

IBM IMS DataPropagator for z/OS



Installation Guide

Version 3 Release 1

IBM IMS DataPropagator for z/OS



Installation Guide

Version 3 Release 1

Note!

Before using this information and the product it supports, read the general information in "Notices" on page 215.

This edition applies to Version 3 Release 1 of IMS DataPropagator, 5655-E52, and to any subsequent releases until otherwise indicated in new editions or technical newsletters.

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About this information

This information describes how to install and configure IMS™ DataPropagator™ (hereafter called IMS DPROP).

Technical changes for this edition are summarized under “Summary of changes” on page xviii. Specific changes since the previous edition of this book are indicated by a vertical bar (|) to the left of a change. Editorial changes that have no technical significance are not noted.

Always check the DB2® and IMS™ Tools Library page for the most current version of this information:

www.ibm.com/software/data/db2imstools/library.html

Information topics

| The information consists of the following topics:

- | • Chapter 2, “Planning for IMS DPROP,” on page 5
- | • Chapter 3, “Preparing the MVS system environment for IMS DPROP,” on page 15
- | • Chapter 4, “Preparing the DB2 objects and IMS DPROP collections (applicable only for propagation related to DB2),” on page 23
- | • Chapter 5, “Working with the ISPF panel application,” on page 29
- | • Chapter 6, “Beginning the IMS DPROP configuration process,” on page 33
- | • Chapter 7, “Defining the IMS DPROP environment,” on page 41
- | • Chapter 8, “Defining the IMS DPROP system,” on page 57
- | • Chapter 9, “Generating and submitting installation and IVP jobs,” on page 87
- | • Chapter 10, “Preparing for IMS-to-IMS propagation,” on page 103
- | • Chapter 11, “Performing post-configuration tasks,” on page 105
- | • Chapter 12, “Deleting IMS DPROP systems,” on page 111
- | • Chapter 13, “Changing generation parameters,” on page 115
- | • Chapter 14, “Migrating IMS DPROP,” on page 119
- | • Chapter 15, “Migrating an IMS DPROP system,” on page 127
- | • Chapter 16, “Changing the environment definition panels for migration,” on page 137
- | • Chapter 17, “Migrating the system parameters,” on page 153
- | • Chapter 18, “Generating and submitting installation and IVP jobs,” on page 175
- | • Chapter 19, “Performing fallback of IMS DPROP systems,” on page 187

Changes for Version 3 Release 1

This edition includes technical and editorial changes.

IMS DPROP, Version 3 Release 1, includes improvements to both the product and the product library.

Product highlights

IMS DPROP Version 3 Release 1 provides an MQSeries-based asynchronous (MQ-ASYNC) propagation of IMS source database changes to IMS target databases and to DB2 tables. With MQ-ASYNC, enterprises can implement both:

- Near Real Time Propagation - With Near Real Time propagation, the delay between the update of the IMS source and the update of the IMS target database or DB2 target tables can often be as short as a few seconds.
- Point-In-Time Propagation - With Point-In-Time propagation, the data content of the DB2 target tables or IMS target database matches the IMS source database content at a previous clearly identified logical point-in-time. For example, an enterprise may decide that the content of the DB2 tables will match the following points-in-time: the logical end of a business day, the logical end of a business month, or the end of a specific IMS job stream that updated the IMS databases.

Differences between Version 3 Release 1 and Version 2 Release 2 ISPF panel support

In IMS DPROP Version 3 Release 1, any supported IMS DPROP system can be defined within an IMS DPROP environment. In IMS DPROP Version 2 Release 2, the environment was categorized as either a 'base' site or a 'selector-only' site. A base-site environment cannot host a selector-only IMS DPROP system.

In IMS DPROP, the systems (propagation modes) supported with the ISPF panels are:

IMS DPROP V3 Release 1	IMS DPROP V2 Release 2
MQ Capture	N/A
MQ Apply	N/A
Selector and Receiver	Same as DASYNC
Selector	Selector only
Receiver	N/A
Synchronous	Same as Synchronous
USER-ASYNC	Same as user asynchronous

In IMS DPROP, you cannot change the propagation mode of the IMS DPROP system.

Product library

The Version 3 Release 1 library contains three Administrators Guides, one for each primary mode of propagation.

- *Administrators Guide for MQSeries Asynchronous Propagation*
- *Administrators Guide for Log Asynchronous Propagation*
- *Administrators Guide for Synchronous Propagation*

An additional book, *IMS DataPropagator for z/OS: Concepts*, provides a conceptual description of data propagation.

Terms

The following terms are used in this information:

|
|

IMS Apply

(capitalized) refers to the IMS DPROP IMS Apply feature.

Apply (capitalized) refers to the IMS DPROP Apply feature.

apply (not capitalized) refers to a user-created function.

Capture

(capitalized) refers to the IMS DPROP Capture feature.

capture

(not capitalized) refers to a user-created function.

child is used instead of the term “dependent”. For example, IMS DPROP books use the terms “child table” and “child rows” instead of DB2 terms “dependent table” and “dependent rows”. The term “child” is used so that terms for IMS and DB2 are similar.

HR propagation

refers to hierarchical-to-relational (IMS to DB2) propagation

HUP

refers to the Hierarchical Update Program within IMS DPROP that performs RH propagation

IMS

refers to Information Management System/Enterprise Systems Architecture (IMS/ESA®)

IMS DPROP environment

refers to an MVS™ environment that is delineated by a set of IMS DPROP control libraries and a set of parameters from MVS, IMS, DB2, and other products upon which the IMS DPROP operations depend. These parameters are specified via the IMS DPROP installation ISPF panels. Within a particular IMS DPROP environment, a number of IMS DPROP systems can be defined.

See Figure 148 on page 192 for an illustrated example of an IMS DPROP environment.

IMS DPROP system

is a set of IMS DPROP components that support either synchronous or asynchronous propagation. Each IMS DPROP system has one or more of the following, depending on the system type:

- Directory tables
- Propagation status file
- Virtual Lookaside Facility (VLF) objects and class
- Propagation requests
- SQL update modules
- DB2 plans that provide access to both the directory tables and the propagated tables

See Figure 148 on page 192 for an illustrated example of an IMS DPROP system.

Receiver

(capitalized) refers to the IMS DPROP Receiver feature

receiver

(not capitalized) refers to a user-created function

Selector

(capitalized) refers to the IMS DPROP Selector feature

selector

(not capitalized) refers to a user-created function

RH propagation

refers to relational-to-hierarchical (DB2 to IMS) propagation

RUP® refers to the Relational Update Program within IMS DPROP that performs HR propagation

The terms that are synonymous in this book are:

- *File and data set.*
- *quiesce or set to read-only status.*

In all cases, these terms refer to either or both of the following databases:

- Any database that can be propagated and is set to read-only status, except for data entry databases (DEDBs),
- DEDBs that were taken offline with a /DBR command

Conventions

This information applies to:

- IMS DPROP asynchronous propagation
- Synchronous propagation
- User asynchronous propagation

Any information that applies to only one type of propagation is indicated as follows:

- Sentences and phrases are specified explicitly, for example:
If you are implementing synchronous propagation,
- List items are qualified by a label, for example:
 - IMS-to-DB2
 - DB2-to-IMS
- With one-way DB2-to-IMS propagation, IMS DPROP propagates database updates from DB2 tables to IMS databases.
- User asynchronous is not marked by a special margin symbol but is indicated by sentences, phrases, and headings.

What you should know

This documentation assumes that you understand what data propagation is and the business reasons for propagating data. Information on these topics is in *IMS DataPropagator for z/OS: An Introduction* and *IMS DataPropagator for z/OS: Concepts*.

This documentation also assumes that you understand IMS, DB2, DataRefresher™ and MQSeries concepts and functions, as applicable.

Service updates and support information

To find service updates and support information, including software fix paks, PTFs, Frequently Asked Question (FAQs), technical notes, troubleshooting information, and downloads, refer to the following Web page:

www.ibm.com/software/data/db2imstools/support.html

Receiving information updates automatically

By registering with the IBM® My Support service, you can automatically receive a weekly e-mail that notifies you when new technote documents are released, when existing product documentation is updated, and when new product documentation is available. You can customize the service so that you receive information about only those IBM products that you specify.

To register with the My Support service:

1. Go to <http://www.ibm.com/support/mysupport>
2. Enter your IBM ID and password, or create one by clicking **register now**.
3. When the My Support page is displayed, click **add products** to select those products that you want to receive information updates about. The DB2 and IMS Tools category is located under **Software -> Data and Information Management -> Database Tools & Utilities**.
4. Click **Subscribe to email** to specify the types of updates that you would like to receive.
5. Click **Update** to save your profile.

Where to find information

The DB2 and IMS Tools Library Web page provides current product documentation that you can view, print, and download. To locate publications with the most up-to-date information, refer to the following Web page:

www.ibm.com/software/data/db2imstools/library.html

IBM Redbooks™ that cover DB2 and IMS Tools are available from the following Web page:

www.ibm.com/software/data/db2imstools/support.html

Using LookAt to look up message explanations

LookAt is an online facility that lets you look up explanations for most of the IBM messages you encounter, as well as for some system abends and codes. Using LookAt to find information is faster than a conventional search because in most cases LookAt goes directly to the message explanation.

You can use LookAt from the following locations to find IBM message explanations for z/OS® elements and features, z/VM®, VSE/ESA™, and Clusters for AIX® and Linux®:

- The Internet. You can access IBM message explanations directly from the LookAt Web site at <http://www.ibm.com/eserver/zseries/zos/bkserv/lookat/>.
- Your z/OS TSO/E host system. You can install code on your z/OS or z/OS.e systems to access IBM message explanations, using LookAt from a TSO/E command line (for example, TSO/E prompt, ISPF, or z/OS UNIX® System Services running OMVS).
- Your Microsoft® Windows® workstation. You can install code to access IBM message explanations on the z/OS Collection (SK3T-4269) using LookAt from a Microsoft Windows command prompt (also known as the DOS command line).
- Your wireless handheld device. You can use the LookAt Mobile Edition with a handheld device that has wireless access and an Internet browser (for example,

Internet Explorer for Pocket PCs, Blazer, or Eudora for Palm OS, or Opera for Linux handheld devices). Link to the LookAt Mobile Edition from the LookAt Web site.

You can obtain code to install LookAt on your host system or Microsoft Windows workstation from a disk on your z/OS Collection (SK3T-4269) or from the LookAt Web site (click **Download**, and select the platform, release, collection, and location that suit your needs). More information is available in the LOOKAT.ME files available during the download process.

How to send your comments

Your feedback is important in helping to provide the most accurate and high-quality information. If you have any comments about this book or any other IMS High Performance System Generation Tools for z/OS documentation:

- Use the online reader comment form located at www.ibm.com/software/data/rcf/
- Send your comments by e-mail to comments@us.ibm.com. Be sure to include the name, part number and version of the book and, if applicable, the specific location of the text you are commenting on (for example, a page number or table number).

Summary of changes

Additions to IMS DPROP that are supplied with this documentation, extend the description of the installation, customization and verification processes. These extended descriptions discuss the procedures that relate to support of IMS-to-IMS propagation. Specifically, additional processes relating to the IMS Apply verification are presented. This documentation explains how the IMS Apply verification process fits with the existing IMS-async propagation function.

Part 1. Preparing for IMS DPROP configuration

Chapter 1. Prerequisites for using IMS DPROP

The following topics describes:

- Hardware requirements
- Software requirements
- Optional software

Hardware requirements

IMS DPROP operates on any IBM processor supported by z/OS Version 1, Release 1, or higher. No special machine configurations are required.

Most IMS DPROP modules are loaded above the 16 megabyte (MB) line.

Software requirements

For planning purposes, the following sections list the software requirements for IMS DPROP. Refer to the *Program Directory for IMS DPROP Version 3.1* for the most current list.

Software requirements for the IMS DPROP environment

The following program products are required in the IMS DPROP environment during or after installation:

- z/OS Version 1 Release 1 (5694–A01)
- The following basic and/or optional features of z/OS Version 1 Release 1, or higher:
 - JES2 OR JES3
 - ISPF
 - ISPF/PDF
 - TSO/E
 - SMP/E
 - DFSORT
- IBM High Level Assembler Version 1 Release 2 (5696-234), or higher

Software requirements for MQ-ASYNCR propagation

The following program products are required for MQ-ASYNCR propagation, IMS/ESA to DB2 on MVS:

- IMS/ESA Database Manager Version 7, with APAR PQ51895 (5655-B01), or higher
- IMS/ESA Transaction Manager Version 7, with APAR PQ51895 (5655-B01), or higher
IMS/ESA Transaction Manager is needed for online processing only if propagating in message processing program (MPP), IMS Fast Path (IFP), or non-Database Control-Batch Message Processing (non-DBCTL-BMP) regions.
- DB2 Version 5 (5655-DB2), or higher , if performing IMS-to-DB2 propagation
- MQSeries Version 5 Release 2 (5655-F10), or higher

Software requirements for synchronous propagation

The following program products are required for synchronous propagation, IMS/ESA to DB2 on MVS:

- IMS/ESA Transaction Manager Version 7, with APAR PQ51895 (5655-B01), or higher

IMS/ESA Transaction Manager is needed for online processing only if propagating in message processing program (MPP), IBM function program (IFP), or non-Database Control-Batch Message Processing (DBCTL-BMP) regions.

- DB2 Version 5 (5655-DB2), or higher

The following program products are required for synchronous propagation, DB2 on MVS to IMS/ESA:

- IMS/ESA Database Manager Version 7, with APAR PQ51895 (5655-B01), or higher

- IMS/ESA Transaction Manager Version 7, with APAR PQ51895 (5655-B01), or higher

IMS/ESA Transaction Manager is needed for online processing only if propagating in MPP, IFP, or non-DBCTL BMP regions.

Software requirements for LOG-ASYNCR propagation

The following program products are required for LOG-ASYNCR propagation, IMS/ESA to DB2 on MVS:

- DB2 Version 5 (5655-DB2), or higher
- IMS/ESA Database Manager Version 7, with APAR PQ51895 (5655-B01), or higher

Optional software

The following program products are optional in the IMS DPROP environment.

- DataRefresher Version 1 (5696-703), or higher, if you want to use the DataRefresher Map Capture exit routine provided by IMS DPROP.
- DB2 DataPropagator for OS/390 (5655-E60) Version 7, or higher, if you want to extend IMS data propagation to the DB2 Universal Database for Windows NT, DB2 for AIX, or DB2 UDB for AS/400. You also need DataRefresher Version 1 (5696-703), or higher, if you want a method of initially populating DataPropagator Relational's data staging area.
- Query Management Facility for OS/390 Version 7, or higher, which is a feature of DB2 Version 6 (5645-DB2), if you want to query the IMS DPROP directory tables and audit trail table.
- The Language Environment Feature of the z/OS Version 1 Release 1, or higher, if you want to write exit routines in high level languages.
- IBM COBOL for OS/390 and VM Version 2 (5648-A25), or higher, if you want to write exit routines in COBOL.
- IBM C/370 Version 1 Release 2 (5688-216), or higher, if you want to write exit routines in C.
- IBM Programming Language (PL/I) 370 Version 1 Release 1 (5688-235), or higher, if you want to write exit routines in PL/I.
- Customer Information Control System, CICS Transaction Server for OS/390 Version 1 (5655-147), or higher, if you want to support CICS/DBCTL for LOG-ASYNCR propagation, IMS to DB2, on MVS. CICS is required only if IMS data is being updated through CICS transactions.

Chapter 2. Planning for IMS DPROP

The information beginning here and continuing through Chapter 11, “Performing post-configuration tasks,” on page 105, guides you through the IMS DPROP configuration process. The process is applicable whether you are configuring IMS DPROP for the first time or are configuration additional IMS DPROP environments and systems.

The topics in this section describe how to plan for configuration. The topics include the following:

- Configuration process overview
- General considerations
- Planning for the IMS DPROP environment
- Planning for Sysplex and data sharing

Configuration process overview

The general configuration process includes the steps outlined in the following topics:

1. Perform the following prerequisite tasks:

- Plan for configuration by reviewing and performing the tasks outlined in **c** through **f** below:
- Use the IBM-supplied tape to install the product files. Instructions are contained in the *Program Directory for IMS DPROP Version 3.1*.
- Ensure that you have the correct prerequisite products installed. Chapter 1, “Prerequisites for using IMS DPROP,” on page 3 and the *Program Directory for IMS DPROP Version 3.1* lists these products.
- If you are planning to implement IMS-to-DB2 propagation, ensure that your DB2 subsystem is accessible to the ISPF/PDF environment in which you will be running the IMS DPROP ISPF panel application.
- If you are planning to implement IMS-to-DB2 propagation, prepare MVS and DB2 for IMS DPROP, as described in Chapter 3, “Preparing the MVS system environment for IMS DPROP,” on page 15 and Chapter 4, “Preparing the DB2 objects and IMS DPROP collections (applicable only for propagation related to DB2),” on page 23.
- Continue with the configuration tasks that start in Chapter 5, “Working with the ISPF panel application,” on page 29.

2. Perform the following remaining tasks:

- Start the IMS DPROP ISPF panel application by calling the IMS DPROP REXX procedure EKYINST.
- If you are configuring your initial IMS DPROP system, specify the system name and system number.
- Select the environment or system to define.
- Define and configure the IMS DPROP environment.
- If you are planning to implement IMS-to-DB2 propagation, define the DB2 environment.
- Define the IMS DPROP system, configuration, and IVP parameters.
- If you are planning to implement IMS-to-DB2 propagation, bind the DB2 application plans.
- Generate, review, edit (as necessary), and submit the IMS DPROP generation jobs.

- i. Perform post-configuration tasks.

During the configuration process, you can:

- Display the information that will be used to create your IMS DPROP environments and systems (see “Displaying table information” on page 39).
- Display error information (see “Displaying errors during job generation” on page 30).

General configuration considerations

There are no general configuration considerations when you are configuring for the first time.

When adding subsequent IMS DPROP systems:

- Set all IMS databases and DB2 tables propagated by IMS DPROP systems that share the same environment to read-only access. Then, run the IMS DPROP Status Change utility (SCU) with an ESTOP control statement for these IMS DPROP systems to stop any IMS DPROP-related activity.
- Ensure that there are no Receivers operating in the relevant IMS DPROP environment during the addition of IMS DPROP systems.

If you are planning for IMS-to-DB2 propagation, then before you configure IMS DPROP, you must ensure that your DB2 subsystem is accessible to the ISPF/PDF environment in which you will be running the IMS DPROP ISPF panel application.

Planning for the IMS DPROP environment

Before you configure IMS DPROP, you must plan for a proper environment. This section describes how to:

- Determine the number of IMS DPROP systems you need
- Determine the number of IMS DPROP environments you need
- Determine the type of environments to define
- Gather information you need for configuration
- Determine the IMS DPROP generation parameters
- Determine what IMS DPROP features to install
- Consider what is necessary for IMS DPROP to perform data sharing in a Sysplex

Deciding on the number of IMS DPROP systems to define

As part of the planning process, determine the number of IMS DPROP systems you need to define and generate and the type of propagation you need to perform. Propagation can be synchronous, asynchronous, or both. To perform both synchronous and asynchronous data propagation, you must define separate IMS DPROP systems and we suggest that you run these systems in separate IMS DPROP environments.

You can define one or several systems. For example, one IMS DPROP system can propagate test data, and another can propagate production data. In synchronous propagation, each system can propagate to an unlimited number of IMS online or batch subsystems. The set of IMS subsystems supported by one IMS DPROP system must use shared RECON data sets.

Defining systems for IMS-to-IMS and IMS-to-DB2 propagation

Figure 1 on page 7 shows IMS-to-IMS propagation which may be supported using one IMS DPROP environment and one IMS DPROP MQ-Capture system. You can also define an IMS DPROP Selector system under the same IMS DPROP

environment to allow IMS log records to be used for initial IMS changed data capture.

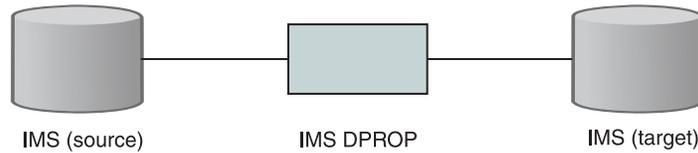


Figure 1. One IMS source, one IMS DPROP system, and one IMS target

Figure 2 shows IMS-to-IMS propagation which may be supported using one IMS DPROP environment and two IMS DPROP systems. In this case, an IMS DPROP MQ-Capture system is defined along with an IMS DPROP Selector system. Both systems are under the same IMS DPROP environment. The configuration allows IMS log records to be used for initial IMS changed data capture and allows the Selector to drive MQ-Capture to write MQSeries messages.

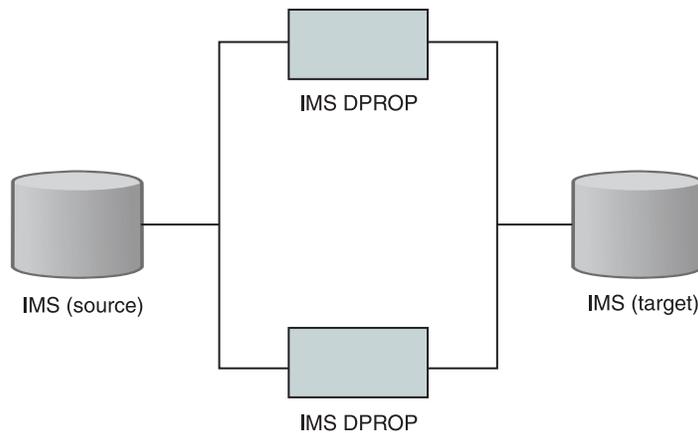


Figure 2. One IMS source, two IMS DPROP systems, and one IMS target

Figure 3 on page 8 shows IMS-to-IMS and IMS-to-DB2 propagation using the same IMS source. The source can be supported using one IMS DPROP environment and two IMS DPROP systems.

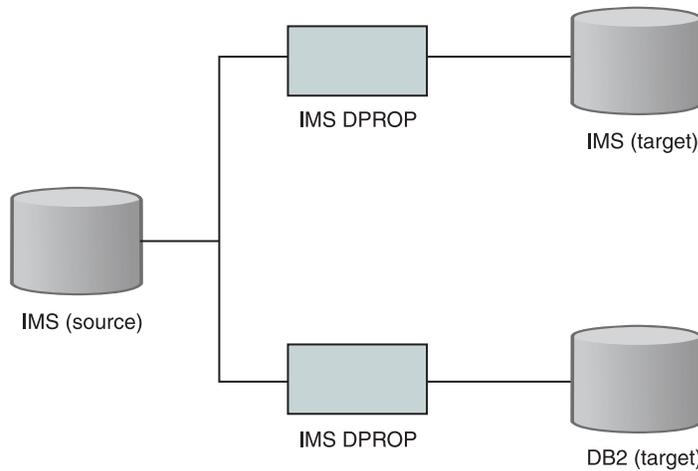


Figure 3. One IMS source, two IMS DPROP systems, one IMS target, and one DB2 target

Defining systems for IMS-to-DB2 propagation

In synchronous or asynchronous propagation mode, a single IMS DPROP system can propagate to only one DB2 system. However, multiple IMS DPROP systems can propagate to the same DB2 system. Figure 4 through Figure 8 depict different combinations of IMS, IMS DPROP, and DB2 systems.

Figure 4 shows one IMS system, one IMS DPROP system, and one DB2 system.



Figure 4. One IMS, one IMS DPROP, and one DB2 environment

If you run production jobs and test jobs on the same MVS system, you must separate the propagation definitions for production jobs and test jobs into different directories and systems. Depending on your current IMS and DB2 environments, you can use the combination of environments or systems described in Figure 5 to Figure 8.

In Figure 5, IMS test and production data propagate from one IMS environment to one DB2 environment through two IMS DPROP systems. One IMS DPROP system propagates test data and the other propagates production data.

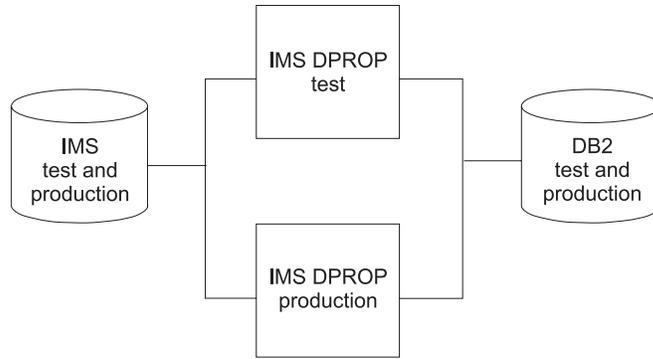


Figure 5. One IMS and one DB2 system, two IMS DPROP systems

For synchronous propagation, an IMS dependent or batch region can propagate with only a single IMS DPROP system. Therefore, an IMS region can propagate either test data or production data, but not both.

Figure 6 shows two different propagation environments for test and production data.

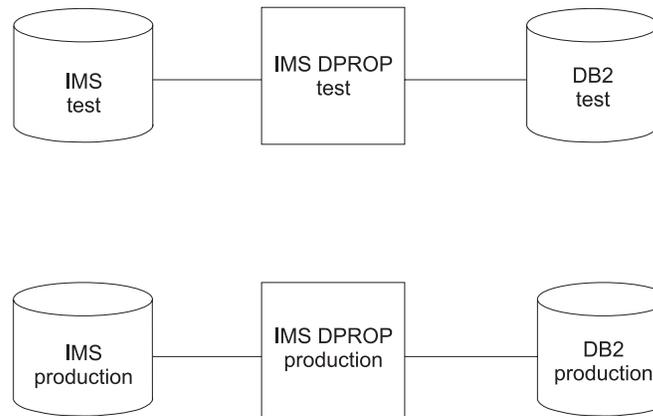


Figure 6. Two different propagation environments

Figure 7 shows two IMS systems connected to one DB2 system through two IMS DPROP systems.

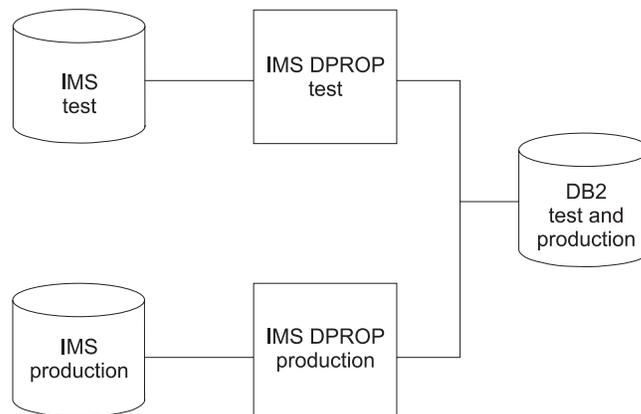


Figure 7. Two IMS, one DB2, and two IMS DPROP systems

Figure 8 shows one IMS environment, used for both test and production jobs, connected to two DB2 environments through two IMS DPROP systems.

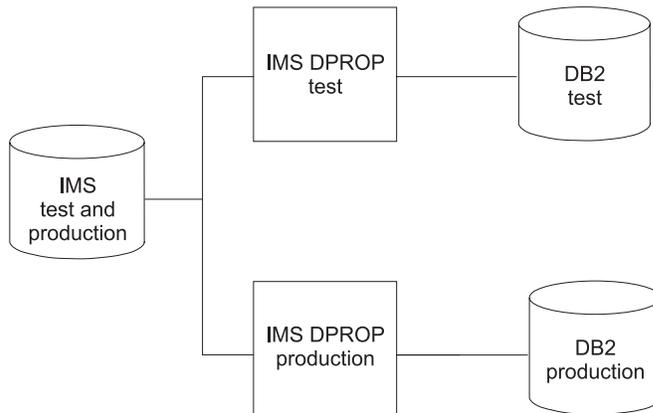


Figure 8. One IMS, two DB2, and two IMS DPROP environments

Type of propagation

After deciding how many IMS DPROP systems to create, you must decide what type of propagation these systems will perform. The type of propagation will help you decide which IMS DPROP features to install and how many IMS DPROP environments you need.

Choosing the number of IMS DPROP environments for multiple IMS DPROP systems

When generating multiple IMS DPROP systems, you must decide whether the systems will share the same IMS DPROP environment or use different environments. If multiple systems share the same environment, then all systems can share a single load module library.

If you use different environments, you can run different IMS DPROP systems with different IMS DPROP release levels at the same time. Each release level uses a specific IMS DPROP load module library.

If you are using more than one set of RECON data sets in a single MVS image, then consider using multiple IMS DPROP environments.

Once you determine the relationship of the IMS DPROP systems to their IMS DPROP environments, you will know the number of environments that you need.

Deciding on the configuration of IMS DPROP environments and RECON data sets

Usually, you install a single IMS DPROP environment on a single MVS image with a single set of selector data sets to process a single set of system RECON data sets. If you have more than one set of RECON data sets on an MVS system, you should install one IMS DPROP environment for each set of RECON data sets.

For a discussion of the use of RECON data sets, see Appendix A, “Using multiple RECON data sets in a single MVS image,” on page 191.

Gathering information for the ISPF panels

Information you should gather for ISPF panels includes the following:

For MVS:

- MVSROUTCDE
- Subsys name (MVS IMS DPROP subsystem name)
- SMF data set name
- SMF record type (for IMS DPROP audit trail records)
- Authorized IDs and associated privileges
- VLF class names

For IMS:

- Log record type
- RESLIB data set name
- MACLIB data set name
- Authorized IDs and associated privileges
- List of propagating applications

For DB2:

- Subsystem ID
- DB2 VCAT name
- DB2 version ID
- Default IMS DPROP PRSET ID
- SQLDLM (SQL string delimiter as defined in DB2)
- Default date format
- Default time format
- Whether storage groups are used
- Authorized IDs and associated privileges
- Collection IDs (two for DB2 Package Bind Facility)
- For running the DB2 sample program:
 - DB2 program name
 - DB2 load library
 - DB2 plan name

For IMS DPROP:

- VOLSER (specific volume name for IMS DPROP status file (sync only))
- VOLSER (volume serial name for IVP JCL data sets)
- SVC number (for IMS DPROP type 4 SVC)
- DBRM DSN (data set name for SQL update module DBRMs)
- Specifications for IMS DPROP directory tables, audit trail table, and MVG input tables
- IMS DPROP directory table qualifier and authority level
- Binding packages of IMS DPROP modules accessing the IMS DPROP directory tables
- Binding of the DB2 Plans of the IMS DPROP utilities (AUDU, CCU, MVGU, SCU, DLU)
- IMS DPROP audit trail table specification
- VOLSER (Capture Status File)
- VOLSER (Capture Transmission Specification File)

For MQSeries

- MQSeries Queue Manager names
- MQSeries Queue names

Explanations for the items listed in this section can be found later in this documentation.

Deciding on IMS DPROT generation parameters

This section lists the IMS DPROT generation parameters required during configuration and migration. Before beginning, you must determine what values to give to these parameters. The generation parameters that you use depend on your IMS DPROT environment.

You set these parameters on the ISPF panels during configuration. You must enter these parameters carefully because once entered, they can be changed only by restarting the IMS DPROT generation process. See “Defining the EKYGSYS and EKYGJCL parameters” on page 47 for more information about entering these parameters.

The generation parameters to consider are:

MVS ROUTCDE

Used to route IMS DPROT messages to MVS consoles

SVC number

Reserved for IMS DPROT

SMF record type

Reserved for IMS DPROT

IMS log record type

Reserved for IMS DPROT

Generation parameters for sites where the DB2 tables reside are:

MVS subsystem name

Reserved for the current IMS DPROT environment

DBD version ID

Checked by IMS DPROT

Default IMS DPROT PRSET ID

Default propagation request set ID, set by IMS DPROT

SQL string delimiter

For dynamic SQL

Default date format

Used for RH propagation

Default time format

Used for RH propagation

For a discussion of these system parameters, see “The IMS DPROT Environment Parameters primary menu” on page 42.

After choosing the IMS DPROT generation parameters, you must prepare the MVS environment. For a detailed description of this process, see Chapter 3, “Preparing the MVS system environment for IMS DPROT,” on page 15.

Planning for Sysplex and data sharing

In IMS DPROT Version 2 Release 2, sysplex capabilities were expanded to include synchronous propagation. For synchronous propagation, a single IMS DPROT system must operate across multiple MVS systems because any MVS system in the Sysplex can update IMS shared data. Therefore, IMS DPROT control

information must be shared data, existing on shared DASD. The IMS DPROP control objects which must be shared are the:

- Status file
- Directory tables
- Global master timestamp (GMTS) PDS

Most of the Sysplex setup is done automatically by the IMS DPROP ISPF panel application during the configuration process.

IMS DPROP LOG-ASYNC propagation supports Sysplex and data sharing because such a single asynchronous IMS DPROP system image is *not* required to exist logically across multiple MVS systems. However, to process work across all MVS systems in the Sysplex, the Selector must run on the same MVS system as the shared DBRC and the Receiver must run on the same MVS system as the shared DB2 system.

For more information on Sysplex systems and information on how to set up a Sysplex environment, refer to:

- *MVS/ESA Setting up a Sysplex*
- *System/390 MVS Sysplex Overview*
- *IMS/ESA Release Planning Guide*
- *DB2 for MVS/ESA Data Sharing: Planning and Administration*

You can also find additional information about Sysplex and the IMS DPROP GMTS in the appropriate *Administrators Guide* for your propagation mode.

Chapter 3. Preparing the MVS system environment for IMS DPROF

This section explains how to prepare MVS for IMS DPROF. If this is the first installation of IMS DPROF, the preparations include the following:

- “Preparing MVS for IMS DPROF SVC use.”
- “Reserving an MVS subsystem name” on page 17.
- “Authorizing the IMS DPROF RESLIB” on page 17.
- “Preparing VLF for IMS DPROF use” on page 17.
- “Preparing SMF for use by IMS DPROF” on page 19.
- “Preparing REXX and DB2 for IMS DPROF REXX external subroutines” on page 20.
- “Updating the MVS Message Processing Facility List (optional)” on page 21.
- “Providing an SMF IEFUSI exit routine” on page 21.
- “Requesting an IPL of MVS” on page 21.

If IMS DPROF is already installed, only the following sections apply:

- “Reserving an MVS subsystem name” on page 17.
- “Authorizing the IMS DPROF RESLIB” on page 17.
- “Preparing REXX and DB2 for IMS DPROF REXX external subroutines” on page 20.
- “Updating the MVS Message Processing Facility List (optional)” on page 21.
- “Requesting an IPL of MVS” on page 21.

Preparing MVS for IMS DPROF SVC use

IMS DPROF uses a Supervisor Call (SVC) routine (EKYSVC00) to call the Virtual Lookaside Facility (VLF) and System Management Facility (SMF) services.

Note for migrating from IMS DPROF Version 2:

The IMS DPROF Version 3 Release 1 SVC is not compatible with the SVC from IMS DPROF Version 2. You must define a new SVC. The IMS DPROF example (which is provided) uses an EPNAME value of EKYSVC00 for the IMS DPROF SVC. However, to distinguish the new IMS DPROF SVC from other versions, use an EPNAME value of EKYSVC31.

You cannot share SVCs between Version 2 and Version 3. In order to operate two versions of IMS DPROF concurrently, you need two SVC numbers. For example, if you defined your SVCPARM for Version 2 of IMS DPROF as follows:

```
SVCPARM 207,  
        REPLACE,  
        TYPE(4),  
        EPNAME(EKYSVC00),  
        APF(NO),  
        NPRMPT(NO),  
        AR(NO)
```

then, you would define a new SVCPARM as follows:

```
SVCPARM nnn, /**** <=== new number (not 207) ****/  
        REPLACE,  
        TYPE(4),
```

```

EPNAME(EKYSVC31),
APF(NO),
NPRMPT(NO),
AR(NO)

```

To prepare MVS for IMS DPROP:

1. Link-edit EKYSVC00 into your LPALIB using the link-edit job EKYJSVCL found in the SEKYBASE library.

Note: If you do not use EKYSVC00 as the EPNAME for the IMS DPROP SVC, ensure that the name you are using is specified as the target of the link-edit in LPALIB in the EKYJSVCL job.

2. Update the IEASVCxx member of the SYS1.PARMLIB to include an SVCARM statement that specifies the SVC number which you have already determined.

Figure 9 shows an example of an SVCARM statement for an IMS DPROP SVC.

```

SVCARM  nnn,           /* DPROP-SVC NUMBER, USED IN INSTALLATION*/
REPLACE,           /* REPLACE EXISTING SVC TABLE ENTRY      */
TYPE(4),           /* DPROP SVC IS A TYPE-4 SVC             */
EPNAME(EKYSVC00), /* LOAD MODULE NAME IN LPA              */
APF(NO),           /* DPROP SVC MUST SUPPORT NON-APF CALLER */
NPRMPT(NO),       /* SVC CAN BE PREEMPTED                 */
AR(NO)            /* NO ACCESS-REGISTER-MODE CALLER       */

```

Figure 9. SVCARM statement for IMS DPROP SVC

3. Enter the following SVCARM parameters:

nnn

Sets the SVC number to use during IMS DPROP installation. This is a required parameter. Replace the current *nnn* with this number. Use panel EKYGPZ8E (see Figure 32 on page 47 for details of entering the SVC number).

REPLACE

Replaces the existing MVS SVCTABLE entry. This is a required parameter.

TYPE(4)

Sets the IMS DPROP SVC as Type 4. This is a required parameter.

EPNAME

Sets EKYSVC00 as the IMS DPROP SVC load module name in the LPALIB.

APF(NO)

Indicates programs calling the SVC routine do not need APF authorization.

NPRMPT(NO)

Indicates SVC can be preempted.

AR(NO)

Indicates modules in access register mode cannot issue SVC calls.

The SVC number, REPLACE and TYPE parameters are required and must be coded in the sequence shown in Figure 9.

Reserving an MVS subsystem name

An MVS subsystem name must be exclusively reserved for IMS DPROT use. All IMS DPROT environments residing on one MVS image can share the same MVS subsystem name.

To reserve an MVS subsystem name:

1. Reserve the subsystem name by adding an additional record in the IEFSSNxx member of the SYS1.PARMLIB.
2. Type the IMS DPROT name by entering the name in the first four bytes of the added record. The first character must be an alphabetic or national character. The remaining characters can be alphabetic, numeric, or national.
3. If you want to add comments, leave at least one blank after the name.

Do not define any init-routine or additional parameters in this record.

The following example shows a subsystem definition statement for IMS DPROT.

```
EKY    IMS DPROT V3R1
```

Authorizing the IMS DPROT RESLIB

The IMS DPROT RESLIB, referenced in the DD statement EKYRESLB, must be Authorized Program Facility (APF) authorized to operate. For example, to APF authorize the IMS DPROT RESLIB, add the name of the IMS DPROT RESLIB to the IEAAPFnn member of the SYS1.PARMLIB.

Preparing VLF for IMS DPROT use

This section does not apply to Selector-only systems.

IMS DPROT uses the VLF to hold control information for quicker retrieval of propagation data. The VLF can operate in either non-Sysplex or Sysplex mode. In a non-Sysplex environment, each MVS system has its own VLF space and the objects in one VLF space are not related to objects in the VLF space of another system.

In a Sysplex environment, the VLFs on the various MVS systems communicate with one another. If the SYS1.PARMLIB is not shared across the sharing MVSSs, the VLF definitions must be provided in the SYS1.PARMLIB of each sharing system.

To prepare VLF for IMS DPROT systems:

1. For an MQ-ASYNCT Capture system:
Define the PDS VLF class for each MQ-ASYNCT Capture system by adding a class definition statement to the COFVLFxx member of SYS1.PARMLIB. Include one CLASS statement in the COFVLFxx member for each Capture system, such as the following:

```

CLASS NAME(PMM1 )      /* Class name for DPROB */
EDSN(HLQ.EKYMST.FILE) /* Data set name of Capture status file */
EDSN(HLQ.EKYTRANS.FILE) /* DSName of Capture transmission specification file */
MAXVIRT(001000)      /* Amount of Virtual Storage(4KB-Blocks)*/

```

Figure 10. CLASS statements for COFVLFxx in SYS1.PARMLIB: MQ-ASYNC Capture

2. For an MQ-ASYNC Apply system:

Define the non-PDS VLF class for each MQ-ASYNC Apply system by adding a class definition statement to the COFVLFxx member of SYS1.PARMLIB. Include one CLASS statement in the COFVLFxx member for each Apply system, such as the following:

```

CLASS NAME(PM1 )      /* Class name for DPROB */
EMAJ(EKYDPR1)        /* Major name-1 : must be EKYDPR */
EMAJ(EKYDPR2)        /* Major name-2: must be EKYDPR2 */
MAXVIRT(001000)      /* Amount of Virtual Storage(4KB-Blocks)*/

```

Figure 11. CLASS statements for COFVLFxx in SYS1.PARMLIB: MQ-ASYNC Apply

3. For a LOG-ASYNC Receiver or Selector and Receiver system:

Define the non-PDS VLF class for each LOG-ASYNC Receiver system by adding a class definition statement to the COFVLFxx member of SYS1.PARMLIB. Include one CLASS statement in the COFVLFxx member for each Receiver system, such as the following:

```

CLASS NAME(PM2 )      /* Class name for DPROB */
EMAJ(EKYDPR1)        /* Major name-1 : must be EKYDPR */
EMAJ(EKYDPR2)        /* Major name-2: must be EKYDPR2 */
MAXVIRT(001000)      /* Amount of Virtual Storage(4KB-Blocks)*/

```

Figure 12. CLASS statements for COFVLFxx in SYS1.PARMLIB: LOG-ASYNC Receiver

A VLF class is not required for the LOG—ASYNC Selector system.

4. For IMS DPROB synchronous systems:

Define the non-PDS VLF class for each Synchronous system by adding a class definition statement to the COFVLFxx member of SYS1.PARMLIB. Include one CLASS statement in the COFVLFxx member for each Synchronous system, such as the following:

```

CLASS NAME(PM3 )      /* Class name for DPROB */
EMAJ(EKYDPR1)        /* Major name-1 : must be EKYDPR */
EMAJ(EKYDPR2)        /* Major name-2: must be EKYDPR2 */
MAXVIRT(001000)      /* Amount of Virtual Storage(4KB-Blocks)*/

```

Figure 13. CLASS statements for COFVLFxx in SYS1.PARMLIB: Synchronous

5. Additional PDS VLF for IMS DPROB Sysplex systems:

Define the PDS VLF class for each Sysplex system by adding a class definition statement to the COFVLFxx member of SYS1.PARMLIB. Include one CLASS statement in the COFVLFxx member for each Sysplex system, such as the

following:

```
CLASS NAME(PMT) /* Class name for DPROP */
EDSN(EKYGMTS) /* Data set name to hold the GMTS */
VOL(xxxxxxx) /* Volume on which the GMTS resides */
MAXVIRT(001000) /* Amount of Virtual Storage(4KB-Blocks)*/
```

Figure 14. CLASS statements for COFVLFxx in SYS1.PARMLIB: Sysplex

See *MVS/ESA SPL: Initialization and Tuning* for information on the COFVLFxx member of SYS1.PARMLIB.

The Class names are defined using the ISPF panel shown in Figure 48 on page 65

Parameters for the CLASS statements are:

NAME

The class name you will specify during IMS DPROP installation in the VLF class field of the IMS DPROP installation panels.

EMAJ

The VLF major name; provide two names by specifying two EMAJ values. The two major names must be EKYDPR1 and EKYDPR2.

EDSN

The data set name used to hold the Global Master Timestamp (GMTS). This parameter is required for Sysplex operations.

VOL

The volume on which the GMTS data set will reside. This parameter is optional and is used only if the GMTS data set is not cataloged or not yet allocated.

MAXVIRT

The amount of virtual storage (in 4 KB blocks) VLF reserves for the class. This amount must be enough to allow all IMS DPROP control blocks to reside concurrently in VLF virtual storage for performance reasons.

Activate the updated COFVLFxx specifications by either:

- Using MVS commands to stop VLF and then restart it.
- Performing an initial program load (IPL) of the MVS system.

The *MVS/ESA System Commands* contains information about starting VLF. The *MVS/ESA SPL: Application Development Guide* contains general information about VLF.

After installing IMS DPROP and creating propagation requests, submit a Status Control Utility (SCU) DISPLAY STATUS command to determine how much virtual storage IMS DPROP requires for its VLF objects.

Preparing SMF for use by IMS DPROP

To prepare SMF for IMS DPROP use:

- If your installation already uses SMF, update the TYPE value on the SYS keyword if it is already defined.
- If your installation does not use SMF, you must:
 1. Reserve an SMF record type for IMS DPROP's use during configuration. See Figure 32 on page 47 for a description of SMF record type.

- Update the SMFPRMxx member of SYS1.PARMLIB so that SMF will write to this SMF record type.

Figure 15 contains a sample SMFPRMxx member of SYS1.PARMLIB.

```

ACTIVE                /* Active SMF recording          */
DSNAME(SYS1.MANX,SYS1.MANY) /* Two data sets MANX AND MANY  */
REC(PERM)             /* Type 17 PERM records only    */
MAXDORM(3000)         /* Write an idle buffer after 30 min*/
STATUS(060000)        /* Write SMF stats after 6 hours */
JWT(0030)             /* 522 after 30 minutes         */
SID(T38A)             /* System ID is T38A           */
LISTDSN              /* List data set status at IPL   */
SYS(TYPE(0,02,03,06,08:11,14:18,21:23,26,28,
          30:32,37:39,43,44,47,48,
          50,54,57,61:68,70:79,90,100:102,
          130), /*THIS IS THE ONLY CHANGE REQUIRED FOR IMS DPROP */
EXITS(IEFU84,IEFACTRT,IEFUJV,IEFU83,IEFUSI,
       IEFUJI,IEFUTL,IEFU29),
INTERVAL(010000),DETAIL)

SUBSYS(STC,EXITS(IEFUTL,IEFU29,IEFU83,IEFU84,IEFACTRT,IEFUSI),
        INTERVAL(030000))

```

Figure 15. Sample SMFPRMxx member of SYS1.PARMLIB

The sample shows the update for records to be written to record type 130. Record type 130 is defined as reserved for IMS DPROP during. For more information on SMF and the SMFPRMxx member of SYS1.PARMLIB, see *MVS/ESA SPL: System Management Facilities* and *MVS/ESA SPL: Initialization and Tuning*.

Preparing REXX and DB2 for IMS DPROP REXX external subroutines

Some IMS DPROP ISPF applications use a REXX external subroutine called EKYN010X. EKYN010X issues SQL statements for propagating data to DB2. To prepare REXX and DB2 for IMS DPROP external subroutines:

- Make sure EKYN010X is accessible to REXX in one of two ways:
 - Define the IMS DPROP RESLIB as a link list library, allowing REXX to access the IMS DPROP external subroutines.
 - Use the REXX function package feature. To use the REXX function package feature:
 - Decide which function package (User, Local, or System) to use.
 - Update the directory of the chosen function package; for example, IRXFUSER or IRXFLOC, for the IMS DPROP external subroutine EKYN010X. The data you need to add is:

```

Field Name
Value to Define

FUNC-NAME
EKYN010X

ADDRESS
0

SYS-NAME
EKYN010X

```

SYS-DD

EKYNREXL

- c. Assemble and link-edit the modified function package directory into a library accessible to TSO users using either link list, STEPLIB or JOBLIB.

The method used to make EKYN010X accessible to REXX is transparent to the IMS DPROP ISPF applications. Therefore, the IMS DPROP ISPF applications which use this REXX external subroutine always allocate the IMS DPROP RESLIB with DD statement EKYNREXL.

See the *TSO/E Guide to Writing a TMP or CP* for information on REXX external subroutines.

2. Adapt and submit the EKYJBIND job contained in the SEKYBASE library to bind the plan for EKYN010X.

Updating the MVS Message Processing Facility List (optional)

If propagation fails, the relational update program (RUP) and the hierarchical update program (HUP) use write to operator (WTO) macros to write messages to MVS consoles. These messages contain detailed information about the propagation failure. These console messages can be suppressed using the MVS Message Processing Facility List. The detailed information provided by these messages still appears in the JES log.

We recommend that you do not suppress messages during the first installation of IMS DPROP on an MVS image.

The messages to suppress are specified in the MPFLSTxx member of SYS1.PARMLIB and can include:

EKYR099I	EKYR600I	EKYZ360E
EKYR365I	EKYU003E	EKYZ360I
EKYR366I	EKYX216I	EKYZ380I
EKYR367I	EKYX217I	EKYZ381I

See *MVS/ESA SPL: Initialization and Tuning* for details about suppressing these messages. See *Messages and Codes* for details about determining what messages you can suppress after IMS DPROP is operating successfully.

Providing an SMF IEFUSI exit routine

If your installation is using a batch region to update your IMS databases with database definitions (DBDs) that request calls to the IMS Data Capture function, you must ensure that an SMF IEFUSI exit routine is written, available, and activated. This routine must instruct MVS to authorize programs to run in storage key 8 and must allow storage key 8 data spaces to be created that are large enough to contain all segments changed by one Data Language/I (DL/I) call.

If you do not run any batch jobs that update IMS databases, or if the batch jobs do not call the IMS Data Capture function, then the SMF IEFUSI exit routine is optional.

Requesting an IPL of MVS

Perform an IPL to allow IMS DPROP to use its SVC module from the link pack area and to activate the IMS DPROP MVS subsystem definition.

If IMS DPROP is being installed on the MVS system for the first time, perform an IPL with CREATE LINK PACK AREA (CLPA). A CLPA is required to activate the EKYSVC00 SVC load module linked into your LPALIB.

You must also prepare the DB2 environment. These preparations are described in the next section.

Preparing MVS for RRS support

For IMS DPROP to ensure that updates made in DLI batch mode use a two-phase commit with MQ, the DLI batch region must run using RRS. To invoke RRS using the supplied DLI batch procedure, set the 24th parameter to 'Y' as shown below:

```
//UPDATE EXEC PGM=DFSRR00,REGION=0M  
//PARM=(DLI,&PROG,&PSB,,0000,,0,,N,0,T,,N,Y,N,&N,Y,,,,,NONE,,Y)
```

This is a new parameter and is supplied as part of the standard IMS maintenance process. Ensure that PTFs for the following APAR has been applied to your IMS system:

- IMS RRS Batch V7 Code APAR PQ51895
- IMS RRS Batch V7 Code APAR PQ59157

Chapter 4. Preparing the DB2 objects and IMS DPROT collections (applicable only for propagation related to DB2)

This section describes how to prepare your DB2 environment for IMS DPROT.

You must:

- Identify the authorization IDs and the privileges associated with those IDs.
- Bind the IMS DPROT modules into collection packages and bind the DB2 plans of individual IMS DPROT utilities.

For additional environmental considerations, see the appropriate *Administrators Guide* for your propagation mode.

Granting privileges for DB2 objects and IMS DPROT collections

During installation you must grant certain authorizations to those elements of IMS DPROT interfacing with DB2.

Granting privileges for DB2 objects

Before you can perform data operations in a DB2 environment you must have authorization and defined privileges associated with that authorization. You have privileges associated with both:

- IMS DPROT tables, IMS DPROT utilities, and related objects
- Your propagated tables, your propagating applications, and associated objects

The IMS DPROT tables, IMS DPROT utilities and related objects include:

- IMS DPROT directory tables, the audit trail table, and Mapping Verification and Generation (MVG) input tables
- Collection IDs associated with the DB2 package bind facility
- Binding packages of IMS DPROT modules accessing the IMS DPROT directory tables
- Binding of the DB2 plans of the IMS DPROT utilities

Use the ISPF installation panels to set the privileges associated with your authorized ID. For a discussion on the use of the ISPF panels, see “Using the ISPF panels” on page 29.

Granting privileges for IMS DPROT collections

The IMS DPROT installation process can use the DB2 package bind facility. To use the facility, identify two collection IDs for each IMS DPROT system. The collection IDs are referred to as the “IMS DPROT collections”.

As part of the IMS DPROT installation process, you are also asked to grant the CREATE IN COLLECTION and EXECUTE privileges for these two collections. The authorization ID you use for IMS DPROT installation must have the authority to grant privileges for the two IMS DPROT collections.

Recommendation: In granting privileges:

- Be restrictive when granting the CREATE IN COLLECTION privilege. Usually, only the IMS DPROT system administrator needs to bind into these collections packages of IMS DPROT modules.

- Be restrictive when granting the EXECUTE privilege for the read-write IMS DPROP collection. Usually only the IMS DPROP system administrator needs to bind and own the plans of IMS DPROP utilities.
- Do not be restrictive when granting the EXECUTE privilege for the read-only IMS DPROP collection. All owners of DB2 plans of propagating applications and IMS DPROP utilities need the EXECUTE privilege. Because the packages of this collection provide read-only access, you might want to grant the EXECUTE privilege to PUBLIC.

Also consider granting BIND and COPY privileges for the two IMS DPROP collections. Be restrictive when granting these privileges. Usually only IMS DPROP system administrators need these privileges. The creation of the collection IDs is described in “Preparing for binding the IMS DPROP and SQL update modules” on page 72.

Binding packages and plans in IMS DPROP

As part of the installation process:

- Bind the IMS DPROP modules into two collection IDs and grant authorizations to them.
- Bind the DB2 plans of certain IMS DPROP applications.

This section describes these two operations.

Binding packages of IMS DPROP modules

The installation process binds the packages of IMS DPROP modules into two collection IDs:

- The first IMS DPROP collection is used to bind packages of IMS DPROP utility modules reading and updating the IMS DPROP directory tables. It is called the “read-write IMS DPROP collection”.
- The second IMS DPROP collection is used to bind packages of IMS DPROP modules reading IMS DPROP directory tables. It is called the “read-only IMS DPROP collection”.

The authorization ID you use to do IMS DPROP installation must have the following privileges:

- BINDADD and CREATE IN COLLECTION privilege, for binding new packages, or BIND privilege, if binding again an existing package
- SELECT, UPDATE, INSERT, and DELETE privileges for the IMS DPROP directory tables, MVG input tables, and audit trail table
- SELECT privilege for the DB2 catalog tables, because some IMS DPROP modules read information from the DB2 catalog

The setting of privileges for the collection IDs is described in “Creating the privileges for the DB2 collection IDs” on page 73.

Binding plans of IMS DPROP applications

During IMS DPROP installation, bind the DB2 plans of the following IMS DPROP applications:

- Audit Extract utility (AUDU)
- Consistency Check utility (CCU)
- Mapping Verification and Generation utility (MVGU)
- Status Change utility (SCU)

- DL/I Load utility (DLU)
- PRDS Registration utility (PRU)
- Group Unload utility (GUU)
- Receiver
- MQ Apply

IMS DPROP uses the DB2 package bind facility and requires the following authorizations:

- BINDADD privilege, for binding new plans, or BIND privilege, if binding again an existing plan
- EXECUTE privilege for the DB2 collection IDs containing IMS DPROP packages

After binding the plans for the applications, you need to grant the EXECUTE privilege for them. Usually, this privilege is granted to authorization IDs used by systems programmers, database administrators, and operations personnel.

For a discussion on binding the IMS DPROP application plans see “Binding the DB2 application plans” on page 71.

As part of the installation procedure you will also need the following information to enable you to complete the ISPF panels:

- DB2 subsystem ID
- DB2 catalog name
- Whether storage groups or user defined table spaces are used
- Sample program name
- Load library name
- IMS DPROP directory table qualifier and authority level
- IMS DPROP audit trail table specification

See Chapter 8, “Defining the IMS DPROP system,” on page 57 for the details concerning the use of the above items. See Chapter 5, “Working with the ISPF panel application,” on page 29 for a discussion on the use of the ISPF panels.

Part 2. Configuring IMS DPROP

Chapter 5. Working with the ISPF panel application

You use the IMS DPROT ISPF panels to enter the parameters and values required to define the IMS DPROT environment, define the IMS DPROT system, and to generate the jobs that perform the installation and migration of IMS DPROT. This section provides general information on the following topics:

- “Using the ISPF panels”
- “Types of ISPF panels” on page 30
- “Selecting panel options” on page 31
- “Calling other ISPF applications” on page 31
- “Overview of installation panel flow” on page 31

Using the ISPF panels

The ISPF panels are displayed in a predefined sequence. They collect IMS DPROT parameters from the information that you enter in the various fields on the panels. They can create multiple job streams also, based on model jobs and parameters that you enter in the panels. The created jobs are not run until you submit one or more job streams during the panel-driven process. You can review and modify these jobs before submitting them. The submitted jobs:

- Define the IMS DPROT environment (see Figure 71 on page 90 for an example of the environment definition job panel)
- Generate or regenerate the IMS DPROT systems (see Figure 73 on page 93 for an example of the IMS DPROT system definition job panel)
- Perform the installation verification procedure (IVP) (see Figure 77 on page 97, Figure 78 on page 98, Figure 79 on page 99, and Figure 80 on page 100 for examples of the IVP job panels)

After you generate and edit certain jobs, there are certain fields on the panels that you cannot modify, for example, the IMS DPROT status file name. These fields are highlighted on any subsequent ISPF panels.

Storing the information from the ISPF panels

The data you enter on the panels are temporarily stored in ISPF variables in the ISPF shared pool. When you return to the IMS DPROT system selection panel EKYGPM1E (Figure 23 on page 38), all the ISPF variables are stored in the following IMS DPROT ISPF tables in the IMS DPROT ISPF table library:

IMS DPROT master table EKYGMSTR

Contains variables common to each IMS DPROT system in a single IMS DPROT environment. The variables of each environment are stored in a separate row of the table.

IMS DPROT system table

Contains the variables for all IMS DPROT systems running within a single IMS DPROT environment. The variables of each IMS DPROT system are stored in a separate row of the table. The name of the IMS DPROT system table is the same as the IMS DPROT environment name.

Stopping and restarting the installation process

You can interrupt the installation process without losing data already entered, and you can restart the process from where you were interrupted.

When you return to the IMS DPROP installation entry panel, EKYGPM0E (Figure 20 on page 35), all variables relevant to the IMS DPROP system you were defining are stored in an ISPF table in the library containing the customized installation job members. These ISPF tables make the IMS DPROP system definitions accessible to the following IMS DPROP utilities: the CCU, the DLU, and the MVGU.

Displaying errors during job generation

If an error occurs during the job generation process, for example a System B37 abend, panel EKYGPXXE (Figure 16) opens and displays information about the error.

```
EKYGPXXE ==>

The following CALL command terminated with a return code other than zero:

  ALLOC F(SYSPRINT) DUMMY
  ALLOC F(SYSIN   ) DUMMY
  ALLOC F(SYSUT1  ) DA('USERD22.SPFTEMP1.CNTL') SHR
  ALLOC F(SYSUT2  ) DA('()') SHR
  CALL '()'

                                Return Code:
                                The copy procedure has been terminated.

Enter END command to return.
```

Figure 16. Sample error panel

When you press F3 or enter End, the panel being used before the error occurred is opened. The panel can be:

- EKYGPZZE (Figure 71 on page 90)
- EKYGPB0E (Figure 73 on page 93)
- EKYGPC0E (Figure 77 on page 97)
- EKYGPD0E (Figure 78 on page 98)

Types of ISPF panels

There are two types of ISPF panels:

- Full screen panels consisting of 24 lines
- Pop-up panels, which are displayed within a window in a full screen panel

The panels are displayed in a predefined sequence. If you want to display the panel identifier, type PANELID ON on command line of the ISPF panel, then press Enter key.

If the panel identifier is displayed, and you no longer want to display it, type PANELID OFF on command line of the ISPF panel, then press Enter key.

The installation panels consist of:

- A panel for initiating the process
- Selection panels
- Data entry panels

- One or more help panels for each installation panel

Selecting panel options

On each selection panel, except for the system selection panels, there is a highlighted number associated with each available option. Select an option by:

- Typing the option number on the command line and pressing the Enter key
- Moving the cursor to the input field to the left of each option and pressing the Enter key

Choosing an option causes one or more related data entry panels to display.

After you complete these related data entry panels, press the END key (F3), or type END on the command line and press Enter, to return to the selection panel. Upon returning to the selection panel, the option number originally selected is no longer highlighted. This indicates the data entered for this option has been stored. If an option number is shown in red, the option is not applicable for the system you are defining.

Calling other ISPF applications

The IMS DPROR installation and migration application uses ISPF LIBDEF services to allocate the ISPF libraries. To call another ISPF application that also uses ISPF LIBDEF services, for example QMF, we recommended that you use split screen mode. Using ISPF LIBDEF services in the same session with multiple applications can result in unpredictable library allocation problems.

Overview of installation panel flow

The ISPF panels for installing and configuring IMS DPROR are displayed in a specific sequence. Figure 17 on page 32 shows the complete panel flow of the ISPF application. There are four configuration areas, grouped as follows:

Installation Entry panels

Starts the ISPF panel application.

Environment definition panels

Prompts for the parameter values that define the IMS DPROR environment. Complete one set of these panels for each IMS DPROR environment.

System definition panels

Prompts for the parameter values defining an IMS DPROR system. Complete one set of these panels for each IMS DPROR system.

Job Submission panels

Creates the jobs to generate the IMS DPROR environment, the IMS DPROR system, and the IVP jobs. Each job is presented for user modification and submission.

Chapter 6. Beginning the IMS DPROF configuration process

This section describes the first stages of running the IMS DPROF ISPF panel application, which in turn generates and runs the jobs that actually create the IMS DPROF environments and systems.

The topics covered are:

- Starting the ISPF panel application
- Defining the IMS DPROF environment
- Installing the initial IMS DPROF system
- Selecting an IMS DPROF environment or system to define
- Displaying table information
- Displaying errors during job generation

Starting the ISPF panel application

You use the IMS DPROF ISPF configuration entry panels to begin the installation tasks. Figure 18 shows the panel flow for the IMS DPROF installation entry panels and Table 1 explains how the panels are used, showing the panel name, the panel function, and the figure which represents the panel.

Panel Flow for Configuring a IMS DPROF Environment

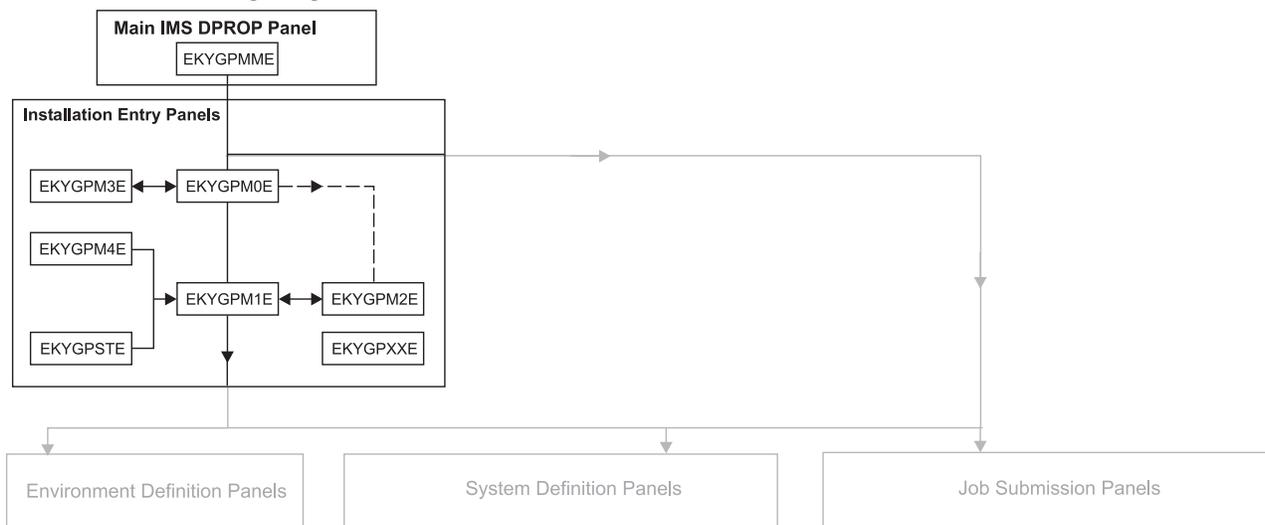


Figure 18. Panel flow for configuring an IMS DPROF environment

Table 1. Configuration entry panels

Panel	Used for	Figure
EKYGPMME	Starting configuration	Figure 19 on page 34
EKYGPM0E	Specifying the environment to be defined or selected	Figure 20 on page 35
EKYGPM3E	Displaying and selecting an existing environment	Figure 21 on page 36
EKYGPM1E	Defining an environment or selecting an existing IMS DPROF system	Figure 23 on page 38
EKYGPM2E	Defining a new system	Figure 22 on page 37

Table 1. Configuration entry panels (continued)

Panel	Used for	Figure
EKYGPXXE	Displaying errors	Figure 16 on page 30
EKYGPSTE	Displaying ISPF table information	Figure 24 on page 39
EKYGPM4E	Deleting IMS DPROF systems	Figure 83 on page 112

To begin configuring IMS DPROF:

1. Enter the following command in an active ISPF/PDF environment:

```
EXEC 'DPROF.SEKYCLIB(EKYGINST)' 'parms'
```

The CLIST procedure EKYGINST has one parameter, a keyword for which you provide a value. You can either specify this value in the procedure or when calling the procedure. Enclose the entire parameter expression in quotation marks.

The keyword is:

EKYGDSPR

Used to pass the high-level qualifier for the IMS DPROF data sets. The high-level qualifier name must be the same as the high-level qualifier specified in the installation job EKYALLOC. The qualifier name can be up to 17 characters long and must be enclosed in parentheses. You can overwrite it later in the panel process. For example:

```
EKYGDSPR(DPR)
```

An example of an EXEC statement is:

```
EXEC 'DPROF.SEKYCLIB(EKYGINST)' 'EKYGDSPR(DPR)'
```

2. Press Enter to display panel EKYGPMME (Figure 19).

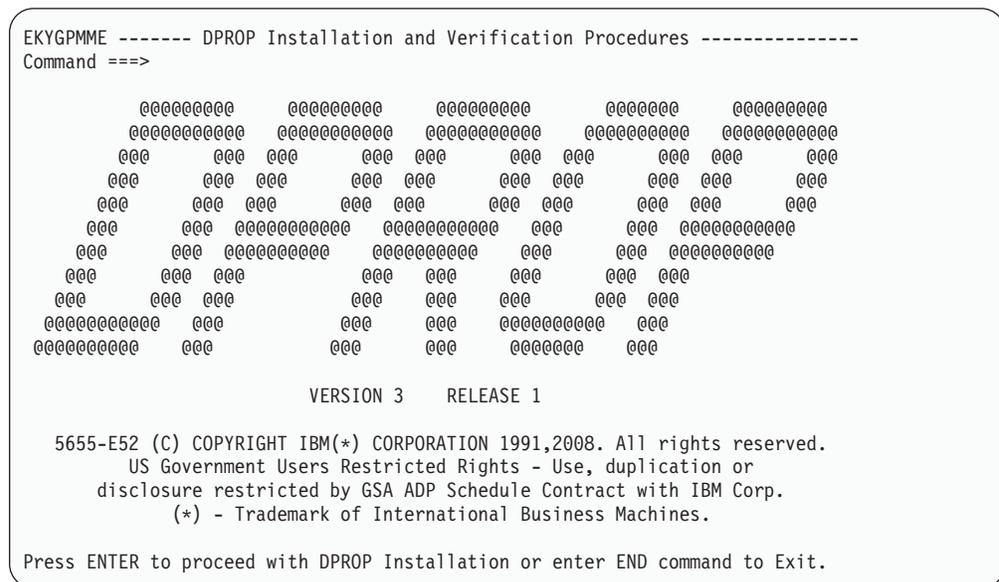


Figure 19. IMS DPROF main entry panel

3. Press Enter to display panel EKYGPM0E (Figure 20 on page 35).

Defining the IMS DPROF environment

Panel EKYGPM0E appears automatically after pressing the Enter key on panel EKYGPMME (Figure 19).


```

EKYGPM0E ----- DPRO P Installation and Verification Procedures -----
Command ==>

@@@@@@@ @@@@@@@ @@@@@@@ @@@@@ @@@@@@@ @@@@@ @@@@
@@@@@@@@ @@@@@@@ @@@@@@@ @@@@@@@ @@@@@@@ @ @ @ @ @
@ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @
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@@@@@@@@ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @

DPRO P Environment Name ==> * (Installation: * for Environ. List )
----- DPRO P Environment Overview (Panel 1 of 1) ----- )
EKYGPM3E ==>
DPRO P Environment Name :
Number of DPRO P Systems:
Installation Library :

Enter a minus sign (-) to go back one DPRO P environment or
press ENTER to go forward or enter END command to select.

```

Figure 21. Environment Overview Pop-Up Panel

The pop-up panel title tells you the current and total number (**Panel nn of nn**) of IMS DPRO P environments that are defined at your installation. Using the Enter and minus-sign (–) keys, you can display the IMS DPRO P environments already defined at your installation. When the environment name you want displays, pressing the End key causes the pop-up window to disappear and you return to panel EKYGPM0E. The name you chose is now displayed in the **DPRO P Environment Name** field.

2. Press Enter.
 - If you are installing IMS DPRO P for the first time, panel EKYGPM2E (Figure 22 on page 37) displays.
 - If you already have IMS DPRO P systems installed, panel EKYGPM1E (Figure 23 on page 38) displays. Panel EKYGPM1E shows the names of any IMS DPRO P systems that have already been installed in the specified IMS DPRO P environment. Go to “Selecting an IMS DPRO P environment or system to define” on page 38.

Installing the initial IMS DPROT system

Pressing Enter on panel EKYGPM0E (Figure 20 on page 35) displays panel EKYGPM2E (Figure 22) if this is the initial IMS DPROT system you are installing.

```
EKYGPM2E ==>
                                                    DPROT Environ-
                                                    ment:
Enter system name, system number, and system type for new DPROT system:

DPROT System Name      ==> DPROT...
DPROT System Number    ==>
DPROT System Type      ==> (Enter a number from list below)

MQ-async propagation:
    1 - MQ Capture          2 - MQ Apply
Log-async propagation:
    3 - Selector and Receiver  4 - Selector  5 - Receiver
Synchronous or user asynchronous propagation:
    6 - Sync                7 - User Async

Descriptive Title (optional) ==> DPROT Default Description

Press ENTER to commit changes or enter END command to return.
```

Figure 22. Defining an initial IMS DPROT system

To define an initial IMS DPROT system:

1. In the **DPROT System Name** field, type the IMS DPROT system name.
This must be a unique name within an environment and satisfy ISPF member rules. It can be up to eight characters long. The first character must be alphabetic, or an @, a #, or £. The rest of the characters must be alphabetic or numeric. The name you specify displays in the right hand corner of this and certain subsequent panels.
2. In the **DPROT System Number** field, type the IMS DPROT system number.
This must be a unique number within an environment in the range of 1 to 999.
3. In the **DPROT SYSTEM TYPE** field, enter in a system code from below to specify the type of system that is going to be created. Specify one of the following.
 - 1 for an MQ Capture system
 - 2 for an MQ Apply system
 - 3 for a Selector and Receiver system
 - 4 for a Selector system
 - 5 for a Receiver system
 - 6 for a Sync system
 - 7 for a USER-ASYNC system
4. Optionally, in the **Descriptive Title** field type a title for the IMS DPROT system.
For example, type IMS DPROT for Production Databases, SYNC
5. Press Enter to commit your input and to display panel EKYGPM1E (Figure 23 on page 38). Panel EKYGPM1E allows you to define an IMS DPROT environment or system.

Selecting an IMS DPROT environment or system to define

Panel EKYGPM1E (Figure 23) displays after completing either panel EKYGPM0E or EKYGPM2E. Use panel EKYGPM1E to:

- Define the IMS DPROT environment parameters
- Define a new IMS DPROT system
- Select an existing IMS DPROT system for further processing
- Delete one or more IMS DPROT systems
- Obtain the ISPF table statistics for the IMS DPROT environment

```

EKYGPM1E ----- DPROT Systems ----- Row 1
Command ==>                                SCROLL ==> PAGE

E - Define DPROT Environment                DPROT Environ
I - Define a new DPROT system              ment: ENV
blank - Enter 'S' (select) in one or several Sel column(s)
        or move cursor to Sel column next to the desired DPROT system
        - Enter 'D' (delete) in one or several Sel column(s)
? - Get information about ISPF table "ENV1"

Press ENTER to continue or enter END command to return.

----- DPROT System Table -----
Sel  System      System System      Release/
     Name        Number Type        Status   Descriptive Title
-   -
-   DPROT001     001  MQCaptur V3R1    DPROT capture system
-   DPROT004     004  MQApply   V3R1    DPROT Apply system
-   DPROT003     003  SelrRcvr  V3R1    DPROT DASYNC system
-   DPROT008     008  Selector  V3R1    DPROT selector
----- End of Table -----

```

Figure 23. IMS DPROT systems

The options for the EKYGPM1E panel are shown in Table 2, including the option, what you use it to do, and the panel next displayed:

Table 2. Installation action options

Option	Used to	Displays panel
E	Define an IMS DPROT environment	EKYGPZ0E (Figure 26 on page 43)
I	Define a new IMS DPROT system in the existing IMS DPROT environment	EKYGP00E (Figure 42 on page 59)
S	Select an existing IMS DPROT system for further processing	EKYGP00E (Figure 42 on page 59)
D	Delete an IMS DPROT system	EKYGPM4E (Figure 83 on page 112)
?	Obtain ISPF information on the current IMS DPROT environment	EKYGPSTE (Figure 24 on page 39)

Options **E**, **I**, and **?** are performed on the command line at the top of the panel.

Options **S**, and **D** are performed in the Sel column before the desired IMS DPROT system. Press Enter to perform the selected action and to open the corresponding panel.

The IMS DPROT System Table that is displayed at the bottom of the IMS DPROT Systems panel will be empty the first time you are installing a Version 3 Release 1 system (as shown in Figure 23).

After first using this panel, you can come back to it to define new IMS DPROP systems for this particular environment. At that time, the system name, system number, system type, release and status information and descriptive title of the Version 3 Release 1 systems for this specific environment are displayed on the lower half of the panel. The valid values that can be in the **Release/Status** column are shown in Table 3:

Table 3. Possible release/status values

Value	Explanation
V3R1	This is a Version 3, Release 1 IMS DPROP system
V2R2migr	This IMS DPROP system was migrated from Version 2, Release 2 migration
	This IMS DPROP system is in the process of being migrated and has not finished

Displaying table information

Enter a question mark (?) in panel EKYGPM1E (Figure 23 on page 38), to open panel EKYGPSTE (Figure 24). Using EKYGPSTE, you can display information that will be used for creating your environments and systems. This information is derived from the ISPF panel application that you use to install IMS DPROP. Besides being informed about the table, you can be assured that the information is being stored by the fact that the table information is displayed in this panel.

```

EKYGPSTE ==>

  Table Name
  Table Library.SEKYTLIB

  Creation or Last Update User

  Creation Date           Creation Time

  Last Update Date       Last Update Time

  Press <ENTER> to continue.
  
```

Figure 24. Viewing IMS DPROP generation information using panel EKYGPSTE

Panel EKYGPSTE displays the following information:

- Table Name**
IMS DPROP environment ISPF table name
- Table Library**
Library name
- Creation or Last Update User**
User that created or last updated the file
- Creation Date**
Date the ISPF table was created
- Creation Time**
Time the ISPF table was created
- Last Update Date**
Date the table was last updated

Last Update Time

Time the table was last updated

After reviewing the information, press Enter to return to panel EKYGPM1E (Figure 23 on page 38).

Chapter 7. Defining the IMS DPROT environment

This section describes the second phase of installation, which involves defining the IMS DPROT environment. Use the Environment Parameters primary menu to select the tasks, which include:

- Defining the IMS DPROT environment data set, copy program, and jobcard parameters
- Defining EKYGSYS and EKYGJCL macro parameters
- Defining audit trail table job parameters
- Defining the interface to the AD/Cycle LE/370
- Defining the interface to IMS DPROT EKYRESLB dynamic allocation exit routine

You use the ISPF environment definition panels to perform the above tasks. This section explains what each panel is used for and describes the tasks associated with the panel options.

Figure 25 shows the panel flow for defining the IMS DPROT environment and Table 5 on page 43 explains how the panels are used, showing the panel name, its function, and the figure that represents the panel.

Panel Flow for IMS DPROT Environment Definition

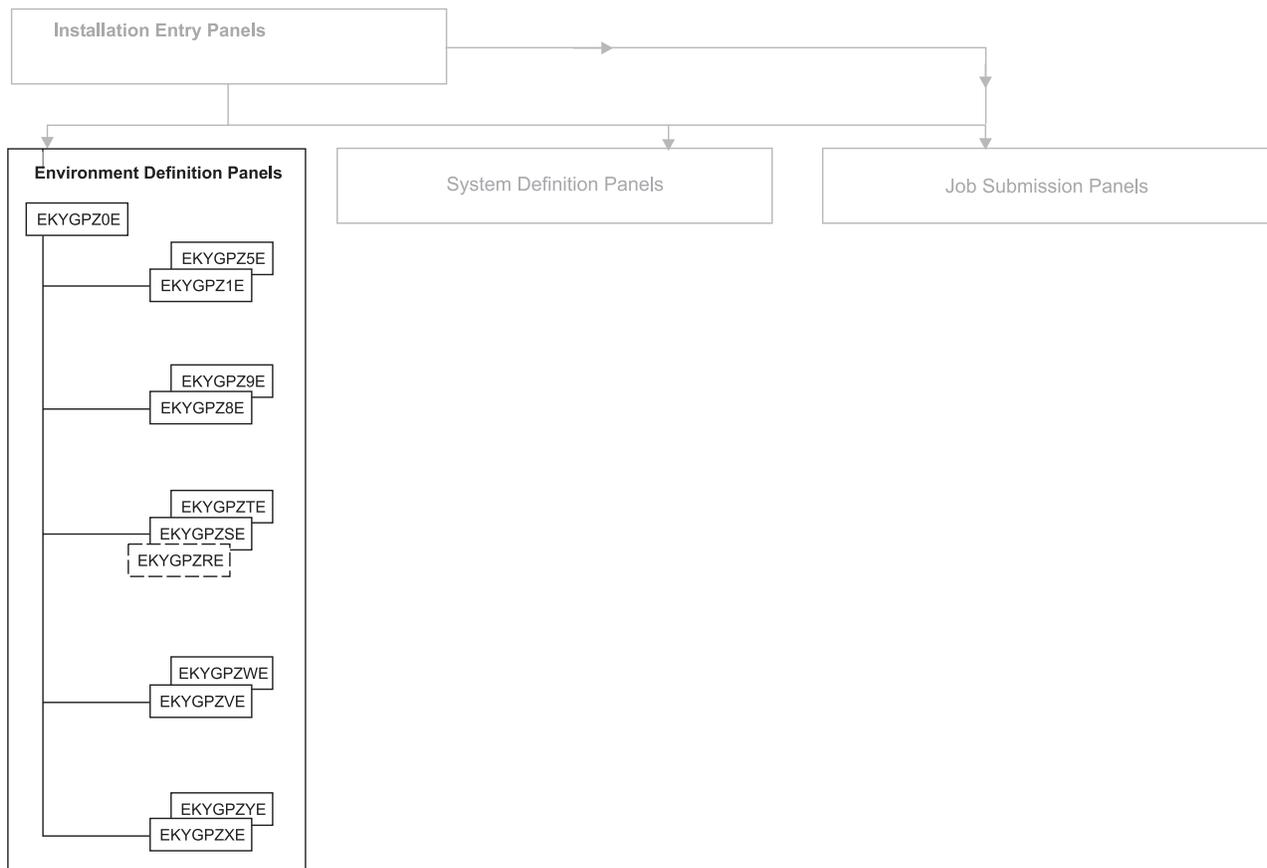


Figure 25. Panel flow for IMS DPROT environment definition

Table 4. Environment definition panel descriptions

Panel	Used for	Figure
EKYGPZ0E	Defining the environment parameters	Figure 26 on page 43
EKYGPZ1E	Specifying the names of the IMS DPROP environment libraries	Figure 27 on page 44
EKYGPZ2E	Specifying additional IMS DPROP environment parameters	Figure 28 on page 44
EKYGPZ3E	Specifying the utility copy program parameters	Figure 29 on page 45
EKYGPZ4E	Defining the default job card parameters to use when generating jobs	Figure 30 on page 46
EKYGPZ5E	Specifying the customized installation library	Figure 31 on page 46
EKYGPZ8E	Defining the EKYSYS system parameters	Figure 32 on page 47
EKYGPZ9E	Specifying the IMS DPROP stage II job statement	Figure 33 on page 50
EKYGPZRE	Specifying whether DB2 is available to IMS DPROP's audit trail	Figure 34 on page 51
EKYGPZSE	Specifying DB2 subsystem parameters for the audit trail table	Figure 35 on page 52
EKYGPZTE	Specifying the DB2 table and database used for storing the audit trail table	Figure 36 on page 53
EKYGPZVE	Defining the interface to LE/370 (panel 1 of 2)	Figure 37 on page 54
EKYGPZWE	Specifying whether IMS DPROP should create a dummy CEEPIPI module in order to avoid having MVS issue message CSV003I in the event that you do not have LE/370 installed	Figure 38 on page 55
EKYGPZXE	Specifying whether an IMS DPROP dynamic allocation exit routine is installed	Figure 39 on page 55
EKYGPZYE	Specifying whether IMS DPROP should create a dummy EKYDAEX0 load module in order to avoid having MVS issue message CSV003I in the event that the dynamic allocation module EKYDAEXX is not found	Figure 40 on page 56

The IMS DPROP Environment Parameters primary menu

The Environment Parameters primary menu (Figure 26 on page 43) opens when you either:

- Select E from panel EKYGPM1E (Figure 23 on page 38).
- Enter the environment name on panel EKYGPM0E (Figure 20 on page 35).

```

EKYGPZ0E ----- DPRO - DPRO Environment Parameters Primary Menu -----
Command ==>

DPRO Environ
ment:

1 - Define DPRO Data Sets, Copy Program, and Jobcard
2 - Define EKYGSYS Macro Parameters
3 - Define Audit Trail Table Job Parameters
4 - Define Interface to LE/370
5 - Define Interface to DPRO EKYRESLB Dynamic Allocation Exit Routine

E - Return

Enter option or move cursor before desired option.
Enter END command to return.

```

Figure 26. Environment Parameters Primary Menu

Select the options in this panel sequentially. The panels for each option are shown in Table 5, including the option, its function, and the next panel displayed:

Table 5. Panel path from the Environment Parameters primary menu

Option	Used for	Displays panel
1	Defining environment libraries and parameters (1 of 5)	EKYGPZ1E (Figure 27 on page 44)
2	Defining the system parameters for the macro that generates the IMS DPRO environment (EKYGSYS)	EKYGPZ8E (Figure 32 on page 47)
3	Specifying the audit trail table parameters: Yes/No	EKYGPZRE (Figure 34 on page 51)
4	Defining the audit trail table parameters	EKYGPZSE (Figure 35 on page 52)
5	Defining the interface to AD/Cycle LE/370	EKYGPZVE (Figure 37 on page 54)
6	Defining IMS DPRO EKYRESLB Dynamic Allocation exit routine	EKYGPZXE (Figure 39 on page 55)
E	Returning to the calling panel, either EKYGPM1E or EKYGPM0E	Figure 23 on page 38 or Figure 26

The tasks associated with each option on panel EKYGPZ0E are described in sequence.

Defining the IMS DPRO environment data set, copy program and job card parameters

Selecting option 1 on the Environment Parameters Primary Menu panel (EKYGPZ0E), displays panel EKYGPZ1E, the System Data Set Names panel (Figure 27).

Panel EKYGPZ1E is the first of five panels you use to define environment libraries and parameters.

```
EKYGPZ1E ----- DPRO - System Data Set Names (Panel 1 of 5) -----
Command ==>

Enter the fully qualified partitioned data set name below that contains
the DPRO macro members. The data set name must be the same as specified
in allocation job EKYALLOC, DDname SEKYMAC:
Macro Library          ==> DPRO.SEKYMAC

Enter the fully qualified partitioned data set name below that contains
the DPRO assembler sample exit members. The data set name must be the
same as specified in allocation job EKYALLOC, DDname SEKYSRC:
Assembler Source Library ==> DPRO.SEKYSRC

Enter the fully qualified partitioned data set name below that contains
the DBRC Skeleton members. The data set name must be the same as
specified in allocation job EKYALLOC, DDname SEKYSKEL:
DBRC Skeleton Library  ==> DPRO.SEKYSKEL

Press <ENTER> to commit changes and continue on the next panel
or enter END command to return.
```

Figure 27. System Data Set Names (Panel 1 of 5)

Use panel EKYGPZ1E to specify the names of the environment libraries.

1. In the **Macro Library** field, type the name of the library containing the IMS DPRO macros.
2. In the **Assembler Source Library** field, type the name of the library containing the IMS DPRO assembler sample exits.
3. In the **DBRC Skeleton Library** field, type the name of the library containing the DBRC skeletons.
4. Press Enter to commit your input and to display panel EKYGPZ2E (Figure 28).

```
EKYGPZ2E ----- DPRO - System Data Set Names (Panel 2 of 5) -----
Command ==>

Enter the fully qualified partitioned data set name below that will contain
the DPRO DBRM members. The data set name must be the same as specified
in allocation job EKYALLOC, DDname SEKYDBRM:
DBRM Data Set Name    ==>

Enter the fully qualified partitioned data set name below that will contain
protected DPRO program load modules. The data set name must be the same as
specified in allocation job EKYALLOC, DDname EKYRESLB:
DPRO RESLIB Library  ==>

Press ENTER to commit changes and continue on the next panel
or enter END command to return.
```

Figure 28. System Data Set Names (Panel 2 of 5)

Use panel EKYGPZ2E to specify additional environment parameters.

1. In the **DBRM Data Set Name** field, type the name of the data set. The data set name must be the same as the data set specified in allocation job EKYALLOC, DD name EKYRESLB.
2. In the **DPROP RESLIB Library** field, type name of the library containing the IMS DPROP program load modules. The name must be the same as specified in allocation job EKYALLOC, DD name EKYRESLB.
Recommendation: Figure 28 on page 44 is an example of defining a single IMS DPROP environment. For multiple environments, you must allocate new DBRM and RESLB data sets (outside of the ISPF-driven process) and the DBRM data set names and the IMS DPROP RESLIB library names must be unique for each environment. Two ways to satisfy this requirement of uniqueness are:
 - a. Copy the members from the original SEKYDBRM and EKYRESLB data sets into the new, unique data sets
 - b. Concatenate (for each environment):
 - The SEKYDBRM specified in the allocation job (EKYALLOC) with the unique DBRM data set name in all appropriate jobs
 - The EKYRESLB specified in the allocation job (EKYALLOC) with the unique IMS DPROP RESLIB library name in all appropriate jobs
3. Press Enter to commit your input and to display panel EKYGPZ3E (Figure 29).

```

EKYGPZ3E ----- DPROP - Copy Program Definition (Panel 3 of 5) -----
Command ==>

During generation of installation jobs, installation skeleton members
are copied from the source library, merged with data entered on the
installation panels, and copied into the target library.

Enter the name of the utility program used for the copy process and
library where the program resides:

Program Name   ==> IEBGENER
Data Set Name  ==> SYS1.LINKLIB

Note:The program you specify above must be compatible with SYSPRINT, SYSIN,
SYSUT1, and SYSUT2 DD statements (as used by the IEBGENER utility).

Press <ENTER> to commit changes and continue on the next panel
or enter END command to return.

```

Figure 29. Copy Program Definition (Panel 3 of 5)

Use panel EKYGPZ3E to specify the utility Copy Program parameters.

1. In the **Program Name** field, type the name of the utility copy program.
The program you specify must be compatible with the SYSPRINT, SYSIN, SYSPRINT, SYSIN SYSUT1, and SYSUT2 DD statements (as used by the IEBGENER utility).
2. In the **Data Set Name** field, type the name of the library where the copy program resides.
3. Press Enter to commit your input and to display panel EKYGPZ4E (Figure 30).

```
EKYGPZ4E -- DPRO - DPRO Environment Job Parameters (Panel 4 of 5) -----  
Command ==>
```

Enter the job statement for the DPRO Environment jobs:

Note: If present, the account definition, the job class, and the msgclass values are used as defaults on later job card definitions.

```
==> //USER022C      JOB      (#ACNT),,  
==> // CLASS=A,MSGCLASS=A,REGION=4096K,  
==> // NOTIFY=USER022,USER=USER022  
==> // *  
==> // *
```

Press <ENTER> to commit changes or enter END command to return.

Figure 30. Environment Job Parameters (Panel 4 of 5)

The values you specify on panel EKYGPZ4E are used as default job card parameters on all subsequent job card panels.

Use panel EKYGPZ4E to specify the IMS DPRO environment job parameters.

1. Type the following job fields:
 - **JOB** ID and account number
 - **CLASS**
 - **MSGCLASS**
 - **REGION**
 - **NOTIFY**
 - **USER** ID
2. Press Enter to commit your input and to display panel EKYGPZ5E (Figure 31).

The region size on this panel must be at least 4096 KB.

If DB2 is not included in the your installation's linklist, include a JOBLIB card for the DB2 load library as part of this job card.

```
EKYGPZ5E --- DPRO - Customized Installation Library (Panel 5 of 5) -----  
Command ==>
```

Enter a fully qualified new partitioned data set name and volume name that contains the customized DPRO installation job members:
(This data set may NOT be shared by multiple DPRO Environments)

```
Target Data Set Name ==> DPRO.INSTALL.ENV  
Volume Serial Name   ==>( ignored if data set name )  
                    ( already exists)
```

Press <ENTER> to commit changes or enter END command to return.

Figure 31. Customized Installation Library (Panel 5 of 5)

Use panel EKYGPZ5E to specify the IMS DPROB environment customized installation library.

1. In the **Target Data Set Name** field, type the name of the library containing your customized installation job members.
2. In the **Volume Serial Name** field, type the name of the volume containing the library.
3. Press Enter to commit your input and to display the primary menu panel, EKYGPZ0E (Figure 26 on page 43).

Proceed to the next task on the primary menu, defining the EKYGSYS and EKYJCL parameters.

Defining the EKYGSYS and EKYJCL parameters

Selecting option 2 from panel EKYGPZ0E (Figure 26 on page 43), displays panel EKYGPZ8E (Figure 32). This is the first of two panels for specifying the EKYGSYS parameter definitions.

```

EKYGPZ8E ---- DPROB - EKYGSYS Parameter Definition (Panel 1 of 2) -----
Command ==>

Enter the DPROB installation stage I EKYGSYS macro parameters below:
ROUTCDE =(          )      ( MVS routcode(s), separated by commas      )
SVCNO   =              ( a decimal value between 200 and 255          )
SUBSYS  =              ( a name up to four bytes in length           )
SMFREC  =              ( a decimal value between 128 and 255         )
ILOGREC =              ( a hexadecimal value between A0 and FF       )
DBDV    =(          )      ( length,offset in decimal                 )
PRSET   =              ( a name up to eight bytes in length         )
SQLDLM  =              ( A=apostrophe, D=default, Q=quotation mark   )
DATE    =              ( one of ISO, USA, EUR or JIS                 )
TIME    =              ( one of ISO, USA, EUR or JIS                 )
EKYRESLB =

For help with an input field, move cursor to the desired field and
press HELP key.
Press ENTER to commit changes and continue on the next panel
or enter END command to return.

```

Figure 32. EKYGSYS Parameter Definition (Panel 1 of 2)

Use panel EKYGPZ8E to define the EKYSYS system parameters.

1. In the **ROUTCDE** field, type the MVS route code or codes IMS DPROB uses to write messages to the MVS consoles with WTO and write to operator with reply (WTOR) macros.

The default is ROUTCDE=2.

In most cases, the route code you specify is the same as the route code IMSGEN (IMSCTRL macro's MSC parameter) uses for writing IMS messages to MVS consoles.

2. In the **SVCNO** field, type the SVC number for the IMS DPROB type 4 SVC. The value you use must be in the range of 200 to 255.
3. In the **SUBSYS** field, type the MVS IMS DPROB subsystem name. This name must be the same as the name specified in member IEFSSNnn of SYS1.PARMLIB.
4. In the **SMFREC** field, type the SMF record type reserved for IMS DPROB to write audit trail records to SMF.

You must select a record type in the range of 128 and 255. The default value is SMFREC=130.

The type you specify must not be used by other programs at your installation.

5. In the **ILOGREC** field, type the IMS log record code reserved for IMS DPRPROP to write records to the IMS log.

IMS allows only record codes in the hexadecimal range X'A0' to X'FF'. The default is ILOGREC=E0.

The code you specify must not be used by other programs at your installation.

6. In the **DBDV** field, type the length and offset of that portion of the DBD version ID used at your installation to describe significant DBD changes to data propagation.

The RUP checks this portion of the DBD version ID to detect inconsistencies between the IMS DPRPROP directory's propagation request definitions and the DBDs that IMS uses. If the DBD changes after the MVG generates the propagation request, inconsistencies can occur. If an inconsistency occurs, you must regenerate the propagation request.

The maximum length for an IMS DBD version ID is 254 bytes. The default values for DBDV are (254,0). Valid values for the length are between 0 and 254; valid values for the offset are between 0 and 253. An offset of 0 indicates the first byte; and a length of 0 indicates that no checking occurs between the DBD version IDs in IMS and IMS DPRPROP.

If you do not override the defaults provided on the panel, the RUP checks the entire version ID.

MQ Capture and Selector-only systems do not use this value.

7. In the **PRSET** field, type the ID of the default set of propagation requests.

The IMS DPRPROP MVGU uses this ID when propagation requests are defined without an associated propagation request set.

The ID is an eight-character name. The first character must be either alphabetic, @, #, or £. The other characters can be alphabetic or numeric.

The default is PRSET1.

MQ Capture and Selector-only systems do not use this value.

8. In the **SQLDLM** field, type the SQL string delimiter as defined in the DB2 installation panels (the SQLDELI field in DSNHDECP).

Specify any of the following:

SQLDLM=A

Apostrophe

SQLDLM=D

Default

SQLDLM=Q,

Quotation Mark

The CCU, the DLU, and the IMS DPRPROP utility ISPF applications use the SQL string delimiter value to construct dynamic SQL statements. See the *DB2 Administration Guide* for more information.

MQ Capture and Selector-only systems do not use this value.

9. In the **DATE** field, type the date format IMS DPRPROP uses during DB2-to-IMS mapping for IMS fields defined to IMS DPRPROP without field exit routines.

Valid formats are:

DATE=ISO

yyyy-mm-dd

DATE=USA
mm/dd/yyyy

DATE=EUR
dd.mm.yyyy

DATE=JIS
yyyy-mm-dd

The default is DATE=ISO.

MQ Capture and Selector-only systems do not use this value.

10. In the **TIME** field, type the time format IMS DPROP uses during DB2-to-IMS mapping for IMS fields defined to IMS DPROP without field exit routines.

Valid formats are:

TIME=ISO
hh.mm.ss

TIME=USA
hh:mm AM or hh:mm PM

TIME=EUR
hh.mm.ss

TIME=JIS
hh:mm:ss

The default is TIME=ISO.

MQ Capture and Selector-only systems do not use this value.

11. The name in the **EKYRESLB** field shows the fully qualified data set name of the APF-authorized library that IMS DPROP dynamically allocates to the EKYRESLB DD statement.

The value, which automatically displays in this panel, is the same as that specified on panel EKYGPZ2E (Figure 28 on page 44).

The value cannot be modified in this panel.

12. Press Enter to commit your input and to display panel EKYGPZ9E (Figure 33 on page 50).

```
EKYGPZ9E --- DPRO - System Generation Job Statement (Panel 2 of 2) -----  
Command ==>
```

Enter the DPRO installation stage II job statement:

Note: If you wish to use apostrophes (') or ampersands (&)
as characters in the job statement, then use a pair of each.
Violating this rule will cause DPRO generation to abend.

```
EKYGJCL1 ==> //USER022G JOB (#ACNT),DPROGEN,  
EKYGJCL2 ==> // CLASS=A,MSGCLASS=A,REGION=4096K,  
EKYGJCL3 ==> // NOTIFY=USER022,USER=USER022  
EKYGJCL4 ==> /*  
EKYGJCL5 ==> /*
```

Press <ENTER> to commit changes or enter END command to return.

Figure 33. System Generation Job Statement (Panel 2 of 2)

Use panel EKYGPZ9E to specify the IMS DPRO stage II job statement.

1. Enter at least one line to generate the job statement.
Define additional JCL, JES2, or JES3 statements as required by your installation. All these statements are put in the Stage I source deck in the EKYJIN member and are submitted using panel EKYGPZZE (Figure 71 on page 90).
2. Enter a JOBLIB card for the DB2 load library, if DB2 is not included in the linklist at your installation.
The IMS DPRO environment generation jobs use DB2 to create the audit trail table and to compile certain IMS DPRO control modules.
3. Press Enter to commit your input and to display panel EKYGPZ0E (Figure 26 on page 43).
Proceed to the next task: defining the audit trail table.

Defining the audit trail table (Applicable only for propagation related to DB2)

Option **3** in panel EKYGPZ0E (Figure 26 on page 43) opens panel EKYGPZRE (Figure 34).

```
EKYGPZRE ----- DPROP - Audit Trail Table (Panel 1 of 3) -----
Command ==>

Is DB2 available on this site for DPROP Audit Trail use ?

  DB2 Available          ==>(YES or NO)

Press <ENTER> to commit changes and continue on the next panel
or enter END command to return.
```

Figure 34. Audit Trail Table (Panel 1 of 3)

1. To indicate whether DB2 is available for IMS DPROP audit trail use, specify the appropriate parameter in the **DB2 Available** field:
 - YES** DB2 is available for the environment. Panel EKYGPZSE displays (Figure 35 on page 52).
 - NO** DB2 is not available or you do not want to use the Audit Extract utility in an environment which has only Selector-only or MQ Capture systems defined in it. Panel EKYGPZ0E displays. (Figure 26 on page 43)
2. Press Enter to display the appropriate panel.

Defining the audit trail table job parameters

Panel EKYGPZSE (Figure 35) opens if YES is specified on panel EKYGPZRE (Figure 34 on page 51). EKYGPZSE is the first of two panels used for supplying the DB2 subsystem parameters for the audit trail table. Figure 35 shows an example of this panel.

```
EKYGPZSE P - DB2 Subsystem Parameters for Audit Trail Table (Panel 2 of 3)-----
Command ==>

Enter DB2 subsystem ID and DB2 volume catalog name used for the definition
of the DPROB audit trail tables:
  DB2 Subsystem ID      ==> DSN
  DB2 VCAT name         ==> DB2

Enter program name, load library and DB2 plan name of a DB2 sample program:
  Program Name          ==> DSNTIAD
  Load Library          ==> DSN220.RUNLIB.LOAD
  DB2 Plan Name         ==> DSNTIA22

Enter Yesif your installation is using DB2 storage groups or
enter Noif you are using user-defined DB2 tablespaces:
  Storage Groups        ==> YES(YES or NO)

Press <ENTER> to commit changes and continue on the next panel
or enter END command to return.
```

Figure 35. DB2 Subsystem Parameters for Audit Trail Table (Panel 2 of 3)

On panel EKYGPZSE:

1. In the **DB2 Subsystem ID** field, type the data set identifier for the audit trail table.
2. In the **DB2 VCAT name** field, type the volume catalog name.
3. In the **Program Name** field, type the name of the DB2 program for processing the SQL statements.
4. In the **Load Library** field, type the name of the load library containing the DB2 program.
5. In the **DB2 Plan Name** field, type the DB2 plan name associated with the audit trail table
6. In the **Storage Groups** field, indicate whether you are using DB2 storage groups by typing:
 - YES** You are using DB2 storage groups and panel EKYGPZTE displays (Figure 36 on page 53).
 - NO** You are not using DB2 storage groups. You are using user-defined DB2 table spaces instead. Commits your input and displays panel EKYGPZ0E (Figure 26 on page 43). The IMS DPROB generation job must include a DEFINE CLUSTER statement to specify the DB2 volume name to be used when defining the new cluster.
7. Press Enter and the appropriate panel displays.

```

EKYGPZTE ----- DPROP - Audit Trail Table (Panel 3 of 3) -----
Command ==>
    Note:The Audit Trail Table Qualifier is used as the DB2 plan owner

Audit trail table specifications:                Use existing DB2 object:
DB2 Storage Group Name      ==> GDPROP          ==> NO(YES or NO)
DB2 Database Name          ==> DDPRAUD         ==> NO(YES or NO)
DB2 Tablespace Name        ==>

SDPRAUD
    Audit Trail Table Qualifier ==>

Enter the volume name used by the CREATE STOGROUP command:
    Volume Serial Name      ==>

The audit trail table is accessed by the audit extract utility:
    DB2 Application Plan Name ==> DPROPAUD

DB2 authorization IDs allowed to execute the audit extract utility plan:
==> PUBLIC
==>

Press <ENTER> to commit changes or enter END command to return.

```

Figure 36. Audit Trail Table (Panel 3 of 3)

Use panel EKYGPZTE to specify the DB2 table and database used for storing the audit trail table.

On panel EKYGPZTE:

1. In the **DB2 Storage Group Name**, type the storage group name IMS DPROP uses when it creates the audit trail table field. To indicate whether an existing DB2 storage group is to be used, specify:
 - YES** Use an existing DB2 storage group. It is not necessary to specify a volume name for the DB2 storage group.
 - NO** Create and use a new storage group. The generated job must include a CREATE STOGROUP statement. Also, the volume name to be used when creating the new DB2 storage group must be specified.
2. In the **DB2 Database Name** field, type the name IMS DPROP uses when it creates the audit trail table. To indicate whether or not an existing DB2 storage group is to be used, you specify:
 - YES** Use an existing DB2 database name.
 - NO** The IMS DPROP job must include the following statements:

```

DROP DATABASE
CREATE DATABASE

```
3. In the **DB2 Tablespace Name** field, type the DB2 table space name
Define a unique DB2 table space for the IMS DPROP directory of each IMS DPROP system within a particular DB2 system.
4. In the **Audit Trail Table Qualifier** field, type the table qualifier IMS DPROP uses during creation of the audit trail table
Only one audit trail table is used by all IMS DPROP systems in an IMS DPROP environment.
5. In the **Volume Serial Name** field, type the volume name used by the CREATE STOGROUP command during creation of the audit trail table.
6. In the **DB2 Application Plan Name** field, type the application plan name associated with the audit extract utility.

7. In the **DB2 Authorization ID** field, type the DB2 authorization ID needed to run the audit extract utility plan.
8. Press Enter to commit your input and to display panel EKYGPZ0E (Figure 26 on page 43).

Defining the interface to LE/370

Selecting option 4 on IMS DPROP Environment Parameters primary menu, panel EKYGPZ0E (Figure 26 on page 43), displays panel EKYGPZV (Figure 37). Use panel EKYGPZV to define the interface between IMS DPROP and the AD/Cycle LE/370 parameters.

```
EKYGPZVE ---- DPROP - Interface to LE/370 (Panel 1 of 2) -----  
Command ===>  
  
Is LE/370 installed on your MVS system ?  
  
LE/370      ===>(YES or NO)  
  
  
Press <ENTER> to commit changes and continue on the next panel  
or enter END command to return.
```

Figure 37. Interface to AD/Cycle LE/370 (Panel 1 of 2)

If the LE/370 program is installed, IMS DPROP can support user exit routines written in high-level languages.

To indicate if the LE/370 program is installed:

1. Specify
 - YES** LE/370 program is installed at the site. Panel EKYGPZ0E displays (Figure 26 on page 43).
 - NO** LE/370 program is not installed at the site. Panel EKYGPZWE displays (Figure 38 on page 55).
2. Press Enter and the appropriate panel displays.

```

EKYGPZWE ==>

IBM recommends that during DPROB installation, member EKYZPIPI
be copied to member CEEPIPI within the DPROB RESLIB.

Note:After creating this dummy module, MVS will not issue CSV003I
messages while initializing DPROB in an address space.

DPROB RESLIB Library:

Create dummy CEEPIPI   ==>(YES or NO)

Press <ENTER> to commit changes or enter END command to return.

```

Figure 38. Interface to LE/370 (Panel 2 of 2)

MVS outputs message CSV003I when initializing IMS DPROB, if the LE/370 is not installed and load module CEEPIPI is not found. To avoid this, a dummy CEEPIPI load module can be generated in the IMS DPROB RESLIB. To create the dummy CEEPIPI load module:

1. In the **Create dummy CEEPIPI** field, specify YES.
2. Press Enter to commit your input and to display panel EKYGPZ0E (Figure 26 on page 43).

If at a later time, you install the LE/370 program, you must:

1. Delete the dummy load module CEEPIPI from the IMS DPROB target RESLIB.
2. Specify NO in the **Create dummy CEEPIPI** field on this panel.

Defining the interface to EKYRESLB dynamic allocation exit routine

Selecting option 5 from the IMS DPROB Environment Parameters primary menu, panel EKYGPZ0E (Figure 26 on page 43) displays panel EKYGPZXE (Figure 39).

EKYGPZXE is the first of two panels you use to define the EKYRESLB dynamic allocation exit routine.

```

EKYGPZXE Define DPROB EKYRESLB Dynamic Allocation Exit Routine (Panel 1 of 2)
Command ==>

Does your installation provide a DPROB EKYRESLB Dynamic Allocation
Exit Routine ?
Exit Routine           ==>(YES or NO)

Press <ENTER> to commit changes and continue on the next panel
or enter END command to return.

```

Figure 39. Define DPROB EKYRESLB Dynamic Allocation Exit Routine (Panel 1 of 2)

To indicate whether an EKYRESLB dynamic allocation exit routine is installed:

1. In the **Exit Routine** field, specify:

YES The routine is already installed. Panel EKYGPZ0E displays (Figure 26 on page 43).

NO The routine is not installed. Panel EKYGPZYE displays (Figure 40).

2. Press Enter to display the appropriate panel.

```
EKYGPZYE ==>
```

```
IBM recommends that during DPRDP installation, member EKYDAEXX  
be copied to member EKYDAEX0 within the DPRDP RESLIB.
```

```
Note:After creating this dummy module, MVS will not issue CSV003I  
messages while initializing DPRDP in an address space.
```

```
DPRDP RESLIB Library: DPRDP.EKYRESLB
```

```
Create dummy EKYDAEX0 ==>(YES or NO)
```

```
Press <ENTER> to commit changes or enter END command to return.
```

Figure 40. Define DPRDP EKYRESLB Dynamic Allocation Exit Routine (Panel 2 of 2)

MVS outputs message CSV003I when initializing IMS DPRDP, if the dynamic allocation module EKYDAEXX is not found. To avoid this, a dummy EKYDAEXX load module can be generated in the IMS DPRDP RESLIB. To create the dummy EKYDAEXX load module:

1. In the **Create dummy EKYDAEX0** field, specify:

YES Prevents displaying of the MVS message CSV003I by generating a job that creates a dummy load module, called EKYDAEX0, in the IMS DPRDP target RESLIB.

NO Displays the MVS message CSV003I each time IMS DPRDP is initialized in an address space.

2. Press Enter to commit your input and to display panel EKYGPZ0E (Figure 23 on page 38).

If at a later date you install an EKYRESLB dynamic allocation exit routine, you must:

1. Delete the dummy load module EKYDAEX0.
2. Edit panel EKYGPZYE so that NO is specified in the **Create dummy EKYDAEX0** field.

You have now completed definition of the IMS DPRDP Environment. To begin defining your IMS DPRDP system, see Chapter 8, "Defining the IMS DPRDP system," on page 57.

Chapter 8. Defining the IMS DPROF system

This section describes the sequence of panels used to define an IMS DPROF system. It describes:

- How to use the System Specification primary menu.
- How to define the DB2 environment, job statements and JOBLIB statements.
- How to define the system, installation and IVP parameters and how to bind the DB2 application plans.
- How to modify the system title.

Figure 41 shows the panel flow during IMS DPROF system definition and Table 6 on page 58 explains how the panels are used, showing the panel name, its function, and the figure that represents the panel.

Panel Flow for Defining the IMS DPROF System

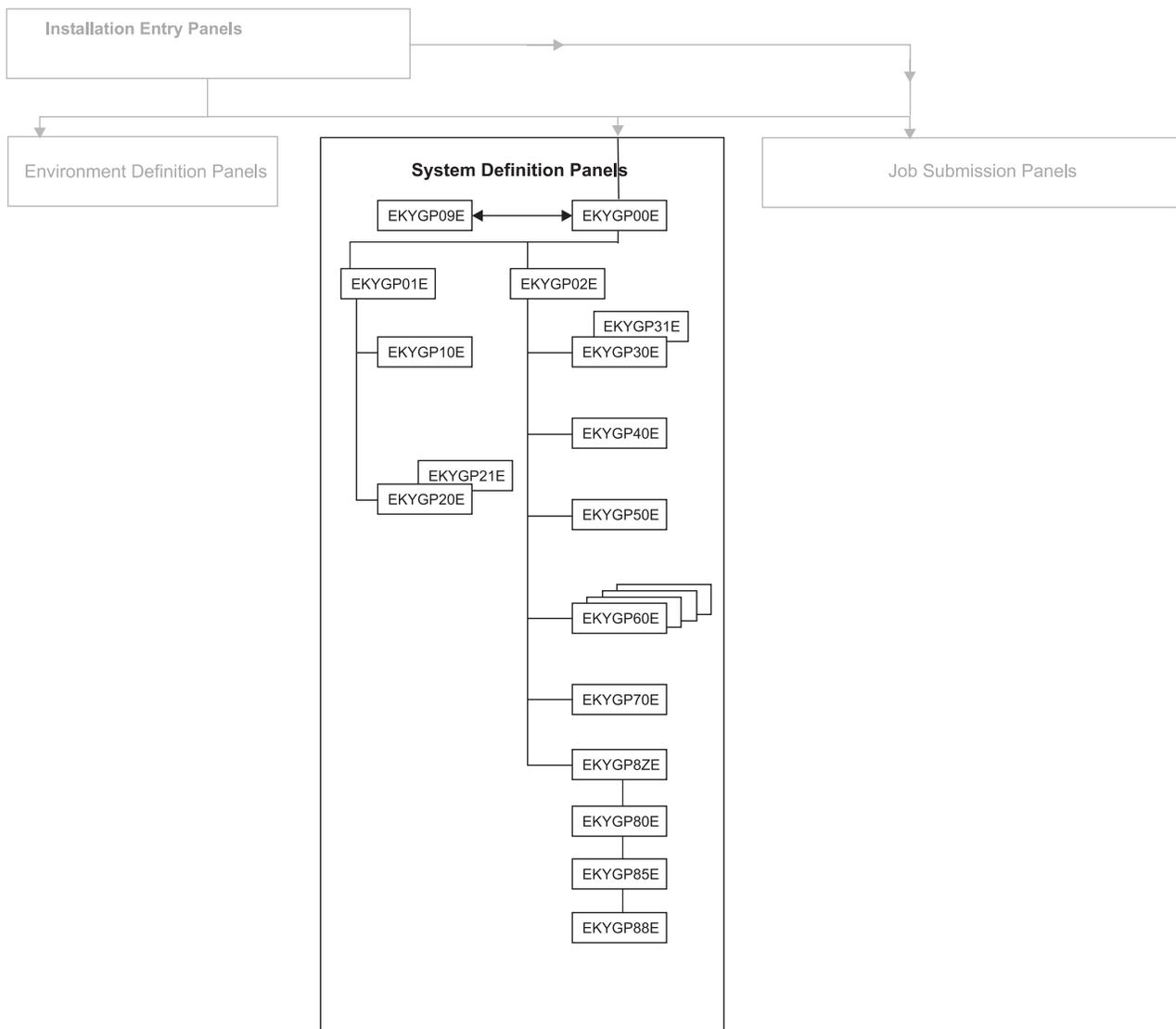


Figure 41. Panel flow for defining the IMS DPROF system

Table 6. System definition panels

Panel	Used for	Figure
EKYGP00E	Starting system definition	Figure 42 on page 59
EKYGP01E	Starting definition of the DB2 parameters and the IMS DPROP job parameters	Figure 43 on page 60
EKYGP10E	Defining the DB2 subsystem parameters	Figure 44 on page 61
EKYGP20E	Defining the job statements for installing IMS DPROP (panel 1 of 2)	Figure 45 on page 62
EKYGP21E	Defining the job statements for installing IMS DPROP (panel 2 of 2)	Figure 46 on page 63
EKYGP02E	Gaining access to the set of panels where you define the parameters needed to generate and IMS DPROP system, to bind utility application plans, and to generate the Installation Verification Programs (IVP).	Figure 47 on page 64
EKYGP30E	Providing input for the EKYGDPR macro, which generates IMS DPROP systems, except Selector-only and MQ Capture systems	Figure 48 on page 65
EKYGP31E	Providing input for the EKYGDPR macro for MQ Capture system	
EKYGP40E	Specifying the DB2 table and database where the IMS DPROP directory tables will be stored	Figure 50 on page 68
EKYGP50E	Specifying the DB2 tables and database where the IMS DPROP MVG input tables will be stored (if you used MVG input tables)	Figure 51 on page 70
EKYGP60E	Starting the set of panels that define the DB2 bind plans	Figure 52 on page 71
EKYGP62E	Defining the DB2 collection IDs for IMS DPROP and non-IMS DPROP modules	Figure 53 on page 72
EKYGP63E	Specifying the authorization IDs for the DB2 collection IDs	Figure 54 on page 73
EKYGP64E	Defining the bind plan for the Status Change utility (SCU)	Figure 55 on page 74
EKYGP65E	Defining the bind plan for the Mapping Verification and Generation application	Figure 56 on page 74
EKYGP66E	Defining the bind plan for the Consistency Check utility (CCU)	Figure 57 on page 75
EKYGP67E	Defining the bind plan for the DL/I Load utility (DLU)	Figure 58 on page 76
EKYGP68E	Defining the bind plan for the PRDS Registration utility (PRU)	Figure 59 on page 77
EKYGP69E	Defining the bind plan for the Group Unload utility (GUU)	Figure 60 on page 78
EKYGP6AE	Defining a unique DB2 application bind plan name for the ACDC Receivers	Figure 61 on page 78
EKYGP6BE	Defining a unique DB2 application bind plan name for the Apply program	Figure 62 on page 79

Table 6. System definition panels (continued)

Panel	Used for	Figure
EKYGP70E	Specifying the DBRM and SMF data set names	Figure 63 on page 80
EKYGP8ZE	Starting definition of parameters for the IVP JCL	Figure 64 on page 81
EKYGP80E	Defining the IVP job parameters	Figure 65 on page 82
EKYGP85E	Defining IVP parameters for an MQSeries system: Capture or Apply	Figure 66 on page 83
EKYGP88E	Define IVP parameters for a Selector system	Figure 67 on page 84
EKYGP09E	Modifying the IMS DPROPS system title, if desired	Figure 68 on page 85

Working with the System Specification primary menu panel

The System Specification primary menu panel, EKYGP00E, allows you to define an IMS DPROPS system. Each option on the panel, when selected, displays another panel or set of panels.

```

EKYGP00E ----- DPROPS - System Specification Primary Menu -----
Command ==>

      1 - Define DPROPS DB2 Environment, Job Statements and
          JOBLIB Statements
      2 - Define DPROPS System and Installation Parameters
          and Installation Verification Program (IVP) Parameters
      3 - Generate and Submit DPROPS Installation and Installation
          Verification Program (IVP) Jobs

      E - Return

      T - Modify DPROPS System Title

      DPROPS Environment : ENV1
      DPROPS-
      System: DPROPSAP1
      DPROPS-System
      DPROPS Type : MQApply

Enter option or move cursor before desired option.
Enter END command to return.
    
```

Figure 42. System Specification Primary Menu

The initial display of the panel shows all three options highlighted. Select options **1**, **2** and **3** sequentially. After completing the tasks associated with each option, you return to this panel (EKYGP00E). If you have successfully entered the required information, the completed option number is no longer highlighted.

Table 7 explains how the panels are used, showing the panel name, its function, and the figure that represents the panel.

Table 7. System Specification menu options

Option	Used for	Displays Panel
1	Defining the DB2 environment, job statements and JOBLIB statements	EKYGP01E (Figure 43 on page 60)
2	Defining the system, installation and IVP parameters	EKYGP02E (Figure 47 on page 64)

Table 7. System Specification menu options (continued)

Option	Used for	Displays Panel
3	Generating and submitting the installation and IVP jobs	For Base and Selector or Base-only sites, EKYGP03E (Figure 70 on page 89) is opened
E	Returning to the panel for defining an IMS DPROP environment or system	EKYGPM1E (Figure 23 on page 38)
T	Modifying the title associated with the IMS DPROP system	EKYGP09E (Figure 68 on page 85).

The tasks associated with each option are described in sequence in the following sections.

Defining the DB2 environment, job statements, and JOBLIB statements

Selecting option **1** from panel EKYGP00E (Figure 42 on page 59), displays the IMS DPROP system environment panel, EKYGP01E (Figure 43). Panel EKYGP01E allows you to define the DB2 parameters and the IMS DPROP job parameters required to install an IMS DPROP system.

To complete panel EKYGP01E:

```

EKYGP01E ----- DPROP - System Environment -----
Command ===>

          DPROP Environ-
          ment      :
          DPROP-
          System:
          DPROP-System
          Type      :

1 - Define DB2 Subsystem Parameters
2 - Define DPROP System Job Statements and, if required,
  Joblib Statements

E - Return

Enter option or move cursor before desired option.
Enter END command to return.
    
```

Figure 43. System Environment

1. Select option **1**, to define the DB2 subsystem parameters. Displays panel EKYGP10E (Figure 44 on page 61).
2. Select option **2**, to define the job, and if required, the JOBLIB statements. Displays panel EKYGP20E (Figure 45 on page 62).
3. Select **E** to return to primary menu panel, EKYGP00E (Figure 42 on page 59).
4. For some systems, like the MQ Capture system, the DB2 subsystem is not involved. In such a case, option 1 is invalid; therefore, the number 1 will be in red color, and cannot be selected.

Defining the DB2 subsystem parameters

Selecting option **1** from panel EKYGP01E (Figure 43 on page 60), displays the panel EKYGP10E (Figure 44 on page 61). Panel EKYGP10E allows you to define

the DB2 subsystem parameters.

```
EKYGP10E ----- DPRDP - DB2 Subsystem Parameters -----
Command ==>
                DPRDP-System  DPRDP-System  DPRDP-System
                Type: MQApply  Name : DPRDPAP1  Number: 2
Enter DB2 subsystem ID and DB2 volume catalog name to be used for the
definition of the DPRDP directory and the MVG input tables:
  DB2 Subsystem ID  ==> DSN
  DB2 VCAT name     ==> DB2

Enter program name, load library and DB2 plan name of a DB2 sample program:
  Program Name      ==> DSNTIAD
  Load Library      ==> DSN610.RUNLIB.LOAD
  DB2 Plan Name     ==> DSNTIA61

Enter Yes if your installation is using DB2 storage groups or
enter No if you are using user-defined DB2 tablespaces:
  Storage Groups    ==> YES      (YES or NO)

Enter default DB2 authorization IDs to be granted for DPRDP components:
  ==> PUBLIC
  ==>

Press ENTER to commit changes or enter END command to return.
```

Figure 44. DB2 Subsystem Parameters

To complete panel EKYGP10E:

1. In the **DB2 Subsystem ID** field, type the DB2 subsystem ID.
2. In the **DB2 VCAT name** field, type the DB2 volume catalog (VCAT) name used for defining the IMS DPRDP directory and the MVG input tables.
3. In the **Program Name** field, type the DB2 sample program name.
DSNTIAD is the default DB2 sample program displayed in Figure 44 for processing SQL statements. You can specify a different DB2 sample program.
4. In the **Load Library** field, type the name of the load library containing the sample program.
5. In the **DB2 Plan Name** field, type the name of the associated DB2 plan.
6. To indicate whether your installation uses DB2 storage groups or user-defined DB2 tables for the creation of directory tables and for MVG input tables, then in the **Storage Groups**, you specify:
YES Use DB2 storage groups
NO Use user-defined DB2 table spaces

This information is used, in panel EKYGP40E (Figure 50 on page 68), when defining the parameters for the directory tables and in panel EKYGP50E (Figure 51 on page 70) when defining the parameters for the MVG input tables.

7. In the **DB2 authorization IDs** field, type one or more DB2 authorization IDs. These are used as default values in subsequent panels. See Chapter 4, “Preparing the DB2 objects and IMS DPRDP collections (applicable only for propagation related to DB2),” on page 23 for more information on granting DB2 authorizations and privileges.
8. Press Enter to commit your changes and to display panel EKYGP01E (Figure 43 on page 60).

Defining the job and JOBLIB statements

Selecting option **2** from panel EKYGP01E (Figure 43 on page 60), displays panel EKYGP20E (Figure 45). This is the first of two panels you use for defining job statements.

Defining job statements

```
EKYGP20E ----- DPROR - Job Statement Definition (Panel 1 of 2) -----
Command ==>
                                     DPROR-System  DPROR-      DPROR-System
                                     Type: MQApply  System: DPRORAP1 Number: 2
Enter the job statement for the DPROR installation and IVP jobs:

====> //USER022G   JOB      (#ACCNT),DPROPGEN,
====> // CLASS=A,MSGCLASS=A,
====> // REGION=4096K,NOTIFY=USER022,USER=USER022
====> // *
====> // *

Note: Entering '@MEMBER' as the programmers name, the system
      replaces '@MEMBER' with the name of the member containing
      the generated installation or IVP job.

Press ENTER to commit changes and continue on the next panel
or enter END command to return.
```

Figure 45. Job Statement Definition (Panel 1 of 2)

IMS DPROR builds the job statement from the values you enter on panel EKYGPZ4E (Figure 30 on page 46) and from ISPF profile pool variables. You can overwrite these values as required. For example, If you enter @MEMBER as the programmer's name, the system replaces @MEMBER with the name of the member containing the generated installation or IVP job.

To fill out panel EKYGP20E:

1. Specify:
 - **JOB** identifier and account number
 - **CLASS**
 - **MSGCLASS**
 - **REGION**
 - **NOTIFY**
 - **USER**
2. Press Enter to commit your input and to display panel EKYGP21E (Figure 46 on page 63).

Defining the JOBLIB statements

You use panel EKYGP21E (Figure 46 on page 63) to define the JOBLIB statement.

```

EKYGP21E ----- DPROP - Joblib Statement Definition (Panel 2 of 2) -----
Command ==>
                                DPROP-System  DPROP-      DPROP-System
                                Type:         System:     Number:
If the DPROP RESLIB, IMS RESLIB, DB2 RESLIB, DataRefresher LOADLIB,
or MQSeries LOADLIB, etc. are not included in your installation's
linklist (SYS1.PARMLIB(LINKLSTnn)), enter a joblib statement below.
Press HELP to see sample coding:

====> /*
====> /*
====> /*
====> /*
====> /*
====> /*
====> /*
====> /*
====> /*
====> /*
====> /*
====> /*

Press ENTER to commit changes or enter END command to return.

```

Figure 46. JOBLIB Statement Definition (Panel 2 of 2)

You can enter up to ten lines on the JOBLIB statement. The procedure generates the JOBLIB statement in the customized jobs. Any data sets specified in the JOBLIB statement must be APF-authorized.

To fill out panel EKYGP21E:

1. Type each data set name on a line.
2. Press Enter to commit your input and to display panel EKYGP01E (Figure 43 on page 60).

Defining system, installation and IVP parameters

Selecting option 2 on panel EKYGP00E (Figure 42 on page 59), displays panel EKYGP02E (Figure 47 on page 64). Panel EKYGP02E acts as the menu to the set of panels used for defining all the parameters needed to generate an IMS DPROP system, to bind utility application plans, and to generate the IVP programs.

```

EKYGP02E ----- DPROP - System Parameters and Job Generation -----
Command ==>

1 - Define DPROP Generation Macro
2 - Define DPROP Directory Tables
3 - Define DPROP MVG Input Tables ( optional )
4 - Define Utility Application Plan Parameters
5 - Define DPROP and SMF Data Set Specifications
6 - Define Installation Verification Program (IVP) Parameters

E - Return

DPROP Environ-
ment : ENV
DPROP-
System: DPROP
DPROP-System
Type : MQA

Enter option or move cursor before desired option.
Enter END command to return.

```

Figure 47. System Parameters and Job Generation

To use panel EKYGP02E:

1. Specify the option you want to perform and press Enter.
Acceptable options are shown in Table 8. The table explains how each option is used and the panel that it generates.

Table 8. System parameter and job generation menu Options

Option	Used for	Displays Panel
1	Defining the Generation macro (This action is invalid for the Selector system.)	EKYGP30E (Figure 48 on page 65)
2	Defining Directory tables (This action is invalid for the Selector and Capture system.)	EKYGP40E (Figure 50 on page 68)
3	Defining MVG Input tables (This action is invalid for the Selector and Capture system.)	EKYGP50E (Figure 51 on page 70)
4	Defining Utility Application Plan parameters (This action is invalid for the Selector and Capture system.)	EKYGP60E (Figure 52 on page 71)
5	Defining IMS DPROP and SMF data set specifications	EKYGP70E (Figure 63 on page 80)
6	Installation Verification Program (IVP) parameters	EKYGP8ZE (Figure 64 on page 81)
E	IMS DPROP — System Specification primary menu	EKYGP00E (Figure 42 on page 59)

2. Press Enter to process the selected action and to display the corresponding panel.

Selecting option **3** is required only if you plan to use the MVG input tables to define propagation requests.

Defining the IMS DPROP Generation macro

This section does not apply to MQ Capture or Selector-only systems.

Selecting option 1 from panel EKYGP02E (Figure 47), displays panel EKYGP30E (Figure 48) for the following system types.

1. SYNC
2. MQ Apply
3. SelRcvr
4. Receiver

```

EKYGP30E ----- DPROP - Generation Macro Parameters -----
Command ==>
                DPROP-System  DPROP-      DPROP-System
                Type:         System:         Number:
Enter the DPROP installation stage I EKYGDPR macro parameters:
Note: The DPROP directory table qualifier must have the
      SYSADM privilege because it is used as the DB2 plan owner.

Directory Table Qualifier ==>
VLF Class                 ==>
DB2 CDC Subexit Routine   ==>          (a name up to 8 bytes in length)
SYNC Systems Only:
Status File Name          ==>
Status File VOLSER Name   ==>
SYNC Sysplex Systems Only:
PDS VLF Class             ==>
GMTS PDS Name             ==>

For help with an input field, move cursor to the desired field and press HELP.
For help with panel, move cursor anywhere except an input field and press HELP.

Press ENTER to commit changes or enter END command to return.

```

Figure 48. Generation Macro Parameters

The information you enter in panel EKYGP30E is used as input for the EKYGDPR macro.

To fill out panel EKYGP30E:

1. In the **Directory Table Qualifier** field, type the directory table qualifier.

This is a required parameter.

Specifies the table qualifier of the IMS DPROP directory tables.

After submitting the directory creation job *SnnnMAPT*, the Directory Table Qualifier field is set to write-protect to prevent changes to this parameter.

The table qualifier must follow DB2 naming conventions for table name qualifiers.

Because each IMS DPROP system uses different directory tables, you must specify a unique table qualifier. This is true for systems propagating to or from the same DB2 system.

The directory tables, with their qualifiers, must be protected using appropriate DB2 authorization definitions.

When you create the MVG input tables, the same DB2 table qualifier must be used.

An example of the valid format is:

```
DPROPI
```

2. In the **VLF Class** field, type the VLF class name.

This is a required parameter.

Specifies the name of the VLF class that IMS DPROB uses. The class name must consist of from one to seven alphabetic or numeric characters and can include @, #, or \$. The first character must be a letter within the range J to Z, followed by one to six alphabetic or numeric characters.

The class name must coincide with the class name specified when VLF was set up for IMS DPROB. See “Preparing VLF for IMS DPROB use” on page 17 for details.

Because each system uses a different VLF class, you must specify a unique VLF class name.

An example of the valid format is:

PM1

3. In the **DB2 CDC Subexit Routine** field, type the name of the DB2 CDC subexit routine.

This is an optional parameter.

Specifies the name of the DB2 CDC subexit routine that IMS DPROB calls if you request it. The routine name must be built in accordance with the ISPF member name rules.

An example of valid format is:

CDCUSER

4. In the **Status File Name** field, type the status file name.

This field is required for synchronous systems and is not allowed for asynchronous systems.

Specifies the fully qualified data set name of the IMS DPROB status file. The data set name must follow MVS conventions for data set names.

Because each IMS DPROB system uses a different status file, you must specify a unique status file name. This data set name must be protected either using Resource Access Control Facility (RACF) or another protection facility.

The status file is allocated in the IMS DPROB initialization job *SnnnDPRI*.

An example of the valid format is:

PROD.DPROB2.STATF

5. In the **Status File VOLSER Name** field, type the volume serial name IMS DPROB uses when creating the status file.

This field is required for synchronous systems and is not allowed for asynchronous systems.

6. In the **PDS VLF Class** field, type the name of the data set for the VLF class.

This parameter is required for Sysplex operations.

Specifies the data set VLF class name to be used by the GMTS. The class name must consist of from one to seven alphabetic or numeric characters and can include @, #, or \$. The first character must be a letter within the range J to Z, followed by one to six alphabetic or numeric characters. This is the VLF PDS class specified in the SYS1.PARMLIB member COLVLFxx. For more information on the VLF and IMS DPROB, see “Preparing VLF for IMS DPROB use” on page 17.

7. In the **GMTS PDS Name** field, type the GMTS data set name.

This parameter is required for Sysplex operations.

Specifies the name of the data set to hold the GMTS for the IMS DPROB system. The data set name must be the same as that specified in the ESDN parameter of the in the COLVLFxx member of SYS1.PARMLIB. For more information on the VLF and IMS DPROB, see “Preparing VLF for IMS DPROB use” on page 17.

- Press Enter to commit your changes and to display panel EKYGP02E (Figure 47 on page 64).

Defining the Generation macro (MQ-Capture only)

Selecting option 1 from panel EKYGP02E (Figure 47 on page 64), displays the panel EKYGP31E.

```

EKYGP31E  DPROP - Generation Macro Parameters: MQ based Capture system -----
Command ==>

                                DPROP-System  DPROP-      DPROP-System
                                Type:          System:     Number:
Enter the DPROP installation stage I EKYGDPR macro parameters

MQ Capture Systems Only:

Status File DSN          ==>
Status File Mbr          ==>          <--Make this the Default <==  (Y/N)
Status File VOLSER       ==>
Trans. Specif. File DSN ==>
Trans. Specif. File Mbr ==>
Trans. Specif. VOLSER    ==>
PDS VLF Class           ==>

Default Status File DSN ==>
Default Status File Mbr ==>

For help with an input field, move cursor to the desired field and press HELP
For help with panel, move cursor anywhere except an input field and press HELP.

Press ENTER to commit changes or enter END command to return.

```

Figure 49. Generation Macro Parameters — MQ based Capture System

The information that you enter in panel EKYGP31E is used as input for the EKYGDPR macro.

To fill out panel EKYGP31E:

- In the Status File DSN field, type the fully qualified data set name to be used as the Status file in the IMS Regions that update IMS DBs propagated by the MQ-Capture system.
This field is mandatory.
This field with the "Status File Mbr" field must be unique within your installation. Each MQ Capture system a unique status file, which must be allocated to each IMS Batch Region and to each IMS Dependent Online Region that is involved in the propagation.
- In the Status File Mbr field, type the member name associated with Status File DSN field of the MQ based Capture system.
This field is mandatory
The "Status File DSN" field plus the "Status File Mbr" field must be unique within the environment.
- In the Status File VOLSER field, type the Volume Serial name of the status file that belongs to the MQ based Capture system.
The name must follow MVS conventions and be the name of an existing volume.
- In the Transmission Specification File DSN field, type the fully qualified data set name of the transmission specification file. This file contains the IMS DPROP control statements for the MQ Capture function.
This field is optional.

Note: The Transmission Specification File PDS data set name and member name are optional for the EKYGDPR macro, which describes the system parameters for the Capture system. If this option is specified, IMS DPROT will allocate this file through dynamic allocation. When running the Capture program, the Transmission Specification file (DDname = //EKYTRANS) must have been allocated either through dynamic allocation, or through an explicit JCL DD statement.

5. In the Transmission Specification file Mbr field, type the member name associated with the MQ based Capture system's "Trans. Specif. File DSN" field. This field is mandatory only if the "Trans. Specif. File DSN" field is specified.
6. In the Transmission Specification VOLSER field, type the Volume Serial name of the Trans. Specif. file that belongs to the MQ based Capture system. The name must follow MVS conventions and be the name of an existing volume.
7. In the PDS VLF Clas field, type the PDS VLF class name that the MQ Capture system uses. The name can be up to seven characters with the first character being letter between J and Z, and the other characters being alphanumeric (including @, #, or \$). This VLF class must not be used by any other system; every IMS DPROT system must have its own class.
8. Default Status File DSN/Mbr field: if this field exists, it shows the current Default Status file for this environment. This field is optional, but if it exists, it must equal one of the system Status File DSN/Mbr of a defined Capture system. To make this Capture Status file the default Status File/Mbr, enter a 'Y' on the line <--Make this the Default <== (Y|N). For more information, see the IMS DPROT *Reference*.
9. Press ENTER to commit your changes and to display panel EKYGP02E.

Defining the directory tables

Selecting option 2 from panel EKYGP02E (Figure 47 on page 64), displays the panel EKYGP40E (Figure 50).

```

EKYGP40E ----- DPROT - Directory Tables Specifications -----
Command ==>

                                DPROT-System   DPROT-      DPROT-System
                                Type: MQApply   System: DPR0PAP1  Number: 2

DB2 Subsystem ID:
Directory Table Qualifier:

DPROT directory specifications:                Using existing DB2 objects
DB2 Storage Group Name   ==> GDPROP           ==> YES      (YES or No)
DB2 Database Name       ==> DDPRDIR          ==> NO       (YES or No)
DB2 Tablespace Name     ==> SDPRDIR         ( must not exist yet in DB2)

Enter the volume name used by the CREATE STOGROUP command:
Volume Serial Name      ==>

DB2 authorization IDs allowed to query the DPROT directory:
==> PUBLIC
==>

Press ENTER to commit changes or enter END command to return.

```

Figure 50. Directory Tables Specification

You specify on panel EKYGP40E the DB2 table and database in which the IMS DPROF directory tables are stored. Information you previously specified in panel EKYGP10E (Figure 44 on page 61) is used as input on this panel.

To fill out panel EKYGP40E:

1. In the **DB2 Subsystem ID** field, type the DB2 subsystem ID.
2. In the **Directory Table Qualifier** field, type the directory table qualifier.
3. In the **DB2 Storage Group Name** field, type the DB2 storage group name.
4. To indicate whether you are using existing DB2 storage groups, in the **Using existing DB2 object** field, type:
 - YES** You are using existing DB2 storage groups. You are not required to specify a volume name for the DB2 storage group.
 - NO** You are not using DB2 storage groups. A new storage group will be used and the generated job will include a CREATE STOGROUP statement. You must specify the volume name that is used when creating the new DB2 storage group.
5. In the **DB2 Database Name** field, type the DB2 database name.
6. To use an existing DB2 storage group or database, in the **Using existing DB2 object** field, you type:
 - YES** You plan to use the same DB2 storage group or DB2 database that is used for the IMS DPROF audit trail table (panel EKYGPZTE, Figure 36 on page 53) regardless of whether it currently exists.
 - NO** You plan to use a new DB2 database. The generated job must include the following statements:

```
DROP DATABASE
CREATE DATABASE
```
7. In the **DB2 Tablespace Name** field, type the DB2 table space name.
Define a unique DB2 table space name for the IMS DPROF directory of each IMS DPROF system within a particular DB2 system.
8. In the **Volume Serial Name** field, type the volume name used by the CREATE STOGROUP command.
This field is required only if you answered NO to the use of a current DB2 storage group in Step 4.
9. In the **DB2 authorization IDs** field, type the DB2 authorization ID.
The authorization IDs are those that you specified on panel EKYGP10E (Figure 44 on page 61).
10. Press Enter to commit your changes and to display panel EKYGP02E (Figure 47 on page 64).

Defining MVG input tables

Selecting option **3** from panel EKYGP02E (Figure 47 on page 64), displays panel EKYGP50E (Figure 51 on page 70). This option is invalid for the Selector and MQ-Capture systems.

```

EKYGP50E ----- DPR0P - MVG Input Tables Specifications -----
Command ==>
                                DPR0P-System  DPR0P-      DPR0P-System
                                Type:          System:      Number:

DB2 Subsystem ID:
MVG Input Table Qualifier:

MVG input tables specifications:          Use existing DB2 object:
DB2 Storage Group Name   ==> GDPROP        ==> YES      (YES or NO)
DB2 Database Name        ==> DDPRDIR       ==> YES      (YES or NO)
DB2 Tablespace Name      ==> SDPRMIN       ( must not exist yet in DB2)

Enter the volume name used by the CREATE STOGROUP command:
Volume Serial Name       ==>

DB2 authorization IDs allowed to update the MVG input tables:
==> PUBLIC
==>

Press ENTER to commit changes or enter END command to return.

```

Figure 51. MVG Input Tables Specifications

If you use DataRefresher to define your propagation requests, you do not need to use this panel .

You use panel EKYGP50E to specify the DB2 tables and database for storing the IMS DPR0P MVG input tables.

To fill out panel EKYGP50E, you:

1. In the **DB2 Storage Group Name** field, type the DB2 storage group name.
2. In the **Using existing DB2 object** field, type:
 - YES** You are using existing DB2 storage groups. You are not required to specify a volume name for the DB2 storage group.
 - NO** You are not using DB2 storage groups. A new storage group will be used and the generated job will include a CREATE STOGROUP statement. You must specify the volume name that is used when creating the new DB2 storage group.
3. In the **DB2 Database Name** field, type the DB2 database name.
4. In the **Using existing DB2 object** field, type:
 - YES** You plan to use the same DB2 storage group or DB2 database that is used for the audit trail table (panel EKYGPZTE, Figure 36 on page 53) regardless of whether it currently exists.
 - NO** You use a new DB2 database. The generated job then must include the following statements:


```

DROP DATABASE
CREATE DATABASE
          
```
5. In the **DB2 Tablespace Name** field, type the DB2 table space name.

Define a unique DB2 table space name for the IMS DPR0P directory of each IMS DPR0P system within a particular DB2 system.
6. In the **Volume Serial Name** field, type the volume name used by the CREATE STOGROUP command.

This field is required only if you answered NO to the use of a current DB2 storage group in Step 4.

7. In the **DB2 authorization IDs** field, type the DB2 authorization ID.
The authorization IDs are those that you specified on panel EKYGP10E (Figure 44 on page 61).
8. Press Enter to commit your changes and to display panel EKYGP02E (Figure 47 on page 64).

Binding the DB2 application plans

Selecting option **4** from the panel EKYGP02E (Figure 47 on page 64), displays panel EKYGP60E (Figure 52). This option is invalid for the Selector and MQ-Capture systems.

```

EKYGP60E ----- DPROR - Bind DB2 Application Plans -----
Command ==>

                                DPROR Environ
                                ment :
1 - Prepare Binding of DPROR and SQL Update Modules          DPROR
2 - Bind Plan for the DPROR Status Change Utility (SCU)      System:
3 - Bind Plan for the DPROR Mapping Verification             DPROR-System
   and Generation (MVG)                                     Type :
4 - Bind Plan for the DPROR Consistency Check Utility (CCU)

Reverse Propagation Only
5 - Bind Plan for the DPROR DL/I Load Utility (DLU)

DPROR Receiver System only
6 - Bind Plan for the DPROR PRDS Registration Utility (PRU)
7 - Bind Plan for the DPROR Group Unload Utility (GUU)
8 - Bind Plan for the DPROR Receiver System

DPROR MQSeries Apply System only
9 - Bind Plan for the DPROR Apply System

E - Return

Enter option or move cursor before desired option. Enter END command to return.

```

Figure 52. Bind DB2 Application Plans

Select an option from panel EKYGP60E and press Enter to perform the task. Table 9 lists the tasks for each option including the option, its function, and the figure that represents the next panel displayed:

Table 9. DB2 application plans bind options

Option	Used for	Displays Panel
1	Specifying whether you are using the package bind for IMS DPROR and SQL update modules	EKYGP62E (Figure 53 on page 72)
2	Bind plan for the Status Change utility (SCU)	EKYGP64E (Figure 55 on page 74)
3	Bind plan for the Mapping Verification and Generation (MVG) application	EKYGP65E (Figure 56 on page 74)
4	Bind plan for the Consistency Check Utility (CCU)	EKYGP66E (Figure 57 on page 75)
5	Bind plan for the DL/1 Load Utility (DLU)	EKYGP67E (Figure 58 on page 76)
6	Bind plan for the PRDS Registration Utility (PRU)	EKYGP68E (Figure 59 on page 77)

Table 9. DB2 application plans bind options (continued)

Option	Used for	Displays Panel
7	Bind plan for the MVG Group Unload Utility (GUU)	EKYGP69E (Figure 60 on page 78)
8	Bind plan for the ACDC Receiver	EKYGP6AE (Figure 61 on page 78)
9	Bind plan for the Apply system	EKYGP6BE (Figure 62 on page 79)
E	Return to the DPRDP – System Parameters and Job Generation menu	EKYGP02E (Figure 47 on page 64)

Preparing for binding the IMS DPRDP and SQL update modules

Selecting option 1 from the panel EKYGP60E (Figure 52 on page 71), opens panel EKYGP62E (Figure 53) and EKYGP63E in sequence.

```

EKYGP62E ==>

The installation process binds DBRMs as packages into a package collection,
identified by a collection ID, before binding them into a Plan.

  Read/Write DPRDP collection ID, used by DBRMs of DPRDP modules that
  update the DPRDP directory:
  Collection ID 1      ==>>

  Read only DPRDP collection ID, used by DBRMs of DPRDP modules that
  read the DPRDP directory:
  Collection ID 2      ==>>

  Read/Write propagating applications collection ID, used by DBRMs of
  SQL update modules for installation verification jobs:
  Collection ID 3      ==>>

Press <ENTER> to commit changes and continue on the next panel
or enter END command to return.
    
```

Figure 53. Preparing the binding of IMS DPRDP and SQL update modules (Panel 2 of 3)

To separate the read-only IMS DPRDP modules from read/write modules, and to separate both from the non- modules (SQL update modules), you define three different DB2 collection IDs on panel EKYGP62E:

1. In the **Collection ID 1** field, type the read/write collection ID 1.
2. In the **Collection ID 2** field, type the read-only collection ID 2.
3. In the **Collection ID 3** field, type the read/write collection ID 3 for the propagating applications.
4. Press Enter to commit your input and to display panel EKYGP63E (Figure 54).

Creating the privileges for the DB2 collection IDs

Panel EKYGP63E appears automatically following the input of the DB2 collection IDs input on panel EYYGP62E (Figure 53 on page 72).

```
EKYGP63E ==>

Grant the CREATE IN privilege for collection ID 1 to authorization IDs:
==> PUBLIC
Grant the EXECUTE privilege for collection ID 1 to authorization IDs:
==> PUBLIC

Grant the CREATE IN privilege for collection ID 2 to authorization IDs:
==> PUBLIC
Grant the EXECUTE privilege for collection ID 2 to authorization IDs:
==> PUBLIC

Grant the CREATE IN and the EXECUTE privileges for collection ID 3 to
authorization IDs:
==> PUBLIC
==>

Press <ENTER> to commit changes or enter END command to return.
```

Figure 54. Preparing the binding of IMS DPRDP and SQL update modules (Panel 3 of 3)

To enter the necessary DB2 authorization IDs for each collection ID:

1. Type the authorization ID for the CREATE IN privilege for collection ID 1.
2. Type the authorization ID for the EXECUTE privilege for collection ID 1.
3. Type the authorization ID for the CREATE IN privilege for collection ID 2.
4. Type the authorization ID for the EXECUTE privilege for collection ID 2.
5. Type the authorization ID or IDs for the CREATE IN and the EXECUTE privileges for collection ID 3.
6. Press Enter to commit your input and to display panel EKYGP60E (Figure 52 on page 71).

For additional information about DB2 package authorization, refer to the appropriate *Administrators Guide* for your propagation mode.

Defining the binding plan for the SCU

Selecting option 2 from panel EKYGP60E (Figure 52 on page 71), displays panel EKYGP64E (Figure 55).

```

EKYGP64E ----- DPROP - Bind SCU Application Plan -----
Command ==>

Each DPROP system needs its own Status Change utility (SCU) application plan.

DB2 application plan specifications:
  SCU Plan Name ==> EKYSCU00

DB2 authorization IDs allowed to execute the SCU plan:
  ==> PUBLIC
  ==>

Press <ENTER> to commit changes or enter END command to return.

```

Figure 55. Bind SCU Application Plan

To complete panel EKYGP64E, you:

1. In the **SCU Plan Name** field, type a unique DB2 application plan name for the SCU.
2. In the **DB2 authorization ID** fields, type the authorization IDs necessary to run the SCU plan.
3. Press Enter to commit your input and to display panel EKYGP60E (Figure 52 on page 71).

Defining the binding plan for the MVG application

Selecting option **3** from panel EKYGP60E, displays panel EKYGP65E (Figure 56).

```

EKYGP65E ----- DPROP - Bind MVG Application Plan -----
Command ==>

Each DPROP system needs its own Mapping Verification and Generation (MVG) plan.

DB2 application plan specifications:
  MVG Plan Name ==> EKYMVG00

DB2 authorization IDs allowed to execute the MVG plan:
  ==> PUBLIC
  ==>

Press <ENTER> to commit changes or enter END command to return.

```

Figure 56. Bind MVG Application Plan

To complete panel EKYGP65E, you:

1. In the **MVG Plan Name** field, type a unique DB2 application plan name for the MVG.
2. In the **DB2 authorization ID** fields, type the authorization IDs necessary to run the MVG plan.
3. Press Enter to commit your input and to display panel EKYGP60E (Figure 52 on page 71).

Defining the binding plan for the CCU

Selecting option 4 from the panel EKYGP60E (Figure 52 on page 71) displays panel EKYGP66E (Figure 57).

```
EKYGP66E ----- DPROP - Bind CCU Application Plan -----
Command ==>

Each DPROP system needs its own Consistency Check utility (CCU) plan.

DB2 application plan specifications:
  General CCU Plan Name ==> EKYCCU00

If you plan to run CCU in a BMP region, you can specify binding a plan for
every CCU program that may run as a BMP. The plan name will be equal to the
program name. The CCU programs are "EKYC100X", "EKYC300X" and "EKYC600X".
  Bind Plans for CCU BMP ==>          ( Yes or No )

Note: Binding plans for CCU BMP can only be specified once per DB2 system.

DB2 authorization IDs allowed to execute the CCU plan(s):
==> PUBLIC
==>

Press <ENTER> to commit changes or enter END command to return.
```

Figure 57. Bind CCU Application Plan

To complete panel EKYGP66E, you:

1. In the **General CCU Plan Name** field, type a unique DB2 application plan name for the CCU.
2. To bind the plan for running the CCU in a BMP region, in the **Bind Plans for CCU BMP** field, type:
YES You are binding the plan for the CCU BMP.
NO You do not want to bind the plans for the CCU running as a BMP. If you do not bind the plans, you must define the plans for the CCU running as a BMP in the Resource Translation Table (RTT).
In a DB2 system, you can specify only *once* the plans for the CCU running as a BMP.
3. In the **DB2 authorization ID** field or fields, type the authorization ID or IDs necessary to run the CCU plan or plans
4. Press Enter to commit your input and to display panel EKYGP60E (Figure 52 on page 71).

Defining the binding plan for the DLU

Selecting option 5 from the panel EKYGP60E, (Figure 52 on page 71) displays panel EKYGP67E (Figure 58).

```

EKYGP67E ----- DPROP - Bind DLU Application Plan -----
Command ==>

Each DPROP system needs its own DL/I Load utility (DLU) plan.

DB2 application plan specifications:
  General DLU Plan Name ==> EKYDLU00

If you plan to run DLU in a BMP region, you can specify binding a plan for
every DLU program that may run as a BMP. The plan name will be equal to the
program name. The DLU programs are "EKYDLU02", "EKYDLU04" and "EKYDLU05".
  Bind Plans for DLU BMP ==>          ( Yes or No )

  Note: Binding plans for DLU BMP can only be specified once per DB2 system.

DB2 authorization IDs allowed to execute the DLU plan(s):
  ==> PUBLIC
  ==>

Press <ENTER> to commit changes or enter END command to return.

```

Figure 58. Bind DLU application plan

You use panel EKYGP67E to define a unique DB2 application plan name for the DLU for each IMS DPROP system of a particular DB2 system.

To complete panel EKYGP67E, you:

1. In the **General DLU Plan Name** field, type a unique DB2 application plan name for the DLU.
2. To bind the plan for running the DLU in a BMP region, in the **Bind Plans for DLU BMP** field, type:
 - YES** You are binding the plan for the DLU BMP.
 - NO** You do not want to bind the plans for the DLU running as a BMP. If you do not bind the plans, you must define the plans for the DLU running as a BMP in the Resource Translation Table (RTT).

In a DB2 system, you can specify only *once* the plans for the DLU running as a BMP.

3. In the **DB2 authorization ID** fields, type the authorization IDs necessary to run the DLU plan or plans.
4. Press Enter to commit your input and to display panel EKYGP60E (Figure 52 on page 71).

Defining the binding plan for the PRU

Selecting option **6** from the panel EKYGP60E, (Figure 52 on page 71) displays panel EKYGP68E (Figure 59).

```

EKYGP68E ----- DPROP - Bind PRU Application Plan -----
Command ==>

Each Log-async Receiver system needs its own PRDS Registration Utility
(PRU) application plan.

DB2 application plan specifications:
  PRU Plan Name ==> EKYPRU00

DB2 authorization IDs allowed to execute the PRU plan:
  ==> PUBLIC
  ==>

Press ENTER to commit changes or enter END command to return.

```

Figure 59. Bind PRU Application Plan

You use panel EKYGP68E to define a unique DB2 application plan name for the PRU for each IMS DPROP system of a particular DB2 system.

To complete panel EKYGP68E, you:

1. In the **PRU Plan Name** field, type a unique DB2 application plan name for the PRU.
2. In the **DB2 authorization ID** fields, type the authorization IDs necessary to run the PRU plans.
3. Press Enter to commit your input and to display panel EKYGP60E (Figure 52 on page 71).

Defining the binding plan for the IMS DPROP GUU

Selecting option **7** from the panel EKYGP60E (Figure 52 on page 71) displays panel EKYGP69E (Figure 60).

```

EKYGP69E ----- DPROP - Bind GUU Application Plan -----
Command ==>

Each Log-async Receiver system needs its own Group Unload Utility (GUU)
application plan.

DB2 application plan specifications:
  GUU Plan Name ==> EKYGUU00

DB2 authorization IDs allowed to execute the GUU plan:
  ==> PUBLIC
  ==>

Press ENTER to commit changes or enter END command to return.

```

Figure 60. Bind GUU Application Plan

You use panel EKYGP69E to define a unique DB2 application plan name for the GUU for each IMS DPROP system of a particular DB2 system.

To complete panel EKYGP69E, you:

1. In the **GUU Plan Name** field, type a unique DB2 application plan name for the GUU.
2. In the **DB2 authorization ID** fields, type the authorization IDs necessary to run the GUU plans.
3. Press Enter to commit your input and to display panel EKYGP60E (Figure 52 on page 71).

Defining the binding plan for the LOG-ASYNC Receiver

Selecting option **8** from the panel EKYGP60E, (Figure 52 on page 71) displays panel EKYGP6AE (Figure 61).

```

EKYGP6AE ----- DPROP - Bind Log-async Receiver Application Plan -----
Command ==>

Each Log-async Receiver system needs its own Receiver application plan.

DB2 application plan specifications:
  Receiver Plan Name ==> EKYRCV00

DB2 authorization IDs allowed to execute the Receiver plan:
  ==> PUBLIC
  ==>

Press ENTER to commit changes or enter END command to return.

```

Figure 61. Bind LOG-ASYNC Receiver Application Plan

You use panel EKYGP6AE to define a unique DB2 application plan name for the LOG-ASYNCR Receiver for each IMS DPROPS system of a particular DB2 system.

To complete panel EKYGP6AE, you:

1. In the **Receiver Plan Name** field, type a unique DB2 application plan name for the ACDC Receiver.
2. In the **DB2 authorization ID** fields, type the authorization IDs necessary to run the Receiver plans.
3. Press Enter to commit your input and to display panel EKYGP60E (Figure 52 on page 71).

Defining the binding plan for the MQ-Apply

Selecting option 9 from the panel EKYGP60E (Figure 52 on page 71) displays panel EKYGP6BE (Figure 62 on page 79).

You use panel EKYGP6BE to define a unique DB2 application plan name for the

```
EKYGP6BE ----- DPROPS - Bind MQSeries Apply Application Plan -----  
Command ==>
```

```
Each MQSeries Apply System needs its own application plan.
```

```
DB2 application plan specifications:  
Apply Plan Name ==> EKYAPY00
```

```
DB2 authorization IDs allowed to execute the Apply plan:  
==> PUBLIC  
==>
```

```
Press ENTER to commit changes or enter END command to return.
```

Figure 62. Bind MQSeries Apply Application Plan

MQ-ASYNCR Apply for each IMS DPROPS system of a particular DB2 system.

To complete panel EKYG6BE, you:

1. In the **Apply Plan Name** field, type a unique DB2 application plan name for the MQ-Apply system.
2. In the **DB2 authorization ID** fields, type the authorization IDs necessary to run the Apply plans.
3. Press **Enter** to commit your input and to display panel EKYGP60E (Figure 52 on page 71).

Specifying the IMS DPROB and SMF data sets

Selecting option **5** from panel EKYGP02E (Figure 47 on page 64) displays the panel EKYGP70E (Figure 63).

```
EKYGP70E ----- DPROB - DPROB and SMF Data Set Specifications -----
Command ==>

                                DPROB-System  DPROB-          DPROB-System
                                Type: SelRcvr  System: DPROBDA1 Number: 3

Data set name that contains the DBRMs of the SQL Update Modules:
  DBRM Data Set Name   ==>

Data set qualifiers for DPROB data sets used during IVP:
  First Qualifier      ==>
  Second Qualifier     ==>

DPROB will write audit records to the SMF data set. These audit records
are extracted from the SMF data set to a temporary data set and written
into the DPROB audit trail table.
  SMF Data Set Name    ==> SYS1.MANX

Press ENTER to commit changes or enter END command to return.
```

Figure 63. DPROB and SMF Data Set Specifications

You use panel EKYGP70E to specify the IMS DPROB and SMF data set names.

To complete panel EKYGP70E, you:

1. In the **DBRM Data Set Name** field, type the DBRM data set name.
The DBRM data set name must be the name of the library that contains the DBRMs of the SQL update modules.
2. In the **SMF Data Set Name** field, type the name of the SMF data set.
This name must be the name used at your installation. If your installation uses more than one data set, such as MANX and MANY, enter the name to insert into your standard job. If the other data set is used later, change job member EKYJVAUD, by editing the job member from either panel EKYGPC0E (Figure 77 on page 97), or from panel EKYGPD0E (Figure 78 on page 98), before submitting it.
3. Press Enter to commit your input and to display panel EKYGP02E (Figure 47 on page 64).

The values for the data set qualifiers are entered automatically by the system.

If you specified a value for EKYGDSPR when you began the installation process, that value is the default for the **First Qualifier** field.

If you did not specify a value for EKYGDSPR when you began the installation process, then the contents of the ISPF variable ZPREFIX is the default for the **First Qualifier** field. If ZPREFIX is set to blanks in your ISPF environment, then your TSO user identification is the default first qualifier.

The second qualifier is the IMS DPROB system name you entered on panel EKYGPM1E (Figure 23 on page 38) or entered on panel EKYGPM2E (Figure 22 on page 37).

Defining the installation verification program parameters

Selecting option 6 from the panel EKYGP02E displays panel EKYGP8ZE (Figure 64).

```
EKYGP8ZE --- DPROP - Installation Verification Program Parameters -----
Command ==>

DPROP Environ
ment :
DPROP-
System:
DPROP-System
Type :

1 - Define IVP Parameters

2 - Define IVP Parameters for an MQSeries system (Capture/Apply)

3 - Define IVP Parameters for a Selector system

E - Return

Enter option or move cursor before desired option.
Enter END command to return.
```

Figure 64. Installation Verification Program parameters

To use panel EKYGP8ZE:

1. In the command line, enter the option that you want to perform, or move the cursor in front of the desired option. Table 10 shows each option, its function, and the figure that represents the next panel to be displayed.

Table 10. Action codes for the EKYGP8ZE panel

Option	Used for	Display Panel
1	Defining IVP parameters (This action is required for all systems.)	EKYGP80E
2	Defining IVP parameters for the MQSeries systems, Capture/Apply. (This action is valid only for MQ-Capture or MQ-Apply systems.)	EKYGP85E
3	Defining IVP parameters for the Selector system (The action is valid only for the Selector system.)	EKYGP88E

2. Select **Enter** to process the selected action and to display the corresponding panel.

Note:

- If an option is invalid for the system you are defining, the option number will be displayed in red.
- The valid options must be processed in sequence.

Defining the IVP job parameters

Selecting option 1 from panel EKYGP8ZE displays panel EKYGP80E (Figure 65).

```

EKYGP80E -- DPROP - Define Installation Verification Jobs Parameters ----
Command ==>
                DPROP-System   DPROP-System   DPROP-System
                Type:          System:          Number:
Define the parameters required for installation verification.
The verification jobs create sample databases and datasets as required.

The generation job parameters can be modified or the defaults accepted:
Sample DB2 Database Name   ==> DDPRSAMP (Must not exist yet in DB2)
Sample DB2 Tablespace Name ==> SDPRSAMP
Sample DB2 Table Qualifier ==> USER022
Sample DB2 Plan Name for RUP ==> DPRSAMP (Must not exist yet in DB2)
Sample DB2 Plan Name for HUP ==> DPHSAMP (Must not exist yet in DB2)

Sample IMS Log Data Set Name ==> USER022.SUER022.IMSLOG
IMS RESLIB Data Set Name   ==> IMSESA.RESLIB
IMS MacLib Data Set Name   ==> IMSESA.MACLIB
VOLSER for Sample Datasets ==>

Note: All data sets created for installation verification are temporary
and are discarded after completion of the process.

Press ENTER to commit changes or enter END command to return.

```

Figure 65. Define Installation Verification Jobs Parameters

Use panel EKYGP80E to enter data for IVP jobs.

To complete panel EKYGP80E, you:

1. In the **Sample DB2 Database Name** field, type the sample DB2 database name.
The sample DB2 database name must not yet exist in DB2.
2. In the **Sample DB2 Tablespace Name** field, type the sample DB2 table space name.
3. In the **Sample DB2 Table Qualifier** field, type the sample DB2 table qualifier.
4. In the **Sample DB2 Plan Name for RUP** field, type the sample DB2 plan name for RUP.
The sample DB2 plan name for RUP must not yet exist in DB2.
5. In the **Sample DB2 Plan Name for HUP** field, type the sample DB2 plan name for HUP.
The sample DB2 plan name for HUP must not yet exist in DB2.
6. In the **Sample IMS Log Date Set Name** field, type the sample IMS log data set name.
7. In the **IMS RESLIB Data Set Name** field, type the IMS RESLIB data set name.
8. In the **IMS MACLIB Data Set Name** field, type the IMS MACLIB data set name.
9. In the **VOLSER for Sample Data Sets** field, type the volume serial name where the sample data sets will reside.
10. Press Enter to commit your input and to display panel EKYGP02E (Figure 47 on page 64).

Defining the IVP parameters for the MQSeries systems

Selecting option 2 from the panel EKYGP8ZE displays panel EKYGP85E.

```

EKYGP85E ----- DPROP - Define IVP Parameters for MQSeries Systems -----
Command ==>
                DPROP-System  DPROP-      DPROP-System
                Type:         System:      Number:
Define the parameters required for installation verification.

The generation job parameters can be modified or the defaults accepted:

MQSeries Queue Manager Name ==>
MQSeries Queue Name          ==> EKY.QUEUE.IVP

Press ENTER to commit changes or enter END command to return.

```

Figure 66. Define IVP Parameters for MQSeries Systems

You use the panel EKYGP85E to enter data for the IVP jobs for any MQSeries system. To complete the system.

1. In the MQSeries Queue Manager Name field, type the name of the MQSeries Queue Manager.
This field identifies the name of the MQSeries Queue Manager that will be used by the MQ-Capture system to send, or the Apply system to receive, data. This field is 1 - 4 alphanumeric, and is mandatory.
2. In the MQSeries Queue Name field, type the name of the MQSeries Queue Name.
This field identifies the name of a MQSeries queue (or the name of a MQSeries queue Alias) that has been reserved for use by a MQSeries-Capture and/or Apply system. This field is mandatory.
3. Press Enter to commit your input and to display panel EKYGP8ZE (Figure 64 on page 81).

Defining the IVP parameters for the Selector system

Selecting option 3 from the panel EKYGP8ZE displays panel EKYGP88E.

```

EKYGP88E ----- DPROB - Define IVP Parameters for Selector system -----
Command ==>

The DPROB Selector requires certain data sets to be created during
DPROB system generation. Please enter names for these data sets:

Enter the fully qualified data set name for the DPROB
Selector Control File (SCF):
      SCF Name      ==>

Enter the fully qualified data set name for the DPROB
Uncommitted Log Record data set (ULR):
      ULR Name      ==>

Enter the Volume Serial Name for these data sets:
      Volume Serial Name ==>

Press ENTER to commit changes or enter END command to return.

```

Figure 67. Define IVP Parameters for Selector System

You use the panel EKYGP88E to enter data for the IVP jobs for any Selector system. To complete panel EKYG88E.

1. In the SCF Name field, type the fully qualified data set name for the Selector control file.
This Data Set should not currently exist on this system because it will be overwritten during IMS DPROB generation. The IMS DPROB SCF is a VSAM KSDS.
2. In the ULR Name field, type the fully qualified data set name for the IMS DPROB Uncommitted Log Record data set.
This data set should not currently exist on this system because it will be overwritten during IMS DPROB Generation. The IMS DPROB ULR is a VSAM KSDS.
3. In the Volume Serial Name, type the volume serial name where the SCF, and the ULR data sets will reside.
4. Press Enter to commit your input and to display panel EKYGP8ZE

Modifying the IMS DPROT descriptive title

Selecting option **T** from the panel EKYGP00E (Figure 42) displays panel EKYGP09E (Figure 68).

```
EKYGP09E ==>

DPROT System Name :
DPROT System Number:

DPROT Environment:

Modify DPROT System Title:
Descriptive Title   ==> IMS DPROT for Production Databases, SYNC

Press <ENTER> to commit changes or enter END command to return.
```

Figure 68. Modify the IMS DPROT system title

The IMS DPROT environment name, system name, and system number are filled in automatically.

1. In the **Descriptive Title** field, modify the title of the IMS DPROT system as desired.
2. Press Enter to commit your changes and to display panel EKYGP00E (Figure 42 on page 59).

Continue the installation procedure by creating and submitting the jobs to install IMS DPROT.

Chapter 9. Generating and submitting installation and IVP jobs

This section describes the sequence of panels you use to create and submit the jobs for installing IMS DPROP. The topics discussed include the following:

- “Submitting installation jobs” on page 89
- “Submitting environment installation jobs” on page 90
- “Generating the Stage I job” on page 91
- “Submitting the system installation jobs” on page 92
- “Verifying installation using DataRefresher-defined PRs” on page 96
- “Verifying installation using PRs defined with MVG input tables” on page 97
- “Verifying installation for the Selector” on page 99
- “Verifying installation for the Receiver” on page 99
- “Temporarily changing the job information” on page 100

Figure 69 shows you the panel flow for IMS DPROP job submission and Table 11 on page 88 explains how the panels are used, showing the panel name, its function, and the figure that represents the panel.

Panel Flow for IMS DPROB Job Submission

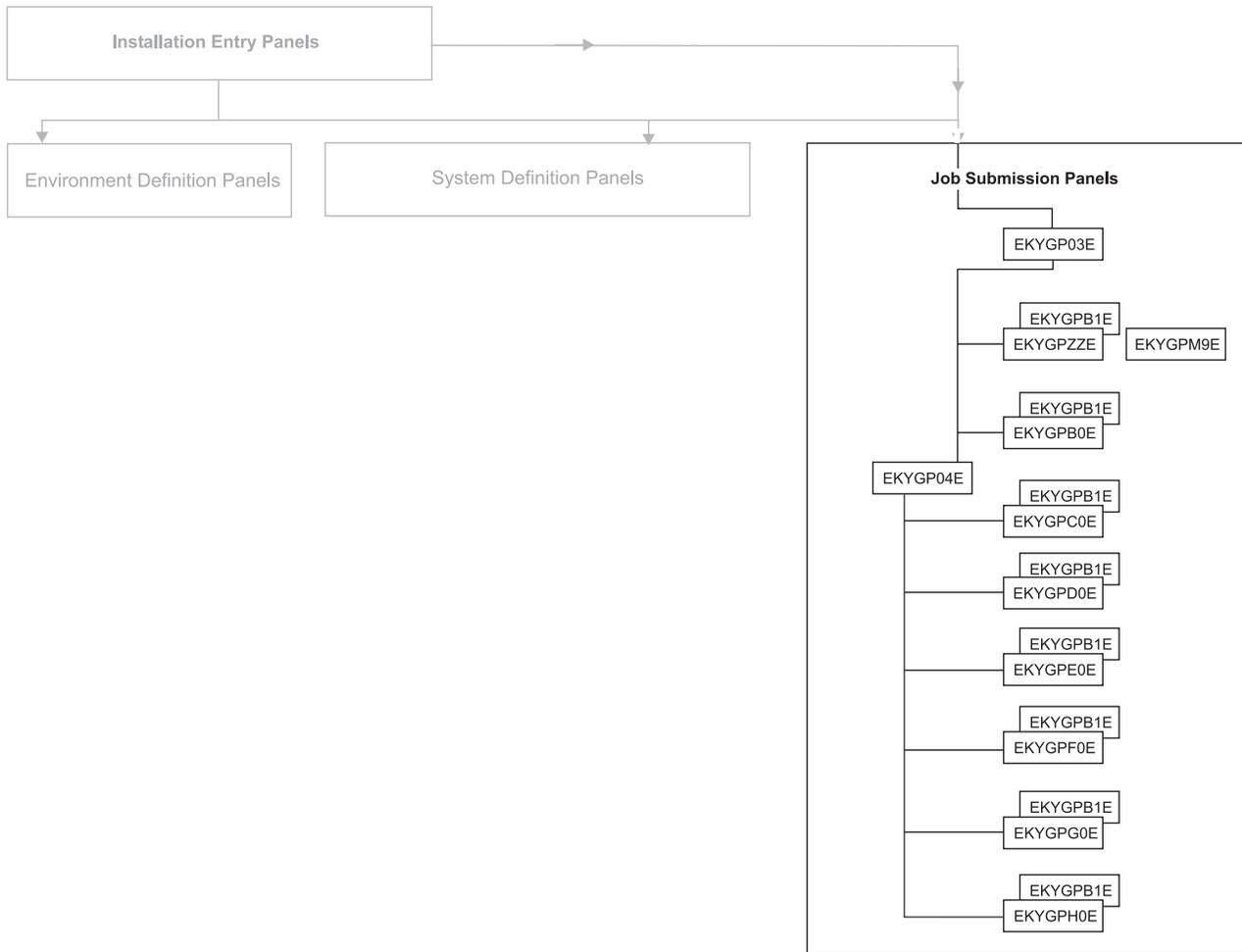


Figure 69. Panel flow for IMS DPROB job submission

Table 11. IMS DPROB job generation and submission panels

Panel	Used for	Figure
EKYGP03E	Generating and submitting jobs for base-site installations	Figure 70 on page 89
EKYGPZZE	Generating, editing, and submitting environment jobs	Figure 71 on page 90
EKYGPM9E	Editing and submitting the generation stage I job (EKYJIN)	Figure 72 on page 91
EKYGPB0E	Generate, edit, and submit the IMS DPROB system installation jobs	Figure 73 on page 93
EKYGP04E	Generating, editing, and submitting IVP jobs	Figure 74 on page 94
EKYGPC0E	Generate, edit, and submit IVP jobs that use propagation requests defined using DataRefresher	Figure 77 on page 97
EKYGPD0E	Generating, editing, and submitting IVP jobs that use propagation requests defined using MVG input tables	Figure 78 on page 98

Table 11. IMS DPRDP job generation and submission panels (continued)

Panel	Used for	Figure
EKYGPE0E	Generating, editing, and submitting IVP jobs for a Selector	Figure 79 on page 99
EKYGPF0E	Generating, editing, and submitting IVP jobs for a Receiver	Figure 80 on page 100
EKYGPG0E	Generate, edit, and submit IVP jobs for a Capture system.	Figure 75 on page 95
EKYGPH0E	Generating, editing, and submitting IVP jobs for an Apply system.	Figure 76 on page 96
EKYGPB1E	Temporarily changing the job statements	Figure 81 on page 101

Submitting installation jobs

Selecting option **3** from the panel EKYGP00E (Figure 42 on page 59) displays panel EKYGP03E.

```

EKYGP03E ----- DPRDP - Submit Installation and Verification Jobs -----
Command ===>

1 - Generate and Edit for Submission Installation Jobs
   for DPRDP Environment

2 - Generate and Edit for Submission Installation Jobs
   for DPRDP System

3 - Generate and Edit for Submission Installation Verification
   Program (IVP) Jobs for DPRDP System

E - Return

DPRDP Environ-
ment :
DPRDP-
System:
DPRDP-System
Type :

Enter option or move cursor before desired option. Enter END command to return.
    
```

Figure 70. Submit Installation and Verification Jobs

Panels EKYGP03E and EKYGP04E allow you to access the panels for entering the parameters required to submit the IVP jobs. EKYGP04E is displayed when you select option 3 from panel EDYGP03E.

Table 12 shows the options on panel EKYGP04E, explains how the options are used, and shows the figures that represent each panel associated with an option:

Table 12. Options for submitting installation and verification Jobs

Option	Used for	Displays Panel
1 - Optional	Generating, editing, and submitting environment jobs	EKYGPZZE– Figure 71 on page 90
2 - Optional	Generating, editing, and submitting system installation jobs (This option is invalid for Selector and MQ-Capture system types.	EKYGPB0E– Figure 73 on page 93 EKYGPB2E – for MQ Apply system only
3 - Optional	Generating, editing, and submitting IVP jobs	EKYGP04E– Figure 74 on page 94

Selecting an option from panel EKYGP03E, causes the system to generate or edit the appropriate job, except where the job name is set to not applicable (N.A.). When the job name is set to N.A., you cannot use the panel to submit the job; you must use ISPF edit mode, instead.

You can edit an already generated job, or regenerate and edit a job using options that are highlighted on the associated panels.

Submitting environment installation jobs

Selecting option **1** from panel EKYGP03E (Figure 70 on page 89) displays panel EKYGPZZE (Figure 71).

```

EKYGPZZE --- DPRO - DPRO Environment Installation Job Submission -----
Command ==>
                                                    DPRO Environ-
                                                    ment:

  1 - Generate          EKYJIN  ( DPRO Generation Stage I Job
  2 - Edit              EKYJIN  ( DPRO Generation Stage I Job

  3 - Generate and Edit N.A.    (* NOT APPLICABLE )

  4 - Generate and Edit N.A.    (* NOT APPLICABLE )

  5 - Generate and Edit EKYJADT ( DPRO Audit Trail Table Creation Job

  6 - Generate and Edit EKYJLE  ( DPRO LE/370 Job

  7 - Generate and Edit EKYJDAE ( DPRO Dynamic Alloc Exit Routine Job

  E - Return
  C - Temporarily Change Job Information

Enter option or move cursor before desired option.
Enter END command to return.

```

Figure 71. Environment Installation Job Submission

Select each of the highlighted options in sequence, and submit the JCL from the ISPF EDIT screen. The return codes from each job step are detailed in Appendix B, “Checklists to verify customization, migration, and IVP jobs,” on page 199.

To create the installation and verification jobs, select:

- 1** Displays the panel EKYGPM9E, then creates the stage I job, member EKYJIN, and stores the member in the job data set.
- 2** Allows you to edit and to submit job member EKYJIN.
 EKYJIN automatically creates and submits the Stage II job. The Stage II job creates the IMS DPRO load module EKYG000X, which includes three unique modules for each defined IMS DPRO system: EKYGC nnn , EKYGH nnn , and EKYGM nnn (nnn is the system number). These modules enable the SQL statements generated by IMS DPRO to access the following directory tables:
 - The master table
 - The RUP control block table
 - The HUP control block table

If the DB2 load library is not included in the linklist, add it to the JOBLIB card.

See “Generating the Stage I job” for an explanation of panel EKYGPM9E.

- 3 Not Applicable.
- 4 Not Applicable.
- 5 EKYJADT creates the audit trail table and binds the audit extract utility. If the DB2 load library is not included in the linklist, add it to the JOBLIB card.
- 6 EKYJLE copies the dummy LE/370 module EKYZPIPI in EKYRESLB to module CEEPIPI.
- 7 EKYJDAE copies the dummy Dynamic Allocation exit module, EKYDAEXX to module EKYDAEX0 in the EKYRESLB.
- C Displays panel EKYGPB1 (Figure 81 on page 101) allowing you to temporarily change the information for a specified job.

When you finish using this panel, press F3 to return to panel EKYGP03E.

Note: If the Generate job needs to be rerun (for example: if you encounter a problem generating a particular system) ensure that the EKYJIN parameter GEN is set to GEN=Y for that particular system. Note that there is one EKYGDPR Macro required for each system.

Generating the Stage I job

Selecting **1** from panel EKYGPZZE (Figure 71 on page 90) displays panel EKYGPM9E (Figure 72), before generating the Stage I job, EKYJIN.

```
----- *** DPROPSYS - DPROPSYS Stage I Job Generation *** -----
EKYGPM9E ==>

                                DPROPSYS Environment:

Number of DPROPSYS Systems      :      DPROPSYS ready to generate:
New or In Process Systems      :      Modified DPROPSYS Systems      :
EKYGSYS parameters modified: NO

Specify the DPROPSYS generation mode:
Generate      ==> MOD      ( ALL - Generate all DPROPSYS systems      )
                                ( MOD - Generate modified/new DPROPSYS systems )
                                (      or modified EKYGSYS parameters      )

Press ENTER to commit changes and continue on the next panel
or enter END command to return to the previous panel.
```

Figure 72. Stage I Job Generation

Panel EKYGPM9E provides statistics on the status of the IMS DPROPSYS systems in the environment and an option to regenerate all systems.

1. The **Number of DPROPSYS Systems** field, shows you how many systems you have defined in the environment.
2. The **DPROPSYS ready to generate** field indicates of those you have defined, how many are ready for JCL generation.
3. The **New or In Process systems** field indicates IMS DPROPSYS systems that are defined but are not ready to generate JCL.

4. The **Modified DPROR Systems** field indicates systems that have been modified after they were ready to generate.
5. If any of the EKYGSYS parameters have been modified, in the **EKYGSYS parameters modified** field, indicates:
 - YES** One or more of the EKYGSYS parameters have been modified.
 - NO** None of the EKYGSYS parameters has been modified.For a description of the EKYGSYS parameters, see “Defining the EKYGSYS and EKYGJCL parameters” on page 47.
6. You have an option to control the generation of JCL. In the **Generate** field, specify the IMS DPROR generation mode by typing either:
 - ALL** Compiles and links the modules for all IMS DPROR systems that are ready for generation. An IMS DPROR system is ready for generation after you have specified, on panel EKYGP30E (Figure 48 on page 65), or on panel EKYGP31E, that the system generation parameters for the system.
 - MOD** Generates either:
 - Only those IMS DPROR systems which have been modified, on panel EKYGP30E (Figure 48 on page 65), since original generation.
 - The modified EKYGSYS parameter module to include IMS DPROR environment parameters.Specifying MOD when no modified or new IMS DPROR systems are defined or no EKYGSYS parameters are modified, results in only generating the EKYGSYS parameter module, EKYG000X.Depending on the presence of modified or new IMS DPROR systems or modified EKYGSYS parameters, the application places a default value in the **Generate** field. You can overwrite this value.
7. Press Enter to commit your input and to display panel EKYGPZZE (Figure 71 on page 90).

The successful generation of IMS DPROR requires binding of the packages or plans of all components of the generated IMS DPROR systems. You must create the bind jobs by selecting option **2** on panel EKYGP03E (Figure 70 on page 89) before submitting the installation job. See the “Binding packages and plans in IMS DPROR” on page 24 and the *Administrators Guide* appropriate for your propagation mode for information on binding DB2 and IMS DPROR components.

Submitting the system installation jobs

Selecting option **2** from panel EKYGP03E (Figure 70 on page 89) displays panel EKYGPB0E (Figure 73 on page 93).

```

EKYGPB0E ----- DPROP - DPROP System Installation Job Submission -----
Command ==>
DPROP Env.:          DPROP-System Type:          DPROP-System:

Job processing for not-highlighted options ==> EDITONLY    ( Regenerate or
                                                    ( Editonly
1 - Generate and Edit SnnnMAPT ( Directory Table Creation Job )
2 - Generate and Edit SnnnRCVT ( Receiver Tables Creation Job )
3 - Generate and Edit SnnnMINT ( MVG Input Table Creation Job )
4 - Generate and Edit SnnnALLB ( Package Bind Job )
5 - Generate and Edit SnnnSCUB ( SCU Bind Job )
6 - Generate and Edit SnnnMVGB ( MVG Bind Job )
7 - Generate and Edit SnnnCCUB ( CCU Bind Job )
8 - Generate and Edit SnnnDLUB ( DLU Bind Job )
9 - Generate and Edit SnnnPRUB ( PRU Bind Job )
10 - Generate and Edit SnnnGUUB ( GUU Bind Job )
11 - Generate and Edit SnnnRCVB ( Receiver Bind Job )
12 - Generate and Edit SnnnDPRI ( DPROP Initialization Job )

E - Return
C - Temporarily Change Job Information

Enter option or move cursor before desired option. Enter END command to return.

```

Figure 73. System Installation Job Submission

On panel EKYGPB0E, you:

1. Select one of the options. The system places you in ISPF edit mode for the job member associated with the option.
2. Modify the job member, as desired.
3. Submit the job by entering SUBMIT from the edit panel.
4. Select option C if you want to temporarily change the job information. Panel EKYGPB1E is displayed. See “Temporarily changing the job information” on page 100 for details about how you use this panel.
5. Enter E or END on the command line to return to panel EKYGP03E (Figure 70 on page 89).

The *nnn* in the job names represents the IMS DPROP system number that you defined in panel EKYGPM2E (Figure 22 on page 37). The system number contains leading zeroes, if necessary.

Submitting IVP jobs

Selecting option 3 from the panel EKYGP03E displays panel EKYGP04E.

```

EKYGP04E DPR0P - Submission Installation Verification Program (IVP)Jobs - -----
Command ==>>

1 - Generate and Edit IVP for MQSeries Capture System
2 - Generate and Edit IVP for MQSeries Apply System

3 - Generate and Edit IVP for Synchronous Propagation
   (SYNC) system if using Data Refresher
4 - Generate and Edit IVP for Synchronous Propagation
   (SYNC) system if using MVG Input Tables

5 - Generate and Edit for DPR0P Selector System
6 - Generate and Edit for DPR0P Receiver System

E - Return

DPR0P Environ-
ment :
DPR0P-
System:
DPR0P-System
Type :

Enter option or move cursor before desired option. Enter END command to return

```

Figure 74. Submission Installation Verification (IVP) Jobs

Panel EKYGP04E allows you to access the panels for entering the parameters required to submit the IVP jobs. Table 13 shows the options on panel EKYGP04E, explains how the options are used, and shows the figures that represent each panel associated with an option:

Table 13. Options for Submitting Verification Jobs

Option	Used for	Displays panel
1 - Optional	Generating, editing, and submitting IVP jobs for an MQ Capture system	EKYGPG0E
2 - Optional	Generating, editing, and submitting IVP jobs for an MQ Apply system	EKYGPH0E
3 - Optional	Generating, editing, and submitting IVP jobs for SYNC systems using DataRefresher	EKYGPC0E
4 - Optional	Generating, editing, and submitting IVP jobs for SYNC systems using MVG input tables	EKYGPD0E
5 - Optional	Generating, editing, and submitting IVP jobs for a Selector system	EKYGPE0E
6 - Optional	Generating, editing, and submitting IVP jobs for a Receiver system	EKYGPF0E
E	Returning to previous panel	

Selecting an option from panel EKYGP04E, causes the system to generate or edit the appropriate job, except where the job name is set to not applicable (N.A.). When the job name is set to N.A., you cannot use the panel to submit the job. You must use ISPF edit mode to submit the job.

You can edit an already generated job, or regenerate and edit a job using options that are highlighted on the associated panels.

Verifying installation for the MQ-Capture system

This section applies only to MQ-Capture systems. Panel EKYGPG0E (Figure 75 on page 95) displays when you select option 1 on panel EKYGP04E

```

EKYGPG0E ----- DPROP - Installation Verification - MQ Capture -----
Command ==>
DPROP Env.:                DPROP-System Type:                DPROP-System:

Job processing for not-highlighted options ==> EDITONLY    ( Regenerate or )
DPROP MQSeries Capture (required) ( Editonly      )
 1 - Generate and Edit SnnnVDBC ( Create and Load IMS Data Base )
 2 - Generate and Edit SnnnVCST ( System Preparation for IMS-MQCAP )
 3 - Generate and Edit SnnnVCAP ( Invoke update/capture program )
 4 - Generate and Edit SnnnVHDC ( Create HD/Unload copy of IMS DB )
Cleanup (required)
 5 - Generate and Edit SnnnVCLC ( Cleanup )

E - Return
C - Temporarily Change Job Information

Enter option or move cursor before desired option.
Enter END command to return.

```

Figure 75. Installation Verification - MQ Capture

On panel EKYGPG0E, all options are required. Before rerunning the IVP jobs, run the cleanup job, (option 5).

On panel EKYGPG0E, you:

1. Select one of the options. The system places you in ISPF edit mode for the job member associated with the option.
2. Modify the job member, as desired.
3. Submit the job by entering SUBMIT from the edit panel.
4. Select option C if you want to temporarily change the job information. Panel EKYGPB1E is displayed. See “Temporarily changing the job information” on page 100 for details about how to use this panel.
5. Enter E or END on the command line to return to panel EKYGP04E (Figure 74 on page 94).

The *nnn* in the job names represents the IMS DPROP system number you defined in panel EKYGPM2E. The system number contains leading zeroes, if necessary.

Verifying installation for the MQ-Apply system

This section applies only to the MQ-Apply system. Panel EKYGPH0E (Figure 76 on page 96) displays when you select option 2 on panel EKYGP04E

```

EKYGPH0E ----- DPROP - Installation Verification - MQ Apply -----
Command ==>
DPROP Env.:                DPROP-System Type:                DPROP-System:

Job processing for not-highlighted options ==> EDITONLY    ( Regenerate or )
DPROP MQSeries Apply (required)                          ( Editonly    )
 1 - Generate and Edit SnnnVDBA ( Create DB2 Target Database )
 2 - Generate and Edit SnnnVAPY ( Invoke DPROP MQ Apply program )
 3 - Generate and Edit SnnnVCUT ( IMSMQ-DPROP Utility           )
 4 - Generate and Edit SnnnVCCA ( Consistency Check Utility     )
    Audit and Cleanup (required)
 5 - Generate and Edit SnnnVAUD ( Audit Extract Utility         )
 6 - Generate and Edit SnnnVCLA ( Cleanup                       )

E - Return
C - Temporarily Change Job Information

Enter option or move cursor before desired option.
Enter END command to return.

```

Figure 76. Installation Verification - MQ Apply

On panel EKYGPH0E, all options are required. Before rerunning the IVP jobs, run the cleanup job, (option 5).

On panel EKYGPH0E, you:

1. Select one of the options. The system places you in ISPF edit mode for the job member associated with the option.
2. Modify the job member, as desired.
3. Submit the job by entering SUBMIT from the Edit panel.
4. Select option C if you want to temporarily change the job information. Panel EKYGPB1E is displayed. See “Temporarily changing the job information” on page 100 for details about how to use this panel.
5. Enter E or END on the command line to return to panel EKYGP04E (Figure 74 on page 94).

The *nnn* in the job names represents the IMS DPROP system number you defined in panel EKYGPM2E. The system number contains leading zeroes, if necessary.

Note: *SnnnVAPY* will reside in the region indefinitely, waiting for work until the *SnnnVCUT* job is submitted and processed. The *SnnnVCUT* job will cause an end-of-job condition for *SnnnVAPY*.

Verifying installation using DataRefresher-defined PRs

This section applies only to synchronous propagation systems.

Selecting option **3** from the panel EKYGP04E (Figure 74 on page 94), displays the panel EKYGPC0E (Figure 77 on page 97).

```

EKYGPC0E ----- DPROP - Installation Verification using Data Refresher
Command ==>
DPROP Env.:          DPROP-System Type:          DPROP-System:

Job processing for not-highlighted options ==> EDITONLY    ( Regenerate or
  Forward Propagation (required)                    ( Editonly
1 - Generate and Edit  VDXT      ( Data Definition and Extract/Load )
2 - Generate and Edit  VRUP      ( Forward Data Propagation      )
3 - Generate and Edit  VCCU      ( Consistency Check Utility      )
  Reverse Propagation (optional)
4 - Generate and Edit  VDLU      ( DL/I Load Utility          )
5 - Generate and Edit  VHUP      ( Reverse Data Propagation  )
6 - Generate and Edit  VCCU      ( Consistency Check Utility      )
  Audit and Cleanup  (required)
7 - Generate and Edit  VAUD      ( Audit Extract Utility      )
8 - Generate and Edit  VCLP      ( Cleanup                    )

E - Return
C - Temporarily Change Job Information

Enter option or move cursor before desired option.
Enter END command to return.

```

Figure 77. Installation Verification Using DataRefresher

Panel EKYGPC0E consists of the following sets of options:

- **1** through **3** are required.
- **4** through **6** are optional and apply only to reverse or two-way propagation.
- **7** through **8** are required.

Before rerunning the IVP jobs, run the cleanup job, (option **8**).

On panel EKYGPC0E, you:

1. Select one of the options. The system places you in ISPF edit mode for the job member associated with the option.
2. Modify the job member, as desired.
3. Submit the job by entering SUBMIT from the edit panel.
4. Select option C if you want to temporarily change the job information. Panel EKYGPB1E is displayed. See “Temporarily changing the job information” on page 100 for details about how you use this panel.
5. Enter E or END on the command line to return to panel EKYGP03E (Figure 70 on page 89).

The *nnn* in the job names represents the IMS DPROP system number you defined in panel EKYGPM2E (Figure 22 on page 37). The system number contains leading zeroes, if necessary.

Verifying installation using PRs defined with MVG input tables

This section applies only to synchronous propagation systems.

Selecting option **4** from the panel EKYGP04E (Figure 74 on page 94), displays the panel EKYGPD0E (Figure 78).

```

EKYGPD0E -- DPROP - Installation Verification using MVG Input Tables ----
Command ==>
DPROP Env.:                DPROP-System Type:                DPROP-System:

Job processing for not-highlighted options ==> EDITONLY      ( Regenerate or
  Forward Propagation (required)                               ( Editonly
  1 - Generate and Edit SnnnVMVU ( Data Definition and Load )
  2 - Generate and Edit SnnnVRUP ( Forward Data Propagation )
  3 - Generate and Edit SnnnVCCU ( Consistency Check Utility )
  Reverse Propagation (optional)
  4 - Generate and Edit SnnnVDLU ( DL/I Load Utility          )
  5 - Generate and Edit SnnnVHUP ( Reverse Data Propagation )
  6 - Generate and Edit SnnnVCCU ( Consistency Check Utility )
  Audit and Cleanup (required)
  7 - Generate and Edit SnnnVAUD ( Audit Extract Utility      )
  8 - Generate and Edit SnnnVCLP ( Cleanup                    )

  E - Return
  C - Temporarily Change Job Information

Enter option or move cursor before desired option.
Enter END command to return.

```

Figure 78. Installation Verification Using MVG Input Tables

Panel EKYGPD0E consists of the following sets of options:

- **1** through **3** are required.
- **4** through **6** are optional and apply only to reverse or two-way propagation.
- **7** through **8** are required.

Before rerunning the IVP jobs, run the cleanup job, (option **8**).

If you are using DB2 Version 3 Release 1 or later you should delete the DATA CAPTURE CHANGES option on DB2 tables in JCL generated from Step 1. This option is not supported in DB2 Version 3 Release 1 and will cause an error message.

On panel EKYGPD0E, you:

1. Select one of the options. The system places you in ISPF edit mode for the job member associated with the option.
2. Modify the job member, as desired.
3. Submit the job by entering SUBMIT from the edit panel.
4. Select option C if you want to temporarily change the job information. Panel EKYGPB1E is displayed. See “Temporarily changing the job information” on page 100 for details about how you use this panel.
5. Enter E or END on the command line to return to panel EKYGP03E (Figure 70 on page 89).

The *nnn* in the job names represents the IMS DPROP system number you defined in panel EKYGPM2E (Figure 22 on page 37). The system number contains leading zeroes, if necessary.

Verifying installation for the Selector

This section applies only to asynchronous propagation systems.

Panel EKYGPE0E (Figure 79) displays when you select Option 5 on panel EKYGP04E (Figure 74 on page 94).

```
EKYGPE0E ----- DPROP - Installation Verification - Selector -----
Command ==>
DPROP Env.:                DPROP-System Type:                DPROP-System:

Job processing for not-highlighted options ==> EDITONLY    ( Regenerate or
DPROP Selector            (required)                        ( Editonly
0 - Generate and Edit SnnnJSDS ( Create Selector Specific Data Sets)
1 - Generate and Edit SnnnVDBL ( Create and Load IMS Data Base   )
2 - Generate and Edit SnnnVSLR ( Invoke DPROP Selector           )
3 - Generate and Edit SnnnVHDU ( Create HD/Unload copy of IMS DB  )
Cleanup                    (required)
4 - Generate and Edit SnnnVCLS ( Cleanup                          )

E - Return
C - Temporarily Change Job Information

Enter option or move cursor before desired option.
Enter END command to return.
```

Figure 79. Installation Verification -Selector

Panel EKYGPE0E, all options are required.

Before re-executing the IVP jobs, run the cleanup job, (option 4).

On panel EKYGPE0E, you:

1. Select one of the options. The system places you in ISPF edit mode for the job member associated with the option.
2. Modify the job member, as desired.
3. Submit the job by entering SUBMIT from the edit panel.
4. Select option C if you want to temporarily change the job information. Panel EKYGPB1E is displayed. See “Temporarily changing the job information” on page 100 for details about how you use this panel.
5. Enter E or END on the command line to return to panel EKYGP04E (Figure 74 on page 94).

Verifying installation for the Receiver

This section applies only to asynchronous propagation systems.

Panel EKYGPF0E (Figure 80) displays if you select option 6 from panel EKYGP04E (Figure 74 on page 94).

```

EKYGPF0E ----- DPROP - Installation Verification - Receiver -----
Command ==>
DPROP Env.:          DPROP-System Type:          DPROP-System:

Job processing for not-highlighted options ==> EDITONLY    ( Regenerate or )
Log-async Receiver (required)                      ( Editonly    )
 1 - Generate and Edit SnnnVDBR ( Create DB2 Target Database )
 2 - Generate and Edit SnnnVRCV ( Invoke DPROP Receiver      )
 3 - Generate and Edit SnnnVCCR ( Consistency Check Utility   )
    Audit and Cleanup (required)
 4 - Generate and Edit SnnnVAUD ( Audit Extract Utility      )
 5 - Generate and Edit SnnnVCLR ( Cleanup                    )

E - Return
C - Temporarily Change Job Information

Enter option or move cursor before desired option.
Enter END command to return.

```

Figure 80. Installation Verification - Receiver

On panel EKYGPF0E all options are required.

Before rerunning the IVP jobs, run the cleanup job, (option 5).

On panel EKYGPE0E, you:

1. Select one of the options. The system places you in ISPF edit mode for the job member associated with the option.
2. Modify the job member, as desired.
3. Submit the job by entering SUBMIT from the edit panel.
4. Select option C if you want to temporarily change the job information. Panel EKYGPB1E is displayed. See “Temporarily changing the job information” for details about how you use this panel.
5. Enter E or END on the command line to return to panel EKYGP04E (Figure 74 on page 94).

The *nnn* in the job names represents the IMS DPROP system number you defined in panel EKYGPM2E (Figure 22 on page 37). The system number contains leading zeroes, if necessary.

Temporarily changing the job information

Panel EKYGPB1E (Figure 81 on page 101) displays if you select option **C** from any of the following panels:

- EKYGPZZE (Figure 71 on page 90)
- EKYGPB0E (Figure 73 on page 93)
- EKYGPC0E (Figure 77 on page 97)
- EKYGPD0E (Figure 78 on page 98)
- EKYGPE0E (Figure 79 on page 99)
- EKYGPF0E (Figure 80)
- EKYGPG0E (Figure 75 on page 95)
- EKYGPH0E (Figure 76 on page 96)

```
EKYGPB1E ==>

You can change the following job statement parameters:

Job Name      ==>Notify ==>User ==>
Initiator Class ==>
Message Class ==>

    Note:Changes to the job statement only affect the job group
           you are currently working on.

Press <ENTER>to commit changes or enter ENDcommand to return.
```

Figure 81. Temporarily change job information

Panel EKYGPB1E allows you to specify temporary changes to the job statement.

The changes you make and commit on panel EKYGPB1E are only valid for the jobs selected in the current job submission panel.

On panel EKYGPB1E, you:

1. In the **Job Name** field, type the name of the job you want to modify.
2. Make changes as needed to the:
 - Notify** field
 - User** field
 - Initiator Class** field
 - Message Class** field
3. Press Enter to commit your changes and to return to the job submission panel from which you selected option **C**.

Chapter 10. Preparing for IMS-to-IMS propagation

This section provides an outline of tasks that should be performed in order to use the IMS-to-IMS features of IMS DPROP.

Other sections of this document describe individual processes in detail. However, the information here describes an overview of the following steps, which are required for support of IMS-to-IMS propagation:

- Define an IMS DPROP environment (see Chapter 7, “Defining the IMS DPROP environment,” on page 41)
- Define an “MQ-CAPTURE Only” system (see “Defining the Generation macro (MQ-Capture only)” on page 67).
- Optionally, define a “SELECTOR Only” system (see “Defining the IVP parameters for the Selector system” on page 83).
- Set up an IMS Apply program ² (see “Verifying the IMS Apply” on page 208).

Generating and submitting jobs for IMS-to-IMS propagation.

For details on using the IMS DPROP ISPF IVP panel application to generate and submit applicable IMS DPROP installation jobs, refer to Chapter 9, “Generating and submitting installation and IVP jobs,” on page 87. The following sections from Chapter 9, “Generating and submitting installation and IVP jobs,” on page 87 apply to IMS-to-IMS propagation:

- “Submitting installation jobs” on page 89
- “Submitting environment installation jobs” on page 90
- “Submitting the system installation jobs” on page 92
- “Verifying installation for the MQ-Capture system” on page 94
- “Verifying installation for the Selector” on page 99 (optional)¹. For an explanation of how to use the Selector with MQ-ASYNC, refer to the IMS DPROP *Reference*

1. If you plan to initially capture IMS source database changes from IMS logs and then use the Selector with the MQ-Capture to provide MQSeries messages to drive the Apply process, you must define an IMS DPROP Selector system and an IMS DPROP MQ-capture system. IMS DPROP does not supply sample jobs to verify use of the Selector with MQ-Capture. If you use the Selector in this way, you should first verify the standard MQ-Capture and Apply processes as described in this guide. The Selector component can be independently configured and verified.

2. There is no explicit IMS DPROP system generation type required for IMS Apply.

Chapter 11. Performing post-configuration tasks

This section describes the tasks you must perform after you complete and verify your installation process for both synchronous and asynchronous propagation. You must:

1. Protect the IMS DPROP status file.
Your installation must protect the IMS DPROP status file against unauthorized changes. Refer to RACF (or equivalent) manuals for more information about data set protection.
2. Implement DBRC SHARE control and register propagated IMS databases. If the propagation mode is synchronous only and the IMS databases are used only for testing, you do not need to register the databases to DBRC. Refer to *IMS/ESA Utilities Reference: Database* and *IMS/ESA Utilities Reference: System* for details.
3. Change the IMS JCL procedures for IMS DPROP and DB2.
4. Bind and authorize the DB2 plans of propagating applications that were not bound during the installation process.
Bind the plans of all application programs performing propagation with a specific IMS DPROP system after installation or regeneration of that IMS DPROP system. Binding the plans of application programs is done outside of the ISPF panel application. The ISPF panel application binds only packages of IMS DPROP modules and plans of IMS DPROP utility functions.
See the appropriate *Administrators Guide* for your propagation mode for information about binding DB2 plans of propagating application programs.
5. Use DB2 aliases or synonyms to create aliases or synonyms for IMS DPROP directory tables.
See the appropriate *Administrators Guide* for more information.

Performing post-migration tasks

Perform the following tasks in order to finish the migration process.

1. Review, edit (as necessary), and copy the IMS DPROP utility JCL procedures and input members to your PROCLIB.

Recommendation: We recommend that you:

- Copy the current version and release of the utility JCL procedures to different names from those used in the SEKYSAMP library or copy the JCL procedures to a different PROCLIB.
Attention: Be careful not to overlay or alter the current-release JCL procedures when copying them to your PROCLIB. During the fallback process, the IVP uses these original JCL procedures.
- Use multiple IMS DPROP utility JCL procedures because every IMS DPROP environment requires its own IMS DPROP utility JCL procedures.
- Use multiple IMS DPROP utility input members because every IMS DPROP system requires its own IMS DPROP utility input members.
- Create utility JCL procedures for every IMS DPROP system and code the input member control statements directly in the JCL procedure in order to avoid problems with the procedures and input members.

The following list describes the IMS DPROP utility JCL procedures and input members that must be adapted and copied to the PROCLIB.

EKYUARCS
IMS Archive JCL to create and register the CDCDS

EKYUCCUD
Job to run the IMS DPROP CCU - Direct technique

EKYUCCUH
Job to run the IMS DPROP CCU - Hashing technique

EKYUCCHD
Job to run the IMS DPROP CCU - Hashing technique using HD Unload file

EKYUCRUP
Procedure to run the CDCDS Registration utility

EKYUCDEP
Procedure to run the IMS DPROP CDCDS Delete utility

EKYUDB2P
Procedure to run the DB2 Loader

EKYUDB2J
Job to run the EKYUDB2P procedure

EKYUDEMP
Procedure to run the DataRefresher DEM

EKYUGUUA
Job to allocate the Group Definitions file (EKYGRPD)

EKYUGUUP
Procedure to run the IMS DPROP GUU

EKYUGUJJ
Job to run the EKYUGUUP procedure

EKYULKGP
Procedure to link EKYG000X and EKYSVC00

EKYUMVUP
Procedure to run the IMS DPROP MVGU

EKYUMVUJ
Job to run the EKYUMVUP procedure

EKYUPRDA
Job to allocate a PRDS GDG

EKYUPRUP
Procedure to run the IMS DPROP PRU

EKYUPRUJ
Job to run the EKYUPRDP procedure

EKYURCVP
Procedure to run the IMS DPROP Receiver

EKYURCVJ
Job to run the EKYURCVP procedure

EKYUSCUP
Procedure to run the IMS DPROP SCU

EKYUSCQJ
Job to run the TSMF

EKYUSCTJ

Job to run the TSMF quiesce timestamps

EKYUSC1A

Job to allocate the SCF Control Statements file (EKYSIDS)

EKYUSC1P

Procedure to run the IMS DPROP SCF Compare utility

EKYUSC1J

Job to run the EKYUSC1P procedure

EKYUSC2P

Procedure to run the IMS DPROP SCF Apply utility

EKYUSC2J

Job to run the EKYUSC2P procedure

EKYUSELA

Job to allocate the:

- PRDS Register file (EKYPRREG)
- DBRC JCLOUT data set (JCLOUT)

EKYUSELP

Procedure to run the IMS DPROP Selector

EKYUSELJ

Job to run the EKYUSELP procedure

EKYUUIMP

Procedure to run the DataRefresher UIM

EKYUUIMJ

Job to run the EKYUUIMP procedure

The IMS DPROP utility JCL procedures refer to members containing the input control statements.

2. Bind and authorize the DB2 plans of propagating applications that were not bound during the migration process.

Bind the plans of all application programs performing propagation with a specific IMS DPROP system after migration or fallback of that IMS DPROP system. Binding the plans of application programs is done outside of the ISPF panel application. The ISPF panel application binds only packages of IMS DPROP modules and plans of IMS DPROP utility functions.

See the appropriate *Administrators Guide* for your propagation mode for information about binding DB2 plans of propagating application programs.

3. After ensuring that your migrated IMS DPROP systems are working properly, update all IMS DPROP Version 2.2 jobs and procedures to use the new IMS DPROP Version 3.1 library names. Include your own IMS propagating applications, DFSDDLT0, as well as your JCL templates (for example, EKYGASSL, EKYGLKG, EKYGPAL located in the INSTALL library.
4. Set all IMS databases and DB2 tables that are associated with the migrated IMS DPROP system to normal access.
5. For asynchronous systems, ensure that the ULR records are processed as described in “Asynchronous migration considerations” on page 121.

Enabling synchronous propagation to run in a Sysplex

After ensuring that your migrated synchronous IMS DPROP 3.1 system is working properly, you can convert your IMS DPROP system to use the Sysplex feature by doing the following:

1. Open the IMS DPROB Version 3.1 macro generation parameter panel (EKYGP30E) and enter the PDS VLF class and GMTS PDS name.
2. Prepare the Sysplex VLF object for system use. For additional information, see “Preparing VLF for IMS DPROB use” on page 17.
3. Run the updated jobs (the jobs that are highlighted) that are indicated on the IMS DPROB installation panels.

You need to synchronize the activation of the VLF objects and the running of the installation jobs with the use of your test and production systems because a new set of control modules and objects will be generated during this process. To activate the changes into a running synchronous system, follow the procedures which are designated by your location.

Part 3. Deleting or changing IMS DPROP systems

Chapter 12. Deleting IMS DPROP systems

The installation application can delete IMS DPROP system entries from ISPF tables and, if it is present, can remove the EKYGDPR macro from generation member EKYJIN. You can, optionally, clean up resources associated with the deleted system.

Topics in this section include:

- Steps for deleting an IMS DPROP system
- Steps for performing cleanup activities

Deleting an IMS DPROP system

To delete an IMS DPROP system, you:

1. For synchronous mode only, set all IMS databases and DB2 tables propagated by the IMS DPROP system or systems to be deleted to read-only access. Run the IMS DPROP SCU with an ESTOP control statement to stop all activities of this system.
2. For IMS DPROP LOG-ASYNC mode only, ensure that there are no Receivers operating in the relevant IMS DPROP environment during the deletion of systems.
3. For IMS DPROP MQ-ASYNC mode only, ensure that there are no Apply or Capture functions operating in the relevant IMS DPROP environment during the deletion of systems.
4. Run the IMS DPROP MVGU with a DELETE DBD=(...),PACKAGE=(...) control statement. This applies for every DL/I database involved in data propagation for the system to be deleted. This deletes the propagation requests, the SQL update modules, their DBRMs, and their DB2 packages for this system. Run the MVGU before you delete the system. Refer to the *Reference* for information about running the MVGU.
5. Call CLIST procedure EKYGINST. This step is identical to that described in “Starting the ISPF panel application” on page 33 and the description of Figure 19 on page 34.
6. Specify the name of the IMS DPROP environment used by the system or systems to be deleted. This step is identical to that described in “Defining the IMS DPROP environment” on page 34 and the description of Figure 20 on page 35.
7. Identify the system or systems to be deleted on system selection panel EKYGPM1E (Figure 82 on page 112).
8. Confirm the delete request for every system to be deleted on panel EKYGPM4E (Figure 83 on page 112). The ISPF panel application erases all information about the system from its internal tables and removes the system’s EKYGDPR macro from the IMS DPROP generation member, EKYJIN.

```

EKYGPM1E ----- DPRO P Systems ----- Row 1
Command ==> SCROLL ==> PAGE

E - Define DPRO P Environment DPRO P Environ-
I - Define a new DPRO P system ment: ENV
blank - Enter 'S' (select) in one or several Sel column(s)
        or move cursor to Sel column next to the desired DPRO P system
        - Enter 'D' (delete) in one or several Sel column(s)
? - Get information about ISPF table "ENV1"

Press ENTER to continue or enter END command to return.

----- DPRO P System Table -----
Sel  System      System System      Release/
     Name       Number Type      Status  Descriptive Title
-   DPRO P001   001   MQCaptur V3R1   DPRO P capture system
-   DPRO P004   004   MQApply   V3R1   DPRO P Apply system
-   DPRO P003   003   SelrRevr V3R1   DPRO P DASYNC system
-   DPRO P008   008   Selector  V3R1   DPRO P selector
----- End of Table -----

```

Figure 82. System selection panel for selecting systems to be deleted

To delete one or more systems, you:

1. Type **D** in the **Sel** column, in the lower half of the screen, of each system you want to delete.
2. Press Enter to display panel EKYGPM4E (Figure 83).

```

EKYGPM4E ==> DPRO P Environment:

Deleting a DPRO P system removes the corresponding entries in the
DPRO P ISPF tables and removes the EKYGDPR macro in the DPRO P
generation member EKYJIN (if present).

You are responsible for deleting the DPRO P system components that
are not used (DPRO P directory and MVG input tables, directory read
modules, SQL update modules, DBRMs, plans and packages).

DPRO P System Name :
DPRO P System Number:

Confirm delete request for this DPRO P system:
Delete DPRO P System ==> (YES for delete)

Press ENTER to commit or enter END command to return.

```

Figure 83. Deleting existing systems

3. In the **Delete DPRO P System** field, type **Yes**. This confirms you want to delete the system.
4. Press Enter to delete the system and to display panel EKYGPM1E (Figure 82).
5. Perform cleanup activities as needed. See "Performing cleanup activities" on page 113 for a description of these activities.

Performing cleanup activities

As an optional step, perform the following cleanup activities, as needed, for each deleted system:

- Free the DB2 plans used for the IMS DPROP utilities.
- Free the DB2 plans used by application programs performing synchronous propagation if these programs do not generate SQL statements, or adapt and bind their DB2 plans if the programs do generate SQL statements.
- Drop the IMS DPROP directory tables.
- Drop the IMS DPROP directory tables table space.
- Drop the MVG input tables.
- Drop the MVG input tables table space.
- Delete the IMS DPROP status file if the system performed synchronous data propagation.
- Delete the *EKYGCnnn*, *EKYGHnnn*, and *EKYGMnnn* modules. Delete the DB2 DBRMs and free the DB2 packages of these modules.
- Delete the VLF Class definition reserved for the deleted system in the COFVLFxx member of SYS1.PARMLIB.

Chapter 13. Changing generation parameters

You can change generation parameters associated with the IMS DPROF environment or individual systems.

You use the ISPF panel application to change generation parameters. The application guides you through the panels as you change the parameter values that define the environment or system(s). The application continues to guide you as you generate and submit the jobs that regenerate the environment, the system(s), and their related infrastructure. The most important of these jobs is EKYJIN. It triggers the regeneration of the IMS DPROF modules, and the jobs that bind DB2 packages of IMS DPROF modules or DB2 plans of IMS DPROF utility functions.

The topics in this section describe procedures for:

- Changing IMS DPROF generation parameters
- Changing DB2 subsystem ID of an IMS DPROF system

Changing generation parameters

To change IMS DPROF parameters, proceed as if you were installing an IMS DPROF system.

For synchronous systems only:

1. Before beginning to change parameters, set all IMS databases and DB2 tables propagated by IMS DPROF systems affected by the changes you will be making to read-only access.
2. Run the IMS DPROF SCU with an ESTOP control statement for all IMS DPROF systems that either use the IMS DPROF environment that is to be changed or share the same IMS DPROF environment with the IMS DPROF systems that are to be changed.

For all systems:

1. Call the IMS DPROF CLIST procedure EKYGINST. See “Starting the ISPF panel application” on page 33.
2. Specify the name of the IMS DPROF environment. See “Defining the IMS DPROF environment” on page 34.
3. To change parameters associated with the IMS DPROF environment, enter E in panel EKYGPM1E (Figure 23 on page 38).

Follow the panel flow to define IMS DPROF environment parameters and overwrite the parameter values that you want to change.

Some parameter values cannot be changed because they are write-protected.

4. To change parameters associated with a particular IMS DPROF system, perform the following steps for each IMS DPROF system to be changed:
 - a. Select the IMS DPROF system to be changed in panel EKYGPM1E (Figure 23 on page 38). See “Selecting an IMS DPROF environment or system to define” on page 38.
 - b. Follow the panel flow to define IMS DPROF system parameters and overwrite the existing parameter values that you want to change. Parameter values in protected fields cannot be changed.
 - c. Generate and submit jobs that:

- Regenerate the IMS DPROF environment.
 - Regenerate the IMS DPROF system and its infrastructure.
Submit only those jobs in panel EKYGPZZE (Figure 71 on page 90) with a highlighted option number. Submit job EKYJIN. It triggers the regeneration of load module EKYG000X, and the jobs that bind either DB2 packages of IMS DPROF modules, or DB2 plans of IMS DPROF utilities.
- d. For synchronous systems, restart all IMS DPROF systems using the SCU with the RESET DPROF, DUBIOUS control statement.
 - e. Optional. Generate and submit the jobs that perform the IVP.
5. If you did not change any parameter values associated with a particular system, you still need to submit job EKYJIN as follows.:
 - a. On panel EKYGPM1E (Figure 23 on page 38), select a system.
Select option **3** in the panel EKYGP00E (Figure 42 on page 59) to generate and submit the installation jobs.
 - b. Generate and submit jobs that regenerate the environment.
 - Submit the jobs identified in panel EKYGPZZE (Figure 71 on page 90) with a highlighted option number.
 - Submit job EKYJIN. It triggers the regeneration of load module EKYG000X.

For asynchronous systems, ensure that all IMS DPROF jobs have completed before running the EKYJIN job. Because all the IMS DPROF components access the EKYG000X module, if they are running simultaneously, one of the jobs might abend.
 - c. Optional. Generate and submit jobs that perform the IVP.

Bind all IMS DPROF systems whose generation parameters have changed. Bind the DB2 plans of application programs after completing the ISPF panel application and outside this ISPF panel application.

Changing the DB2 subsystem ID of an IMS DPROF system

1. Call the IMS DPROF V3.1 installation application.
2. Select the IMS DPROF system.
3. Change the DB2 subsystem ID in the panel EKYGP10E.
4. Select all the valid options for recreating the IMS DPROF utility bind job on panel EKYGPB0E.
Be sure to change job processing for non-highlighted options to regenerate.
5. Submit the jobs.

Part 4. Migrating IMS DPROP

Chapter 14. Migrating IMS DPROP

Migration process overview

This section guides you through the process of updating your installation's IMS DPROP from Version 2 Release 2 to Version 3 Release 1. You must migrate your IMS DPROP systems one at a time.

Migration process prerequisites

Before you perform the migration process:

1. Plan for your IMS DPROP Version 3 Release 1 installation (Chapter 2, "Planning for IMS DPROP," on page 5).
2. Perform the installation instructions that are contained in the *IMS DPROP Version 3.1 Program Directory*.

Attention: At the end of this step, the Version 3 Release 1SEKYTLIB library has not been created. You must explicitly create this IMS DPROP ISPF table library. As an alternative, follow through the steps outlined in the following sections: Chapter 6, "Beginning the IMS DPROP configuration process," on page 33, Chapter 7, "Defining the IMS DPROP environment," on page 41. Chapter 8, "Defining the IMS DPROP system," on page 57, and Chapter 9, "Generating and submitting installation and IVP jobs," on page 87. The IVP panel application process allocates this library during processing, if it does not already exist.

Note: Do not copy the contents of the Version 2 Release 2 SEKYTLIB library into the Version 3 Release 1 SEKYTLIB library.

3. Ensure that your DB2 subsystem is accessible to the ISPF/PDF environment in which you will be running the IMS DPROP ISPF panel application.
4. Finish the installation of Version 3 Release 1, and verify that this new installation is functional (Chapter 3 through Chapter 9).

Although it is possible to begin the migration process directly after performing the tasks outlined in Chapter 4, we encourage you to do the steps outlined in Chapter 6 through Chapter 9 in order to ensure that your IMS DPROP Version 3 Release 1 is functional and to provide you with the opportunity to initialize the Version 3 Release 1 SEKYTLIB library.

Migration steps overview

You migrate your existing IMS DPROP environments and systems to Version 3 Release 1 using the supplied ISPF panel application (Chapter 15, "Migrating an IMS DPROP system," on page 127 through Chapter 18, "Generating and submitting installation and IVP jobs," on page 175). The ISPF panel application creates and runs the migration jobs.

The following list of steps is an overview of the migration process using the ISPF panel application. The details of this process are explained in the topics that follow.

The general migration steps are:

1. Start the IMS DPROP ISPF panel application by calling the IMS DPROP REXX procedure EKYGMIGR.
2. Specify the name of the IMS DPROP Version 3 Release 1 environment to be migrated.

3. Select the IMS DPROP system to be migrated in panel EKYOPM1E (Figure 89 on page 131).
After selecting the IMS DPROP system to be migrated, panel EKYOPM2E (Figure 91 on page 132) is opened.
4. Change the IMS DPROP system number, if desired.
The migration procedure, EKYGMIGR, automatically calls the installation procedure EKYGINST. The installation entry panel is then opened.
5. Specify the name of the environment to be migrated in panel EKYGPM0E (Figure 92 on page 133). You can overwrite the environment name.
6. If this is the first IMS DPROP system of the environment that is being migrated, provide the parameters for the Version 3 Release 1 environment.
To do this:
 - a. Enter an E in panel EKYGPM1E (Figure 93 on page 134).
 - b. Enter the parameter values by going through the sequence of panels to define an IMS DPROP environment.
7. Select the system to be migrated and provide the parameter values for the Version 3 Release 1 system definition.
To do this:
 - a. Select the system in panel EKYGPM1E (Figure 93 on page 134).
 - b. Enter the parameter values by following the sequence of panels to define a system.
8. Generate, review, edit (if necessary), and submit jobs that:
 - Generate the Version 3 Release 1 environment and its infrastructure. Submit only the jobs identified in panel EKYGPZZE (Figure 138 on page 178) whose option number is highlighted.
 - Generate the Version 3 Release 1 system and its infrastructure.
 - Run the Installation Verification Program (optional, but recommended)

The final migration step is to perform the post-migration tasks (see “Performing post-migration tasks” on page 105). The rest of this section covers:

- “General migration considerations”
- “Overview of migration panel flow” on page 121
- “Overview of migration jobs” on page 123

General migration considerations

- Before beginning the migration procedure, we strongly recommended that you back up all IMS DPROP objects. These objects can include:
 - ISPF data sets
 - JCL libraries
 - IMS DPROP product libraries
 - IMS DPROP audit trail table
 - IMS DPROP SQL update modules, their DBRMs, and, optionally, their DB2 packages
 - The propagation request control blocks (PRCB)
 - IMS DPROP Receiver tables and Selector data sets
 - IMS DPROP status file

If you are migrating from Version 2 Release 2 and do not know the names of the IMS DPROP infrastructure objects to back up, you can find their names by browsing through the IMS DPROP Version 2 Release 2 ISPF installation panels.

- We suggest that you use your existing Selector Control File (SCF) and Uncommitted Log Record (ULR). IMS DPROB Version 3 Release 1 *will* use the same DB2 tables that your previous IMS DPROB used.
- We recommend that you migrate a test system before migrating your production system.
- When migrating IMS DPROB systems, you can only migrate the system within the same propagation mode that the system is currently in, as described in Chapter 15, “Migrating an IMS DPROB system,” on page 127 to Chapter 19, “Performing fallback of IMS DPROB systems,” on page 187.
- When migrating synchronous IMS DPROB systems from one version to another, all IMS databases and DB2 tables associated with the migrating system must be set to read-only access. After verifying that the migration was successful, you can set the IMS databases and DB2 tables to their normal access mode.

Asynchronous migration considerations

The SCF and ULR data sets from IMS DPROB Version 2 Release 2 can be used in IMS DPROB Version 3 Release 1 without modification. If you use a release-dependent naming convention and you want to have the Version 3 Release 1 data set names follow the rules of that convention (for example, V3R1 instead of V2R2), you need to allocate new SCF and ULR data sets with the desired names.

Attention: Do not specify the Version 2 Release 2 SCF and ULR data set names in panel EKYGP88E. If you do, the contents of your data sets will be deleted as a result of allocating new data sets for Version 3 Release 1. After you finish migrating to Version 3 Release 1, you can copy the contents from the Version 2 Release 2 SCF and ULR data sets to the Version 3 Release 1 data sets.

Overview of migration panel flow

When you run the ISPF panel application, the following tasks are accomplished:

- Environment related parameters are migrated to Version 3 Release 1.
- System related parameters are migrated to Version 3 Release 1.
- Migration jobs are generated and submitted for running. The following lists are examples of the jobs that are generated for specific panels.

The environment installation jobs that are generated by completing panel EKYGPZZE are shown in Figure 138 on page 178.

The system installation jobs are generated by completing panel EKYPPB0E, shown in Figure 142 on page 182 and panel EKYOPB0E, shown in Figure 141 on page 180.

When you migrate an IMS DPROB system, you use the following sets of panels:

IMS DPROB migration entry panels

Used to start the migration process.

IMS DPROB installation entry panels

Used to define the initial environment and system parameters.

IMS DPROB environment definition panels

Used to enter parameter values that define the environment. You must complete the parameters. Once specified, you can display them again in order to verify them or to make changes to your environment.

IMS DPROB system definition panels

Used to enter the parameters describing each system.

IMS DPROJ job submission panels

Used to submit:

- Environment creation jobs
- System generation jobs
- IVP jobs

Figure 84 shows the sequence of the ISPF panels and the relationship of the different types of panels to each other.

Migration Panel Flow Diagram

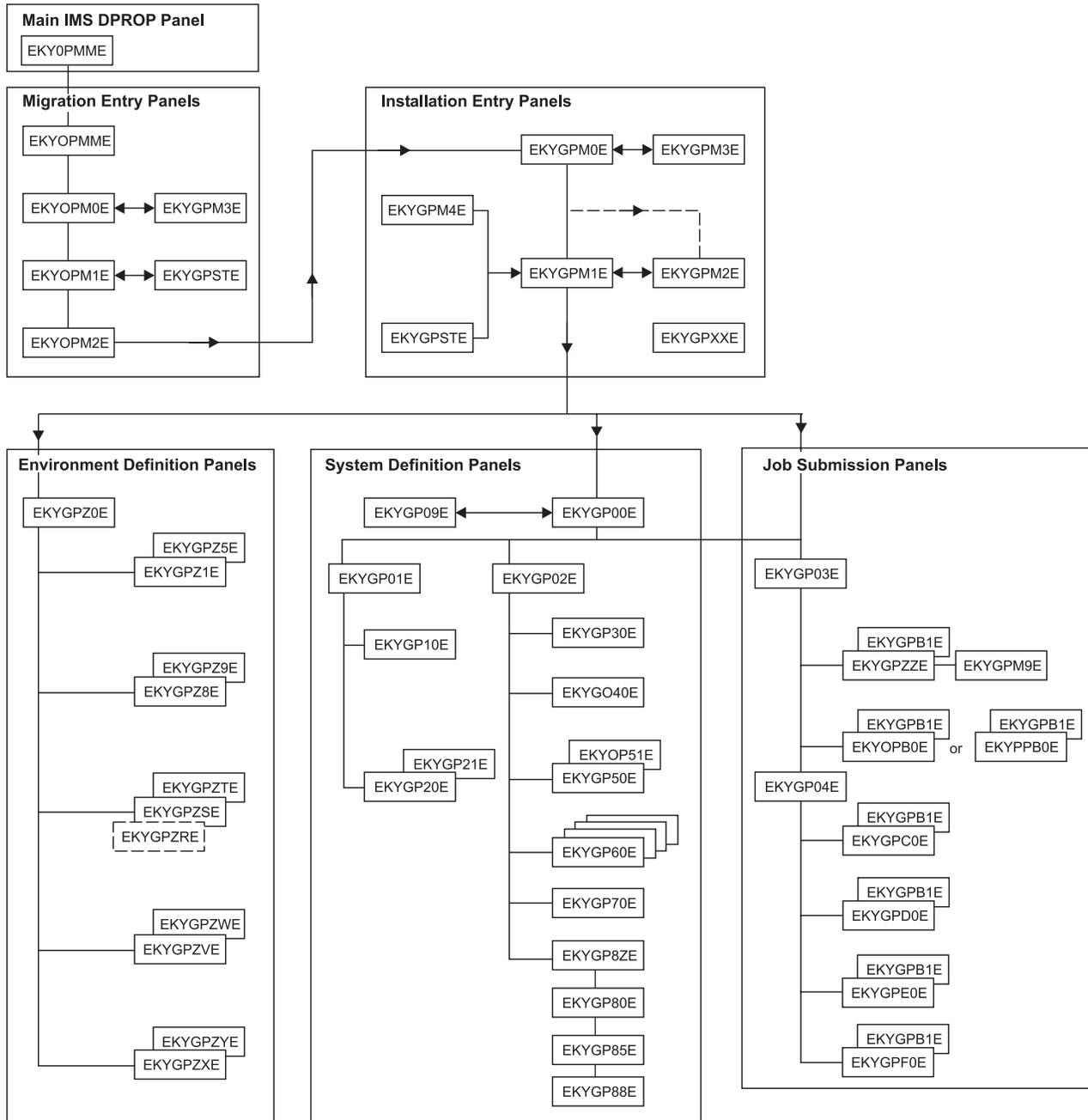


Figure 84. Migration panel flow diagram

Overview of migration jobs

Based on your panel input, the ISPF panel application creates jobs, puts them into the data set created during the installation process (*high_level_qualifier.INSTALL.environment_name*), and guides you through the panels. Submitting and running the jobs migrates the IMS DPROP systems and their infrastructure from IMS DPROP Version 2 Release 2 to IMS DPROP Version 3 Release 1.

Some jobs in the *high_level_qualifier.INSTALL.environment_name* library are associated with the entire IMS DPROP environment. Others are associated with one particular system within the environment. The system jobs are identified with a 3-digit system number, in positions two through four of their member name.

Generating jobs

The jobs required for migrating a system are divided into three categories:

- Stage I jobs
- Stage II jobs
- DB2 package bind jobs

Running Stage I

EKYJIN is the first job that you submit. In the first jobstep, job EKYJIN validates and compiles the generation macros. In the second job step, EKYJIN creates and submits the Stage II job stream.

Running Stage II

Stage II consists of DB2 precompile, compile, and link steps for IMS DPROP modules. More specifically, Stage II consists of the following steps:

- For each IMS DPROP system that you migrate, Stage II precompiles, compiles, and links one *EKYGCnnn*, one *EKYGHnnn*, and one *EKYGMnnn* module. These modules access the system's directory tables. The *nnn* in the module name represents the system number, with leading zeroes if necessary. You enter the migrating system number in panel EKYOPM2E. If you change an environment's generation parameters without changing the system parameters, the Stage II job does not recreate the *EKYGxnnn*.³
- Stage II compiles and links one *EKYG000X* module that describes the Version 3 Release 1 environment. Stage II includes the *EKYGCnnn*, *EKYGHnnn*, and *EKYGMnnn* modules for each system sharing the same IMS DPROP environment during link editing of the *EKYG000X* load module. The included *EKYGxnnn*¹ modules are created either while the same Stage II job is running (if the corresponding IMS DPROP system was migrated), or during a previous running of the Stage II job.

Binding to DB2 using the DB2 Package bind

After running Stage I and Stage II, you must submit DB2 bind jobs generated by the ISPF application for each system that was migrated. Using the DB2 package bind simplifies administration of the required DB2 binds. The DB2 package binds the packages of modules by submitting the *SnnnALLB* Job for *each* IMS DPROP system.

3. x could be H, C, or M.

Job overview

The following list provides an overview of the most important jobs that the ISPF panel application creates in the *high_level_qualifier.INSTALL.environment_name* library:

- **EKYJIN**

IMS DPROP generation's Stage I job, EKYJIN:

- Validates and compiles the following generation macros in the first job step:

- **EKYGJCL**

- The macro for generating the job statement for Stage II.

- **EKYGSYS**

- The macro for generating the IMS DPROP environment (one per environment).

- **EKYGDPR**

- The macro for generating an IMS DPROP system (one EKYGDPR macro per system).

- Creates and submits the Stage II job stream. In the second job step, the REXX procedure EKYGLJME modifies the Stage II job stream to add the necessary compile and link JCL procedures as in-stream procedures. After adding the JCL procedures, EKYJIN submits the Stage II job stream for running.

- **EKYJMDT**

Alters the IMS DPROP audit trail and binds the audit trail utility.

- **SnnnESTO**

Calls the earlier version IMS DPROP SCU to perform an emergency stop of the IMS DPROP system which is currently running.

- **SnnnDIRT**

Creates new DB2 tables and saves the current content of the directory tables (from the earlier version of IMS DPROP) in these newly created tables. If a fallback is performed, this saved information can be used in the fallback procedure.

- **SnnnMVG**

Creates new DB2 tables and saves the current content of the MVG input tables (from Version 2 Release 2 of IMS DPROP) in these newly created tables. If a fallback is performed, the fallback procedure uses this saved information.

- **SnnnALLB**

Performs a DB2 package bind of IMS DPROP Version 3 Release 1.

- **SnnnSCUB, SnnnMVGB, SnnnCCUB, SnnmDLUB**

Binds the DB2 plans of IMS DPROP Version 3 Release 1 utility functions.

- **SnnnCREA**

Reinitializes the IMS DPROP status file for synchronous systems, runs the IMS DPROP Version 3 Release 1 MVGU to create the following Version 3 Release 1 objects for propagation requests, and places them in the directory tables:

- IMS DPROP SQL update modules, their DBRMs, and, optionally, their DB2 packages
 - The propagation request control blocks (PRCB)

- **SnnnRSET**

Calls the IMS DPROP Version 3 Release 1 SCU to reactivate propagation for the migrated system.

Some jobs run in the version of IMS DPROP that you are migrating from, while other jobs run in IMS DPROP Version 3 Release 1. Therefore, the migration process requires that the load libraries of both versions of IMS DPROP be available.

Chapter 15. Migrating an IMS DPROP system

This section describes the panels used to start migrating an IMS DPROP system.

Topics include the following:

- “Starting migration configuration” on page 128
- “Selecting an IMS DPROP system to migrate” on page 131
- “Displaying existing IMS DPROP Environments” on page 134, including:
 - Defining a new IMS DPROP system
 - Displaying information about ISPF tables
 - Deleting an IMS DPROP system

Figure 85 highlights the panels that are involved in starting the migration process. Table 14 explains how panels are used, showing the panel name, its function, and the figure that represents the panel.

Starting the Migration Process

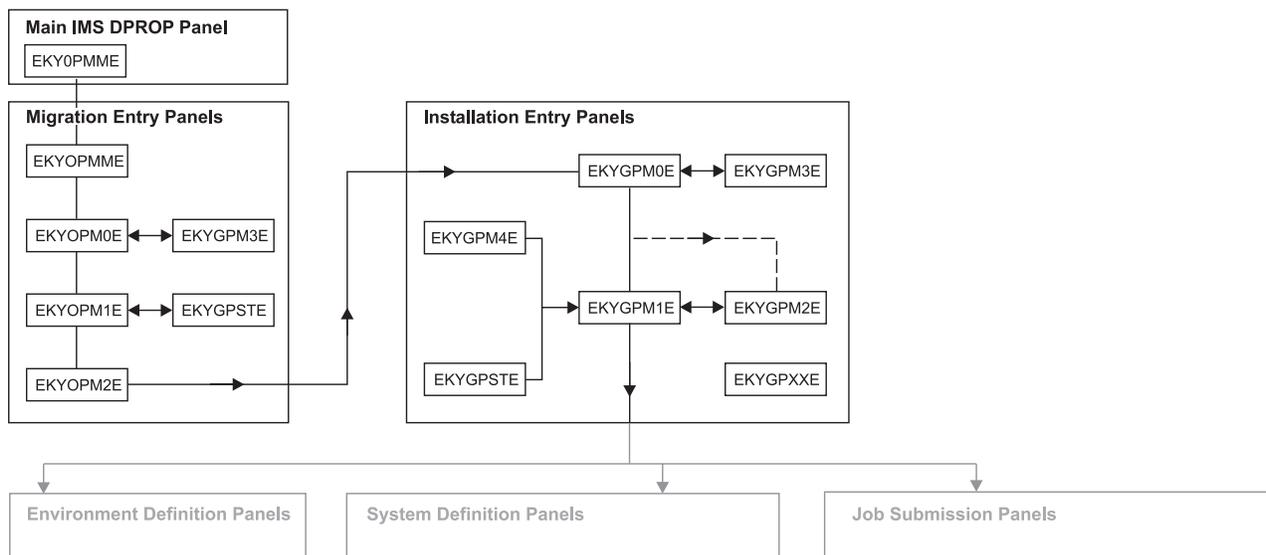


Figure 85. Starting the Migration Process

Table 14. Migration entry panels

Panel	Used for	Figure
EKYGPMME	Starting migration	Figure 86 on page 129
EKYOPM0E	Specifying the environment to be migrated	Figure 87 on page 130
EKYGPM3E	Displaying existing environments in your enterprise	Figure 88 on page 130
EKYOPM1E	Selecting the system to be migrated or querying information about the environment	Figure 89 on page 131
EKYGPSTE	Displaying information about the selected environment	Figure 90 on page 132
EKYOPM2E	Changing the system number of the system being migrated	Figure 91 on page 132
EKYGPM4E	Deleting systems	Figure 83 on page 112

Table 14. Migration entry panels (continued)

Panel	Used for	Figure
EKYGPM0E	Verifying the name of the environment to be migrated	Figure 92 on page 133
EKYGPM1E	<ul style="list-style-type: none"> • Specifying that you want to define an IMS DPROT environment • Specifying that you want to define a new IMS DPROT system • Selecting a system to migrate from a list that is displayed on this panel • Deleting an IMS DPROT system 	Figure 93 on page 134
EKYGPSTE	Displaying the stored information about the new system	Figure 90 on page 132
EKYGPXXE	Displaying errors	Figure 16 on page 30

Starting migration configuration

Before you begin migration:

- Backup all IMS DPROT objects. See “General migration considerations” on page 120 for a list of these objects.
- If you want to use the migration application, both the IMS DPROT Version 2 Release 2 and Version 3 Release 1 ISPF libraries must be available. Therefore, you must allocate both the IMS DPROT Version 2 Release 2 and Version 3 Release 1 ISPF libraries with different names.
- Keep all IMS DPROT Version 2 Release 2 libraries containing the customized installation jobs that are defined in panel EKYGP20E as described in the IMS DPROT Version 2 Release 2 *Installation Guide*. Doing this provides for a possible fallback from IMS DPROT Version 3 Release 1 to Version 2 Release 2. For Version 3 Release 1, only one target library contains installation jobs. This library must have a different name from the Version 2 Release 2 library. You define this name in panel EKYGPZ5E (Figure 101 on page 143).
- Allocate a new ISPF table library named SEKYTLIB for IMS DPROT Version 3 Release 1.

Attention: Do *not* copy the IMS DPROT Version 2 Release 2 ISPF tables into the Version 3 Release 1 ISPF table library. The structure of the Version 3 Release 1 ISPF tables are different from Version 2 Release 2 tables.
- Migrate a test system before migrating your production system.

For additional information, refer to the IMS DPROT Version 2 Release 2 *Installation Guide*.

To begin migration:

1. Enter the following command in an active ISPF/PDF environment:

```
EXEC 'DPROT.R3.SEKYCLIB(EKYGMIGR)' 'parms'
```

The REXX procedure EKYGMIGR has two keywords for which you must provide values. You can specify these values either in the procedure or when calling the procedure. The entire expression must be enclosed in quotations.

2. Provide values for the following keywords:

VER1LVLQ

Use this keyword to pass the high-level qualifiers for the Version 2 Release 2 ISPF data sets. The high-level qualifier name can be up to 26 characters long.

For example: DPR0P.V2 or DPR0P.V3R1.

VER2LVLQ

Used to pass the high-level qualifiers for the IMS DPR0P Version 3 Release 1 ISPF data sets. The high-level qualifier name can be up to 26 characters long.

For example: DPR0P.V3R1.

The following is an example of an EXEC statement with keywords:

```
EXEC 'W56.DPR0P.V3.SEKYCLIB(EKYGMIGR)' 'DPR0P.V2 DPR0P.V3'
```

When you have identified a Version 2 Release 2 system for migration, the migration procedure EKYGMIGR stores the previous version's definitions from the ISPF table into the ISPF shared variable pool, and automatically calls the Version 3 Release 1 installation procedure EKYGINST. The definitions are displayed in the Version 3 Release 1 installation panels and the IMS DPR0P message Field contents taken from IMS DPR0P Version 2.2 definitions appears on the panel. You can change the fields in these definitions.

When calling the EKYGINST procedure, the EKYGINST EKYGDSPR keyword is taken from the EKYGMIGR VER2LVLQ keyword.

3. Press Enter after entering the EXEC command to display panel EKYGPMME (Figure 86).

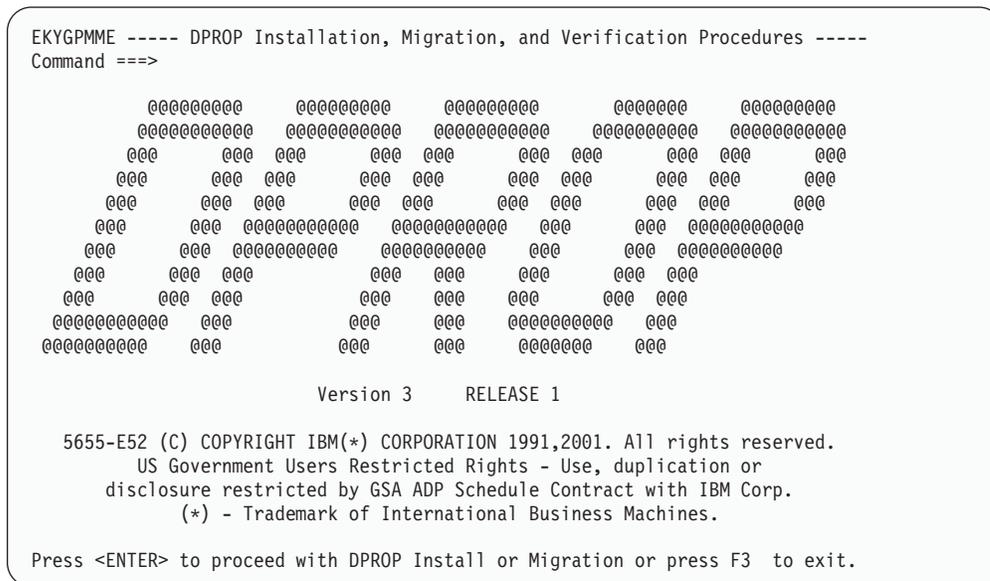


Figure 86. Migration main entry panel

4. Press Enter to display panel EKYOPM0E (Figure 87 on page 130).

```

EKYOPM0E ----- Existing Environment Selection Panel -----
Command ==>

0000 0000 00 00000000 00000000 00000000 00000000 00 00000000 00 00
0000 0000 00 00000000 00000000 00000000 00000000 00 00000000 0000 00
00 0000 00 00 00 00 00 00 00 00 00 00 00 0000 00
00 0 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00000000 00000000 00 00 00 00 00 00 00
00 00 00 00 0000 00000000 00000000 00 00 00 00 00 0000
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 0000
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00000000 00 00 00 00 00 00 00000000 00 00
00 00 00 00000000 00 00 00 00 00 00 00000000 00 00

DataPropagator Version 3 Release 1

DPROP Environment Name ==> (* for DPROP Environment overview)
(Existing DPROP Version 2 Release 2)

Enter END command to return.

```

Figure 87. Existing environment selection panel

The IMS DPROP environment name must be an existing Version 2 Release 2 environment.

The environment name specified on this panel identifies a particular IMS DPROP environment under which you installed one or more systems.

5. To display the environments you have defined, in the **IMS DPROP Environment Name** field, enter an asterisk (*).
6. Press Enter to display pop-up panel EKYGPM3E (Figure 88).

```

EKYOPM0E ----- Existing Environment Selection Panel -----
Command ==>

0000 0000 00 00000000 00000000 00000000 00000000 00 00000000 00 00
0000 0000 00 00000000 00000000 00000000 00000000 00 00000000 0000 00
00 0000 00 00 00 00 00 00 00 00 00 00 00 0000 00
00 0 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00000000 00000000 00 00 00 00 00 00 00
00 00 00 00 0000 00000000 00000000 00 00 00 00 00 0000
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 0000
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00000000 00 00 00 00 00 00 00000000 00 00
00 00 00 00000000 00 00 00 00 00 00 00 00000000 00 00

DPROP Environment Overview (Panel nn of nn)
EKYGPM3E ==>

DPROP Environment Name :
Number of DPROP Systems:
Installation Library   :

Enter a minus sign (-) to go back one DPROP environment or
press ENTER to go forward or enter END command to select.

```

Figure 88. Migration environment overview panel

Use panel EKYGPM3E to display the names of IMS DPROP environments currently defined at your installation. **Panel nn of nn** in the window title displays the current environment number and the total number of environments.

7. Use the Enter key to display the next environment and the minus sign (-) to display the previous environment. You can view each environment defined at your installation.

8. When the environment you want appears in the window, enter END on the command line and press Enter. Panel EKYOPM0E (Figure 87 on page 130) re-displays and the environment name from the pop-up window is now displayed in the **Environment Name** field on panel EKYOPM0E.
9. Press Enter to display panel EKYOPM1E (Figure 89 on page 131).

Selecting an IMS DPROF system to migrate

```

EKYOPM1E ----- DPROF Migration - DPROF Systems -----
Command ==> SCROLL ==> PAGE

blank - Enter one 'S' (select) in the Sel column below      DPROF Environ-
        or move cursor to Sel column next to the desired    ment:
        DPROF system
? - Get information about ISPF table ""

Press <ENTER> to continue or enter END command to return.

----- DPROF System Table -----
Sel  System  System  Release/
     Name   Number  Status  Descriptive Title
-   DPROF001  001    V2R2    Synchronous DPROF System, Production
-   DPROF002  002    V2R2    Asynchronous DPROF System, Education

```

Figure 89. List of systems available for migration

The **Release/Status** column describes the version of the IMS DPROF system. The valid value is V2R2, indicating that this is a Version 2 Release 2 IMS DPROF system.

Use panel EKYOPM1E to:

- Select a system to migrate.
- Ask for information about the environment ISPF table

To select a system to migrate:

1. In the **Sel** column, type an S or move the cursor next to the appropriate system.
2. Press Enter to display panel EKYOPM2E (Figure 91 on page 132).

To ask for information about the ISPF table:

1. In the command line enter a ?
2. Press Enter to display panel EKYGPSTE (Figure 90 on page 132).

```

EKYGPSTE ==>

Table Name
Table Library .SEKYTLIB

Creation or Last Update User

Creation Date           Creation Time

Last Update Date       Last Update Time

Press <ENTER> to continue.

```

Figure 90. ISPF table information panel for migration

Panel EKYPSTE displays the following information:

- Table Name**
Environment ISPF table name
- Table Library**
Library name
- Creation or Last Update User**
User that created or last updated the file
- Creation Date**
Date the ISPF table was created
- Creation Time**
Time the ISPF table was created
- Last Update Date**
Date the table was last updated
- Last Update Time**
Time the table was last updated

3. Press Enter to return to panel EKYPM1E (Figure 89 on page 131).

```

EKYPM2E ==>

DPROR System Name :
DPROR System Title:

DPROR Environ-
ment:

If you want to alter the DPROR system number, enter a new value:
DPROR System Number ==>

Press <ENTER> to continue or enter END command to return.

```

Figure 91. Changing a system number

4. Use panel EKYPM2E to change the system number of the IMS DPROR system you are migrating. For example, if you want to migrate Version 2 Release 2 IMS DPROR system number 3 into Version 3 Release 1 IMS DPROR system number 1, enter 1 in the **DPROR system number** field.

Because the changed system number is stored only in the Version 3 Release 1 ISPF tables, if you end the migration process for a system and resume it later, you must reenter the changed system number. The migration procedure cannot access a changed system number because the migration procedure has access to only the IMS DPROT Version 2 Release 2 definitions.

Also, avoid changing the system number if you are not using DB2 package bind. Changing the system number requires that you change the specifications of all DB2 plans used for application programs performing propagation. This is because the DB2 plans include the DBRMs of the EKYGxnnn modules, where the x can be C, H, or M and the nnn represents the IMS DPROT system number.

5. Press Enter to continue, or press F3 to return to the previous panel.

When you press Enter, the migration procedure automatically calls the Version 3 Release 1 installation procedure EKYGINST from panel EKYOPM2E and displays a slightly modified installation panel EKYGPM0E (Figure 92 on page 133). You will notice that the ISPF panel procedure for migration closely parallels the procedure for installation.

The **DPROT Environment Name** field shows the migrating environment name. The fact that the environment name is displayed (along with the appropriate image class information), verifies that the previous version's environment is being migrated to Version 3 Release 1.

The IMS DPROT environment name specified on this panel identifies a particular Version 3 Release 1 environment under which you can install one or more Version 3 Release 1 systems. From this point in the migration process, all the IMS DPROT jobs generated will be associated with this environment name.

```

EKYGPM0E ----- DPROT Installation and Verification Procedures -----
Command ==>

@@@@@@@  @@@@@@@@  @@@@@@@@  @@@@@@  @@@@@@@@  @@@@@@  @@@@
@@@@@@@@  @@@@@@@@@  @@@@@@@@@  @@@@@@@@  @@@@@@@@@  @@  @@  @@  @@
@@  @@  @@  @@  @@  @@  @@  @@  @@  @@  @@  @@  @@
@@  @@  @@  @@  @@  @@  @@  @@  @@  @@  @@  @@  @@
@@  @@  @@@@@@@@@  @@@@@@@@@  @@  @@  @@@@@@@@@  @@  @@
@@  @@  @@  @@  @@  @@  @@  @@  @@  @@  @@  @@  @@
@@@@@@@@  @@  @@  @@  @@@@@@@@@  @@  @@  @@  @@  @@  @@
@@@@@@@@  @@  @@  @@  @@  @@@@@@  @@  @@@@@@  @@  @@@@@@

      DPROT Environment Name ==>          (Installation: * for Environ. List )
                                          (Migration: DON'T use *, see manual)

Enter END command to Exit.

```

Figure 92. Migration installation and verification procedures

Attention: Do not enter an asterisk (*) in the **DPROT Environment Name** field even though the information on the panel states that this is possible. If you enter an asterisk, you must return to panel EKYOPM0E (Figure 87 on page 130) and select an IMS DPROT environment again for migration.

6. To change the name of the migrating environment, type over the name displayed on panel EKYGPM0E.

The environment name you choose can be up to eight characters long and must satisfy ISPF member name rules. The first character must be alphabetic (this can include @, #, or £). The following characters can be alphabetic or numeric.

7. Press Enter to display panel EKYGPM1E (Figure 93 on page 134).

Displaying existing IMS DPROT Environments

Panel EKYGPM1E (Figure 93) allows you to define the parameters of the IMS DPROT environment or IMS DPROT systems. The values shown are samples.

```

EKYGPM1E ----- DPROT Systems -----
Command ==>                                     SCROLL ==> CSR

  E - Define DPROT Environment                      DPROT Environ-
                                                    ment:
blank - Enter 'S' (select) in one or several Sel column(s)
        or move cursor to Sel column next to the desired DPROT system
        - Enter 'D' (delete) in one or several Sel column(s)
? - Get information about ISPF table ""

Press ENTER to continue or enter END command to return.

----- DPROT System Table -----
Sel  System  System  System  Release/  Descriptive
     Name   Number Type   Status   Title
-   DPROPSR1 012   selrRecv Migration DPROT Asynchronous prod system

```

Figure 93. Environment parameters

The values that can be in the Release/Status column are listed in Table 15 along with the IMS DPROT release they indicate:

Table 15. Release/Status Values

Value	Explanation
V2R2migr	This IMS DPROT system was migrated from Version 2 Release 2
V3R1	This is a Version 3 Release 1 IMS DPROT system
migration	This IMS DPROT system is currently being migrated

This panel allows you to:

- Define environment parameters (enter E on the command line).
- Define a new system (enter I on the command line).
- Select the system to be migrated from the systems listed in the IMS DPROT system table on the bottom of this panel, by either:
 - Entering S in the **Sel** column of the migrating system
 - Moving the cursor next to the migrating system and pressing Enter
- Delete an system (enter D in the **Sel** column in front of the system in the System Table).
- Ask for information about the IMS DPROT environment ISPF table (enter ? on the command line).

The system you select for migration must be the system specified previously in panel EKYOPM2E (Figure 91 on page 132).

Table 16 on page 135 shows the options on panel EKYGPM1E, explains how the options are used, and shows the figures that represent each panel associated with an option:

Table 16. Options for panel EKYGPM1E

Option	Used for	Displays panel
E	Defining the IMS DPROP environment	EKYGPZ0E– Figure 96 on page 139
blank S	Specifying IMS DPROP system parameters	EKYGP00E– Figure 112 on page 156
?	Displaying information about the current environment	EKYGPSTE– Figure 94
D	Deleting an IMS DPROP system	EKYGPM4E– Figure 83 on page 112

1. Select an option from panel EKYGPM1E.
2. Press Enter to display the corresponding panel.

Displaying information about the ISPF table

Selecting **?** from panel EKYGPM1E (Figure 93 on page 134) displays panel EKYGPSTE (Figure 94).

```

EKYGPSTE ==>

Table Name
Table Library .SEKYTLIB

Creation or Last Update User

Creation Date           Creation Time

Last Update Date       Last Update Time

Press <ENTER> to continue.
    
```

Figure 94. Information about the current ISPF table

EKYGPSTE provides information about the current ISPF table. This is the table where the ISPF panel application stores information that you have provided by means of the panels. This panel informs you about the table, and, most important, verifies that information is being stored. This verification is ensured by the fact that table information is displayed in this panel. Press Enter to return to panel EKYGPM1E (Figure 93 on page 134).

Chapter 16. Changing the environment definition panels for migration

This section describes how to use environment definition panels to migrate an IMS DPROP system. Topics include the following:

- “Defining the environment” on page 138
- “Defining data set, copy program, and job card parameters” on page 139
- “Defining EKYGSYS and EKYGJCL macro parameters” on page 143
- “Defining the audit trail table job parameters” on page 147
- “Defining the interface to the AD/Cycle LE/370” on page 150
- “Defining the interface to EKYRESLB dynamic allocation exit routine” on page 151

Figure 95 shows the panel flow for defining the IMS DPROP environment. Table 17 on page 138 describes how the panels are used, showing the panel name, its function, and the figure that represents the panel.

Panel Flow for IMS DPROP Environment Definition

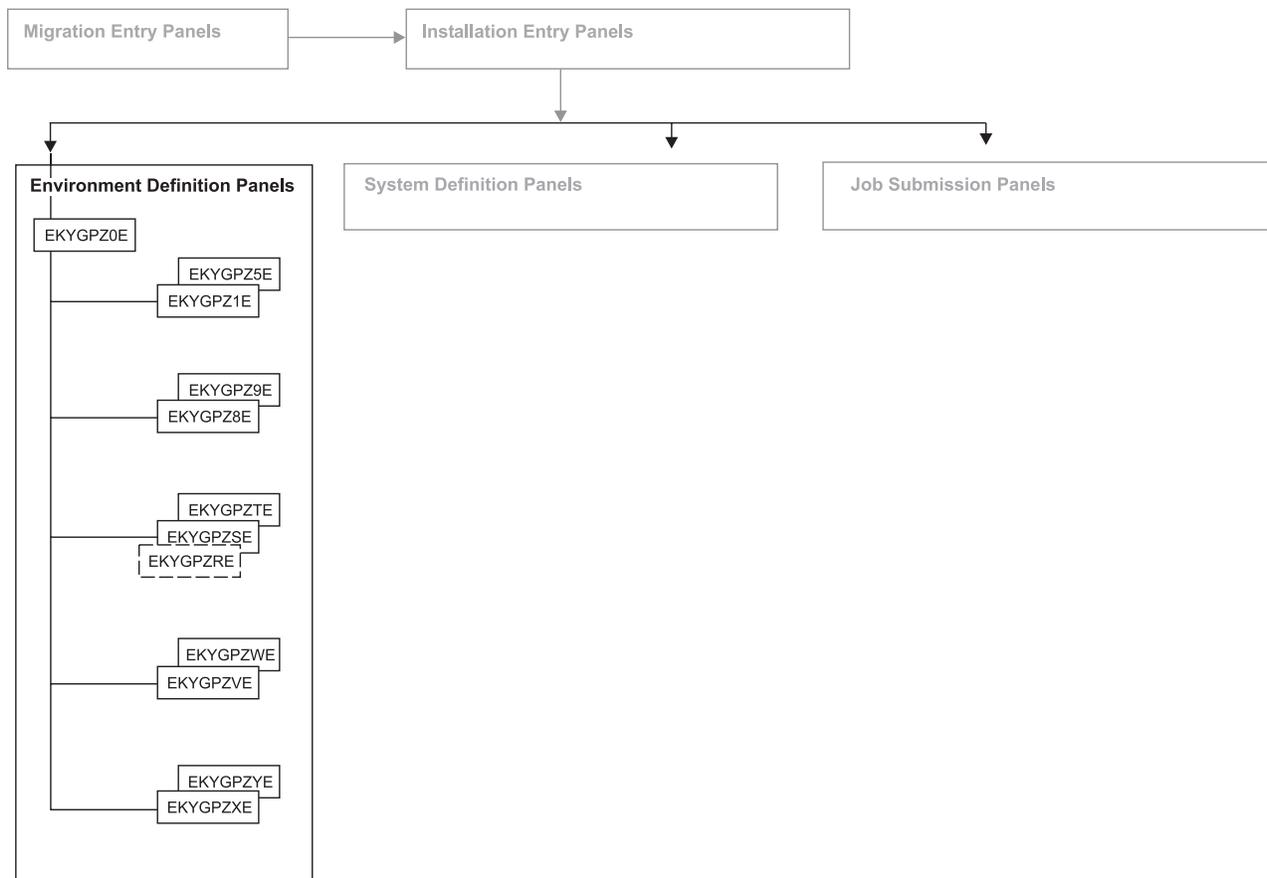


Figure 95. Panel flow for environment definition

Table 17. Environment definition panels

Panel	Used for	Figure
EKYGPZ0E	Starting the environment definition	Figure 96 on page 139
EKYGPZ1E	Identifying the library names used by IMS DPROP	Figure 93 on page 134
EKYGPZ2E	Identifying the IMS DPROP DBRM data set name and the IMS DPROP RESLIB library	Figure 98 on page 140
EKYGPZ3E	Identifying the utility copy program	Figure 99 on page 141
EKYGPZ4E	Specifying default job information	Figure 100 on page 142
EKYGPZ5E	Identifying the library that contains installation job members and the name of the target data set	Figure 101 on page 143
EKYGPZ8E	Defining EKYGSYS macro parameters	Figure 102 on page 144
EKYGPZ9E	Specifying the job statement to be used as input to the EKYGJCL macro	Figure 103 on page 146
EKYGPZRE	Specifying whether DB2 is available to the IMS DPROP audit trail	Figure 104 on page 147
EKYGPZSE	Specifying the DB2 subsystem parameters for the audit trail table	Figure 105 on page 148
EKYGPZTE	Specifying the DB2 subsystem parameters for the audit trail table (continued)	Figure 106 on page 149
EKYGPZVE	Defining the interface between IMS DPROP and the AD/Cycle LE/370 parameters	Figure 107 on page 150
EKYGPZWE	Creating a dummy module in the event that AD/Cycle LE/370 is not installed in your enterprise	Figure 108 on page 150
EKYGPZXE	Indicating whether the dynamic allocation exit routine is installed	Figure 109 on page 151
EKYGPZYE	Specifying whether to create a dummy EKYDAEX0 module	Figure 110 on page 152

Defining the environment

The DPROP environment parameters primary menu (EKYGPZ0E - Figure 96 on page 139) displays when you enter E on the command line in panel EKYGPM1E (Figure 93 on page 134).

```

EKYGPZ0E ----- DPROP - DPROP Environment Parameters Primary Menu -----
Command ==>

DPROP Environ-
ment:

1- Define DPROP Data Sets, Copy Program, and Jobcard
2- Define EKYGSYS Macro Parameters
3- Define Audit Trail Table Job Parameters
4- Define Interface to AD/Cycle LE/370
5- Define Interface to DPROP EKYRESLB Dynamic Allocation Exit Routine

E - Return

Enter option or move cursor before desired option.
Enter END command to return.

```

Figure 96. Environment Parameters Primary Menu

Select the options on this panel sequentially. Table 18 shows the options available from this panel and tasks you perform using them:

Table 18. Environment parameters primary menu options

Option	Used for	Displays panel
1	Identifying library names used by IMS DPROP	EKYGPZ1E – Figure 97 on page 140
2	Defining the EKYGSYS macro parameters	EKYGPZ8E – Figure 102 on page 144
3	Specifying the DB2 subsystem parameters for the audit trail table	EKYGPZSE – Figure 105 on page 148
4	Defining the interface between IMS DPROP and the AD/Cycle LE/370 parameters	EKYGPZVE – Figure 107 on page 150
5	Indicating whether the dynamic allocation exit routine is installed	EKYGPZXE – Figure 109 on page 151

The tasks involved with each option on panel EKYGPZ0E are described in sequence in the following topics.

Defining data set, copy program, and job card parameters

Selecting option 1 on the DPROP Environment Parameters Primary Menu panel (EKYGPZ0E), displays panel EKYGPZ1E (Figure 97 on page 140). EKYGPZ1E is the first of five panels you use to define data sets, copy program, and job card parameters.

```

EKYGPZ1E ----- DPROP - System Data Set Names (Panel 1 of 5) -----
Command ==>

Enter the fully qualified partitioned data set name below that contains
the DPROP macro members. The data set name must be the same as specified
in allocation job EKYALLOC, DDname SEKYMAC:
Macro Library          ==> DPROP.SEKYMAC

Enter the fully qualified partitioned data set name below that contains
the DPROP assembler sample exit members. The data set name must be the
same as specified in allocation job EKYALLOC, DDname SEKYSRC:
Assembler Source Library ==> DPROP.SEKYSRC

Enter the fully qualified partitioned data set name below that contains
the DBRC Skeleton members. The data set name must be the same as
specified in allocation job EKYALLOC, DDname SEKYSKEL:
DBRC Skeleton Library  ==> DPROP.SEKYSKEL

Press <ENTER> to commit changes and continue on the next panel
or enter END command to return.

```

Figure 97. System Data Set Names (Panel 1 of 5)

You use panel EKYGPZ1E to identify the library names used by IMS DPROP.

1. In the **Macro Library** field, type the name of the library containing the IMS DPROP macro members.
2. In the **Assembler Source Library** field, type the name of the library containing the IMS DPROP assembler sample exit members.
3. In the **DBRC Skeleton Library** field, type the name of the library containing the DBRC skeleton members.
4. Press Enter to commit your input and to display panel EKYGPZ2E (Figure 98 on page 140).

You use panel EKYGPZ2E to identify IMS DPROP data sets:

```

EKYGPZ2E ----- DPROP - System Data Set Names (Panel 2 of 5) -----
Command ==>

Enter the fully qualified partitioned data set name below that will contain
the DPROP DBRM members. The data set name must be the same as specified
in allocation job EKYALLOC, DDname SEKYDBRM:
DBRM Data Set Name    ==> DPROP.SEKYDBRM

Enter the fully qualified partitioned data set name below that will contain
protected DPROP program load modules. The data set name must be the same as
specified in allocation job EKYALLOC, DDname EKYRESLB:
DPROP RESLIB Library  ==> DPROP.EKYRESLB

Press <ENTER> to commit changes and continue on the next panel
or enter END command to return.

```

Figure 98. System Data Set Names (Panel 2 of 5)

1. In the **DBRM Data Set Name** field, type the name of the DBRM data set. The data set name must be the same as the data set specified in allocation job EKYALLOC, DD name EKYRESLIB.

2. In the **DPROP RESLIB Library** field, type the data set name of the RESLIB library. This library contains the program load modules. The data set name must be the same as specified in allocation job EKYALLOC, DD name EKYRESLB.
Recommendation: Figure 28 on page 44 is an example of defining a single IMS DPROP environment. For multiple environments, you must allocate new DBRM and RESLB data sets (outside of the ISPF-driven process). The DBRM data set names and the RESLIB library names must be unique for each environment. Two ways to satisfy this requirement are:
 - a. Copy the members from the original SEKYDBRM and EKYRESLB data sets into the new, unique data sets
 - b. Concatenate (for each environment):
 - The SEKYDBRM specified in the allocation job (EKYALLOC) with the unique DBRM data set name in all appropriate jobs
 - The EKYRESLB specified in the allocation job (EKYALLOC) with the unique IMS DPROP RESLB library name in all appropriate jobs
3. Press Enter to commit your input and to display panel EKYGPZ3E (Figure 99 on page 141).

```

EKYGPZ3E ----- DPROP - Copy Program Definition (Panel 3 of 5) -----
Command ==>

During generation of installation jobs, installation skeleton members
are copied from the source library, merged with data entered on the
installation panels, and copied into the target library.

Enter the name of the utility program used for the copy process and
library where the program resides:

Program Name   ==> IEBGENER
Data Set Name  ==> SYS1.LINKLIB

Note:The program you specify above must be compatible with SYSPRINT, SYSIN,
SYSUT1, and SYSUT2 DD statements (as used by the IEBGENER utility).

Press <ENTER> to commit changes and continue on the next panel
or enter END command to return.

```

Figure 99. Copy Program Definition (Panel 3 of 5)

You use panel EKYGPZ3E to identify the utility copy program.

1. In the **Program Name** field, type the name of the utility copy program.
2. In the **Data Set Name** field, type the data set name of the library where the program resides.
 The program you specify must be compatible with the SYSPRINT, SYSIN, SYSUT1, and SYSUT2 DD statements (as used by the IEBGENER utility).
3. Press Enter to commit your input and to display panel EKYGPZ4E (Figure 100 on page 142).

```
EKYGPZ4E -- DPROB - DPROB Environment Job Parameters (Panel 4 of 5) -----  
Command ==>
```

Enter the job statement for the DPROB Environment jobs:

Note: If present, the account definition, the job class, and the msgclass values are used as defaults on later job card definitions.

```
==> // USERD22C      JOB      (#ACCNT),,  
==> // CLASS=A,MSGCLASS=A,REGION=4096K,  
==> // NOTIFY=USERD22,USER=USERD22  
==> // *  
==> // *
```

Press <ENTER> to commit changes or enter END command to return.

Figure 100. Environment Job Parameters (Panel 4 of 5)

The values you specify on panel EKYGPZ4E are used as defaults on all subsequent job card panels.

You use panel EKYGPZ4E to:

1. Enter the following job fields:
 - JOB ID
 - CLASS
 - MSGCLASS
 - REGION
 - NOTIFY
 - USER ID
2. Press Enter to commit your changes and to display panel EKYGPZ5E (Figure 101).

If the default region size of your installation is 0 kilobytes, or if you have not defined a region size, the region size on the panel must be at least 4,096 KB.

Environment generation jobs require that DB2 create the audit trail table and compile certain IMS DPROB control modules. If DB2 is not included in the link list at your installation, you must include a JOBLIB card for the DB2 load library as part of this job card.

```
EKYGZ5E --- DPRO - Customized Installation Library (Panel 5 of 5) -----  
Command ==>
```

```
Enter a fully qualified new partitioned data set name and volume name that  
contains the customized DPRO installation job members:  
(This data set may NOTbe shared by multiple DPRO Environments)
```

```
Target Data Set Name ==> DPRO.INSTALL.ENV  
Volume Serial Name ==>( ignored if data set name )  
                        ( already exists           )
```

```
Press <ENTER> to commit changes or enter END command to return.
```

Figure 101. Customized Installation Library (Panel 5 of 5)

You use panel EKYGPZ5E to identify the *high_level_qualifier.INSTALL.environment_name* library.

1. In the **Target Data Set Name** field, type the name of the data set containing your installation job members.
2. In the **Volume Serial Name** field, type the name of the volume containing the target data set
3. Press Enter to commit your input and to display the primary menu panel, EKYGPZ0E (Figure 96 on page 139).

You now proceed with the next task on the primary menu, defining your EKYGSYS and EKYGJCL macro parameters.

Defining EKYGSYS and EKYGJCL macro parameters

Selecting option 2 from the DPRO Environment Parameters Primary Menu, EKYGPZ0E (Figure 96 on page 139), displays panel EKYGPZ8E (Figure 102). This is the first of two panels for specifying the EKYGSYS parameter definitions.

```
EKYGZ8E ---- DPRDP - EKYGSYS Parameter Definition (Panel 1 of 2) -----
Command ==>
```

```
Enter the DPRDP installation stage I EKYGSYS macro parameters below:
ROUTCDE =(2      )      ( MVS routcode(s), separated by commas )
SVCNO   = 248          ( a decimal value between 200 and 255 )
SUBSYS  =              ( a name up to four bytes in length )
SMFREC  = 132          ( a decimal value between 128 and 255 )
ILOGREC = EQ           ( a hexadecimal value between A0 and FF )
DBDV    =(254,0      )      ( length,offset in decimal )
PRSET   = PRSET1       ( a name up to eight bytes in length )
SQLDLM  =              ( A=apostrophe, D=default, Q=quotation mark )
DATE    = ISO          ( one of ISO, USA, EUR or JIS )
TIME    = ISO          ( one of ISO, USA, EUR or JIS )
EKYRESLB = DPRDP.EKYRESLB
```

For help with an input field, move cursor to the desired field and press HELP key.

Press <ENTER> to commit changes and continue on the next panel or enter END command to return.

Figure 102. EKYGSYS Parameter Definition (Panel 1 of 2)

Use panel EKYGPZ8E to define the EKYGSYS parameters:

1. In the **ROUTCDE** field, enter the MVS route codes used by IMS DPRDP to write messages to the MVS consoles with WTO and write to operator with reply (WTOR) macros.

The default is ROUTCDE=2.

In most cases, the route code you specify is the same as the route code MSGEN (IMSCTRL macro's MSC parameter) uses for writing IMS messages to MVS consoles.

2. In the **SVCNO** field, enter the SVC number for the IMS DPRDP type 4 SVC.

The value you use must be in the range of 200 to 255.

3. In the **SUBSYS** field, type the same MVS IMS DPRDP subsystem name as specified in member IEFSSNnn of SYS1.PARMLIB.

Selector-only sites do not use this value.

4. In the **SMFREC** field, type the SMF record type reserved for IMS DPRDP to write audit trail records to SMF.

You must select a record type in the range of 128 and 255. The default value is SMFREC=130.

The type you specify must not be used by other programs at your installation.

5. In the **ILOGREC** field, type the IMS log record code reserved for IMS DPRDP to write records to the IMS log.

IMS allows only record codes in the hexadecimal range X'A0' to X'FF'. The default is ILOGREC=E0.

Although IMS DPRDP asynchronous Receiver-only sites do not use this value, we recommend that you specify an IMS log record code in this field, because you may install an IMS DPRDP Selector or a synchronous system at a future date.

The code you specify must not be used by other programs at your installation.

6. In the **DBDV** field, type the length and offset of that portion of the DBD version ID used at your installation to describe significant DBD changes to data propagation.

The RUP checks this portion of the DBD version ID to detect inconsistencies between the IMS DPRDP directory's propagation request definitions and the DBDs that IMS uses. If the DBD changes after the MVG generates the propagation request, inconsistencies can occur. If an inconsistency occurs, you must regenerate the propagation request.

The maximum length for an IMS DBD version ID is 254 bytes. The default values for DBDV are (254,0). Valid values for the length are between 0 and 254; valid values for the offset are between 0 and 253. An offset of 0 indicates the first byte; and a length of 0 indicates that no checking occurs between the DBD version IDs in IMS and IMS DPRDP.

If you do not override the defaults provided on the panel, the RUP checks the entire version ID.

Selector-only sites do not require this value.

7. In the **PRSET** field, type the ID of the default set of propagation requests. The MVGU uses this ID when propagation requests are defined without an associated propagation request set.

The ID is an eight-character name. The first character must be either alphabetic, @, #, or £. The other characters can be alphabetic or numeric.

The default ID is PRSET1.

Selector-only sites do not require this value.

8. In the **SQLDLM** field, type the SQL string delimiter as defined in the DB2 installation panels (the SQLDELI field in DSNHDECP).

Specify any of the following:

SQLDLM=A

Apostrophe

SQLDLM=D

Default

SQLDLM=Q,

Quotation Mark

The CCU, the DLU, and the utility ISPF applications use the SQL string delimiter value to construct dynamic SQL statements. See the *DB2 Administration Guide* for more information.

Selector-only sites do not require this value.

9. In the **DATE** field, type the date format IMS DPRDP uses during DB2-to-IMS mapping for IMS fields defined to IMS DPRDP without field exit routines.

Valid formats are:

DATE=ISO

yyyy-mm-dd

DATE=USA

mm/dd/yyyy

DATE=EUR

dd.mm.yyyy

DATE=JIS

yyyy-mm-dd

The default is DATE=ISO.

Selector-only sites do not require this value.

10. In the **TIME** field, type the time format IMS DPRDP uses during DB2-to-IMS mapping for IMS fields defined to IMS DPRDP without field exit routines.

Valid formats are:

TIME=ISO
 hh.mm.ss

TIME=USA
 hh:mm AM or hh:mm PM

TIME=EUR
 hh.mm.ss

TIME=JIS
 hh:mm:ss

The default is TIME=ISO.

Selector-only sites do not require this value.

11. The name in the **EKYRESLB** field shows the fully qualified data set name of the APF-authorized library that IMS DPROB dynamically allocates to the EKYRESLB DD statement.

The value, which automatically displays in this panel, is the same as that specified on panel EKYGPZ2E (Figure 98 on page 140).

The value cannot be modified in this panel.

12. Press Enter to commit your input and to display panel EKYGPZ9E (Figure 103).

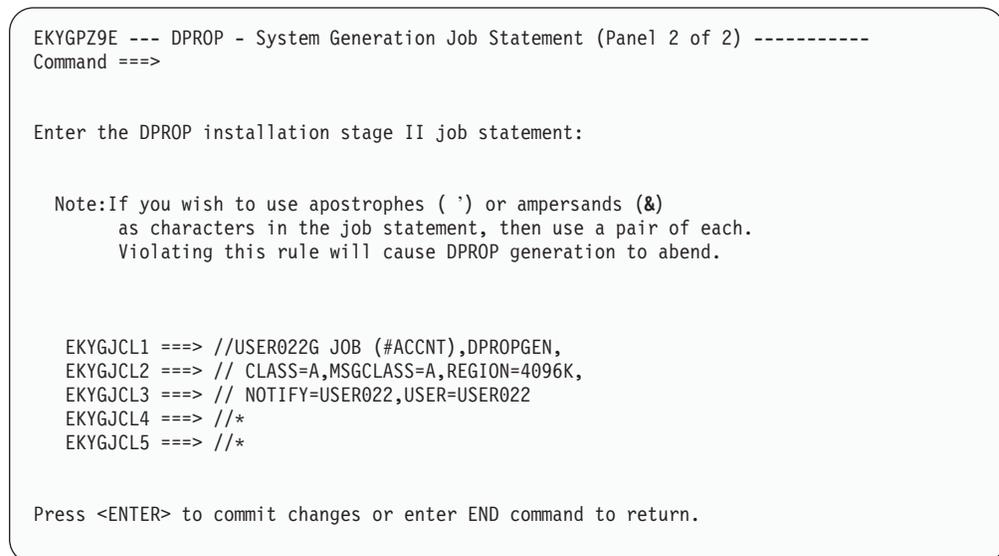


Figure 103. System Generation Job Statement (Panel 2 of 2)

You use panel EKYGPZ9E to specify the job statement used as input for the EKYGJCL macro used in Stage II of IMS DPROB generation.

1. Enter at least one line to generate the job statement.
 You can define additional JCL, JES2, or JES3 statements. All these statements are put in the Stage I source deck in the EKYJIN member and are submitted using panel EKYGPZ2E (Figure 138 on page 178).
2. Enter a JOBLIB card for the DB2 load library if DB2 is not included in the link list at your installation.
 Environmental generation jobs use DB2 to create the audit trail table and to compile certain control modules.
3. Press Enter to commit your input and to display panel EKYGPZ0E (Figure 96 on page 139).

Proceed to the next task, defining the audit trail table.

Defining the audit trail table job parameters

Selecting option **3** in panel EKYGPZ0E (Figure 96 on page 139) opens panel EKYGPZRE (Figure 104).

```
EKYGPZRE ----- DPROP - Audit Trail Table (Panel 1 of 3) -----
Command ==>

Is DB2 available on this site for DPROP Audit Trail use ?

    DB2 Available          ==>(YES or NO)

Press <ENTER> to commit changes and continue on the next panel
or enter END command to return.
```

Figure 104. Audit Trail Table (Panel 1 of 3)

1. To indicate whether DB2 is available for IMS DPROP audit trail use, in the **DB2 Available** field, specify:
 - YES** DB2 is available at the site. Panel EKYGPZSE displays (Figure 105 on page 148).
 - NO** DB2 is not available. Panel EKYGPZ0E displays. (Figure 96 on page 139)
2. Press Enter to display the appropriate panel.

Note: You must reply YES if a system that uses IMS DPROP DB2 directory tables is defined or is being defined. This includes LOG-ASYNCR and synchronous systems.

Selecting option **4** from the IMS DPROP Environment Parameters Primary Menu panel EKYGPZ0E (Figure 96 on page 139) displays panel EKYGPZSE (Figure 105). EKYGPZSE is the first of two panels used for supplying the DB2 subsystem parameters for the audit trail table.

```

EKYGPZSE P - DB2 Subsystem Parameters for Audit Trail Table (Panel 2 of 3)-----
Command ==>

Enter DB2 subsystem ID and DB2 volume catalog name used for the definition
of the DPR0P audit trail tables:
  DB2 Subsystem ID      ==> DSN
  DB2 VCAT name         ==> DB2

Enter program name, load library and DB2 plan name of a DB2 sample program:
  Program Name          ==> DSNTIAD
  Load Library          ==> DSN220.RUNLIB.LOAD
  DB2 Plan Name         ==> DSNTIA22

Enter Yesif your installation is using DB2 storage groups or
enter Noif you are using user-defined DB2 tablespaces:
  Storage Groups       ==> YES(YES or NO)

Press <ENTER> to commit changes and continue on the next panel
or enter END command to return.

```

Figure 105. DB2 Subsystem Parameters for Audit Trail Table (Panel 2 of 3)

To complete panel EKYGPZSE:

1. In the **DB2 Subsystem ID** field, type the DB2 subsystem ID used for audit trail installation.
2. In the **DB2 VCAT name** field, type the name of the DB2 volume catalog.
3. In the **Program Name** field, type the name of the DB2 program for processing SQL statements.
4. In the **Load Library** field, type the load library containing the DB2 program.
5. In the **DB2 Plan Name** field, type the name of the associated DB2 plan.
6. In the **Storage Groups** field, if you enter:
 - YES** Panel EKYGPZTE displays (Figure 106 on page 149). You use panel EKYGPZTE to specify the table space and database used for storing the audit trail table.
 - NO** This indicates DB2 storage groups are not to be used. The generated job will include a DEFINE CLUSTER statement which you use to specify the volume name to be used when defining the new cluster. Panel EKYGPZ0E displays (Figure 26 on page 43).
7. Press Enter and the appropriate panel displays.

You use panel EKYGPZTE for specifying storage group information. The initial field contents displayed on the panel are the values of the system being migrated.

```

EKYGPZTE ----- DPRO - Audit Trail Table (Panel 3 of 3) -----
Command ==>
Field contents are taken from DPRO Version 1 definitions.
Note: The Audit Trail Table Qualifier is used as the DB2 plan owner

Audit trail table specifications:                Use existing DB2 object:
DB2 Storage Group Name    ==> GDPROP           ==> NO      (YES or NO)
DB2 Database Name        ==> DDPRAUD          ==> NO      (YES or NO)
DB2 Tablespace Name      ==> SDPRAUD
Audit Trail Table Qualifier ==>

Enter the volume name used by the CREATE STOGROUP command:
Volume Serial Name      ==>

The audit trail table is accessed by the audit extract utility:
DB2 Application Plan Name ==> DPROPAUD

DB2 authorization IDs allowed to execute the audit extract utility plan:
==> PUBLIC
==>

Press <ENTER> to commit changes or enter END command to return.

```

Figure 106. Audit Trail Table (Panel 3 of 3)

To complete panel EKYGPZTE:

1. In the **DB2 Storage Group Name** field, type the name of the storage group IMS DPRO uses when it creates the audit trail table. To indicate whether an existing DB2 storage group is to be used, you specify:
 - YES** Use an existing DB2 storage group. You do not need to specify a volume name for the DB2 storage group.
 - NO** Create and use a new storage group. The generated job must include a CREATE STOGROUP statement. Also, you must specify the volume name to be used when creating the new DB2 storage group.
2. In the **DB2 Database Name** field, type the name of the database that IMS DPRO uses when it creates the audit trail table. To indicate whether or not an existing database name is to be used, you specify:
 - YES** Use an existing DB2 database name.
 - NO** The job must include the following statements:

```

DROP DATABASE
CREATE DATABASE

```
3. In the **DB2 Tablespace Name** field, type the table name that IMS DPRO uses during the creation of the audit trail table.
4. In the **Audit Trail Table Qualifier** field, type the table qualifier of the audit trail table that IMS DPRO uses during creation of the audit trail table. Only one audit trail table is used by all systems in an IMS DPRO environment.
5. In the **Volume Serial Name** field, enter the volume serial name that IMS DPRO uses during creation of the audit trail table.
6. In the **DB2 Application Plan Name** field, enter the application plan name associated with the Audit Extract utility.
7. In the **DB2 Authorization ID** field, enter the DB2 authorization ID needed to run the Audit Extract utility plan.
8. Press Enter to commit your input and to display the IMS DPRO Environment Parameters Primary menu, EKYGPZ0E (Figure 96 on page 139).

Defining the interface to the AD/Cycle LE/370

Selecting option **4** from panel EKYGPZ0E (Figure 96 on page 139) displays panel EKYGPZVE (Figure 107). Use panel EKYGPZVE to define the interface between IMS DPROB and the LE/370 parameters.

```
EKYGPZVE ---- DPROB - Interface to AD/Cycle LE/370 (Panel 1 of 2) -----
Command ==>

Is LE/370 installed on your MVS system ?

LE/370                ==>(YES or NO)

Press <Enter> to commit changes and continue on the next panel
or enter END command to return.
```

Figure 107. Interface to LE/370 (Panel 1 of 2)

If the LE/370 program is installed, IMS DPROB can support user exit routines written in high-level languages.

To indicate if the LE/370 program is installed:

1. Specify
 - YES** The LE/370 program is installed and panel EKYGPZ0E displays (Figure 96 on page 139).
 - NO** The LE/370 program is not installed and panel EKYGPZWE displays (Figure 108)
2. Press Enter and the appropriate panel displays.

```
EKYGPZWE ==>

IBM recommends that during DPROB installation, member EKYZPIPI
be copied to member CEEPIPI within the DPROB RESLIB.

Note: After creating this dummy module, MVS will not issue CSV003I
      messages while initializing DPROB in an address space.

DPROB RESLIB Library:

Create dummy CEEPIPI  ==>(YES or NO)

Press <ENTER> to commit changes or enter END command to return.
```

Figure 108. DPROB – Interface to LE/370 (Panel 2 of 2)

If the LE/370 is not installed, MVS puts out message CSV003I, noting the condition each time that IMS DPROB is initialized in an address space. To prevent the MVS message output, we recommend that you:

1. In the **Create dummy CEEPIPI** field, specify YES.
During installation, a job is generated that creates a dummy load module called CEEPIPI in the target RESLIB.
2. Press Enter to commit your input and to display panel EKYGPZ0E (Figure 26 on page 43).

If at a later date, you install the LE/370 program, you must:

- Delete the dummy load module CEEPIPI from the target RESLIB.
- In the **Create dummy CEEPIPI** field, Specify NO.

Defining the interface to EKYRESLB dynamic allocation exit routine

Selecting option 5 from the Environment Parameters Primary Menu panel (Figure 96 on page 139), displays panel EKYGPZXE (Figure 109). EKYGPZXE is the first of two panels used to define the EKYRESLB dynamic allocation exit routine.

```
EKYGPZXE Define DPROB EKYRESLB Dynamic Allocation Exit Routine (Panel 1 of 2)
Command ==>

Does your installation provide a DPROB EKYRESLB Dynamic Allocation
Exit Routine ?
Exit Routine          ==>(YES or NO)

Press <ENTER> to commit changes and continue on the next panel
or enter END command to return.
```

Figure 109. EKYRESLB Dynamic Allocation Exit Routine (Panel 1 of 2)

To indicate whether an EKYRESLB dynamic allocation exit routine is installed:

1. In the **Exit Routine** field, specify:
 - YES** The routine is already installed. Panel EKYGPZ0E (Figure 96 on page 139) displays.
 - NO** The routine is not installed. Panel EKYGPZYE (Figure 110 on page 152) displays.
2. Press Enter to display the appropriate panel.

EKYGPZYE ==>

IBM recommends that during DPROP installation, member EKYDAEXX be copied to member EKYDAEX0 within the DPROP RESLIB.

Note:After creating this dummy module, MVS will not issue CSV003I messages while initializing DPROP in an address space.

DPROP RESLIB Library:

Create dummy EKYDAEX0 ==>(YES or NO)

Press <ENTER> to commit changes or enter END command to return.

Figure 110. Defining the EKYRESLB dynamic allocation exit routine (Panel 2 of 2)

Recommendation: We recommend that you copy member EKYDAEXX member EKYDAEX0 within the RESLIB. To create the dummy module:

1. In the **Create dummy EKYDAEX0** field, specify:

YES Prevents displaying of the MVS message CSV003I by generating a job that creates a dummy load module called EKYDAEX0 in the target RESLIB.

NO Displays the MVS message CSV003I each time IMS DPROP is initialized in an address space.

2. Press Enter to commit your input and to display panel EKYGPZ0E (Figure 96 on page 139).

If at a later date you install an EKYRESLB dynamic allocation exit routine, you must:

1. Delete the dummy load module EKYDAEX0.
2. In the **Create dummy EKYDAEX0** field, specify NO.

You have now defined the IMS DPROP environment and are ready to define a migrating IMS DPROP system. See Chapter 17, "Migrating the system parameters," on page 153.

Chapter 17. Migrating the system parameters

This section describes the sequence of panels used when defining a migrating IMS DPROF system.

Topics in this section describes:

- “Using the System Specification Primary Menu panel” on page 155
- “Defining the IMS DPROF DB2 environment, job statements, and JOBLIB statements” on page 157
- “Modifying the IMS DPROF descriptive title” on page 156
- “Defining system, installation and IVP parameters” on page 159 (which includes binding the DB2 application plans)

Figure 111 shows the panel flow during system definition and Table 19 on page 154 explains how the panels are used, showing the panel name, its function, and the figure that represents the panel.

Panel Flow for Defining the Migrating IMS DPROF System

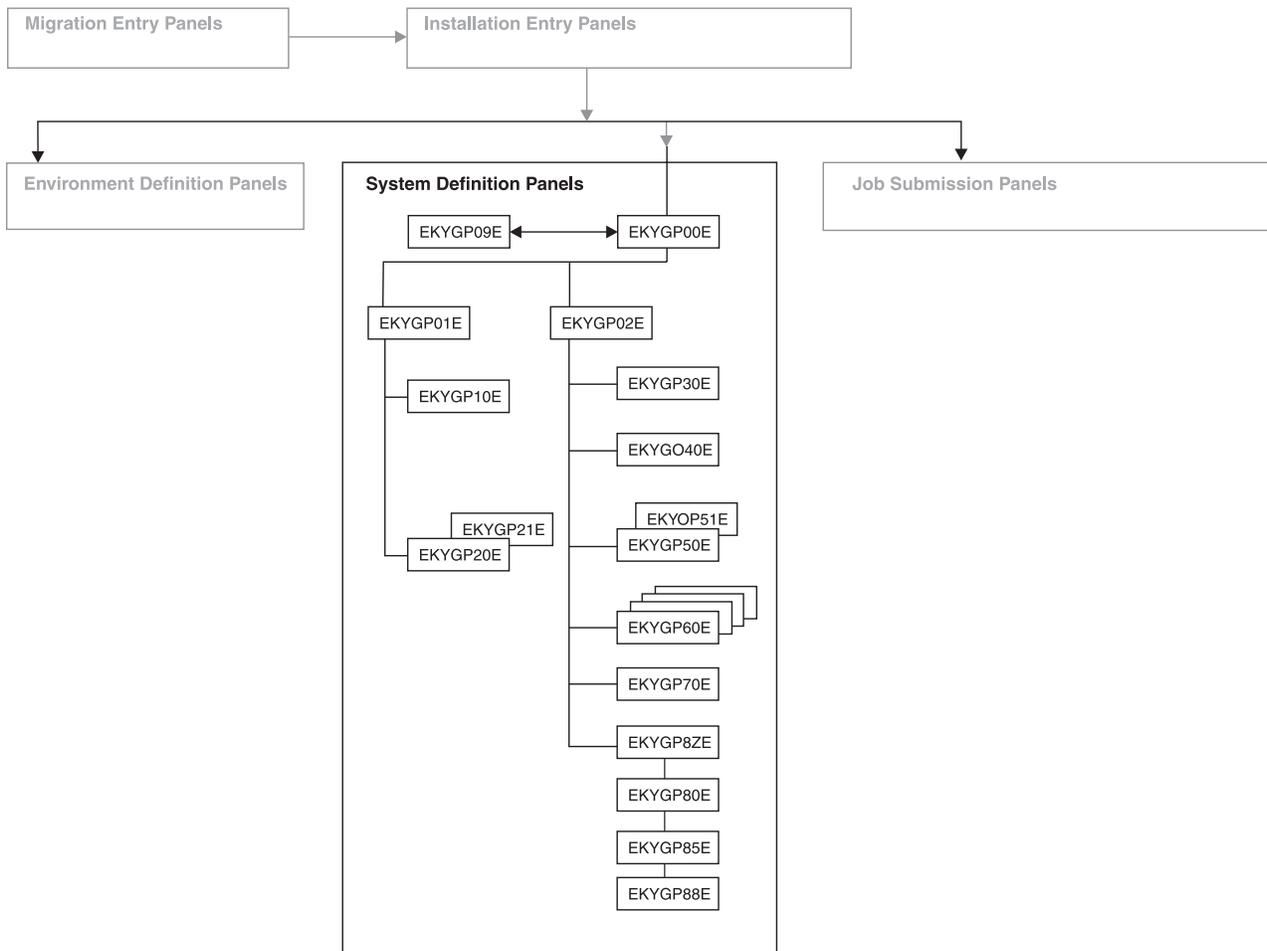


Figure 111. Panel flow for defining the migrating IMS DPROF system

Table 19. System definition panels

Panel	Used for	Figure
EKYGP00E	Starting the specification of system parameters	Figure 112 on page 156
EKYGP09E	Modifying the system title	Figure 113 on page 157
EKYGP01E	Defining either the DB2 subsystem parameters or the IMS DPROF system job and joblib statements	Figure 114 on page 157
EKYGP10E	Viewing, and optionally modifying, the original DB2 subsystem parameters	Figure 115 on page 158
EKYGP20E	View, and optionally modify, the original job statement from the original configuration of the IMS DPROF system	Figure 116 on page 158
EKYGP21E	Viewing, and optionally modifying, the original joblib statement from the original configuration of the IMS DPROF system	Figure 117 on page 159
EKYGP02E	Starting one of the following tasks: <ul style="list-style-type: none"> View the generation macro input parameters from the migrating system View and add to the directory table specifications from the migrating system Define the MVG input tables or the storage group name of the MVG input table Prepare various IMS DPROF utility application bind plans View, and optionally modify, the IMS DPROF and SMF data set specifications from the migrating system View, and optionally modify, the IVP parameters from the migrating system 	Figure 118 on page 160
EKYGP30E	Viewing the generation macro input parameters from the migrating system	Figure 119 on page 161
EKYOP40E	Viewing and adding to the directory table specifications from the migrating system	Figure 120 on page 161
EKYOP50E	Defining the MVG input tables	Figure 121 on page 163
EKYGP60E	Starting one of the following tasks: <ul style="list-style-type: none"> Prepare the binding of IMS DPROF and SQL update modules Define a DB2 SCU application bind plan and enter the necessary authorization IDs Define a DB2 MVG application bind plan and enter the necessary authorization IDs Define a DB2 CCU application bind plan and enter the necessary authorization IDs Define a DB2 DLU application bind plan and enter the necessary authorization IDs Define a DB2 PRU application bind plan and enter the necessary authorization IDs Define a DB2 GUU application bind plan and enter the necessary authorization IDs Define a DB2 application bind plan name for the LOG-ASYNCR Receiver and enter the necessary authorization IDs 	Figure 122 on page 164

Table 19. System definition panels (continued)

Panel	Used for	Figure
EKYGP62E	Preparing the binding of IMS DPROP and SQL update modules	Figure 123 on page 165
EKYGP63E	Preparing the binding of IMS DPROP and SQL update modules (continued)	Figure 124 on page 165
EKYGP64E	Defining a DB2 SCU application bind plan and enter the necessary authorization IDs	Figure 125 on page 166
EKYGP65E	Defining a DB2 MVG application bind plan and enter the necessary authorization IDs	Figure 126 on page 167
EKYGP66E	Defining a DB2 CCU application bind plan and enter the necessary authorization IDs	Figure 127 on page 167
EKYGP67E	Defining a DB2 DLU application bind plan and enter the necessary authorization IDs	Figure 128 on page 168
EKYGP68E	Defining a DB2 PRU application bind plan and enter the necessary authorization IDs	Figure 129 on page 169
EKYGP69E	Defining a DB2 GUU application bind plan and enter the necessary authorization IDs	Figure 130 on page 169
EKYGP6AE	Defining a DB2 application bind plan for the LOG-ASYNC Receiver and enter the necessary authorization IDs	Figure 131 on page 170
EKYGP70E	Viewing, and optionally modifying, the IMS DPROP and SMF data set specifications from the migrating system	Figure 132 on page 171
EKYGP80E	Viewing, and optionally modifying, the IVP parameters from the migrating system	Figure 134 on page 173
EKYGP88E	Viewing, and optionally modifying, the IVP parameters for the Selector system from the migrating system	Figure 135 on page 173

Using the System Specification Primary Menu panel

Selecting a system to migrate on panel

EKYGPM1E (Figure 93 on page 134) displays panel EKYGP00E (Figure 112 on page 156).

You use panel EKYGP00E to define the system to be migrated. Each selected option displays another panel or set of panels.

```

EKYGP00E ----- DPROP - System Specification Primary Menu -----
Command ==>

1 - Define DPROP DB2 Environment, Job Statements and JOBLIB Statements
2 - Define DPROP System and Installation Parameters and Installation Verification Program (IVP) Parameters
3 - Generate and Submit DPROP Installation and Installation Verification Program (IVP) Jobs

E - Return

T - Modify DPROP System Title

DPROP Environ-
ment :
DPROP-
System:
DPROP-System
Type :

Enter option or move cursor before desired option.
Enter END command to return.

```

Figure 112. System Specification Primary Menu

The options available on panel EKYGP00E allow you to:

- 1** Define IMS DPROP DB2 Environment, job statements and JOBLIB statements. Displays panel EKYGP01E (Figure 114 on page 157).
- 2** Define system, installation, and IVP parameters. Displays panel EKYGP02E (Figure 118 on page 160).
- 3** Generate and submit installation and verification program jobs. Displays panel EKYGP03E (Figure 137 on page 177).
- E** Quit this panel and return to panel EKYGPM1E (Figure 89 on page 131).
- T** Modify the IMS DPROP system title using panel EKYGP09E (Figure 113 on page 157).

Options **1**, **2** and **3** should be selected sequentially. When first entering the panel, all five options are highlighted. After completing the panels associated with an option, you return to panel EKYGP00E. If you have successfully entered the required information, the selected option number is no longer highlighted.

Modifying the IMS DPROP descriptive title

Selecting option **T** on panel EKYGP00E (Figure 112 on page 156), displays panel EKYGP09E (Figure 113 on page 157).

```

EKYGP09E ==>

DPRROP System Name :
DPRROP System Number:

Modify DPRROP System Title:
Descriptive Title   ==>>

DPRROP Environ-
ment:

Press <ENTER> to commit changes or enter ENDcommand to return.

```

Figure 113. Modify the IMS DPRROP system title

Environment name, system name, and system number are filled in automatically.

To modify the descriptive title:

1. In the **Modify DPRROP System Title** field, type the modified title.
2. Press Enter to commit your change and display panel EKYGP00E (Figure 112 on page 156).

Defining the IMS DPRROP DB2 environment, job statements, and JOBLIB statements

Selecting option **1** on panel EKYGP00E (Figure 112 on page 156) displays panel EKYGP01E (Figure 114).

Panel EKYGP01E allows you to:

```

EKYGP01E ----- DPRROP - System Environment -----
Command ==>>

1 - Define DB2 Subsystem Parameters
2 - Define DPRROP System Job Statements and, if required,
   Joblib Statements
E - Return

DPRROP Environ-
ment :
DPRROP-
System:
DPRROP-System
Type :

Enter option or move cursor before desired option.
Enter END command to return.

```

Figure 114. System Environment

1. Select option **1**, to define the DB2 subsystem parameters and to display panel EKYGP10E (Figure 115 on page 158).
2. Select option **2**, to define the job and, if required, the JOBLIB statements and to display panel EKYGP20E (Figure 116 on page 158).
3. Select **E** to return to primary menu panel, EKYGP00E (Figure 112 on page 156).

Defining the DB2 subsystem parameters

Selecting option **1** from panel EKYGP01E (Figure 114) displays panel EKYGP10E.

```

EKYGP10E ----- DPROP - DB2 Subsystem Parameters -----
Command ==>
                                DPROP-System  DPROP-System  DPROP-System
                                Type: MQApply  Name : DPROPAP1  Number: 2
Enter DB2 subsystem ID and DB2 volume catalog name to be used for the
definition of the DPROP directory and the MVG input tables:
  DB2 Subsystem ID      ==> DSN
  DB2 VCAT name         ==> DB2

Enter program name, load library and DB2 plan name of a DB2 sample program:
  Program Name          ==> DSNTIAD
  Load Library           ==> DSN610.RUNLIB.LOAD
  DB2 Plan Name         ==> DSNTIA61
Enter Yes if your installation is using DB2 storage groups or
enter No if you are using user-defined DB2 tablespaces:
  Storage Groups        ==> YES          (YES or NO)

Enter default DB2 authorization IDs to be granted for DPROP components:
  ==> PUBLIC
  ==>

Press ENTER to commit changes or enter END command to return.

```

Figure 115. DB2 Subsystem Parameters

The DB2 subsystem parameters displayed on panel EKYGP10E are taken from the original configuration of the system you are migrating. For a description of the DB2 subsystem parameters, see “Defining the DB2 subsystem parameters” on page 60.

1. Change the parameters as needed.
2. Press Enter to commit your changes and display panel EKYGP01E (Figure 114 on page 157).

Defining the job and JOBLIB statements

Selecting option 2 from panel EKYGP01E (Figure 114 on page 157) displays panel EKYGP20E. This is the first of two panels used to define the job statements.

Defining the job statements

```

EKYGP20E ----- DPROP - Job Statement Definition (Panel 1 of 2) -----
Command ==>
                                DPROP-System  DPROP-System  DPROP-System
                                Type: MQApply  System: DPROPAP1  Number: 2
Enter the job statement for the DPROP installation and IVP jobs:

  ==> //USER022G      JOB      (#ACCNT),DPROPGEN,
  ==> // CLASS=A,MSGCLASS=A,
  ==> // REGION=4096K,NOTIFY=USER022,USER=USER022
  ==> //*
  ==> //*

Note: Entering '@MEMBER' as the programmers name, the system
      replaces '@MEMBER' with the name of the member containing
      the generated installation or IVP job.

Press ENTER to commit changes and continue on the next panel
or enter END command to return.

```

Figure 116. Job Statement Definition (Panel 1 of 2)

The job statement displayed in panel EKYGP20E is taken from the original configuration of the system you are migrating.

1. Change the parameters as needed.

2. Press Enter to commit your changes and display panel EKYGP21E (Figure 117).

Defining the JOBLIB statements

EKYGP21E (Figure 117) is the second of two panels and is used to define the JOBLIB statement.

```

EKYGP21E ----- DPROP - Joblib Statement Definition (Panel 2 of 2) -----
Command ==>
                                DPROP-System  DPROP-      DPROP-System
                                Type:          System:    Number:
If the DPROP RESLIB, IMS RESLIB, DB2 RESLIB, Data Refresher LOADLIB,
or MQSeries LOADLIB, etc. are not included in your installation's
linklist (SYS1.PARMLIB(LNKSTnn)), enter a joblib statement below.
Press  HELP  to see sample coding:

====> /*
====> /*
====> /*
====> /*
====> /*
====> /*
====> /*
====> /*
====> /*
====> /*
====> /*

Press ENTER to commit changes or enter END command to return.

```

Figure 117. Joblib Statement Definition (Panel 2 of 2)

The parameters displayed on panel EKYGP21E are from the original configuration of the system you are migrating.

You can enter up to ten lines on the JOBLIB statement. The procedure automatically generates the JOBLIB statement in the customized jobs. Any data sets specified in the JOBLIB statement must be APF-authorized.

1. Enter a JOBLIB statement as needed.
 - For Version 2 Release 2, if you defined the RESLIB in the JOBLIB statement, change the RESLIB name to the Version 3 Release 1 RESLIB name.
2. Press Enter to commit your changes and display panel EKYGP01E (Figure 114 on page 157).

Defining system, installation and IVP parameters

Selecting option 2 from panel EKYGP00E (Figure 112 on page 156) displays panel EKYGP02E.

```

EKYGP02E ----- DPROP - System Parameters and Job Generation -----
Command ==>

1 - Define DPROP Generation Macro
2 - Define DPROP Directory Tables
3 - Define DPROP MVG Input Tables ( optional )
4 - Define Utility Application Plan Parameters
5 - Define DPROP and SMF Data Set Specifications
6 - Define Installation Verification Program (IVP) Parameters

E - Return

DPROP Environ-
ment : ENV1
DPROP-
System: DPROPAP1
DPROP-System
Type : MQApply

Enter option or move cursor before desired option.
Enter END command to return.

```

Figure 118. System Parameters and Job Generation

Table 20 shows the options on panel EKYGP02E, explains how the options are used, and shows the figures that represent each panel associated with an option:

Table 20. System parameters and job generation options

Option	Used for	Displays panel
1	Viewing the generation macro input parameters from the migrating system	EKYGP30E – Figure 119 on page 161
2	Viewing and adding to the directory table specifications from the migrating system	EKYOP40E – Figure 120 on page 161
3	Viewing and adding to the MVG input tables specifications from the migrating system	EKYOP50E – Figure 121 on page 163
4	Starting to define the application bind plan for the IMS DPROR utilities	EKYGP60E – Figure 122 on page 164
5	Viewing, and optionally modifying, the IMS DPROR and SMF data set specifications from the migrating system	EKYGP70E – Figure 132 on page 171
6	Viewing, and optionally modifying, the IVP parameters from the migrating system	EKYGP87E – Figure 134 on page 173

Selecting option 3 is only required if you were using the MVG input tables to define propagation requests in Version 2 Release 2.

Defining the Generation macro

Selecting option 1 from panel EKYGP02E (Figure 118) displays panel EKYGP30E (Figure 119 on page 161).

```

EKYGP30E ----- DPROP - Generation Macro Parameters -----
Command ==>
                                DPROP-System  DPROP-  DPROP-System
                                Type:         System:  Number:
Enter the DPROP installation stage I EKYGDPR macro parameters:
Note: The DPROP directory table qualifier must have the
      SYSADM privilege because it is used as the DB2 plan owner.

Directory Table Qualifier ==>
VLF Class                  ==>
DB2 CDC Subexit Routine   ==>          (a name up to 8 bytes in length)
SYNC Systems Only:
Status File Name          ==>
Status File VOLSER Name   ==>
SYNC Sysplex Systems Only:          (Enabled via APAR PQ11070)
PDS VLF Class             ==>
GMTS PDS Name             ==>

For help with an input field, move cursor to the desired field and press HELP
For help with panel, move cursor anywhere except an input field and press HELP.

Press ENTER to commit changes or enter END command to return.

```

Figure 119. Generation Macro Parameters

The parameters displayed on panel EKYGP30E are taken from the original configuration of the system you are migrating. The information it contains is used as input for the EKYGDPR macro.

All the fields in the panel EKYGP30E are set to write protect to avoid changes to these parameters. Changing the system parameters can only take place during an initial installation process.

For an explanation of these fields, see “Defining the IMS DPROP Generation macro” on page 64.

Defining the directory tables

Selecting option 2 from panel EKYGP02E (Figure 118 on page 160) displays panel EKYOP40E (Figure 120).

```

EKYOP40E ----- DPROP - Directory Tables Save Job Specifications -----
Command ==>
                                DPROP-SYSTEM: V2R1MIG    DPROP-SYSTEM NUMBER: 1

A job saves the current DPROP directory tables for a possible fallback
this DPROP system.

Directory Database Name:   V2R1MIG    Storage Group Name: DP124AS
Directory Tablespace Name: DP12DITS

DPROP directory save tables specifications:    Using existing DB2 obje
DB2 Storage Group Name ==> DP124ASG          ==> YES      (YES or
DB2 Database Name      ==> V1R1MIG          ==> YES      (YES or
DB2 Tablespace Name    ==>                  ( must not exist yet in
Enter the volume name used by the CREATE STOGROUP command:
Volume Serial Name      ==>
DB2 authorization IDs allowed to update the DPROP directory save table
==> PUBLIC

Press <ENTER> to commit changes or enter END command to return.

```

Figure 120. Directory Tables Save Job Specifications

A job for migrating IMS DPROT directory tables is generated from information entered on panel EKYOP40E. This job consists of a CREATE TABLE statement step and a save step.

All directory tables are saved in DB2 tables. The table name of the save tables is the name of the IMS DPROT directory table with the extension `_SAVER1`. The saved directory tables are stored in their own table space.

You can delete directory save tables and table space when you are finished with migration.

Information you previously specified at the time you initially installed the migrating system is used as input to this panel (EKYOP40E). Information in panel EKYOP40E is complete after you specify:

- the DB2 storage group
 - the database name and table space name where the IMS DPROT directory tables are to be stored
 - the DB2 authorization IDs that are allowed to update the IMS DPROT directory tables
1. If you specified in panel EKYGP10E (Figure 44 on page 61) that DB2 storage groups are:
 - To be used, panel EKYOP40E contains this storage group information. You must indicate whether an existing DB2 storage group is used when creating the IMS DPROT directory save tables. If you specify:
 - YES** An existing DB2 storage group is used and you are not required to specify a volume name for the DB2 storage group.
 - NO** A new storage group is used and the generated job includes a CREATE STOGROUP statement. You must also specify the volume name that is used when creating the new DB2 storage group.
 - Not to be used, the generated job includes a DEFINE CLUSTER statement. You must specify the volume name used when defining the new cluster in panel EKYOP40E.
 2. Indicate whether an existing DB2 database name is used when creating the directory save tables. Specify:
 - YES** If you plan to use an existing DB2 database name.
 - NO** To use a new DB2 database. The generated job then includes the following statements:

```
DROP DATABASE
CREATE DATABASE
```
 3. Define a unique DB2 table space name for the directory save tables of each IMS DPROT system within a particular DB2 system. Type the DB2 authorization IDs allowed to update the directory panel EKYGP02E (Figure 118 on page 160).
 4. Press Enter after completing panel EKYGP40E to display panel EKYGP02E (Figure 118 on page 160).

Defining the MVG input tables

Selecting option **3** from panel EKYGP02E displays panel EKYOP50E, shown in Figure 121 on page 163.

IMS DPROT generates a job for migrating the MVG input tables from information entered in panel EKYOP50E.

You do not need to use this panel if you are using DataRefresher.

```
EKYOP50E ----- DPROP - MVG Input Tables Save Job Specifications -----
Command ==>
                DPROP-System:DPROP...   DPROP-System Number:

A job saves the current DPROP MVG input tables for a possible fallback of
this DPROP system.

    MVGIN Database Name:                Storage Group Name: GDROP
    MVGIN Tablespace Name:

MVGIN save tables specifications:        Using existing DB2 object:

    DB2 Database Name    ==> DDPRDIR      ==> YES(YES or NO)
    DB2 Tablespace Name  ==> SDPRDIR( must not exist yet in DB2 )
Enter the volume name used by the DEFINE CLUSTER command:
    Volume Serial Name   ==>
    DB2 authorization IDs allowed to update the DPROP MVG input save tables:
    ==> PUBLIC

Press <ENTER> to commit changes or enter END command to return.
```

Figure 121. MVG Input Tables Save Job Specifications

All MVG input tables are saved in DB2 tables. The table name of the save tables is the name of the MVG input table with the extension `_SAVER1`. The saved MVG input tables are stored in their own table space.

You can delete the MVG save tables and table space when you are finished with migration.

You specify the DB2 table space and database in which the IMS DPROP MVG input tables are stored in panel EKYOP50E as follows: If you specified in the panel EKYGP10E (Figure 115 on page 158), that:

- DB2 storage groups are used, panel EKYOP50E contains this storage group information. You must indicate whether an existing DB2 storage group is used when creating the IMS DPROP MVG input save tables. If you specify:
 - YES** An existing DB2 storage group is used and you are not required to specify a volume name for the DB2 storage group.
 - NO** A new storage group is used and the generated job includes a `CREATE STOGROUP` statement. You must specify the volume name that is used when creating the new DB2 storage group.
- DB2 storage groups are not used, the generated job includes a `DEFINE CLUSTER` statement. You specify the volume name used when defining the new cluster in panel EKYOP50E.

To complete panel EKYOP50E:

1. In the **DB2 Database Name** field, type the name of the DB2 database to be used when creating the MVG input save tables.
2. In the **DB2 Tablespace Name** field, type the name of the DB2 table space to be used when creating the MVG input tables.
3. Indicate if an existing DB2 database is used when creating the IMS DPROP MVG input tables. If you specify `NO`, a new database is used and the generated job includes the following statements:

```
DROP DATABASE
CREATE DATABASE
```

If you plan to use the same DB2 storage group or DB2 database used for the IMS DPROP audit trail table, as specified in panel EKYGPZTE (Figure 106 on page 149

page 149), or for the IMS DPROB directory tables, as specified in panel EKYGP40E (Figure 120 on page 161), Specify YES for the DB2 object regardless of whether it currently exists.

4. Type the DB2 authorization IDs allowed to update the MVG input tables.
5. Press Enter to commit your changes and to display panel EKYGP02E (Figure 118 on page 160).

Binding the DB2 application plans

Selecting option 4 on the panel EKYGP02E (Figure 118 on page 160) opens panel EKYGP60E (Figure 122).

```

EKYGP60E ----- DPROB - Bind DB2 Application Plans -----
Command ==>>

1 - Prepare Binding of DPROB and SQL Update Modules
2 - Bind Plan for the DPROB Status Change Utility (SCU)
3 - Bind Plan for the DPROB Mapping Verification
   and Generation (MVG)
4 - Bind Plan for the DPROB Consistency Check Utility (CCU)

Reverse Propagation Only
5 - Bind Plan for the DPROB DL/I Load Utility (DLU)

DPROB Receiver System only
6 - Bind Plan for the DPROB PRDS Registration Utility (PRU)
7 - Bind Plan for the DPROB Group Unload Utility (GUU)
8 - Bind Plan for the DPROB Receiver System

DPROB MQSeries Apply System only
9 - Bind Plan for the DPROB Apply System

E - Return

DPROB Environ-
ment :
DPROB
System:
DPROB-System
Type :

Enter option or move cursor before desired option. Enter END command to return.

```

Figure 122. Bind DB2 application plans

Selecting an option from panel EKYGP60E opens a related panel or set of panels. Table 21 shows the options on panel EKYGP60E, explains how the options are used, and shows the figures that represent each panel associated with an option:

Table 21. Options for panel EKYGP60E

Option	Used for	Displays panel
1	Preparing bind for IMS DPROB and SQL update modules	EKYGP62E – Figure 123 on page 165
2	Defining a DB2 SCU application bind plan and entering the necessary authorization IDs	EKYGP64E – Figure 125 on page 166
3	Defining a DB2 MVG application bind plan and entering the necessary authorization IDs	EKYGP65E – Figure 126 on page 167
4	Define a DB2 CCU application bind plan and entering the necessary authorization IDs	EKYGP66E – Figure 127 on page 167
5	Defining a DB2 DLU application bind plan and entering the necessary authorization IDs	EKYGP67E – Figure 128 on page 168
6	Defining a DB2 PRU application bind plan and entering the necessary authorization IDs	EKYGP68E – Figure 129 on page 169
7	Defining a DB2 GUU application bind plan and entering the necessary authorization IDs	EKYGP69E – Figure 130 on page 169

Table 21. Options for panel EKYGP60E (continued)

Option	Used for	Displays panel
8	Defining a DB2 GUU application bind plan for the LOG-ASYNC Receiver and entering the necessary authorization IDs	EKYGP6AE – Figure 131 on page 170

Preparing a bind plan for IMS DPROF and SQL update modules

Selecting option 1 from the panel EKYGP60E (Figure 122 on page 164) displays panel EKYGP62E (Figure 123).

```

EKYGP62E ==>

The installation process binds DBRMs as packages into a package collection,
identified by a collection ID, before binding them into a Plan.

Read/Write DPROF collection ID, used by DBRMs of DPROF modules that
update the DPROF directory:
Collection ID 1      ==>

Read only DPROF collection ID, used by DBRMs of DPROF modules that
read the DPROF directory:
Collection ID 2      ==>

Read/Write propagating applications collection ID, used by DBRMs of
SQL update modules for installation verification jobs:
Collection ID 3      ==>

Press <Enter> to commit changes and continue on the next panel
or enter END command to return.
    
```

Figure 123. Preparing bind for IMS DPROF and SQL Update Modules (Panel 1 of 2)

1. Define three different DB2 collection IDs in panel EKYGP62E to separate the read-only IMS DPROF modules from the read-write modules, and to separate both of them from the non-IMS DPROF modules (SQL update modules).
2. Press Enter after completing the information required in panel EKYGP62E to display panel EKYGP63E (Figure 124).

```

EKYGP63E ==>

Grant the CREATE IN privilege for collection ID 1 to authorization IDs:
==> PUBLIC
Grant the EXECUTE privilege for collection ID 1 to authorization IDs:
==> PUBLIC

Grant the CREATE IN privilege for collection ID 2 to authorization IDs:
==> PUBLIC
Grant the EXECUTE privilege for collection ID 2 to authorization IDs:
==> PUBLIC

Grant the CREATE IN and the EXECUTE privileges for collection ID 3 to
authorization IDs:
==> PUBLIC
==>

Press <ENTER> to commit changes or enter END command to return.
    
```

Figure 124. Preparing bind for IMS DPROF and SQL update modules (Panel 2 of 2)

3. Use panel EKYGP63E to define the necessary DB2 authorization IDs for each collection ID.
For additional information about DB2 package authorization, refer to “Creating the privileges for the DB2 collection IDs” on page 73 and the appropriate *Administrators Guide* for your propagation mode.
4. Press Enter to commit your input and display panel EKYGP60E (Figure 122 on page 164).

Preparing binding plan for the SCU

Selecting option **2** from panel EKYGP60E (Figure 122 on page 164) displays panel EKYGP64E (Figure 125).

```
EKYGP64E ----- DPRDP - Bind SCU Application Plan -----  
Command ==>  
  
Each DPRDP system needs its own Status Change utility (SCU) application plan.  
  
DB2 application plan specifications:  
SCU Plan Name ==> EKYSUCU00  
  
DB2 authorization IDs allowed to execute the SCU plan:  
==> PUBLIC  
==>  
  
Press <ENTER> to commit changes or enter END command to return.
```

Figure 125. Bind SCU Application Plan

The parameters displayed on panel EKYGP64E are from the original configuration of the system you are migrating.

1. Use panel EKYGP64E to define a unique DB2 SCU application plan name for each IMS DPRDP system of a particular DB2 system.
2. Type the authorization IDs necessary to run the SCU plan.
3. Press Enter to commit your changes and display panel EKYGP60E (Figure 122 on page 164).

Preparing binding plan for the MVG application

Selecting option **3** from panel EKYGP60E (Figure 122 on page 164) displays panel EKYGP65E (Figure 126 on page 167).

```

EKYGP65E ----- DPROP - Bind MVG Application Plan -----
Command ==>

Each DPROP system needs its own Mapping Verification and Generation (MVG) plan.

DB2 application plan specifications:
MVG Plan Name ==> EKYMVG00

DB2 authorization IDs allowed to execute the MVG plan:
==> PUBLIC
==>

Press <ENTER> to commit changes or enter END command to return.

```

Figure 126. Bind MVG Application Plan

The parameters displayed in panel EKYGP65E are from the original configuration of the system you are migrating.

1. Use panel EKYGP65E to define a unique DB2 MVG application plan name for each IMS DPROP system of a particular DB2 system.
2. Type the authorization IDs necessary to run the MVG plan.
3. Press Enter to commit your changes and display panel EKYGP60E (Figure 122 on page 164).

Preparing binding plan for the CCU

Selecting option 4 from the panel EKYGP60E (Figure 122 on page 164) displays panel EKYGP66E (Figure 127).

```

EKYGP66E ----- DPROP - Bind CCU Application Plan -----
Command ==>

Each DPROP system needs its own Consistency Check utility (CCU) plan.

DB2 application plan specifications:
General CCU Plan Name ==> EKYCCU00

If you plan to run CCU in a BMP region, you can specify binding a plan for
every CCU program that may run as a BMP. The plan name will be equal to the
program name. The CCU programs are "EKYC100X", "EKYC300X" and "EKYC600X".
Bind Plans for CCU BMP ==>( Yes or No )

Note:Binding plans for CCU BMP can only be specified once per DB2 system.

DB2 authorization IDs allowed to execute the CCU plan(s):
==> PUBLIC
==>

Press <ENTER> to commit changes or enter END command to return.

```

Figure 127. Bind CCU Application Plan

The parameters displayed on panel EKYGP66E are from the original configuration of the system you are migrating.

1. Use panel EKYGP66E to define a unique DB2 CCU application plan name for each IMS DPROP system of a particular DB2 system.

If you plan to run the CCU in a BMP region, you can bind a plan for each CCU program that can run as a BMP. If you do not want to bind these plans for the CCU running as a BMP, define the plans for the CCU running as a BMP in the Resource Translation Table (RTT).

You can only specify once in a DB2 system the plans for the CCU running as a BMP.

2. Type the authorization IDs necessary to run the CCU plan.
3. Press Enter to commit your changes and display panel EKYGP60E (Figure 122 on page 164).

Preparing binding plan for the DLU

Selecting option **5** from the panel EKYGP60E (Figure 122 on page 164), displays panel EKYGP67E (Figure 128).

```
EKYGP67E ----- DPRDP - Bind DLU Application Plan -----  
Command ==>  
  
Each DPRDP system needs its own DL/I Load utility (DLU) plan.  
  
DB2 application plan specifications:  
  General DLU Plan Name ==> EKYDLU00  
  
If you plan to run DLU in a BMP region, you can specify binding a plan for  
every DLU program that may run as a BMP. The plan name will be equal to the  
program name. The DLU programs are "EKYDLU02", "EKYDLU04" and "EKYDLU05".  
  Bind Plans for DLU BMP ==>          ( Yes or No )  
  
Note: Binding plans for DLU BMP can only be specified once per DB2 system.  
  
DB2 authorization IDs allowed to execute the DLU plan(s):  
  ==> PUBLIC  
  ==>  
  
Press <ENTER> to commit changes or enter END command to return.
```

Figure 128. Bind DLU Application Plan

The parameters displayed on panel EKYGP67E are from the original configuration of the system you are migrating.

1. Use panel EKYGP67E to define a unique DB2 DLU application plan name for each IMS DPRDP system of a particular DB2 system.
If you plan to run the DLU in a BMP region, you can bind a plan for every DLU program that can run as a BMP. If you do not want to bind these plans and you run the DLU as a BMP, define the plans for the DLU running as a BMP in the RTT.
You can only specify once in a DB2 system the plans for the DLU running as a BMP.
2. Type the authorization IDs necessary to run the DLU plan.
3. Press Enter to commit your changes and display panel EKYGP60E (Figure 122 on page 164).

Defining the binding plan for the PRU

Selecting option **6** from the panel EKYGP60E, (Figure 122 on page 164) displays panel EKYGP68E (Figure 129).

```

EKYGP68E ----- DPROP - Bind PRU Application Plan -----
Command ==>

Each Log-async Receiver system needs its own PRDS Registration Utility
(PRU) application plan.

DB2 application plan specifications:
  PRU Plan Name ==> EKYPRU00

DB2 authorization IDs allowed to execute the PRU plan:
  ==> PUBLIC
  ==>

Press ENTER to commit changes or enter END command to return.

```

Figure 129. Bind PRU Application Plan

You use panel EKYP68E to define a unique DB2 application plan name for the PRU for each IMS DPRDP system of a particular DB2 system.

To complete panel EKYP68E, you:

1. In the **PRU Plan Name** field, type a unique DB2 application plan name for the PRU.
2. In the **DB2 authorization ID** fields, type the authorization IDs necessary to run the PRU plans.
3. Press Enter to commit your input and to display panel EKYP60E (Figure 122 on page 164).

Defining the binding plan for the GUU

Selecting option 7 from the panel EKYP60E (Figure 122 on page 164) displays panel EKYP69E (Figure 130).

```

EKYP69E ----- DPRDP - Bind GUU Application Plan -----
Command ==>

Each Log-async Receiver system needs its own Group Unload Utility (GUU)
application plan.

DB2 application plan specifications:
  GUU Plan Name ==> EKYGUU00

DB2 authorization IDs allowed to execute the GUU plan:
  ==> PUBLIC
  ==>

Press ENTER to commit changes or enter END command to return.

```

Figure 130. Bind GUU Application Plan

You use panel EKYP69E to define a unique DB2 application plan name for the GUU for each IMS DPRDP system of a particular DB2 system.

To complete panel EKYGP69E, you:

1. In the **GUU Plan Name** field, type a unique DB2 application plan name for the GUU.
2. In the **DB2 authorization ID** fields, type the authorization IDs necessary to run the GUU plans.
3. Press Enter to commit your input and to display panel EKYGP60E (Figure 122 on page 164).

Defining the binding plan for the LOG-ASYNC Receiver

Selecting option **8** from the panel EKYGP60E, (Figure 122 on page 164) displays panel EKYGP6AE (Figure 131).

You use panel EKYGP6AE to define a unique DB2 application plan name for the

```
EKYGP6AE ----- DPR0P - Bind Log-async Receiver Application Plan -----  
Command ==>
```

Each Log-async Receiver system needs its own Receiver application plan.

DB2 application plan specifications:

Receiver Plan Name ==> EKYRCV00

DB2 authorization IDs allowed to execute the Receiver plan:

==> PUBLIC

==>

Press ENTER to commit changes or enter END command to return.

Figure 131. Bind LOG-ASYNC Receiver Application Plan

LOG-ASYNC Receiver for each IMS DPR0P system of a particular DB2 system.

To complete panel EKYGP6AE, you:

1. In the **Receiver Plan Name** field, type a unique DB2 application plan name for the LOG-ASYNC Receiver.
2. In the **DB2 authorization ID** fields, type the authorization IDs necessary to run the Receiver plans.
3. Press Enter to commit your input and to display panel EKYGP60E (Figure 122 on page 164).

Defining IMS DPR0P and SMF data sets

Selecting option **5** from the panel EKYGP02E (Figure 118 on page 160) displays panel EKYGP70E (Figure 132 on page 171).

```

EKYGP70E ----- DPRO - DPRO and SMF Data Set Specifications -----
Command ==>
                                DPRO-System  DPRO-      DPRO-System
                                Type: SelRcvr  System: DPRODA1 Number: 3

Data set name that contains the DBRMs of the SQL Update Modules:
DBRM Data Set Name  ==>

Data set qualifiers for DPRO data sets used during IVP:
First Qualifier     ==>
Second Qualifier    ==>

DPRO will write audit records to the SMF data set. These audit records
are extracted from the SMF data set to a temporary data set and written
into the DPRO audit trail table.
SMF Data Set Name   ==> SYS1.MANX

Press ENTER to commit changes or enter END command to return.

```

Figure 132. DPRO and SMF Data Set Specifications

The DB2 subsystem parameters displayed in panel EKYGP70E are from the original configuration of the system you are migrating.

The DBRM data set name must be the name of the library that contains the DBRMs of the SQL update modules.

The SMF data set name must be the same name as the one used at your installation.

1. If you have more than one data set, for example MANX and MANY, select one to insert into your standard job. If you later use the other data set, use either panel EKYGPC0E (Figure 144 on page 183) or panel EKYGPD0E (Figure 145 on page 184) to edit job member EKYJVAUD before submitting it.
2. Press Enter to commit your changes and display panel EKYGP02E (Figure 118 on page 160).

Defining Installation Verification Program parameters

Selecting option 6 from the panel EKYGP02E (Figure 47 on page 64) displays panel EKYGP8ZE (Figure 133 on page 172).

```

EKYGP8ZE --- DPRDP - Installation Verification Program Parameters -----
Command ==>

DPRDP Environ-
ment :
DPRDP-
System:
DPRDP-System
Type :

1 - Define IVP Parameters

2 - Define IVP Parameters for an MQSeries system (Capture/Apply)

3 - Define IVP Parameters for a Selector system

E - Return

Enter option or move cursor before desired option.
Enter END command to return.

```

Figure 133. Installation Verification Program Parameters

To use panel EKYGP8ZE:

1. In the command line, enter the option you want to perform, or move the cursor in front of the option you want to select. Table 22 shows the options on this panel, what you use them for, and the next panel displayed:

Table 22. Options for Panel EKYGP8ZE

Option	Used for	Displays panel
1	Defining IVP parameters. (This action is required for all systems)	EKYGP80E – Figure 65 on page 82
2	Defining IVP parameters for the MQSeries systems Capture and Apply. (This action is not applicable for migration from V2 Release 2 to V3 Release 1)	EKYGP85E – Figure 66 on page 83
3	Defining IVP parameters for the Selector system. (This action is valid only for the Selector system).	EKYGP88E – Figure 67 on page 84

2. Press Enter to process the selected action and to display the corresponding panel.

Notes:

1. If an option is invalid for the system you are defining, the option number is shown in red.
2. The valid options must be processed in sequence.

Defining the IVP job parameters

Selecting option 1 from the panel EKYGP8ZE displays panel EKYGP80E (Figure 134 on page 173).

```

EKYGP80E -- DPRO - Define Installation Verification Jobs Parameters -----
Command ==>
                DPRO-System   DPRO-System   DPRO-System
                Type:         System:         Number:
Define the parameters required for installation verification.
The verification jobs create sample databases and datasets as required.

The generation job parameters can be modified or the defaults accepted:
Sample DB2 Database Name   ==> DDPRSAMP (Must not exist yet in DB2)
Sample DB2 Tablespace Name ==> SDPRSAMP
Sample DB2 Table Qualifier ==> USER022
Sample DB2 Plan Name for RUP ==> DPRSAMP (Must not exist yet in DB2)
Sample DB2 Plan Name for HUP ==> DPHSAMP (Must not exist yet in DB2)

Sample IMS Log Data Set Name ==> USER022.SUER022.IMSLOG
IMS RESLIB Data Set Name   ==> IMSESA.RESLIB
IMS Maclib Data Set Name   ==> IMSESA.MACLIB
VOLSER for Sample Datasets ==>

Note: All data sets created for installation verification are temporary
and are discarded after completion of the process.

Press ENTER to commit changes or enter END command to return.

```

Figure 134. Define Installation Verification Jobs Parameters

The field contents displayed in panel EKYGP80E are from the original configuration of the system you are migrating. The data contained in panel EKYGP80E is used only for the IVP jobs.

1. Make any changes necessary.
2. Press Enter to commit your changes and display panel EKYGP8ZE (Figure 133 on page 172).

Defining The IVP parameters for the Selector system

Selecting option **3** from panel EKYGP8ZE (Figure 133 on page 172) displays panel EKYGP88E (Figure 135):

```

EKYGP88E ----- DPRO - Define IVP Parameters for Selector system -----
Command ==>

The DPRO Selector requires certain data sets to be created during
DPRO system generation. Please enter names for these data sets:

Enter the fully qualified data set name for the DPRO
Selector Control File (SCF):
    SCF Name   ==>

Enter the fully qualified data set name for the DPRO
Uncommitted Log Record data set (ULR):
    ULR Name   ==>

Enter the Volume Serial Name for these data sets:
    Volume Serial Name   ==>

Press ENTER to commit changes or enter END command to return.

```

Figure 135. Define IVP Parameters for Selector system

The IMS DPRO LOG-ASYNC Selector requires that two particular data sets be created during environment generation. These data sets are the Selector control file (SCF) and the uncommitted log record (ULR) data sets.

Important: If you are going to use Version 2 Release 2 SCF and ULR data sets in your Version 3 Release 3 environment, do not specify the Version 2 Release 2 data set names on panel EKYGP88E. Specify unique names for the Version 3 Release 1 data sets. Later in the migration process (in panel EKYGPE0E), a job is generated that first deletes any data sets with the names specified on panel EKYGP88E, and then allocates new data sets with those specified names. If you specify your Version 2 Release 2 data set names in panel EKYGP88E, you will lose the contents of those data sets when the Version 3 Release 1 data sets are generated. The new data sets are initialized with the Version 3 Release 1 headers, but they will otherwise remain empty. After you complete the migration process, you can copy the contents of the Version 2 Release 2 SCF and ULR data sets into the Version 3 Release 1 data sets. Another reason for leaving the SCF and ULR data sets outside of the migration process is for fallback purposes. For more information, see “Asynchronous migration considerations” on page 121.

Use panel EKYGP88E to enter the names of the SCF and ULR data sets:

1. In the SCF Name field, type the name of the SCF data set.
2. In the ULR Name field, type the name of the ULR data set.
3. In the Volume Serial Name field, type the name of the volume where the SCF and ULR data sets reside.
4. Press ENTER to commit your input and display panel EKYGP8ZE.
If you successfully completed the information in each of the displayed panels, all of the option numbers in panel EKYGPZ8E are no longer highlighted.
5. If you are satisfied with your changes, press the END key (F3) or enter END on the command line to display panel EKYGP02E (Figure 47 on page 64).
If you successfully completed the information in each of the displayed panels, all of the option numbers in panel EKYGP02E are no longer highlighted.
6. If you are satisfied with your changes, press the END key (F3) or enter END on the command line to display panel EKYGP00E (Figure 42 on page 59).

Chapter 18. Generating and submitting installation and IVP jobs

At this point in the migration process, you generate, review, edit (if needed), and submit the IMS DPROP installation and IVP jobs. In the previous sections, you provided input parameters that IMS DPROP needs in order to create the Version 3 Release 1 environment and system that you want. This section describes:

- Creating and submitting the following jobs:
 - IMS DPROP environment installation jobs (including generating the stage I job)
 - IMS DPROP system installation jobs
 - IVP jobs
- Verifying IMS DPROP installation using either:
 - PRs defined by DataRefresher
 - PRs defined by the MVG application

Figure 136 shows you the panel flow involved in submitting IMS DPROP jobs and Table 23 on page 176 explains how the panels are used, showing the panel name, its function, and the figure that represents the panel.

Panel Flow for IMS DPROP Job Submission

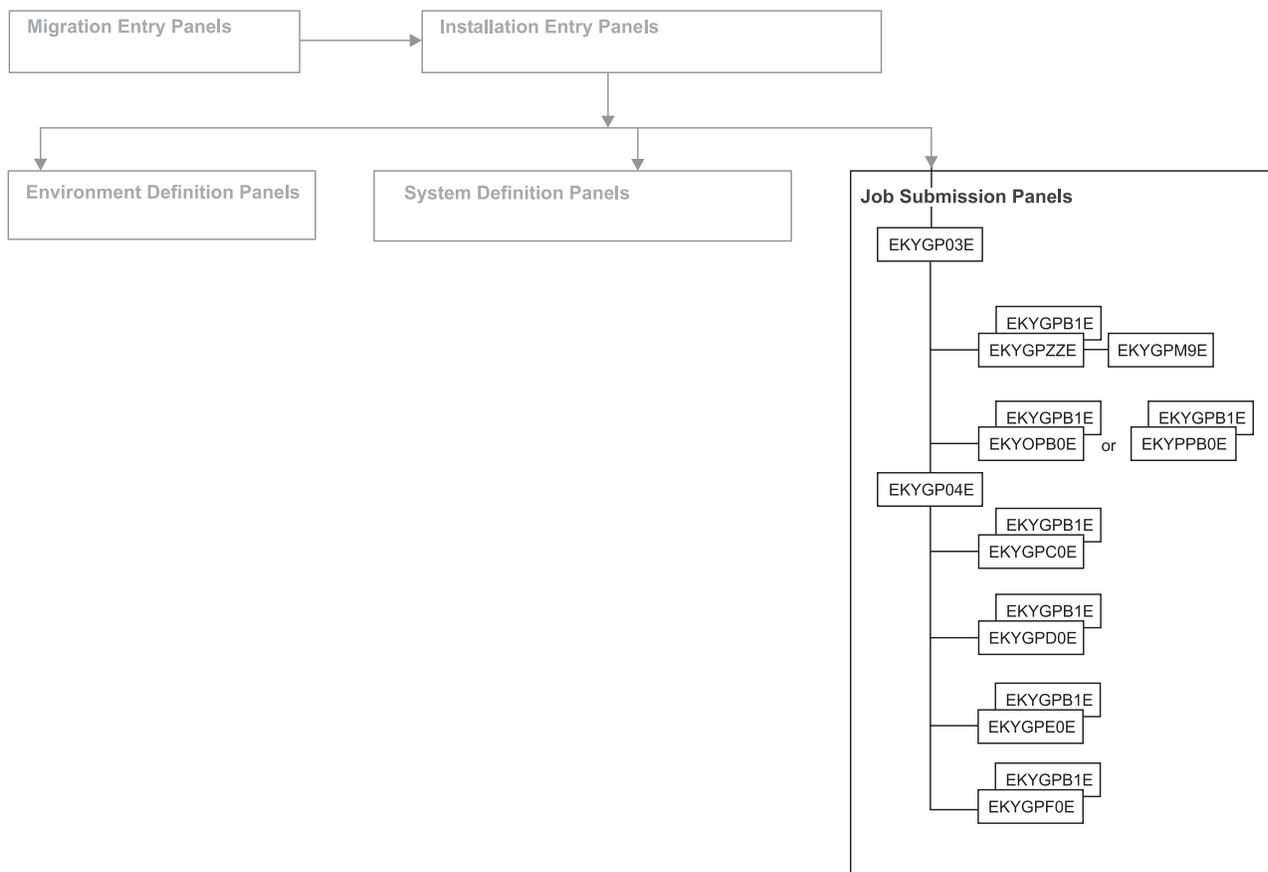


Figure 136. Panel flow for job generation and submission

Table 23. Job generation and submission panels

Panel	Used for	Figure
EKYGP03E	Starting one of the following tasks: <ul style="list-style-type: none"> • Generate, review, edit (if necessary), and submit environment installation jobs • Generate, review, edit (if necessary), and submit system installation jobs • Verify installation using DataRefresher-defined PRs • Verify installation using PRS defined using MVG input tables 	Figure 137 on page 177
EKYGPZZE	Generating, editing, and submitting environment jobs	Figure 138 on page 178
EKYGPM9E	Editing and submitting the generation stage I job (EKYJIN)	Figure 139 on page 179
EKYGPB1E	Temporarily changing the job statements	“Changing the job information” on page 179
EKYPPB0E	Generating, editing, and submitting system installation jobs	Figure 142 on page 182
EKYOPB0E	Generating, editing, and submitting system installation jobs (continued)	Figure 141 on page 180
EKYGPC0E	Generating, editing, and submitting IVP jobs that use propagation requests defined using DataRefresher	Figure 144 on page 183
EKYGPD0E	Generating, editing, and submitting IVP jobs that use propagation requests defined using MVG input tables	Figure 145 on page 184
EKYGPE0E	Generating, editing, and submitting IVP jobs for a Selector	Figure 146 on page 185
EKYGPF0E	Generating, editing, and submitting IVP jobs for a Receiver	Figure 145 on page 184

Submitting the installation and IVP jobs

Selecting option **3** from the panel EKYGP00E (Figure 112 on page 156) displays panel EKYGP03E (Figure 137). You use panels EKYGP03E and EKYGP04E to complete the parameters necessary to submit the installation and IVP jobs.

```

EKYGP03E ----- DPROP - Submit Installation and Verification Jobs -----
Command ==>

1 - Generate and Edit for Submission Installation Jobs
  for DPROP Environment

2 - Generate and Edit for Submission Installation Jobs
  for DPROP System

3 - Generate and Edit for Submission Installation Verification
  Program (IVP) Jobs for DPROP System

E - Return

DPROP Environ-
ment :
DPROP-
System:
DPROP-System
Type :

Enter option or move cursor before desired option. Enter END command to return.

```

Figure 137. Submit Installation and Verification Jobs

Table 24 shows each option on panel EKYGP03E and the panels that open when you select the option:

Table 24. Options for panel EKYGP03E

Option	Takes You to Panel	Page	Mode
1 - Required	EKYGPZZE – Environment Installation Job Submission	178	
2 - Required	EKYOPB0E – System Installation Job Submission	180	synchronous
	or	or	or
	EKYPPB0E – System Installation Job Submission	182	asynchronous
3 - Optional	EKYGP04E – Installation Verification Process Jobs	183	synchronous

See Appendix B, “Checklists to verify customization, migration, and IVP jobs,” on page 199 for details about verifying the installation and IVP process.

Submitting the environment installation job

Selecting option 1 on panel EKYGP03E (Figure 137) displays panel EKYGPZZE (Figure 138 on page 178).

```

EKYGPZZE --- DPROP - DPROP Environment Installation Job Submission -----
Command ==>
                                                    DPROP Environ-
                                                    ment:

1 - Generate          EKYJIN  ( DPROP Generation Stage I Job      )
2 - Edit              EKYJIN  ( DPROP Generation Stage I Job      )

3 - Generate and Edit N.A.    (* NOT APPLICABLE )
4 - Generate and Edit N.A.    (* NOT APPLICABLE )

5 - Generate and Edit EKYJADT ( DPROP Audit Trail Table Creation Job )
6 - Generate and Edit EKYJLE  ( DPROP LE/370 Job                  )
7 - Generate and Edit EKYJDAE ( DPROP Dynamic Alloc Exit Routine Job )

E - Return
C - Temporarily Change Job Information

Enter option or move cursor before desired option.
Enter END command to return.

```

Figure 138. Environment Installation Job Submission

Select each of the highlighted options in sequence, and submit the JCL job from the ISPF EDIT panel. The return codes from each job step are detailed in Appendix B, “Checklists to verify customization, migration, and IVP jobs,” on page 199.

You can edit an already generated job, or regenerate and edit a job using options that are not highlighted in the panels.

1. Modify each job, as needed:

EKYJIN

EKYJIN automatically creates and submits the Stage II job. The Stage II job creates the IMS DPROP load module EKYG000X, which includes three unique modules for each defined IMS DPROP system: EKYGC nnn , EKYGH nnn , and EKYGM nnn (nnn is the system number). These modules enable the SQL statements generated by IMS DPROP to access the following directory tables:

- The master table
- The RUP control block table
- The HUP control block table

EKYJMDT

Binds the audit trail utility.

EKYJLE

Copies the dummy A/DC LE/370 module EKYZPIP1 to CEEPIPI in EKYRESLB.

EKYJDAE

Copies the dummy dynamic allocation exit module, EKYDAEXX to EKYDAEX0 in EKYRESLB.

2. Select option:

- **E** or enter END on the command line to return to panel EKYGP03E (Figure 137 on page 177).
- **C** to display panel EKYGPB1E (Figure 140 on page 180). You use panel EKYGPB1E to temporarily change the job information.

Generating the Stage I job

Selecting option **1** on panel EKYGPZZE (Figure 138 on page 178) displays panel EKYGPM9E (Figure 139).

```
----- *** DPROP Systems - DPROP Stage I Job Generation *** -----
EKYGPM9E ==>

                                DPROP Environment:

Number of DPROP Systems   :   DPROP Systems ready to generate:
New DPROP Systems        :   Modified DPROP Systems           :
EKYGSYS parameters modified: NO

Specify the DPROP generation mode:
Generate   ==> MOD   ( ALL - Generate all DPROP systems       )
                  ( MOD - Generate modified/new DPROP systems )
                  (           or modified EKYGSYS parameters   )

Press ENTER to commit changes and continue on the next panel
or enter END command to return to the previous panel.
```

Figure 139. Stage I Job Generation

1. In the **Generate** field, type one of the following values:

ALL Compiles and links modules for all IMS DPROP systems that are ready for generation. A system is ready for generation when all the input panels have been edited.

MOD Generates:

- Only the systems that have been modified in panels EKYGP30E (Figure 119 on page 161), EKYGP31E, or EKYGP88E (depending on which system) after generation.
- The modified EKYGSYS parameter module to include environment parameters.

Specify **MOD** when no modified or new systems and no EKYGSYS parameters are modified, to generate the EKYGSYS parameter module EKYG000X only.

Depending on the presence of modified or new systems, or modified EKYGSYS parameters, the application places a default value in the **Generate** field. However, you can overwrite this value.

2. Press Enter, after completing your changes, to return to panel EKYGPZZE (Figure 138 on page 178).

Option **2** on panel EKYGPZZE allows you to edit and submit the EKYJIN member generated in option **1**.

Successful generation of IMS DPROP requires binding of the packages or plans of all components of the generated systems. Option **2** in panel EKYGP03E (Figure 137 on page 177) highlights the panel options that are necessary to run the bind jobs in either panel EKYOPB0E (Figure 141 on page 180) or panel EKYPPB0E (Figure 142 on page 182).

Changing the job information

Selecting option **C** from the panel EKYGPZZE (Figure 138 on page 178) displays panel EKYGPB1E (Figure 140 on page 180).

```

EKYGPB1E --- Change Job Information Panel-----
==>

You can change the following job statement parameters:

Job Name      ==>Notify ==>User ==>
Initiator Class ==>
Message Class ==>

    Note:Changes to the job statement only affect the job group
           you are currently working on.

Press <ENTER> to commit changes or enter END command to return.

```

Figure 140. Change Job Information

You use panel EKYGPB1E to specify temporary changes to the job statement. You can also select this panel from the following job submission panels:

- EKYOPB0E (Figure 141 or EKYPPB0E Figure 142 on page 182)
- EKYGPC0E (Figure 144 on page 183)
- EKYGPD0E (Figure 145 on page 184)

Any changes you make and commit in panel EKYGPB1E are only valid for the jobs selected in the current job submission panel.

1. Make any temporary changes required.
2. Press Enter to commit your changes and return to either:
 - Panel EKYGPZZE (Figure 138 on page 178)
 - The job submission panel from which you selected the option **C**

Submitting the system installation job

Selecting option 2 on panel EKYGP03E (Figure 137 on page 177) opens either:

- Panel EKYOPB0E (Figure 141)
- Panel EKYPPB0E (Figure 142 on page 182)

```

EKYOPB0E ----- DPROP - DPROP System Installation Job Submission -----
Command ==>

                DPROP Environment:                DPROP-System:

Job processing for not-highlighted options ==> EDITONLY      ( Regenerate or )
                                                    ( Editonly      )

  1 - Generate and Edit SnnnESTO ( DPROP DPROP Stop Job      )
  2 - Generate and Edit SnnnDIRT ( DPROP Directory Table Migration Job )
  3 - Generate and Edit SnnnMVG  ( DPROP MVG Input Table Migration Job )
  4 - Generate and Edit SnnnALLB ( DPROP Package Bind Job      )
  5 - Generate and Edit SnnnSCUB ( DPROP SCU Bind Job          )
  6 - Generate and Edit SnnnMVGB ( DPROP MVG Bind Job          )
  7 - Generate and Edit SnnnCCUB ( DPROP CCU Bind Job          )
  8 - Generate and Edit SnnnDLUB ( DPROP DLU Bind Job          )
  9 - Generate and Edit SnnnCREA ( DPROP SQL Update Modules & PRCBs Job )
 10 - Generate and Edit SnnnRSET ( DPROP DPROP Start and Activation Job )

E - Return
C - Temporarily Change Job Information

Enter option or move cursor before desired option.
Enter END command to return.

```

Figure 141. Synchronous System Installation Job Submission for Migration

Selecting one of the options on the panel places you in ISPF edit mode for the member associated with that option. You can modify and submit the job from the edit panel.

The *nnn* in the job names represents the IMS DPROP system number. The system number contains leading zeroes if necessary.

To complete panel EKYPPB0E or EKYOPB0E:

1. Select option **C** to display panel EKYGPB1E (Figure 140 on page 180). You use panel EKYGPB1E to temporarily change the job information. See “Changing the job information” on page 179 for details about how you use this panel.
2. Select a job to process by selecting a highlighted number.
3. Edit the fields as required.
4. Submit the job from the ISPF edit panel.
5. Select option **E**, press the END key (F3), or enter END on the command line to return to panel EKYGP03E (Figure 137 on page 177).

The installation job submission panels for installation and migration have the following differences:

- Before migrating a synchronous IMS DPROP system, stop the migrating system using the SCU function ESTOP DPROP (Job *Snnn*ESTO).
Job *Snnn*ESTO runs in the previous version IMS DPROP environment.
- The jobs *Snnn*DIRT and *Snnn*MVGT contain job steps that create a backup of the IMS DPROP directory tables and, optionally, the MVG input tables for migration. The directory tables and MVG input tables are created in installation mode. Jobs *Snnn*DIRT and *Snnn*MVGT run in the Version 3 Release 1 environment.

In installation mode, the bind jobs are followed by the initialization job. In migration mode, the bind jobs are followed by:

- A job that issues the following SCU commands to recreate the SQL update modules and the program request control blocks (PRCBs):
 - INIT STATF,ESTOPPED
 - MVG RECREATE ALL

If all the propagation requests (in the system being migrated) are PRTYPE=U, modify the MVGUIN DD statement parameters from “RECREATE=ALL” to “RECREATE=ALL,CBTABLE”. If any of the propagation requests are *not* PRTYPE=U, the CBTABLE modification is not necessary.

- A job that issues the SCU RESET DPROP,DUBIOUS and ACTIVATE ALL commands (*Snnn*RSET).

```

EKYPPB0E ----- DPRO - DPRO System Installation Job Submission -----
Command ==>
                                DPRO Environment:          DPRO-System:

Job processing for not-highlighted options ==> EDITONLY    ( Regenerate or )
                                                ( Editonly      )
  1 - Generate and Edit  SnnnDIRT ( DPRO Directory Table Migration Job)
  2 - Generate and Edit  SnnnMVG  ( DPRO MVG Input Table Migration Job)
  3 - Generate and Edit  SnnnALLB ( DPRO Package Bind Job )
  4 - Generate and Edit  SnnnSCUB ( DPRO SCU Bind Job )
  5 - Generate and Edit  SnnnMVB  ( DPRO MVG Bind Job )
  6 - Generate and Edit  SnnnCCUB ( DPRO CCU Bind Job )
  7 - Generate and Edit  SnnnPRUB ( DPRO PRU Bind Job )
  8 - Generate and Edit  SnnnGUUB ( DPRO GUU Bind Job )
  9 - Generate and Edit  SnnnRCVB ( DPRO Receiver Bind Job )
 10 - Generate and Edit  SnnnCREA ( SQL Update Modules & PRCB Recreate )

E - Return
C - Temporarily Change Job Information

Enter option or move cursor before desired option. Enter END command to return.

```

Figure 142. LOG-ASYNC System Installation Job Submission for Migration

Selecting one of the options on the panel places you in ISPF edit mode for the member associated with that option. You can modify and submit the job from the edit panel.

The *nnn* in the job names represents the IMS DPRO system number. The system number contains leading zeroes if necessary.

Submitting the system installation job

Selecting option **3** on panel EKYGP03E (Figure 137 on page 177) displays panel EKYGP04E.

```

EKYGP04E DPRO - Submission Installation Verification Program (IVP)Jobs - -----
Command ==>
                                DPRO Environ-
                                ment :
                                DPRO-
                                System:
                                DPRO-System
                                Type :

  1 - Generate and Edit IVP for MQSeries Capture System
  2 - Generate and Edit IVP for MQSeries Apply System

  3 - Generate and Edit IVP for Synchronous Propagation
      (SYNC) system if using Data Refresher
  4 - Generate and Edit IVP for Synchronous Propagation
      (SYNC) system if using MVG Input Tables

  5 - Generate and Edit for DPRO Selector System
  6 - Generate and Edit for DPRO Receiver System

E - Return

Enter option or move cursor before desired option. Enter END command to return

```

Figure 143. IMS DPRO Submission Installation Verification Program Jobs

Table 25 on page 183 shows the options on this panel and what panel opens when you select them:

Table 25. Options for panel EKYGP04E

Option	Takes You to Panel	Page	Mode
3 - Optional	EKYGPC0E – Installation Verification using DataRefresher	Figure 144 on page 183	synchronous
4 - Optional	EKYGPD0E –Installation Verification Using MVG Input Tables	Figure 145 on page 184	asynchronous
5 - Optional	Generate, edit, and submit IVP jobs for a Selector	Figure 146 on page 185	asynchronous
6 - Optional	Generate, edit, and submit IVP jobs for a Receiver	Figure 147 on page 186	asynchronous

See Appendix B, “Checklists to verify customization, migration, and IVP jobs,” on page 199 for details about verifying the installation and IVP process.

Verifying installation using DataRefresher-Defined PRs

This section applies only to synchronous propagation systems.

Selecting option **3** on panel EKYGP04E displays panel EKYGPC0E (Figure 144).

```

EKYGPC0E ----- DPROP - Installation Verification using Data Refresher
Command ==>
DPROP Env.:          DPROP-System Type:          DPROP-System:

Job processing for not-highlighted options ==> EDITONLY    ( Regenerate
Forward Propagation (required)                          ( Editonly
1 - Generate and Edit VDXT    ( Data Definition and Extract/Load )
2 - Generate and Edit VRUP    ( Forward Data Propagation      )
3 - Generate and Edit VCCU    ( Consistency Check Utility      )
Reverse Propagation (optional)
4 - Generate and Edit VDLU    ( DL/I Load Utility            )
5 - Generate and Edit VHUP    ( Reverse Data Propagation  )
6 - Generate and Edit VCCU    ( Consistency Check Utility      )
Audit and Cleanup (required)
7 - Generate and Edit VAUD    ( Audit Extract Utility      )
8 - Generate and Edit VCLP    ( Cleanup                    )

E - Return
C - Temporarily Change Job Information

Enter option or move cursor before desired option.
Enter END command to return.
    
```

Figure 144. Installation Verification Using DataRefresher-Defined PRs

Selecting one of the options on the panel places you in ISPF edit mode for the member associated with that option. You can modify and submit the job from the edit panel.

The *nnn* in the job names represents the system number that contains leading zeroes, if necessary.

To complete panel EKYGPC0E:

1. Select option **C** to display panel EKYGPB1E (Figure 140 on page 180). You use panel EKYGPB1E to temporarily change the IMS DPROB job information. See “Changing the job information” on page 179 for details about how you use this panel.
2. Select a job to process by selecting a highlighted number.
3. Edit the fields as required.
4. Submit the job from the ISPF edit screen.
5. Run the cleanup job, option **8**, before you rerun the IVP jobs.
6. Select option **E** or enter END on the command line to return to panel EKYGP03E (Figure 137 on page 177).

Verifying installation using PRs defined using MVG input tables

This topic applies only to synchronous propagation systems.

Selecting option **4** from the panel EKYGP04E displays panel EKYGPD0E (Figure 145).

```

EKYGPD0E -- DPROB - Installation Verification using MVG Input Tables -----
Command ==>
DPROB Env.:          DPROB-System Type:          DPROB-System:

Job processing for not-highlighted options ==> EDITONLY    ( Regenerate or )
  Forward Propagation (required)                ( Editonly      )
  1 - Generate and Edit SnnnVMVU ( Data Definition and Load )
  2 - Generate and Edit SnnnVRUP ( Forward Data Propagation )
  3 - Generate and Edit SnnnVCCU ( Consistency Check Utility )
  Reverse Propagation (optional)
  4 - Generate and Edit SnnnVDLU ( DL/I Load Utility          )
  5 - Generate and Edit SnnnVHUP ( Reverse Data Propagation )
  6 - Generate and Edit SnnnVCCU ( Consistency Check Utility )
  Audit and Cleanup (required)
  7 - Generate and Edit SnnnVAUD ( Audit Extract Utility      )
  8 - Generate and Edit SnnnVCLP ( Cleanup                      )

  E - Return
  C - Temporarily Change Job Information

Enter option or move cursor before desired option.
Enter END command to return.

```

Figure 145. Installation Verification Using MVG Input Tables

Selecting one of the options on the panel places you in ISPF edit mode for the member associated with that option. You can modify and submit the job from the edit panel.

The *nnn* in the job names represents the IMS DPROB system number that contains leading zeroes if necessary.

To complete panel EKYGPD0E:

1. Select a job to process by selecting a highlighted number.
2. Edit the fields as required.
3. Submit the job from the ISPF edit screen.
4. Run the cleanup job, option **8**, before rerunning the IVP jobs.
5. Select option **E** or enter END on the command line to return to panel EKYGP03E (Figure 137 on page 177).

6. Select option **C** to display panel EKYGPB1E (Figure 140 on page 180).
You use panel EKYGPB1E to temporarily change the IMS DPROP job information. See “Changing the job information” on page 179 for details about how you use this panel.

Verifying installation for the Selector

This topic applies only to LOG-ASync propagation systems.

Panel EKYGPE0E (Figure 146) displays when you select:

- Option **5** on panel EKYGP04E (Figure 143 on page 182)

```

EKYGPE0E ----- DPROP - Installation Verification - Selector -----
Command ==>
DPROP Env.:                DPROP-System Type:                DPROP-System:

Job processing for not-highlighted options ==> EDITONLY      ( Regenerate or
DPROP Selector              (required)                      ( Editonly
0 - Generate and Edit SnnnJSDS ( Create Selector Specific Data Sets
1 - Generate and Edit SnnnVDBL ( Create and Load IMS Data Base   )
2 - Generate and Edit SnnnVSLR ( Invoke DPROP Selector           )
3 - Generate and Edit SnnnVHDL ( Create HD/Unload copy of IMS DB  )
Cleanup                    (required)
4 - Generate and Edit SnnnVCLS ( Cleanup                          )

E - Return
C - Temporarily Change Job Information

Enter option or move cursor before desired option.
Enter END command to return.

```

Figure 146. Installation Verification for the Selector

On panel EKYGPE0E, all options are required.

Before rerunning the IVP jobs, run the cleanup job, (option **5**).

On panel EKYGPE0E, you:

1. Select one of the options. The system places you in ISPF edit mode for the job member associated with the option.
2. Modify the job member, as desired.
3. Submit the job by entering SUBMIT from the edit panel.
4. Select option **C** if you desire to temporarily change the job information. Panel EKYGPB1E is displayed. See “Temporarily changing the job information” on page 100 for details about how you use this panel.
5. Enter **E** or END on the command line to return to panel EKYGP03E (Figure 70 on page 89).

The *nnn* in the job name represents the IMS DPROP system number, containing leading zeros, if necessary.

Verifying installation for the Receiver

This section applies only to asynchronous propagation systems.

Panel EKYGPF0E (Figure 147) displays if you select option 6 from panel EKYGP04E (Figure 143 on page 182).

```
EKYGPF0E ----- DPROP - Installation Verification - Receiver -----
Command ==>
DPROP Env.:                DPROP-System Type:                DPROP-System:

Job processing for not-highlighted options ==> EDITONLY      ( Regenerate or
Log-async Receiver (required)                               ( Editonly )
 1 - Generate and Edit SnnnVDBR ( Create DB2 Target Database )
 2 - Generate and Edit SnnnVRCV ( Invoke DPROP Receiver      )
 3 - Generate and Edit SnnnVCCR ( Consistency Check Utility  )
    Audit and Cleanup (required)
 4 - Generate and Edit SnnnVAUD ( Audit Extract Utility      )
 5 - Generate and Edit SnnnVCLR ( Cleanup                    )

E - Return
C - Temporarily Change Job Information

Enter option or move cursor before desired option.
Enter END command to return.
```

Figure 147. Installation Verification for the Receiver

On panel EKYGPF0E, all options are required.

Before rerunning the IVP jobs, run the cleanup job, (option 5).

On panel EKYGPE0E, you:

1. Select one of the options. The system places you in ISPF edit mode for the job member associated with the option.
2. Modify the job member, as desired.
3. Submit the job by entering SUBMIT from the edit panel.
4. Select option **C** if you desire to temporarily change the job information. Panel EKYGPB1E is displayed. See “Temporarily changing the job information” on page 100 for details about how you use this panel.
5. Enter **E** or END on the command line to return to panel EKYGP04 (Figure 74 on page 94).

The *nnn* in the job name represents the IMS DPROP system number, with leading zeroes if necessary, that you defined in panel EKYGPM2E (Figure 22 on page 37).

Chapter 19. Performing fallback of IMS DPROP systems

Fallback is the process used to return a migrated IMS DPROP system back to its original version and release level.

Falling back from Version 3 Release 1 to Version 2 Release 2

This section discusses fallback from Version 3.1 to Version 2.2. Fallback from Version 3.1 to Version 2.2 does not use ISPF fallback panels. The sequence and extent to which you implement fallback steps might vary because each installation has IMS and DB2 systems with unique advantages or limitations that need to be taken into consideration

Read the instructions in this section fully before initiating a fallback. We also recommend that you perform a fallback on a test system before you perform fallback on your production system.

The fallback process is as follows:

1. Set all IMS databases and DB2 tables involved in data propagation on the previously migrated Version 3 Release 1 system to read-only access.
2. For Asynchronous, refrain from running any Version 3 Release 1 jobs. For Synchronous, run the Version 3 Release 1 SCU to emergency stop the previously migrated Version 3 Release 1 system. Use the ESTOP DPROP statement.
3. Restore the Version 2 Release 2 SVC. Consider doing a link pack area (LPA) refresh to accomplish this.
4. Restore the Version 2 Release 2 infrastructure that you backed up prior to migration. See the list of steps described in "Migration steps overview" on page 119.
5. Rerun all relevant Version 2 Release 2 installation jobs to restore the prior release DB2 plans. Include only jobs or job steps that recompile, link edit, bind, or copy Version 2 Release 2 plans. You do not need to recreate installation files or tables.
6. For Synchronous, run the Version 2 Release 2 SCU to reactivate the previously migrated (now restored) Version 2 Release 2 system. Use the RESET DPROP,DUBIOUS statement.
7. Rerun the Version 2 Release 2 IVP jobs or your own IVP to verify the fallback. Make sure the RUP is included.
8. After you have determined that your restored Version 2 Release 2 systems run properly, update all other relevant IMS DPROP jobs and procedures to use the restored Version 2 Release 2 library names. Include your own IMS propagating applications, DFSDDLT0, and JCL skeletons.
9. Set all IMS databases and DB2 tables involved in data propagation with the restored Version 2 Release 2 system to normal access.

Part 5. Appendixes

Appendix A. Using multiple RECON data sets in a single MVS image

This section explains how to set up IMS DPROF environments and systems to propagate from many IMS to DB2 subsystem pairs, each with their own set of RECONS. Usually one set of RECON data sets (the system RECON data sets) are defined in a single MVS image. However it is possible to establish environments and systems to propagate from a number of IMS to DB2 subsystem pairs, each with their own set of DBRC data sets (RECON data sets).

Multiple environments each using a single Selector

Figure 148 contains an example of an MVS image with two sets of RECON data sets, Set A and Set B, and two IMS DPROF environments, DPRENV A and DPRENV B. In each environment are three IMS DPROF systems performing asynchronous propagation, a common set of Selector data sets, and a common set of environment data sets.

The RECON data sets for Set A contain the recovery data for the production IMS subsystem IMSA and the associated XRF subsystem. These subsystems provide the source data for the target DB2 production system DSNA1. Data is propagated from IMSA to DSNA1 via the IMS DPROF system A1 (DPRSYSA1). Data can also be propagated from the IMS production system to the DB2 systems DSNA2 and DSNA3 using IMS DPROF systems DPRSYSA2 and DPRSYSA3, respectively.

The RECON data sets for Set B contain the recovery data for the production IMS subsystem IMSB and the associated XRF subsystem. These subsystems provide the source data for the target DB2 production system DSNB1. Data is propagated from IMSB to DSNB1 using the IMS DPROF system DPRSYSB1. Data can also be propagated from the IMS production system to the DB2 systems DSNB2 and DSNB3 through IMS DPROF systems DPRSYSB2 and DPRSYSB3 respectively.

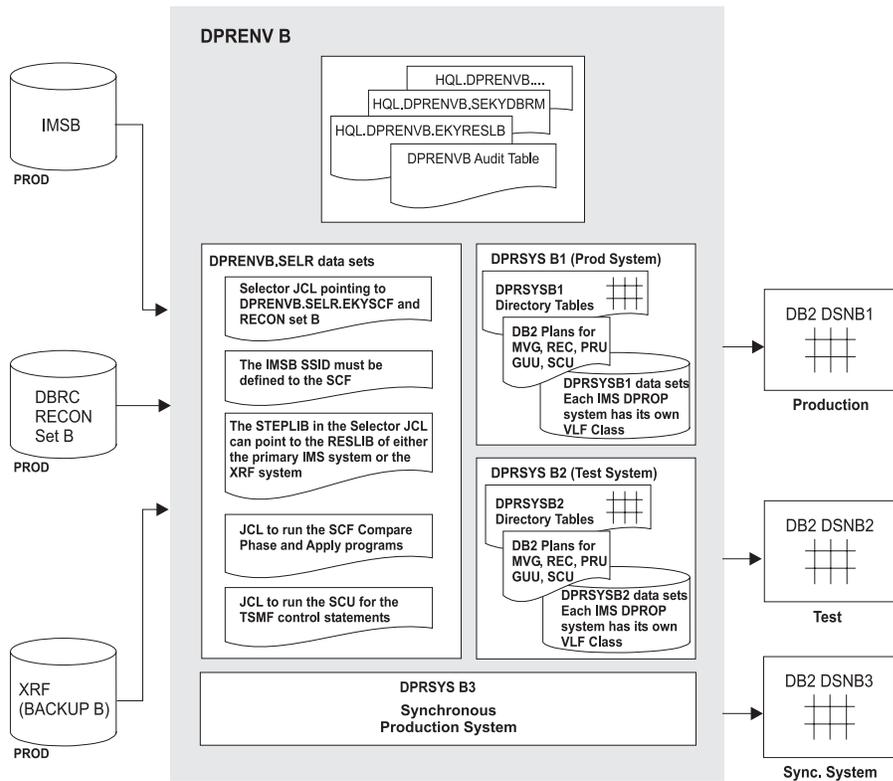
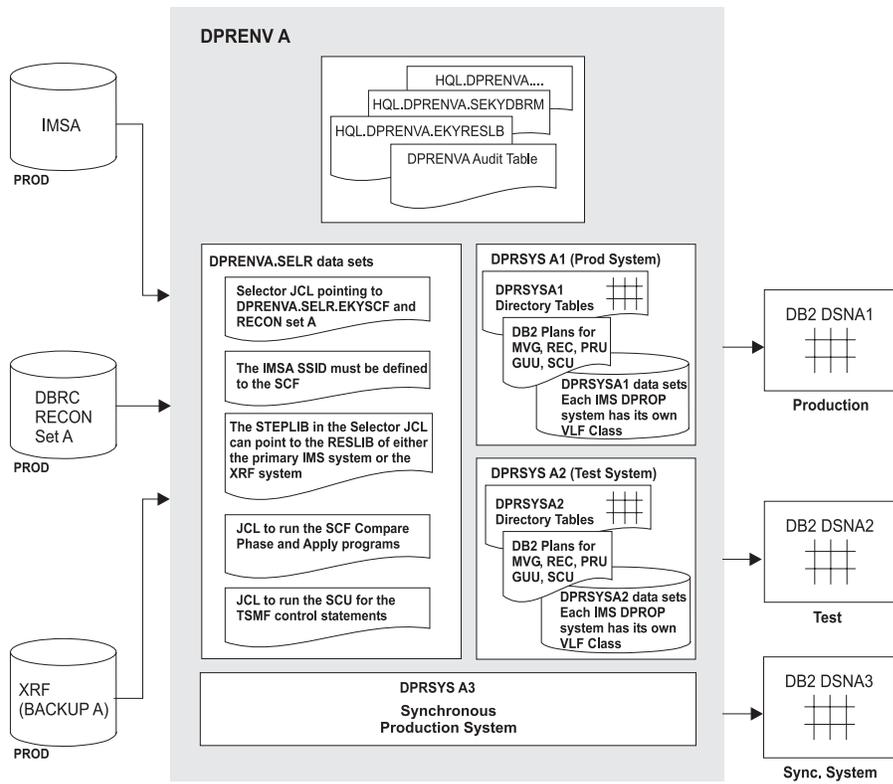


Figure 148. Multiple IMS DPROF environments, each with a single Selector

Setting up IMS DPROP environments

Each environment created in an MVS image requires the following:

- A single EKYGCxx, EKYGHxxx and EKYGMxxx member for each system generated in an environment in both the EKYRESLB and the SEKYSDBRM libraries:
DPRENA.EKYRESLB pointed to by //EKYRESLB and //STEPLIB
.SEKYSDBRM pointed to by //DBRMLIB
- A DB2 table (the audit table) which IMS DPROP uses to store audit messages unloaded from SMF data sets.
- A unique SMF record number to distinguish audit records from different IMS DPROP environments in the MVS SMF data sets. The AUDU extracts the SMF records for an IMS DPROP environment and writes them to the corresponding audit table for that environment.

The following data sets are required to run the Selector at the IMS site.

```
DPRENA.SELR.JCL(member to run selector)
.EKYSCF pointed to by //EKYSCF
.EKYULR pointed to by //EKYULR
.EKYPRREG pointed to by //EKYPRREG
.EKYSIDS pointed to by //EKYSIDS
.JCLOUT pointed to by //JCLOUT
.SELPRINT pointed to by //SELPRINT
                (put to SYSOUT in SEKYSAMP)
.SEKYSKEL pointed to by //EKYSMEM
```

The Selector uses the skeletal JCL members stored in .SEKYSKEL.

During the normal installation process, a single SCF for each environment is created and a single set of RECONS is used by all the IMS subsystems on the MVS image (the system RECONS).

To use multiple sets of RECONS on the same MVS image you should install separate environments for each set of RECONS.

Each environment then has a single SCF for its respective set of RECONS.

Alternatively, you can install a single environment to process multiple sets of RECONS on the same MVS image. This type of configuration is not supported in the IMS DPROP ISPF installation process and must be set up manually. Be aware that setting up a single environment to process multiple sets of RECONS on the same MVS image has certain limitations. Because only one SMF record type is defined for the IMS DPROP environment, records in the audit table from individual Selectors cannot be distinguished because there is no concept of a Selector name or ID within an IMS DPROP environment.

The data sets which are required to run the Selector at the IMS site need to be duplicated in order to run:

- The Selector against separate SCFs that are specific to particular RECON data sets.
- The TSMF, the SCF compare utility and the SCF apply utility against separate data sets that are specific to particular RECON data sets and their associated IMS subsystems, DB2 subsystems and IMS DPROP system.

The following example contains the data sets that are needed to run the SCF compare utility:

```

DPRENVA.SELR.JCL(member to run SCF compare utility)
.EKYSCHF
.EKYSIDS
.SELPRINT
DPRENVA.DPRSYSxx.EKYGRPD pointed to by //EKYGRPD
                    (put in the DPRSYS number for xx)

```

Propagation request definitions are unloaded from the directory table for a particular set of IMS DPROP systems by the GUU and compared to the propagation request definitions defined in the current SCF. The output file (EKYSIDS) is created and contains the differences between the two sets of definitions. These difference are generated as normal input control statements for the SCF apply utility.

The data sets needed to run the SCF apply utility are:

```

DPRENVA.SELR.JCL(member to run SCF apply utility)
.EKYSCHF
.EKYULR
.DBDLIB
.EKYSIDS
.SELPRINT
.EKYLIST

```

The data in the SCF is modified to make it consistent with the IMS DPROP directory. Differences in the propagation request definitions between the IMS DPROP system directory tables and the current SCF are applied to the SCF.

The following are the data sets required to run the SCU to process all the TSMF commands except the CREATE QUIESCE command:

```

DPRENVA.SELR.JCL(member to run SCU for TSMF commands)
.SCUIN  pointed to by //SCUIN (instream in SEKYSAMP)
.SCUPLAN pointed to by //SCUPLAN(instream in SEKYSAMP)
.EKYSCHF pointed to by //EKYSCHF

```

The following are the data sets required to run the SCU to process the TSMF CREATE QUIESCE command:

```

DPRENVA.SELR.JCL(member to run SCU for CREATETSM QUIESCE command)
.SCUIN  pointed to by //SCUIN (instream in SEKYSAMP)
.SCUPLAN pointed to by //SCUPLAN(instream in SEKYSAMP)
.EKYSCHF pointed to by //EKYSCHF

```

Requirements for generating IMS DPROP systems

Each IMS DPROP system generated within an IMS DPROP environment requires:

- A VLF Class specific to that IMS DPROP system
- A set of IMS DPROP directory tables specific to that IMS DPROP system
- DB2 plans for the MVG, Receiver, PRU, GUU, and SCU that are specific to that IMS DPROP system
- Data sets that are specific to that IMS DPROP system

The following describes the data sets that are specific to each IMS DPROP system.

- The following data sets are required to run the MVGU to create propagation requests.

```

DPRENVA.DPRSYSA1.JCL(member to run MVG)
.SYSTSIN(MVG) pointed to by //SYSTSIN
                    (must not be instream)
.MVGUIN  pointed to by //MVGUIN
                    (instream in SEKYSAMP)
.MVGPARM pointed to by //MVGPARM

```

```

                                (instream in SEKYSAMP)
.MVGPRINT pointed to by //MVGPRINT
                                (put to SYSOUT in SEKYSAMP)
.DBDLIB  pointed to by //DBDLIB
                                (must point to DBDLIB for IMSA)
.DBRMLIB pointed to by //DBRMLIB
.LOAD    pointed to by //SYSLMOD

```

The MVGU creates propagation requests for each IMS DPROP system depending on the plan you use when running the MVGU. Each IMS DPROP system has its own plan for running the MVG.

Ensure that the //DBDLIB statement points to the IMS subsystem from which you want to source data and that there are separate DBRMLIBs and SYSLMODs for each IMS DPROP system.

For each propagation request, the MVG puts the DBRMs for the SQL update modules that it builds in the DBRMLIB and the SQL update modules that it builds into the SYSLMOD data set. The member name used for each is the same as the propagation request ID.

You may want to specify a different MVGPARM data set for each IMS DPROP system, particularly if you are specifying the BIND parameters for the propagation requests in MVGPARM.

- The following data sets are required to run the Receivers *within* an IMS DPROP system:

```

DPRENVA.DPRSYSA1.JCL(member to run RECEIVER)
.EKYRIDS  pointed to by //EKYRIDS (instream in SEKYSAMP)
.EKYPRINT pointed to by //EKYPRINT
                                (put to SYSOUT in SEKYSAMP)

```

Each system requires its own set of these data sets.

- The following data sets are required to run the PRU within an IMS DPROP system:

```

DPRENVA.DPRSYSA1.JCL(member to run PRU)
.EKYPRREG pointed to by //EKYREGIN
.EKYPRINT pointed to by //EKYPRINT
                                (can be shared with REC)

```

Each IMS DPROP system requires its own set of these data sets.

- The following data sets are required to run the GUU:

```

DPRENVA.DPRSYSA1.JCL(member to run GUU)
.SYSTSIN(GUU) pointed to by //SYSTSIN
                                (instream in SEKYSAMP)
.EKYRIDS  pointed to by //EKYRIDS (instream in SEKYSAMP)
.EKYGRPD  pointed to by //EKYGRPD
                                (instream in SEKYSAMP)
.EKYPRINT pointed to by //EKYPRINT

```

Each IMS DPROP system requires its own set of these data sets.

Propagation request definitions are unloaded from the directory table for a particular system into the output file EKYGRPD. This file is then used as input for the SCF compare utility.

- The following are the data sets needed to run the SCU:

```

DPRENVA.DPRSYSA1.JCL(member to run SCU for IMS DPROP directory commands)
.SCUIN    pointed to by //SCUIN (instream in SEKYSAMP)
.SCUPLAN  pointed to by //SCUPLAN(instream in SEKYSAMP)

```

Each system requires its own set of these data sets.

- Each system should also have its own set of CCU data sets.

A single environment using multiple Selectors

Figure 149 is based on a single environment with multiple Selectors. Data is propagated from IMSA to DSNA1 through the IMS DPROP system DPRSA1 and from IMSB to DSNB1 through the IMS DPROP system DPRSYSB1. Both DPRSYSA1 and DPRSYSB1 have been generated in the same IMS DPROP environment, DPRENV A.

To configure this type of environment, you need to:

1. Manually copy the DPRENVA Selector data sets (EKYSCF and EKYULR) to provide a Selector for each set of the RECON data sets. See the DPRENVA.SELA... and DPRENVA.SELB... data set naming convention in Figure 149 on page 197.
2. Ensure that the JCL to run the Selector, TSMF, SCF compare utility, and SCF apply utility point to the Selector data sets and the RECON data sets for the IMS subsystem providing the source data.

The audit records written by different Selectors (SCFs) in a single environment cannot be distinguished in this configuration because they share the same SMF record type.

Environments installed on the same MVS image

When a number of environments are installed on the same MVS image, the following considerations apply:

- The same MVS subsystem name and routing code can be used by all environments
- A different SVC number and SMF record type *must* be used for each environment
- A different VLF Class is required for each IMS DPROP system generated in the various environments.

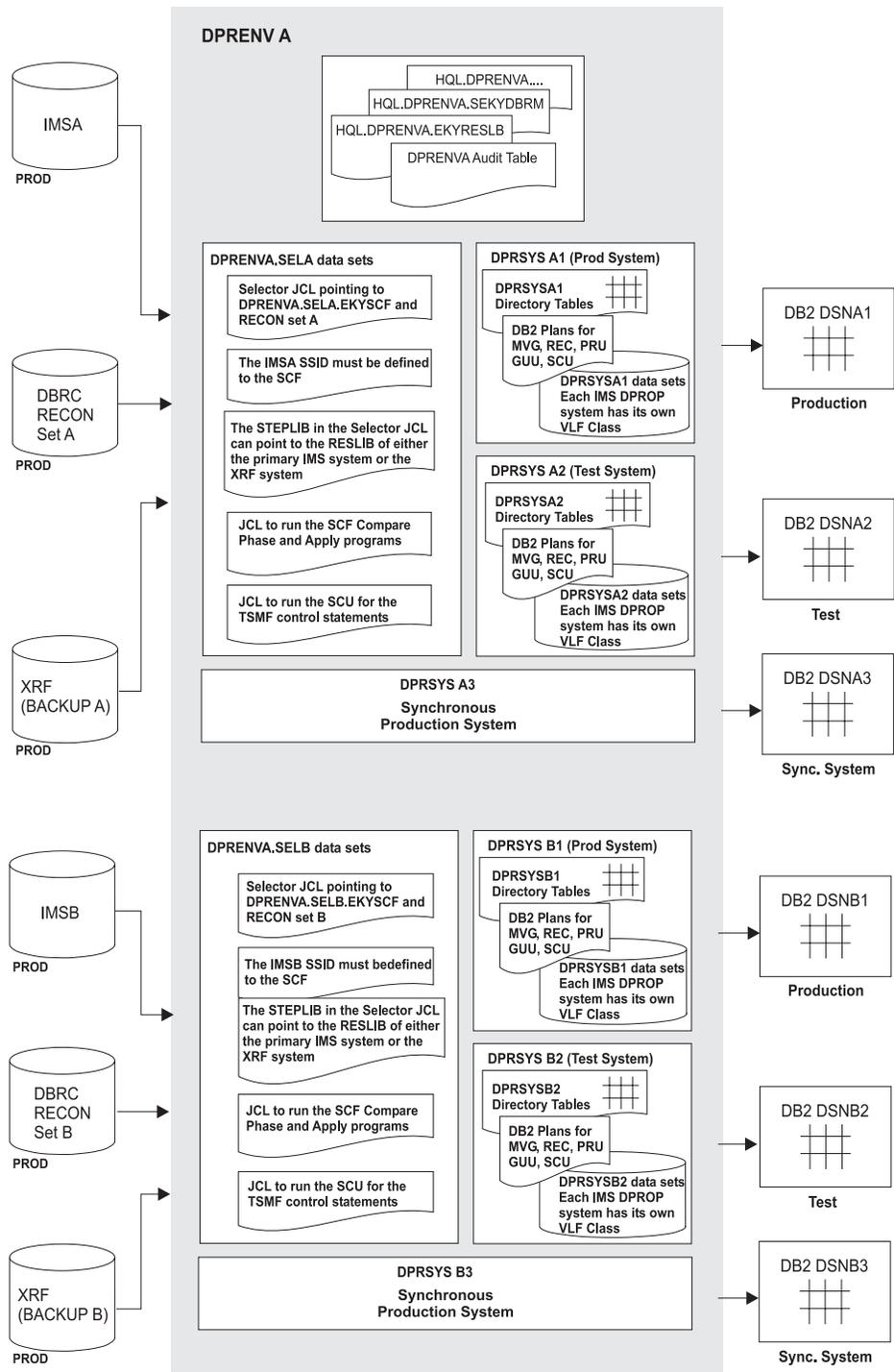


Figure 149. A single IMS DPROT environment with multiple Selectors

Appendix B. Checklists to verify customization, migration, and IVP jobs

This section contains checklists to verify the success of the following jobs:

- Environment and system customization
- Migration: Note that the steps generated during migration depend on which level of IMS DPROP is being migrated. As a result, not all the steps in the migration checklist are generated.
- Installation verification program (IVP)

Use the following checklists to determine whether your jobs ran successfully. Expected results are given for each step.

If a job does not complete with the expected results:

- Refer to *Messages and Codes* to determine how to correct the problem.
- Correct the problem, and rerun the job.

You can typically rerun IVP jobs by:

- Running the cleanup job (*SnnnVCLP*)
- Starting with job *SnnnVMVU*, when using the MVG input tables, or *SnnnVDXT*, when using DataRefresher.

Environment customization and migration jobs

- **EKYJIN (IMS DPROP Generation)**
 - Stage I. Step ST1.C ends with condition code=0.
 - Stage I. Step ST2 ends with condition code=0.
 - Stage II. Final step LKED.L ends with condition code=0.
Stage II is automatically generated and submitted by Stage I.
- **EKYJADT (Create or migrate audit trail table)**
 - DEFCLUST (if used), must end with condition code=0.
 - DEFDBASE must end with condition code=0.
 - DEFTAB must end with condition code=0.
 - BINDAUD must end with condition code=0.

Migration Process Only (Migrate)

EKYJMDT (Audit trail table migration job)

- BINDAUD ends with condition code=0.

End of Migration Process Only (Migrate)

- **EKYJLE (Create AD/Cycle LE/370 Dummy Module)**
 - Step ST1 ends with return code=0
- **EKYJDAE (Create EKYRESLB Dynamic Allocation Exit Dummy Module)**
 - Step ST1 ends with return code=0
 - Step ST2 ends with return code=0.

System customization jobs

- **SnnnMAPT (Create IMS DPROP Directory Tables)**
 - DEFDBASE (if used) must have condition code=0.
 - EFTABS must have condition code=0.
- **SnnnRCVT (IMS DPROP ACDC Tables Creation Job)**
 - DEFCUST must have condition code=0.
 - DEFTABS (if used) must have condition code=0.
- **SnnnMINT (Create IMS DPROP MVG Input Tables)**
 - DEFCUST (if used) must end with condition code=0.
 - DEFDBASE must end with condition code=0.
 - DEFTABS must end with condition code=0.
- **SnnnALLB (Bind packages)**
 - GRANTC, GRANTEX1, GRANTEX2, GRANTEX3 must end with condition code=04 or condition code=0.
 - BINDPKG1 and BINDPKG2 must end with condition code=0 .
- **SnnnSCUB (Bind plan for SCU)**
 - Step ST1 must end with condition code=0.
 - Step ST2 must end with condition code=0.
- **SnnnMVGB (Bind plan for MVG)**
 - Step ST1 must end with condition code=0.
 - Step ST2 must end with condition code=0.
- **SnnnCCUB (Bind plan for CCU)**
 - Step ST1 must end with condition code=0.
 - Step ST2 must end with condition code=0.
- **SnnnDLUB (Bind plan for DLU)**
 - Step ST1 must end with condition code=0.
 - Step ST2 must end with condition code=0.
- **SnnnPRUB (Bind plan for PRU)**
 - Step ST1 must end with condition code=0.
 - Step ST2 must end with condition code=0.
- **SnnnGUUB (Bind plan for GUU)**
 - Step ST1 must end with condition code=0.
 - Step ST2 must end with condition code=0.
- **SnnnRCVB (Bind plan for RCVB)**
 - Step ST1 must end with condition code=0.
 - Step ST2 must end with condition code=0.
- **SnnnDPRI (Initialize IMS DPROP)**
 - Step INITDPR ends with condition code=0.
 - Step INITVLF ends with condition code=0.

System migration jobs

- **SnnnESTO (ESTOP IMS DPROP System)**
 - Step ESTOP ends with condition code=0.
- **SnnnDIRT (Save IMS DPROP Directory and Alter IMS DPROP Directory)**
 - DEFCLUST (if used) ends with condition code=0.
 - DEFDBASE ends with condition code=0.
 - DEFTABS ends with condition code=0.
 - DEFNEWCL (if used) ends with condition code=0.
 - NEWTABS1 (if used) ends with condition code=0.
 - NEWTABS2 (if used) ends with condition code=0.

- NEWTABS3 (if used) ends with condition code=0.
- **SnnnMVG (Save MVG Input Tables and Alter MVG Input Tables)**
 - DEFCLUST (if used) ends with condition code=0.
 - DEFDBASE ends with condition code=0.
 - DEFTABS ends with condition code=0.
 - DEFNEWCL (if used) ends with condition code=0.
 - NEWTABS (if used) ends with condition code=0.
- **SnnnALLB (Bind packages)**
 - GRANTxxx steps must end with condition code=04 or 0.
 - BINDPKGn steps must end with condition code=0.
 - GRANTC, GRANTEX1, GRANTEX2, GRANTEX3 must end with condition code=04 or condition code=0.
 - BINDPKG1 and BINDPKG2 must end with condition code=0 .
- **SnnnSCUB (Bind plan for SCU)**
 - Step ST1 must end with condition code=0.
 - Step ST2 must end with condition code=0.
- **SnnnMVGB (Bind plan for MVG)**
 - Step ST1 must end with condition code=0.
 - Step ST2 must end with condition code=0.
- **SnnnCCUB (Bind plan for CCU)**
 - Step ST1 must end with condition code=0.
 - Step ST2 must end with condition code=0.
- **SnnnDLUB (Bind plan for DLU)**
 - Step ST1 receives the following messages:
 - DSNT232I SUCCESSFUL BIND FOR PACKAGE = xxxxxxxx.xxxxxxx.()
 - DSNT200I BIND FOR PLAN xxxxxxxx SUCCESSFUL
 - Step ST2. The following statement ends with SQL code=000:

```
GRANT EXECUTE
```
- **SnnnCREA (RECREATE SQL Update Modules and Propagation Request Control Blocks)**
 - Step INITSTAT receives the following messages:

```
EKYS144I ALL INPUT DATA SUCCESSFULLY ACCEPTED
EKYS860I CONTROL STATEMENT COMPLETED SUCCESSFULLY
EKYS549I JOB COMPLETED SUCCESSFULLY - HIGHEST RETURN CODE: 0
```
 - Step MVGU ends with condition code=0.

Step MVGU receives the following messages:

```
EKYV304I PROCESSING OF THE RECREATE STATEMENT STARTED
EKYM709I SUCCESSFUL RECREATE OPERATION
EKYX708I n RUP-PRCBS SUCCESSFULLY PROCESSED
EKYX808I NUMBER OF HUP PRCBS SUCCESSFULLY PROCESSED=0
```

If the Package bind option on panel EKYOP61E is used, the precompile, compile, link, and bind of every SQL update module must be OK and none of the following messages must be output:

 - EKYM305E BIND PACKAGE NOT SUCCESSFUL FOR PR=xxxxxxx; RETURN CODE FROM DSN IS n
 - EKYM725W AT LEAST ONE PACKAGE BIND FAILED WHEN USING THE DEFAULT BIND OPTIONS (BIND=DEFAULT WAS SPECIFIED)
- **SnnnRSET (RESET and ACTIVATE IMS DPROP System)**
 - Step RESET receives the following messages:

```
EKYS144I ALL INPUT DATA SUCCESSFULLY ACCEPTED
EKYS860I CONTROL STATEMENT COMPLETED SUCCESSFULLY
```

- EKYS549I JOB COMPLETED SUCCESSFULLY - HIGHEST RETURN CODE: 0
- Step ACT receives the following messages:
 - EKYS144I ALL INPUT DATA SUCCESSFULLY ACCEPTED
 - EKYS860I CONTROL STATEMENT COMPLETED SUCCESSFULLY
 - EKYS549I JOB COMPLETED SUCCESSFULLY - HIGHEST RETURN CODE: 0
- A return code of 4 is also OK.

IVP jobs for synchronous propagation

- **SnnnVMVU (Data Definition using MVG Input Tables, which creates a sample propagation request)**
 - Step DEFLIB ends with condition code=0.
 - Step DEFDBD ends with condition code=0.
 - Step LINKDBD ends with condition code=0.
 - Step DEFPSB1 ends with condition code=0.
 - Step LINKPSB1 ends with condition code=0.
 - Step DEFPSB2 ends with condition code=0.
 - Step LINKPSB2 ends with condition code=0.
 - Step LOADDDB ends with condition code=0.
 - Step DEFINX ends with condition code=0.
 - Step DEFTAB ends with condition code=0.
 - Step DEFDBTS. The following statements end with SQL code=000:
 - CREATE DATABASE
 - CREATE TABLESPACE
 - Step INSERT. The following statement ends with SQL code=000:
 - INSERT INTO
 - Step MVGU ends with condition code=0.
 - Receives the following message:
 - EKYV107I SUCCESSFUL GENERATION OF PR=PSAMPPR2
 - Step LDB2T. The following statement ends with SQL code=000:
 - INSERT INTO
 - Step SCU2. Receives one of the following messages:
 - EKYS851I PRID=PSAMPPR2 IS REPLACED - RETURN CODE: 0
 - OR**
 - EKYS850I PRID=PSAMPPR2 IS UPDATED - RETURN CODE: 0
- **SnnnVDXT (Data Definition using Data Refresher, which creates a sample PR)**
 - Step DEFDBD ends with condition code=0.
 - Step LINKDBD ends with condition code=0.
 - Step DEFPSB1 ends with condition code=0.
 - Step LINKPSB1 ends with condition code=0.
 - Step DEFPSB2 ends with condition code=0.
 - Step LINKPSB2 ends with condition code=0.
 - Step DEFPSB3 ends with condition code=0.
 - Step LINKPSB3 ends with condition code=0.
 - Step LOADDDB ends with condition code=0.
 - Step DEFDBTS. The following statements end with SQL code=000:
 - CREATE DATABASE
 - CREATE TABLESPACE

Receives the following messages:

- EKYS144I ALL INPUT DATA SUCCESSFULLY ACCEPTED
- EKYS860I CONTROL STATEMENT COMPLETED SUCCESSFULLY
- EKYS549I JOB COMPLETED SUCCESSFULLY - HIGHEST RETURN CODE: 4
- Step ALTTAB ends with condition code=0.
- Step DELETE ends with condition code=0.
- Step ACTIVATE.

Receives the following messages:

```
EKYS144I ALL INPUT DATA SUCCESSFULLY ACCEPTED
EKYS860I CONTROL STATEMENT COMPLETED SUCCESSFULLY
EKYS549I JOB COMPLETED SUCCESSFULLY - HIGHEST RETURN CODE: 4
```

- Step DBRO ends with condition code=0.

Receives the following message:

```
DSN9022I - DSNTDDIS 'START DATABASE' NORMAL COMPLETION
```

- Step EKYDLU01 ends with condition code=0.
- Step EKYDLU02 ends with condition code=0.
- Step EKYDLU03 ends with condition code=0.
- Step EKYDLU04 ends with condition code=0.
- Step EKYDLU05 ends with condition code=0.
- Step DBRW ends with condition code=0.

Receives the following message:

```
DSN9022I - DSNTDDIS 'START DATABASE' NORMAL COMPLETION
```

- **SnnnVHUP (Reverse Data Propagation)**

- Step PCL. Precompile, compile, and link of the program EKYGVHUP must be OK.
- Step BIND. Receives the following messages:

```
DSNT232I SUCCESSFUL BIND FOR PACKAGE = xxxxxxxx.xxxxxxxx.()
DSNT200I BIND FOR PLAN xxxxxxxx SUCCESSFUL
```

Message DSNT232I appears only when package bind is used. The following statement ends with SQL code=000:

```
GRANT EXECUTE
```

- Step PROPRUN ends with condition code=0.

- **SnnnVCCU (CCU)**

- Step HSUMCOMP ends with condition code=0.

Receives the following messages (propagation was successful):

```
EKYC432I HASH SUMS ARE EQUAL FOR PRID PSAMPPR2 SEGMENT SEGA TABLE
xxxxxxx.TABSAM2
EKYC495I HASH SUMS OF DL/I AND DB2 READ PHASES ARE EQUAL
```

- Steps COMPARE and ERRORLOC must not be run.

- **SnnnVAUD (Audit Extract Utility)**

- Step ST1 ends with condition code=0.
- Step ST2 ends with condition code=0.

Receives the following message:

```
EKYA007I nnn ROWS OF TYPE 'SYSTEM' INSERTED ON DPRAUDIT TABLE
```

- **SnnnVCLP (Delete IVP Data Sets and sample PR PSAMPPR2)**

- Step DELDB ends with condition code=0.
- Step DELMINT ends with condition code=0, if MVG input tables were used.
- Step DEACT. Receives the following message:

EKYS859I 1 DPROP-DIRECTORY RESOURCE(S) SUCCESSFULLY PROCESSED

- Step MVGU ends with condition code=0.

Receives the following message:

EKYM615I PR=PSAMPPR2 WAS SUCCESSFULLY DELETED FROM THE MAPPING TABLES

- Step DELLIB ends with condition code=0.
- Step DROPTS ends with condition code=0.
- Step DELCLU ends with condition code=0.
- Step FREEPL ends with condition code=0.

If the reverse propagation job (*SnnnVHUP*) was not submitted, the FREE for the plan and for the package, if used by program EKYGVHUP, is sometimes unsuccessful.

- Step DELXLIB ends with condition code=0, if DataRefresher was used.
- Step DELDLU ends with condition code=0, if DLU was used.

IVP jobs for asynchronous propagation

- **SnnnVDBL (Create and load IMS database)**
 - Step DEFLIB ends with condition code=0.
 - Step DEFDBD ends with condition code=0.
 - Step LINKDBD ends with condition code=0.
 - Step DEFPSB1 ends with condition code=0.
 - Step LINKPSB1 ends with condition code=0.
 - Step DEFPSB2 ends with condition code=0.
 - Step LINKPSB2 ends with condition code=0.
 - Step DEFDB ends with condition code=0.
 - Step RCONUTL ends with condition code=0.
 - Step LOADDDB ends with condition code=0.
 - Step SCFADMIN ends with condition code=0.
 - Step READON ends with condition code=0.
 - Step READOFF ends with condition code=0.
 - Step CREATETS ends with condition code=0.
 - Step ASSINGTS ends with condition code=0.
 - Step UPDTDB ends with condition code=0.
- **SnnnVSLR (Invoke IMS DPROP ACDC Selector)**
 - Step SELECTOR ends with condition code=0.
- **SnnnVHDU (Create HD/Unload copy of IMS DB)**
 - Step HDUNLOAD ends with condition code=0.
- **SnnnVCLS (Cleanup)**
 - Step EKYGSCU ends with condition code=0.
 - Step SCFADMIN ends with condition code=0.
 - Step RCONUTL ends with condition code=0.
 - Step DELDB ends with condition code=0.
 - Step DELLIB ends with condition code=0.
- **SnnnVDBR (Create DB2 Target Database)**
 - Step DEFLIB ends with condition code=0.
 - Step DEFCLUST ends with condition code=0.
 - Step DEFDBTS ends with condition code=0.
 - Step DEFINX ends with condition code=0.
 - Step DEFTAB ends with condition code=0.
 - Step LOADTAB ends with condition code=0.
 - Step INSERT ends with condition code=0.

- Step MVGU ends with condition code=0.
- **SnnnVRCV (Invoke IMS DPROG ACDC Receiver)**
 - Step EKYGSCU ends with condition code=0.
 - Step EKYGPRU ends with condition code=0.
 - Step RECEIVE ends with condition code=0.
- **SnnnVCCR (Consistency Check Utility)**
 - Step HSUMCOMP ends with condition code=0.
 - Steps COMPARE and ERRORLOC must not be run.
- **SnnnVAUD (Audit Extract Utility)**
 - Step ST1 end with condition code=0.
 - Step ST2 ends with condition code=0.
- **SnnnVCLR (Cleanup)**
 - Step EKYGPRU ends with condition code=0.
 - Step EKYGSCU ends with condition code=0.
 - Step MVGU ends with condition code=0.
 - Step DELLIB ends with condition code=0.
 - Step DROPTS ends with condition code=0.
 - Step DELCLU ends with condition code=0.

I IVP jobs for MQ-ASYNC propagation (for IMS-to-DB2 propagation)

- **SnnnVDBC (Create and load IMS database)**
 - Step DEFLIB ends with condition code=0.
 - Step DEFDBD ends with condition code=0.
 - Step LINKDBD ends with condition code=0.
 - Step DEFPSB1 ends with condition code=0.
 - Step LINKPSB1 ends with condition code=0.
 - Step DEFPSB2 ends with condition code=0.
 - Step LINKPSB2 ends with condition code=0.
 - Step DEFDB ends with condition code=0.
 - Step LOADDB ends with condition code=0.
- **SnnnVCST (System Preparation for IMS-MQCAP)**
 - Step CSQUTIL ends with condition code=0.
 - Step DEL1 ends with condition code=0.
 - Step INITDPR ends with condition code=0.
 - Step INITVLF ends with condition code=0.
 - Step DMYDEL ends with condition code=0.
 - Step DMYALC ends with condition code=0.
 - Step TRANSCRT ends with condition code=0.
 - Step READON ends with condition code=0.
 - Step DEFDBD ends with condition code=0.
 - Step LINKDBD ends with condition code=0.
 - Step READOFF ends with condition code=0.
- **SnnnVCAP (Invoke Update/Capture program)**
 - Step IMSMQCAP ends with condition code =0.
- **SnnnVHDC (Create HD/Unload copy of IMS DB)**
 - Step HDUNLOAD ends with condition code=0.
- **SnnnVCLC (Cleanup)**
 - Step DELDB ends with condition code=0.
 - Step DELLIB ends with condition code=0.
- **SnnnVDBA (Create DB2 Target Database)**
 - Step DELLIB ends with condition code=0.
 - Step DEFLIB ends with condition code=0.

- Step DROP ends with condition code=0.
- Step DELTAB ends with condition code=0.
- Step DEFCLUST ends with condition code=0.
- Step DEFDBTS ends with condition code=0.
- Step DEFINX ends with condition code=0.
- Step DEFTAB ends with condition code=0.
- Step LOADTAB ends with condition code=0.
- Step INSERT ends with condition code=0.
- Step MVGU ends with condition code=0.
- . **SnnnVAPY (Invoke DPROP MQ Apply program)**
 - Step APPLY ends with condition code=0.
- . **SnnnVCUT (IMSMQ-DPROP Utility)**
 - Step EKYCUT ends with condition code=0.
- . **SnnnVCCA (Consistency Check Utility)**
 - Step HSUMCOMP ends with condition code=0.
 - Steps COMPARE and ERRORLOC must not be run.
- . **SnnnVAUD (Audit Extract Utility)**
 - Step ST1 end with condition code=0.
 - Step ST2 ends with condition code=0.
- . **SnnnVCLA (Cleanup)**
 - - Step DELMINT ends with condition code=0.
 - Step MVGU ends with condition code=0.
 - Step DELLIB ends with condition code=0.
 - Step DROPTS ends with condition code=0.
 - Step DELCLU ends with condition code=0.
 - Step DELCCU ends with condition code=0.

IVP jobs for IMS-to-IMS propagation

The IMS DPROP ISPF panel application does not explicitly provide end-to-end IVP job preparation for IMS-to-IMS propagation. However, the same procedure and jobs provided for IMS source data capture related to IMS-to-DB2 MQ Asynchronous propagation, may be invoked to provide installation verification source related to IMS-to-IMS propagation. IMS data captured to MQSeries using this process may then be used as input to the IMS Apply program.

Sample jobs relating to the IMS Apply process may be found in the SEKYSAMP sample library provided by IMS DPROP. If the sample jobs related to IMS Apply are customized by the user to process IMS source changed data described earlier, then a complete end-to-end IMS-to-IMS propagation verification can be achieved.

The steps in the next section outline this verification process.

Verifying an MQ-Capture system

From the IMS DPROP ISPF panel application jobs (MQ-Capture system):

- **SnnnVDBC (Create and load IMS database)**
 - Step DEFLIB ends with condition code=0.
 - Step DEFDBD ends with condition code=0.
 - Step LINKDBD ends with condition code=0.
 - Step DEFPSB1 ends with condition code=0.
 - Step LINKPSB1 ends with condition code=0.
 - Step DEFPSB2 ends with condition code=0.
 - Step LINKPSB2 ends with condition code=0.

- Step DEFDB ends with condition code=0.
- Step LOADDB ends with condition code=0.
- **. SnnnVCST (System Preparation for IMS-MQCAP)**
 - Step CSQUTIL ends with condition code=0.
 - Step DEL1 ends with condition code=0.
 - Step INITDPR ends with condition code=0.
 - Step INITVLF ends with condition code=0.
 - Step DMYDEL ends with condition code=0.
 - Step DMYALC ends with condition code=0.
 - Step TRANSCRT ends with condition code=0.
 - Step READON ends with condition code=0.
 - Step DEFDBD ends with condition code=0.
 - Step LINKDBD ends with condition code=0.
 - Step READOFF ends with condition code=0.
- **. SnnnVCAP (Invoke Update/Capture program)**
 - Step IMSMQCAP ends with condition code =0.
- **. SnnnVHDC (Create HD/Unload copy of IMS DB)**
 - Step HDUNLOAD ends with condition code=0.
- **. SnnnVCLC (Cleanup)**
 - Step DELDB ends with condition code=0.
 - Step DELLIB ends with condition code=0.

Verifying the IMS Apply

From the SEKYSAMP sample library provided by IMS DPROP, customize members to match the applicable objects used by the IMS capture process described above.

These objects include:

EKYUIAPE
 EKUIAPT
 EKUIAPP
 EKUIAPJ
 EKUIDSP

- **EKYUIAPE (IMS ERROR DB housekeeping; DBD, allocate, and initial load)**
 - Step DBDERRC ends with condition code=0.
 - Step DBDERRL ends with condition code=0.
 - Step DBDIXC ends with condition code=0.
 - Step DBDIXL ends with condition code=0.
 - Step PSBLOADC ends with condition code=0.
 - Step PSBLOADL ends with condition code=0.
 - Step PSBREPLC ends with condition code=0.
 - Step PSBLOADL ends with condition code=0.
 - Step DELDB ends with condition code=0.
 - Step DEFINDX ends with condition code=0
 - Step LOADDB ends with condition code=0
 - Step DBDEVMC ends with condition code=0
 - Step DBDEVML ends with condition code=0
 - Step DBDIXCEM ends with condition code=0
 - Step DBDIXLEM ends with condition code=0
 - Step PSBLDCEM ends with condition code=0
 - Step PSBLDLEM ends with condition code=0
 - Step PSBRPCEM ends with condition code=0
 - Step PSBRPLEM ends with condition code=0
 - Step DELDBEM ends with condition code=0
 - Step DEFIXEM ends with condition code=0
 - Step LOADDBEM ends with condition code=0

- **. EKYUIAPT (IMS target DB housekeeping, allocate, and initial load)**
 - Step DELDBL ends with condition code=0.
 - Step ALLOCDB ends with condition code=0.
 - Step LOADDDB ends with condition code=0.
- **. EKYUIAPP (PSB for IMS Apply)**
 - Step PSBCOMP ends with condition code =0.
 - Step PSBLINK ends with condition code =0.
- **.EKYUIAPJ (IMS Apply IVP job)**
 - Step APPLY ends with condition code=0.
- **.EKYUIDSP (Display of IMS source and IMS target databases)**
 - Step SOURCEDB ends with condition code=0.
 - Step TARGETDB ends with condition code=0.

The database contents listed by each of the prior two job steps can be inspected and compared to verify that both contain identical records. This verification confirms that the IMS Capture and IMS Apply were successful.

Notes:

1. In the sample provided above, the IMS Apply program in member EKYUIAPJ is configured to run in DLI mode for user convenience.
2. To ensure data integrity, the IMS Apply program must normally be run as a BMP.
3. IMS DPROP does not provide an explicit cleanup job for the IMS Apply process.

Appendix C. Migrating from IMS DPROF Version 2 Release 2 to Version 3 Release 1 without migration ISPF panels

This section describes how to migrate a system from Version 2 Release 2 to Version 3 Release 1 without using the IBM Migration ISPF panels. Migration with ISPF panels is described in Chapter 15, “Migrating an IMS DPROF system,” on page 127, and is a productivity tool recommended for most users. However, if you choose not to use this ISPF tool, the following is a step-by-step guide, to be used with other IMS DPROF V3.1 manuals to migrate from Version 2 Release 2 to Version 3 Release 1.

Before reading this section, it is recommended that you read or be familiar with all sections in Part 1, “Preparing for IMS DPROF configuration,” on page 1 and Part 2, “Configuring IMS DPROF,” on page 27, and then read or familiarize yourself with the first sections of Chapter 14, “Migrating IMS DPROF,” on page 119, which includes “Migration process overview” on page 119, and “General migration considerations” on page 120.

For those who intend to use the ISPF panels to do migration, this appendix might be helpful.

Backing Up Your Version 2 Release 2 IMS DPROF system data sets

Before beginning the migration procedure, we strongly recommended that you back up all IMS DPROF objects. These objects include:

- JCL libraries
- IMS DPROF product libraries
- IMS DPROF audit trail table
- IMS DPROF directory tables
- IMS DPROF MVG Input tables, if used in V2.2.
- IMS DPROF SQL update modules, their DBRMs, and, optionally, their DB2 packages
- The propagation request control blocks (PRCB)
- (Asynchronous) IMS DPROF Receiver tables and Selector data sets

We recommend that you migrate a test IMS DPROF system before you migrate your production system

Migrating from V2 Release 2 to Version 3 Release 1

1. Set all IMS databases and DB2 tables involved in data propagation on the migrating IMS DPROF Version 2 Release 2 system to read-only access.
2. For Synchronous, run the Version 2 Release 2 SCU to emergency stop the migrating IMS DPROF Version 2 Release 2 system. Use the ESTOP DPROF statement. For Log-Asynchronous, avoid running any IMS DPROF Version 2 Release 2 jobs.
3. Install the Version 3 Release 1 SVC. Consider doing a link pack area (LPA) refresh to accomplish this. For additional information, see “Preparing MVS for IMS DPROF SVC use” on page 15.
4. Update and run all relevant Version 2 Release 2 installation jobs to use the new Version 3 Release 1 release library names. Include only jobs or job steps that recompile, link edit, bind or copy IMS DPROF modules. You do not need

to recreate installation files, or tables, except for what is mentioned below: For more information on how to do the modifications, see the *IMS DPROP Reference*.

5. Update and run:
 - IMS DPROP environment installation jobs listed in panel EKYGPZZE:
 - EKYJIN
 - For the Log-asynchronous system: Add this statement to the EKYGDPR macro: TYPEA=(SELECTOR,RECEIVER).
 - For the Selector Only System: Add this statement to the EKYGDPR macro: TYPEA=SELECTOR. Also, change SNAME= to a unique system name (A valid name of up to 8 alphanumeric characters) within the same IMS DPROP environment.
 - There is no change necessary for migrating a Synchronous system.
 - EKYJADT (Bind step only)
 - EKYJLE
 - EKYJDAE
 - IMS DPROP system installation jobs listed in panel EKYGPB0E:
 - SnnnALLB (package bind only)
 - SnnnSCUB
 - SnnnMVGB
 - SnnnCCUB
 - SnnnDLUB (Synchronous only)
 - SnnnPRUB (Log-Asynchronous only)
 - SnnnGUUB(Log-Asynchronous only)
 - SnnnRCVB(Log-Asynchronous only)
6. Run the Version 3 Release 1 MVGU to initialize the Version 3 Release 1 PRCB tables, SQL update modules, and DBRMs. Use the RECREATE ALL statement. (This is not applicable to Selector-only systems.)
7. (Synchronous) Run the Version 3 Release 1 SCU to initialize the status file and activate the IMS DPROP system. Use INIT STATF,ESTOPPED.
8. (Synchronous) Run the Version 3 Release 1 SCU to reactivate the Version 3 Release 1 system. Use the RESET DPROP,DUBIOUS statement; and the ACTIVATE ALL statement.
9. Run the Version 3 Release 1 IVP jobs or your own IVP to use the new IMS DPROP library names. Make sure the RUP is included. Refer to panels EKYGPC0E (Figure 144 on page 183) and EKYGPD0E (Figure 145 on page 184) for synchronous propagation and panels EKYGPE0E (Figure 146 on page 185) and EKYGPF0E (Figure 147 on page 186) for log-asynchronous propagation. For the Selector-only system, use the EKYGPE0E panel only.
10. After you have determined that your migrated IMS DPROP Version 3 Release 1 system runs properly, update all your other relevant IMS DPROP jobs and procedures to use the new Version 3 Release 1 library names. Include your own IMS propagating applications, DFSDDLTO, and JCL skeletons.
11. Set all IMS databases and DB2 tables involved in data propagation with the migrated Version 3 Release 1 system to normal access.
12. If the migration was successful, you need to perform post-migration tasks. Refer to Chapter 11, “Performing post-configuration tasks,” on page 105 for details on post-installation and post-migration tasks.

Fallback from Version 3 Release 1 to Version 2 Release 2

Fallback is the process used to return a migrated IMS DPROF system to its original version and release level. Refer to Chapter 19, “Performing fallback of IMS DPROF systems,” on page 187 for details.

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Bibliography

Bibliography

IMS DataPropagator for z/OS Version 3 Release 1

The following documentation is part of the IMS
DPROP library.

Order Number	Title
SC27-1216	<i>Administrators Guide for Log Asynchronous Propagation</i>
SC27-1217	<i>Administrators Guide for MQSeries Asynchronous Propagation</i>
SC27-1215	<i>Administrators Guide for Synchronous Propagation</i>
SC27-1544	<i>Concepts</i>
SC27-1214	<i>Customization Guide</i>
GC27-1209	<i>Diagnosis</i>
GC27-1211	<i>An Introduction</i>
GC27-1212	<i>Installation Guide</i>
GC27-1213	<i>Messages and Codes</i>
SC27-1210	<i>Reference</i>

Other documentation referenced in this publication

The following documentation is referred to in this
publication.

- IMS Version 7
 - *IMS/ESA Utilities Reference: Database and Transaction Manager*, SC26-9440
 - *IMS/ESA Utilities Reference: System*, SC26-9441
 - *IMS/ESA Release Planning Guide*, GC26-9437
- IMS Version 6
 - *IMS/ESA General Information*, available online only from the IMS Internet site at www.software.ibm.com/data/ims/v6/gi.html
 - *IMS/ESA Utilities Reference: Database*, SC26-8769
 - *IMS/ESA Utilities Reference: System*, SC26-8770
 - *IMS/ESA Release Planning Guide*, GC26-8744
- DB2 Version 3
 - *DB2 Administration Guide*, GC26-4888
- DB2 for MVS/ESA Version 4
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- *MVS/ESA JCL Reference*, GC28-1654
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- *MVS/ESA SPL: System Management Facilities*, GC28-1628
- *MVS/ESA SPL: Application Development Macro Reference*, GC28-1857
- *MVS/ESA Setting up a Sysplex*, GC28-1449
- *System/390 MVS Sysplex Overview*, GC28-1208
- *SMP/E User's Guide*, SC28-1302
- *TSO/E Guide to Writing a TMP or CP*, SC28-1136

Glossary

A

abort record. An IMS DataPropagator propagation log record (38nn or 5938), indicating that the associated unit of work will not be committed by IMS and should not be propagated to DB2. *Compare with commit record.*

ACB. Application control block. Located in IMS.

Apply Program. A component of IMS MQ-DPROP that reads the MQSeries messages containing the changed data and passes it to the RUP. RUP transforms the changed data into relational format and updates the DB2 target tables.

Archive utility. A utility that filters out propagation log records from the records written to the IMS logs and writes them to Changed Data Capture data sets (CDCDSs).

Audit Extract utility. An IMS DPROP utility that inserts the IMS DPROP audit records written to SMF into the IMS DPROP audit table.

ACDC. Asynchronous changed data capture.

asynchronous changed data capture. An IMS function that captures the changes needed for IMS DPROP asynchronous propagation and saves them on the IMS logs. The function is mandatory for IMS DPROP asynchronous propagation and is either implemented by an SPE (IMS 3.1) or built into the program (subsequent releases of IMS).

asynchronous propagation. The propagation of data at a later time, not within the same unit of work as the update call.

AUDU. Audit Extract utility.

B

Batch Log data set. A data set that an IMS batch job uses to store propagation log records needed for IMS DPROP asynchronous propagation.

C

CAF. Call attach facility.

CCU. Consistency Check utility.

CDCDS. Changed Data Capture data sets.

CDCDS Registration utility. An IMS DPROP asynchronous propagation utility that registers new CDCDS to DBRC.

CDCDS Unregistration utility. An IMS DPROP asynchronous propagation utility that deletes CDCDS entries from DBRC.

CDU. CDCDS Unregistration utility.

CEC. central electronics complex.

Changed Data Capture data set (CDCDS). The data sets that the archive utility uses to store the IMS DPROP asynchronous propagation log records filtered during the archive process. CDCDSs contain only the propagation log records. These log records are used by the Selector in place of the corresponding SLDSs, that contain all IMS changes.

Changed Data Capture exit routine. See DB2 Changed Data Capture exit routine

Changed Data Capture function. See DB2 Changed Data Capture function.

commit record. An IMS DPROP asynchronous propagation log record (9928, 37nn, 41nn, or 5937) indicating that the associated unit of work has been committed by IMS and should be propagated to DB2. *Compare with abort record.*

concatenated key. See “IMS concatenated key” and “conceptual concatenated key.”

conceptual concatenated key. The conceptual concatenated key of a segment consists of the concatenated keys of the segment’s immediate physical parent and physical ancestors. Unlike the Conceptual *fully* Concatenated key, the conceptual concatenated key does not include the concatenated key of the segment itself.

conceptual fully concatenated key. The conceptual fully concatenated key is an IMS DPROP concept useful for the propagation of entity segments that do not have a unique IMS fully concatenated key; but that are nevertheless uniquely identifiable.

The conceptual fully concatenated key of a segment consists of these parts:

- the concatenated key of the segment
- the concatenated keys of the segment’s physical parent and physical ancestors

The conceptual fully concatenated key is therefore the combination of these parts:

- the IMS fully concatenated key
- the ID fields (if any) of the segment that contribute to the concatenated key of the segment
- the ID fields (if any) of the physical parent or ancestors that contribute to the concatenated keys of the physical parent or ancestor

So, the conceptual fully concatenated key is equal to that hypothetical IMS fully concatenated key, that you would see if including the ID fields into the IMS key-field at each hierarchical level.

The concept of conceptual fully concatenated key allows the support of segments with a unique conceptual fully concatenated key, much in the same way as segments with a unique IMS fully concatenated key.

concatenated key. The concatenated key is an IMS DPROF concept useful for the propagation of entity segments that are neither unique under their parent nor have a unique IMS key, but that are nevertheless uniquely identifiable through ID fields.

The concatenated key is a combination of these fields that identify the segment uniquely under its parent:

- the non-unique IMS key field (if any)
- ID fields

For segments having a unique IMS key field, the conceptual key and the IMS key field are identical.

Consistency Check utility (CCU). An IMS DPROF utility that checks whether the data that has been propagated between IMS and DB2 databases is consistent. If not, it reports the inconsistencies and generates statements the DBA can use to fix the inconsistencies. The CCU is applicable when generalized mapping cases are being used.

containing IMS segment. An IMS segment that contains internal segments (embedded structures) propagated by mapping case 3 Propagation Requests. It is referred to interchangeably as a “containing IMS segment” or “containing segment.”

containing segment. See containing IMS segment.

CRU. CDCDS Registration utility.

D

DBRM. Database Request Module.

Data Capture exit routine. See IMS data capture exit routine.

data capture function. An IMS function that captures the changes needed for data propagation.

DataRefresher. An IBM licensed program that lets you extract selected operational data on a periodic or one-time basis.

Data Extract Manager (DEM). A DataRefresher component that extracts the IMS data to which changes will subsequently be propagated. DEM also creates control statements for the DB2 Load utility to load the extracted IMS data into DB2 tables.

data propagation. The application of changes to one set of data to the copy of that data in another database system. See also synchronous propagation and IMS DPROF asynchronous propagation.

DB2 commit count. The number of IMS commit records that the IMS DPROF asynchronous propagation receiver is to apply to DB2 before it issues a DB2 commit.

DB2 Changed Data Capture exit routine. The routine to which the DB2 Changed Data Capture function passes the DB2 changes it has captured for propagation. This routine can be the IMS DPROF HUP routine, that propagates data, or your own exit routine.

DB2 Changed Data Capture function. A DB2 function that captures the DB2 changes needed for data propagation.

DB2 Changed Data Capture subexit routine. An optional IMS DPROF exit routine invoked whenever the HUP is called by DB2 changed data capture. The DB2 Changed Data Capture subexit routine can typically be used to perform generalized functions such as auditing all of the captured DB2 changes.

DB2-to-IMS propagation. Propagation of changed DB2 tables to IMS segments. It can be either:

- One-way DB2-to-IMS propagation
- DB2-to-IMS propagation, as part of two-way propagation

DBD. Database definition. The collection of macroparameter statements that describes an IMS database. These statements describe the hierarchical structure, IMS organization, device type, segment length, sequence fields, and alternate search fields. The statements are assembled to produce database description blocks.

DBDLIB. Database definition library.

DBPCB. Database program communication block.

DEDB. Data entry database.

DEM. Data Extract Manager.

directory. See IMS DPROF directory.

DLU. DL/1 Load Utilities. IMS DPROF utilities that are used to create (or re-create) the IMS databases from the content of the propagated DB2 tables. You can use DLU if you have implemented DB2 to IMS or two-way propagation.

DPROF-NR. The abbreviation for IBM IMS DataPropagator MVS/ESA through Version 2.2. At Version 3.1 the product name changed to IMS DataPropagator, abbreviated as IMS DPROF.

DataRefresher DEM. DataRefresher data extract manager.

DataRefresher Map Capture exit routine (MCE). See Map Capture exit routine.

DataRefresher UIM. See User Input Manager.

E

EKYMQCAP. The Capture component of MQ-DPROP. EKYMQCAP is an IMS data Capture exit routine. It runs as an extension to the updating IMS application programs, but it is transparent to them. EKYMQCAP obtains the changed data from the IMS Data Capture function and sends this data via MQSeries messages to the Apply Program.

EKYRESLB Dynamic Allocation exit routine. An IMS DPROP exit routine that can be used to allocate dynamically the IMS DPROP load module library to the EKYRESLB DD-name.

entity segment. The data being mapped from IMS to DB2 comes from one single hierarchic path down to a particular segment. This segment is called the entity segment. See also mapping case 1.

ER. Extract request.

Event Marker. A component of MQ-DPROP that runs on the same system as the IMS source databases. It is used to identify an event that occurs on the Source System. The customer must run the Event Marker on the Source System at the time that the event occurs.

The Event Marker transmits an MQSeries message that identifies the event to the Apply Program. This MQSeries message is transmitted in FIFO sequence and in the same Propagation Data Streams as the changed IMS data.

When an occurrence of the Apply Program processes this message, the content of the target DB2 tables of this occurrence of the Apply Program reflect the content of the IMS source databases at the time that the Event Marker was run on the Source System.

The Event Marker is used for an automated stop of the Apply Program when the content of the target DB2 tables reflects a particular Source System point in time.

exit routines. IMS DPROP contains seven exit routines. See the individual glossary entries for:

- DB2 Changed Data Capture exit routine
- DB2 Changed Data Capture subexit routine
- IMS Data Capture exit routine
- Field exit routine
- Map Capture exit routine
- Propagation exit routine
- Segment exit routine
- User exit routine

extension segment. The data being mapped from IMS to DB2 comes from a single hierarchic path down to an entity segment and from any segments

immediately subordinate to the entity segment. The segments subordinate to the entity segment can have zero or one occurrence beneath a single occurrence of the entity segment. This type of subordinate segment is called an extension segment (as it extends the data in the entity segment). See also mapping case 2.

extract request (ER). A DataRefresher request to extract IMS data. Extract requests become IMS DPROP propagation requests once they are validated by the IMS DPROP MCE.

F

Field exit routine. An IMS DPROP exit routine you can write to complement the logic of IMS DPROP's generalized mapping cases. Field exit routines are typically used to convert an individual IMS data field between a customer format IMS DPROP does not support and a format you have defined in your propagation request.

FIFO. First-In-First-Out

fully concatenated key. See IMS fully concatenated key and conceptual fully concatenated key.

G

generalized mapping cases. The mapping cases provided by IMS DPROP. See mapping case 1, mapping case 2 and mapping case 3.

group definition file. The file that the Group Unload utility (GUU) uses to store the IMS sources that it extracts from the IMS DPROP directory tables. See also, *SCF Compare job and SCF Apply job*.

Group Unload utility (GUU). The IMS DPROP asynchronous propagation utility that extracts details of all IMS sources for the specified propagation group from the IMS DPROP directory tables at the receiver site and writes them to the Group Definitions File. See also, *SCF Compare job and SCF Apply job*.

GUU. Group Unload utility.

H

hierarchical update program (HUP). The IMS DPROP component that does the actual DB2-to-IMS propagation. HUP is the IMS DPROP-provided DB2 Changed Data Capture exit routine. The DB2 Changed Data Capture function calls HUP and provides to HUP the changed IMS rows.

Hierarchical to Relational propagation. This is one-way hierarchical to relational propagation: the one-way propagation of changed IMS segments to DB2

tables. The terms *hierarchical to relational propagation* and *one-way IMS-to-DB2 propagation* are interchangeable.

HUP. Hierarchical Update program.

HSSR. High speed sequential retrieval.

I

ID fields. *Identification (ID) fields* are non-key fields that:

- uniquely identify a segment under its parent
- do not change their value

Typical examples of IMS segments with ID fields, are segments where the database administrator has not defined the ID fields as part of the IMS Key field. For example because the IMS applications need to retrieve the segment in another sequence than the ascending sequence of the ID fields.

identification fields. See ID fields.

IMS concatenated key. For an IMS segment, the concatenated key consists of:

- The key of the segment's immediate parent, and
- The keys of the segment's ancestors

Unlike the IMS **fully** concatenated key of the segment, the concatenated key does not include the key of the segment itself.

A logical child segment has two concatenated keys: a physical concatenated key and a logical concatenated key. The physical concatenated key consists of the key of the segment's physical parent and the keys of the physical ancestors of the physical parent. The logical concatenated key consists of the key of the segment's logical parent and the keys of the physical ancestors of the logical parent.

IMS Data Capture exit routine. The routine to which the IMS Data Capture function passes the IMS changes it has captured for propagation. For synchronous propagation, this routine can be the IMS DPRDP RUP routine, that propagates data, or your own exit routine. For IMS DPRDP asynchronous propagation, the data capture exit routine is a program you write that gets the changed data from IMS. Other programs that you write will later invoke IMS DPRDP with the changed IMS data.

IMS data capture function. An IMS function that captures the changes needed for data propagation.

IMS DPRDP. The abbreviated name for the IBM IMS DataPropagator product. Previously, this product was called IMS DataPropagator, abbreviated as DPRDP-NR.

IMS DPRDP directory. A set of DB2 tables containing the mapping and control information necessary to perform propagation.

IMS fully concatenated key. For an IMS segment, the fully concatenated key consists of:

- The key of the segment,
- The key of the segment's immediate parent, and
- The keys of the segment's ancestors.

Unlike the IMS concatenated key of the segment, the fully concatenated key includes the key of the segment itself.

IMS INQY data. The first 9904 (update) record in each IMS unit of work (UOW) contains IMS INQY data (transaction name, PSB name, and user ID). This information is written to the PRDS for the propagation group as the first record of the UOW.

IMS log files. The files that IMS uses to store details of all changes to IMS data. See also, batch log data sets, online data sets (OLDSs), system log data sets (SLDSs), and Changed Data Capture data sets (CDCDSs).

IMS logical concatenated key. One of the two IMS concatenated keys of a logical child segment (the other is an IMS physical concatenated key). The logical concatenated key consists of:

- The key of the segment's logical parent, and
- The keys of the physical ancestors of the logical parent.

IMS physical concatenated key. One of the two IMS concatenated keys of a logical child segment (the other is an IMS logical concatenated key). The physical concatenated key consists of:

- The key of the segment's physical parent, and
- The keys of the physical ancestors of the physical parent.

IMS-to-DB2 propagation. This is the propagation of changed IMS segments to DB2 tables. Distinguish between:

- One-way IMS-to-DB2 propagation
- IMS-to-DB2 propagation, as part of two-way propagation

ISC. Inter-system communications.

IXF. Integrated exchange format.

ISPF. Interactive system production facility or Interactive structured programming facility.

internal segments. Internal Segments is the IMS DPRDP and DataRefresher term for structures embedded in IMS Segments, that are propagated through mapping case-3 propagation requests. Each embedded structure (i.e. each internal segment), is propagated to a different table; each occurrence of the embedded structure to one row of the table.

invalid unit of work. An IMS UOW that is missing a first record (containing the INQY data). If the IMS DPRDP asynchronous propagation Selector detects an

invalid unit, it responds according to what you specified on the INVUOW keyword of the SELECT control statements. If you specified:

IGNORE

The Selector continues processing

STOP The Selector issues an error message and terminates

L

LOG-ASYNC. The IMS log-based, asynchronous propagation functions of IMS DPROF.

Once the IMS log records are archived (IMS Online Logs) or de-allocated (IMS Batch Logs) by IMS and then stored in time-stamp sequence, LOG-DPROF reads the IMS logs to find the changed data and then stores the changed data in PRDS datasets. The Receiver component of IMS DPROF reads the PRDSs, transforms the data into the relational format, and applies the changes to the target DB2 tables.

See asynchronous propagation.

logical concatenated key. See IMS logical concatenated key

M

MSDB. Main storage database.

Map Capture exit (MCE) routine. The map capture exit routine provided by DPROF. MCE is used when you provide mapping information through DataRefresher. MCE is called by DataRefresher during mapping and data extract to perform various validation and checking operations. The IMS DPROF MCE should be distinguished from the DataRefresher Map Capture exit, the DataRefresher routine that calls MCE.

mapping case. A definition of how IMS segments are to be mapped to DB2 tables. IMS DPROF distinguishes between mapping case 1, mapping case 2, and user mapping cases.

mapping case 1. One of the generalized mapping cases provided by IMS DPROF. Mapping case 1 maps one single segment type, with the keys of all parents up to the root, to a row in a single DB2 table.

mapping case 2. One of the generalized mapping cases provided by IMS DPROF. Mapping case 2 maps one single segment type, with the keys of all parents up to the root, plus data from one or more immediately subordinate segment types (with a maximum of one occurrence of each segment type per parent), to a row in a single DB2 table.

mapping case 3. One of the generalized mapping cases provided by IMS DPROF. Mapping case 3 supports the propagation of segments containing

embedded structures. A typical example of an embedded structure is a repeating group of fields.

- each embedded structure can be propagated to/from a different table. Mapping case 3 propagates each occurrence of an embedded structure, with the key of the IMS segment, and the keys of the physical parent and ancestor, to/from a row of one DB2 table.
- the remaining data of the IMS segment (that is the fields that are not located in a embedded structure) can be propagated to/from another table.

Mapping Verification and Generation (MVG). An IMS DPROF component that validates the mapping information for each propagation request and stores it in the IMS DPROF directory. For a propagation request belonging to a generalized mapping case, MVG generates an SQL update module. MVG is invoked internally by MCE and MVGU.

Mapping Verification and Generation utility (MVGU). An IMS DPROF utility invoked by the DBA. MVGU creates propagation requests when DataRefresher is not used to provide mapping information (i.e., when you put the mapping information directly into the MVG input tables). MVGU also deletes or rebuilds propagation requests in the IMS DPROF directory.

MCE. Map Capture exit routine.

MIT. Master Index Table.

master table. The IMS DPROF directory master table, that is created when IMS DPROF is initialized. It consists of one row, containing system and error information.

MCE. Map Capture exit routine.

MQ-ASYNC. The MQSeries-based, asynchronous propagation functions of IMS DPROF.

An IMS Data Capture Exit routine provided by IMS DPROF obtains the IMS Database changes in real time from IMS and sends the changes via MQSeries messages to an IMS DPROF Apply program. The Apply program reads the MQSeries messages, transforms the data into relational format, and then applies the new data to the target DB2 tables.

MQ-ASYNC supports both near-real time propagation and automated point-in-time propagation.

MQSeries. A family of IBM licensed programs that provide message queuing services.

MQSeries for OS/390. The members of the MQSeries that run on OS/390 systems.

MSC. Multisystem communication.

MVG. Mapping Verification and Generation.

MVG input tables. A group of DB2 tables into which the DBA stores propagation request definitions when DataRefresher is not used to provide mapping information. Once the propagation requests are stored, the DBA invokes MVGU. MVGU invokes MVG, that validates the propagation request and copies the mapping definitions from the MVG input tables to the IMS DPROT directory.

MVGU. Mapping Verification and Generation utility.

N

Near RealTime. A delay of only a couple of seconds.

O

OLDS. Online Data Set.

One-way DB2-to-IMS propagation. This is the propagation of changed DB2 tables to IMS segments. Distinguish between:

- One-way DB2-to-IMS propagation
- DB2-to-IMS propagation, as part of two-way propagation

One-way IMS-to-DB2 propagation. This is the propagation of changed IMS segments to DB2 tables. Distinguish between:

- One-way IMS-to-DB2 propagation
- IMS-to-DB2 propagation, as part of two-way propagation

P

persistent MQSeries message. An MQSeries message that survives a restart of the MQSeries Queue Manager.

PCB. Program communication block.

Point In Time Propagation. An Asynchronous propagation is said to operate in 'Point In Time' mode, when the data content of the target databases matches the content of the source databases at a previous, clearly identified Point In Time. For example, a Point In Time Propagation can be used to reflect in the content of the target databases the logical end of a business day, or the logical end of business month, or the end of specific Batch jobstream that updated the source databases.

physical concatenated key. See IMS physical concatenated key.

PR. Propagation request.

PR ID. Propagation request identifier.

PRCT. Propagation Request Control Table

PRDS. Propagation Request Data Set

PRDS register file. A data set created by the IMS DPROT asynchronous propagation Selector that contains details of the associated PRDS.

propagation. See data propagation.

Propagation Data Stream. A stream of changed IMS data that flows in MQSeries messages from the Capture Component of IMS DPROT to the Apply Component of IMS DPROT. Propagation data streams are defined with PRSTREAM control statements in the //EKYTRANS file of EKYMQCAP.

propagation delay. The time elapsed between the update of the IMS source database by the application programs and the update of the target DB2 table by IMS DPROT.

propagation log records. IMS log records that the IMS DPROT asynchronous propagation Selector writes to PRDSs:

- 9904 (update) records
- Commit or abort records
- SETS/ROLS records

Propagation Request data set (PRDS). A sequential file into which the IMS DPROT asynchronous propagation Selector writes all propagation log records for a propagation group.

PRDS register table. An IMS DPROT directory table that is created at the Receiver site when IMS DPROT is installed. The table is initially empty and you must populate it, using the PRU REGISTER control statements.

PRDS Registration utility (PRU). An IMS DPROT asynchronous propagation utility that registers PRDSs in the PRDS Register Table.

Propagation exit routine. An IMS DPROT exit routine you can write to propagate data when the generalized mapping cases don't meet your needs. A Propagation exit routine must provide all the logic for data mapping, field conversion, and propagation.

propagation group. A subset of the propagation requests in the IMS DPROT directory propagation request table (IMS DPROT asynchronous only).

You can define as many propagation groups as you like, but any propagation request can be associated with one and only one propagation group.

propagation request (PR). A request to propagate data between IMS and DB2. You define propagation requests for each segment type that is to be propagated.

PR set. A group of logically related propagation requests, identified by having the same PRSET ID. PR

sets are typically used when you propagate the same IMS data to multiple sets of DB2 tables.

propagation request control table (PRCT). An IMS DPROT directory table that is created at the Receiver site when IMS DPROT is installed. It contains details of all propagation requests defined to IMS DPROT and, in combination with the RCT, enables the Receiver to ascertain:

- Which propagation requests are assigned to which Receivers
- The activity status of all defined Receivers
- The activity status of all propagation requests that are assigned to defined Receivers

PRU. PRDS Registration utility.

PSB. Program specification block.

R

RCT. Receiver control table.

Receiver. An IMS DPROT asynchronous propagation component that retrieves the propagation log records from a PRDS and passes them to the RUP, that uses them to update the DB2 target tables.

Applies to LOG-DPROT.

RECEIVER control statement. A control statement that is input directly into the IMS DPROT asynchronous propagation Receiver JCL to specify:

- The name of the Receiver that is to process a PRDS
- The names of the DB2 subsystem to be accessed and the DB2 plan
- The number of committed UOWs to process before a DB2 commit is issued

Applies to LOG-DPROT.

Receiver control table (RCT). An IMS DPROT directory table, that is created at the Receiver site when IMS DPROT is installed. The table is initially empty and you must populate it, using the SCU CREATEREC control statement. It contains details of all Receivers and, in combination with the PRCT, enables the Receiver to ascertain:

- Which propagation requests are assigned to which Receivers
- The activity status of all defined Receivers
- The activity status of all propagation requests that are assigned to defined Receivers

Applies to LOG-DPROT.

Relational to Hierarchical propagation. This is one-way relational to hierarchical propagation: the one-way propagation of changed DB2 tables to IMS

segments. The terms *relational to hierarchical propagation* and *one-way DB2-to-IMS propagation* are interchangeable.

relational update program (RUP). The IMS DPROT component that does the actual IMS to DB2 propagation. RUP is the IMS DPROT-provided IMS Data Capture exit routine.

For synchronous propagation, the IMS Data Capture function calls RUP with the changed IMS segments.

For user asynchronous propagation, your routine gets the changes from IMS and later calls RUP.

For IMS DPROT asynchronous propagation, the Receiver gets the changes from the Selector-Receiver Interface and later calls RUP. In either case, RUP propagates the changes to DB2.

RIR. RIR is an IMS DPROT abbreviation for DB2 Referential Integrity Relationship. Database administrators can define RIRs between tables in order to request that DB2 catches and prevents update anomalies in the relational databases.

Implementation of RIRs between propagated tables is:

- Optional for one-way IMS to DB2 propagation
- Strongly recommended for DB2 to IMS and two-way propagation

RTT. Resource translation table.

RUP. Relational Update program.

RUP control block table. A single IMS DPROT directory table that contains one RUP propagation control block (PRCB) for each propagated segment type. Each RUP PRCB contains details of the relevant database and segment.

S

SCF. Selector Control File.

SCF Apply job. Uses the SCF control statements to create new propagation groups and to list and modify existing propagation groups in the SCF.

SCF Compare job. Used to compare the contents of the Group Definitions File with the propagation groups in the SCF and to generate SCF control statements to bring the SCF into line with the Group Definitions File.

SCF control statements. Can be generated automatically by the IMS DPROT asynchronous propagation GUU or input directly into the IMS DPROT asynchronous propagation SCF Apply utility JCL. The control statements modify the contents of the SCF records.

SCU. Status Change utility.

segment exit routine. An IMS DPROT exit routine you can write to complement the logic of the

generalized mapping cases. Segment exit routines are typically used to convert a changed data segment from the form it has in your IMS database to a form you have defined in your propagation request.

SELECT control statements. Control statements that are input directly into the IMS DPROP asynchronous propagation Selector JCL to define the execution options for the Selector.

Applies to LOG-DPROP.

Selector. An IMS DPROP asynchronous propagation component that collects propagation log records from the IMS log files and writes them to PRDSs for later processing by the IMS DPROP asynchronous propagation Receiver component.

Applies to LOG-DPROP.

Selector control file. Created at Selector installation or generation time and contains the following control information that is essential to the operation of the Selector:

- Database records and propagation group records
- DBRC information
- Timestamp information

Applies to LOG-DPROP.

SLDS. System Log Data Set.

SNAP. system network analysis program

Source System. An OS/390 system where IMS source databases of the IMS DPROP propagation reside.

SQL update module. A module generated by MVG for each propagation request belonging to a generalized mapping case. An SQL update module contains all the SQL statements required to propagate to DB2 the changed IMS data for that propagation request.

SSM. Subsystem member. An IMS JCL parameter that identifies the PDS member that describes connection between IMS and the DB2 subsystems.

Status Change utility (SCU). An IMS DPROP utility that:

1. Changes the status of propagation requests in the synchronous environment. Propagation requests can be active, inactive, or suspended. The SCU also performs a variety of other service functions.
2. Maintains the Timestamp Marker Facility and populates the RCT and the PRCT in IMS DPROP asynchronous propagation.

synchronous propagation. The propagation of data within the same unit-of-work as the update call.

T

Target System. An OS/390 system where DB2 target tables of the IMS DPROP propagation reside.

Timestamp Marker Facility. Supports the statements that create, assign, and delete timestamp markers in the SCF. It is run as part of the SCU.

TSMF. Timestamp Marker Facility.

TSMF Callable Interface. A facility that allows a user application to create a stop timestamp for one or more propagation groups.

Two-way propagation. The combination of IMS-to-DB2 propagation and DB2-to-IMS propagation for the same data.

TW propagation. See two-way propagation.

U

UIM. User Input Manager.

ULR. Uncommitted Log Record.

uncommitted log records (ULR). When the IMS DPROP asynchronous propagation Selector terminates, it writes all uncommitted log records (propagation log records that have not yet been either committed or aborted by IMS) to the uncommitted log record data set. On a subsequent Selector execution, these records will be either written to the appropriate PRDS (if they have been committed by IMS) or deleted from the uncommitted log record data set (if they have been aborted by IMS).

UOW. Unit of work.

USER-ASYNC. The User asynchronous propagation functions of IMS DPROP.

user exit. See exit routines.

User Input Manager (UIM). A DataRefresher component to which you describe your IMS databases and the mapping between IMS databases and DB2 tables. The mapping is defined by submitting extract requests. You can specify on an extract requests that the UIM is to invoke the DataRefresher Map Capture exit routine provided by IMS DPROP and pass it the DataRefresher mapping definitions of the extract request.

user mapping case. A mapping case you can develop if the generalized mapping cases don't meet your needs.

V

Virtual Lookaside Facility (VLF). An MVS/ESA component that is a specific implementation of data spaces. IMS DPROP exploits VLF for a high-performance retrieval of mapping information and other control information.

VLF. Virtual Lookaside Facility.

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