowed access.

Additionally, for each rule set displayed, the list of users who can modify the rule set is listed along with the reason why ACF2 would allow that modification.

ESRF: ACF2 LOGONID-OWNER DATASET REPORT						
USERS IN PAYROLL DEPARTMENT						
MON, JUNE 3, 1996				PAGE...10		
RULE SET ACCESSED: PAYROLL						
REF COUNT	LINE					
PAYROLL	1	ACCESS RULE PAYROLL STORED BY USER68 ON 06/24/96-14:59				
	2	\$KEY(PAYROLL)				
	3	\$MODE(ABORT)				
7	4	UID(ASYSRDCLK) READ(A) WRITE(A) EXEC(A)				
THE FOLLOWING USERS CAN MODIFY RULE SET: PAYROLL						
STATUS	LOGONID	USER ID(UID)	STRING	NAME	DEPT	JOBFUN
SECURITY OFFICER	USER11	ASYSRDPRG1	USER11	HOLT, ROY	ACT	RESGRP

JCL Statements for the LogonidOwner Dataset Report

```
//EKCRALDS EXEC PGM=EKCRALDS
//SYSPRINT DD   SYSOUT=A
//BKRULES  DD   DISP=SHR,DSN= ACF2 backup rules dataset
              (sequential)
//BKLIDS   DD   DISP=SHR,DSN= ACF2 backup Logonid dataset
              (sequential)
//BKINFO   DD   DISP=SHR,DSN= ACF2 backup information storage dataset
              (sequential)
//GRPRULES DD   DISP=SHR,DSN= E-SRF grouping rule compiler object
              dataset
              (optionally leave out GRPRULES if you are not
              using the GROUP keyword)
//DSNAMES  DD   DISP=SHR,DSN= input list of dataset names or masks
              created by the EKCRXCAT or EKCRDMSK
              programs (default DDNAME)
//EXPORT   DD   DISP=OLD,DSN= output file for Data Interchange Format
              records
//SYSIN    DD   *
              INDEX(    )   or   GROUP(    )
/*
```

Recommendation

The EKCRALDS report selects the Logonids by the criteria and then determines for each dataset which of the Logonids selected have access and under what conditions. If there are a large number of datasets in the DSNAMES dataset and a large number of Logonids are selected, the report will run for a very long time. For example, if there are 370,000 datasets with 100 Logonids selected, 37,000,000 dataset/Logonid combinations exist, and even though the report is very well optimized, this will take a while. It is suggested that installations use the dataset masks produced by the EKCRDMSK program for input since this is usually a number under 10,000. If this results in more detail being required, the report should be re-run with a limited number of Logonids and the full complement of dataset names. For more information, see the section, *EKCRDMSK - Access Rule Dataset Mask Generator*, earlier in this guide. Alternatively, it is possible to run the report against a section of the datasets on a system via the use of the GROUP or INDEX keywords.

Note: The input dataset referenced by the DSNAMES DD name must be sorted. Use SORT FIELDS=(17,44,CH,A). If this input was generated by the EKCRDMSK utility, it was already in sort order. Input from the EKCRXCAT utility must be sorted prior to use.

Chapter 8 : EKCRALRS - LogonidOwner Resource Report

☛ What Resources Can My Employees Access?

Description

The E-SRF LogonidOwner Resource Report provides the Department or Area Manager an overview of what resources the employees within his or her department can access. It can also be used to determine what resources an individual can access via multiple Logonids if there is a field within the Logonid Record that contains a unique person identifier such as a Social Security Number or Employee ID Number.

The input control keywords are as follows:

TITLE(title) - the title that will appear at the top of each page of the report output. If this is not specified, no title will appear.

COMMENTS - indicates that the Grouping Rule Comments, if any, are to be displayed along with each resource name.

LIDFIELDS(lidfield1,lidfield2, ... , lidfield8) - a list of additional fields to be displayed when this report displays a Logonid Record. The report always displays the Logonid, User Identification String, and the Name fields. Additional defined Character, Binary, Date and Switch fields may be displayed along with these fields as long as the total displayed length fits on one print line. Currently, the default available space is 50 characters. The keywords NONAME and NOUID can be used to eliminate printing of these fields to provide additional space.

SORTBY(lidfield1,lidfield2, ... , lidfieldn) - a list of Logonid Record Fields that are used to generate a sort key which will be used to sort the Logonid Records in the report displays. The maximum length of the Sort Key is 256 characters and it may be composed of Character, Binary, Date, or Bit fields in the Logonid Record.

SKIP(mask1,mask2,...,mask16) - a list of resource class masks that are to be totally bypassed by this report generator. Classes, such as those used for TSO Account Codes, have many rules, yet may not be necessary to this report. Eliminating them will aid in the performance of the report process.

EXCLUDE(mask1,mask2,...,maskn) - a list of high-level class masks. If a user has access to a resource via a rule line that allows all users access (**UID(*)**), the access will **not** be reported on. This allows the installation to reduce the size of the report by eliminating reporting on resources that are available to all users. To eliminate all listing of accesses via an ACF2 UID(*) rule, use **EXCLUDE(*****)**.

LINES(n-lines) - the number of lines per page of output - 55 is default.

LISTGROUPS - List the ACF2 Resource Groups used to process each individual resource. Note that only the Resource Groups needed to provide access permission to the set of Logonids selected are listed – there may be more but they were not needed. All users were allowed access to the resources without the need for processing all of the Resource Groups.

LISTSELECT - List the Logonids selected by the **SELECT** keyword options.

LISTUPGD – list the Logonid Records Upgraded due to Resource Controls for Logonid Records.

NOTE11 - Prior to supporting the **NEXTKEY** keyword on rule lines, ACF2 supported a NOTE extension that used a **\$KEY** value in the rule-data field. This keyword indicates to the DataOwner report that it should look in the **DATA** field of a rule for the **\$KEY** field.

MAXUSERS(m-users) - the number of Logonid Records to display at any one point in the output. If this limit is reached, a message indicating this is produced and the remainder of the Logonid Record displays are skipped. The maximum value for this field is 9999, although the letter “U”, indicating “unlimited” can be used. The value of 25 is the default.

MAXRSNS(m-rsns) - the maximum number of resource names to report on within a class. The remainder of the resources within the class will be skipped and the resources within the next class will be processed. The maximum value for this field is 9999, although the letter “U”, indicating “unlimited” can be used. The value of 25 is the default.

MODIFYONLY - specifies that the report output not include resource accesses of SERVICE(READ). Only those accesses that modify the resource (ADD, DELETE, UPDATE) will be included. An access rule that does not specify a SERVICE will always be included.

RULEPRINT(ALL|REF|NONE) - Section 4 of the report prints the rules and rule lines that have been referenced in addition to the number of references they have had. **ALL**, which is the default, prints all of the rule lines in each rule set with the text “**UNREFERENCED**” next to rule lines that have not been referenced. **REF** prints the rule set control lines (\$) and % lines) and only those rule lines with a non-zero reference count. **NONE** skips section 4 reporting altogether.

Note: If printed, this will produce voluminous amounts of information since many rule sets will have been referenced during processing of the report.

NORULEMOD - When printing Section 4 of the report, which displays the rule sets accessed, bypass printing of the list of Logonids that can modify the rule sets.

SELECT(Lidrec Field 1, Lidrec Field 2, ...) - A list of Logonid Field Names and Masks that will be used to limit the processing to selected Logonid Records.

Example: SELECT(DEPARTMENT(A), AREA(C*),-SECURITY)

The Logonid Records are read and Logonids that match all of the specified criteria will be selected. Character and Switch fields are supported. A negative test can be done as in SELECT(-SECURITY) indicated by the leading minus sign. Any number of SELECT keywords may be specified and any number of fields may be specified within a single SELECT keyword as long as the total number of fields selected upon is no greater than 16.

The SELECT keyword can also be used to select Logonid Records by the Resource Grouping Rules. In this case, the format of the SELECT keyword is:

SELECT(GROUPUSER(class,imageid))

Where “class” specifies the resource class (usually USERS) and “imageid” specifies the security image that users are to be selected from. In a single image system, imageid is usually irrelevant, but something must be specified. If the Logonid Record is a member of one of the Groups specified in the **GROUP** keyword, then the user will be selected.

Example: **SELECT(GROUPUSER(USERS,CHICAGO))**

GROUP(groupname-mask1,groupname-mask2,..) - the resource groups to be used to limit processing. The groupnames are based upon the E-SRF Grouping Rules. If no grouping rules exist for the groupname specified, transactions within the same type (or class) as the groupname specified will be selected. If neither the **GROUP** or **CLASS** keyword is specified, all resources will be included in processing. Multiple **GROUP** keywords may be specified.

RSGROUP(groupname-mask1, groupname-mask2, ...) - the resource groups to be processed. The groupnames are based upon the E-SRF Grouping Rules. If no grouping rules exist for the groupname specified, transactions within the same type (or class) as the groupname specified will be selected. Multiple **RSGROUP** keywords are allowed. **This parameter is the same as GROUP.** **UGROUP**(groupname-mask1,groupname-mask2, ...) - This allows selection of the users to be process based upon the EKC Grouping Rules (see *the E-SRF Grouping Facility Guide*). The EKC Grouping Rules allow the selection of Users based upon algorithmic rules. Multiple disparate users can be combined to form a single group. Multiple **UGROUP** keywords may be specified

CLASS(high-level-index-mask) - If the **CLASS** keyword is specified, the **GROUP** keyword is ignored and all resources within the specified class will be selected. References to the Grouping Rule database are not made. If neither the **GROUP** or **CLASS** keyword is specified, all resources will be included in processing

INCCANCELED - Normally, Logonids that are in CANCELED status (the CANCEL bit is on) will be excluded from further processing. This option forces the report to include them.

INCSUSPENDED - Normally, Logonids that are in SUSPENDED status (the SUSPEND bit is on) will be excluded from further processing. This option forces the report to include them.

INCEXPIRED - Normally, Logonids that have expired (the EXPIRE date in the Logonid Record has passed) will be excluded from further processing. This option forces the report to include them.

INCFIRECALL - Include the accesses allowed by the ETF/A Firecall UID String.

NOSEC0LIDS - Skip printing of Canceled, Suspended, and Expired Logonids in the Processing Journal portion of the output.

NOSEC2 - Skip Section 2 of the Report -- Access without ACF2 rules, but with Loggings.

NOSEC4 - Skip Section 4 of the Report -- display of rule sets used. Same functionality as **RULEPRINT(NONE)** keyword.

SEPARATE - Do not combine resources with identical access patterns – generates a separate listing for each resource to be printed.

SUMMARY - Generate SUMMARY report for Section 3 -- access via the ACF2 rules -- rather than listing environments, etc.

EXPORT(DIF|RECORD) - produces an export dataset to the dataset defined in the EXPORT DD card in either DIF (comma delimited - data interchange format) or RECORD (fixed field width format) formats (see the section on EXPORT for more information). Note that if EXPORT is requested, SUMMARY output will also be produced.

EXIT(exitname)/NOEXIT - a module name that will be called to change a dataset name or force a rule set key prior to processing

Report Sections

The output report is divided into four sections -- section 0 to section 3.

Section 0 - Processing Log

UID String Definition: the installation defined User Identification String as a list of the ACF2 Logonid Record Fields that make up the string.

ETF/A Presence: If an alternate ETF/A User Identification String has been defined in the Logonid Record, it will be used for Access Permission processing.

Installation Exit Presence: Some installations, via an ACF2 supported exit, modify the resource names themselves prior to ACF2 processing. This report supports an exit with similar functions. The report will indicate when an installation exit is active.

Input Control Cards: A listing of the input control cards read from the **SYSIN** dataset.

INFOSTORAGE Statistics: The report process reads the ACF2 Infostorage Backup Dataset in order to accumulate the **SCOPELISTS** and ACF2 Resource rules. Only **SCOPELISTS** with **INFOSTORAGE** scopes are kept. The statistics show how many information storage records were read and how many were kept.

LOGONID Statistics: The report process reads the ACF2 Logonid Backup Dataset in order to accumulate the Logonids that will be reported on. The statistics show the number of Logonid Records read and the number that matched all of the selection criteria in the **SELECT** statement.

RESOURCE RULE Statistics: The report process reads the ACF2 Infostorage Backup Dataset in order to ascertain which Resource Rule Sets reference the UID or ETF/A UID strings of the selected Logonid Records. Those Resource Rule Sets that reference the selected UID strings are kept in storage for later processing.

EXCLUDE Statistics: This shows the number of accesses that were excluded from the report because the resource name matched the masks specified by the **EXCLUDE** keyword and/or was allowed because of a rule line that specified **(UID(*))**.

RESOURCE NAMES Statistics: The report process reads the resource names defined by the **RSNAMES** DDnames. As each resource name is read, it is compared to the prior resource name. Duplicates are skipped. The number of resources where at least one user had access is listed as the number of resource names processed.

CANCELED Logonids: As the report process goes through the Logonid Records to determine whether they have access to the resources in the group, a final check is made to determine whether the Logonid is in **CANCEL** or **SUSPEND** status. If the Logonid is in **CANCEL** or **SUSPEND** status, it cannot be used. However, these Logonids may at some time in the future become "uncanceled" and therefore have the ability to access resources in the group. This is just an informational warning. To bypass printing of these Logonids, use the **NOSEC0LIDS** keyword.

Section 1 - Access without Rules but with Loggings

In ACF2 processing, the Resource Rules will be interpreted first. If the Logonid has some access permission defined in the rules, that access permission will be used (as in Allow or Log). However, if the Logonid is not allowed access under the rules, a check is made for a series of authorities such as Security Officer, Non-cancelable, etc. If the Logonid has one of these special authorities, the access is allowed and a special access permission logging record is generated.

For each Logonid with one of these permissions, the Logonid is displayed with the reason for the access permission.

Note: Access in this section may be controlled by the information storage SCOPELISTS.

Section 2 - Access via ACF2 Rules - Summary

This report determines all of the access environments for each resource processed. It then groups together Logonids and resources with identical sets of access environments.

For each group of Logonids, all the resources are listed, one per line. The output is in the following format:

```
MULT PERM RD ADD UPD DEL  RESOURCE NAME
mult prm  r   a   u   d   resource-name
```

where:

mult - If there is only one rule line referencing the resource, then this will be blank. If there is more than one that can be interpreted by the ACF2 rules, then the keyword "MULT" will be specified.

prm - If the access is allowed, then the keyword "ALW" will be displayed. If the access is allowed, but logged, then "LOG" will be displayed.

If the access is conditional, then the ALW or LOG keywords will be followed by an asterisk. Conditional accesses are those rules that specify specific sources, shifts, etc.

r - If the SERVICE keyword was specified with the READ operand, "R" will appear. If not, a period will appear.

a - If the SERVICE keyword was specified with the ADD operand, "A" will appear. If not, a period will appear.

u - If the SERVICE keyword was specified with the UPDATE operand, "U" will appear. If not, a period will appear.

d - If the SERVICE keyword was specified with the DELETE operand, "D" will appear. If not, a period will appear.

ESRF: ACF2 LOGONID-OWNER RESOURCE REPORT						
USERS IN PAYROLL DEPARTMENT						
MON, JUNE 3, 1996						PAGE...4
ACCESS VIA ACF2 RULES. FIRST LOGONID IN GROUP: USER87						
LOGONIDS IN THIS GROUP:						
STATUS	LOGONID	USER ID(UID)	STRING	NAME	DEPT	JOBFUN
	USER87	ASYSRDCLKC1USER87		RILEY, CINDY	ACT	CLERK
	USER92	ASYSRDCLKC1USER92		JACOBSEN, DAVE	ACT	CLERK
	USER96	ASYSRDCLKC1USER96		HACKETT, TIM	ACT	CLERK

MULT	PERM	RD	ADD	UPD	DEL	RESOURCE NAME
	ALW	.	.	.	.	CKC-PAYB
	LOG	R	A	U	D	CKC-PAYC
	ALW	R	.	.	.	CKC-PAYD
	ALW	.	.	.	.	CKC-PAYF
	ALW	R	A	U	D	CKC-PAYH
	LOG	.	.	.	.	CKC-PAYR
	LOG	.	.	.	.	CKC-PAYS
	LOG	.	A	U	.	CKC-PAYT

Section 2 - Access via ACF2 Rules - Detail

This report determines all of the access environments for each resource processed. It then groups together Logonids and resources with identical sets of access environments.

Then, by group, the report displays all of the Logonids within each group, resources in each group, and each access environment.

ESRF: ACF2 LOGONID-OWNER RESOURCE REPORT						
USERS IN PAYROLL DEPARTMENT						
MON, JUNE 3, 1996						PAGE...4
ACCESS VIA ACF2 RULES. FIRST LOGONID IN GROUP: USER87						
LOGONIDS IN THIS GROUP:						
STATUS	LOGONID	USER ID(UID) STRING	NAME	DEPT	JOBFUN	
	USER87	ASYSRDCLKCLUSER87	RILEY, CINDY	ACT	CLERK	
	USER92	ASYSRDCLKCLUSER92	JACOBSEN, DAVE	ACT	CLERK	
	USER96	ASYSRDCLKCLUSER96	HACKETT, TIM	ACT	CLERK	

RESOURCES FOR WHICH ALL LOGONIDS IN THE GROUP HAD IDENTICAL ACCESS:						
CKC-PAYB	CKC-PAYC	CKC-PAYD	CKC-PAYF	CKC-PAYH	CKC-PAYR	
CKC-PAYS	CKC-PAYT					
ENVIRONMENT(S) UNDER WHICH THE LOGONIDS HAD ACCESS:						
1	SOURCE:	SHIFT:	ACTIVE:	UNTIL:	SERVICE:	VERIFY: NO
	ACCESS: ALLOW	RECCHCK:	DATA:			

Section 3 - Rule Sets Accessed

As each resource is processed, for every rule line in the ACF2 Resource Rule Sets that matches, the reference count for that line is incremented. This section displays all of the rule sets accessed and the reference count for each line. Note that the reference count is updated once per Logonid per resource where the rule line allowed access.

Additionally, for each rule set displayed, the list of users who can modify the rule set is listed along with the reason why ACF2 would allow that modification.

ESRF: ACF2 LOGONID-OWNER RESOURCE REPORT						
USERS IN PAYROLL DEPARTMENT						
MON, JUNE 3, 1996			PAGE...10			
RULE SET ACCESSED: PAYROLL						
REF COUNT	LINE					
	1 RESOURCE RULE PAY* STORED BY USER68 ON 06/24/96-14:59					
	2 \$KEY(PAY*) TYPE(CKC)					
8	3 UID(ASYSRDCLK) ALLOW					
THE FOLLOWING USERS CAN MODIFY RULE SET: PAYROLL						
STATUS	LOGONID	USER ID(UID)	STRING	NAME	DEPT	JOBFUN
SECURITY OFFICER	USER11	ASYSRDPRG1	USER11	HOLT, ROY	ACT	RESGRP

JCL Statements for LogonidOwner Resource Report

```
//EKCRALRS EXEC PGM=EKCRALRS
//SYSPRINT DD   SYSOUT=A
//BKLIDS   DD   DISP=SHR,DSN= ACF2 backup Logonid dataset
              (sequential)
//BKINFO   DD   DISP=SHR,DSN= ACF2 backup information storage dataset
              (sequential)
//GRPRULES DD   DISP=SHR,DSN= E-SRF grouping rule compiler object
              dataset
              (optionally leave out GRPRULES if you are not using the
              GROUP
              keyword))
//RSNAMES  DD   DISP=SHR,DSN= input list of resource names or masks
              created by          the EKCRMSK program or equivalent
//EXPORT   DD   DISP=OLD,DSN= output file for Data Interchange Format
              records
//SYSIN    DD   *
          CLASS(      )   or   GROUP(      )
```

Note: The input dataset defined by the RSNAMES DD name must be sorted. Use SORT FIELDS=(17,44,CH,A). The output from the EKCRMSK generator is already sorted, so no further action is necessary if this is the input source used.

Chapter 9 : EKCRASDF - System Differences Report

- ☛ What are the differences in access for two different ACF2 databases?

Description

The E-SRF System Differences Report provides the Security Administrator or Auditor an overview of the different accesses personnel have between two different ACF2 databases. This Report Processor is used with the E-SRF Proposed Rule Processor to give the Security Administrator an overview of the different accesses that would be allowed for a set of proposed ACF2 Rule Set changes. It can also be used by the supervising Security Administrator or the Auditor to display the different accesses for a particular index or resource class that are allowed today versus, for example, last month.

The report operates by accepting as input the **EXPORT** output of the DataOwner Access Analysis Reports **EKCRADDS** and **EKCRADRS** reports. The Access Analysis Reports accept as input the sequential backup copies of the ACF2 database. Normally, the backup copies will be of the current database, but they also can be run against a “proposed” database or an old database.

The input control cards for the **EKCRADDS** report should be specified as follows:

TITLE(any title)
SUMMARY EXPORT(RECORD) NOSEC1 NOSEC2 NOSEC4
plus some selection criteria using the **INDEX** or **GROUP** keywords

The input control cards for the **EKCRADRS** report should be specified as follows:

TITLE(any title)
SUMMARY EXPORT(RECORD) NOSEC2 NOSEC4
plus some selection criteria using the **CLASS** or **GROUP** keywords

NOTE: It is important to note that, at this time, this processor only displays differences in accesses due to ACF2 Rules. Changes due to authority – such as **SECURITY** or **READALL** – are not analyzed at this time.

The input control keywords are as follows:

TITLE(title) - the title that will appear at the top of each page of the report output. If this is not specified, no title will appear.

LIDFIELDS(lidfield1,lidfield2, ... , lidfield8) - a list of additional fields to be displayed when this report displays a Logonid Record. The report always displays the Logonid, User Identification String, and the Name fields. Additional defined Character, Binary, Date and Switch fields may be displayed along with these fields as long as the total displayed length fits on one print line. Currently, the default available space is 50 characters. The keywords NONAME and NOUID can be used to eliminate printing of these fields to provide additional space.

LINES(n-lines) - the number of lines per page of output - 55 is default.

NOWARN - Do not issue Warning Messages.

SEPARATE - Do not combine users with identical access patterns. Create a separate report for each user.

SORTBY(lidfield1,lidfield2, ... , lidfieldn) - a list of Logonid Record Fields that are used to generate a sort key which will be used to sort the Logonid Records in the report displays. The maximum length of the Sort Key is 256 characters and it may be composed of Character, Binary, Date, or Bit fields in the Logonid Record.

SYS1TITLE(title) - a column title, maximum 20 characters, that describes System number 1.

SYS2TITLE(title) - a column title, maximum 20 characters, that describes System number 2.

Report Sections

The output for this report is printed in this manual in the section describing the output from the Proposed Rule Processor. This report output is divided into two sections:

Section 0 - Processing Log

Input Control Cards: A listing of the input control cards read from the **SYSIN** dataset.

Processing information for each of the four input datasets defined by the **SYSTEM1D**, **SYSTEM1R**, **SYSTEM2D**, and **SYSTEM2R** DD Cards.

Total Number of Users Defined: This is the total number of unique Logonids encountered. Only Logonids that have access to the resources selected for analysis will be included.

Total Number of Resources Defined: This is the total number of unique resources encountered. Note that when this process is run as part of the Proposed Rule Processor, selection is made to reduce the input to only the Dataset High Level Indices and Resource Types that may be affected.

Number of Users with Different Access Permissions: This is the total number of users whose access rights are different between System # 1 and System # 2.

Section 1 - Differences for Users

This section lists each group of users who have identical differences and then the differences between the accesses on System # 1 and System # 2.

The first part is the Status of the Logonid. Blank indicates an active status. Otherwise, it may say EXPIRED, CANCELED, etc. Then the Logonid, the Userid String (UID String), the User's name and any optional fields specified by the LIDFIELDS keyword.

The second part has a column for permissions for System #1, then a column for the permissions for System #2, the Resource Class (ACF2 Resource Type), and finally the resource name. Note that for datasets, the prevent attribute is specified by a period. For datasets, "A" indicates Allow and "L" indicates Log. An asterisk "*" following a permission indicates that the permission is conditional.

JCL Statements for the System Differences Report

```
//EKCRASDF EXEC PGM=EKCRASDF
//SYSPRINT DD SYSOUT=A
//BKLIDS DD DSN= ACF2 backup Logonid dataset
//SYSTEM1D DD DSN= EXPORT(RECORD) output from the EKCRADDS for system # 1
//SYSTEM1R DD DSN= EXPORT(RECORD) output from the EKCRADRS for system # 1
//SYSTEM2D DD DSN= EXPORT(RECORD) output from the EKCRADDS for system # 2
//SYSTEM2R DD DSN= EXPORT(RECORD) output from the EKCRADRS for system # 2
```

Chapter 10 : EKCRAPRC - Proposed Rule Processor

- ☛ If I make a change to the ACF2 Rules, how can I be sure that the different accesses allowed would be what I expected?

Description

The E-SRF Proposed Rule Processor accepts as input a Partitioned Dataset containing the ACF2 rule source for a set of proposed rules and the current copies of the backup ACF2 clusters. It produces an analysis of the rule set changes plus control cards for a series of subsequent job steps culminating with the E-SRF System Differences Report, which lists the different accesses users have under the current ACF2 rules and the proposed set of rules.

Optionally, the Proposed Rule Processor will produce an EXPORT data file containing the analysis of the rule set changes. This feature is invoked by the addition of an EXPORT DD card in the JCL. The output dataset is variable blocked and is the same format as used in the EXPORT output of the Database Differences Report. See the section for the Database Differences Report for details on the format of this dataset.

Suggested Method of Usage

It is suggested that the following sequence of operations, or something similar, be used to test proposed rules with the E-SRF Proposed Rule Processor:

Allocated a Proposed Rule Partitioned Dataset. This dataset should be RECFM=VB, LRECL=255,BLKSIZE=4096. For the examples, we are assuming that the proposed rule partitioned dataset is USER.TEST.PRPDS and the Logonid of the Security Administrator is USER.

Decompile the rule sets to be changed into the Proposed Rule Partitioned Dataset using the ACF2 decompile subcommand:

```
ACF
DECOMP rule1 INTO(TEST.PRPDS)    --- for an access rule

or

ACF
SET RESOURCE(CKC)
DECOMP acfm INTO(TEST.PRPDS)    --- for a resource rule

then

END
```

- Edit the proposed rules (there may be several of them) using ISPF.
- Run the Proposed Rule Processor using the edited rules in the Proposed Rule Partitioned Dataset as input. If the output is not what was expected, edit the rules and try again.

When the results are satisfactory, copy the rules to the ACF2 Rule Source PDS if your installation uses it and recompile and store them. If there is no Rule Source PDS in use, recompile and store them directly from the Proposed Rule PDS.

The input control keywords are as follows:

TITLE(title) - the title that will appear at the top of each page of the report output. If this is not specified, no title will appear. This title will appear on the EKCRAPRC output, the intermediate EKCRADDS and EKCRADRS outputs, and the final EKCRASDF output.

ADDCLASS(class1, ... , classn) - The Proposed Rule Processor analyzes the Resource Classes that will be affected by a set of proposed rule changes and uses this to control later steps in the analysis. If, for some reason, this analysis fails, additional classes to be analyzed can be specified via the ADDCLASS keyword.

ADDINDEX(index1, ... , indexn) - The Proposed Rule Processor analyzes the dataset high level indices that will be affected by a set of proposed rule changes and uses this to control later steps in the analysis. This analysis includes any \$PREFIX keywords in the access rule sets. However, if the high level index of the PREFIX is all asterisks, the Proposed Rule Processor will issue a warning message requesting that the specification of the affected indices be specified manually via the ADDINDEX keyword.

DELARULE(a-rule1, ... , a-rulen) - specifies a list of dataset access rule keys in the current set of access rules that are to be deleted from the proposed set of rules. Any number of DELARULE keywords may be specified.

DELRRULE(type,key) - specifies a single resource rule type and key in the current set of resource rules that is to be deleted from the proposed set of rules. Any number of DELRRULE keywords may be specified.

DEXIT(exitname) - This keyword is passed to the EKCRADDS steps and specifies a dataset name modification exit. See the EKCRADDS description for more information.

LIDFIELDS(lidfield1,lidfield2, ... , lidfield8) - a list of additional fields to be displayed when this report displays a Logonid Record. The report always displays the Logonid, User Identification String, and the Name fields. Additional defined Character, Binary, Date and Switch fields may be displayed along with these fields as long as the total displayed length fits on one print line. Currently, the default available space is 50 characters. The keywords **NONAME** and **NOUID** can be used to eliminate printing of these fields to provide additional space. This keyword is passed to the EKCRADDS, EKCRADRS, and EKCRASDF steps. It has no effect on the output of the EKCRAPRC step.

LINES(n-lines) - the number of lines per page of output - 55 is default. This keyword is passed to all steps of the process.

NOCOMPLIST - indicates to the Proposed Rule Processor that the ACF2 Compiler Output from the compilation of the proposed rules is not to be listed. However, if compiler errors are encountered, the output is listed regardless of this option.

NODIFLIST - indicates to the Proposed Rule Processor that the analysis of which rule lines changed is not to be listed.

NOTE11 - This keyword is passed to the EKCRADRS steps and indicates that the installation is using the ACF2 NOTE11 specification of ACF2 Nextkeys in Resource Rules.

NOWARN - Do not issue Warning Messages. This keyword is passed to the EKCRASDF step.

REXIT(exitname) - This keyword is passed to the EKCRADRS steps and specifies the Resource Name Modification Exit to be used. See the EKCRADRS description for more information.

SELECT(ALL|pds-member1, pds-member2, ... , pds-membern) - This keyword specifies the members of the proposed partitioned dataset (PDS) to be processed. If this keyword is omitted or "ALL" is specified, all the members of the proposed partitioned dataset are processed.

SEPARATE - Do not combine users with identical access patterns. Issue a separate report on each user. This keyword is passed to the EKCRASDF step.

SKIP(type1, ... , typen) - This keyword is passed to the EKCRADRS steps and specifies the ACF2 Resource Types to be excluded in the analysis for savings of resources. The normal specification of this is SKIP(TAC) – skip the analysis of ACF2 TSO Account Rules.

SORTBY(lidfield1,lidfield2, ... , lidfieldn) - a list of Logonid Record Fields that are used to generate a sort key which will be used to sort the Logonid Records in the report displays. The maximum length of the Sort Key is 256 characters and it may be composed of Character, Binary, Date, or Bit fields in the Logonid Record. This keyword is passed to the EKCRASDF step.

SYSID(sysid) - eight character sysid to be placed in the EXPORT records.

SYS1TITLE(title) - a column title, maximum 20 characters, that describes System number 1. This keyword is passed to the EKCRASDF step and defaults to "ORIGINAL".

SYS2TITLE(title) - a column title, maximum 20 characters, that describes System number 2. This keyword is passed to the EKCRASDF step and defaults to "PROPOSED".

Report Sections

Section 0 - Processing Log

This section lists the input control cards and the dataset name of the input proposed rule partitioned dataset.

```
EKCRAPRC-08.10.98          ESRF: ACF2 PROPOSED RULE PROCESSOR
WED, AUGUST 12, 1998   8:24          PAGE.....1
INPUT PARAMETERS AND JOURNAL:

EKCRAPRC-001 INPUT CONTROL CARDS:

        TITLE(TEST OF PROPOSED RULE PROCESSOR)
        LIDFIELDS(ACC-DATE,PHONE)
        SORTBY(NAME)

EKCRAPRC-005 PROPOSED PDS DATASET NAME IS: ACF2ADM.ESRF.PRPDS
```

Section 1 - ACF2 Compilation of the Proposed Rules

This section lists the output of the ACF2 compilation of the proposed rule sets.

```
EKCRAPRC-010 COMPILING PROPOSED PDS MEMBER: ACFM
ACF70010 ACF COMPILER ENTERED

$KEY(ACFM) TYPE(CKC)
$USERDATA(MARKET SYSTEMS / CICS ACF2 TRANSACTIONS)
  UID(QCSSEC) ALLOW
  UID(QCSONL) ALLOW
  UID(**EKC) ALLOW
ACF70051 TOTAL RECORD LENGTH= 246 BYTES, 6 PERCENT UTILIZED

EKCRAPRC-010 COMPILING PROPOSED PDS MEMBER: CICS
ACF70010 ACF COMPILER ENTERED

$KEY(CICS)
R161.LOADLIB1 UID(QCSMVS) READ(A) EXEC(A)
R161.LOADLIB1 UID(*) EXEC(A)
R161.STEPLIB UID(QCSONL) READ(A) WRITE(A) ALLOC(A) EXEC(A)
R161.STEPLIB UID(QCSMVS) READ(A) EXEC(A)
R161.STEPLIB UID(QSMSTG) READ(A) EXEC(A)
R161.STEPLIB UID(*) EXEC(A)
R-. UID(QCSONL) READ(A) WRITE(A) ALLOC(A) EXEC(A)
R-. UID(QSMSTG) READ(A) WRITE(A) ALLOC(A) EXEC(A)
R-. UID(**EKC) R(A) W(A) A(A)
R-. UID(*) READ(A) EXEC(A)
  - UID(QSMSTG) READ(A) WRITE(A) ALLOC(A) EXEC(A)
  - UID(**EKC) R(A) W(A) A(A)
  - UID(*) READ(A) EXEC(A)
ACF70050 IN ONE OR MORE RULES, THE EXECUTE ACCESS WAS SET TO THE READ ACCESS
ACF70051 TOTAL RECORD LENGTH= 361 BYTES, 8 PERCENT UTILIZED
```

Section 2 - Creation of the Proposed Set of ACF2 Backup Datasets

This section lists the control information and the statistics as the Original (or current) set of ACF2 Backup datasets are copied and modified to create the Proposed set of datasets.

```

                                ESRF: ACF2 PROPOSED RULE PROCESSOR
WED, AUGUST 12, 1998   8:24   TEST OF PROPOSED RULE PROCESSOR           PAGE.....2
COPYING AND UPDATING ACF2 BACKUP DATASETS:

EKCRAPRC-020 RULE SET REPLACED: CICS

EKCRAPRC-030 DATASET ACCESS RULE STATISTICS:
      INPUT RECORDS:          1,447
      OUTPUT RECORDS:         1,447
      RECORDS REPLACED:        1
      RECORDS ADDED:           0
      RECORDS DELETED:         0

EKCRAPRC-020 RULE SET REPLACED: CKC-ACFM

EKCRAPRC-031 RESOURCE RULE STATISTICS:
      INPUT RECORDS:          2,022
      OUTPUT RECORDS:         2,022
      RECORDS REPLACED:        1
      RECORDS ADDED:           0
      RECORDS DELETED:         0
```

Section 3 - Analysis of Rule Set Differences

This section lists each of the proposed rule sets and indicates which rule lines were either deleted or inserted when compared to the original rule set.

```

                                ESRF: ACF2 PROPOSED RULE PROCESSOR
WED, AUGUST 12, 1998   8:24   TEST OF PROPOSED RULE PROCESSOR           PAGE.....3
ANALYSIS OF RULE SET DIFFERENCES:

EKCRAPRC-512 RULE SET REPLACED: CICS

ORIGINAL RULE----->  ACF75052 ACCESS   RULE CICS STORED BY ACF2ADM ON 02/06/98-15:28

                        $KEY(CICS)
                        R161.LOADLIB1 UID(QCSMVS) READ(A) EXEC(A)
                        R161.LOADLIB1 UID(*) EXEC(A)
                        R161.STEPLIB UID(QCSONL) READ(A) WRITE(A) ALLOC(A) EXEC(A)
                        R161.STEPLIB UID(QCSMVS) READ(A) EXEC(A)
                        R161.STEPLIB UID(QSMSTG) READ(A) EXEC(A)
                        R161.STEPLIB UID(*) EXEC(A)
                        R-. UID(QCSONL) READ(A) WRITE(A) ALLOC(A) EXEC(A)
                        R-. UID(QSMSTG) READ(A) WRITE(A) ALLOC(A) EXEC(A)
LINE INSERTED----->  R-. UID(**EKC) READ(A) WRITE(A) ALLOC(A) EXEC(A)
                        R-. UID(*) READ(A) EXEC(A)
LINE INSERTED----->  - UID(QSMSTG) READ(A) WRITE(A) ALLOC(A) EXEC(A)
                        - UID(**EKC) READ(A) WRITE(A) ALLOC(A) EXEC(A)
                        - UID(*) READ(A) EXEC(A)

EKCRAPRC-512 RULE SET REPLACED: CKC-ACFM

ORIGINAL RULE----->  ACF75052 RESOURCE RULE ACFM STORED BY ACF2ADM ON 03/11/98-17:51

                        $KEY(ACFM) TYPE(CKC)
                        $USERDATA(MARKET SYSTEMS / CICS ACF2 TRANSACTIONS)
                        UID(QCSSEC) ALLOW
                        UID(QCSONL) ALLOW
LINE INSERTED----->  UID(**EKC) ALLOW
```

Section 4 - Pseudo Dataset and Resource Names Produced

The input for the analysis steps is the pseudo dataset and resource names generated from the current or original set of ACF2 rules. Because the addition of rule lines may create additional pseudo names to analyze, these additional pseudo names are generated and added to the pseudo name input from the current set of ACF2 rules.

```
                                ESRF: ACF2 PROPOSED RULE PROCESSOR
WED, AUGUST 12, 1998   8:24   TEST OF PROPOSED RULE PROCESSOR           PAGE.....4
PSEUDO DSNAME AND RESOURCE NAME GENERATION:

EKCRAPRC-050 PSEUDO DATASET NAMES PRODUCED:

DATASET  CICS.R--
DATASET  CICS.-

EKCRAPRC-051 NUMBER OF PSEUDO DATASET NAMES PRODUCED:           2

EKCRAPRC-052 PSEUDO RESOURCE NAMES PRODUCED:

CKC      ACFM

EKCRAPRC-053 NUMBER OF PSEUDO RESOURCE NAMES PRODUCED:           1
```

Section 5 - Input to the E-SRF Grouping Rule Compiler

In order to limit the analysis to only those dataset high level indices and resource types that may have been affected by a change in ACF2 rule sets, the E-SRF Grouping Rule Compiler and GROUP selection criteria is used. The input for the Grouping Rule Compiler is listed. This should specify the dataset high level indices and resource types that may have been affected by the ACF2 Rule changes.

```
                                ESRF: ACF2 PROPOSED RULE PROCESSOR
WED, AUGUST 12, 1998   8:24   TEST OF PROPOSED RULE PROCESSOR           PAGE.....5
INPUT STATEMENTS FOR THE E-SRF GROUPING RULE COMPILER:

      $INDEX(CICS) DEFGROUP(DIFFERENCES)
      $CLASS(CKC) DEFGROUP(DIFFERENCES)
```

Section 6 - Input Control Cards for Subsequent Steps

The input control cards for the Access Analysis Steps (EKCRADDS and EKCRADRS) and the System Differences Report Step are listed.

```
                                ESRF: ACF2 PROPOSED RULE PROCESSOR
WED, AUGUST 12, 1998   8:24   TEST OF PROPOSED RULE PROCESSOR           PAGE.....6
CONTROL CARDS FOR SUBSEQUENT STEPS:

EKCRAPRC-040 CONTROL CARDS PRODUCED FOR INPUT TO EKCRADDS:

ORIGINAL      TITLE(TEST OF PROPOSED RULE PROCESSOR -- ORIGINAL)
PROPOSED      TITLE(TEST OF PROPOSED RULE PROCESSOR -- PROPOSED)
              SUMMARY EXPORT(RECORD) GROUP(DIFFERENCES) NOSEC0LIDS NOSEC4
              NOSEC1 NOSEC2
              LIDFIELDS(ACC-DATE,PHONE)

EKCRAPRC-041 CONTROL CARDS PRODUCED FOR INPUT TO EKCRADRS:

ORIGINAL      TITLE(TEST OF PROPOSED RULE PROCESSOR -- ORIGINAL)
PROPOSED      TITLE(TEST OF PROPOSED RULE PROCESSOR -- PROPOSED)
              SUMMARY EXPORT(RECORD) GROUP(DIFFERENCES) NOSEC0LIDS NOSEC4
              NOSEC2
              LIDFIELDS(ACC-DATE,PHONE)

EKCRAPRC-042 CONTROL CARDS PRODUCED FOR INPUT TO EKCRASDF:

              TITLE(TEST OF PROPOSED RULE PROCESSOR)
              LIDFIELDS(ACC-DATE,PHONE)
              SORTBY(NAME)
              SYS1TITLE(ORIGINAL)
              SYS2TITLE(PROPOSED)
```

Output from the System Differences Report

This output is from the System Differences Report, which is the culmination of the Proposed Rule Processor. See the description in that section for details.

EKCRASDF-08.12.98	ESRF: ACF2 SYSTEM DIFFERENCES REPORT	PAGE.....1			
WED, AUGUST 12, 1998 8:24					
PROCESSING JOURNAL					
EKCRASDF-001 INPUT CONTROL CARDS:					
TITLE(TEST OF PROPOSED RULE PROCESSOR)					
LIDFIELDS(ACC-DATE,PHONE)					
SORTBY(NAME)					
SYS1TITLE(ORIGINAL)					
SYS2TITLE(PROPOSED)					
EKCRASDF-006 PROCESSING COMPLETE FOR DDNAME: SYSTEM1D	NUMBER OF RECORDS READ:	139			
EKCRASDF-006 PROCESSING COMPLETE FOR DDNAME: SYSTEM1R	NUMBER OF RECORDS READ:	15,814			
EKCRASDF-006 PROCESSING COMPLETE FOR DDNAME: SYSTEM2D	NUMBER OF RECORDS READ:	149			
EKCRASDF-006 PROCESSING COMPLETE FOR DDNAME: SYSTEM2R	NUMBER OF RECORDS READ:	15,819			
EKCRASDF-007 TOTAL NUMBER OF USERS DEFINED:	239				
EKCRASDF-008 TOTAL NUMBER OF RESOURCES DEFINED:	117				
EKCRASDF-099 NOTE: ONLY ACCESSES GENERATED BY ACF2 RULES ARE REPORTED ON.					
EKCRASDF-020 NUMBER OF USERS WITH DIFFERENT ACCESS PERMISSIONS:	5				

ESRF: ACF2 SYSTEM DIFFERENCES REPORT					
WED, AUGUST 12, 1998 8:24	TEST OF PROPOSED RULE PROCESSOR	PAGE.....2			
DIFFERENCES FOR USERS. FIRST USER IN GROUP: EKCZEK6					
STATUS	S-LOGONID	USER ID(UID) STRING	NAME	ACC-DATE	PHONE
	EKCADAM	QCSEKCADAM	ADAMS, SCOTT	03-FEB-97	847-296-8010
	EKCCARN	QCSEKCCARN	CARNEAL, TOM	11-AUG-98	847-296-8010
	EKCKLEM	QCSEKCKLEM	KLEMENS, EBERHARD	10-AUG-98	847-296-8010
	EKCSCHR	QCSEKCSCHR	SCHRAGER, BARRY	11-AUG-98	847-296-8010
	MVSSKAW	QCSMVSSKAW	SKAWINSKI, SUE	24-MAR-97	214-555-4327

ORIGINAL		PROPOSED			
M RSRC DATASET		M RSRC DATASET	RESOURCE		
PERM RD WT AL EX		PERM RD WT AL EX	CLASS RESOURCE NAME		
PRV		ALW	CKC ACFM		
.		A A A A	DATASET CICS.-		
.		A A A A	DATASET CICS.R-.-		

JCL Required to Execute EKCRAPRC

```
//EKZK4P JOB (E014),'SCHRAGER',CLASS=J,MSGCLASS=X,MSGLEVEL=(1,1),
// REGION=4M,NOTIFY=EKCZK4
//*
//* THIS JOBSTREAM MAKES THE FOLLOWING ASSUMPTIONS:
//*
//* 1. THE PSEUDO DATASET NAMES AND RESOURCE NAMES FROM THE
//* CURRENT SET OF ACF2 BACKUP DATASETS IS STORED IN THE
//* DATASETS: SYS1.ESRF.DSNAMES AND SYS1.ESRF.RSNAMES
//* IF THIS IS NOT THE CASE, THE EKCRDPSD AND EKCRPSD
//* UTILITIES MUST BE RUN FIRST TO CREATE THEM.
//*
//* 2. THE ACF2 BACKUP DATASETS ARE ACF2.BKLIDS, ACF2.BKINFO,
//* AND ACF2.BKRULES
//*
//* 3. THE E-SRF LOAD LIBRARY IS SYS1.ESRF.LOAD
//*
//PRC EXEC ESRFPRC,PRPDS=SYSADM.TEST.PRPDS
//APRC.SYSIN DD *
TITLE(REQUEST BY J. SMITH 8/12/98)
LIDFIELDS(DEPT,PHONE)
SORTBY(DEPT,NAME)
/*
```

The stored procedure, ESRFPRC, is listed in Appendix D of this manual.

Chapter 11 : Export Data Files for all Reports Except the Database Differences Report

Optionally, all of the E-SRF/ACF2 Access Analysis Reports can create an output dataset that can be use as input to a Personal Computer Based Spreadsheet or Database System or as input for another Mainframe application. The keyword used in all the reports is EXPORT and it may optionally contain an operand. The format for the EXPORT output of the Database Differences Report is different – see the section describing that report for additional information.

EXPORT or EXPORT(DIF) Format

This is the default EXPORT output format and is chosen if the keyword EXPORT is used with no operand. The output dataset would be created in PC - Data Interchange Format or comma-delimited format. The first output record will contain field names and subsequent records will be variable length with each field separated by a comma. Fields that may contain commas, such as the name field, are enclosed with double quotation marks (“...”).

The field names are:

TYPE - The ACF2 Resource Type. DATASET is used for all Dataset output.

RSNAME - The Resource Name. In the case of dataset records, it is the dataset name.

MULTIPLE - If there were multiple methods in which the user could obtain this access to the resource, then a “Y” will appear. Otherwise, an “N” will appear.

RSRC_ACCESS - For Resources, this is the access that will be allowed. Values are “A” for allow and “L” for allowed but logged.

RSRC_COND - For Resources, this defines whether the access is conditional or not. Values are a “Y”, meaning the access was conditional, or an “N” for an unconditional access.

READ_ACCESS - For Datasets, this defines whether the READ access will be allowed. Values are “A” for allowed, “L” for allowed but logged, and “P” for prevent.

READ_COND - For Datasets, this defines whether the READ access was conditional or not. Values are “Y”, meaning the access was conditional, or “N” for an unconditional access.

WRITE_ACCESS - For Datasets, this defines whether the WRITE access will be allowed. Values are “A” for allowed, “L” for allowed but logged, and “P” for prevent.

WRITE_COND - For Datasets, this defines whether the WRITE access was conditional or not. Values are “Y”, meaning the access was conditional, or “N” for an unconditional access.

ALLOC_ACCESS - For Datasets, this defines whether the ALLOCate access will be allowed. Values are “A” for allowed, “L” for allowed but logged, and “P” for prevent.

ALLOC_COND - For Datasets, this defines whether the ALLOCate access was conditional or not. Values are “Y”, meaning the access was conditional, or “N” for an unconditional access.

EXEC_ACCESS - For Datasets, this defines whether the EXECute access will be allowed. Values are “A” for allowed, “L” for allowed but logged, and “P” for prevent.

EXEC_COND - For Datasets, this defines whether the EXECute access was conditional or not. Values are “Y”, meaning the access was conditional, or “N” for an unconditional access.

USER_ID - The ACF2 Logonid

USER_NAME - The ACF2 Logonid Name field

USER_UID - The ACF2 User Identification String used for the access

ALT_UID - Whether the UID specified was the normal or primary UID string or an alternate UID specified by ETF/A or ACF2. The values are “Y” for alternate, “N” for normal, or “?” for undetermined. In the case of “?”, the access has been determined to be allowed, but the information within the report was lost prior to writing these records. This is applicable to the Logonid Owner reports only – the DataOwner reports will always produce an accurate UID string.

REASON - The reason the access was allowed. Values are:

PREFIX - allowed because of owned dataset prefix

NON-CNCL - allowed because of the NON-CNCL privilege

SECURITY - allowed because of the SECURITY privilege

RULES - allowed because of the ACF2 rules

EXPORT(RECORD) Format

The output dataset is to be produced as a variable length record with fixed length fields with the exception of the resource name (which appears last) which is a variable length field.

The field definitions are:

Columns Description

1-1	Multiple access permissions - Y/N
3-3	Resource Access Permission - A/L
5-5	Resource Access Conditional? - Y/N
7-7	Dataset Read Access Permission - A/L/P
9-9	Dataset Read Access Conditional? - Y/N
11-11	Dataset Write Access Permission - A/L/P
13-13	Dataset Write Access Conditional? - Y/N
15-15	Dataset Allocate Access Permission - A/L/P
17-17	Dataset Allocate Access Conditional? - Y/N
19-19	Dataset Execute Access Permission - A/L/P
21-21	Dataset Execute Access Conditional? - Y/N
23-30	ACF2 Logonid
32-51	ACF2 Logonid Record Name field
53-76	ACF2 User Identification String
78-78	Is User Identification String an Alternate? Y/N/?
80-87	Reason Code: PREFIX/NON-CNCL/SECURITY/RULES
89-96	Resource type: ACF2 three character type or DATASET
98-end	Resource or Dataset name

Chapter 12 : EKCRADDR - Database Differences Report

- ☛ What portions of the ACF2 database changed between yesterday and today or last week and today?

Description

The E-SRF Database Differences Report provides the Security Administrator a tool to review what changes took place to the ACF2 database between two different times. For example, the Security Administrator can review changes between two different days or between last week and this week. Input is from two different sets of ACF2 Backup Datasets. Output is a summary report, a detailed report, and an Export dataset that can be used by some other post-processing system such as SAS.

Data Definition (DD) Cards Required and Optional

SYSPRINT - Required - will contain the listing of the control cards, any errors, statistics, and the Summary output.

SYSIN - Required - contains the input control cards.

DETLIDS - Optional - will contain the Detailed Logonid Record Output. If this DD card is missing, then no detailed output will be produced.

DETACCR - Optional – will contain the Detailed Access Rule Record Output. If this DD card is missing, then no detailed output will be produced.

DETRSRC - Optional – will contain the Detailed Resource Rule Record Output. If this DD card is missing, then no detailed output will be produced.

DETINFO - Optional – will contain the Detailed Information Storage Record Output. If this DD card is missing, then no detailed output will be produced.

OLIDS - Optional - defines the older version of the ACF2 Backup Logonid Dataset (BKLIDS)

NLIDS - Optional - defines the newer version of the ACF2 Backup Logonid Dataset (BKLIDS)

ORULES - Optional - defines the older version of the ACF2 Backup Access Rule Dataset (BKRULES)

NRULES - Optional - defines the newer version of the ACF2 Backup Access Rule Dataset (BKRULES)

OINFOS - Optional - defines the older version of the ACF2 Information Storage Dataset (BKINFO)

NINFOS - Optional - defines the newer version of the ACF2 Information Storage Dataset (BKINFO)

WRAPSYS - Optional - defines the wrapper definitions for the SYSPRINT (summary) output. See the section in this manual that defines the input for the WRAPPER definitions.

WRAPDET - Optional - defines the wrapper definitions for the DETAILS (detailed) output. See the section in this manual that defines the input for the WRAPPER definitions.

EXPORT- Optional - defines the EXPORT data file. This is a variable length record length text file described later in this section.

The Input Control Keywords

TITLE(title) - the title that will appear on the top of each page of both the summary and the detailed report outputs.

SYSID(sysid) - the subsystem Identifier that will be placed in all of the output **EXPORT** dataset records. This can be up to eight characters long. Nothing is done with this field except to place it in the output records.

IGNOREFIELDS(field1,field2,...,fieldn) - a list of ACF2 external field names that should be ignored for the purpose of determining whether or not a Logonid Record is to be considered as changed. There are a series of fields used as default. These fields are added to the default list of fields. The default list of fields can be deleted by using the **RESETIGNORE** keyword before specifying a new list of **IGNOREFIELDS**. Any number of **IGNOREFIELDS** keywords can be used. The default fields that will be ignored are:

ACC-CNT	System Access Count
ACC-DATE	Date of last System Access
ACC-SRCE	Source of last System Access
ACC-TIME	Time of last System Access
PRVPSWD1	Last previous password
PRVPSWD2	Two passwords ago
PRVPSWD3	Three passwords ago
PRVPSWD4	Four passwords ago
PRV-TOD1	Time of previous password
PRV-TOD2	Time of two passwords ago
PRV-TOD3	Time of three passwords ago
PRV-TOD4	Time of four passwords ago
PSWD-DAT	Date of last invalid password validation
PSWD-INV	Number of invalid passwords since the last successful system entry validation
PSWD-SRC	Source of the last invalid password
PSWD-TIM	Time of day of the last invalid password
PSWD-VIO	Number of password violations on PSWD-DAT
SEC-VIO	Security violation count
UPD-TOD	Time stamp of the last time the Logonid Record was updated

INCLUDE(type1,type2,...,typen) - a list of Information Storage Class and Type masks that specify which Information Storage records are to be included in the analysis. If this keyword is omitted, then the equivalent of INCLUDE(****) is taken as a default.

EXCLUDE(type1,type2,...,typen) - a list of Information Storage Class and Type masks that specify which Information Storage records are to be excluded in the analysis. If this keyword is omitted, no records will be excluded.

As an example: To do only Information Storage Analysis on Resource Rules, but to skip those rules of ACF2 Resource Type "TAC" (TSO Account Rules), the following combination of keywords could be used:

INCLUDE(R-) EXCLUDE(RTAC)

FULLRULES - Normally, just the rule lines that have been inserted or deleted are listed. This keyword causes all of the rule lines in the rule set to be listed.

LINES(nnn) - The number of lines per page. This applies to both the summary and detailed outputs.

Summary Output (SYSPRINT DD CARD)

Input Parameters and Journal

This section of the report lists the input control cards and any error messages.

```
EKCRADDR-01.29.99          ESRF: ACF2 DATABASE DIFFERENCES REPORT
FRI, JANUARY 29, 1999 10:23          PAGE.....1
INPUT PARAMETERS AND JOURNAL:

EKCRADDR-100 INPUT CONTROL CARDS:

        TITLE(TEST OF ACF2 DATABASE DIFFERENCES REPORT)
        LINES(70)
        SYSID(EKCP390)
```

Summary Differences Output

This section is really divided into three parts – the Logonid Record Summary information, the Access Rule Summary information, and the Information Storage Summary information.

If the DETAILS output is active (there are DETLIDS, DETACCR, DETRSRC, or DETINFO DD cards defined), then each of the summary lines will reference a page number and line number in the detailed output section where the details on each modified record can be found.

```
ESRF: ACF2 DATABASE DIFFERENCES REPORT
FRI, JANUARY 29, 1999 10:23  TEST OF ACF2 DATABASE DIFFERENCES REPORT          PAGE.....2
SUMMARY DIFFERENCES OUTPUT:

LOGONID RECORD: BARRY  -- MODIFIED AT OR BEFORE: THU 28-JAN-1999 @ 09:52  -- SEE DETAILS PAGE: 1, LINE: 8
LOGONID RECORD: EB    -- MODIFIED AT OR BEFORE: THU 28-JAN-1999 @ 14:40  -- SEE DETAILS PAGE: 1, LINE: 14
LOGONID RECORD: TOM   -- MODIFIED AT OR BEFORE: THU 28-JAN-1999 @ 14:46  -- SEE DETAILS PAGE: 1, LINE: 20
...
PROCESSING COMPLETE FOR LOGONID RECORDS:
NUMBER OF OLD LOGONID RECORDS READ: 2,238
NUMBER OF NEW LOGONID RECORDS READ: 2,246
NUMBER OF LOGONID RECORDS CHANGED: 78
-----
ACCESS RULE: $ABD    CHANGED AT: WED 06-JAN-1999 @ 11:18 -- SEE DETAILS PAGE:8, LINE: 58
ACCESS RULE: #DEF    CHANGED AT: WED 06-JAN-1999 @ 11:18 -- SEE DETAILS PAGE:9, LINE: 8
ACCESS RULE: #MMM    CHANGED AT: WED 06-JAN-1999 @ 11:18 -- SEE DETAILS PAGE:9, LINE: 17
ACCESS RULE: #SYS1   CHANGED AT: WED 06-JAN-1999 @ 11:18 -- SEE DETAILS PAGE:9, LINE: 23
...
PROCESSING COMPLETE FOR ACCESS RULE RECORDS:
NUMBER OF OLD ACCESS RULE RECORDS READ: 1,148
NUMBER OF NEW ACCESS RULE RECORDS READ: 1,151
NUMBER OF ACCESS RULE RECORDS CHANGED: 48
-----
INFORMATION RECORD: e-EKC-SYS1.ETFA.C100000 -- MODIFIED AT: TUE 12-JAN-1999 @ 12:35 -- NO FURTHER INFORMATION
AVAILABLE
INFORMATION RECORD: e-EKC-SYS1.ETFA.F$R0000 -- MODIFIED AT: THU 28-JAN-1999 @ 09:22 -- NO FURTHER INFORMATION
AVAILABLE
INFORMATION RECORD: C-TSO-PSCZDVB -- MODIFIED AT: THU 31-DEC-1998 @ 11:40 -- NO FURTHER INFORMATION AVAILABLE
INFORMATION RECORD: C-TSO-PSCZJLC -- INSERTED AT: TUE 12-JAN-1999 @ 14:24 -- NO FURTHER INFORMATION AVAILABLE
...
RESOURCE RULE: APL-BBVLOGON CHANGED AT: WED 06-JAN-1999 @ 12:42 -- SEE DETAILS PAGE: 16, LINE: 10
RESOURCE RULE: APL-B1ETAS CHANGED AT: WED 06-JAN-1999 @ 11:25 -- SEE DETAILS PAGE: 16, LINE: 18
RESOURCE RULE: APL-IDMS14CV INSERTED AT: THU 28-JAN-1999 @ 16:38 -- SEE DETAILS PAGE: 16, LINE: 26
...
PROCESSING COMPLETE FOR INFORMATION STORAGE RECORDS:
NUMBER OF OLD INFORMATION STORAGE RECORDS READ: 2,403
NUMBER OF NEW INFORMATION STORAGE RECORDS READ: 2,411
NUMBER OF RECORDS BYPASSED BECAUSE OF MASKS: 0
NUMBER OF INFORMATION STORAGE RECORDS CHANGED: 221
```

Detailed Report Output

Detailed output is activated when a details DD Card is defined in the JCL. The Detailed Output contains details of the actual changes to the ACF2 Database Record when available.

```
DETLIDS DD CARD:
-----
EKCRADDR-01.29.99          ESRF: ACF2 DATABASE DIFFERENCES REPORT
FRI, JANUARY 29, 1999 10:39                                PAGE.....1
DETAILED DIFFERENCES OUTPUT:
-----

LOGONID RECORD: BARRY    -- MODIFIED AT OR BEFORE: THU 28-JAN-1999 @ 09:52
  OLD VALUES: NOAUDIT
  NEW VALUES:  AUDIT
-----

LOGONID RECORD: EB      -- INSERTED AT OR BEFORE: TUE 12-JAN-1999 @ 16:13
  NEW VALUES: DFT-PFX(EB) LID(EB) LID-DATE(04-JAN-99) NAME(EB K.) PREFIX(EB) TSOACCT(Q010)
-----

LOGONID RECORD: TOM     -- INSERTED AT OR BEFORE: MON 04-JAN-1999 @ 16:38
  NEW VALUES: DFT-PFX(TOM) LID(TOM) LID-DATE(04-JAN-99) NAME(TOM C.) PREFIX(TOM) TSOACCT(Q010)
                UGROUP(WQOLONL) VLD-ACCT
-----

DETACCR DD CARD:
-----

ACCESS RULE: $ABD      CHANGED AT: WED 06-JAN-1999 @ 11:18
NEW RULE----->      ACF75052 ACCESS  RULE $ABD STORED BY BARRY ON 01/06/99-11:18
LINE INSERTED-----> - UID(DEPTAB) READ(A) WRITE(A) EXEC(A)
-----

ACCESS RULE: #DEF      CHANGED AT: WED 06-JAN-1999 @ 11:18
NEW RULE----->      ACF75052 ACCESS  RULE #DEF STORED BY BARRY ON 01/06/99-11:18
LINE INSERTED-----> SAR.- UID(DEPTAB) READ(A) WRITE(A) EXEC(A)
LINE INSERTED-----> - UID(DEPT)  READ(A) WRITE(A) EXEC(A)
-----

ACCESS RULE: #MMM      CHANGED AT: WED 06-JAN-1999 @ 11:18
NEW RULE----->      ACF75052 ACCESS  RULE #MMM STORED BY EB ON 01/06/99-11:18
LINE INSERTED-----> PAYMSTR.- UID(DEPTPY) READ(A) WRITE(A) ALLOC(A) EXEC(A)
-----

ACCESS RULE: #SYS1     CHANGED AT: WED 06-JAN-1999 @ 11:18
NEW RULE----->      ACF75052 ACCESS  RULE #SYS1 STORED BY TOM ON 01/06/99-11:18
LINE INSERTED-----> LOGREC UID(DEPTSE) READ(A) WRITE(A) EXEC(A)
LINE INSERTED-----> PARMLIB UID(DEPTSM) READ(A) EXEC(A)
LINE INSERTED-----> PROCLIB UID(DEPTSM) READ(A) WRITE(A) ALLOC(A) EXEC(A)
-----

DETRSRC DD CARD:
-----

RESOURCE RULE: APL-BBVLGON CHANGED AT: WED 06-JAN-1999 @ 12:42
NEW RULE----->      ACF75052 RESOURCE RULE BBVLGON STORED BY TOM ON 01/06/99-12:42
LINE INSERTED-----> UID(DEPTAB) ALLOW
LINE INSERTED-----> UID(DEPTCD) ALLOW
LINE INSERTED-----> UID(DEPTDE) ALLOW
LINE DELETED----->  UID(DEPTXX) ALLOW
-----

RESOURCE RULE: APL-B1ETAS CHANGED AT: WED 06-JAN-1999 @ 11:25
NEW RULE----->      ACF75052 RESOURCE RULE B1ETAS STORED BY TOM ON 01/06/99-11:25
LINE INSERTED-----> UID(DEPTAS) SERVICE(READ,UPDATE) ALLOW
-----

RESOURCE RULE: APL-IDMS CHANGED AT: THU 28-JAN-1999 @ 16:38
NEW RULE----->      ACF75052 RESOURCE RULE IDMS STORED BY TOM ON 01/28/99-16:38
LINE INSERTED-----> UID(DEPTAS) SERVICE(READ,UPDATE) ALLOW
-----
```


Sample JCL to Execute the Database Differences Report

```
//ACF2DDR EXEC PGM=EKCRADDR
//STEPLIB DD DSN=SYS1.ESRF.LOAD,DISP=SHR
//SYSPRINT DD SYSOUT=*
//DETLIDS DD SYSOUT=*
//DETACCR DD SYSOUT=*
//DETRSRC DD SYSOUT=*
//DETINFO DD SYSOUT=*
//OLIDS DD DSN=ACF2.BKLIDS.D010199,DISP=SHR
//NLIDS DD DSN=ACF2.BKLIDS.D020199,DISP=SHR
//ORULES DD DSN=ACF2.BKRULES.D010199,DISP=SHR
//NRULES DD DSN=ACF2.BKRULES.D020199,DISP=SHR
//OINFOS DD DSN=ACF2.BKINFO.D010199,DISP=SHR
//NINFOS DD DSN=ACF2.BKINFO.D020199,DISP=SHR
//SYSIN DD *
TITLE(COMPARISON BETWEEN JAN 1 AND FEB 1)
/*
```

Export Dataset Output Format

The Database Differences Report Export Dataset output is indicated by inserting an EXPORT Data Definition Card in the JCL. The format of the Export dataset output is RECFM=VB, LRECL=2048, and whatever BLKSIZE the installation chooses.

The Record Format is as follows:

- 1-8 SYSID specified by the SYSID input keyword
- 9-16 Database ID – LOGONIDS, RULES, or INFOSTG
- 17-61 Record Key. For the Logonid Records, it is the eight byte Logonid followed by 36 blanks; for Access Rules, it is the eight byte Access Rule Key followed by 36 blanks; and for the Information Storage Records (including Resource Rules), it is the 44 byte key.
- 62-96 Time Stamp of the updated record. If the record was deleted, this will be blanks. Otherwise, it is in the format: DOW DD-MMM-YYYY @ HH:MM where DOW is the day of the week and the rest is self-explanatory.
- 97-105 Operation performed. This can either be INSERTED, CHANGED, or DELETED.
- 106-2040 Text of the operation in the same format as the printed output.

Chapter 13 : EKCRADCR - Database Comparison Report

- ☛ What Logonid Record Fields, Rule Lines, and Information Storage Records are different between two separate ACF2 Databases?

Description

The E-SRF Database Comparison Report provides the Security Administrator a tool to review what ACF2 Records, Rules, and Fields are different between two different ACF2 Databases. For example, a single company may have multiple ACF2 databases that should be kept in synchronization. This report gives the Security Administrator the ability to review the differences ignoring certain information that would for sure be different, such as timestamps, etc. Input is from two different sets of ACF2 Backup Datasets. Output is a summary report, a detailed report, and an Export dataset that can be used by some other post-processing system such as SAS.

Note: The following description uses the term “A” system to refer to one of the two systems being compared, and “B” system refers to the other.

Data Definition (DD) Cards Required and Optional

SYSPRINT - Required - will contain the listing of the control cards, any errors, statistics, and the Summary output.

SYSIN - Required - contains the input control cards.

DETLIDS - Optional - will contain the Detailed Logonid Record Output. If this DD card is missing, then no detailed output will be produced.

DETACCR - Optional – will contain the Detailed Access Rule Record Output. If this DD card is missing, then no detailed output will be produced.

DETRSRC - Optional – will contain the Detailed Resource Rule Record Output. If this DD card is missing, then no detailed output will be produced.

DETINFO - Optional – will contain the Detailed Information Storage Record Output. If this DD card is missing, then no detailed output will be produced.

ALIDS - Optional - defines the “A” system version of the ACF2 Backup Logonid Dataset (BKLIDS)

BLIDS - Optional - defines the “B” system version of the ACF2 Backup Logonid Dataset (BKLIDS)

ARULES - Optional - defines the “A” system version of the ACF2 Backup Access Rule Dataset (BKRULES)

BRULES - Optional - defines the “B” system version of the ACF2 Backup Access Rule Dataset (BKRULES)

AINFOS - Optional - defines the “A” system version of the ACF2 Information Storage Dataset (BKINFO)

BINFOS - Optional - defines the “B” system version of the ACF2 Information Storage Dataset (BKINFO)

WRAPSYS - Optional - defines the wrapper definitions for the SYSPRINT (summary) output. See the section in this manual that defines the input for the WRAPPER definitions.

WRAPDET - Optional - defines the wrapper definitions for the DETAILS (detailed) output. See the section in this manual that defines the input for the WRAPPER definitions.

EXPORT - Optional - defines the EXPORT data file. This is a variable length record length text file described later in this section.

The Input Control Keywords

TITLE(title) - the title, up to 64 characters, that will appear on the top of each page of both the summary and the detailed report outputs.

ANAME(SYSTEM-A|name) - the name, up to 8 characters, of the A-system to be used in the reports. The default is “SYSTEM-A.”

BNAME(SYSTEM-B|name) - the name, up to 8 characters, of the B-system to be used in the reports. The default is “SYSTEM-B.”

SYSID(sysid) - the subsystem Identifier that will be placed in all of the output **EXPORT** dataset records. This can be up to eight characters long. Nothing is done with this field except to place it in the output records.

IGNOREFIELDS(field1,field2,...,fieldn) - a list of ACF2 external field names that should be ignored for the purpose of determining whether or not a Logonid Record is to be considered as different. There are a series of fields used as default. These fields are added to the default list of fields. The default list of fields can be deleted by using the **RESETIGNORE** keyword before specifying a new list of **IGNOREFIELDS**. Any number of **IGNOREFIELDS** keywords can be used. The default fields that will be ignored are:

ACC-CNT	System Access Count
ACC-DATE	Date of last System Access
ACC-SRCE	Source of last System Access
ACC-TIME	Time of last System Access
PRVPSWD1	Last previous password
PRVPSWD2	Two passwords ago
PRVPSWD3	Three passwords ago
PRVPSWD4	Four passwords ago
PRV-TOD1	Time of previous password
PRV-TOD2	Time of two passwords ago
PRV-TOD3	Time of three passwords ago
PRV-TOD4	Time of four passwords ago

PSWD-DAT	Date of last invalid password validation
PSWD-INV	Number of invalid passwords since the last successful system entry validation
PSWD-SRC	Source of the last invalid password
PSWD-TIM	Time of day of the last invalid password
PSWD-VIO	Number of password violations on PSWD-DAT
SEC-VIO	Security violation count
UPD-TOD	Time stamp of the last time the Logonid Record was updated

SELECTFIELDS(field1,field2,...,fieldn) - a list of Logonid Record Fields that are to be selected for comparison.. If **SELECTFIELDS** is used, then anything specified in **IGNOREFIELDS** or its defaults is ignored.

SELECTGROUPS(group1,group2,...,groupn) - a list of Logonid Record Field Groups that are to be selected for comparison. These are the same groupnames as used by ACF2 and displayed when a Logonid Record is displayed or via a **SHOW FIELDS** subcommand. Fields that are in a group and in the default **IGNOREFIELDS** list specified above will not be selected even if the group is selected. To select these fields, the **SELECTFIELDS** keyword must be used in addition to the **SELECTGROUPS** keyword. In specifying a groupname, only the shortest unique character sequence need be used – as in ACF2. The default set of Logonid Record Field Groupnames are:

IDENTIFICATION
CANCEL/SUSPEND
PRIVILEGES
ACCESS
PASSWORD
TSO
STATISTICS
CICS
IMS
IDMS
MUSASS
RESTRICTIONS
DFP

INCLUDE(type1,type2,...,typen) - a list of Information Storage Class and Type masks that specify which Information Storage records are to be included in the analysis. If this keyword is omitted, then the equivalent of **INCLUDE(****)** is taken as a default.

EXCLUDE(type1,type2,...,typen) - a list of Information Storage Class and Type masks that specify which Information Storage records are to be excluded in the analysis. If this keyword is omitted, no records will be excluded.

As an example: To do only Information Storage Analysis on Resource Rules, but to skip those rules of ACF2 Resource Type “TAC” (TSO Account Rules), the following combination of keywords could be used:

INCLUDE(R-) EXCLUDE(RTAC)

FULLRULES - Normally, just the rule lines that have been inserted or deleted are listed. This keyword causes all the rule lines in the rule set to be listed.

LINES(nnn) - The number of lines per page. This applies to both the summary and detailed outputs.

Summary Output (SYS PRINT DD CARD):

Input Parameters and Journal

This section of the report lists the input control cards and any error messages.

```
EKCRADCR-08.27.99                ESRF: ACF2 DATABASE COMPARISON REPORT
FRI, AUGUST 27, 1999  15:34                PAGE.....1
INPUT PARAMETERS AND JOURNAL:

EKCRADCR-100 INPUT CONTROL CARDS:

      TITLE(COMPARISON OF CHICAGO/NEW YORK SYSTEMS)
      ANAME(CHICAGO)  BNAME(NEW YORK)
      SELECTGROUPS( IDENT,PRIV,PASSWORD)
```

Summary Comparison Output

This section is really divided into three parts – the Logonid Record Summary information, the Access Rule Summary information, and the Information Storage Summary information.

If the DETAILS output is active (there are DETLIDS, DETACCR, DETRSRC, or DETINFO DD cards defined), then each of the summary lines will reference a page number and line number in the detailed output section where the details on each modified record can be found.

```
ESRF: ACF2 DATABASE COMPARISON REPORT
FRI, AUGUST 27, 1999 15:34                COMPARISON OF CHICAGO/NEW YORK SYSTEMS                PAGE.....2
SUMMARY COMPARISON OUTPUT:

LOGONID RECORD: BARRY -- TIMESTAMPS: FRI 27-AUG-1999 @ 08:29 - FRI 27-AUG-1999 @ 15:11 -
  SEE DETLIDS PAGE: 1, LINE: 7
LOGONID RECORD: JMLMS10-- TIMESTAMPS: WED 25-AUG-1999 @ 14:42 - FRI 27-AUG-1999 @ 15:08 -
  SEE DETLIDS PAGE: 1, LINE: 12
LOGONID RECORD: JMLSS24-- TIMESTAMPS: THU 26-AUG-1999 @ 09:39 - FRI 27-AUG-1999 @ 14:22 -
  SEE DETLIDS PAGE: 1, LINE: 17
LOGONID RECORD: PTEST3 -- TIMESTAMPS: THU 26-AUG-1999 @ 15:34 - FRI 27-AUG-1999 @ 14:13 -
  SEE DETLIDS PAGE: 1, LINE: 22

PROCESSING COMPLETE FOR LOGONID RECORDS:
NUMBER OF LOGONID RECORDS READ FOR CHICAGO:    1,081
NUMBER OF LOGONID RECORDS READ FOR NEW YORK:    1,080
  NUMBER OF DIFFERENT LOGONID RECORDS:         4
-----
ACCESS RULE: ACFOWN - TIMESTAMPS: MON 23-AUG-1999 @ 14:43 - FRI 27-AUG-1999 @ 12:05 -
  SEE DETACCR PAGE: 1, LINE: 7
ACCESS RULE: ACFUSED - TIMESTAMPS: .....NO RECORD..... - FRI 27-AUG-1999 @ 12:00 -
  SEE DETACCR PAGE: 1, LINE: 17
ACCESS RULE: DPAYROLL- TIMESTAMPS: THU 26-AUG-1999 @ 15:55 - FRI 27-AUG-1999 @ 10:15 -
  SEE DETACCR PAGE: 1, LINE: 28
ACCESS RULE: PAYROLL - TIMESTAMPS: THU 26-AUG-1999 @ 16:05 - FRI 27-AUG-1999 @ 14:54 -
  SEE DETACCR PAGE: 1, LINE: 38
ACCESS RULE: PROJECT - TIMESTAMPS: THU 26-AUG-1999 @ 15:52 - FRI 27-AUG-1999 @ 11:47 -
  SEE DETACCR PAGE: 1, LINE: 52

PROCESSING COMPLETE FOR ACCESS RULE RECORDS:
NUMBER OF ACCESS RULE RECORDS READ FOR CHICAGO:    549
NUMBER OF ACCESS RULE RECORDS READ FOR NEW YORK:    557
  NUMBER OF ACCESS RULE RECORDS CHANGED:         5
-----
INFO RECORD: e-EKC-SYS1.ETFA.CONTROL -- TIMESTAMPS: FRI 02-JUL-1999 @ 18:31 -- FRI 02-JUL-1999 @ 20:38
  -- NO FURTHER INFORMATION AVAILABLE
INFO RECORD: e-EKC-SYS1.ETFA.C100000 -- TIMESTAMPS: THU 26-AUG-1999 @ 19:57 -- FRI 27-AUG-1999 @ 15:06
  -- NO FURTHER INFORMATION AVAILABLE
INFO RECORD: e-EKC-SYS1.ETFA.F$R0000 -- TIMESTAMPS: THU 26-AUG-1999 @ 19:57 -- FRI 27-AUG-1999 @ 15:06
  -- NO FURTHER INFORMATION AVAILABLE

RESOURCE RULE: CKT-AUDIT -- TIMESTAMPS: .....NO RECORD..... -- MON 09-AUG-1999 @ 07:32 -
  SEE DETRSRC PAGE: 1, LINE: 7

RESOURCE RULE: F$F-F$RECALL -- TIMESTAMPS: WED 11-AUG-1999 @ 17:59 -- WED 11-AUG-1999 @ 17:59 -
  SEE DETRSRC PAGE: 1, LINE: 16

RSRC GROUPING: X-RGP-P390 BARRY -- TYPE: ENTRY FRI 27-AUG-1999 @ 08:31 -- FRI 27-AUG-1999 @ 11:28 --
  SEE DETINFO PAGE: 1, LINE: 7

PROCESSING COMPLETE FOR INFORMATION STORAGE RECORDS:
NUMBER OF INFORMATION STORAGE RECORDS READ FOR CHICAGO:    1107
NUMBER OF INFORMATION STORAGE RECORDS READ FOR NEW YORK:    1117
  NUMBER OF RECORDS BYPASSED BECAUSE OF MASKS:         0
  NUMBER OF INFORMATION STORAGE RECORDS CHANGED:         6
```

Note that the format of the Timestamps segments is the record timestamp for the “A” system followed by the timestamp for the “B” system. “No Record” for one of the timestamps indicates that the corresponding record for that system is missing.

Detailed Report Output:

Detailed output is activated when a details DD Card (DETLIDS, DETACCR, DETRSRC or DETINFO) is defined in the JCL. The Detailed Output contains details of the actual differences between the two ACF2 Database Records when available.

```
DETLIDS DD Card:
-----
EKCRADCR-08.27.99                      ESRF: ACF2 DATABASE COMPARISON REPORT
FRI, AUGUST 27, 1999 15:34              COMPARISON OF CHICAGO/NEW YORK SYSTEMS      PAGE.....1
DETLIDS - DETAILED LOGONID COMPARISON OUTPUT:
-----

LOGONID RECORD: BARRY  -- TIMESTAMPS: FRI 27-AUG-1999 @ 08:29 -- FRI 27-AUG-1999 @ 15:11
CHICAGO:  NAME(BARRY SCHRAGER)
NEW YORK:  NAME(BARRY S SCHRAGER)
-----

LOGONID RECORD: JMLMS10 -- TIMESTAMPS: WED 25-AUG-1999 @ 14:42 -- FRI 27-AUG-1999 @ 15:08
CHICAGO:  DEPT(DEV) DIVISION(PSDD) PASSWORD(??) PSWD-TOD(WED 25-AUG-1999 @ 13:14)
NEW YORK:  DEPT(ACT) DIVISION(RADD) PASSWORD(??) PSWD-TOD(FRI 27-AUG-1999 @ 14:52)
-----

LOGONID RECORD: JMLSS24 -- TIMESTAMPS: THU 26-AUG-1999 @ 09:39 -- FRI 27-AUG-1999 @ 14:22
CHICAGO:  SECURITY
NEW YORK:  NOSECURITY
-----

LOGONID RECORD: PTEST3  -- TIMESTAMPS: THU 26-AUG-1999 @ 15:34 -- FRI 27-AUG-1999 @ 14:13
CHICAGO:  PASSWORD(??) PSWD-EXP PSWD-TOD(WED 25-AUG-1999 @ 13:38)
NEW YORK:  PASSWORD(??) NOPSWD-EXP PSWD-TOD(FRI 27-AUG-1999 @ 13:40)

DETACCR DD Card:
-----
EKCRADCR-08.27.99                      ESRF: ACF2 DATABASE COMPARISON REPORT
FRI, AUGUST 27, 1999 15:34              COMPARISON OF CHICAGO/NEW YORK SYSTEMS      PAGE.....1
DETACCR - DETAILED ACCESS RULE COMPARISON OUTPUT:
-----

ACCESS RULE: ACFOWN  -- TIMESTAMPS: MON 23-AUG-1999 @ 14:43 -- FRI 27-AUG-1999 @ 12:05

CHICAGO RULE-----> ACF75052 ACCESS  RULE ACFOWN STORED BY TEST ON 08/23/99-14:43
NEW YORK RULE-----> ACF75052 ACCESS  RULE ACFOWN STORED BY TEST ON 08/27/99-12:05

NEW YORK RULE-----> $RESOWNER(JLITTLE)
CHICAGO RULE-----> $RESOWNER(BRET)
NEW YORK RULE-----> ABC UID(EKCMKTDACT) READ(A) EXEC(A)
-----

ACCESS RULE: ACFUSED -- TIMESTAMPS: .....NO RECORD..... -- FRI 27-AUG-1999 @ 12:00

NEW YORK RULE-----> ACF75052 ACCESS  RULE ACFUSED STORED BY TEST ON 08/27/99-12:00
NEW YORK RULE-----> $KEY(ACFUSED)
NEW YORK RULE-----> $RESOWNER(JMLAB09)
NEW YORK RULE-----> ABC.FLOOR UID(EKCPSSDDEV) READ(A) WRITE(A) EXEC(A)
NEW YORK RULE-----> ABC.PLAN UID(EKCMKTDACT) ACTIVE(09/04/99) READ(A) WRITE(A) EXEC(A)
NEW YORK RULE-----> ABC.PRINT UID(*)
-----

ACCESS RULE: DPAYROLL -- TIMESTAMPS: THU 26-AUG-1999 @ 15:55 -- FRI 27-AUG-1999 @ 10:15
```

CHICAGO RULE-----> ACF75052 ACCESS RULE DPAYROLL STORED BY SAMC ON 08/26/99-15:55
NEW YORK RULE-----> ACF75052 ACCESS RULE DPAYROLL STORED BY BRET ON 08/27/99-10:15

CHICAGO RULE-----> LOADLIB UID(EKCMKTDACT) READ(A) WRITE(A) EXEC(A)
NEW YORK RULE-----> LOADLIB UID(EKCMKTDACT) WRITE(A)
CHICAGO RULE-----> LOADLIB UID(EKCRACRGOSBOC) READ(A) WRITE(A) EXEC(A)
NEW YORK RULE-----> LOADLIB UID(EKCTSSD) READ(A) EXEC(A)

ACCESS RULE: PAYROLL -- TIMESTAMPS: THU 26-AUG-1999 @ 16:05 -- FRI 27-AUG-1999 @ 14:54

CHICAGO RULE-----> ACF75052 ACCESS RULE PAYROLL STORED BY SAMC ON 08/26/99-16:05
NEW YORK RULE-----> ACF75052 ACCESS RULE PAYROLL STORED BY BRET ON 08/27/99-14:54

NEW YORK RULE-----> ABC UID(CO1DIV1DPT) READ(A) WRITE(A) EXEC(A)
CHICAGO RULE-----> PROD.LOAD UID(EKCESTD) READ(A) WRITE(A) EXEC(A)
CHICAGO RULE-----> PROD.LOAD UID(EKCRADDREM) READ(A) WRITE(A) EXEC(A)
CHICAGO RULE-----> PROD.LOAD UID(EKCRADD) READ(A) EXEC(A)
CHICAGO RULE-----> PROD.LOAD UID(EKSSDD) READ(A) EXEC(A) DATA(08/16/99 PER CHAUNTAI)
CHICAGO RULE-----> PROD.LOAD.BKUP UID(EKCRADDREM) READ(A) EXEC(A)
CHICAGO RULE-----> PROD.LOAD.BKUP UID(*) NEXTKEY(XKPYRL2)

ACCESS RULE: PROJECT -- TIMESTAMPS: THU 26-AUG-1999 @ 15:52 -- FRI 27-AUG-1999 @ 11:47

CHICAGO RULE-----> ACF75052 ACCESS RULE PROJECT STORED BY SUES ON 08/26/99-15:52
NEW YORK RULE-----> ACF75052 ACCESS RULE PROJECT STORED BY TOMC ON 08/27/99-11:47

CHICAGO RULE-----> EDI.PROJECTS UID(ADM) READ(A) EXEC(A)
NEW YORK RULE-----> EDI.PROJECT2 UID(ADM) READ(A) EXEC(A)

DETRSRC DD Card

EKCRADCR-08.27.99 ESRF: ACF2 DATABASE COMPARISON REPORT
FRI, AUGUST 27, 1999 15:34 COMPARISON OF CHICAGO/NEW YORK SYSTEMS PAGE.....1
DETRSRC - DETAILED RESOURCE RULES COMPARISON OUTPUT:

RESOURCE RULE: CKT-AUDIT -- TIMESTAMPS:NO RECORD..... -- MON 09-AUG-1999 @ 07:32

NEW YORK RULE-----> ACF75052 RESOURCE RULE AUDIT STORED BY TOMC ON 08/27/99-11:27
NEW YORK RULE-----> \$KEY(AUDIT) TYPE(CKT)
NEW YORK RULE-----> UID(EKCMKTD) SHIFT(ALL) LOG
NEW YORK RULE-----> UID(EKMSDD) SOURCE(I10502) SHIFT(3RD) UNTIL(09/09/99) ALLOW
NEW YORK RULE-----> UID(EKSSDD) SOURCE(I10039) SHIFT(ALL) ACTIVE(09/09/99) ALLOW

RESOURCE RULE: F\$F-F\$RECALL -- TIMESTAMPS: WED 11-AUG-1999 @ 17:59 -- WED 11-AUG-1999 @ 17:59

CHICAGO RULE-----> ACF75052 RESOURCE RULE F\$RECALL STORED BY DON ON 07/16/99-07:49
NEW YORK RULE-----> ACF75052 RESOURCE RULE F\$RECALL STORED BY BRET ON 08/27/99-13:27

NEW YORK RULE-----> UID(EKCMKTDACT) PTEST5) PREVENT

DETINFO DD Card

EKCRADCR-08.27.99 ESRF: ACF2 DATABASE COMPARISON REPORT
FRI, AUGUST 27, 1999 15:34 COMPARISON OF CHICAGO/NEW YORK SYSTEMS PAGE.....1
DETINFO - DETAILED INFORMATION STORAGE COMPARISON OUTPUT:

RSRC GROUPING: X-RGP-P390 BARRY -- TYPE: ENTRY FRI 27-AUG-1999 @ 08:31 -- FRI 27-AUG-1999 @ 11:28

NEW YORK INCL LIST: PAYD

Sample JCL to Execute the Database Comparison Report

```
//ACF2DCR EXEC PGM=EKCRADCR
//STEPLIB DD DSN=SYS1.ESRF.LOAD,DISP=SHR
//SYSPRINT DD SYSOUT=*
//DETLIDS DD SYSOUT=*
//DETACCR DD SYSOUT=*
//DETRSRC DD SYSOUT=*
//DETINFO DD SYSOUT=*
//ALIDS DD DSN=ACF2.CHICAGO.BKLIDS,DISP=SHR
//BLIDS DD DSN=ACF2.NEWYORK.BKLIDS,DISP=SHR
//ARULES DD DSN=ACF2.CHICAGO.BKRULES,DISP=SHR
//BRULES DD DSN=ACF2.NEWYORK.BKRULES,DISP=SHR
//AINFOS DD DSN=ACF2.CHICAGO.BKINFO.,DISP=SHR
//BINFOS DD DSN=ACF2.NEWYORK.BKINFO,DISP=SHR
//SYSIN DD *
TITLE(COMPARISON OF CHICAGO/NEW YORK SYSTEMS)
ANAME(CHICAGO) BNAME(NEW YORK)
SELECTGROUPS( IDENT, PRIV, PASSWORD)
/*
```

Export Dataset Output Format

The Database Differences Report Export Dataset output is indicated by inserting an EXPORT Data Definition Card in the JCL. The format of the Export dataset output is RECFM=VB, LRECL=2048, and whatever BLKSIZE the installation chooses.

The Record Format is as follows:

- 1-8 SYSID specified by the SYSID input keyword
- 9-16 Database ID – LOGONIDS, RULES, or INFOSTG
- 17-61 Record Key. For the Logonid Records, it is the eight byte Logonid followed by 36 blanks; for Access Rules, it is the eight byte Access Rule Key followed by 36 blanks; and for the Information Storage Records (including Resource Rules), it is the 44 byte key.
- 62-96 Time Stamp of the record. It is in the format: DOW DD-MMM-YYYY @ HH:MM where DOW is the day of the week and the rest is self-explanatory.
- 97-105 System name – either the “A” system name or the “B” system name. In a few cases, this may just contain the string “DIFFERS” to indicate the value is different between the two systems.
- 106-2040 Text of the operation in the same format as the printed output.

Chapter 14 : ACF2 Access Analysis Report Exits

Because some installations use the ACF2 pre-validation exit to actually change the dataset or resource name or to force a rule set key, the ACF2 Access Analysis Reports provide similar capabilities.

The exits should be assembled and link-edited in the same library as the Access Analysis Reports themselves. The Access Analysis Reports will load the exits and make note of that fact in their processing journals. The exit names are specified by the EXIT parameter of the reports.

Linkage - The exits use standard OS Calling Sequence (R14 contains the return address, R15 contains the exit's entry point address, R13 contains the address of a save area and R1 points to the parameter list).

Dataset Report Parameters

R1-> +0 Address of 256 byte dataset name

+4 Address of 8 byte forced rule set key initialized to blanks

The exit can modify the dataset name by changing it in the area provided. Optionally, it can force a rule set key to be used for rule interpretation by setting the forced key area to a non-blank area.

Resource Report Parameters

R1->+0 Address of 256 byte resource name in the format:

Byte 1 "R" Constant Character R

2-4 typ - the ACF2 Resource Type

5-44 name - the ACF2 Resource Name

+4 Address of 44 byte forced rule set key initialized to blanks

The exit can modify the resource name by changing it in the area provided. Optionally, it can force a rule set key to be used for rule interpretation by setting the forced key area to a non-blank area. Note that the forced key must be in the ACF2 key format beginning with the letter "R", followed by a three byte type, and then followed by a 40 character resource name.

Sample EKCRADDX Exit

```

EKCRADDX  CSECT
          STM  R14,R12,12(R13)  SAVE  REGISTERS
          LR   R12,R15           COPY ENTRY POINT ADDR
          USING EKCRADDX,R12    ADDRESSABILITY
          LR   R3,R1            SAVE  PARM ADDRESS
          GETMAIN RU,LV=WORKLEN GET WORK AREA STORAGE
          ST   R13,4(,R1)       CHAIN SAVE AREAS
          ST   R1,8(,R13)
          LR   R13,R1           SET NEW SAVEAREA PTR
          USING WORKAREA,R13    ADDRESS WORK AREA
          LM   R4,R5,0(R3)      GET PARAMETERS

*
*
*      NOW, R4 POINTS TO 256 BYTE DATASET NAME
*      R5 POINTS TO 8 BYTE FORCED RULE SET KEY
*
*      CHECK TO SEE IF WE WANT TO CHANGE DATASET NAME
*
          CLC  =C'CD.',0(R4)     IS IT CD.?
          BE   CDX              YES
          ...                  OTHER CHECKS
          B    RETURN           NO MATCH, RETURN
          SPACE 1

CDX      MVI  NEWDSN,C'         BLANK NEW DSNAME AREA
          MVC  NEWDSN+1(L'NEWDSN-1),NEWDSN
          MVC  NEWDSN(4),=C'CDE.'  NEW HIGH LEVEL INDEX
          MVC  NEWDSN+4(252),3(R4)  COPY REST OF DSNAME
          MVC  0(256,R4),NEWDSN COPY DSNAME BACK
          B    RETURN

          ...                  REST OF CHANGE RTNS
RETURN   LR   R1,R13           COPY SAVEAREA ADDR
          L    R13,4(,R13)      OLD SAVEAREA ADDR
          FREEMAIN RU,LV=WORKLEN,A=(1) FREE STORAGE
          LM   R14,R12,12(R13)  RESTORE REGISTERS
          SR   R15,R15          ZERO RETURN CODE
          BR   R14              AND RETURN
          SPACE 3

WORKAREA DSECT
SAVEAREA DS 9D
NEWDSN   DS CL256             NEW DSNAME BUILD AREA
WORKLEN  EQU *-WORKAREA     WORKAREA LENGTH
END      EKCRADDX

```

Chapter 15 : Resource Controls for Logonid Privileges

This is a feature that was introduced with CA-ACF2 Release 6.2. It allows privileges to be added to a Logonid based upon Resource Rules. The prerequisites are:

1. Specify a **GSO CLASMAP** record with the Resource Class **PRIVCTL**. This record specifies a three character ACF2 type that these Resource Rules will be stored under. Note that the Resource Rules may not specify the **NEXTKEY** keyword. These Resource Rules must also be globally resident.
2. Develop a set of Resource Rules. Each Resource Rule should have a Type of what was specified in the **GSO CLASMAP** record. The Resource Names are the ACF2 Logonid field names. They may not be masked.
3. For each Logonid that is to be eligible to have its privileges upgraded, activate the **PRIV-CTL** privilege. This will cause ACF2 to search for potential upgrades.

E-SRF Access Analysis uses the EKCRADRS (DataOwner Resource Report) to generate a dataset that will be used by all of the other reports. This is activated by the **PRIVDEFS** keyword. Sample JCL is:

```
//UPGD EXEC PGM=EKCRADRS
//STEPLIB DD DSN=SYS1.ESRF.LOAD,DISP=SHR
//BKINFO DD DSN=ACF2.BKINFO,DISP=SHR
//BKLIDS DD DSN=ACF2.BKLIDS,DISP=SHR
//SYSUT1 DD SPACE=(TRK,(5,5)),UNIT=VIO
//SYSPRINT DD SYSOUT=*
//EXPORT DD DSN=SYS1.ESRF.UPGRADES,DISP=SHR
//SYSIN DD *
PRIV-DEFS(ttt) SEPARATE
/*
```

The dataset defined by the EXPORT DD card will contain the Logonid Privilege Upgrade information required by all of the reports.

The reports (EKCRADDS, EKCRADRS, EKCRALDS, EKCRALRS) then access the Upgrade information by the addition of an additional DD Card. This is:

```
//PRIVUPG DD DSN=SYS1.ESRF.UPGRADES,DISP=SHR
```

One additional keyword, **LISTUPGD**, has been added to all four reports that will cause each Logonid upgraded to be listed along with a list of each field upgraded. Note that even if a Logonid is authorized for a field to be upgraded, it is only listed if the privilege was actually given to the Logonid. For example, if the Logonid already had **NON-CNCL**, even if the privilege was to be granted, it would not be listed because it was there already.

Chapter 16 : Wrappers - Defining Front and Back Wrappers

Function

In the following reports, the installation may define Wrapper information to be printed in the front and back of the report. The E-SRF Access Analysis Reports that support this function are:

- EKCRADDS - DataOwner Dataset Report
- EKCRADRS - DataOwner Resource Report
- EKCRALDS - LogonidOwner Dataset Report
- EKCRALRS - LogonidOwner Resource Report
- EKCRAPRC - Proposed Rule Processor
- EKCRASDF - System Differences Report
- EKCRADDR - Database Differences Report

The Wrapper functionality is invoked by adding the WRAPPER DD card to the Job Control Language for the report. The exception to this is the Database Differences Report (EKCRADDR), which, because it has multiple different print outputs, uses many DD Cards – WRAPSYS (for the status and summary output), WRAPDETL (for the detailed Logonid Record output), WRAPDETA (for the detailed Access Rule output), WRAPDETR (for the detailed Resource Rule output), and WRAPDETI (for the detailed Information Storage Record output).

The Wrappers are formatted as follows:

23 lines of 72 characters each on the front Wrapper page which is centered in the top portion of the page and 18 lines of 132 characters each at the bottom of the page that describes the abbreviations used in the report. The information for the bottom portion of the page is supplied with E-SRF although it can be modified via the \$DESCMOD control card in the Wrapper definitions.

44 lines of 72 characters each on the back Wrapper page.

The WRAPPER DD card defines a card-image dataset (or member of a dataset) with the following control cards:

* -- as the first character of a line, not within a front or back wrapper definition, defines a comment.

\$HEAD1 - the top Header Line of the Wrapper pages

\$HEAD2 - the middle Header Line of the Wrapper pages

\$HEAD3 - the bottom Header Line of the Wrapper pages

\$DESCMOD= the installation load module that is to replace the E-SRF supplied portion of the bottom of the front Wrapper page. See description of definition below.

\$FRONT - the beginning of the Front Wrapper Page definition – all lines following until another \$ control card is encountered are placed on the Front Wrapper Page.

\$BACK - the beginning of the Back Wrapper Page definition – all lines following until another \$ control card is encountered are placed on the Back Wrapper Page. If no Back Wrapper Page Definitions are encountered, the Back Wrapper Page is not printed.

Sample Wrapper Input

\$HEAD1=ABC COMPANY SECURITY ACCESS CONTROL REPORT
\$FRONT
PLEASE READ THE FOLLOWING REPORT CAREFULLY AND REVIEW THE ACCESS
CONTROL INFORMATION CONTAINED THEREIN.

OUR COMPANY'S SECURITY MAY DEPEND ON IT.

SINCERELY,

THE MANAGEMENT

\$BACK

IF ANY CHANGES IN ACCESS AUTHORITY ARE REQUIRED PLEASE CALL
INFORMATION SECURITY AT 555-3456. OTHERWISE, PLEASE SIGN
THIS REPORT AND RETURN IT TO INFORMATION SECURITY.

I APPROVE THE ABOVE REFERENCED SECURITY ACCESS LISTS.

PLEASE SIGN HERE:

PLEASE PRINT NAME HERE:

The WRAPDEF Macro Instruction

The WRAPDEF Macro Instruction is of the following format:

```
WRAPDEF ROW,COL,'TEXT'
```

Where ROW defines the line number, COL defines the Column number ("CENTER" means center the text), and TEXT defines the Text to be displayed.

The input must be terminated by a WRAPDEF END statement.

Sample Description Load Module Definition

```
ADDW      TITLE 'WRAPPER DEFINITIONS FOR EKCRADDS'
*
*        THIS CSECT DEFINES THE WRAPPER DEFINITIONS FOR THE
*        E-SRF/ACF2 DATAOWNER DATASET REPORT - EKCRADDS
*
*        COPYRIGHT EKC, INC. -- 1998
*
EKCRADDW  CSECT
          SPACE 1
          WRAPDEF 1,1,'COLUMN DESCRIPTIONS FOR SUMMARY VERSION:'
          WRAPDEF 3,2,'MLT - "M" INDICATES MULTIPLE RULE LINES EXIST'
          WRAPDEF 4,8,'FOR THIS USERS ACCESS TO DATASETS'
          WRAPDEF 5,2,'RD - READ ACCESS'
          WRAPDEF 6,2,'WT - WRITE ACCESS'
          WRAPDEF 7,2,'AL - ALLOCATE ACCESS INCLUDES CREATE AND DELETE'
          WRAPDEF 8,2,'EX - EXECUTE ACCESS'
          WRAPDEF 10,1,'PERMISSION DESCRIPTIONS:'
          WRAPDEF 11,2,'." (PERIOD) - ACCESS IS PREVENTED'
          WRAPDEF 12,2,' A - ACCESS IS ALLOWED'
          WRAPDEF 13,2,' L - ACCESS IS ALLOWED BUT JOURNALED'
          WRAPDEF 1,67,'S-LOGONID STATUS DESCRIPTIONS:'
          WRAPDEF 3,68,'E - EXPIRED'
          WRAPDEF 4,68,'S - SUSPENDED'
          WRAPDEF 5,68,'A - ALTERNATE UID STRING USED FOR ACCESS'
          WRAPDEF 6,68,'F - FIRECALL UID STRING USED FOR ACCESS'
          WRAPDEF 16,CENTER,'E-SRF IS A PROPRIETARY PRODUCT OF EKC, INC.X
          , ROSEMONT, ILLINOIS, USA.'
          WRAPDEF 18,CENTER,'FOR TECHNICAL SUPPORT IN NORTH AMERICA, CALX
          L 847-296-8035.'
          WRAPDEF END
          END
```

Chapter 17 : Appendix

Appendix A - Access Analysis Messages

EKCRADDS-001 INPUT CONTROL CARDS

EKCRADRS

EKCRALDS

EKCRALRS

Input control cards read from the SYSIN file will be displayed.

EKCRASS-100 * MAX USERS LIMIT REACHED -- ADDITIONAL USERS SKIPPED *****

EKCRADDS

EKCRADRS

EKCRALDS

EKCRALRS

The MAXUSERS limit has been reached for any single display of Logonid Records.

EKCRADDS-101 * ALL USERS HAVE THIS PERMISSION *****

EKCRADRS

EKCRALDS

EKCRALRS

A UID(*) was found in a rule, a %CHANGE or a %RCHANGE parameter indicating all users have permission -- it is unrestricted.

EKCRALRS-102 * UNSCOPED - ACCESS TO ALL RESOURCES *****

The Security Officer listed does not have any scope or SCOPELISTS associated with the Logonid Record. ACF2 will not limit the access in any way.

EKCRALRS-103 * SCOPELISTS DEFINED IN LIDREC DOES NOT HAVE INFOSTORAGE SCOPES ASSOCIATED WITH IT -- NO ACCESS ****

The Security Officer listed has a SCOPELISTS, indicating his or her Logonid Record does not have a SCOPELISTS record in the Infostorage Database which means that no special Security Officer access will be allowed.

EKCRALDS-104 * MAX DATASET LIMIT REACHED -- ADDITIONAL DATASETS SKIPPED *****

EKCRALRS-104 * MAX RESOURCE LIMIT REACHED - ADDITIONAL RESOURCE NAMES SKIPPED *****

The listing of the resource or dataset names reached the limit specified in MAXRSNS or MAXDSNS. Additional resource or dataset names, although they also would fall into the same group, were skipped.

EKCRADDS-105 TOTAL NUMBER OF USERS WITH THIS ACCESS: nnnnnn

This message, which only appears in the detail version of the report, indicates the total number of users who have the access defined. The best way to use this is to set MAXUSER(5) and the report will show the first five users and then a count of the total number users that would have been listed.

**EKCRADDS-200 INSTALLATION EXIT LOADED - MAY MODIFY RULE PROCESSING. NAME:
XXXXXXXX****EKCRADRS****EKCRALDS****EKCRALRS**

The EXIT() parameter has been specified in the input control cards specifying an installation exit to be called prior to processing each dataset or resource name. This exit may modify the name being processed or set an initial rule set key. If the exit does this, it will modify the methodology of rule processing. If this modification is consistent with the ACF2 exits, then the results will be the same as for the real ACF2 system. If there is a difference in methodology, there may be differences in results.

EKCRARGP-200 NOTE: ONLY THE RESOURCE GROUPS ACTUALLY PROCESSED FOR THIS SET OF LOGONIDS ARE LISTED. AS AN EXAMPLE: IF ALL THE LOGONIDS WERE GRANTED ACCESS BY THE TIME THE THIRD GROUP ASSOCIATED WITH A GIVEN RESOURCE WAS INTERPRETED, ONLY THREE GROUPS WILL BE LISTED EVEN THOUGH THERE MAY BE MORE GROUPS ASSOCIATED WITH THIS RESOURCE.

The information as to which resources are part of which resource groups is collected as each resource group is processed on behalf of the individual resource name. When running the DataOwner Resource Report, all of the groups will be processed to determine which users have access and this message will not appear. However, when running the LogonidOwner Resource Report, only those groups that are necessary to satisfy access for all the users will be processed. This may not be the complete set of Resource Groups associated with the listed resource and thus this message is produced as a warning/informational indicator.

EKCRADDS-201 ETF/A SECONDARY UID STRING DEFINED - WILL PROCESS**EKCRADRS****EKCRALDS****EKCRALRS**

The Access Analysis Reports determined that EKC's ETF/A system has been installed. This system allows the use of alternate UID strings to be tested in all access requests should the primary (normal) ACF2 UID string not allow access. The Access Analysis Reports will process the rules in a similar manner to an ACF2 system with ETF/A installed.

EKCRADDS-202 UID STRING DEFINED AS: XXXXXXXXXXXX**EKCRADRS****EKCRALDS****EKCRALRS**

This is a display of the UID String as defined to ACF2 in the ACF2 Field Definition Record.

EKCRADDS-203 LOGONID DATASET: RECORDS READ: XXXXXXXX -- RECORDS PROCESSED: YYYYYYYY

EKCRADRS

EKCRALDS

EKCRALRS

As the Access Analysis Reports read the Logonid Database for processing any SELECT statement parameters were checked against the Logonid Records read. The "processed" number is the result after SELECT statement selection.

EKCRADDS-204 INFOSTORAGE: RECORDS READ: XXXXXXXX -- SCOPELISTS RECORDS WITH DSNSCOPE KEPT: YYYYYYYY

-- ETF/A MULTIPLE UID RECORDS KEPT: ZZZZZZ

EKCRALDS

EKCRADRS-204 INFOSTORAGE: RECORDS READ: XXXXXXXX -- SCOPELISTS RECORDS WITH INFOSTORAGE-SCOPES KEPT: YYYYYYYY

--ETF/A MULTIPLE UID RECORDS KEPT: ZZZZZZ

EKCRALRS

The Infostorage Database was read and the SCOPELISTS records that pertain to either dataset Scoping or resources Scoping were kept for later use during processing.

EKCRADRS-204 INFOSTORAGE: RECORDS READ: XXXXXXXX -- SCOPELISTS RECORDS WITH INFOSTORAGE SCOPES KEPT: ZZZZZZZZ

INFOSTORAGE: RESOURCE RULES KEPT: PPPPPPP

INFOSTORAGE: RESOURCE RULES EXCLUDED BY REQUEST: QQQQQQQQ

INFOSTORAGE: RESOURCE GROUPING RULES KEPT: RRRRRRRR

The Infostorage Database was read and the SCOPELISTS records that pertain to either dataset Scoping or resource Scoping were kept for later use during processing. Additionally, the number of resource rules that were found in the Infostorage Database is displayed, the number excluded by request (via the SKIP keyword) is displayed, and the number of resource grouping rules (XRGP) is displayed.

EKCRADDS-205 DATASET NAMES: RECORDS READ: XXXXXXXX -- MATCHING DATASET NAMES KEPT: YYYYYYYY -- NUMBER WITHOUT DUPLICATES: ZZZZZZZZ

EKCRADRS-205 RESOURCE NAMES: RECORDS READ: XXXXXXXX -- MATCHING RESOURCE NAMES KEPT: YYYYYYYY -- NUMBER WITHOUT DUPLICATES: ZZZZZZZZ

The Access Analysis DataOwner Reports read the entire set of dataset or resource names and compares them to a GROUP or INDEX/CLASS specification. The number kept is displayed and the number left after duplicates are removed is also displayed.

EKCRALDS-206 DATASET NAMES: RECORDS READ: XXXXXXXXX - PROCESSED: YYYYYYYY - REFERENCED BY RULES: ZZZZZZZZ

EKCRALRS-206 RESOURCE NAMES: RECORDS READ: XXXXXXXXX - PROCESSED: YYYYYYYY - REFERENCED BY RULES: ZZZZZZZZ

The number of dataset or resource name records read is displayed. Any dataset names that were not in the GROUP/INDEX keywords are skipped and the resultant number processed is listed. Finally, the number of datasets or resources actually referenced by rules specifying at least one of the selected Logonids is displayed.

EKCRALDS-207 NUMBER OF DATASETS EXCLUDED USING MASKS: XXXXXXXX

EKCRALRS-207 NUMBER OF RESOURCES EXCLUDED USING MASKS: XXXXXXXX

The number of dataset or resource rule lines that were excluded from reporting because the rule line contained a UID(*) [available to anyone] and the high level index (for dataset rules) or the resource class (for resource rules) was specified in the EXCLUDE parameter.

EKCRADDS-208 NUMBER OF DATASETS COMPRESSED USING MASKS: NNNNNNNN

EKCRALDS

The number of dataset names (usually Generation Data Group entries) that were compressed down to a single dataset name (usually G0000V00). This means that, after duplicates are eliminated, only a single entry will appear for an entire set of Generation Data Group datasets.

EKCRADRS-208 NUMBER OF RESOURCE PRIVILEGE RECORDS: nnnnn

The number of ACF2 Resources that define the dynamic privilege upgrade entries is listed.

EKCRADDS-209 THE FOLLOWING WERE ELIMINATED BECAUSE THEY WERE CANCELED, SUSPENDED OR EXPIRED. THEY WOULD HAVE HAD ACCESS TO ONE OR MORE DATASETS (RESOURCES):

EKCRADRS

EKCRALDS

EKCRALRS

Normally, all Logonid Records that are in SUSPEND or CANCEL status or have passed their expiration date (in the EXPIRE) field are excluded from processing by the Access Analysis Reports. The INCSUSPEND, INCCANCEL, and INCEXPIRED keywords override their respective tests. Logonid displays for those SUSPENDED, CANCELED, and EXPIRED Logonids will have an "S-", a "C-", or an "E-" in front of the Logonid itself to indicate the status.

EKCRADDS-210 * MAXIMUM %CHANGE COUNT REACHED FOR RULE SET: XXXXXXXX --
REMAINDER SKIPPED**

EKCRADRI

EKCRADRS

EKCRALDS

EKCRALRI

The list of %CHANGE UID strings is kept as each rule set is being processed for reporting on who has the ability to change the rule set. The Access Analysis reports only keep the first 32 entries found for reporting.

EKCRADDS-211 * MAXIMUM %RCHANGE COUNT REACHED FOR RULE SET: XXXXXXXX --
REMAINDER SKIPPED**

EKCRALDS

EKCRADRI

EKCRALRI

The list of %RCHANGE UID strings is kept as each rule set is being processed for reporting on who has the restricted ability to change the rule set. The Access Analysis reports only keep the first 32 entries found for reporting.

EKCRADDS-212 * LOGICAL END OF FILE REACHED IN RULE SET: XXXXXXXX**

EKCRADRI

EKCRADRS

EKCRALDS

EKCRALRI

This is an internal error message generated while processing rule sets and if it occurs, signifies an error. Usually, the message printed prior to this reveals the actual error. Please send the output to EKC Technical Support for analysis along with a decompilation (listing) of the rule set being processed.

**EKCRADRS-213 MORE THAN XXXXXXXX LOGONIDS HAVE ACCESS TO YYYYYYYY -- REMAINDER
SKIPPED**

More than the indicated number of Logonids have access to the indicated resource without rules. The remainder of Logonids with this access were ignored. The current version of EKCRADRS limits this to 512.

**EKCRALDS-214 ACCESS RULES: RECORDS READ: XXXXXXXX -- RULES WITH MATCHING UID
STRINGS KEPT: YYYYYYYY**

**EKCRALRS-214 RESOURCE RULES: RECORDS READ: XXXXXXXX -- RULES WITH MATCHING UID
STRINGS KEPT: YYYYYYYY**

The Access Analysis LogonidOwner Reports read the Logonid Database first and select the Logonids for processing using the SELECT keyword parameters. The Rule Object Records are then read and only those rule sets that refer to at least one of the selected Logonids are kept.

EKCRALRS-215 INFOSTORAGE: RESOURCE GROUPING RULES KEPT: XXXXXXXX

Indicates the number of resource grouping records (XRGP) records found in Infostorage. These will be used in later processing to determine access permissions.

EKCRADDS-220 SPECIFIED INDEX WILL BE USED FOR GROUPING

EKCRADRS-220 SPECIFIED CLASS WILL BE USED FOR GROUPING

The INDEX (for datasets) or the CLASS (for resources) keywords have been specified and will be used instead of the GROUP specification.

EKCRADDS-221 DATASETS WILL BE READ FROM DSLIST INPUT FILE

The dataset names will be read from the DSLIST input file allowing a list of specific dataset names to be processed.

EKCRADDS-222 DSLIST INPUT DATASETS:

The input from the DSLIST input file is reported.

**EKCRADRS-224 ACF2 PRIVILEGE UPGRADE DEFINITION ANALYSIS PROCESSING BEING
PERFORMED**

The privilege definition upgrade information in the ACF2 Resource Rules is being processed and output into a dataset that will be used by all the ACF2 Access Analysis Report Processors.

EKCRADDS-230 TERMINATION REQUESTED – NULL FILE WRITTEN TO EXPORT DATASET

EKCRADRS

This feature (“NULLRUN”) is used in the Proposed Rule Processor sequence when no rules have changed and a dataset still has to be written for later processing.

EKCRALDS-250 LOGONIDS IN THIS GROUP:

EKCRALRS

The Access Analysis LogonidOwner Reports combines Logonids together into sub-groups. This heading defines a particular sub-group of Logonids.

**EKCRALDS-251 DATASETS IN THIS GROUP FOR WHICH ALL LOGONIDS HAD IDENTICAL ACCESS:
EKCRALRS-251 RESOURCES IN THIS GROUP FOR WHICH ALL LOGONIDS HAD IDENTICAL ACCESS:**

For each sub-group of Logonids, this is the set of datasets/resources that they have identical access to.

EKCRALDS-252 ENVIRONMENT(S) UNDER WHICH LOGONIDS HAD ACCESS:

EKCRALRS

For each sub-group of Logonids and each set of datasets/resources, this is the set of environments that define the access permissions.

EKCRADDS-253 NO USERS HAD ACCESS WITHOUT RULES AND WITHOUT GENERATING LOGGING RECORDS

EKCRALDS

Normally, Logonids are allowed access to datasets whose high level index matches the prefix field in the Logonid Record. None of the Selected Logonids Prefix fields matched any of the datasets processed.

EKCRALDS-254 LOGONIDS IN THIS GROUP HAD NO ACCESS TO ANY OF THE SELECTED DATASETS

EKCRALRS-254 LOGONIDS IN THIS GROUP HAD NO ACCESS TO ANY OF THE SELECTED RESOURCES

This set of Logonids (defined by the SELECT keyword) had no access to the set of datasets (defined by the GROUP or INDEX keywords).

EKCRADDS-255 NUMBER OF RECORDS WRITTEN TO EXPORT DATASET: nnnnn

EKCRADRS

EKCRALDS

EKCRALRS

The number of individual records written to the EXPORT dataset is reported.

EKCRADDS-256 NO ACCESSES TO SELECTED RESOURCES WERE ALLOWED

EKCRADRS

EKCRALDS

EKCRALRS

No users as selected via the SELECT keyword were allowed access to the resources selected by this report.

EKCRADDS-260 * NO USERS MATCH SPECIFIED UID MASK *******EKCRADRS**

The UID string specified in the rule line does not match any of the Logonid UID strings in the entire Logonid database.

EKCRADDS-261 * UNDEFINED INDEX - NO USERS HAVE ACCESS VIA THE ACF2 RULES**

No ACF2 access rule existed for this high level index. Access via the ACF2 rules would be denied.

EKCRADDS-262 DATASETS IN THIS GROUP**EKCRADRS-262 RESOURCES IN THIS GROUP**

The Access Analysis DataOwner Reports group datasets or resources that have identical access patterns together. This heading defines each group.

EKCRADDS-263 NO RULES EXISTED FOR THIS GROUP OF DATASETS

No ACF2 access rules existed for this group of datasets. Access via the ACF2 rules would be denied.

EKCRADDS-265 * NO USERS HAD ACCESS TO THESE DATASETS *****

None of the selected Logonids had access to any of the selected datasets.

EKCRADDS-501 LIDFIELDS SPECIFIED COMBINED LENGTHS ARE TOO LONG

The specified Logonid Record Fields must fit on the rest of the output line after the standard Report information. There are fifty (50) characters remaining. The minimum length for any field on the output line is 9 characters, thus, at most five fields may be specified.

EKCRADDS-502 NO/NULL LIDFIELDS SPECIFIED**EKCRADRS**

The LIDFIELDS or SELECT keywords were specified with either no fields or a null field.

EKCRADDS-503 LOGONID RECORD FIELD NOT FOUND: XXXXXXXX**EKCRADRS**

The Logonid Record field specified in the LIDFIELDS or SELECT keyword does not exist in the ACF2 Field Definition Record.

EKCRADDS-504 LOGONID RECORD FIELD NOT CHARACTER: XXXXXXXX

The current implementation of the ACF2 Access Analysis Reports limits the fields specified in the SELECT keyword to character type only.

EKCRADDS-505 TOO MANY LOGONID RECORD FIELDS SPECIFIED FOR KEYWORD SELECT**EKCRADRS-505 TOO MANY LOGONID RECORD FIELDS SPECIFIED FOR KEYWORD LIDFIELDS**

The maximum number of Logonid Record Fields that may be specified is eight.

EKCRAASS-506 FIELD NAME SPECIFIED IS AMBIGUOUS

The field name specified in the SELECT or LIDFIELDS keyword is ambiguous in that it does not match exactly a single ACF2 Field Definition Record Field and the characters specified match more than one ACF2 Field Definition Record Field.

EKCRAASS-507 INVALID SYNTAX IN LOGONID FIELD SPECIFICATION**EKCRAADS**

The parsing function for the subfields of the SELECT or LIDFIELDS keyword detected some syntax error.

EKCRAASS-508 OPERAND TOO LARGE FOR SPECIFIED FIELD -- TERMINATED

The mask specified in the SELECT keyword field is too large for the actual data field.

EKCRADDS-900 INSUFFICIENT STORAGE - TYPE: XXXXXXXX**EKCRADRI****EKCRADRS****EKCRALDS****EKCRALRI****EKCRALRS**

A GETMAIN (get storage) failed. Attempt to run the Access Analysis Report with a larger region specification. If this also fails, call EKC Technical Support.

EKCRADDS-901 UNABLE TO OPEN XXXXXXXX -- PROCESSING TERMINATED**EKCRADRS****EKCRALDS****EKCRALRS**

An OPEN failed for the DDNAME specified. The Access Analysis Report was unable to process without this input.

EKCRADDS-902 UNABLE TO LOAD CRITICAL MODULE: XXXXXXXX**EKCRADRS****EKCRALDS****EKCRALRS**

The module specified was unable to be loaded. If it is ACFFDR or ACFDCMPL, the Access Analysis Reports are running on a system without ACF2 installed. If it is a module name beginning with EKC, the Access Analysis Reports were probably not installed correctly. Otherwise, it will probably be the EXIT name specified in the EXIT keyword -- and it was not found.

EKCRADDS-903 NULL DDNAME SPECIFIED

EKCRADRS

EKCRALDS

EKCRALRS

A null, e.g., “,”, DDNAME was specified.

EKCRADDS-904 TOO MANY FIELDS SPECIFIED FOR KEYWORD: XXXXXXXX

EKCRADRI

EKCRADRS

EKCRALDS

EKCRALRI

EKCRALRS

The maximum number of fields for the specified keyword was defined.

EKCRADDS-905 OPERAND NULL OR TOO LARGE FOR KEYWORD:

EKCRADRI

EKCRADRS

EKCRALDS

EKCRALRI

EKCRALRS

A value was entered that was null, e.g. (), or was too large for a keyword.

EKCRALDS-906 NO LOGONIDS MET SELECTION CRITERIA

EKCRALRS

No Logonid Records met the selection criteria specified in the SELECT keyword.

EKCRADDS-907 * INVALID SYNTAX *****

EKCRADRI

EKCRADRS

EKCRALDS

EKCRALRI

EKCRALRS

The input control statement listed had invalid syntax.

EKCRADDS-908 INVALID OR AMBIGUOUS KEYWORD OR VALUE: XXXXXXXX

EKCRADRI

EKCRADRS

EKCRALDS

EKCRALRI

EKCRALRS

The keyword specified was either invalid, meaning it did not match any of the possible choices, or was ambiguous, meaning that it matched more than one of the possible choices. If there is an ACF2 rule keyword, please send this output to EKC Technical Support.

EKCRADDS-909 * NO MATCHING RULES FOUND - REPORT TERMINATED**

EKCRADRS

EKCRALDS

EKCRALRS

No rules matched the selected resource or dataset names.

EKCRALDS-910 NO LOGONIDS SELECTED - REPORT TERMINATED

EKCRALRS

No Logonids matched the SELECT keyword criteria.

EKCRADDS-911 * NO DATASET NAMES TO PROCESS**

EKCRALDS

EKCRADRS-911 * NO RESOURCE NAMES TO PROCESS**

EKCRALRS

No Dataset/Resource names matched the GROUP or INDEX/CLASS keywords.

EKCRADDS-912 INVALID DATASET NAME: XXXXXXXX REASON: YYYYYYYY

EKCRALDS

EKCRADRS-912 INVALID RESOURCE NAME: XXXXXXXX REASON: YYYYYYYY

EKCRALRS

The dataset or resource name being processed had invalid syntax. The reason code is listed. If you believe that the dataset or resource had proper syntax, please send this output to EKC Technical Support.

EKCRADDS-913 UNABLE TO OPEN: XXXXXXXX--PROCESSING OF DATASET NAMES SKIPPED FOR THIS DATASET

EKCRALDS

EKCRADRS-913 UNABLE TO OPEN: XXXXXXXX--PROCESSING OF RESOURCE NAMES SKIPPED FOR THIS RESOURCE

EKCRALRS

The DDNAME listed was unable to be opened. This DDNAME defined a list of dataset or resource names to be used as input. Processing continued without using the data defined by this DDNAME.

EKCRADRS-914 NO RESOURCE RULES FOUND IN INFOSTORAGE DATABASE

EKCRALRS

No Resource Rule Sets were found in the Infostorage database. Processing is terminated.

EKCRADDS-920 * NEITHER GROUP/INDEX SPECIFIED OR BOTH SPECIFIED - REPORT TERMINATED**

EKCRADRS-920 * NEITHER GROUP/CLASS SPECIFIED OR BOTH SPECIFIED - REPORT TERMINATED**

The Access Analysis DataOwner Reports require either a Group or an INDEX/CLASS specification. Neither was specified or both were specified.

EKCRADDS-950 * FIRST CARD MUST BE \$KEY *****

EKCRADRI

EKCRALDS

EKCRALRI

The ACF2 Decompiler returned a rule set where the first card is not a \$KEY. This is an error. Decompile the rule set in question using the ACF command and send this output plus the decompiled listing to EKC service.

EKCRADDS-951 VALUE NULL, GREATER THAN MAX, OR INVALID FOR KEYWORD: XXXXXXXX

EKCRADRI

EKCRADRS

EKCRALDS

EKCRALRI

EKCRALRS

In processing the output from the ACF2 Decompiler, the reports found a keyword with, what they thought, was an illegal value. Decompile the rule set with the ACF command and provide that and this output to EKC Technical Support.

EKCRADDS-952 * KEY ENCOUNTERED IS BLANK *****

EKCRADRI

EKCRALDS

EKCRALRI

In processing the output from the ACF2 Decompiler, the reports found a null or blank \$KEY specification. Decompile the rule set with the ACF command and provide that and this output to EKC Technical Support.

EKCRADDS-953 * INVALID DATASET MASK *****

EKCRALDS

EKCRADRI-953 * INVALID RESOURCE MASK *****

EKCRALRI

In processing the output from the ACF2 Decompiler, the reports found an invalid mask specification. Decompile the rule set with the ACF command and provide that and this output to EKC Technical Support.

EKCRALDS-954 TOO MANY RULE LINES FOR THIS DATASET XXXXXXXX -- REMAINDER SKIPPED

EKCRADRI -954 TOO MANY RULE LINES FOR THIS RESOURCE XXXXXXXX -- REMAINDER SKIPPED

EKCRALRI

More than 8190 rule lines referenced this dataset or resource name. The remainder after 8190 was ignored.

EKCRADDS-955 * ERROR IN LOGONID SORT PROCESSING *****

An error occurred in the Logonid Sort Processor (invoked by the SORTBY keyword). There should be an additional message indicating the specific cause of the error.

EKCRALDS-956 ERROR PROCESSING DATASET: XXXXXXXX

EKCRALRS-956 ERROR PROCESSING RESOURCE: XXXXXXXX

An error was encountered processing the specified Dataset or Resource Name. Review any other error messages that accompanied this message. Contact EKC Technical Support with the output.

EKCRADDS-957 * INVALID MASK SYNTAX *****

EKCRADRI

EKCRADRS

EKCRALDS

EKCRALRI

EKCRALRS

An invalid mask was encountered. Review the mask specification in other error messages.

EKCRADDS-958 RULE SET: rule set name NOT FOUND PROCESSING DATASET: dataset name
EKCRADRI-958 RULE SET: rule set name NOT FOUND PROCESSING RESOURCE: resource name
EKCRALRI-958

The specified rule set was not found in the processing of the access permissions for the specified dataset or resource. ACF2 would have denied the access.

EKCRADDS-990 ACF2 DECOMPILER ERROR, R15=XXX

EKCRADRI
EKCRADRS
EKCRALDS
EKCRALRS

The ACF2 Decompiler returned the Error Code specified. Contact EKC Technical Support with the output.

EKCRADDS-991 * ERROR IN LIDFIELD PROCESSING, R15=**

EKCRADRS
EKCRALDS
EKCRALRS

The LIDFIELD keyword support routine returned the error specified. Contact EKC Technical Support with the output.

EKCRADDS-992 * ERROR IN SELECT PROCESSING, R15=**

EKCRADRS
EKCRALDS
EKCRALRS

The SELECT keyword support routine returned the error specified. Contact EKC Technical Support with the output.

EKCRADDS-993 * ERROR IN PATTERN SUPPORT PROCESSING, R15=**

EKCRADRI
EKCRADRS
EKCRALDS
EKCRALRI
EKCRALRS

The Compare Masked Character Segment support routine returned the error specified. Contact EKC Technical Support with the output.

EKCRADDS-994 * GROUPING RECORD MANAGER ERROR, R15=**

EKCRADRS

EKCRALDS

EKCRALRS

The Grouping Manager support routine returned the error specified. Check the dataset referenced by the GRPRULES DD card. It should be a *sequential* dataset (not partitioned) and should have been initialized by the **SRFCOMP** TSO command or the **SRFBCMP** batch program. Contact EKC Technical Support with the output.

EKCRADDS-995 * ERROR IN EXPORT DATA PROCESSING, R15=**

EKCRADRS

EKCRALDS

EKCRALRS

An unrecoverable error occurred during the processing of the EXPORT dataset. Please review the Job's SYSLOG dataset for any obvious reasons, and if this does not produce an apparent result, please call EKC Technical Support.

EKCRADDS-996 * ERROR IN BKRULES PROCESSING, R15=**

EKCRADRI-996 * ERROR IN SYSUT1 RULES PROCESSING, R15=**

An error occurred while processing the BKRULES dataset which contains the backup version of the ACF2 Dataset (access) rules or an error occurred while processing the SYSUT1 temporary dataset that contains copies of the resource rules.

EKCRADDS-997 * ERROR IN LIDREC PRIVILEGE UPGRADE PROCESSING, R15=**

EKCRADRS

EKCRALDS

EKCRALRS

An error occurred in the dynamic upgrade of Logonid privileges first introduced with ACF2 Release 6.2. Check the Privilege Definition program output. This is described in this manual.

EKCRADRS-999 * ERROR IN RESOURCE GROUP REFERENCE PROCESSING**

EKCRALRS

An error occurred in the LISTGROUP processing which lists the Resource Cross Reference Groups that an individual resource was processed under.

Appendix B - Proposed Rule Processor Messages

EKCRAPRC-001 INPUT CONTROL CARDS

The input control cards read from the SYSIN ddname are listed.

EKCRAPRC-005 PROPOSED PDS DATASET NAME IS: dataset name

The dataset name that contains the proposed rule sets is listed.

EKCRAPRC-010 COMPILING PROPOSED PDS MEMBER: member

The ACF2 Rule Compiler is being invoked to compile the ACF2 rule set contained in the member specified.

EKCRAPRC-020 RULE SET REPLACED: rule set name

The rule set indicated was replaced in the “proposed” set of ACF2 databases.

EKCRAPRC-021 RULE SET DELETED: rule set name

The rule set indicated was deleted from the “proposed” set of ACF2 databases.

EKCRAPRC-022 RULE SET ADDED: rule set name

The rule set indicated was added to the “proposed” set of ACF2 databases.

EKCRAPRC-030 DATASET ACCESS RULE STATISTICS:

INPUT RECORDS: nnnn
OUTPUT RECORDS: nnnn
RECORDS REPLACED: nnnn
RECORDS ADDED: nnnn
RECORDS DELETED: nnnn

The ACF2 Dataset Rules have been copied and updated from the Original database to the Proposed Database. The statistics from the copy operation are displayed.

EKCRAPRC-031 RESOURCE RULE STATISTICS:

INPUT RECORDS: nnnn
OUTPUT RECORDS: nnnn
RECORDS REPLACED: nnnn
RECORDS ADDED: nnnn
RECORDS DELETED: nnnn

The ACF2 Resource Rules have been copied and updated from the Original database to the Proposed Database. The statistics from the copy operation are displayed.

EKCRAPRC-040 CONTROL CARDS PRODUCED FOR INPUT TO EKCRADDS:

Control cards are generated for input to the DataOwner Dataset Report. The ones indicated by “ORIGINAL” are input to the step with the Original ACF2 Database. The ones indicated by “PROPOSED” are input to the step with the Proposed ACF2 Database. The ones with no indication are input to both reports.

EKCRAPRC-041 CONTROL CARDS PRODUCED FOR INPUT TO EKCRADRS:

Control cards are generated for input to the DataOwner Resource Report. The ones indicated by “ORIGINAL” are input to the step with the Original ACF2 Database. The ones indicated by “PROPOSED” are input to the step with the Proposed ACF2 Database. The ones with no indication are input to both reports.

EKCRAPRC-042 CONTROL CARDS PRODUCED FOR INPUT TO EKCRASDF:

Control cards are generated for input to the System Differences Report.

EKCRAPRC-050 PSEUDO DATASET NAMES PRODUCED:

If a rule set rule line was inserted, the dataset mask might be new – i.e. never mentioned in the previous iteration of the rule set. A pseudo dataset name is created from the mask and used as additional input to the DataOwner Dataset Reports to assure that the access analysis for the new pseudo dataset name will also be processed.

EKCRAPRC-051 NUMBER OF PSEUDO DATASET NAMES PRODUCED:

The total number of pseudo dataset names produced is listed. Zero indicates that no rule lines were inserted, thus there were no potential new dataset names to be analyzed.

EKCRAPRC-052 PSEUDO RESOURCE NAMES PRODUCED:

If a rule set rule line was inserted, the resource name mask might be new – i.e. never mentioned in the previous iteration of the rule set. A pseudo resource name is created from the mask and used as additional input to the DataOwner Resource Reports to assure that the access analysis for the new pseudo resource name will also be processed.

EKCRAPRC-031 RESOURCE RULE STATISTICS:

INPUT RECORDS: nnnn
OUTPUT RECORDS: nnnn
RECORDS REPLACED: nnnn
RECORDS ADDED: nnnn
RECORDS DELETED: nnnn

The ACF2 Resource Rules have been copied and updated from the Original database to the Proposed Database. The statistics from the copy operation are displayed.

EKCRAPRC-040 CONTROL CARDS PRODUCED FOR INPUT TO EKCRADDS:

Control cards are generated for input to the DataOwner Dataset Report. The ones indicated by "ORIGINAL" are input to the step with the Original ACF2 Database. The ones indicated by "PROPOSED" are input to the step with the Proposed ACF2 Database. The ones with no indication are input to both reports.

EKCRAPRC-041 CONTROL CARDS PRODUCED FOR INPUT TO EKCRADRS:

Control cards are generated for input to the DataOwner Resource Report. The ones indicated by "ORIGINAL" are input to the step with the Original ACF2 Database. The ones indicated by "PROPOSED" are input to the step with the Proposed ACF2 Database. The ones with no indication are input to both reports.

EKCRAPRC-042 CONTROL CARDS PRODUCED FOR INPUT TO EKCRASDF:

Control cards are generated for input to the System Differences Report.

EKCRAPRC-050 PSEUDO DATASET NAMES PRODUCED:

If a rule set rule line was inserted, the dataset mask might be new – i.e. never mentioned in the previous iteration of the rule set. A pseudo dataset name is created from the mask and used as additional input to the DataOwner Dataset Reports to assure that the access analysis for the new pseudo dataset name will also be processed.

EKCRAPRC-051 NUMBER OF PSEUDO DATASET NAMES PRODUCED:

The total number of pseudo dataset names produced is listed. Zero indicates that no rule lines were inserted, thus there were no potential new dataset names to be analyzed.

EKCRAPRC-052 PSEUDO RESOURCE NAMES PRODUCED:

If a rule set rule line was inserted, the resource name mask might be new – i.e. never mentioned in the previous iteration of the rule set. A pseudo resource name is created from the mask and used as additional input to the DataOwner Resource Reports to assure that the access analysis for the new pseudo resource name will also be processed.

EKCRAPRC-053 NUMBER OF PSEUDO RESOURCE NAMES PRODUCED:

The total number of pseudo resource names produced is indicated. Zero indicates that no rule lines were inserted, thus there were no potential new resource names to be analyzed.

EKCRAPRC-054 NUMBER OF EXPORT RECORDS WRITTEN: nnnnn

The total number of EXPORT records written is indicated.

EKCRAPRC-500 BACKUP ACCESS RULES DDNAME (BKRULES) NOT FOUND. SKIPPED.

The Proposed Rule Processor did not find a definition for the Backup Access Rule dataset. This definition defines the Original set of Access Rules. The Access Rule portion of the analysis will be skipped.

EKCRAPRC-501 BACKUP INFORMATION STORAGE DDNAME (BKINFO) NOT FOUND. SKIPPED.

The Proposed Rule Processor did not find a definition for the Backup Information Storage dataset. This dataset defines the Original set of Resource rules. The Resource Rule portion of the analysis will be skipped.

EKCRAPRC-510 RULE SET NOT REPLACED: rule set name – COMPILE NOT SUCCESSFUL

The Rule set indicated was not replaced in the “proposed” database because the compilation of the new rule set was not successful.

EKCRAPRC-511 RULE SET DELETED: rule set name

The specified rule set was deleted from the proposed database.

EKCRAPRC-512 RULE SET REPLACED: rule set name

The specified rule set was replaced in the proposed database.

EKCRAPRC-513 RULE SET ADDED: rule set name

The specified rule set was added to the proposed database.

EKCRAPRC-520 CONTROL CARDS FOR EKCRADDS NOT PRODUCED. DDNAME (ADDSCCTLx) NOT FOUND.

The control cards for the subsequent steps of the DataOwner Dataset Reports were not produced because the DDCARD ADDSCTLO was not defined.

EKCRAPRC-521 CONTROL CARDS FOR EKCRADRS NOT PRODUCED. DDNAME (ADRSCCTLx) NOT FOUND.

The control cards for the subsequent steps of the DataOwner Resource Reports were not produced because the DDCARD ADRSCTLO was not defined.

EKCRAPRC-522 CONTROL CARDS FOR EKCRASDF NOT PRODUCED. DDNAME (ASDFCTL) NOT FOUND.

The control cards for the subsequent step of the System Differences Report were not produced because the DDCARD ASDFCTL was not defined.

EKCRAPRC-523 PSEUDO DATASET NAMES NOT PRODUCED. DDNAME (PDSNAMES) NOT FOUND.

The Pseudo Dataset Names from the inserted rule lines were not produced because the DDCARD PDSNAMES was not defined.

EKCRAPRC-524 PSEUDO RESOURCE NAMES NOT PRODUCED. DDNAME (PRSNAMES) NOT FOUND.

The Pseudo Resource Names from the inserted rule lines were not produced because the DDCARD PRSNAMES was not defined.

EKCRAPRC-530 PREFIX OF ALL ASTERISKS FOR KEY: keyname.**SPECIFY AFFECTED PREFIXES DIRECTLY VIA THE ADDINDEX KEYWORD.**

The access rule set specified by the keyname value had a \$PREFIX where the high level index was all asterisks – meaning any high level index. The DataOwner Dataset Report needs specific indices. Specify the high level indices affected by this rule change via the ADDINDEX keyword.

EKCRAPRC-903 TOO MANY FIELDS SPECIFIED FOR KEYWORD: keyword

There were too many operands specified for the keyword indicated.

EKCRAPRC-904 OPERAND NULL OR TOO LARGE FOR KEYWORD: keyword

The value for the operand was either null or too large for the keyword indicated.

EKCRAPRC-905 * INVALID SYNTAX *****

The line displayed above the message had invalid syntax and could not be interpreted.

EKCRAPRC-906 * INVALID OR AMBIGUOUS KEYWORD OR VALUE:**

The keyword or value specified was invalid or ambiguous in that it could apply to more than one value.

EKCRAPRC-908 MUTUALLY EXCLUSIVE KEYWORD USED: keyword

The keyword specified indicates a selection that is mutually exclusive with a prior selection.

EKCRAPRC-910 VALUE NULL, GREATER THAN MAX, OR INVALID FOR KEYWORD: keyword

The value of the operand specified is not valid for the keyword indicated.

EKCRAPRC-920 BOTH SELECT(ALL) AND INDIVIDUAL MEMBERS SPECIFIED.

The Proposed Rule Processor will either process all of the members of the Proposed Partitioned Dataset or selected members thereof. Both options were chosen and there is a conflict. Either choose all the members or list them individually.

EKCRAPRC-921 INVALID SYNTAX FOR DELRRULE KEYWORD.

The DELRRULE keyword has two operands – the first is the ACF2 Resource Type and the second is the ACF2 Resource Name. Although any number of DELRRULE keywords can be specified, only one set of Type/Name can be indicated for each one.

EKCRAPRC-922 NO MEMBERS IN PROPOSED RULE PDS.

The Proposed Rule Partitioned Dataset was empty.

EKCRAPRC-923 ERROR RETURNED FROM ACF2 DECOMPILER. R15: rtc

The ACF2 Rule Decompiler returned an error when decompiling the rule set. The return code is listed.

EKCRAPRC-924 ERROR RETURNED FROM PDS SUPPORT ROUTINE: error

The Partitioned Dataset Support Routine returned an error as indicated.

EKCRAPRC-925 ACF2 NOT IN SYSTEM - TERMINATING

The Proposed Rule Compiler requires that ACF2 be active in the processing system. It was not.

EKCRAPRC-950 INSUFFICIENT STORAGE – TYPE: type

An MVS GETMAIN failed. Try re-running the Job with a larger region size. If this also fails, call EKC Technical Support.

EKCRAPRC-951 UNABLE TO OPEN ddname

The Proposed Rule Processor was unable to Open a critical dataset. The ddname is listed. Allocate the dataset required and re-run the Job.

EKCRAPRC-952 UNABLE TO LOAD CRITICAL MODULE. NAME: module

The Proposed Rule Processor was unable to load a module critical to its process. Usually this will be an ACF2 module. Contact your ACF2 maintenance person for help locating the module and add a STEPLIB to the Proposed Rule Processor Job that defines the dataset containing the module.

EKCRAPRC-960 ERROR DURING RULE SET COMPILE. MAX RETURN CODE: rtc

There was an error returned from one of the ACF2 Rule Set Compilations. The maximum return code is listed. Processing terminates at this point. Repair the error in the ACF2 Rule Set definition (which also should have been listed in the output) and re-run the Job.

EKCRAPRC-961 MEMBER SPECIFIED DOES NOT EXIST IN PROPOSED PDS: member

The Partitioned Dataset Member, which was specified in the SELECT keyword, was not defined in the Proposed Rule Partitioned Dataset.

**EKCRAPRC-970 ERROR RETURNED FROM DIFFERENCES ANALYSIS FOR RULE SET KEY: rule set
key**

There was an error returned from the Differences Service Routine when comparing the original and proposed rule sets defined by the rule set key indicated. Call EKC Technical Support.

EKCRAPRC-971 ERROR RETURNED FROM DIFFERENCES ANALYSIS INITIALIZATION. R15=rtc

The Differences Service Routine returned an error during initialization. Call EKC technical support.

Appendix C - System Differences Report Messages

EKCRASDF-001 INPUT CONTROL CARDS

Input control cards read from the SYSIN file will be displayed.

EKCRASDF-006 PROCESSING COMPLETE FOR DDNAME: ddname NUMBER OF RECORDS READ: nnnn

The System Differences Report has completed processing for the EXPORT input from the ddname specified. Nnnn Records have been read from this ddname.

EKCRASDF-007 TOTAL NUMBER OF USERS DEFINED: nnnn

Processing of all four DDnames is complete. The number of unique Logonids encountered is nnnn. Note, this is the total number of users in the EXPORT data input which is limited by the parameters chosen for the preliminary EKCRADDS and EKCRADRS previous steps.

EKCRASDF-008 TOTAL NUMBER OF RESOURCES DEFINED: nnnn

Processing of the input is complete. This is the total number of unique resources (datasets and general resources) that have been encountered.

EKCRASDF-009 NUMBER OF SECURITY, NON-CNCL, ETC. RECORDS WHICH HAVE BEEN SKIPPED: nnnn

The comparison of the accesses on both systems is done for accesses via the ACF2 Rules. If accesses are allowed because of privileged attributes, they are ignored. This is the total number of such access definition records that have been ignored.

EKCRASDF-020 NUMBER OF USERS WITH DIFFERENT ACCESS PERMISSIONS: nnnn

The total number of Logonids that have different access permissions on System #1 versus System #2 is listed.

EKCRASDF-021 ALL USERS HAD THE SAME ACCESS ON BOTH SYSTEMS

All of the Logonids contained in the EXPORT input data had identical access on both systems. The report terminates at this point.

EKCRASDF-099 NOTE: ONLY ACCESSES GENERATED BY ACF2 RULES ARE REPORTED ON

The System Differences Report, at this point in time, only compares accesses allowed via ACF2 Rules. Accesses allowed because of Logonid attributes, such as SECURITY, NON-CNCL, READALL, etc. are not reported on. A future enhancement to the System Differences Report will compare the Logonid attributes between the two systems.

EKCRASDF-800 DUPLICATE ACCESS PERMISSIONS- SYSTEM # n DDNAME: ddname LOGONID: logonid RESOURCE: resource class - resource name.

Duplicate permissions were encountered when reading the input from ddname for System # n for the Logonid specified. This should not happen. The highest authority is selected for

access to the resource. To eliminate this message from the output, use the NOWARN keyword.

EKCRASDF-801 NO LOGONID RECORD FOUND FOR LOGONID: Logonid

The Logonid Record for the Logonid listed was not found in the dataset defined by the BKLIDS dataset. This should be investigated since it signifies a synchronization problem between the Access Analysis Export output and the Backup Logonid dataset provided to the System Differences Report. To eliminate this message from the output, use the NOWARN keyword.

EKCRASDF-903 TOO MANY FIELDS SPECIFIED FOR KEYWORD:

There were too many operands specified for the keyword listed.

EKCRASDF-904 OPERAND NULL OR TOO LARGE FOR KEYWORD:

The operand provided for the keyword specified was either null or too large.

EKCRASDF-905 * INVALID SYNTAX *****

The line printed above this message had invalid syntax and could not be interpreted.

EKCRASDF-906 * INVALID OR AMBIGUOUS KEYWORD OR VALUE: keyword**

The keyword or value listed was either not valid or was ambiguous – meaning that the shortened form of the keyword or value matched more than one possible value.

EKCRASDF-908 MUTUALLY EXCLUSIVE KEYWORD USED: keyword

The keyword specified requests a function that is mutually exclusive with a prior keyword that had already been interpreted.

EKCRASDF-909 INVALID SYNTAX: expression

The expression listed has invalid syntax for this application.

EKCRASDF-910 VALUE NULL, GREATER THAN MAX, OR INVALID FOR KEYWORD: keyword

The operand value of the keyword specified is invalid.

EKCRASDF-950 INSUFFICIENT STORAGE - TYPE: type

An MVS GETMAIN failed. The type indicates the purpose for the GETMAIN. Try re-running the process in a larger region. If the message persists after that, call EKC Technical Support.

EKCRASDF-951 UNABLE TO OPEN: ddname

The System Differences Report was unable to Open the DDNAME listed and this input or output dataset was critical to the process completing successfully. Define the DDNAME and re-run the Job.

EKCRASDF-952 UNABLE TO LOAD CRITICAL MODULE: module

The System Differences Report was unable to load a module critical to its process. Usually this will be an ACF2 module. Contact your ACF2 maintenance person for help locating the module and add a STEPLIB to the System Differences Report Job that defines the dataset containing the module.

EKCRASDF-960 ERROR RETURNED FROM EKCRADDS. R15: rtc

The Logonid display subroutine returned an error that should have been printed on the previous line. Repair the error described and re-run the Job.

EKCRASDF-961 ERROR RETURNED FROM EKCRASLS. R15: rtc

The Logonid sort routine returned an error that should have been printed on the previous line. Repair the error described and re-run the Job.

Appendix D - Database Differences Report Messages

EKCRADDR-001 INPUT CONTROL CARDS

Input control cards read from the SYSIN file will be displayed.

EKCRADDR-500 LOGONID RECORD TIME STAMP ERROR. OLD LOGONID RECORD HAS UPDATED TIME-OF-DAY GREATER THAN NEW ONE. LOGONID: xxxxxx -- SKIPPED

There is a sequencing error in the two versions of the Logonid Backup Datasets. The OLIDS dataset should have timestamps for a given Logonid Record that are no later than the ones in the NLIDS dataset. Usually, this is because the Data Definition Cards were reversed – e.g. OLIDS points to the older dataset, not the newer one.

EKCRADDR-501 ACCESS RULE TIME STAMP ERROR. OLD ACCESS RULE HAS UPDATED TIME-OF-DAY GREATER THAN NEW ONE. RULE KEY: xxxxxx – SKIPPED.

There is a sequencing error in the two versions of the Access Rule Backup Datasets. The ORULES dataset should have timestamps for a given Access Rule Record that are no later than the ones in the NRULES dataset. Usually, this is because the Data Definition Cards were reversed – e.g. ORULES points to the older dataset, not the newer one.

EKCRADDR-502 INFORMATION STORAGE RECORD TIME STAMP ERROR. OLD RECORD HAS UPDATED TOD GREATER THAN NEW ONE. INFORMATION STORAGE KEY: xxxxx --- SKIPPED

There is a sequencing error in the two versions of the Information Storage Backup Datasets. The OINFOS dataset should have timestamps for a given Information Storage Record that are no later than the ones in the NINFOS dataset. Usually, this is because the Data Definition Cards were reversed – e.g. OINFOS points to the older dataset, not the newer one.

EKCRADDR-600 OLIDS DD CARD MISSING, LOGONID PROCESSING SKIPPED

The OLIDS Data Definition Card was missing. Processing of Logonid Records will be skipped.

EKCRADDR-601 NLIDS DD CARD MISSING, LOGONID PROCESSING SKIPPED

The NLIDS Data Definition Card was missing. Processing of Logonid Records will be skipped.

EKCRADDR-602 ORULES DD CARD MISSING, ACCESS RULE PROCESSING SKIPPED

The ORULES Data Definition Card was missing. Processing of the Access Rules will be skipped.

EKCRADDR-603 ORULES DD CARD MISSING, ACCESS RULE PROCESSING SKIPPED

The NRULES Data Definition Card was missing. Processing of the Access Rules will be skipped.

EKCRADDR-604 OINFO DD CARD MISSING, INFORMATION STORAGE PROCESSING SKIPPED

The OINFO Data Definition Card was missing. Processing of the Information Storage Records will be skipped.

EKCRADDR-605 NINFO DD CARD MISSING, INFORMATION STORAGE PROCESSING SKIPPED

The NINFO Data Definition Card was missing. Processing of the Information Storage Records will be skipped.

EKCRADDR-903 TOO MANY FIELDS SPECIFIED FOR KEYWORD:

There were too many operands specified for the keyword listed.

EKCRADDR-904 OPERAND NULL OR TOO LARGE FOR KEYWORD:

The operand provided for the keyword specified was either null or too large.

EKCRADDR-905 * INVALID SYNTAX *****

The line printed above this message had invalid syntax and could not be interpreted.

EKCRADDR-906 * INVALID OR AMBIGUOUS KEYWORD OR VALUE: keyword**

The keyword or value listed was either not valid or was ambiguous – meaning that the shortened form of the keyword or value matched more than one possible value.

EKCRADDR-908 MUTUALLY EXCLUSIVE KEYWORD USED: keyword

The keyword specified requests a function that is mutually exclusive with a prior keyword that had already been interpreted.

EKCRADDR-909 INVALID SYNTAX: expression

The expression listed has invalid syntax for this application.

EKCRADDR-910 VALUE NULL, GREATER THAN MAX, OR INVALID FOR KEYWORD: keyword

The operand value of the keyword specified is invalid.

EKCRADDR-950 INSUFFICIENT STORAGE - TYPE: type

An MVS GETMAIN failed. The type indicates the purpose for the GETMAIN. Try re-running the process in a larger region. If the message persists after that, call EKC Technical Support.

EKCRADDR-951 UNABLE TO OPEN: ddname

The System Differences Report was unable to Open the DDNAME listed and this input or output dataset was critical to the process completing successfully. Define the DDNAME and re-run the Job.

EKCRADDR-952 UNABLE TO LOAD CRITICAL MODULE: module

The System Differences Report was unable to load a module critical to its process. Usually this will be an ACF2 module. Contact your ACF2 maintenance person for help locating the module and add a STEPLIB to the System Differences Report Job which defines the dataset containing the module.

EKCRADDR-960 ERROR IN LOGONID RECORD ANALYSIS INITIALIZATION. R15=nn

An error was returned from the Logonid Record Differences Analysis Routine during its initialization. The return code is displayed. There also should be a message from that routine indicating the specific trouble encountered.

EKCRADDR-961 ERROR RETURNED FROM DIFFERENCES ANALYSIS FOR LOGONID: IIIIII

An error was returned from the Logonid Record Differences Analysis Routine when processing the records for the Logonid indicated. There also should be a message from that routine indicating the specific trouble encountered.

EKCRADDR-970 ERROR IN RULE DIFFERENCES ANALYSIS INITIALIZATION. R15=nn

An error was returned during initialization from the routine that processes both the Access and the Resource Rule Differences Analysis. The return code is displayed. There also should be a message from that routine indicating the specific trouble encountered.

EKCRADDR-971 ERROR RETURNED FROM DIFFERENCES ANALYSIS FOR RULE SET KEY: rrrrrr

An error was returned from the Access and Resource Rule Differences Analysis Routine when processing the Rule Set who's key is indicated. There also should be a message from that routine indicating the specific trouble encountered.

EKCRADDR-980 ERROR IN INFORMATION STORAGE INITIALIZATION MODULE: modname

An error was returned during initialization from the information record analysis processing routine "modname." Note there are multiple Information Storage Record Processing Routines so the "modname" is significant. There should also be a message from the routine indicating the specific trouble encountered.

**EKCRADDR-981 ERROR RETURNED FROM DIFFERENCES ANALYSIS INFORMATION STORAGE
KEY: kkkk**

SERVICE MODULE NAME: modname

An error was returned from the Information Storage Record Processing Routine "modname" when processing the record associated with the Information Storage Key "kkkk". Note there are multiple Information Record Processing Routines so the "modname" is significant. There should also be a message from the routine indicating the specific trouble encountered.

EKCRADDR-990 SEQUENCE ERROR LIMIT EXCEEDED - PROCESS TERMINATING

One hundred timestamp sequence errors were encountered during processing. The old and new datasets are probably reversed. Processing is terminated.

Appendix E - Database Comparison Report Messages

EKCRADCR-001 INPUT CONTROL CARDS

Input control cards read from the SYSIN file will be displayed.

EKCRADCR-600 ALIDS DD CARD MISSING, LOGONID PROCESSING SKIPPED

The ALIDS Data Definition Card was missing. Processing of Logonid Records will be skipped.

EKCRADCR-601 BLIDS DD CARD MISSING, LOGONID PROCESSING SKIPPED

The BLIDS Data Definition Card was missing. Processing of Logonid Records will be skipped.

EKCRADCR-602 ARULES DD CARD MISSING, ACCESS RULE PROCESSING SKIPPED

The ARULES Data Definition Card was missing. Processing of the Access Rules will be skipped.

EKCRADCR-603 BRULES DD CARD MISSING, ACCESS RULE PROCESSING SKIPPED

The BRULES Data Definition Card was missing. Processing of the Access Rules will be skipped.

EKCRADCR-604 AINFO DD CARD MISSING, INFORMATION STORAGE PROCESSING SKIPPED

The AINFO Data Definition Card was missing. Processing of the Information Storage Records will be skipped.

EKCRADCR-605 BINFO DD CARD MISSING, INFORMATION STORAGE PROCESSING SKIPPED

The BINFO Data Definition Card was missing. Processing of the Information Storage Records will be skipped.

EKCRADCR-903 TOO MANY FIELDS SPECIFIED FOR KEYWORD:

There were too many operands specified for the keyword listed.

EKCRADCR-904 OPERAND NULL OR TOO LARGE FOR KEYWORD:

The operand provided for the keyword specified was either null or too large.

EKCRADCR-905 * INVALID SYNTAX *****

The line printed above this message had invalid syntax and could not be interpreted.

EKCRADCR-906 * INVALID OR AMBIGUOUS KEYWORD OR VALUE: keyword**

The keyword or value listed was either not valid or was ambiguous – meaning that the shortened form of the keyword or value matched more than one possible value.

EKCRADCR-908 MUTUALLY EXCLUSIVE KEYWORD USED: keyword

The keyword specified requests a function that is mutually exclusive with a prior keyword that had already been interpreted.

EKCRADCR-909 INVALID SYNTAX: expression

The expression listed has invalid syntax for this application.

EKCRADCR-910 VALUE NULL, GREATER THAN MAX, OR INVALID FOR KEYWORD: keyword

The operand value of the keyword specified is invalid.

EKCRADCR-950 INSUFFICIENT STORAGE - TYPE: type

An MVS GETMAIN failed. The type indicates the purpose for the GETMAIN. Try re-running the process in a larger region. If the message persists after that, call EKC Technical Support.

EKCRADCR-951 UNABLE TO OPEN: ddname

The System Comparison Report was unable to Open the DDNAME listed and this input or output dataset was critical to the process completing successfully. Define the DDNAME and re-run the Job.

EKCRADCR-952 UNABLE TO LOAD CRITICAL MODULE: module

The System Comparison Report was unable to load a module critical to its process. Usually this will be an ACF2 module. Contact your ACF2 maintenance person for help locating the module and add a STEPLIB to the System Differences Report Job that defines the dataset containing the module.

EKCRADCR-960 ERROR IN LOGONID RECORD ANALYSIS INITIALIZATION. R15=nn

An error was returned from the Logonid Record Differences Analysis Routine during its initialization. The return code is displayed. There also should be a message from that routine indicating the specific trouble encountered.

EKCRADCR-961 ERROR RETURNED FROM DIFFERENCES ANALYSIS FOR LOGONID: IIIIII

An error was returned from the Logonid Record Differences Analysis Routine when processing the records for the Logonid indicated. There also should be a message from that routine indicating the specific trouble encountered.

EKCRADCR-970 ERROR IN RULE DIFFERENCES ANALYSIS INITIALIZATION. R15=nn

An error was returned during initialization from the routine that processes both the Access and the Resource Rule Differences Analysis. The return code is displayed. There also should be a message from that routine indicating the specific trouble encountered.

EKCRADCR-971 ERROR RETURNED FROM DIFFERENCES ANALYSIS FOR RULE SET KEY: rrrrrr

An error was returned from the Access and Resource Rule Differences Analysis Routine when processing the Rule Set whose key is indicated. There also should be a message from that routine indicating the specific trouble encountered.

EKCRADCR-980 ERROR IN INFORMATION STORAGE INITIALIZATION MODULE: modname

An error was returned during initialization from the information record analysis processing routine "modname." Note there are multiple Information Storage Record Processing Routines so the "modname" is significant. There should also be a message from the routine indicating the specific trouble encountered.

**EKCRADCR-981 ERROR RETURNED FROM DIFFERENCES ANALYSIS INFORMATION STORAGE
KEY: kkkk**

SERVICE MODULE NAME: modname

An error was returned from the Information Storage Record Processing Routine "modname" when processing the record associated with the Information Storage Key "kkkk". Note there are multiple Information Record Processing Routines so the "modname" is significant. There should also be a message from the routine indicating the specific trouble encountered.

EKCRADCR-990 SEQUENCE ERROR LIMIT EXCEEDED - PROCESS TERMINATING

One hundred timestamp sequence errors were encountered during processing. The old and new datasets are probably reversed. Processing is terminated.

Appendix F - Stored ESRFPRC Procedure

The following procedure should be modified and stored in one of the Installation's Procedure Libraries so as to facilitate the use of the Proposed Rule Processor. This JCL is supplied in the SAMPLIB for E-SRF.

```
//ESRFPRC PROC PRPDS=
//*
//* THIS PROCEDURE MAKES THE FOLLOWING ASSUMPTIONS:
//*
//* 1. THE PSEUDO DATASET NAMES AND RESOURCE NAMES FROM THE
//* CURRENT SET OF ACF2 BACKUP DATASETS IS STORED IN THE
//* DATASETS: SYS1.ESRF.DSNAMES AND SYS1.ESRF.RSNAMES
//* IF THIS IS NOT THE CASE, THE EKCRDPSD AND EKCRRPD
//* UTILITIES MUST BE RUN FIRST TO CREATE THEM.
//*
//* 2. THE ACF2 BACKUP DATASETS ARE ACF2.BKLIDS, ACF2.BKINFO,
//* AND ACF2.BKRULES
//*
//* 3. THE E-SRF LOAD LIBRARY IS SYS1.ESRF.LOAD
//*
//* DEVELOP THE PROPOSED VERSION OF THE BACKUP DATABASE
//* AND CONTROL CARDS FOR SUBSEQUENT STEPS
//*
//APRC EXEC PGM=EKCRAPRC,REGION=2M
//STEPLIB DD DSN=SYS1.ESRF.LOAD,DISP=SHR
//SYSPRINT DD SYSOUT=*
//PRPDS DD DSN=&PRPDS,DISP=SHR
//BKRULES DD DSN=ACF2.BKRULES,DISP=SHR
//PRRULES DD DSN=&PRRULES,DISP=(,PASS),SPACE=(CYL,(1,1)),UNIT=VIO
//BKINFO DD DSN=ACF2.BKINFO,DISP=SHR
//PRINFO DD DSN=&PRINFO,DISP=(,PASS),SPACE=(CYL,(1,1)),UNIT=VIO
//SYSUT1 DD SPACE=(TRK,(5,5)),UNIT=VIO
//RULES DD DSN=&RULES,SPACE=(TRK,(1,1)),DISP=(,PASS),UNIT=VIO
//ADDSCTLO DD DSN=&ADDSO,SPACE=(TRK,(1,1)),DISP=(,PASS),UNIT=VIO
//ADDSCTLP DD DSN=&ADDSP,SPACE=(TRK,(1,1)),DISP=(,PASS),UNIT=VIO
//ADRSTLO DD DSN=&ADRSO,SPACE=(TRK,(1,1)),DISP=(,PASS),UNIT=VIO
//ADRSTLP DD DSN=&ADRSP,SPACE=(TRK,(1,1)),DISP=(,PASS),UNIT=VIO
//ASDFCTL DD DSN=&ASDF,SPACE=(TRK,(1,1)),DISP=(,PASS),UNIT=VIO
//PDSNAMES DD DSN=&XTRADSN,SPACE=(TRK,(1,1)),DISP=(,PASS),UNIT=VIO
//PRSNAMES DD DSN=&XTRARSN,SPACE=(TRK,(1,1)),DISP=(,PASS),UNIT=VIO
//SYSIN DD DUMMY
//*
//* COMPILE THE GROUPING RULES THAT WILL SELECT AFFECTED
//* INDICES AND ACF2 RESOURCE TYPES
//*
//GRPRULES EXEC PGM=SRFBCMP,COND=(4,LT),REGION=2M
//STEPLIB DD DSN=SYS1.ESRF.LOAD,DISP=SHR
//RULES DD DSN=&RULES,DISP=(OLD,PASS)
//RULEOBJ DD DSN=&RULEOBJ,DISP=(,PASS),UNIT=VIO,SPACE=(TRK,(1,1))
//SYSPRINT DD SYSOUT=*
//*
```

```

//*  CREATE AN EXPORT DATASET OF THE ACCESSES FOR THE ORIGINAL
//*  SET OF ACF2 ACCESS RULES
//*
//OADDS EXEC PGM=EKCRADDS,COND=(4,LT),REGION=4M
//STEPLIB DD DSN=SYS1.ESRF.LOAD,DISP=SHR
//BKINFO  DD DSN=ACF2.BKINFO,DISP=SHR
//BKLIDS  DD DSN=ACF2.BKLIDS,DISP=SHR
//GRPRULES DD DSN=&RULEOBJ,DISP=(OLD,PASS)
//DSNAMES DD DSN=SYS1.ESRF.DSNAMES,DISP=SHR
//        DD DSN=&XTRADSN,DISP=(OLD,PASS)
//EXPORT  DD DSN=&OADDS,DISP=(,PASS),UNIT=VIO,SPACE=(TRK,(5,5))
//SYSPRINT DD SYSOUT=*
//SYSIN DD DSN=&ADDSO,DISP=(OLD,PASS)
//*
//*  CREATE AN EXPORT DATASET OF THE ACCESSES FOR THE PROPOSED
//*  SET OF ACF2 ACCESS RULES
//*
//PADDS EXEC PGM=EKCRADDS,COND=(4,LT),REGION=4M
//STEPLIB DD DSN=SYS1.ESRF.LOAD,DISP=SHR
//BKRULES DD DSN=&PRRULES,DISP=(OLD,PASS)
//BKINFO  DD DSN=&PRINFO,DISP=(OLD,PASS)
//BKLIDS  DD DSN=ACF2.BKLIDS,DISP=SHR
//GRPRULES DD DSN=&RULEOBJ,DISP=(OLD,PASS)
//DSNAMES DD DSN=SYS1.ESRF.DSNAMES,DISP=SHR
//        DD DSN=&XTRADSN,DISP=(OLD,PASS)
//EXPORT  DD DSN=&PADDS,DISP=(,PASS),UNIT=VIO,SPACE=(TRK,(5,5))
//SYSPRINT DD SYSOUT=*
//SYSIN DD DSN=&ADDSP,DISP=(OLD,PASS)
//*
//*  CREATE AN EXPORT DATASET OF THE ACCESSES FOR THE ORIGINAL
//*  SET OF ACF2 RESOURCE RULES
//*
//OADRS EXEC PGM=EKCRADRS,COND=(4,LT),REGION=4M
//STEPLIB DD DSN=SYS1.ESRF.LOAD,DISP=SHR
//BKINFO  DD DSN=ACF2.BKINFO,DISP=SHR
//BKLIDS  DD DSN=ACF2.BKLIDS,DISP=SHR
//GRPRULES DD DSN=&RULEOBJ,DISP=(OLD,PASS)
//RSNAMES DD DSN=SYS1.ESRF.RSNAMES,DISP=SHR
//        DD DSN=&XTRARSN,DISP=(OLD,PASS)
//EXPORT  DD DSN=&OADRS,DISP=(,PASS),UNIT=VIO,SPACE=(TRK,(5,5))
//SYSUT1  DD SPACE=(CYL,(1,1)),UNIT=VIO
//SYSPRINT DD SYSOUT=*
//SYSIN DD DSN=&ADRSO,DISP=(OLD,PASS)
//*
//*  CREATE AN EXPORT DATASET OF THE ACCESSES FOR THE PROPOSED
//*  SET OF ACF2 RESOURCE RULES
//*
//PADRS EXEC PGM=EKCRADRS,COND=(4,LT),REGION=4M
//STEPLIB DD DSN=SYS1.ESRF.LOAD,DISP=SHR
//BKINFO  DD DSN=&PRINFO,DISP=(OLD,PASS)
//BKLIDS  DD DSN=ACF2.BKLIDS,DISP=SHR
//GRPRULES DD DSN=&RULEOBJ,DISP=(OLD,PASS)
//RSNAMES DD DSN=SYS1.ESRF.RSNAMES,DISP=SHR
//        DD DSN=&XTRARSN,DISP=(OLD,PASS)
//EXPORT  DD DSN=&PADRS,DISP=(,PASS),UNIT=VIO,SPACE=(TRK,(5,5))

```

```
//SYSUT1 DD SPACE=(CYL,(1,1)),UNIT=VIO
//SYSPRINT DD SYSOUT=*
//SYSIN DD DSN=&ADRSP,DISP=(OLD,PASS)
//*
//* RUN THE SYSTEM DIFFERENCES REPORT TO DISPLAY ACCESS DIFFERENCES
//*
//DIFFER EXEC PGM=EKCRASDF,REGION=4M
//STEPLIB DD DSN=SYS1.ESRF.LOAD,DISP=SHR
//SYSPRINT DD SYSOUT=*
//BKLIDS DD DSN=ACF2.BKLIDS,DISP=SHR
//SYSTEM1D DD DSN=&OADD,DISP=(OLD,PASS)
//SYSTEM1R DD DSN=&OADRS,DISP=(OLD,PASS)
//SYSTEM2D DD DSN=&PADDS,DISP=(OLD,PASS)
//SYSTEM2R DD DSN=&PADRS,DISP=(OLD,PASS)
//SYSIN DD DSN=&ASDF,DISP=(OLD,PASS)
```