Reference

!DB®/EXPLAIN for DB2

Version 500

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Contents

Preface

Efficient SQL is the foundation for optimal DB2 performance.
!DB®/EXPLAIN for DB2 provides answers to SQL performance questions.

!DB/EXPLAIN provides developers with the means to more easily write
efficient SQL code for high performance applications.

Using !DB/EXPLAIN, database administrators can perform the analysis
needed to ensure that inefficient SQL does not degrade DB2 application or
subsystem performance.

When used in conjunction with OMEGAMON II® for DB2, !DB/EXPLAIN
provides a means for system programmers and DBAs to view access path
data provided by !DB/EXPLAIN together with application trace and
accounting data provided by OMEGAMON II for DB2 to quickly pinpoint
poorly performing SQL and improve application performance.

This *!DB/EXPLAIN Reference* illustrates !DB/EXPLAIN's major object list
panels and describes the fields each contains. It also describes the commands
and selects available for use on each panel, and the formats in which each
panel can be displayed. The panels that support Housekeeping and
Customization are also described.

An associated publication, the *!DB/EXPLAIN User's Guide*, describes the
features of !DB/EXPLAIN and guides you in performing common
!DB/EXPLAIN tasks.

Contents of this Book

Overview

This unit describes the contents of each major section of this manual.

Content of major sections

Use the table to understand the organization and content of this reference.

Section name	Contents
Preface	The Preface describes the customer support available from Candle® Corporation, the documentation available with !DB/EXPLAIN, and the conventions used in the !DB/EXPLAIN publications.
!DB/EXPLAIN Object Panels	This section contains the object panels, with a description of the fields on the panels, as well as applicable formats, selects and commands.
Housekeeping and Customization Panels	This section contains the housekeeping and customization panels with a description of each field on each panel.
Appendixes	Use the appendixes to learn more about !DB/EXPLAIN commands, selects, and fields.

Adobe Portable Document Format

Introduction

Candle supplies documentation in the Adobe Portable Document Format (PDF). The Adobe Acrobat Reader prints PDF documents with the fonts, formatting, and graphics in the original document. To print a Candle document, do the following:

1. Specify the print options for your system. From the Acrobat Reader Menu bar, select **File > Print Setup...** and make your selections. A setting of 300 dpi is highly recommended as is duplex printing if your printer supports it.

2. To start printing, select **File > Print** on the Acrobat Reader Menu bar.

3. On the Print popup, select one of the **Print Range** options for

   - a single page
   - a range of pages
   - all of the document

4. (Optional) To fit oversize pages to the paper size currently loaded on your printer, select the **Shrink to Fit** option.

Printing problems?

Your printer ultimately determines the print quality of your output. Sometimes printing problems can occur. If you experience printing problems, potential areas to check are:

- settings for your printer and printer driver. (The dpi settings for both your driver and printer should be the same. A setting of 300 dpi is recommended.)

- the printer driver you are using. (You may need a different printer driver or the Universal Printer driver from Adobe. This free printer driver is available at www.adobe.com.)

- the halftone/graphics color adjustment for printing color on black and white printers. (Check the printer properties under **Start > Settings > Printer**. For more information, see the online help for the Acrobat Reader.)

- the amount of available memory in your printer. (Insufficient memory can cause a document or graphics to fail to print.)

For additional information on printing problems, refer to the documentation for your printer or contact your printer manufacturer.

Documentation Conventions

Overview

This guide uses the conventions described in this unit.

Convention Description

Refer to the table for a description of the documentation conventions used in this guide.

Convention	Description
Panels and figures	Panels and figures in this document are representations. Actual product panels may differ.
Revision bars	Revision bars (|) appear in the left margin to identify new or updated material.
Commands	DB2, TSO, ISPF, and !DB/EXPLAIN command names are in upper case.
Percent sign	When executing a CLIST, you can optionally preceded the CLIST name with a percent sign (%) to achieve optimum performance. For example, to access !DB/EXPLAIN, you can invoke the CLIST KTE in the form `KTE` or `%KTE`.
Square brackets	Square brackets [ ] denote optional arguments. Arguments enclosed in square brackets are not required. In the following example, use of XLV is optional: `[XLV]`

Braces	Braces { } denote required arguments. In the following example, the *workload* keyword is required:
	
	`MONITOR {workload}`
	`        [time]`
	`        [SUMMARY]`

Convention Description (continued)

Convention	Description
hilev	Lower-case italics in data set names denote variable qualifiers. Qualifiers are prefixes in a data set name that make the data set name unique. Some qualifiers used in this document are:
	hilev A high-level qualifier; the first prefix or set of prefixes in the data set name.
	db2id The DB2 subsystem identifier; used as a mid-level qualifier for some !DB®/Tools for DB2 data sets. The mid-level qualifier is the prefix or set of prefixes between the high-level qualifier and the last part of the data set name.
	extract_id An extract ID; an identifier for the catalog data extracted from the DB2 catalog. It is used as a mid-level qualifier for some !DB/Tools data sets. The mid-level qualifier is the prefix or set of prefixes between the high-level qualifier and the last part of the data set name.
	product_id A product ID; an identifier for the !DB/Tools product or products you are installing. It is used as a mid-level qualifier for some !DB/Tools data sets. The mid-level qualifier is the prefix or set of prefixes between the high-level qualifier and the last part of the data set name.
'tddoc3.booklib.prod'	Single quotes distinguish specific data set names from variable qualifiers. The data set name is shown in lower case and in the same font as the rest of the text.
Function keys	This guide does not refer to specific function keys, for example, F3. Because you may use the function key definitions provided by ISPF or choose to define your own function keys, this guide instructs you to enter a command on the command line or press the appropriate function key.
	Example: Type END on the command line and press Enter, or press the appropriate function key.

Terminology—panel versus display

In this document, the term "panel" is used to denote a facsimile of an actual screen you might see when logged onto !DB/EXPLAIN. The term "display" is used to denote the information that is contained on a panel or the equivalent information written to an output device such as a printer or output file.

This distinction is especially important in the chapters of this manual that discuss the use of !DB/EXPLAIN in batch. In these chapters, you are asked to construct batch jobs to perform processing equivalent to entering commands, filters, and sorts on the command line of an object panel. Thus:

- A discussion of the "EXPLAIN display" refers to the EXPLAIN information presented either as a series of panel images or as information contained in a file that can be output to a printer.

- A discussion of a batch job containing commands usable from the "Statements display" implies that you can use only those commands you might use in an online session from the Statements panel.

Documentation Set

Introduction

Candle provides a complete set of documentation for !DB/EXPLAIN. Each manual in this documentation set contains a specific type of information to help you use the product.

Candle welcomes your comments and suggestions for changes or additions to the documentation set. A user comment form, located at the back of each manual, provides simple instructions for communicating with Candle's Information Development department. You can also send email to `UserDoc@candle.com`. Please include the product name, version, and book title in the subject line. To order additional manuals, contact Candle Customer Support.

The documentation listed in the following table is available for !DB/EXPLAIN.

Table 1. !DB/EXPLAIN Documentation		
Doc Number	**Title**	**Description**
TE54-5842	*!DB/EXPLAIN User's Guide*	Tells how to use !DB/EXPLAIN and its features
TE53-5843	*!DB/EXPLAIN Reference*	Provides a reference for major !DB/EXPLAIN functions and features
TI51-5840	*!DB/Tools Installation and Customization Guide*	Tells how to install !DB/EXPLAIN as well as the other !DB®/Tools for DB2 products. It also contains information about security and authorizations.

Online documentation for BookManager

In addition to the printed versions, !DB/EXPLAIN documentation is available in BookManager format. Both major !DB/EXPLAIN releases and maintenance releases between major releases contain updated BookManager documentation. See the *!DB/Tools Installation and Customization Guide* for information regarding these files.

For more information about using BookManager, see these IBM documents:

IF you want to ...	THEN see ...
put our book on a bookshelf,	*IBM BookManager BUILD/MVS Preparing Online Books* SC38-2036
display our book,	*IBM BookManager READ/MVS Displaying Online Books* SC38-2034

Version 500 Changes

Overview

This section describes what is different between !DB/EXPLAIN and previous versions of !DB/EXPLAIN.

Differences in this release

Primarily, the Version 500 release of !DB/EXPLAIN provides full compatibility for DB2 Version 6. However, some DB2 enhancements are not exploited by !DB/EXPLAIN Version 500.

DB2 Version 6 contains enchancements for

- defining and manipulating data objects
- conducting e-business
- improving performance and availablity of database applications
- managing the database environment
- increasing database and query capacity

This release of !DB/EXPLAIN also continues to support fully earlier releases of DB2 and is also Y2K compliant.

!DB/EXPLAIN Object Panels

Chapter 1.
!DB/EXPLAIN Panels

Introduction

This chapter provides reference information about major !DB/EXPLAIN functions and features. Information is referenced by major panel function and is mapped by sections.

Description   Describes and defines panel functions

Format   For panels available in more than one format, describes the formats

Access   Tells you how to access panels

Panels   Shows you the major panel and its associated panels and panel formats

Fields and Associated Sorts and Filters
Gives information about the fields on a panel. Sorts and filters are listed if they are avaiable.

Selects   Describes available selects

Commands   Describes available commands

Chapter contents

Administration Menu

Overview

This unit describes the !DB/EXPLAIN Administration Menu.

Background about the Administration Menu

The Administration Menu (KTEPADMN) provides entry to !DB/EXPLAIN administration menu functions. You can find information about using !DB/EXPLAIN's Administration Menu and its functions in "Using the Administration Menu" in the *!DB/EXPLAIN User's Guide*.

Access

You access the !DB/EXPLAIN Administration Menu from !DB/EXPLAIN's Primary Menu or by typing **ADMIN** on the command line of an object list panel.

Panel

The following illustration shows the Administration Menu panel.

```
----------------------------- DB/EXPLAIN  DB2=D42B     ----------------------
Cmd ===>

                    A D M I N I S T R A T I O N    M E N U
Cmds: GLOBAL (Menu)  1
-----------------------------------------------------------------------------

Option ===>

            1  Activity Log 2
            2  Authorizations 3
            3  Extract Ids 4
            4  Extract History 5
            5  Housekeeping 6
            6  Refresh displays from extract 7
            7  Display DB/Tools profile data sets 8
            8  Set DB/Tools profile data sets 9
```

Elements of the Administration Menu (continued)

1   Command entered from this menu to obtain a detailed global command menu.

2   Displays log of your activity; you can access the activity log from other !DB/EXPLAIN panels by entering the command ACTLOG on the command line.

3   If you have authorization, system displays a list of authorized users of !DB/EXPLAIN Without appropriate authority, you cannot view or alter the list.

4   Displays the !DB/Tools Global Information--DB2 Subsystem Name Table panel that contains the extract IDs of configured DB2 subsystems available to you mapped against their associated subsystems IDs and MVS IDs.

5   Displays extract history.

6   Takes you directly to the Houskeeping Main Menu.

7   Rebuilds the displays generated from the extract

8   Displays profile datasets information panel.

9   Lets you set and maintain profile datasets.

BIND/REBIND Package

Overview

This unit describes the BIND/REBIND Package panel.

Background about the BIND/REBIND Package panel

The BIND/REBIND Package panel (KTEPBIKA) generates the commands necessary to BIND/REBIND packages. The BIND Package panel displays when BIND or REBIND is invoked by entering a B select from the DBRMS panel or a B or R select from the Packages panel.

Steps to BIND or REBIND a package

Here are the steps to BIND or REBIND a package.

- If BINDing from a DBRM:
    1. Type a DBRM member name and library.

        Only one DBRM can be bound into a package. There is a one-to-one correspondence between a package and a DBRM member.

    2. If system connections are to be enabled or disabled type **Y** (Yes) in the Enable/Disable Connections field. The System Connection Names panel (KTEPBIKC) displays.

- If COPYing from Packages:
    1. Enter a collection ID and package ID.

    2. If system connections are to be enabled or disabled, type **Y** (Yes) in the Enable/Disable Connections field. The System Connection Names panel (KTEPBIKC) displays.

Copying packages and BINDing DBRMs are mutually exclusive.

If no previous errors have occurred, and if you have requested it on Housekeeping's Output Options Defaults panel, the Output Options panel appears to allow you to specify where the generated BIND/REBIND commands are stored.

Overriding BIND parameters

Housekeeping's Package BIND Overrides panel allows you to make global changes to BIND parameters for more than one package. It allows you to override attributes of an existing package when generating a BIND or REBIND command. Fields for which no overrides are shown on the Package BIND Overrides panel cannot be overridden. Refer to "Package BIND Overrides" on page 328 for more information.

Caution when executing BINDs or REBINDs

When executing the BIND commands generated by !DB/EXPLAIN, remember that your output can be limited by the amount of available storage.

Access

This panel is accessed from either the Packages panel using the B or R select, or the DBRMS panel using the B select.

Panels

The following illustration shows the BIND/REBIND Package panel.

```
---------------------------- DB/EXPLAIN  DB2=D42B ------------------- -------
Cmd ===>
                          P A C K A G E   B I N D

BIND or REBIND : BIND                    Action   : R   (R Replace  A Add)
                                         Flag     : I   (I / W / E / C)
Package      : KTEEXDB3                   Isolation: S   (R RR T RS CS  U UR)
Location     :                           Release  : C   (C Commit  D Deallocate)
Collection   : CANDLE_SYSTEM             Validate : B   (R Run  B Bind)
Owner        : MYUSER                    Explain  : N   (Y Yes  N No)
Qualifier    : SYSIBM                    Sqlerror : N   (N Nopackage  C Continue)
Dynamicrules:  ( B / R / blank)          Degree   : 1   (1  ANY)
Keepdynamic : N ( Y  Yes  N  No )        Deferprep :    (Y Yes  N No  blank )
Reopt(VARS) : N ( Y  Yes  N  No )        Currentdata: Y  (Y Yes  N No )
Version      : V500
Enable/Disable Connections?: * (Y Yes  N No  * ALL)
Remote ENABLE?             :   (Y Yes  N No )
Source:
Library      : CANDLE.DBTOOLS.DBRM                         DBRM:  KTEEXDB3
  - or -
Collection   :                          Package    :
Version      :

ENTER to process   END to cancel
```

From the System Connection Names panel, you can enable or disable system
connections.

```
----------------------- DB/EXPLAIN   DB2=D31A ----------------------------
CMD ===>                                                 SCROLL ===> PAGE

                 SYSTEM CONNECTION TYPES FOR BIND PACKAGE
   Cmds: GLOBAL (Menu)
  --------------------------------------------------------------------------

  Enter system connect types to be Enabled/Disabled for Package ALTSQLUC

                   System         Connection        Enable?
                   ---------      ---------------    -------

   More Connections?: N (Y Yes  N No)
```

Fields and Associated Sorts and Filters

FIELD	ON PANEL	DESCRIPTION
ACTION on Package	KTEPBIKA	Indicates whether to replace the application package: **R** Replace **A** Add
BIND or REBIND	KTEPBIKA	Type of command.
COLLECTION	KTEPBIKA	Collection name where package is to reside.
COLLECTION (SOURCE)	KTEPBIKA	Collection in which package to be copied resides.
CONNECTION	KTEPBIKC	Connection ID.
CURRENTDATA	KTEPBIKA	Indicates the data currency requirement of ambiguous cursors **Y** Bind with CURRENTDATA (YES) **N** Bind with CURRENTDATA (NO)
DEFERPREP	KTEPBIKA	Indicates whether PREPARE statement referring to a remote object is deferred until the first EXECUTE, OPEN, or DESCRIBE for the statement is issued. Valid values include: **Y** Yes **N** No **blank** Inherit from PLAN
DEGREE	KTEPBIKA	Determines whether I/O Parallelism is enabled **1** Generated BIND/REBIND contains the DEGREE(1) clause—I/O parallelism disabled. **ANY** Generated BIND/REBIND contains the DEGREE(ANY) clause. I/O parallelism value set by DB2. **blank** No degree( ) clause generated so default of 1 is used.
DBRM Member	KTEPBIKA	DBRM member name.
DYNAMICRULES	KTEPBIKA	If non-blank, indicates the value to generate in the DYNAMICRULES() clause: **R** Generate DYNAMICRULES(RUN) to cause dynamic SQL to be handled like dynamic SQL at run time. **B** Generate DYNAMICRULES(BIND) to cause dynamic SQL to be handled like static SQL at run time.
ENABLE/DISABLE CONNECTIONS?	KTEPBIKA	Indicates whether to include system connections: **Y** Yes **N** No ***** All connections Takes you to KTEPBIKC.

FIELD	ON PANEL	DESCRIPTION
ENABLED?	KTEPBIKC	Indicates whether connection is enabled: **Y** Yes **N** No
EXPLAIN	KTEPBIKA	EXPLAIN at BIND? **Y** Yes **N** No
FLAG	KTEPBIKA	Indicates what levels of messages to display: **I** Informational, Warning, Error, and Completion messages **W** Warning, Error, and Completion messages **E** Error and Completion messages **C** Completion messages only
ISOLATION	KTEPBIKA	Isolation Level: **R** RR Repeatable Read **S** CS Cursor Stability **T** RS Read Stability **U** UR Uncommitted Read **blank** Not specified and therefore at the level specified for the plan executing the package
KEEPDYNAMIC	KTEPBIKA	Indicates if prepared dynamic SQL should be purged at the end of a unit of work. Valid values include: **Y** Keep dynamic SQL past commit or rollback **N** Destroy dynamic SQL at commit or rollback
LIBRARY	KTEPBIKA	Library that contains the DBRMs.
LOCATION	KTEPBIKA	Location where the package is to be bound. Location is required only if a remote unit of work is being used.
MORE CONNECTIONS?	KTEPBIKC	Indicates whether to include more connections: **Y** Yes **N** No
OWNER of PACKAGE (AUTHID)	KTEPBIKA	Authorization ID of the owner of the package.
PACKAGE	KTEPBIKA	Package ID.
PACKAGE	KTEPBIKC	Package ID.
PACKAGE (SOURCE)	KTEPBIKA	Package ID to be copied.
QUALIFIER	KTEPBIKA	Implicit qualifier for the unqualified table, view, index, and alias names in the static SQL statements of the package.
RELEASE	KTEPBIKA	Indicates when resources are released: **C** At commit **D** At deallocation **blank** Not specified and therefore at the level specified for the plan executing the package.

FIELD	ON PANEL	DESCRIPTION
REOPT(VARS)	KTEPBIKA	Indicates whether the access path is re-determined at execution time using input variables. Valid values include: **Y** Determines access path at execution time for SQL statements with variable values **N** Determines access path at bind time
SQLERROR	KTEPBIKA	Indicates whether to continue processing to produce a package after finding SQL errors: **N** No Package **C** Continue
SYSTEM	KTEPBIKC	Environment for connection. Values are: **BATCH** TSO batch **DB2CALL** DB2 call attachment facility **CICS** Customer Information Control System **DLIBATCH** DLI batch support facility **IMS** IMS region **IMSBMP** IMP BMP region **IMSMPP** IMS MPP or IFP region **REMOTE** Remote application server
VALIDATE	KTEPBIKA	Indicates how to handle "OBJECT NOT FOUND" and "NOT AUTHORIZED" errors that occur at bind time: **R** RUN **B** BIND
VERSION	KTEPBIKA	Indicates whether to replace a specific version on an existing package.
VERSION (SOURCE)	KTEPBIKA	Package version to be copied.

BIND/REBIND Plan

Overview

This unit describes the BIND/REBIND Plan panel.

Background about the BIND/REBIND Plan panel

The BIND/REBIND Plan panel (KTEPBIPL) generates BIND or REBIND commands.

Steps to BIND or REBIND a plan

Here are the steps to BIND a plan.

- If DBRMs are to be bound into the plan:

    1. Type **Y** (Yes) in the Include DBRMs field. The DBRM Member Names panel (KTEPBIDB) appears.

    2. You are prompted for additional library names on the Library Names for BIND Plan panel.

- If system connections are to be enabled or disabled:

    Type **Y** (Yes) in the Enable/Disable Connections field and the System Connection Types panel appears.

- If packages are to be bound into the plan:

    Type **Y** (Yes) in the Include Package List field. You are then prompted for a list of packages.

If no previous errors have occurred, and if you have requested it on Housekeeping's Output Options Defaults panel, the Output Options panel appears to allow you to specify where to store the generated BIND commands.

Overriding BIND parameters

Housekeeping's Plan BIND Overrides panel allows you to make global changes to BIND parameters for more than one plan. Fields for which no overrides are shown on the Plan BIND Overrides panel cannot be overridden. Refer to "Plan BIND Overrides" on page 341 for more information.

Caution when executing BINDs or REBINDs

When executing the BIND commands generated by !DB/EXPLAIN, remember that your output can be limited by the amount of available storage.

Access

BIND/REBIND Plan can be accessed from the Plans panel by using the B or R select.

Panels

The following illustration shows the BIND/REBIND Plan panel.

```
---------------------------- DB/EXPLAIN  DB2=D42B --------------------------
Cmd ===>
                              P L A N   B I N D

BIND or REBIND :   BIND                 Action   : R  ( R Replace  A Add )
                                        Retain   : Y  ( Y Yes  N No )
Plan         : PLAN300                  Flag     : I  ( I / W / E / C )
Owner        : MYUSER                   Isolation : S ( R RR  T RS  S CS  U UR )
Qualifier    : MYUSER                   Acquire  : U  ( U Use  A  Allocate )
                                        Release  : C  ( C Commit  D Deallocate )
Cache Size   : 1024                     Validate : R  ( R Run  B Bind )
                                        EXPLAIN  : N  ( Y Yes  N No )
Current Server:                         Deferprep : N ( Y Yes  N No )
Current Data  : Y  ( Y Yes  N No )      Degree   : 1  ( 1 / ANY )
Keepdynamic   : N  ( Y Yes  N No )      SQLRULES : D  ( D DB@  S STD )
Reopt(VARS)   : N  ( Y Yes  N No )      Disconnect: E (E Explicit  A Automatic
Dynamicrules  :     (blank / B)                      C Conditional)

Include DBRMs?:             :   (Y Yes  N No)
Include Package List?:      :   (Y Yes  N No)
Enable/Disable Connections?: * (Y Yes  N No  * ALL)

ENTER to process    END to cancel
```

!DB/EXPLAIN displays the DBRM Member Names panel to permit you to
include additional DBRMs in the plan.

```
----------------------- DB/EXPLAIN  DB2=D31A ------------------ LINE 1 OF 3
CMD ===>                                                  SCROLL ===> PAGE

                     DBRM MEMBER NAMES FOR BIND PLAN
  Cmds: GLOBAL (Menu)
 ------------------------------------------------------------------------------

  Enter DBRM member names to be included in PLAN DSCSAMP4

 ---------------------------------- DBRM ------------------------------------
        Member          Member          Member          Member
        --------        --------        --------        --------
        DSCSAMP4

        More DBRMs?:   (Y Yes  N No)
```

Panels (continued)

!DB/EXPLAIN displays the Library Names panel to permit you to search additional DBRM libraries.

```
----------------------- DB/EXPLAIN  DB2=D31A ------------------ LINE 1 OF 3
CMD ===>                                                 SCROLL ===> PAGE

                           LIBRARY NAMES FOR BIND PLAN
  Cmds: GLOBAL (Menu)
-------------------------------------------------------------------------------

 Enter DBRM Library names to be included in the DBRMLIB concatenation for
 PLAN DBT925E

         LIBRARY NAME
         --------------------------------------------
         TDDB00.DBT925.CNTL

         More Libraries?:    (Y Yes  N No)
```

The System Connection Types panel lets you enable/disable system connection types.

```
----------------------- DB/EXPLAIN  DB2=D42B ------------------ LINE 1 OF 3
Cmd ===>                                                 SCROLL ===> PAGE

                      SYSTEM CONNECTION TYPES FOR BIND PLAN
  Cmds: GLOBAL (Menu)
-------------------------------------------------------------------------------

 Enter system connect types to be Enabled/Disabled for Plan $PMRDEMO

                      SYSTEM          CONNECTION        ENABLE?
                      ---------       ----------        -------


 More Connections?: N (Y Yes  N No)
```

Panels (continued)

Use the Package List panel to include additional packages in the plan.

```
----------------------- DB/EXPLAIN  DB2=D31A  ----------------- LINE 1 OF 3
CMD ===>                                                  SCROLL ===> PAGE

                          Package List for Bind Plan
  Cmds: GLOBAL (Menu)
--------------------------------------------------------------------------------

 Enter names to be included in list for Plan DSCSAMP4

            Location              Collection            Package
            ----------------      ------------------    --------


            More Package Lists?: N (Y Yes  N No)
```

Fields

The following table summarizes input needed for the BIND function. Information on the related panels BIND/REBIND Plan (KTEPBIPL), DBRM Member Names (KTEPBIDB), and Library Names (KTEPBILI) has been combined.

FIELD	ON PANEL	DESCRIPTION	TAKES YOU TO...
ACQUIRE	KTEPBIPL	Indicates when resources are obtained: **A** At allocation **U** Use	
ACTION ON PLAN	KTEPBIPL	Indicates whether to replace the application plan: **R** Replace **A** Add	
BIND or REBIND	KTEPBIPL	Type of command.	
CACHE SIZE	KTEPBIPL	Size measured in bytes of the cache to be acquired for the plan.	
COLLECTION	KTEPBIPK	Collection name where package resides.	
CONNECTION	KTEPBIPC	Connection ID.	
CURRENTDATA	KTEPBIPL	Indicates the data currency requirement of ambiguous cursors. **Y** Bind with CURRENTDATA (YES) **N** Bind with CURRENTDATA (NO)	
CURRENTSERVER (Server)	KTEPBIPL	Location name specified with the CURRENTSERVER option when the plan was last bound. Blank if none was specified.	
DBRM MEMBER	KTEPBIDB	DBRM member name.	Library Names (KTEPBILI)
DEGREE	KTEPBIPL	Determines whether I/O Parallelism is enabled **1** Generated BIND/REBIND contains the DEGREE(1) clause—I/O parallelism disabled. **ANY** Generated BIND/REBIND contains the DEGREE(ANY) clause. I/O parallelism value set by DB2. **blank** No degree( ) clause generated so default of 1 is used.	

FIELD	ON PANEL	DESCRIPTION	TAKES YOU TO...
DEFERPREP	KTEPBIKA	Indicates whether the PREPARE statement referring to a remote object is deferred until the first EXECUTE, OPEN, or DESCRIBE for the statement is issued. Valid values include: **Y** Yes **N** No	
DISCONNECT	KTEPBIPL	Determines whether disconnect is explicit, automatic, or conditional The values are: **E** Generated BIND/REBIND command contains the clause DISCONNECT(EXPLICIT) **A** Generated BIND/REBIND command contains the clause DISCONNECT(AUTOMATIC) **C** Generated BIND/REBIND command contains the clause DISCONNECT(CONDITIONAL)	
DYNAMICRULES	KTEPBIPL	Indicates whether run time or bind time rules will apply to a dynamic SQL statement at run time. If this field is non-blank, it specifies the value to be generated in the DYNAMICRULES() clause: **R** Generate DYNAMICRULES(RUN). **B** Generate DYNAMICRULES(BIND)	
ENABLE/DISABLE CONNECTIONS?	KTEPBIPL	Indicates whether to include system connections: **Y** Yes **N** No ***** All connections	If yes, System Connection Types (KTEPBIPC)
ENABLED?	KTEPBIPC	Indicates whether to enable the connection: **Y** Yes **N** No	
EXPLAIN	KTEPBIPL	Explain at BIND? **Y** Yes **N** No	

FIELD	ON PANEL	DESCRIPTION	TAKES YOU TO...
FLAG	KTEPBIPL	Indicates what levels of messages to display: **I** Informational, Warning, Error, and Completion messages **W** Warning, Error, and Completion messages **E** Error and Completion messages **C** Completion messages only	
INCLUDE DBRMS?	KTEPBIPL	Indicates whether to include DBRMs: **Y** Yes **N** No	If yes, DBRM Member Names (KTEPBIDB)
INCLUDE PACKAGE LIST?	KTEPBIPL	Indicates whether to include packages: **Y** Yes **N** No	If yes, Package List for Bind (KTEPBIPK)
ISOLATION	KTEPBIPL	Isolation Level: **R** RR Repeatable Read **S** CS Cursor Stability **T** RS Read Stability **U** UR Uncommitted Read	
KEEPDYNAMIC	KTEPBIPL	Indicates if prepared dynamic SQL should be purged at the end of a unit of work. Valid values include: **Y** Keep dynamic SQL past commit or rollback. **N** Destroy dynamic SQL at commit or rollback.	
LIBRARY NAME	KTEPBILI	Library name.	
LOCATION	KTEPBIPK	Location where package is to be bound.	
MORE CONNECTIONS?	KTEPBIPC	Indicates whether to include more connections: **Y** Yes **N** No	
MORE DBRMs?	KTEPBIDB	Indicates whether to include more DBRMs: **Y** Yes **N** No	
MORE LIBRARIES?	KTEPBILI	Indicates whether to include more libraries: **Y** Yes **N** No	

FIELD	ON PANEL	DESCRIPTION	TAKES YOU TO...
MORE PACKAGE LISTS?	KTEPBIPK	Indicates whether to include more packages: **Y** Yes **N** No	
OWNER of PLAN(AUTHID)	KTEPBIPL	Authorization ID of the owner of the application plan.	
PACKAGE	KTEPBIPK	Package ID.	
PLAN	KTEPBIPL	Name of the application plan.	
QUALIFIER	KTEPBIPL	Implicit qualifier for the unqualified table, view, index, and alias names in the static SQL statements of the plan.	
RELEASE	KTEPBIPL	Indicates when resources are released: **C** At commit **D** At deallocation	
REMOTE ENABLE?	KTEPBIPL	Indicates whether to enable the remote connection: **Y** Yes **N** No	
REOPT(VARS)	KTEPBIKA	Indicates whether the access path is re-determined at execution time using input variables **Y** Keep dynamic SQL past commit or rollback **N** Destroy dynamic SQL at commit or rollback	
RETAIN	KTEPBIPL	Preserves EXECUTE authority when an application plan is replaced. It is applicable only if ACTION(REPLACE).	
SQLRULES	KTEPBIPL	Values are: **D** Generated BIND/REBIND command contains the clause SQLRULES(DB2) **S** Generated BIND/REBIND command contains the clause SQLRULES(STD) **blank** Not specified; thus generated clause contains the default (=DB2).	

FIELD	ON PANEL	DESCRIPTION	TAKES YOU TO...
SYSTEM	KTEPBIPC	Environment for connection. Values are: **BATCH** TSO batch **DB2CALL** DB2 call attachment facility **CICS** Customer Information Control System **DLIBATCH** DLI batch support facility **IMS** IMS region **IMSBMP** IMP BMP region **IMSMPP** IMS MPP or IFP region	
VALIDATE	KTEPBIPL	Indicates when to handle OBJECT NOT FOUND and NOT AUTHORIZED errors that occur at bind time: **R** RUN **B** BIND	

Collections

Overview

This unit describes the Collections panel.

Background about the Collections panel

DB2 permits the grouping of packages into collections. Collections are not physical entities, and consequently no DB2 table exists for them.

The Collections panel (KTEPCLTN) in !DB/EXPLAIN lists collection IDs and locations for all packages within the DB2 catalog.

Access

The Collections panel can be accessed through the Primary or Sessions Menus, or through the Plans or Packages panels.

Panel

This is the Collections panel.

```
----------------------- DB/EXPLAIN  DB2=D31A --------------------------------
CMD ===>                                                       SCROLL ===> PAGE

                          C O L L E C T I O N S
  Cmds: DO (Menu) GLOBAL (Menu)                            Selects: ? (Menu)
-------------------------------------------------------------------------------

SEL      COLLECTION              LOCATION
---      ------------------      ----------------
 _       DBTCL1
 _       DBTCL1                  D23A
 _       DESCOL01                D23A
 _       DSNESPCS
 _       DSNESPRR
 _       DSNQCATV                D23A
 _       EXPCOL2
 _       EXPCOL3
 _       GULCOL
 _       GULCOL1
 _       GULCOL11
 _       GULCOL12
 _       GULCOL13                D23A
 _       GULCOL14
 _       GULCOL15
 _       GULCOL16
```

Fields and Associated Sorts and Filters

FIELD	DESCRIPTION	SORTS/ FILTERS
COLLECTION	Name of the package collection. Source: **SYSIBM.SYSPACKLIST.COLLID**	QCOL
LOCATION	Location of the package: * Location to be determined at run time **blank** Local **nonblank** Location name Source: **SYSIBM.SYSPACKLIST.LOCATION**	QLOC ***Note:*** Filtering for QLOC has been defined as a special filter where the wild card % is used instead of * for this field. The wild card * will not be recognized as a wild card for this field.

Selects

SELECT	DESCRIPTION	TAKES YOU TO...
K	Display all packages associated with the selected collection.	Packages (KTEPKACK)
M	Display all package lists associated with the selected collection.	Plan Package List (KTEPPKPL)
P	Display all plans associated with the selected collection.	Plans (KTEPPLAN)

Column Distribution Statistics

Overview

This unit describes the Column Distribution Statistics panel.

Background about the Column Distribution Statistics panel

The Column Distribution Statistics panel (KTEPCDIS) allows the user to view column distribution statistics. The user may update, delete, or insert data rows on this panel.

- To update row data, overtype the current information.

- To delete row data, enter the **D** select on the row.

- To insert row data, enter the **I** select or the **R** select to insert a blank line or repeat a row respectively.

The Column Distribution Statistics function is available only for DB2 Version 3 or later.

Access

Column Distribution Statistics is invoked whenever the user selects a column with **S** on the Table Columns Panel (KTEPTCOL).

Panels

The Column Distribution Statistics panel is available in two formats. This is format 1.

```
----------------------- DB/EXPLAIN  DB2=D31A ----------------- LINE 1 OF 4
CMD ===>                                               SCROLL ===> CSR
                       COLUMN DISTRIBUTION STATISTICS
  Cmds: DO (Menu) GLOBAL (Menu)                        Selects: ? (Menu)
-----------------------------------------------------------------------------

TABLE=D23B.PROD.COLUMNS                    COLUMN=THE_VALUE

SEL  PART  FREQ%  NULL? VALUE
---  ----- -----  ----- ---------------------------------------------------
 _       0     1    N   JJ
 _       0     2    N   JK
 _       0    30    N   33
 _       1     1    N   JJ
 _       1     2    N   KK
 _       1     2    N   MJ
 X       2    40    N   FF444444
                        33000000
 _       2    20    N   44
```

This is format 2.

```
----------------------- DB/EXPLAIN  DB2=D31A ----------------- LINE 1 OF 4
CMD ===>                                               SCROLL ===> CSR
                       COLUMN DISTRIBUTION STATISTICS
  Cmds: DO (Menu) GLOBAL (Menu)                        Selects: ? (Menu)
-----------------------------------------------------------------------------

TABLE=D23B.PROD.COLUMNS                    COLUMN=THE_VALUE

SEL  PART  FREQ%  NULL? VALUE
---  ----- -----  ----- ---------------------------------------------------
 _       0     1    N   JJ
                        STATS TIMESTAMP : 1999/09/09 02:02:02
 _       0     2    N   JK
                        STATS TIMESTAMP : 1999/09/09 02:02:02
 _       0    30    N   33
                        STATS TIMESTAMP : 1999/09/09 02:02:02
 _       1     1    N   JJ
                        STATS TIMESTAMP : 1999/09/09 02:02:02
 _       1     2    N   KK
                        STATS TIMESTAMP : 1999/09/09 02:02:02
 _       1     2    N   MJ
 X       2    40    N   FF444444
                        33000000
                        STATS TIMESTAMP : 1999/09/09 02:02:02
 _       2    20    N   44
                        STATS TIMESTAMP : 1999/09/09 02:02:02
```

Fields

Fields marked with an asterisk are updateable.

FIELD	DESCRIPTION	NOTES
COLUMN=	The column name.	
FREQ% *	Percentage of rows that contain the specified VALUE.	Source: `SYSIBM.SYSCOLDIST.FREQUENCY` if the partition number is 0.
		Source: `SYSIBM.SYSCOLDISTSTATS.FREQUENCY` if the partition number is non-zero.
NULL? *	Indicates whether the column value is null. The value in the field may be: Y The column value is null. N The column value is not null. If the value in the field is `Y`, the VALUE field is ignored.	Source: `SYSIBM.SYSCOLVALUE`
PART *	The partition number.	Source: `SYSIBM.SYSCOLDISTSTATS.PARTITION` if the partition number is non-zero.
STATS TIMESTAMP	Format 2 only. The statistics timestamp value from the Catalog.	This field is set to the CURRENT TIMESTAMP for functions that update the catalog or output statistics.
		Source: `SYSIBM.SYSCOLDIST.STATSTIME`
		Source: `SYSIBM.SYSCOLDISTSTATS.STATSTIME`
TABLE=	Name of the table to which the listed column belongs.	
VALUE *	Value of the column. The field may span multiple lines. Its length is determined by the length of the column.	Source: `SYSIBM.SYSCOLDIST.COLVALUE` if the partition number is 0.
		Source: `SYSIBM.SYSCOLDISTSTATS.COLVALUE` if the partition number is non-zero.

Selects

SELECT	DESCRIPTION
C	Display VALUE in character format. This select is only available for character or graphic data columns.
D	Delete the current row unless this function was entered from the WHATIF function. If entered from WHATIF, you can only delete PART=0 rows.
I	Insert a row following the current row unless this function was entered from the WHATIF function. If entered from WHATIF, you can only insert PART=0 rows.
R	Repeat the current row
X	Display VALUE in hexadecimal format. This select is only available for character or graphic data columns.

Commands

COMMAND	DESCRIPTION
CHAR	Display all lines in character format. This command only applies to character or graphic data columns.
DELETE	Delete all lines unless this function was entered from the WHATIF function. If entered from WHATIF, you can only delete PART=0 rows.
HEX	Display all lines in hexadecimal format. This command only applies to character or graphic data columns.
NEWSET	Establish a new statistics set.
RESET	Reset column distribution statistics value to the last statistics set value. (A statistics set is established when you enter the Column Distribution Statistics panel or when you issue the NEWSET command.)

Compare History

Overview

This unit describes the Compare History panel.

Background about the Compare History panel

The Compare History (KTEPJHIS) panel shows all corresponding differences between two plans, DBRMs, or packages.

- When comparing two plans, corresponding data from SYSPLAN is compared.

- When comparing two DBRMs, corresponding data from SYSDBRM is compared.

- When comparing two packages, corresponding data from SYSPACKAGE is compared.

Access

To use this function, select two items to compare from either the Plans, DBRMs, or Packages panels using the **J** select or the IMPACT command.

When you exit the Compare History panel, you return to the invoking panel.

Panel

The Compare History panel is a text only panel. There are no associated
filter or sort panels.

```
----------------------- DB/EXPLAIN   DB2=D31A -------------------------------
CMD ===>                                                    SCROLL ===> PAGE
                          C O M P A R E   H I S T O R Y

  Cmds: DO (Menu) GLOBAL (Menu)
------------------------------------------------------------------------------
 PLAN: CHGPLANX                    BOUND: 1999/11/30 05:46:51.840000
 PLAN: DSDZPLAN                    BOUND: 1999/12/06 10:48:53.880000

 PLAN: CHGPLANX
 PLAN: DSDZPLAN

 BIND DATE - TIME: 1999/11/30 05:46:51.840000
 BIND DATE - TIME: 1999/12/06 10:48:53.880000

 CREATOR: TDDB43
 CREATOR: TDDB25

 BOUNDBY: TDDB43
 BOUNDBY: TDDB25

 QUALIFIER: TDDB43
 QUALIFIER  TDDB25

 PLSIZE:          2944
 PLSIZE:          2928

 AVGSIZE:          1450
 AVGSIZE:          1233
```

Fields

The fields on the Compare History panel vary depending on the panel (DBRMS, Packages, or Plans) from which you accessed it. The value of the displayed fields corresponds to the value of fields of the same name on the accessing panel.

Commands

The following command is available for the Compare History function.

COMMAND	DESCRIPTION	TAKES YOU TO...
CEXPL	Compare EXPLAIN data for two entities and display the results. The current object is compared to the historic object and differences in access path or other EXPLAIN information is presented.	EXPLAIN Compare (KTEPCMPR)

A note about compares

CEXPL adds another layer of information to your compare processing. Typically, when you are on the Plans, Packages, or DBRMS panel, you can issue the IMPACT command (or the J select) to obtain compare history information. The IMPACT command or J select compares such things as precompile options, owners, or qualifiers.

CEXPL is issued from the Compare History panel and compares EXPLAINs.

Considerations for using the CEXPL command in batch

When you issue a CEXPL command in batch, a PRNT command is implied. There is no need to issue a PRNT command following the CEXPL command. If you are using the default format for the EXPLAIN compares, that is, the format you set in Housekeeping, issuing CEXPL causes the comparison to be printed.

If you want to use a format other than the format you have set in Housekeeping, you need to create an override statement as input to your KTECNTL batch job. The override to set up the report format *must* precede issuing CEXPL. This example illustrates the correct coding to override default format 1.

```
//EXBATCH.KTECNTL DD *    (Start of KTECNTL batch program)
EXP_CM_FORMAT=2           (Input to set up EDIFF format)
/*
//EXBATCH.SYSIN   DD *    (Start of SYSIN program)
KA                        (Selects Packages as object type to use)
IMPACT                    (Runs compare history)
PRNT                      (Prints impact results)
CEXPL                     (Compares EXPLAINs and prints results)
END                       (Ends the program)
/*
```

If your default format is format 2, then your override would take the form **EXP_CM_FORMAT=1**.

Costs

Overview

This unit describes the Costs panel.

Background about the Costs panel

The Costs panel (KTEPCOST) lists access path selection information which can affect statement cost.

Formats

Format	Displayed Fields
Format 1	Plan Name, Plan Table Access or Join with Degree greater than 1, Access Type, Sorts, Method, Lock, List, Sequential Prefetch
Format 2	Plan Name, Precompile Timestamp, Explain Timestamp, Statement Cost
Format 3	Plan Name, Maximum Statement Cost, Average Statement Cost, Total Statement Cost

Access

Costs can be accessed through the Primary Menu or the Plans, DBRMs, Packages, or Exceptions panels. The information you see depends on how you enter the panel.

- If Costs are entered from DBRMs, only costs for DBRMs display.

- If Costs are entered from Packages, only costs for packages display.

Panels

This is format 1 of the Costs panel.

```
----------------------- DB/EXPLAIN  DB2=D31A --------------------------------
CMD ===>                                                        SCROLL ===> PAGE
                                    C O S T S
  Cmds: DO (Menu) GLOBAL (Menu)                              Selects: ? (Menu)
-------------------------------------------------------------------------------
 S PLAN    --------ACCESS TYPES------- -----SORTS----- ---METHOD--
 L ADG  JDG TS  MIS NMIS I1  N MX MI MU SU SJ SO SG SRT MSJ NLJ HBJ LCK LPF SPF
 - -------- --- --- ---- -- -- -- -- -- -- -- -- -- --- --- --- --- --- --- ---
 _ CANPLAN
     0    0   1  59    1  0  0  0  0  0  0  0 11  0  11   0   0   0  92  40   2
 _ CANPLNX
     0    0   0   1    0  0  0  0  0  0  0  0  0  0   0   0   0   0   6   0   0
 _ CHGPLAN
     0    0   0   3    0  0  0  0  0  0  0  0  0  0   0   0   0   0   7   0   0
 _ CHGPLANX
     0    0   0   0    0  0  0  0  0  0  0  0  0  0   0   0   0   0   4   0   0
 _ DSDPLAN
     0    0   0   2    0  0  0  0  0  0  0  0  0  0   0   0   0   0   3   0   0
 _ DSDPLANX
     0    0   0   1    0  0  0  0  0  0  0  0  0  0   0   0   0   0   2   0   0
 _ DSDPLANZ
     0    0   0   1    0  0  0  0  0  0  0  0  0  0   0   0   0   0   2   0   0
```

This is format 2 of the Costs panel.

```
----------------------- DB/EXPLAIN  DB2=D31A --------------------------------
CMD ===>                                                        SCROLL ===> PAGE
                                    C O S T S
  Cmds: DO (Menu) GLOBAL (Menu)                              Selects: ? (Menu)
-------------------------------------------------------------------------------
SEL PLAN      PRECOMPILE TIMESTAMP       EXPLAIN TIMESTAMP        STMT COST
--- --------  -------------------------  -------------------------  ------------
 _  CANPLAN  0000/00/00 00:00:00.000000 1999/12/13 15:29:53.680000     34,500.0
 _  CANPLNX  0000/00/00 00:00:00.000000 1999/12/13 15:29:53.680000          8.8
 _  CHGPLAN  0000/00/00 00:00:00.000000 1999/12/14 07:18:38.490000         29.0
 _  CHGPLANX 0000/00/00 00:00:00.000000 1999/12/14 07:18:38.490000          0.0
 _  DSDPLAN  0000/00/00 00:00:00.000000 1999/12/13 15:29:53.680000          9.1
 _  DSDPLANX 0000/00/00 00:00:00.000000 1999/12/13 15:29:53.680000          8.8
 _  DSDPLANZ 0000/00/00 00:00:00.000000 1999/12/14 07:18:38.490000          8.8
 _  DSDZPLAN 0000/00/00 00:00:00.000000 1999/12/14 07:18:38.490000          9.1
 _  DSNHYCRD 0000/00/00 00:00:00.000000 1999/12/13 15:29:53.680000        708.4
 _  DSN8BH31 0000/00/00 00:00:00.000000 1999/12/13 15:29:53.680000         47.0
 _  DSN8BP31 0000/00/00 00:00:00.000000 1999/12/13 15:29:53.680000         47.0
 _  DSN8CH0  0000/00/00 00:00:00.000000 1999/12/14 07:18:38.490000     14,298.1
 _  DSN8IH0  0000/00/00 00:00:00.000000 1999/12/14 09:29:47.900000     14,298.1
 _  DSN8SC31 0000/00/00 00:00:00.000000 1999/12/14 07:18:38.490000     14,298.1
 _  DSN8SP31 0000/00/00 00:00:00.000000 1999/12/14 07:18:38.490000     14,298.1
 _  D23ASEXT 0000/00/00 00:00:00.000000 1999/12/13 15:29:53.680000          8.8
 _  D23ASRUN 0000/00/00 00:00:00.000000 1999/12/13 15:29:53.680000     34,500.0
 _  D31ASEXT 0000/00/00 00:00:00.000000 1999/12/13 15:29:53.680000          8.8
```

Panels (continued)

This is format 3 of the Costs panel.

```
----------------------- DB/EXPLAIN  DB2=D31A --------------------------------
CMD ===>                                                       SCROLL ===> PAGE
                                   C O S T S
   Cmds: DO (Menu) GLOBAL (Menu)                               Selects: ? (Menu)
------------------------------------------------------------------------------
                  MAXIMUM         AVERAGE          TOTAL
SEL  PLAN        STMT COST       STMT COST       STMT COST
---  --------   ------------    ------------    ------------
  _  CANPLAN      2,218.0           379.0         34,500.0
  _  CANPLNX          8.8             8.8              8.8
  _  CHGPLAN         10.6             9.7             29.0
  _  CHGPLANX         0.0             0.0              0.0
  _  DSDPLAN          8.8             4.6              9.1
  _  DSDPLANX         8.8             8.8              8.8
  _  DSDPLANZ         8.8             8.8              8.8
  _  DSDZPLAN         8.8             4.6              9.1
  _  DSNHYCRD       654.2           236.1            708.4
  _  DSN8BH31        30.1            11.8             47.0
  _  DSN8BP31        30.1            11.8             47.0
  _  DSN8CH0     11,141.4         3,574.5         14,298.1
  _  DSN8IH0     11,141.4         3,574.5         14,298.1
  _  DSN8SC31    11,141.4         3,574.5         14,298.1
  _  DSN8SP31    11,141.4         3,574.5         14,298.1
  _  D23ASEXT         8.8             8.8              8.8
  _  D23ASRUN     2,218.0           379.0         34,500.0
  _  D31ASEXT         8.8             8.8              8.8
```

Fields and Associated Sorts and Filters

FIELD	FORMAT	DESCRIPTION	SORTS/ FILTERS
ADG (Number of Access Degrees > 1)	1	Number of Access Degrees > 1 Source: `PLAN_TABLE.ACCESS_DEGREE`	C#ADG
AVERAGE STMT COST	3	Average statement cost. Source: `Derived`	CACST
DBRM/PACKAGE/ PLAN	1, 2, 3	Name of the DBRM, Package, or Plan. Source: `SYSIBM.SYSDBRM.NAME or SYSPACKAGE.NAME`	CNAME
EXPLAIN TIMESTAMP	2	The date of EXPLAIN. Source: `PLAN_TABLE.TIMESTAMP`	CEXDT
HBJ (Hybrid Join)	1	Number of METHOD=4 statements in the package or DBRM. Indicates the join method is Hybrid Join. Source: `PLAN_TABLE.METHOD`	C#HBJ
I1 (One-Fetch Index Scan)	1	Number of ACCESSTYPE='I1' statements in the package or DBRM. Method of accessing new table by one-fetch index scan. Source: `PLAN_TABLE.ACCESSTYPE`	C#I1S
JDG (Number of Join Degrees > 1)	1	Number of Join Degrees > 1 Source: `PLAN_TABLE.JOIN_DEGREE`	C#JDG
LCK (TSLOCKMODE)	1	Number of Locks used in the package or DBRM. Indicates the lock mode of the table space. # TSLOCKMODE=1X + # TSLOCKMODE =X. Source: `PLAN_TABLE.TSLOCKMODE`	C#LCK
LPF (List Prefetch)	1	Number of PREFETCH='L' statements in the package or DBRM. Source: `PLAN_TABLE.PREFETCH`	C#LPF
MAXIMUM STMT COST	3	Maximum statement cost. Source: `Derived`	CMCST
MI (Multiple Index Intersection)	1	Number of ACCESSTYPE='MI' statements in the package or DBRM. Method of accessing new table by an intersection of multiple indexes. Source: `PLAN_TABLE.ACCESSTYPE`	C#MXI
MIS (Matching Index Scan)	1	Number of Matching Index Scan statements in the package or DBRM. ACCESSTYPE is an index access and MATCHCOLS is greater than 0 in the PLAN_TABLE. Source: `Derived`	C#MIS

FIELD	FORMAT	DESCRIPTION	SORTS/ FILTERS
MSJ (Merge Scan Join)	1	Number of METHOD=2 statements in the package or DBRM. Indicates the join method is Merge Scan Join. Source: `PLAN_TABLE.METHOD`	C#MSJ
MU (Multiple Index Union)	1	Number of ACCESSTYPE='MU' statements in the package or DBRM. Method of accessing new table by a union of multiple indexes. Source: `PLAN_TABLE.ACCESSTYPE`	C#MXU
MX (Index Scans on Index)	1	Number of ACCESSTYPE='MX' statements in the package or DBRM. Method of accessing new table by an index scan on the index named in ACCESSNAME. Source: `PLAN_TABLE.ACCESSTYPE`	C#MXS
N (Index Scan for IN)	1	Number of ACCESSTYPE=N statements in the package or DBRM. Method of accessing new table by index scan when predicate contains IN keyword. Source: `PLAN_TABLE.ACCESSTYPE`	C#NS
(NAME heading) ● **DBRM** ● **PACKAGE** ● **PLAN** ● **DBRM/PKG (if previous panel was Exceptions)**	1, 2, 3	Variable field describing the type of data displayed in the column below it. Source: `Derived`	
NLJ (Nested Loop Join)	1	Number of METHOD=1 statements in the package or DBRM. Indicates the join method is Nested Loop Join. Source: `PLAN_TABLE.METHOD`	C#NLJ
NMIS (Non-Matching Index Scan)	1	Number of Non-Matching Index Scan statements in the package or DBRM. ACCESSTYPE is an index access and MATCHCOLS is 0 in the PLAN_TABLE. Source: `Derived`	C#NMI
PRECOMPILE TIMESTAMP	2	The precompile timestamp of the DBRM or package. If displaying Plan data, this field contains 0s. Source: `SYSIBM.SYSDBRM.PRECOMPDATE` Source: `SYSIBM.SYSDBRM.PRECOMPTIME` Source: `SYSIBM.SYSPACKAGE.PCTIMESTAMP`	CPCDT
SG (Sorts - Group By)	1	Number of Group By Sorts in the package or DBRM. Source: `PLAN_TABLE.SORTN_GROUPBY + SORTC_GROUPBY`	C#SRG

FIELD	FORMAT	DESCRIPTION	SORTS/ FILTERS
SJ (Sorts - Join)	1	Number of Join Sorts in the package or DBRM. Source: `PLAN_TABLE.SORTN_JOIN + SORTC_JOIN`	C#SRJ
SO (Sorts - Order By)	1	Number of Order By Sorts in the package or DBRM. Source: `PLAN_TABLE.SORTN_ORDERBY + SORTC_ORDERBY`	C#SRO
SPF (Sequential Prefetch)	1	Number of PREFETCH=S statements in the package or DBRM. Source: `PLAN_TABLE.PREFETCH`	C#SPF
SRT (Sorts - Total)	1	Total number of Sorts in the package or DBRM. Source: `Derived`	C#SRT
SU (Sorts - Unique)	1	Number of Unique Sorts in the package or DBRM. Source: `PLAN_TABLE.SORTN_UNIQ + SORTC_UNIQ`	C#SRU
TOTAL STMT COST	2, 3	Total statement cost. Source: `Derived`	CTCST
TS (Table Space Scan)	1	Number of ACCESSTYPE=R statements in the package or DBRM. Access by sequential scan of pages. Source: `PLAN_TABLE.ACCESSTYPE`	C#TSS
VERSION	2	Version identifier for the package. Source: `PLAN_TABLE.VERSION`	CVER

Selects

Options available will depend on the type of data that is currently being displayed on the panel.

DATA TYPE	SELECT	DESCRIPTION	TAKES YOU TO...
DBRM	D	Display DBRM panel.	DBRMs (KTEPDBRM)
Package	K	Display package panel.	Packages (KTEPKACK)
Plan	P	Display plans panel.	Plans (KTEPPLAN)

Commands

You can customize the display by controlling the type of data. Three commands will be available *only* when the Costs panel is accessed from the Primary or Sessions Menu.

COMMAND	DESCRIPTION
CDBR	Display all DBRMs and their total DB2 statement cost.
CPKG	Display all packages and their total DB2 statement cost.
CPLN	Display all plans and their total DB2 statement cost.

DBRMs

Overview

This unit describes the DBRMS panel.

Background about the DBRMS panel

The DBRMs panel (KTEPDBRM) and its associated information panel (KTEPDBIN) list DBRMs bound into plans in the DB2 subsystem.

Using this panel, you can convert an existing DBRM, including those precompiled prior to DB2 2.3, to a package using the **Z** select or convert all listed DBRMs to packages using the **BINDCNV** command.

Note: DBRMs which were precompiled using a pre-DB2 V1R3 (1.3) precompiler *may* contain statements which !DB/EXPLAIN incorrectly interprets. EXPLAINs of such statements can result in -417 or -418 SQLCODES or an inaccurately reported access path. See "EXPLAIN/SQL Defaults" on page 310 for information on the options you have for avoiding -417 and -418s.

You can specify DMISS=YES to display all of the DBRMs from which a statement was discarded during an extract. The extract discards an SQL statement when the extract cannot process it (for example, a statement which has a statement number of 0 and spans multiple tables in SYSIBM.SYSSTMTS).

Formats

The DBRMs panel is available in five formats. You can also display the DBRM Information panel, which allows you to view *all* data related to DBRMs.

Format	Displayed Fields
Format 1	DBRMs, Status, Plan, Statements, Selects, Deletes, Updates, Inserts, Exclusive Locks, Shared Locks
Format 2	DBRMs, Precompile Timestamp, Library,
Format 3	DBRMs, Statements, Selects, Deletes, Updates, Inserts, Exclusive Locks, Shared Locks, Total Statement Cost
Format 4	DBRMs, EXPLAIN Timestamp, Maximum Cost, Average Cost, Total Cost
Format 5	DBRMs, Selects, Declared Cursors, Deletes, Updates, Inserts, Shared Locks, Exclusive Locks

Access

You can access the DBRMs panel from the Primary Menu or Sessions Menu or the Plans, Libraries, Costs, or Tables panels. Access the DBRM Information panel by using the **I** select or by typing **INFO** on the command line of the DBRMs panel.

Panels

The following illustration shows format 1 of the DBRMS panel.

```
---------------------- DB/EXPLAIN   DB2=D31A ---------------- LINE 45 OF 172
CMD ===>                                                      SCROLL ===> PAGE

                                    D B R M S
  Cmds: DO (Menu) GLOBAL (Menu)                             Selects: ? (Menu)
-------------------------------------------------------------------------------
            VQCCMDH                                                   LCK LCK
SEL DBRM    LUOHXEL PLAN      STMTS SELECTS DELETES UPDATES INSERTS XCL SHR
--- -------- ------- -------- ------- ------- ------- ------- ------- --- ---
    _ EXPSQL05 NNNAN B NMVTESTA      8       0       0       4       0   0   0
    _ EXPSQL12 NNNAN B NMVTESTA      3       2       0       0       0   0   0
    _ EXPSQL13 NNNAN B NMVTESTA      6       0       0       0       0   0   0
```

The following illustration shows format 2 of the DBRMS panel.

```
---------------------- DB/EXPLAIN   DB2=D31A        ----------- LINE 45 OF 172
CMD ===>                                                      SCROLL ===> PAGE

                                    D B R M S
  Cmds: DO (Menu) GLOBAL (Menu)                      Selects& colon. ? (Menu)
-------------------------------------------------------------------------------
                 --- PRECOMPILE ---
SEL DBRM    DATE            TIME LIBRARY
--- -------- ------------------- -------------------------------------------
    _ DSQIIPEL 1999/06/12 11:37:44 PP.QMF.V240.DSQDBRM
      VERSION:
    _ DSQILD   1999/06/12 11:37:25 PP.QMF.V240.DSQDBRM
      VERSION:
    _ DSQIOLST 1999/09/05 08:22:08 PP.QMF.V240.DSQDBRM
      VERSION:
```

Panels (continued)

The following illustration shows format 3 of the DBRMS panel.

```
----------------------- DB/EXPLAIN  DB2=D31A ----------------- LINE 45 OF 172
CMD ===>                                               SCROLL ===> PAGE

                                 D B R M S
   Cmds: DO (Menu) GLOBAL (Menu)                       Selects: ? (Menu)
--------------------------------------------------------------------------
                                                  LCK LCK      TOTAL
SEL DBRM      STMTS    SELECTS DELETES UPDATES INSERTS XCL SHR   STMT COST
--- --------  ------- ------- ------- ------- ------- --- ---  ------------
 _   EXPSQL05     8       0       0       4       0   0   0        62.7
 _   EXPSQL12     3       2       0       0       0   0   0        24.3
 _   EXPSQL13     6       0       0       0       0   0   0        11.6
```

The following illustration shows format 4 of the DBRMS panel.

```
----------------------- DB/EXPLAIN  DB2=D31A ----------------- LINE 45 OF 172
CMD ===>                                               SCROLL ===> PAGE

                                 D B R M S
   Cmds: DO (Menu) GLOBAL (Menu)                       Selects: ? (Menu)
--------------------------------------------------------------------------
               ---- EXPLAIN ----  ---------- STATEMENT COSTS -----------
SEL DBRM      DATE       TIME       MAXIMUM      AVERAGE       TOTAL
--- --------  ---------- --------  -----------  -----------  ------------
 _   EXPSQL05 1999/09/03 15:27:25      27.3         15.7          62.7
 _   EXPSQL12 1999/09/03 15:27:25      12.4         12.2          24.3
 _   EXPSQL13 1999/09/03 15:27:25      11.6         11.6          11.6
```

The following illustration show format 5 of the DBRMS panel.

```
----------------------- DB/EXPLAIN  DB2=D31A -------------------------------
CMD ===>                                               SCROLL ===> CSR
                                 D B R M S
   Cmds: DO (Menu) GLOBAL (Menu)                       Selects: ? (Menu)
--------------------------------------------------------------------------
                            DECLARE                      LOCK    LOCK
SEL DBRM      STMTS  SELECTS CURSORS DELETES UPDATES INSERTS SHR     XCL
--- --------  ------- ------- ------- ------- ------- ------- ------- -------
 _   #CDLABL1     2       1       0       0       0       0       0       0
 _   #101NSRT     3       0       0       1       0       1       0       0
 _   #101SAVE     5       0       1       0       0       0       0       0
```

Panels (continued)

The DBRMs Information panel lets you to view *all* data related to DBRMs.

```
----------------------- DB/EXPLAIN  DB2=D31A --------------------------------
CMD ===>                                                       SCROLL ===> PAGE
                         D B R M   I N F O R M A T I O N

  Cmds: GLOBAL (Menu)
------------------------------------------------------------------------------

 DBRM: ALTMPEX2          PRECOMPILE DATE/TIME: 2064/01/17 19:37:02.130000
 PLAN: D31ASRUN          CONSISTENCY TOKEN   : 0E5C5D9F01F1F040
                         PLAN CREATOR        : TDDB31A

 LIBRARY: TDDB31.V230.DBRM
 VERSION:

 HOST LANGUAGE: B              QUOTE: N                    MIXED: N
 CHARACTER SET: A              COMMA: N                    DEC31:


 ------------------------------ SQL COUNTS ----------------------------------
  STATEMENTS         =     8  DROP       =      0  REVOKE       =       0
  ALTER              =     0  EXECUTE    =      0  ROLLBACK     =       0
  CALL               =     0  EXPLAIN    =      0  SELECT       =       1
  CLOSE              =     0  FETCH      =      0  SET          =       0
  COMMIT             =     0  GRANT      =      0  SET CONNECT  =       0
  CONNECT            =     0  INSERT     =      0  SET DEGREE   =       0
  CREATE             =     0  LOCK SHR   =      0  SET HOST     =       0
  DECLARE CURSOR     =     0  LOCK XCL   =      0  SET PKGSET   =       0
  DECLARE STATEMENT  =     0  OPEN       =      0  SET RULES    =       0
  DECLARE TABLE      =     3  PREPARE    =      0  SET SQLID    =       0
  DELETE             =     0  RELEASE    =      0  UPDATE       =       1
  DESCRIBE           =     0                       WHENEVER     =       3
 ***************************** BOTTOM OF LIST ********************************
```

Fields and Associated Sorts and Filters

Below is an alphabetical listing of fields in all the DBRMs panel formats and the DBRM Information Panel. The letter "I" in the ON FORMAT column indicates the information panel.

FIELD	ON FORMAT	DESCRIPTION	SORTS/ FILTERS
ALTER	I	The total number of ALTER statements. Source: `SYSIBM.SYSSTMT`	D#AL
AVG STMT COST	4	Average statement cost. Source: `Derived`	DACST
CALL	I	Number of CALL statements Source: `SYSIBM.SYSSTMT`	D#CA
CH (Charset)	1, I	Indicates whether the system CCSID for SBCS data was 290 (katakana) when the program was precompiled: **K** Yes **A** No Source: `SYSIBM.SYSDBRM.CHARSET`	DCHRS
CLOSE	I	The total number of CLOSE statements. Source: `SYSIBM.SYSSTMT`	D#CL
CO (Comma)	1, I	Decimal point representation for SQL statements in the DBRM: **N** Period **Y** Comma Source: `SYSIBM.SYSDBRM.COMMA`	DCOMM
COMMIT	I	The total number of COMMIT statements. Source: `SYSIBM.SYSSTMT`	D#CM
CONNECT	I	The total number of CONNECT statements. Source: `SYSIBM.SYSSTMT`	D#CN
CONTOKEN (Consistency Token)	I	Consistency token for the DBRM. Source: `SYSIBM.SYSDBRM.TIMESTAMP`	D#CN
CREATE	I	The total number of CREATE statements. Source: `SYSIBM.SYSSTMT`	D#CR
D#TS	Filter panel	Total number of DECLARE CURSOR and SELECT statements. Source: `SYSIBM.SYSSTMT`	D#TS
DBRM	All formats	Name of the DBRM. The list is in alphabetic order. Source: `SYSIBM.SYSDBRM.NAME`	DBRM

FIELD	ON FORMAT	DESCRIPTION	SORTS/ FILTERS
DE (Dec31)	1, I	Indicates whether DEC31 was in effect when the program was precompiled: **blank** No **Y** Yes Source: `SYSIBM.SYSDBRM.DEC31`	DDC31
DECLARE CURSOR	5, I	The total number of DECLARE CURSOR statements. Source: `SYSIBM.SYSSTMT`	D#DC
DECLARE STATEMENT	I	The total number of DECLARE STATEMENT statements. Source: `SYSIBM.SYSSTMT`	D#DM
DECLARE TABLE	I	The total number of DECLARE TABLE statements. Source: `SYSIBM.SYSSTMT`	D#DT
DELETES	1, 3, 5, I	The number of DELETE statements in DBRMs. Source: `SYSIBM.SYSSTMT`	D#DL
DESCRIBE	I	The total number of DESCRIBE statements. Source: `SYSIBM.SYSSTMT`	D#DS
DROP	I	The total number of DROP statements. Source: `SYSIBM.SYSSTMT`	D#DR
EXECUTE	I	The total number of EXECUTE statements. Source: `SYSIBM.SYSSTMT`	D#EC
EXPLAIN	I	The total number of EXPLAIN statements. Source: `SYSIBM.SYSSTMT`	D#EX
EXPLAIN DATE/TIME	4	EXPLAIN date. Source: `PLAN_TABLE.TIMESTAMP`	DEXDT
FETCH	I	The total number of FETCH statements. Source: `SYSIBM.SYSSTMT`	D#FT
GRANT	I	The total number of GRANT statements. Source: `SYSIBM.SYSSTMT`	D#GR
HL (Hostlang)	1, I	The host language used: **B** Assembler Language **C** COBOL **D** C **F** FORTRAN **P** PL/I **2** VS COBOL II **3** OO-COBOL **4** C++ Source: `SYSIBM.SYSDBRM.HOSTLANG`	DHLNG
INSERTS	1, 3, 5, I	The number of INSERT statements in DBRMs. Source: `SYSIBM.SYSSTMT`	D#IN

FIELD	ON FORMAT	DESCRIPTION	SORTS/ FILTERS
LCK SHR	1, 3, 5, I	Number of LOCK SHR in DBRMs. Source: `SYSIBM.SYSSTMT`	D#LS
LCK XCL	1, 3, 5, I	Number of LOCK XCL in DBRMs. Source: `SYSIBM.SYSSTMT`	D#LX
LIBRARY	2, I	Name of the partitioned dataset of which the DBRM is a member. Source: `SYSIBM.SYSDBRM.PDSNAME`	DLIB
MAX STMT COST	4	Maximum statement cost. Source: `Derived`	DMCST
MX (Mixed)	1, I	Indicates if mixed data was in effect when the program was precompiled: **N** No **Y** Yes Source: `SYSIBM.SYSDBRM.MIXED`	DMIXD
OPEN	I	The total number of OPEN statements. Source: `SYSIBM.SYSSTMT`	D#OP
PLAN CREATOR	I	Authorization ID of the owner of the application plan. Source: `SYSIBM.SYSPLAN.CREATOR`	
PLAN HEADING (depends on DUPS/NODUPS command)	1, I	If DUPS is specified, then the Plan name is used if the DBRM is contained in one plan. If NODUPS is specified, the number of plans in which DBRM is a member is used. Source: `SYSIBM.SYSDBRM.PLNAME`	DPLN D#PL
PRECOMPILE DATE/TIME	2, I	The date of precompilation. Source: `SYSIBM.SYSDBRM.PRECOMPDATE || PRECOMPTIME`	DPCDT
PREPARE	I	The total number of PREPARE statements. Source: `SYSIBM.SYSSTMT`	D#PR
QU (Quote)	1, I	SQL string delimiter for the SQL statements in the DBRM: **N** Apostrophe **Y** Quotation mark Source: `SYSIBM.SYSDBRM.QUOTE`	DQUOT
RELEASE	I	The number of RELEASE SQL statements. Source: `SYSIBM.SYSSTMT`	D#RE
REVOKE	I	The total number of REVOKE statements. Source: `SYSIBM.SYSSTMT`	D#RV
ROLLBACK	I	The total number of ROLLBACK statements. Source: `SYSIBM.SYSSTMT`	D#RL

FIELD	ON FORMAT	DESCRIPTION	SORTS/ FILTERS
SELECTS	1, 3, 5, I	The number of SELECT statements in DBRMs. Source: `SYSIBM.SYSSTMT`	D#SE
SET	I	The total number of SET statements. Source: `SYSIBM.SYSSTMT`	D#ST
SET CONNECT	I	The number of SET CONNECTION SQL statements. Source: `SYSIBM.SYSSTMT`	D#SC
SET DEGREE	I	The number of SET CURRENT DEGREE SQL statements. Source: `SYSIBM.SYSSTMT`	D#SD
SET HOST	I	The number of SET host variable SQL statements. Source: `SYSIBM.SYSSTMT`	D#SH
SET PKGSET	I	The number of SET PACKAGESET SQL statements. Source: `SYSIBM.SYSSTMT`	D#SP
SET RULES	I	Number of SET CURRENT RULES statements Source: `SYSIBM.SYSSTMT`	D#SR
SET SQLID	I	The number of SET CURRENT SQLID SQL statements. Source: `SYSIBM.SYSSTMT`	D#SS
STMTS	1, 3, 5, I	The total number of statements in DBRMs. Source: `SYSIBM.SYSSTMT`	D#TL DMISS (filters on statements discarded by the extract)
TOTAL STMT COST	3, 4	Total statement cost. Source: `Derived`	DTCST
UPDATES	1, 3, 5, I	The number of UPDATE statements in DBRMs. Source: `SYSIBM.SYSSTMT`	D#UP
VERSION	2, I	Version identifier for the DBRM. Source: `SYSIBM.SYSDBRM.VERSION`	DVER
VL (Verify)	1	Shows results of DBRM Verification. Possible values include: N DBRM has not been verified. Y DBRM was verified successfully E DBRM verification was unsuccessful T There is a timestamp mismatch Source: `Derived`	DVRF
WHENEVER	I	The total number of WHENEVER statements. Source: `SYSIBM.SYSSTMT`	D#WH

Selects

SELECT	DESCRIPTION	TAKES YOU TO...
@	Remote EXPLAIN and gather statistics.	EXPLAIN (KTEPEXPL)
#	Remote EXPLAIN but do not gather statistics.	EXPLAIN (KTEPEXPL)
B	Generate a BIND package statement for the selected DBRM.	BIND Package (KTEPBIKA)
C	Compare the results of the latest EXPLAIN with the results of a BIND EXPLAIN(YES).	EXPLAIN Compare (KTEPCMPR)
E	EXPLAIN statements and gather statistics.	EXPLAIN (KTEPEXPL)
G	Display cost details for the selected DBRM.	Costs (KTEPCOST)
H	Display the EXPLAIN History for the selected DBRM.	EXPLAIN History (KTEPHIST)
I	Display detailed DBRM information.	DBRM Information (KTEPDBIN)
J	Select 2 DBRMs with J and compare DBRM attributes.	Compare History (KTEPJHIS)
L	Display the output from the latest EXPLAIN of selected DBRM.	EXPLAIN (KTEPEXPL)
P	List all plans for the selected DBRM.	Plans (KTEPPLAN)
S	List all the SQL statements for the selected DBRM.	Statements (KTEPSTMT)
T	Display tables for all DB2 tables, views, or aliases referenced by any SQL INSERT, SELECT, UPDATE, DELETE, LOCK, or DECLARE CURSOR statement in any DBRM or package.	Tables (KTEPTABL)
U	EXPLAIN (do not gather statistics).	EXPLAIN (KTEPEXPL)
V	Verify the DBRM.	DBRM Verification (KTEPPVER)
W	Perform Whatif analysis on the selected DBRM.	WHATIF (KTEPWHIF)
X	Display Exceptions that exist for each SQL statement in the selected DBRM.	Exceptions (KTEPXCPT)
Z	Generate BIND conversion statements.	
8	EXPLAIN and display only DBRMs that have not been EXPLAINed—gather catalog statistics.	EXPLAIN (KTEPEXPL)
9	EXPLAIN and display only DBRMs that have not been EXPLAINed—do not gather catalog statistics.	EXPLAIN (KTEPEXPL)

Commands

COMMAND	DESCRIPTION	TAKES YOU TO...
BIND	Generate BIND statements for all active DBRMs.	Overrides (KTEPBIKG)
BINDADD	BIND ACTION(ADD).	Overrides (KTEPBIKG)
BINDCNV	Generate conversion BIND for all DBRMs.	Overrides (KTEPBIKG)
BINDEXP	BIND EXPLAIN(YES).	Overrides (KTEPBIKG)
BINDREP	BIND ACTION(REPLACE).	Overrides (KTEPBIKG)
COMPARE	Perform a BIND COMPARE of each DBRM on the current display according to the options set on the Housekeeping BIND Compare Options Panel KTEPHOBC.	EXPLAIN Compare (KTEPCMPR)
COST	Display statement costs.	Costs (KTEPCOST)
DUPS	Show all DBRMs.	
EXPL	EXPLAIN all DBRMs that have not been EXPLAINed since they were last bound and display latest EXPLAIN for DBRMs that have been previously EXPLAINed.	EXPLAIN (KTEPEXPL)
EXPLA	EXPLAIN all regardless of BIND time.	EXPLAIN (KTEPEXPL)
EXPLAR	Remote EXPLAIN all regardless of BIND time.	EXPLAIN (KTEPEXPL)
EXPLO	EXPLAIN and display only DBRMs that have not been EXPLAINed since they were last bound. Do not gather catalog statistics.	EXPLAIN (KTEPEXPL)
EXPLOR	Remote EXPLAIN and display only DBRMs that have not been EXPLAINed since they were last bound. Do not gather catalog statistics.	EXPLAIN (KTEPEXPL)
EXPLR	Remote EXPLAIN all DBRMs that have not been EXPLAINed since they were last bound and display latest EXPLAIN for DBRMs that have been previously EXPLAINed.	EXPLAIN (KTEPEXPL)
GEXPL	EXPLAIN all DBRMs on the list that have not been EXPLAINed since they were last bound and gather statistics; and display latest EXPLAIN for DBRMs that have been previously EXPLAINed.	EXPLAIN (KTEPEXPL)
GEXPLA	EXPLAIN all DBRMs on the list and gather statistics regardless of BIND time.	EXPLAIN (KTEPEXPL)
GEXPLAR	Remote EXPLAIN all DBRMs on the list and gather statistics regardless of BIND time.	EXPLAIN (KTEPEXPL)
GEXPLO	EXPLAIN and display only DBRMs that have not been EXPLAINed since they were last bound. Gather catalog statistics.	EXPLAIN (KTEPEXPL)
GEXPLOR	Remote EXPLAIN and display only DBRMs that have not been EXPLAINed since they were last bound. Gather catalog statistics.	EXPLAIN (KTEPEXPL)

COMMAND	DESCRIPTION	TAKES YOU TO...
GEXPLR	Remote EXPLAIN all DBRMs on the list that have not been EXPLAINed since they were last bound and gather statistics; and display latest EXPLAIN for DBRMs that have been previously EXPLAINed.	EXPLAIN (KTEPEXPL)
HIST	Display DBRM History.	
IMPACT	Compare each nonhistorical DBRM with its most recent historical counterpart.	Compare History (KTEPJHIS)
INFO	Display DBRM Information.	DBRM Info (KTEPDBIN)
LEHIST	Display latest EXPLAIN History.	EXPLAIN History (KTEPHIST)
LEXPL	Display latest EXPLAIN.	EXPLAIN (KTEPEXPL)
NODUPS	Show unique DBRMs. Reset DUPS.	
NOHIST	Reset HIST.	
XCPT	Display Exceptions.	Exceptions (KTEPXCPT)

A note about compares

Typically, when you are on the Plans, Packages, or DBRMS panel, you can issue the IMPACT command (or the J select) to obtain compare history information. The IMPACT command or J select compares such things as precompile options, owners, or qualifiers.

CEXPL is issued from the Compare History panel and compares EXPLAINs.

Estimator

Overview

This unit describes the Estimator panel.

Background about the Estimator panel

The Estimator panel (KTEPESTM) shows what effect changing certain values in the catalog has on other values.

Estimator is affected by settings you specify on Housekeeping's Panel Formats panel:

- If you specify 0 in the Format # field of the Panel Formats panel, then the Estimator panel inherits its format from the Whatif panel.

- If you specify 0 in the Initial Command field of the Panel Formats panel, then the Estimator panel inherits the settings for NDX/NONDX from the Whatif panel.

Formats

The panel is available in two formats:

Format	Displayed Fields
Format 1	Data collected by RUNSTATS
Format 2	All data

Access

Estimator is invoked using the command ESTIM from Whatif.

Panels

The following illustration shows format 1 of the Estimator panel, the RUNSTATS format.

```
----------------------- DB/EXPLAIN  DB2=D31A ------------------ LINE 1 OF 14
CMD ===>                                                SCROLL ===> PAGE
                            E S T I M A T O R
  Cmds: DO (Menu) GLOBAL (Menu)                          Selects: ? (Menu)
                                  The fields marked with * can be updated.
-----------------------------------------------------------------------------
 TS= DSNDB06.SYSCOPY       PARTITIONS= 0      LOCKRULE = A
  *NACTIVE= 9


 _ TBL= SYSIBM.SYSCOPY              LOCATION=
    *RECLEN= 1904            *PCTPAGES= 100          *PCTROWCOMP= 0
    *CARD  = 300             *NPAGES  = 9


    ----------------------- USED INDEXES -------------------------------
 _ IX= SYSIBM.DSNUCH01                             CLUSTERED = N
    *FULLKEY = -1           *NLEVELS= -1           *CLUSTRATIO= 0
    *FIRSTKEY= -1           *NLEAF  = -1           *UNIQUE    = D
    *KEYSIZE = 0            *# TABLE ROWS/INDEX KEY= -1
    *INDEXTYPE =

***************************** BOTTOM OF LIST ********************************
```

Panels (continued)

Format 2 of the Estimator panel shows all data.

```
----------------------- DB/EXPLAIN  DB2=D31A ------------------- LINE 1 OF 31
CMD ===>                                               SCROLL ===> PAGE
                           E S T I M A T O R
  Cmds: DO (Menu) GLOBAL (Menu)                         Selects: ? (Menu)
                              The fields marked with * can be updated.
-----------------------------------------------------------------------------
 TS= DSNDB06.SYSCOPY      PARTITIONS= 0  LOCKRULE = A
  *NACTIVE= 9             OBID= 7      CLOSERULE= N  CREATOR = SYSIBM
   NTABLES= 1             DBID= 6      IMPLICIT = N  CREATEBY= SYSIBM
   SPACE  = 0             PSID= 16     STATUS   = A  BPOOL= BP0
   PGSIZE = 4             SEGSIZE= 0   ERASERULE= N  DSETPASS=
   LOCKMAX= 0             STATSTS= 0000/00/00 00:00:00.000000

 _ TBL= SYSIBM.SYSCOPY              LOCATION=
   *RECLEN= 1904           TBCREATR=                      TYPE  = T
   *CARD  = 300            TBNAME  =                      STATUS=
   *NPAGES= 9              CREATEBY= SYSIBM               CKFLAG=
   *PCTPAGES  = 100        VALPROC =                      AUDIT =
    KEYOBID   = 0          EDPROC  =                      CHILD = 0
    OBID      = 46         CKRID   =                      PARENT= 0
    COLCOUNT  = 16         RBA1    = 000000000000         DATAC =
    KEYCOLUMNS= 0          RBA2    = 000000000000
   *PCTROWCOMP= 0          CREATETS= 1998/04/01 00:00:00.000000
    CLUSTERTYPE=           ALTERTS = 1998/04/01 00:00:00.000000
    CHECKS= 0              STATSTS = 0000/00/00 00:00:00.000000

    ---------------------- USED INDEXES -------------------------------
 _  IX= SYSIBM.DSNUCH01                          CREATEBY  = SYSIBM
    *FULLKEY = -1          *NLEVELS= -1          *CLUSTRATIO= 0
    *FIRSTKEY= -1          *NLEAF  = -1           CLUSTERED = N
     SPACE   = 0            COLCOUNT = 3          CLUSTERING= Y
     PGSIZE  = 4096         ERASERULE= N          BPOOL     = BP0
     OBID    = 91           CLOSERULE= N          DSETPASS  =
     ISOBID  = 114         *UNIQUE   = D          INDEXSPACE= DSNUCH01
    *KEYSIZE = 0          *# TABLE ROWS/INDEX KEY= -1
    *INDEXTYPE =           STATSTS  = 0000/00/00 00:00:00.000000

 ***************************** BOTTOM OF LIST ********************************
```

Panels (continued)

You can control the amount of data retrieved from the DB2 catalog with the
GSTATS (Gather Statistics) command. When this command is invoked, the
Statistics Gathering panel is displayed. This panel also allows you to modify
the location of the server. If not specified the default is "local."

```
----------------------- DB/EXPLAIN(V235)  DB2=DB2  ------------- LINE 1 OF 20
 Cmd ===>

                     S T A T I S T I C S   G A T H E R I N G


 Enter the server from which you wish to retrieve catalog statistics.
 If no value is entered the current server will be set to local.

  Server: TS
  Amount of data to gather:

     1. - SYSTABLESPACE, SYSTABLES, SYSINDEXES
     2. - Data specified in 1 plus
          SYSCOLUMNS, SYSCOLSTATS, SYSCOLDIST, SYSCOLDISTSTATS
     3. - Data specified in 2 plus
          SYSKEYS
     4. - Data specified in 2 plus
          SYSTABLEPART, SYSTABSTATS, SYSINDEXPART, SYSINDEXSTATS
     5. - Data specified in 3 plus
          SYSTABLEPART, SYSTABSTATS, SYSINDEXPART, SYSINDEXSTATS

 ENTER to process request    END to abort request
```

If you are using DB2 Version 2.3 or a later version and invoke the UPDT
command, the Statistics Update panel is presented to permit you to enter the
location of the server.

```
            STATISTICS UPDATE


    Please enter the following information:

            SERVER ===>
```

Fields and Associated Sorts and Filters

The fields marked with an asterisk can be updated.

FIELD	ON FORMAT	DESCRIPTION
ALTERTB (TBL)	2	Time when the latest ALTER TABLE statement was applied. Source: `SYSIBM.SYSTABLES.ALTEREDTS`
AMOUNT OF DATA TO GATHER	Statistics Gathering (KTEPSSSG)	Type of data to retrieve from catalog: 1. SYSTABLESPACE, SYSTABLES, SYSINDEXES 2. SYSTABLESPACE, SYSTABLES, SYSINDEXES, SYSCOLUMNS, SYSCOLSTATS, SYSCOLDIST, and SYSCOLDISTSTATS 3. SYSTABLESPACE, SYSTABLES, SYSINDEXES, SYSCOLUMNS, SYSCOLSTATS, SYSCOLDIST, SYSCOLDISTSTATS, and SYSKEYS 4. SYSTABLESPACE, SYSTABLES, SYSINDEXES, SYSCOLUMNS, SYSCOLSTATS, SYSCOLDIST, SYSCOLDISTSTATS, SYSTABLEPART, SYSTABSTATS, SYSINDEXPART, and SYSINDEXSTATS 5. SYSTABLESPACE, SYSTABLES, SYSINDEXES, SYSCOLUMNS, SYSCOLSTATS, SYSCOLDIST, SYSCOLDISTSTATS, SYSKEYS, SYSTABLEPART, SYSTABSTATS, SYSINDEXPART, and SYSINDEXSTATS
AUDIT (TBL)	2	Value of the audit option: **A** AUDIT All **C** AUDIT CHANGE **blank** AUDIT NONE, or the row describes a view or alias Source: `SYSIBM.SYSTABLES.AUDITING`
BPOOL (IX)	2	Name of the buffer pool used for index. Source: `SYSIBM.SYSINDEXES.BPOOL`
BPOOL (TS)	2	Name of the buffer pool used for the table space. Source: `SYSIBM.SYSTABLESPACE.BPOOL`
CARD (IXP)	1, 2	Number of rows referred to by the index or partition. Source: `SYSIBM.SYSINDEXPART.CARD`
CARD (TBL) *	1, 2	Number of rows in the table. You can update this field. Source: `SYSIBM.SYSTABLES.CARD`
CARD (TSTP)	1, 2	Number of rows in the table space or partition. Source: `SYSIBM.SYSTABLEPART.CARD`
CARDP (TSTP) *	1, 2	Total number of rows in the partition. You can update this field. Source: `SYSIBM.SYSTABSTATS.CARD`

FIELD	ON FORMAT	DESCRIPTION
CKFLAG (TBL)	2	Check for referential constraint violations. **C** There are rows in the table that can violate referential constraints. **blank** The table contains no rows that violate referential constraints, or the row describes a view or alias. Source: `SYSIBM.SYSTABLES.CHECKFLAG`
CHECKFLAG (TSTP)	2	Check for referential constraint violations. **C** The table space partition is in CHECK PENDING mode and there are rows that can violate referential constraints. **blank** The table contains no rows that violate referential constraints, or the table space is not partitioned. Source: `SYSIBM.SYSTABLEPART.CHECKFLAG`
CHECKS (TBL)	2	Number of check constraints defined on a table. The value in this field is 0 if there are no constraints, or if the row describes a view or alias. Source: `SYSIBM.SYSTABLES.CHECKS`
CHILD (TBL)	2	Number of relationships in which the table is a parent; 0 means the row describes a view or alias. Source: `SYSIBM.SYSTABLES.CHILDREN`
CKRID (TBL)	2	**RID** RID of the first row of the table that can violate referential constraints. **blank** Table is not in a check pending state. Source: `SYSIBM.SYSTABLES.CHECKRID`
CKRID (TSTP)	2	**RID** RID of the first row of the table that can violate referential constraints. **blank** Table or partition is not in a check pending state or the table space is not partitioned. Source: `SYSIBM.SYSTABLEPART.CHECKRID`
CLOSERULE (IX)	2	Indicates whether the datasets are candidates for being closed when the limit on the number of open datasets is reached: **N** No **Y** Yes Source: `SYSIBM.SYSINDEXES.CLOSERULE`

FIELD	ON FORMAT	DESCRIPTION
CLOSERULE (TS)	2	Indicates whether the datasets are candidates for being closed when the limit on the number of open datasets is reached: **Y** Yes **N** No Source: `SYSIBM.SYSTABLESPACE.CLOSERULE`
CLUSTERED (IX)	1, 2	Indicates whether the table is actually clustered by the index: **N** No: 95% or fewer of the rows are in clustering order, or statistics were not gathered **Y** Yes: More than 95% of the rows are in clustering order Source: `SYSIBM.SYSINDEXES.CLUSTERED`
CLUSTERING (IX)	2	Indicates whether CLUSTER was specified when the index was created: **N** No **Y** Yes Source: `SYSIBM.SYSINDEXES.CLUSTERING`
CLUSTERTYPE (TBL)	2	Whether the table can be dropped (that is, whether the table is defined with RESTRICT ON DROP). **blank** The table can be dropped **Y** The table cannot be dropped and any table space or database containing this table also cannot be dropped. Source: `SYSIBM.SYSTABLES.CLUSTERTYPE`
CLUSTRATIO (IX) *	1, 2	Percentage of rows that are in clustering order. You can update this field. Source: `SYSIBM.SYSINDEXES.CLUSTERRATIO`
CLUSTRATIO (IXP) *	1, 2	For the index partition, percentage of rows that are in clustering order. You can update this field. Source: `SYSIBM.SYSINDEXSTATS.CLUSTERRATIO`
COLCOUNT (IX)	2	Number of columns in the key. Source: `SYSIBM.SYSINDEXES.COLCOUNT`
COLCOUNT (TBL)	2	Number of columns in the table or view. Source: `SYSIBM.SYSTABLES.COLCOUNT`

FIELD	ON FORMAT	DESCRIPTION
COMPRESS (TSTP)	2	For a table space partition or nonpartitioned table space, indicates whether the COMPRESS attribute is YES. Values can be: **Y** Compression is defined. **blank** Compression is not defined. Source: `SYSIBM.SYSTABLEPART.COMPRESS`
CREATEBY (IX)	2	Primary authorization ID of the user who created the index. Source: `SYSIBM.SYSINDEXES.CREATEDBY`
CREATEBY (TBL)	2	Primary authorization ID of the user who created the table, view, or alias. Source: `SYSIBM.SYSTABLES.CREATEDBY`
CREATEBY (TS)	2	Primary authorization ID of the user who created the table space. Source: `SYSIBM.SYSTABLESPACE.CREATEDBY`
CREATETS (TBL)	2	Time when the CREATE statement was executed for the table, view, or alias. Source: `SYSIBM.SYSTABLES.CREATEDTS`
CREATOR (TS)	1, 2	Authorization ID of the owner of the table space. Source: `SYSIBM.SYSTABLESPACE.CREATOR`
DATAC (TBL)	2	Indicates the value of the DATACAPTURE option for a table. **Y** Data capture is defined for the table. **blank** Data capture is not defined. Source: `SYSIBM.SYSTABLES.DATACAPTURE`
DBID (TS)	2	Internal identifier of the database which contains the table space. Source: `SYSIBM.SYSTABLESPACE.DBID`
DSETPASS (IX)	2	Password for the datasets of the index. Source: `SYSIBM.SYSINDEXES.DSETPASS`
DSETPASS (TS)	2	Password for the datasets of the table space. Source: `SYSIBM.SYSTABLESPACE.DSETPASS`
EDPROC (TBL)	2	Name of the edit procedure. Source: `SYSIBM.SYSTABLES.EDPROC`
ERASERULE (IX)	2	Whether the datasets are to be erased when dropped (not applicable to partitioned indexes): **N** No **Y** Yes Source: `SYSIBM.SYSINDEXES.ERASERULE`

FIELD	ON FORMAT	DESCRIPTION
ERASERULE (TS)	2	Whether the datasets are to be erased when dropped (not applicable for partitioned table space): **Y** Erase **N** No Erase Source: `SYSIBM.SYSTABLESPACE.ERASERULE`
FARINDREF (TSTP)	1, 2	Number of rows that have been relocated far from their original page. Source: `SYSIBM.SYSTABLEPART.FARINDREF`
FAROFFPOS (IXP)	1, 2	Number of referred to rows that are far from optimal position as the result of an insert into a full page. Source: `SYSIBM.SYSINDEXPART.FAROFFPOS`
FIRSTKEY (IX) *	1, 2	Number of distinct values of the first key column. You can update this field. Source: `SYSIBM.SYSINDEXES.FIRSTKEYCARD`
FIRSTKEY (IXP) *	1, 2	Number of distinct values of the first key column in the index partition. You can update this field. Source: `SYSIBM.SYSINDEXSTATS.FIRSTKEYCARD`
FREEPAGE (TSTP) *	1, 2	Number of pages loaded before a page is left as free space. You can update this field. Source: `SYSIBM.SYSTABLEPART.FREEPAGE`
FREEPAGE (IXP) *	1, 2	Number of pages loaded before a page is left as free space. You can update this field. Source: `SYSIBM.SYSINDEXPART.PERCACTIVE` `SYSIBM.SYSINDEXPART.FREEPAGE`
FULLKEY (IX) *	1, 2	Number of distinct values of all of the key columns. You can update this field. Source: `SYSIBM.SYSINDEXES.FULLKEYCARD`
FULLKEY (IXP) *	1, 2	Number of distinct values of the key column in the index partition. You can update this field. Source: `SYSIBM.SYSINDEXSTATS.FULLKEYCARD`
GBPCACHE (IXP)	2	The group buffer pool cache option for the index or index space. **A** Both changed and unchanged pages are cached in the group buffer pool **blank** Only changed pages are cached in the group buffer pool, or the DB2 subsystem is not at least Version 4. Source: `SYSIBM.SYSINDEXPART.GBPCACHE`

FIELD	ON FORMAT	DESCRIPTION
GBPCACHE (TSTP)	2	The group buffer pool cache option for the table or table space. **A** Both changed and unchanged pages are cached in the group buffer pool **blank** Only changed pages are cached in the group buffer pool, or the DB2 subsystem is not at least Version 4. Source: `SYSIBM.SYSTABLEPART.GBPCACHE`
IMPLICIT (TS)	2	Whether the table space was created implicitly: **Y** Yes **N** No Source: `SYSIBM.SYSTABLESPACE.IMPLICIT`
INDEXSPACE (IX)	2	Name of the index space. Source: `SYSIBM.SYSINDEXES.INDEXSPACE`
INDEXTYPE (IX)	1, 2	The type of the index **blank** Index is type 1 **2** Index is type 2 Source: `SYSIBM.SYSINDEXES.INDEXTYPE`
ISOBID (IX)	2	Internal identifier of the set descriptor for the index page. Source: `SYSIBM.SYSINDEXES.ISOBID`
IX	1, 2	Index name. Source: `SYSIBM.SYSINDEXES.CREATOR` Source: `SYSIBM.SYSINDEXES.NAME`
IXCREATOR (TSTP)	2	Authorization ID of the owner of the partitioned index. Source: `SYSIBM.SYSTABLEPART.IXCREATOR`
IXNAME (TSTP)	2	Name of the partitioned index. Source: `SYSIBM.SYSTABLEPART.IXNAME`
IXP	1, 2	Index name. Source: `SYSIBM.SYSINDEXPART.CREATOR` Source: `SYSIBM.SYSINDEXPART.IXNAME`
KEYCOLUMNS (TBL)	2	Number of columns in the table's primary key. Source: `SYSIBM.SYSTABLES.KEYCOLUMNS`
KEYCNT (IXP) *	1, 2	Total number of rows in the partition. The field is updateable. Source: `SYSIBM.SYSINDEXSTATS.KEYCOUNT`

FIELD	ON FORMAT	DESCRIPTION
KEYOBID (TBL)	2	Internal DB2 identifier of the index that enforces uniqueness of the table's primary key. Source: `SYSIBM.SYSTABLES.KEYOBID`
KEYSIZE (IX)	1, 2	Length of keys. Source: `Derived`
LEAFDIST (IXP)	1, 2	100 times the average number of pages between successive leaf pages of the index. Source: `SYSIBM.SYSINDEXPART.LEAFDIST`
LOCATION (TBL)	1, 2	Location name of the table for an alias defined on a remote object. Source: `SYSIBM.SYSTABLES.LOCATION`
LOCKMAX (TS)	2	Maximum number of locks per user to acquire for the table or table space before escalating to the next locking level. Source: `SYSIBM.SYSTABLESPACE.LOCKMAX`
LOCKRULE (TS)	2	Lock size of the table space: **A**　Any **P**　Page **S**　Table space **T**　Table Source: `SYSIBM.SYSTABLESPACE.LOCKRULE`
NACTIVE (TS) *	1, 2	Number of active pages in the table space. You can update this field. Source: `SYSIBM.SYSTABLESPACE.NACTIVE`
NACTIVE (TSTP) *	1, 2	Number of active pages in the table space partition. You can update this field. Source: `SYSIBM.SYSTABSTATS.NACTIVE`
NEARINDREF (TSTP)	1, 2	Number of rows that have been relocated near their original page. Source: `SYSIBM.SYSTABLEPART.NEARINDREF`
NEAROFFPOS (IXP)	1, 2	Number of referred to rows near, but not at optimal position as the result of an insert into a full page. Source: `SYSIBM.SYSINDEXPART.NEAROFFPOS`
NLEAF (IX) *	1, 2	Number of active leaf pages in the index. You can update this field. Source: `SYSIBM.SYSINDEXES.NLEAF`
NLEAF (IXP) *	1, 2	Number of active leaf pages in the index partition. You can update this field. Source: `SYSIBM.SYSINDEXSTATS.NLEAF`
NLEVELS (IX) *	1, 2	Number of levels in the index tree. You can update this field. Source: `SYSIBM.SYSINDEXES.NLEVELS`

FIELD	ON FORMAT	DESCRIPTION
NLEVELS (IXP) *	1, 2	Number of levels in the partition index tree. You can update this field. Source: `SYSIBM.SYSINDEXSTATS.NLEVELS`
NPAGES (TBL) *	1, 2	Total number of pages on which rows of the table appear. You can update this field. Source: `SYSIBM.SYSTABLES.NPAGES`
NPAGES (TSTP) *	1, 2	Total number of pages on which rows of the partition appear. You can update this field. Source: `SYSIBM.SYSTABSTATS.NPAGES`
NTABLES (TS)	2	Number of tables defined in the table space. Source: `SYSIBM.SYSTABLESPACE.NTABLES`
OBID (IX)	2	Internal identifier of the index fan set descriptor. Source: `SYSIBM.SYSINDEXES.OBID`
OBID (TBL)	2	Internal identifier of the table. Source: `SYSIBM.SYSTABLES.OBID`
OBID (TS)	2	Internal identifier of the table space file descriptor. Source: `SYSIBM.SYSTABLESPACE.OBID`
PAGESAVE (TSTP)	2	Percentage of pages saved in a table space or partition as a result of using data compression. Source: `SYSIBM.SYSTABLEPART.OBID`
PARNT (TBL)	2	Number of relationships in which the table is a dependent; 0 means the row describes a view or alias. Source: `SYSIBM.SYSTABLES.PARENTS`
PARTITION (IXP)	1, 2	Partition number; 0 if index is not partitioned. Source: `SYSIBM.SYSINDEXPART.PARTITION`
PARTITION (TSTP)	1, 2	Partition number; 0 if table space is not partitioned. Source: `SYSIBM.SYSTABLEPART.PARTITION`
PARTITIONS (TS)	2	Number of partitions of the table space; 0 if the table space is not partitioned. Source: `SYSIBM.SYSTABLESPACE.PARTITIONS`
PCTFREE (IXP) *	1, 2	Percentage of each subpage or nonleaf page that is left as free space. You can update this field. Source: `SYSIBM.SYSINDEXPART.PCTFREE`
PCTFREE (TSTP) *	1, 2	Percentage of each page left as free space. You can update this field. Source: `SYSIBM.SYSTABLEPART.PCTFREE`
PCTPAGES (TBL) *	1, 2	Percentage of active table space pages that contain rows of the table. You can update this field. Source: `SYSIBM.SYSTABLES.PCTPAGES`

FIELD	ON FORMAT	DESCRIPTION
PCTPAGES (TSTP) *	1, 2	Percentage of total active pages in the partition that contain rows of the table. You can update this field. Source: `SYSIBM.SYSTABSTATS.PCTPAGES`
PCTROWCOMP (TBL) *	1, 2	Percentage of rows compressed within the total number of active rows in the table. You can update this field. Source: `SYSIBM.SYSTABLES.PCTROWCOMP`
PCTROWCOMP (TSTP) *	1, 2	Percentage of rows compressed within the total number of active rows in the partition. You can update this field. Source: `SYSIBM.SYSTABSTATS.PCTROWCOMP`
PERCACT (TSTP)	1, 2	Percentage of space occupied by rows of data from active tables. Source: `SYSIBM.SYSTABLEPART.PERCACTIVE`
PERCDROP (TSTP)	1, 2	Percentage of space occupied by rows of dropped tables; 0 for segmented table spaces. Source: `SYSIBM.SYSTABLEPART.PERCDROP`
PGSIZE (IX)	2	Size of subpages in the index. Source: `SYSIBM.SYSINDEXES.PGSIZE`
PGSIZE (TS)	2	Size, in kilobytes, of pages in the table space. Source: `SYSIBM.SYSTABLESPACE.PGSIZE`
PQTY (IXP)	2	Primary space allocation in units of 4K storage blocks; 0 if storage group is not used. Source: `SYSIBM.SYSINDEXPART.PQTY`
PQTY (TSTP)	2	Primary space allocation in units of 4K storage blocks; 0 if a storage group is not used. Source: `SYSIBM.SYSTABLEPART.PQTY`
PSID (TS)	2	Internal identifier of the set descriptor for the table space page. Source: `SYSIBM.SYSTABLESPACE.PSID`
RBA1 (TBL)	2	Log RBA when the table was created. Source: `SYSIBM.SYSTABLES.RBA1`
RBA2 (TBL)	2	Log RBA when the table was last altered. If the table has not been altered RBA1=RBA2. Source: `SYSIBM.SYSTABLES.RBA2`
RECLEN (TBL) *	1, 2	Maximum length of any record in the table. You can update this field. Source: `SYSIBM.SYSTABLES.RECLENGTH`
SERVER	Statistics Gathering (KTEPSSSG) Statistics Update (KTE3SSUP)	Location. Only installations running DB2 Version 2.3 or a later version will be able to designate the location of the server.

FIELD	ON FORMAT	DESCRIPTION
SEGSIZE (TS)	2	Number of pages in each segment of a segmented table space. Source: **SYSIBM.SYSTABLESPACE.SEGSIZE**
SPACE (IX)	2	Number of kilobytes of DASD storage allocated to the index, as determined by the last execution of STOSPACE utility. Source: **SYSIBM.SYSINDEXES.SPACE**
SPACE (IXP)	2	Number of kilobytes of DASD storage allocated to the index partition as determined by the last execution of STOSPACE utility. Source: **SYSIBM.SYSINDEXPART.SPACE**
SPACE (TS)	2	Number of kilobytes of DASD storage allocated to the table space as determined by the last execution of the STOSPACE utility. Source: **SYSIBM.SYSTABLESPACE.SPACE**
SQTY (IXP)	2	Secondary space allocation in units of 4K storage blocks; 0 if storage group is not used. Source: **SYSIBM.SYSINDEXPART.SQTY**
SQTY (TSTP)	2	Secondary space allocation in units of 4K storage blocks; 0 if a storage group is not used. Source: **SYSIBM.SYSTABLEPART.SQTY**
STATSTS (IX)	2	This field displays the timestamp value from the catalog except that when **UPDT** or **OUT** are specified, the catalog timestamp field is set to the current timestamp to indicate when the change was applied. Source: **SYSIBM.SYSINDEXES.STATSTIME**
STATSTS (IXP)	2	This field will be set to CURRENT TIMESTAMP for functions that update the catalog or output statistics. Source: **SYSIBM.SYSINDEXPART.STATSTIME**
STATSTS (TBL)	2	This field will be set to CURRENT TIMESTAMP for functions that update the catalog or output statistics. Source: **SYSIBM.SYSTABLES.STATSTIME**
STATSTS (TS)	2	This field will be set to CURRENT TIMESTAMP for functions that update the catalog or output statistics. Source: **SYSIBM.SYSTABLESPACE.STATSTIME**
STATSTS (TSTP)	2	This field will be set to CURRENT TIMESTAMP for functions that update the catalog or output statistics. Source: **SYSIBM.SYSTABLEPART.STATSTIME**
STATSTSP (IXP)	2	This field will be set to CURRENT TIMESTAMP for functions that update the catalog or output statistics. Source: **SYSIBM.SYSINDEXSTATS.STATSTIME**
STATSTSP (TSTP)	2	This field will be set to CURRENT TIMESTAMP for functions that update the catalog or output statistics. Source: **SYSIBM.SYSTABSTATS.STATSTIME**

FIELD	ON FORMAT	DESCRIPTION
STATUS (TS)	2	Availability status of the table space: **A** Available **C** Incomplete because no partitioned index has been created **P** Check Pending **S** Check Pending with the scope less than the entire table space **T** Incomplete because no table has been created Source: `SYSIBM.SYSTABLESPACE.STATUS`
STATUS (TBL)	2	Status of the table definition: **I** The table's definition is incomplete because it lacks a primary index **X** The table has a primary index **blank** Table has no primary key, or is a catalog table, or the row describes a view or alias Source: `SYSIBM.SYSTABLES.STATUS`
STORNAME (IXP)	2	Name of storage group or ICF catalog used for space allocation. Source: `SYSIBM.SYSINDEXPART.STORNAME`
STORNAME (TSTP)	2	Name of storage group used for allocation; blank if STORTYPE = E. Source: `SYSIBM.SYSTABLEPART.STORNAME`
STORTYPE (IXP)	2	Type of storage allocation: **E** Explicit storage type, and STORNAME names an ICF catalog **I** Implicit storage type, and STORNAME names a storage group Source: `SYSIBM.SYSINDEXPART.STORTYPE`
STORTYPE (TSTP)	2	Type of storage allocation: **E** Explicit (storage group is not used) **I** Implicit (storage group used) Source: `SYSIBM.SYSTABLEPART.STORTYPE`
TABLE ROWS/INDEXES *	1, 2	Number of nonunique index entries per key. You can update this field. Source: `Derived`
TBCREATR (TBL)	2	For an alias, the authorization ID of the owner of the referred table or view; blank otherwise. Source: `SYSIBM.SYSTABLES.TBCREATOR`
TBL	1, 2	Name of the table. Source: `SYSIBM.SYSTABLES.CREATOR` Source: `SYSIBM.SYSTABLES.NAME`

FIELD	ON FORMAT	DESCRIPTION
TBNAME (TBL)	2	For an alias, the name of the referred table or view; blank otherwise. Source: **SYSIBM.SYSTABLES.TBNAME**
TS	1, 2	Name of the table space. Source: **SYSIBM.SYSTABLESPACE.DBNAME** **SYSIBM.SYSTABLESPACE.NAME**
TSTP	1, 2	Name of the table space. Source: **SYSIBM.SYSTABLEPART.DBNAME** Source: **SYSIBM.SYSTABLEPART.TSNAME**
TYPE	2	Type of object: **A** Alias **T** Table **V** View Source: **SYSIBM.SYSTABLES.TYPE**
UNIQUE *	1, 2	Whether the index is unique: **D** No (Duplicates are allowed) **U** Yes (Unique, but not primary) **P** Primary key (Unique) You can update this field. Source: **SYSIBM.SYSINDEXES.UNIQUERULE**
VALPROC (TBL)	2	Name of the validation procedure; blank if the row describes a view, alias, or a table without a validation procedure. Source: **SYSIBM.SYSTABLES.VALPROC**
VCATNAME (IXP)	2	Name of ICF catalog used for space allocation. Source: **SYSIBM.SYSINDEXPART.VCATNAME**
VCATNAME (TSTP)	3	Name of ICF catalog used for space allocation. Source: **SYSIBM.SYSTABLEPART.VCATNAME**

Selects

SELECT	DESCRIPTION	TAKES YOU TO...
C	Display/Update Table columns.	Table Columns (KTEPTCOL)
D	Drop the selected index. Available for IX= rows.	
K	Display Index Keys.	Index Keys (KTEPCKEY)
N	Creates a new index having the DEFER option, unless you specifically indicate that you do not want it created with the DEFER option. When you exit from the Whatif panel, you will be given an opportunity to drop any indexes created using the N select.

Available for TBL= rows and assists you in testing the effect of adding new indexes to tables. | |

Commands

COMMAND	DESCRIPTION	TAKES YOU TO...
CALC	Calculate statistics. When you issue a CALC, any fields affected by the results of the command change color on your display. Fields whose color had been white are now yellow. Fields whose color had been blue are now green.	
CHANGE	Change all of the specified values to the new value. Can be abbreviated as C or CHA. See "Format of the Change command" later in this unit for expanded information about the CHANGE command.	
FIND	Find a specific character string on the display. Can be abbreviated as F. See "Format of the FIND command" later in this unit for expanded information about the FIND command.	
GSTATS	Gather statistics from the catalog and refresh the Estimator display.	Statistics Gathering (KTEPSSSG)
LOCATE	Locate a specific value, or a specific value for a specific object type, in one of the fields on the display; or locate data changed by the last command (for example, CALC or UNIFORM) you issued or data you have modified. Can be abbreviated as L or LOC. See "Format of the LOCATE command" later in this unit for expanded information about the LOCATE command.	

COMMAND	DESCRIPTION	TAKES YOU TO...
NDXS	Display all used and unused indexes.	
NEWSET	Establish a new statistics set. NEWSET does not affect column or column distribution statistics.	
NEWSETALL	Establish a new statistics set, including column and column distribution statistics.	
NONDXS	Reset used indexes.	
NOSTAT	Set statistics to RUNSTATS, not to run value. NOSTAT does not affect column or column distribution statistics. RUNSTATS can be either 0, blank, or -1.	
NOSTATALL	Set statistics, including column and column distribution statistics, to RUNSTATS, not to run value. RUNSTATS can be either 0, blank, or -1.	
OUT	Generate a REXX EXEC to update catalog statistics or create SQL statements to update catalog statistics depending on the value specified for "OUT statistics format" on housekeeping panel Miscellaneous Defaults (KTEPHOMI).	Output Options (KTEPOUTP)
RESET	Reset statistics values to the last statistics set. RESET does not affect column or column distribution statistics. *Note:* A statistics set is established when you enter the Estimator panel and when you explicitly enter the NEWSET* command.	
RESETALL	Reset statistics, including column and column distribution statistics, to the last statistics set. *Note:* A statistics set is established when you enter the Estimator panel and when you explicitly enter the NEWSET* command.	
RFIND	Reexeute the last FIND command. Can be abbreviated as RF.	
RLOCATE	Reexeute the last LOCATE command. Can be abbreviated as RL or RLOC.	
UNIFORM	Set partitioned statistics to uniform distribution. For example, if the value for CARD for tables is 90000 and there are 10 partitions, then set each table partition CARD field to 9000.	
UPDT	Update the local catalog with new statistics.	Statistics Update (KTE3SSUP)
UPDTL	Update the local catalog with new statistics.	Statistics Update (KTE3SSUP)
UPDTR	Update the remote catalog with new statistics.	Statistics Update (KTE3SSUP)

Format of the Change command

The Change command (CHANGE) can be abbreviated as CHA or C. The format for this command is

`CHANGE [field_type]` *field_name* `operator` *value* `[%]`

This table provides information about the parameters of the CHANGE command. All parameters are optional unless specifically declared as required.

Parameter	Meaning
field_type	Can be TS, TSTP, TBL, IX, or IXP. *field_type* is optional. If it is omitted, all fields having the specified field name are changed. If it is included, only those fields of the type specified and having the specified field name are changed.
field_name (required)	Name of the field to be changed
operator (required)	One of the following can be used in the operator field: = (equals) + (plus) - (minus)
value (required)	Value to which the specified fields are set
%	The % (percent) sign can be used with the + (plus) and - (minus) operators to indicate that the value represents a percentage by which the changed field is to be incremented or decremented.

Valid field types for the CHANGE command

Refer to the table for the fields than can be affected by the CHANGE command. A more complete list showing alternate field names (where applicable) for the field names in this table can be found in the online help for this panel.

Field Type	Field Name
TS	NACTIVE
TSTP	CARD NACTIVE NPAGES PCTPAGES PCTROWCOMP PCTFREE FREEPAGE
TBL	RECLEN CARD NPAGES PCTPAGES PCTROWCOMP
IX	FULLKEY FIRSTKEY KEYSIZE INDEXTYPE NLEVELS NLEAF UNIQUE CLUSTER ROWS
IXP	FULLKEY FIRSTKEY KEYCNT NLEVELS NLEAF CLUSTER FREEPAGE PCTFREE

Format of the FIND command

The FIND command can be abbreviated as **F**. The format of the FIND command is as follows:

```
FIND string [FIRST|LAST|NEXT|PREV] [ASIS]
```

This table provides information about the parameters of the FIND command. All parameters are optional unless specifically declared as required.

Parameter	Meaning

string (required)	One of:
	
	• A quoted or unquoted string that is to be found; can take the form:
	
	    dirt
	    'dirt road'
	    "dirt road"
	    "Mary's road"
	
	• * (asterisk)—meaning find an occurrence of the last value entered for *string*.

FIRST	Find the first occurrence of the string on the display. Ignore the case of any characters in the string when performing the FIND.
LAST	Find the last occurrence of the string on the display. Ignore the case of any characters in the string when performing the FIND.
PREV	Find the previous occurrence of the string on the display. Ignore the case of any characters in the string when performing the FIND.
NEXT	Find the next occurrence of the string (the default) on the display. Ignore the case of any characters in the string when performing the FIND.

Format of the FIND command (continued)

Parameter	Meaning
ASIS	Can be included with any of the above parameters and indicates that the string is to be found as entered; that is, the case of the characters in the string should match the case of the characters in the 'found' string.

Format of the LOCATE command

The LOCATE command can be abbreviated as **L** or **LOC**. The format of the LOCATE command is as follows:

> **LOCATE [*field_type*] *field_name* operator *value* [ASIS]**

or

> **LOCATE CHANGED**

or

> **LOCATE MODIFIED**

CHANGED can be abbreviated as CHA. MODIFIED can be abbreviated as MOD.

This table provides information about the parameters of the LOCATE command. All parameters are optional unless specifically declared as required.

Parameter	Meaning
field_type	Can be TS, TSTP, TBL, IX, or IXP. *field type* is optional. If specified, it designates the types of field in which !DB/EXPLAIN is to locate the designated value.
field_name (required)	Name of the field in which the specified value is to be located

---

Format of the LOCATE command (continued)

Parameter	Meaning
operator (required)	One of the following can be used in the operator field: = (equals) > (greater than) < (less than) >= (greater than or equal to) <= (less than or equal to) <> (not equal to) ¬= (not equal to)
value (required)	A quoted or unquoted value that is to be found; can take the form: dirt 'dirt road' "dirt road" "Mary's road" If the field in which a value is to be located is numeric, the format of *value* on the LOCATE command *must* match the format of the display field. Can take the form: 999 9,999 or 9.999 1999/09/01 (will not match a value entered as 09/01/1999)
ASIS	Can be included with any of the above parameters and indicates that a character string is to be found as entered; that is, the case of the characters in the string should match the case of the characters in the 'found' string. (ASIS is only valid for character data.)
CHANGED	Locates a value changed as the result of the last-issued command, for example, a CALC or UNIFORM command
MODIFIED	Locates a value changed by a user modification or a CHANGE command since the last statistics were gathered

Valid field types for the LOCATE command

Refer to the table for the fields than can be affected by the LOCATE command. A more complete list showing alternate field names (where applicable) for the field names in this table can be found in the online help for this panel.

Field Type	Field Name
TS	BPOOL
	CLOSERULE
	CREATEBY
	CREATOR
	DBID
	DBNAME
	DSETPASS
	ERASERULE
	IMPLICIT
	LOCKMAX
	LOCKRULE
	NACTIVE
	NAME
	NTABLES
	OBID
	PARTITIONS
	PGSIZE
	PSID
	SEGSIZE
	SPACE
	STATSTS
	STATUS
	TSNAME

Valid field types for the LOCATE command (continued)

Field Type	Field Name
TSTP	CARD CARDP CHECKFLAG CKRID COMPRESS DBNAME FARINDREF FREEPAGE GBPCACHE IXCREATOR IXNAME NACTIVE NEARINDREF NPAGES PAGESAVE PARTITION PCTFREE PCTPAGES PCTROWCOMP PERCACT PERCDROP PQTY SPACE SQTY STATSTS STATSTSP STORNAME STORTYPE TSNAME VCATNAME
TBL	ALTERTS AUDIT CARD CHECKS CHILD CKFLAG CKRID CLUSTERTYPE COLCOUNT CREATEBY CREATETS CREATOR DATAC EDPROC KEYCOLUMNS KEYOBID LOCATION NAME NPAGES OBID PARENT PCTPAGES PCTROWCOMP RBA1 RBA2 RECLEN STATSTS STATUS TBCREATR TBNAME TYPE VALPROC

Valid field types for the LOCATE command (continued)

Field Type	Field Name
IX	BPOOL CLOSERULE CLUSTER CLUSTERED CLUSTERING COLCOUNT CREATEBY CREATOR DSETPASS ERASERULE FIRSTKEY FULLKEY INDEXSPACE INDEXTYPE ISOBID KEYSIZE NAME NLEAF NLEVELS OBID PGSIZE ROWS SPACE STATSTS UNIQUE
IXP	CARD CLUSTER FAROFFPOS FIRSTKEY FREEPAGE FULLKEY GBPCACHE IXCREATOR IXNAME KEYCNT LEAFDIST NEAROFFPOS NLEAF NLEVELS PARTITION PCTFREE PQTY SPACE SQTY STATSTS STATSTSP STORNAME STORTYPE VCATNAME

Exceptions

Overview

This unit describes the Exceptions panel.

Background about the Exceptions panel

The Exceptions panel (KTEPXCPT) lists exceptions that exist for SQL statements. This panel shows statements that are in error and identifies statements that potentially can affect DB2 performance.

The exceptions that are displayed are affected by the values you have specified on the Exception Options Housekeeping panel and the Recommendations panels.

Access

Exceptions can be accessed from the Primary Menu or the Sessions Menu, or from the DBRMs, Plans, Packages, Tables and Statements panels.

Panel

The following illustration shows the Exceptions panel.

```
----------------------- DB/EXPLAIN DB2=D31A --------------------------------
CMD ===>                                                       SCROLL ===> PAGE

                            E X C E P T I O N S
  Cmds:  DO (Menu) GLOBAL (Menu)                             Selects: ? (Menu)
-----------------------------------------------------------------------------

SEL COUNT   EXCEPTION DESCRIPTION
--- ------  -----------------------------------------------------------------
 _     117  TABLE SPACE SCAN
 _      45  NON MATCHING INDEX SCAN
 _      67  SORT FOR JOIN
 _      25  SORT FOR ORDER BY
 _     139  LIST PREFETCH
 _     123  SEQUENTIAL PREFETCH
 _     619  X / IX TABLESPACE LOCKS
```

Fields

FIELD	ON PANEL...	DESCRIPTION
COUNT	KTEPXCPT	Number of exceptions.
EXCEPTION DESCRIPTION	KTEPXCPT	Description of the exception. On recommendation exceptions, the first 8 characters of this field contain the recommendation identifier followed by the exception description.

Selects

SELECT	DESCRIPTION	TAKES YOU TO...
G	Display statement costs. This select is valid for access path information only.	Statement Costs (KTEPCOST)
L	List exception details.	Latest EXPLAIN (KTEPEXPL)
S	List statements.	Statements (KTEPSTMT)

Commands

COMMAND	DESCRIPTION	TAKES YOU TO...
COST	Display cost for the exceptions for all access path types.	Costs (KTEPCOST)
LEXPL	Display latest EXPLAIN results for the tripped exceptions.	EXPLAIN (KTEPEXPL)
RFIND	Reexeute the last FIND command.	
STMTS	Display SQL statements that tripped the exceptions.	Statements (KTEPSTMT)
XERR	Display statements for the exceptions for all "SQL error" types.	Latest EXPLAIN (KTEPEXPL)

Storage considerations when displaying exceptions

When using one of the commands to display statements that triggered an exception condition, you need to ensure that you have sufficient storage to contain the display. Alternatively, you need to limit your request to a number that can be displayed within the existing capacity of your system.

EXPLAIN

Overview

This unit describes the EXPLAIN panel.

Background about the EXPLAIN panel

The EXPLAIN panel (KTEPEXPL) shows access path information of EXPLAINed SQL statements. This panel displays the message "EXTRACT DISCARDED STATEMENTs" when the extract has discarded a statement or statements from the associated DBRM.

If the statement displayed on format 2 or format 6 has been modified by the !DB/EXPLAIN parser to avoid -417 and -418 SQL errors, the panel displays a message indicating the statement has been modified.

Formats

You can display the panel in the formats given in the chart. Customizing format 0 to meet your needs is easily done using Housekeeping's Explain Display tuning Parameters panel.

Format	Displayed Fields
Format 0	User-defined format (defined on the EXPLAIN Display Tuning Parameters panel)
Format 1	Object, BIND, statement text, access path, and recommendation information
Format 2	Access path summary (EXPLAIN Plan Table Data)
Format 3	Object Information, Key Information
Format 4	BIND Data
Format 5	Statement Text
Format 6	Access Path Information
Format 7	Recommendations (text level is None/Terse/Verbose). See "Recommendations Panel 1" on page 350 for more information.
Format 8	Plan Table Data (two line format)
Format 9	Statement Cost Information

Access

Explain is accessed from the Plans, DBRMs, Packages, Statements, or Exceptions panels.

Panels

The following illustration shows format 1 of the EXPLAIN display.

```
----------------------- DB/EXPLAIN  DB2=D42B ------------------ LINE 1 OF 222
Cmd ===> FORMAT1                                          SCROLL ===> PAGE
                              E X P L A I N
  Cmds: DO (Menu) GLOBAL (Menu)
------------------------------------------------------------------------------
PLAN=DSN8BD42  DBRM=DSN8BD3   CONTOKEN=15B3C90A0B7E75A0
PRECOMPILE=1999/10/14 16:41:17.260000
EXPLAINED=1999/12/09 11:46:04   DEGREE=1
+----------------------- DETAILED PLAN INFORMATION ------------------------+
| PLAN NAME   = DSN8BD42   CREATOR  = DCYBU2    PLENTRIES =        0        |
| PLAN FREED? = N          QUALIFIER= DCYBU2    SYSENTRIES=        0        |
| AVERAGE SIZE=     3194   BOUND BY = DCYBU2    DBRMS     =        1        |
| PLAN SIZE   =     2728   BIND DATE= 1999/10/14 PACKAGES  =        0       |
| CACHE SIZE  =     1024   BIND TIME= 16:42:01   GROUP MEMBER=             |
| DEGREE      = 1          SERVER   =                                       |
|                                                                          |
| VALIDATE    = R  ISOLATION   = S  VALID  = Y  OPERATIVE = Y  ACQUIRE= U   |
| EXPLAIN     = N  DEFERPREP   = N  SQLRULES= D  DISCONNECT= E  RELEASE= C  |
| EXPREDICATE= C  DYNAMICRULES=      KEEPDYN = N  REOPT     = N             |
+--------------------------------------------------------------------------+
+--------------------- RECOMMENDATIONS FOR DBRM DSN8BE3 --------------------+
| RECOMMENDATION B00004                                                     |
|    The plan or package this statement belongs to was bound with the      |
|    option VALIDATE(RUN). Generally the option VALIDATE(BIND) is          |
|    preferred.                                                            |
|                                                                          |
|    When the option VALIDATE(RUN) is specified, DB2 does validity         |
|    checking at BIND time and then rechecks any failures at run time.     |
|    The validity checking at run time can cause catalog contention        |
|    and degrated performance. If possible, ensure that all objects        |
|    exist and all privileges are granted prior to binding a plan or       |
|    package and then choose the VALIDATE(BIND) option.                    |
|                                                                          |
+--------------------------------------------------------------------------+
+------------- STATEMENT NUMBER 286 TEXT-----------------------------------+
| DECLARE TELE1 CURSOR FOR                                                  |
| SELECT *                                                                  |
| FROM VPHONE                                                               |
+--------------------------------------------------------------------------+
+--------------STATEMENT NUMBER 286 ERROR----------------------------------+
| DSNT4081 SQLCODE = -204, ERROR:  DCYBU2.VPHONE IS AN UNDEFINED NAME       |
| DSNT4181 SQLSTATE   = 42704 SQLSTATE RETURN CODE                          |
|..........................................................................|
```

Panels (continued)

This continues format 1 of the EXPLAIN display.

```
----------------------- DB/EXPLAIN  DB2=D42B ----------------- LINE 1 OF 222
Cmd ===> FORMAT1                                        SCROLL ===> PAGE
                              E X P L A I N
  Cmds: DO (Menu) GLOBAL (Menu)
-------------------------------------------------------------------------------
PLAN=DSN8BD42  DBRM=DSN8BD3   CONTOKEN=15B3C90A0B7E75A0
PRECOMPILE=1999/10/14 16:41:17.260000
EXPLAINED=1999/12/09 11:46:04   DEGREE=1
+----------------------- DETAILED PLAN INFORMATION -----------------------+
| PLAN NAME   = DSN8BD42   CREATOR  = DCYBU2     PLENTRIES =       0       |
| PLAN FREED? = N          QUALIFIER= DCYBU2     SYSENTRIES=       0       |
| AVERAGE SIZE=    3194    BOUND BY = DCYBU2     DBRMS     =       1       |
| PLAN SIZE   =    2728    BIND DATE= 1999/10/14 PACKAGES  =       0       |
| CACHE SIZE  =    1024    BIND TIME= 16:42:01   GROUP MEMBER=            |
| DEGREE      = 1          SERVER   =                                     |
|                                                                        |
| VALIDATE    = R  ISOLATION   = S  VALID  = Y  OPERATIVE = Y  ACQUIRE= U |
| EXPLAIN     = N  DEFERPREP   = N  SQLRULES= D  DISCONNECT= E  RELEASE= C |
| EXPREDICATE= C  DYNAMICRULES=     KEEPDYN = N  REOPT     = N            |
+------------------------------------------------------------------------+
+-------------------- RECOMMENDATIONS FOR DBRM DSN8BE3 --------------------+
| RECOMMENDATION B00004                                                   |
|    The plan or package this statement belongs to was bound with the    |
|    option VALIDATE(RUN). Generally the option VALIDATE(BIND) is         |
|    preferred.                                                           |
|                                                                        |
|    When the option VALIDATE(RUN) is specified, DB2 does validity       |
|    checking at BIND time and then rechecks any failures at run time.   |
|    The validity checking at run time can cause catalog contention      |
|    and degrated performance. If possible, ensure that all objects      |
|    exist and all privileges are granted prior to binding a plan or     |
|    package and then choose the VALIDATE(BIND) option.                  |
|                                                                        |
+------------------------------------------------------------------------+
+------------- STATEMENT NUMBER 286 TEXT----------------------------------+
| DECLARE TELE1 CURSOR FOR                                                |
| SELECT *                                                                |
| FROM VPHONE                                                             |
+------------------------------------------------------------------------+
+--------------STATEMENT NUMBER 286 ERROR---------------------------------+
| DSNT4081 SQLCODE = -204, ERROR:  DCYBU2.VPHONE IS AN UNDEFINED NAME     |
| DSNT4181 SQLSTATE   = 42704 SQLSTATE RETURN CODE                        |
| ......................................................................|
```

Panels (continued)

The following illustration shows format 2 of the EXPLAIN display—EXPLAIN Plan Table data.

```
----------------------------- DB/EXPLAIN  DB2=D42B     ------ LINE 1 OF 13
Cmd ===> FORMAT2                                        Scroll ===> PAGE
                                 E X P L A I N
Cmds: DO (Menu)  GLOBAL (Menu)
--------------------------------------------------------------------------------
 PACKAGE=DSNHYCRD  COLLID=DSNHYCRD          CONTOKEN=155403E608555E10
 PRECOMPILE=1999/02/13 06:30:05.610000
 EXPLAINED=1999/12/09 13:35:09   DEGREE=1
 +--------------------------- ACCESS PATH SUMMARY ---------------------------+
 | STMT QB  PLN MX EMJP AC I MT MJ P ACCESS JOIN  SRNSRC  SRN SRC        PFW |
 | NO. NO. NO. OP METR CS X CL CL M  DG ID DG ID  ID ID UJOGUJOG  LCK   FNO  |
 |------ --- --- -- ---- -- - -- -- - ----------- ------ --------- --- ----- |
 |  437   1   1  0 E0   I N  2  0     0  0  0  0   0  0 NNNNNNNN   IS  L      |
 |  488   1   2  0 E0     N  0  0     0  0  0  0   0  0 NNNNNNNN              |
 |  543   1   1  0 E0   I N  2  0     0  0  0  0   0  0 NNNNNNNN   IS  L      |
 | 1717   1   2  0 E0     N  0  0     0  0  0  0   0  0 NNNNNNNN              |
 |  204   1   1  0 E0   I N  2  0     0  0  0  0   0  0 NNNNNNNN   IS         |
 +--------------------------------------------------------------------------+
 ***************************** BOTTOM OF LIST ******************************
```

Panels (continued)

The following illustration shows format format 3 of the EXPLAIN display—object information.

```
----------------------- DB/EXPLAIN  DB2=D31A -------------------- LINE1 OF 92
CMD ===> FORMAT3                                           SCROLL ===> PAGE
                                E X P L A I N
  Cmds: DO (Menu) GLOBAL (Menu)
-------------------------------------------------------------------------------
PLAN=CRBDPLNR  DBRM=DSDDB2UP  CONTOKEN=1470006C10B79FB4
PRECOMPILE=1998/02/23 02:42:08.610000
EXPLAINED=1999/03/01 11:46:04   DEGREE=1
+--------- DETAILED OBJECT INFORMATION FOR STATEMENT NUMBER 373    ---------+
| TS= DSNDB06.SYSDBASE      PARTITIONS= 0  LOCKRULE = A                      |
|   NACTIVE=  540           OBID= 1        CLOSERULE= N  CREATOR = SYSIBM    |
|   NTABLES=  14            DBID= 6        IMPLICIT= N   CREATEBY= SYSIBM    |
|   SPACE  = 0              PSID= 9        STATUS  = A   BPOOL   = BP0       |
|   PGSIZE = 4              SEGSIZE= 0     ERASERULE= N  DSETPASS=           |
|   LOCKMAX=  0             STATSTS= 1999/11/02 15:28:07.744171             |
|                                                                          |
|    TBL= SYSIBM.SYSTABLES              LOCATION=                           |
|      RECLEN= 521          TBCREATR=                    TYPE  = T          |
|      CARD  = 211          TBNAME  =                    STATUS= X          |
|      NPAGES= 110          CREATEBY= SYSIBM             CKFLAG=            |
|      PCTPAGES  = 20       VALPROC =                    AUDIT =            |
|      KEYOBID   = 61       EDPROC  =                    CHILD = 7          |
|      OBID      = 19       CKRID   =                    PARNT = 1          |
|      COLCOUNT  = 38       RBA1    = 00000000           DATAC =            |
|      KEYCOLUMNS= 2        RBA2    = 00000000                              |
|      PCTROWCOMP= 0        CREATETS= 1998/04/01 00:00:00.000000            |
|      CHECKS    = 0        ALTERTS = 1999/06/24 16:09:28.046861            |
|      CLUSTERTYPE =        STATSTS = 1999/11/02 15:28:07.744171            |
|                                                                          |
|      ----------------------  USED INDEXES   ----------------------        |
|                                                                          |
|    IX= SYSIBM.DSNDTX01                        CREATEBY  = SYSIBM          |
|     FULLKEY = 211         NLEVELS= 2          CLUSTRATIO= 62              |
|     FIRSTKEY= 28          NLEAF= 28           CLUSTERED = N               |
|     SPACE = 0             COLCOUNT = 2        CLUSTERING= N               |
|     PGSIZE= 4096          ERASERULE= N        INDEXTYPE =                 |
|     SUBPAG= 1             CLOSERULE= N        DSETPASS  =                 |
|     OBID  = 61            UNIQUE  = P         INDEXSPACE= DSNDTX01         |
|     ISOBID= 93            STATSTS = 1999/11/02 15:28:07.744171            |
|     BPOOL = BP0                                                           |
]                                                                          ]
]         KY                O N                                            ]
]    USE SQ KEY COLUMN NAME    R L COLTYPE  LENGTH SCALE COLCARD            ]
]    --- -- ----------------- - - -------- ------ ----- ---------------     ]
]    **>  1 CREATOR            A N CHAR        8                  28 ]
]           HIGH2KEY= TSL251                     LOW2KEY= CLOVIS            ]
]                                                                          ]
]    **>  2 NAME               A N VARCHAR    18                 118 ]
]           HIGH2KEY= VSTAFAC1                   LOW2KEY= ALTERCON          ]
]                                                                          ]
|      ----------------------  UNUSED INDEXES   ----------------------      |
|                                                                          |
|    IX= SYSIBM.DSNDTX02                        CREATEBY  = SYSIBM          |
|     FULLKEY = 211         NLEVELS= 2          CLUSTRATIO= 76              |
|     FIRSTKEY= 25          NLEAF= 25           CLUSTERED = N               |
|     SPACE = 0             COLCOUNT = 4        CLUSTERING= N               |
|     PGSIZE= 4096          ERASERULE= N        INDEXTYPE =                 |
|     SUBPAG= 1             CLOSERULE= N        DSETPASS  =                 |
|     OBID  = 163           UNIQUE  = U         INDEXSPACE= DSNDTX02         |
|     ISOBID= 164           STATSTS = 1999/11/02 15:28:07.744171            |
|     BPOOL = BP0                                                           |
+--------------------------------------------------------------------------+
```

Panels (continued)

Format 4 of the EXPLAIN display shows bind data.

```
----------------------- DB/EXPLAIN  DB2=D42B -------------------- LINE1 OF 31
Cmd ===> FORMAT4                                        SCROLL ===> PAGE
                                E X P L A I N
  Cmds: DO (Menu) GLOBAL (Menu)
-------------------------------------------------------------------------------
PLAN=CRBDPLNR  DBRM=DSN8BD3P  CONTOKEN=15B3C90A0B7E75A0
PRECOMPILE=1999/10/14 02:42:08.610000
EXPLAINED=1999/12/09 11:46:04   DEGREE=1
 +-------------------- DETAILED PLAN INFORMATION -----------------------+
 | PLAN NAME   = DSN8BD42   CREATOR  = DCYBU2     PLENTRIES =       0    |
 | PLAN FREED? = N          QUALIFIER= DCYBU2     SYSENTRIES=       0    |
 | AVERAGE SIZE=    3194    BOUND BY = TDCYBU2    DBRMS     =       3    |
 | PLAN SIZE   =    2728    BIND DATE= 1999/10/14 PACKAGES  =       0    |
 | CACHE SIZE  =    1024    BIND TIME= 03:41:49   GROUP MEMBER=          |
 | DEGREE      = 1          SERVER   =                                   |
 |                                                                      |
 | VALIDATE    = R  ISOLATION  = S  VALID  = Y  OPERATIVE = Y  ACQUIRE= U|
 | EXPLAIN     = N  DEFERPREPARE= N  SQLRULES= D  DISCONNECT= E  RELEASE= C|
 | EXPREDICATE= C  DYNAMICRULES=    KEEPDYN = N  REOPT     = N          |
 +----------------------------------------------------------------------+
 ***************************** BOTTOM OF LIST *****************************
```

Format 5 of the EXPLAIN display shows statement text.

```
----------------------- DB/EXPLAIN  DB2=D31A -------------------- LINE1 OF 33
CMD ===> FORMAT5                                        SCROLL ===> PAGE
                                E X P L A I N
  Cmds: DO (Memu) GLOBAL (Menu)
-------------------------------------------------------------------------------
PLAN=CRBDPLNR  DBRM=DSDDB2UP  CONTOKEN=1470006C10B79FB4
PRECOMPILE=1998/02/23 02:42:08.610000
EXPLAINED=1999/03/01 11:46:04 DEGREE=1
 +-------------------- STATEMENT NUMBER 373 TEXT ----------------------+
 | SELECT CURRENT TIMESTAMP                                            |
 | INTO :WORKTIME                                                      |
 | FROM SYSIBM.SYSTABLES                                               |
 | WHERE NAME = 'DSPSTATS ' AND CREATOR = 'CDB'                        |
 +--------------------------------------------------------------------+
 +-------------------- STATEMENT NUMBER 458 TEXT ----------------------+
 | INSERT INTO CDB.DSPHIST                                             |
 | VALUES                                                             |
 | ( :WORKTIME , :TMPDBNAM , :TMPSPNAM , :TMPPART# , :TMPRELVL , :TMPDSTYP , |
 |   :TMPASSGN , :TMPVCAT , :TMPSTGRP , :TMPPSWD , :TMPSTTYP , :TMPRSRVD , |
 |   :TMPPQTY , :TMPSQTY , :TMP#EXTS , :TMPTLSPC , :TMPUSED , :TMPVLSR1 |
 | )                                                                  |
 +--------------------------------------------------------------------+
 ***************************** BOTTOM OF LIST *****************************
```

Panels (continued)

Format 6 of the EXPLAIN display lists access path information.

```
------------------------ DB/EXPLAIN  DB2=D31A -------------------- LINE1 OF 78
 CMD ===> FORMAT6                                        SCROLL ===> PAGE
                                E X P L A I N
  Cmds: DO (Menu) GLOBAL (Menu)
 ------------------------------------------------------------------------------
 PLAN=CRBDPLNR  DBRM=DSDDB2UP  CONTOKEN=1470006C10B79FB4
 PRECOMPILE=1999/02/23 02:42:08.610000
 EXPLAINED=1999/03/01 11:46:04   DEGREE=1
 +------------- ACCESS PATH STRATEGY FOR STATEMENT NUMBER 373 ---------------+
 |                                                                           |
 |  Statement Cost: 7.6                                                      |
 |    The cost (timerons) is a rough estimate of resources required to       |
 |    execute the SQL statement.                                             |
 |                                                                           |
 |  Query Block No. 1                                                        |
 |                                                                           |
 |    Step 1                                                                 |
 |                                                                           |
 |     Access Info:                                                          |
 |                                                                           |
 |        This is either a composite table or it is the first table accessed.|
 |        This step accesses SYSIBM.SYSTABLES.                               |
 |        Uses index SYSIBM.DSNDTX01.                                        |
 |        Matching on 2 index columns.                                       |
 |        Index access only, no table pages are accessed.                    |
 |        Column functions are to be decided at run time.                    |
 |                                                                           |
 |     Lock Info:                                                            |
 |                                                                           |
 |        Intent Share.  Lock holder has read-only access.                   |
 |        Concurrent reads and updates are allowed.                          |
 +---------------------------------------------------------------------------+
 PLAN=CRBDPLNR  DBRM=DSDSQL01  CONTOKEN=145CF65D033BF130
 PRECOMPILE=1998/10/24 23:12:43.950000
 EXPLAINED=1999/03/01 11:46:04   DEGREE=1
 +------------- ACCESS PATH STRATEGY FOR STATEMENT NUMBER 227 ---------------+
 |                                                                           |
 |  Statement Cost: 0.3                                                      |
 |    The cost (timerons) is a rough estimate of resources required to       |
 |    execute the SQL statement.                                             |
 |                                                                           |
 |  Query Block No. 1                                                        |
 |                                                                           |
 |    Step 1                                                                 |
 |                                                                           |
 |     Access Info:                                                          |
 |                                                                           |
 |        This is either a composite table or it is the first table accessed.|
 |        This step accesses SYSIBM.SYSTABLESPACE.                           |
 |        Uses index SYSIBM.DSNDSX01.                                        |
 |        Matching on 2 index columns.                                       |
 |        Index access only, no table pages are accessed.                    |
 |        Column functions are to be decided at run time.                    |
 |                                                                           |
 |     Lock Info:                                                            |
 |                                                                           |
 |        Intent Share.  Lock holder has read-only access.                   |
 |        Concurrent reads and updates are allowed.                          |
 +---------------------------------------------------------------------------+
 ****************************** BOTTOM OF LIST ********************************
```

Panels (continued)

Format 7 of the EXPLAIN display provides recommendations in verbose text style.

```
------------------------- DB/EXPLAIN  D31A ---------------------- LINE1 OF 86
 CMD ===>                                              SCROLL ===> PAGE
                               E X P L A I N
  Cmds: DO (Menu) GLOBAL (Menu)
 -----------------------------------------------------------------------------
 PACKAGE=I321899D  COLLID=I321899B          CONTOKEN=151E21441FDC79B2
 PRECOMPILE=1999/03/07 09:49:35.616486
 EXPLAINED=1999/08/26 07:12:19   DEGREE=1
 +------------------ RECOMMENDATIONS FOR PACKAGE I321899D -------------------+
 | NO BIND TYPE RECOMMENDATIONS FOR PACKAGE                                  |
 +--------------------------------------------------------------------------+
 +---------------- RECOMMENDATIONS FOR STATEMENT NUMBER 156 -----------------+
 | RECOMMENDATION O000002                                                    |
 |    Tablespace DSNDB04.EMP has a LOCKSIZE of ANY.  Lock                    |
 |    escalation may occur.  If concurrency is of utmost importance for      |
 |    applications referencing this tablespace then LOCKSIZE(PAGE) may       |
 |    be a better choice.                                                    |
 |                                                                          |
 |    When LOCKSIZE ANY is specified, the number of locks that any           |
 |    program can hold within a table space is limited by the value          |
 |    specified for LOCKS PER TABLE(SPACE) when DB2 was installed.           |
 |    When the number of page locks reaches the limit, a tablespace          |
 |    lock is acquired and all of the page locks are released.  When         |
 |    LOCKSIZE PAGE is specified, lock escalation will not occur.            |
 |                                                                          |
 | RECOMMENDATION O000004                                                    |
 |    Tablespace DSNDB04.EMP has a LOCKSIZE of ANY. The                      |
 |    !DB/EXPLAIN database shows no INSERT / UPDATE / DELETE statements       |
 |    referencing table TDDB44B.EMP.  If this table is                       |
 |    truly read only then a LOCKSIZE of TABLE or TABLESPACE may             |
 |    improve performance.                                                   |
 |                                                                          |
 | EXCEPTION X00009                                                          |
 |    Sequential Prefetch                                                    |
 |                                                                          |
 +--------------------------------------------------------------------------+
 +---------------- RECOMMENDATIONS FOR STATEMENT NUMBER 161 -----------------+
 | RECOMMENDATION O000002                                                    |
 |    Tablespace DSNDB04.EMP has a LOCKSIZE of ANY.  Lock                    |
 |    escalation may occur.  If concurrency is of utmost importance for      |
 |    applications referencing this tablespace then LOCKSIZE(PAGE) may       |
 |    be a better choice.                                                    |
 |                                                                          |
 |    When LOCKSIZE ANY is specified, the number of locks that any           |
 |    program can hold within a table space is limited by the value          |
 |    specified for LOCKS PER TABLE(SPACE) when DB2 was installed.           |
 |    When the number of page locks reaches the limit, a tablespace          |
 |    lock is acquired and all of the page locks are released.  When         |
 |    LOCKSIZE PAGE is specified, lock escalation will not occur.            |
 |                                                                          |
 | RECOMMENDATION O000004                                                    |
 |    Tablespace DSNDB04.EMP has a LOCKSIZE of ANY. The                      |
 |    !DB/EXPLAIN database shows no INSERT / UPDATE / DELETE statements       |
 |    referencing table TDDB44B.EMP.  If this table is                       |
 |    truly read only then a LOCKSIZE of TABLE or TABLESPACE may             |
 |    improve performance.                                                   |
 |                                                                          |
 | EXCEPTION X00009                                                          |
 |    Sequential Prefetch                                                    |
 |                                                                          |
 +--------------------------------------------------------------------------+
```

Panels (continued)

Format 8 of the EXPLAIN display illustrates plan table data in two-line format.

```
----------------------------- DB/EXPLAIN  DB2=D42B    ------ LINE 1 OF 30(F)
Cmd ===> FORMAT8                                         Scroll ===> PAGE
                                E X P L A I N
Cmds: DO (Menu)  GLOBAL (Menu)
-------------------------------------------------------------------------------
 PACKAGE=DSNHYCRD  COLLID=DSNHYCRD    CONTOKEN=155403E608555E10
 PRECOMPILE=1999/02/13 06:30:05.610000
 EXPLAINED=1999/12/09 13:35:09   DEGREE=1
 +-------------------------- ACCESS PATH SUMMARY --------------------------+
 | STMT QB  PLN MX EMJP AC I MT MJ P ACCESS JOIN  SRNSRC  SRN SRC     PFW   |
 |  NO. NO. NO. OP METR CS X CL CL M  DG ID DG ID  ID ID UJOGUJOG LCK FNO   |
 |  ----- --- --- -- ---- -- - -- -- - ------------ ------ -------- --- --- |
 | 1051   1   1  0 E0   I N  2  0     0  0  0  0   0  0 NNNNNNNN  IS  L      |
 |          TBL=SYSIBM.SYSTABLESPACE          NDX=SYSIBM.DSNDSX01            |
 |           TABNO=  1                STMT COST=       1,419.5*             |
 |                                   QUERY TYPE=SELECT                      |
 | 1051   1   2  0 E3      N  0  0     0  0  0   0  0  0 NNNNNNNN            |
 |                                                                         |
 |                                   QUERY TYPE=SELECT                      |
 | 1056   1   1  0 E0   I N  2  0     0  0  0   0  0  0 NNNNNNNN  IS  L      |
 |          TBL=SYSIBM.SYSCOLUMNS             NDX=SYSIBM.DSNDCX01            |
 |           TABNO=  1                STMT COST=       1,094.9*             |
 |                                   QUERY TYPE=SELECT                      |
 | 1056   1   2  0 E0      N  0  0     0  0  0   0  0  0 NNNNNNNN            |
 |                                   QUERY TYPE=SELECT                      |
 |  204   1   1  0 E0   I N  2  0     0  0  0  0   0  0 NNNNNNNN  IS         |
 |          TBL=SYSIBM.SYSTABLES              NDX=SYSIBM.DSNDTX01            |
 |           TABNO=  1                STMT COST=         52.8*              |
 |                                   QUERY TYPE=SELECT                      |
 +-------------------------------------------------------------------------+
 ***************************** BOTTOM OF LIST *******************************
```

Panels (continued)

Format 9 of the EXPLAIN display provides statement cost information. Fields on the Statement Cost Information panel are sorted by statement cost in descending order.

```
------------------------ DB/EXPLAIN  DB2=D31A -------------------- LINE1 OF 12
 CMD ===> FORMAT9                                       SCROLL ===> PAGE
                              E X P L A I N
   CMDS: DO (MENU) GLOBAL (MENU)
 ------------------------------------------------------------------------------
 PLAN=CRBDPLNR  DBRM=DSDDB2UP  CONTOKEN=1470006C10B79FB4
 PRECOMPILE=1999/02/23 02:42:08.610000
 EXPLAINED=1999/03/01 11:46:04   DEGREE=1
 +--------------------------- COST INFORMATION --------------------------+
 |   STMT                                                                |
 |   NO.  STATEMENT TYPE       STMT COST  SQLCODE                        |
 | ------ --------------- --------------- -------                        |
 |   373  SELECT                      7.6       0                        |
 +----------------------------------------------------------------------+

 PLAN=CRBDPLNR  DBRM=DSDSQL01  CONTOKEN=145CF65D033BF130
 PRECOMPILE=1998/10/24 23:12:43.950000
 EXPLAINED=1999/03/01 11:46:04   DEGREE=1
 +--------------------------- COST INFORMATION --------------------------+
 |   STMT                                                                |
 |   NO.  STATEMENT TYPE       STMT COST  SQLCODE                        |
 | ------ --------------- --------------- -------                        |
 |   227  SELECT                      0.3       0                        |
 +----------------------------------------------------------------------+
 ***************************** BOTTOM OF LIST ******************************
```

Fields and Associated Sorts and Filters

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
ACC DEG	2	Number of parallel I/O streams activated by a query Source: `PLAN_TABLE.ACCESS_DEGREE`	EADG
ACCESS INFO	1	Method of accessing the new table: **I** By an index **I1** One-fetch index scan **N** Index scan when predicate contains IN keyword **R** table space scan **MX** By a multiple index scan on the index named in ACCESSNAME **MI** By an intersection of multiple indexes **MU** By a union of multiple indexes **Blank** Not applicable to the current row Source: `PLAN_TABLE.ACCESSTYPE`	EACCS
ACCESS PATH	1, 6	Descriptive text on access path Source: `Derived`	
ACC PID	2	Identifier of the parallel group Source: `PLAN_TABLE.ACCESS_PGROUP_ID`	EAID
ACCS (ACCESS)	2	Method of accessing the new table: **I** By an index **I1** One-fetch index scan **N** Index scan when predicate contains IN keyword **R** table space scan **MX** By a multiple index scan on the index named in ACCESSNAME **MI** By an intersection of multiple indexes **MU** By a union of multiple indexes **Blank** Not applicable to the current row Source: `PLAN_TABLE.ACCESSTYPE`	EACCS
ACQUIRE	1, 4	When resources are acquired: **A** At allocation **U** At use Source: `SYSIBM.SYSPLAN.ACQUIRE`	
ALTERED	1, 3	Time when the latest ALTER TABLE statement was applied Source: `SYSIBM.SYSTABLES.ALTEREDTS`	

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
AUDIT	1, 3	Indicates status of the audit: **A** AUDIT All **C** AUDIT CHANGE **blank** AUDIT NONE, or the row describes a view or alias Source: `SYSIBM.SYSTABLES.AUDITING`	
AVERAGE SIZE	1, 4	Average size, measured in bytes, of the plan section processed at BIND time Source: `SYSIBM.SYSPLAN.AVGSIZE`	
AVSIZE	1, 4	Average size, measured in bytes, of the package section processed at BIND time Source: `SYSIBM.SYSPACKAGE.AVGSIZE`	
BIND DATE	1, 4	Date on which the plan was last bound, in the form YYYY/MM/DD Source: `SYSIBM.SYSPLAN.BINDDATE`	
BIND TIME	1, 4	Time the plan was last bound, in the form HH:MM:SS Source: `SYSIBM.SYSPLAN.BINDTIME`	
BOUND	1, 4	Timestamp indicating when the package was last bound Source: `SYSIBM.SYSPACKAGE.BINDTIME`	
BOUND BY	1, 4	Primary authorization ID of the binder of the plan Source: `SYSIBM.SYSPLAN.BOUNDBY`	
BPOOL (IX)	1, 3	Name of the buffer pool used for index Source: `SYSIBM.SYSINDEXES.BPOOL`	
BPOOL (TS)	1, 3	Name of the buffer pool used for the table space Source: `SYSIBM.SYSTABLESPACE.BPOOL`	
C H	9	Statement changed indicator **N** This is the original statement text **Y** The user modified this SQL statement text **A** The user added this SQL statement Source: `derived`	
CACHE SIZE	1, 4	Size, measured in bytes, of the cache to be acquired for the plan Source: `SYSIBM.SYSPLAN.CACHESIZE`	
CARD (IXP)	1, 3	Number of rows referred to by the index or partition Source: `SYSIBM.SYSINDEXPART.CARD`	
CARD (TBL)	1, 3	Number of rows in the table Source: `SYSIBM.SYSTABLES.CARD`	

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
CARD (TSTP)	1, 3	Number of rows in the table space or partition. Source: `SYSIBM.SYSTABLEPART.CARD`	
CARDP (TSTP)	1, 3	Total number of rows in the partition Source: `SYSIBM.SYSTABSTATS.CARD`	
Changed statement identifier	(Does not appear as field; however, can be filtered on.)	A value that identifies whether a user has changed the SQL text of a statement. **Y** User has changed the SQL statement text **N** The text of the statement is the original text. **A** This is a new SQL statement added by the user. Source: `derived`	ECHA
CHARSET	1, 4	Indicates whether the system CCSID for SBCS data was 290 (Katakana) when the program was precompiled: **K** Yes **A** No Source: `SYSIBM.SYSPACKAGE.CHARSET`	
CHECKFLAG (TBL)	1, 3	Flag indicating the following: **C** There are rows in the table that can violate referential constraints. **blank** The table contains no rows that violate referential constraints, or the row describes a view or alias. Source: `SYSIBM.SYSTABLES.CHECKFLAG`	
CHECKFLAG (TSTP)	1, 3	Flag indicating the following: **C** The table space partition is in CHECK PENDING mode and there are rows that can violate referential constraints. **blank** The table contains no rows that violate referential constraints, or the table space is not a partition. Source: `SYSIBM.SYSTABLEPART.CHECKFLAG`	
CHECKS (TBL)	1, 3	Number of check constraints defined on a table. The value in this field is 0 if there are no constraints, or if the row describes a view or alias. Source: `SYSIBM.SYSTABLES.CHECKS`	
CHILD	1, 3	Number of relationships in which the table is a parent; 0 means the row describes a view or alias. Source: `SYSIBM.SYSTABLES.CHILDREN`	

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
CKRID (TBL)	1, 3	**RID** RID of the first row of the table that can violate referential constraints **blank** Table is not in a check pending state. Source: **SYSIBM.SYSTABLES.CHECKRID**	
CKRID (TSTP)	1, 3	**RID** RID of the first row of the table that can violate referential constraints. **blank** Table or partition is not in a check pending state or the table space is not partitioned. Source: **SYSIBM.SYSTABLEPART.CHECKRID**	
CLOSERULE (IX)	1, 3	Indicates whether the datasets are candidates for being closed when the limit on the number of open datasets is reached: **N** No **Y** Yes Source: **SYSIBM.SYSINDEXES.CLOSERULE**	
CLOSERULE (TS)	1, 3	Indicates whether the datasets are candidates for being closed when the limit on the number of open datasets is reached: **Y** Yes **N** No Source: **SYSIBM.SYSTABLESPACE.CLOSERULE**	
CLUSTERED	1, 3	Indicates whether the table is actually clustered by the index: **N** No: 95% or fewer of the rows are in clustering order; or statistics were not gathered **Y** Yes: More than 95% of the rows are in clustering order Source: **SYSIBM.SYSINDEXES.CLUSTERED**	
CLUSTERING	1, 3	Indicates whether CLUSTER was specified when the index was created: **N** No **Y** Yes Source: **SYSIBM.SYSINDEXES.CLUSTERING**	

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
CLUSTERTYPE (TBL)	1, 3	Indicates whether the table can be dropped (that is, whether the table is defined with RESTRICT ON DROP). **blank** The table can be dropped **Y** The table cannot be dropped and any table space or database containing this table also cannot be dropped. Source: `SYSIBM.SYSTABLES.CLUSTERTYPE`	
CLUSTRATIO	1, 3	Percentage of rows that are in clustering order. This field is updateable. Source: `SYSIBM.SYSINDEXES.CLUSTERRATIO`	
CLUSTRATIO (IXP)	1, 3	Percentage of rows that are in clustering order. The field is updateable. Source: `SYSIBM.SYSINDEXSTATS.CLUSTERRATIO`	
COLCOUNT (TBL)	1, 3	Number of columns in the table or view Source: `SYSIBM.SYSTABLES.COLCOUNT`	
COLCOUNT (IX)	1, 3	Number of columns in the key Source: `SYSIBM.SYSINDEXES.COLCOUNT`	
COLLECTION	1, 4	Name of the package collection Source: `SYSIBM.SYSPACKAGE.COLLID`	ECOL
COLLECTION ID	1, 2	Name of the collection in which the package resides Source: `SYSIBM.SYSPACKAGE.COLLID`	ECOL
COMPRESS (TSTP)	1, 3	Indicates whether compression is defined for a table space or table space partition **blank** Compression is not defined. **Y** Compression is defined. Source: `SYSIBM.SYSTABLEPART.COMPRESS`	
COMMA	1, 4	Indicates the decimal point representation for SQL statements in the package: **N** Period **Y** Comma Source: `SYSIBM.SYSPACKAGE.COMMA`	
CONTOKEN	1, 3, 4, 5	Consistency token for the package Source: `SYSIBM.SYSPACKAGE.CONTOKEN`	
CORR=	8	Correlation name of a table or view that is specified in the statement. If no correlation name is specified or if the DB2 subsystem is not at least Version 4, the field is blank. Source: `PLAN_TABLE.CORRELATION_NAME`	ECORR

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
Cost field discrepancy identifier	(Does not appear as field; however, can be filtered on.)	A value that identifies whether the statement cost may be in error as the result of a column being compared to a host variable or literal of a different type or length. Value may be: **Y** Statement cost may be in error **N** Statement cost estimate is approximately equivalent to the cost that would have been determined if the statement were bound in a plan or package. Source: `derived`	ETCMI
CREATEBY (IX)	1, 3	Primary authorization ID of the user who created the index Source: `SYSIBM.SYSINDEXES.CREATEDBY`	EICR
CREATEBY (TBL)	1, 3	Primary authorization ID of the user who created the table, view, or alias Source: `SYSIBM.SYSTABLES.CREATEDBY`	ETCR
CREATEBY (TS)	1, 3	Primary authorization ID of the user who created the table space Source: `SYSIBM.SYSTABLESPACE.CREATEDBY`	
CREATED	1, 3	Time when the CREATE statement was executed for the table, view, or alias Source: `SYSIBM.SYSTABLES.CREATEDTS`	
CREATOR (Packages)	1, 4	Authorization ID of the package creator Source: `SYSIBM.SYSPACKAGE.CREATOR`	
CREATOR (Plans)	1, 4	Authorization ID of the owner of the application plan Source: `SYSIBM.SYSPLAN.CREATOR`	
CREATOR (TS)	1, 3	Authorization ID of the owner of the table space Source: `SYSIBM.SYSTABLESPACE.CREATOR`	
DATACAPTURE (TBL)	1, 3	Records the value of the DATACAPTURE option for the table **blank** Data capture not specified. **Y** Data capture specified. Source: `SYSIBM.SYSTABLES.DATACAPTURE`	
DBID	1, 3	Internal identifier of the database which contains the table space Source: `SYSIBM.SYSTABLESPACE.DBID`	
DBRM/PACKAGE NAME	1, 2, 3, 4, 5	Name of the package or DBRM Source: `SYSIBM.SYSSTMT or SYSPACKSTMT`	EDBRM

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
DEC31	1, 4	Indicates whether DEC31 was in effect when the program was precompiled: **blank** No **Y** Yes Source: `SYSIBM.SYSPACKAGE.DEC31`	
DEGREE	1, 2, 3, 4, 5	DEGREE option used for the plan or package at bind time Source: `SYSIBM.SYSPACKAGE.DEGREE` `SYSIBM.SYSPLAN.DEGREE`	
DEGREE (on EXPLAIN header)	1, 2, 3, 4, 5	Value of CURRENT DEGREE at the time the plan, package, DBRM, or SQL statement was EXPLAINed Source: `SYSIBM.SYSPACKAGE.DEGREE` `SYSIBM.SYSPLAN.DEGREE`	
DISCONNECT	1, 4	DISCONNECT option used when the plan was bound Source: `SYSIBM.SYSPLAN.DISCONNECT`	
DEFERPREP	1, I	Indicates the CURRENTDATA option when the package was bound or rebound: **A** Data currency required for all cursors. Inhibit blocking for all cursors. This value can only be generated by a non-DB2 application requestor. **B** Data currency is not required for ambiguous cursors. Allow blocking for ambiguous cursors. **C** Data currency is required for ambiguous cursors. Inhibit blocking for ambiguous cursors. **blank** Blocking protocol not recorded because the package was created before the CURRENTDATA option was available. Source: `SYSIBM.SYSPACKAGE.DEFERPREP`	
DEFERPREPARE (Packages)	1, I	Indicates whether the package was bound with the DEFER(PREPARE) option. Valid values include: **Y** Yes **N** No **Blank** The option is inherited from the PLAN Source: `SYSPACKAGE.DEFERPREPARE`	

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
DEFERPREPARE(Plans)	1, I	Indicates whether the package was bound with the DEFER(PREPARE) option. Valid values include: **Y** Yes **N** No Source: `SYSPLAN.DEFERPREPARE`	
DSETPASS (IX)	1, 3	Password for the datasets of the index Source: `SYSIBM.SYSINDEXES.DSETPASS`	
DSETPASS (TS)	1, 3	Password for the datasets of the table space Source: `SYSIBM.SYSTABLESPACE.DSETPASS`	
DYNAMICRULES= (Packages)	1, 4	Indicates whether run time or bind time rules will apply to a dynamic SQL statement at run time **B** Dynamic SQL statements are handled like static SQL statements at run time. **R** Dynamic SQL statements are handled like dynamic SQL statements at run time. **blank** Handling for dynamic SQL statements is not specified if the DB2 subsystem is not at least Version 4. Source: `SYSIBM.SYSPLAN.DYNAMICRULES`	
DYNAMICRULES= (Plans)	1, 4	Indicates whether run time or bind time rules will apply to a dynamic SQL statement at run time **B** Dynamic SQL statements are handled like static SQL statements at run time. **R** Dynamic SQL statements are handled like dynamic SQL statements at run time. **blank** Handling for dynamic SQL statements is not specified if the DB2 subsystem is not at least Version 4. Source: `SYSIBM.SYSPLAN.DYNAMICRULES`	
E M	2, 8	EXPLAIN method **E** EXPLAIN results are from a !DB/EXPLAIN EXPLAIN **P** EXPLAIN results are from a PLAN_TABLE extract **B** EXPLAIN results are from a BIND COMPARE ***** An SQL error occurred during the EXPLAIN Source: `derived`	EEXME
EDPROC	1, 3	Name of the edit procedure Source: `SYSIBM.SYSTABLES.EDPROC`	

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
ERASERULE (IX)	1, 3	Whether the datasets are to be erased when dropped (not applicable for partitioned indexes): **Y** Yes **N** No Source: `SYSIBM.SYSINDEXES.ERASERULE`	
ERASERULE (TS)	1, 3	Whether the datasets are to be erased when dropped (not applicable for partitioned table spaces): **Y** Erase **N** No Source: `SYSIBM.SYSTABLESPACE.ERASERULE`	
EXPLAIN (Packages)	1, 4	EXPLAIN at BIND? **Y** Yes **N** No Source: `SYSIBM.SYSPACKAGE.EXPLAIN`	
EXPLAIN (Plans)	1, 4	EXPLAIN at BIND? **Y** Yes **N** No Source: `SYSIBM.SYSPLAN.EXPLAIN`	
EXPLAIN TIMESTAMP	1, 2, 4	Time at which the EXPLAIN statement was processed Source: `PLAN_TABLE.TIMESTAMP`	
EXPREDICATE	I, 4	Indicates the CURRENTDATA option when the plan was bound or rebound. **B** Data currency is not required for ambiguous cursors. Allow blocking for ambiguous cursors. **C** Data currency is required for ambiguous cursors. Inhibit blocking for ambiguous cursors. **N** Blocking is inhibited for ambiguous cursors but the plan was created before the CURRENTDATA option was available. Source: `SYSIBM.SYSPLAN.EXPREDICATE`	
FARINDREF	1, 3	Number of rows that have been relocated far from their original page Source: `SYSIBM.SYSTABLEPART.FARINDREF`	
FAROFFPOS	1, 3	Number of referred to rows that are far from optimal position as the result of an insert into a full page Source: `SYSIBM.SYSINDEXPART.FAROFFPOS`	

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
FIRSTKEY	1, 3	Number of distinct values of the first key column Source: `SYSIBM.SYSINDEXES.FIRSTKEYCARD`	
FIRSTKEY (IXP)	1, 3	Number of distinct values of the first key column Source: `SYSIBM.SYSINDEXSTATS.FIRSTKEYCARD`	
FN (Function)	1, 2	A character that indicates when an SQL column function was evaluated: **R** At data retrieval time **S** At sort time **Blank** To be decided at run time Source: `PLAN_TABLE.COLUMN_FN_EVAL`	ECOLF
FREEPAGE (IXP)	1, 3	Number of pages loaded before a page is left as free space Source: `SYSIBM.SYSINDEXPART.FREEPAGE`	
FREEPAGE (TSTP)	1, 3	Number of pages loaded before a page is left as free space Source: `SYSIBM.SYSTABLEPART.FREEPAGE`	
FROM clause table identifier	(Does not appear as field; however, can be filtered on.)	A number that identifies the FROM Clause table referred to for the row. Source: `PLAN_TABLE.TABNO`	ETBNO
FULLKEY	1, 3	Number of distinct values of the key column Source: `SYSIBM.SYSINDEXES.FULLKEYCARD`	
FULLKEY (IXP)	1, 3	Number of distinct values of the key column Source: `SYSIBM.SYSINDEXSTATS.FULLKEYCARD`	
GBPCACHE (IXP)	1, 3	The group buffer pool cache option for the index or index space **A** Both changed and unchanged pages are cached in the group buffer pool **blank** Only changed pages are cached in the group buffer pool, or the DB2 subsystem is not at least Version 4. Source: `SYSIBM.SYSINDEXPART.GBPCACHE`	

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
GBPCACHE (TSTP)	1, 3	The group buffer pool cache option for the table or table space **A** Both changed and unchanged pages are cached in the group buffer pool **blank** Only changed pages are cached in the group buffer pool, or the DB2 subsystem is not at least Version 4. Source: `SYSIBM.SYSTABLEPART.GBPCACHE`	
HOSTLANG	1, 4	Indicates the host language: **B** Assembler Language **C** COBOL **D** C **F** FORTRAN **P** PL/I **2** VS COBOL II Source: `SYSIBM.SYSPACKAGE.HOSTLANG`	
GROUP MEMBER=	1, 4	DB2 data sharing member name of the DB2 subsystem that performed the last BIND Source: `SYSIBM.SYSPACKAGE.GROUP_MEMBER`	EGRP
IMPLICIT	1, 3	Indicates whether the table space was created implicitly: **Y** Yes **N** No Source: `SYSIBM.SYSTABLESPACE.IMPLICIT`	
INDEXNAME	1, 8	For ACCESSTYPE I, I1, N, or MX, the name of the index; otherwise blank Source: `PLAN_TABLE.ACCESSNAME`	EIX
INDEXSPACE	1, 3	Name of index space Source: `SYSIBM.SYSINDEXES.INDEXSPACE`	
INDEXTYPE	1, 3	The type of the index **blank** Index is type 1 **2** Index is type 2 Source: `SYSIBM.SYSINDEXES.INDEXTYPE`	
ISOBID	1, 3	Internal identifier for the set descriptor of the index page Source: `SYSIBM.SYSINDEXES.ISOBID`	

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
ISOLATION (Packages)	1, 4	Isolation level: **R** RR (Repeatable Read) **S** CS (Cursor Stability) **T** RS (Read Stability) **U** UR (Uncommitted Read) Source: `SYSIBM.SYSPACKAGE.ISOLATION`	
ISOLATION (Plans)	1, 4	Isolation Level: **R** RR (Repeatable Read) **S** CS (Cursor Stability) Source: `SYSIBM.SYSPLAN.ISOLATION`	
IX (EPTB, Plan Table Data)	1, 2	Indicates whether access to an index alone is enough to satisfy the query: **Y** Yes **N** No Source: `PLAN_TABLE.INDEXONLY`	ENDXO
IX (IX, Indexes)	1	Index name Source: `SYSIBM.SYSINDEXES.CREATOR` Source: `SYSIBM.SYSINDEXES.NAME`	
IXCREATOR	1, 3	Authorization ID of the owner of the partitioned index Source: `SYSIBM.SYSTABLEPART.IXCREATOR`	
IXNAME	1, 3	Name of the partitioned index Source: `SYSIBM.SYSTABLEPART.IXNAME`	
IXP	1, 3	Index name Source: `SYSIBM.SYSINDEXPART.CREATOR` Source: `SYSIBM.SYSINDEXPART.IXNAME`	
J T=	1, 8	Join type Source: `SYSIBM.PLAN_TABLE.JOIN_TYPE`	EJTYP
JOI DEG	2	Number of parallel I/O streams used to join tables Source: `PLAN_TABLE.JOIN_DEGREE`	EJDG
JOI PID	2	Identifier of the parallel group used to join tables Source: `PLAN_TABLE.JOIN_PGROUP_ID`	EJID

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
KEEPDYNAMIC (Packages)	2	Indicates the KEEPDYNAMIC option when the package was bound or rebound. Valid values include: **Y** Keep dynamic SQL past commit or rollback **N** Destroy dynamic SQL at commit or rollback Source: `SYSPACKAGE.KEEPDYNAMIC`	
KEEPDYNAMIC (Plans)	2	Indicates the KEEPDYNAMIC option when the package was bound or rebound. Valid values include: **Y** Keep dynamic SQL past commit or rollback **N** Destroy dynamic SQL at commit or rollback Source: `SYSPLAN.KEEPDYNAMIC`	
KEYCOLUMNS	1, 3	Number of columns in the table's primary key Source: `SYSIBM.SYSTABLES.KEYCOLUMNS`	
KEYCNT (IXP)	1, 3	Number of rows in the partition Source: `SYSIBM.SYSINDEXSTATS.KEYCOUNT`	
KEYOBID	1, 3	Internal DB2 identifier of the index that enforces uniqueness of the table's primary key Source: `SYSIBM.SYSTABLES.KEYOBID`	
LCK (LOCK INFO)	1, 2	Lock mode of the table space that contains the new table: **IS** Intent Share **IX** Intent Exclusive **S** Share **X** Exclusive **SIX** Share with intent exclusive **U** Update Source: `PLAN_TABLE.TSLOCKMODE`	ELCKM
LEAFDIST	1, 3	100 times the average number of pages between successive leaf pages of the index Source: `SYSIBM.SYSINDEXPART.LEAFDIST`	
LIBRARY	1, 4	Name of the PDS in which the package's DBRM is a member or source of the package Source: `SYSIBM.SYSPACKAGE.PDSNAME`	
LOCATION (Packages)	1, 2, 4	Location name Source: `SYSIBM.SYSPACKAGE.LOCATION`	

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
LOCATION (TBL)	1, 3	Location name of the table for an alias defined on a remote object or blank for local Source: `SYSIBM.SYSTABLES.LOCATION`	
LOCKMAX (TS)	1, 3	Maximum number of locks per user to acquire for the table or table space before escalating to the next locking level Source: `SYSIBM.SYSTABLESPACE.LOCKMAX`	
LOCKRULE	1, 3	Lock size of the table space: **A** Any **P** Page **S** table space **T** Table Source: `SYSIBM.SYSTABLESPACE.LOCKRULE`	
ME (Method)	1, 2	Number indicating the join method used for the step described by the row: **0** First table accessed **1** Nested loop join **2** Merge scan join **3** Sorts **4** Hybrid join **E** SQL error occurred on an SQL statement Source: `PLAN_TABLE.METHOD`	EMETH EERR EERR=Y Display only statements with errors. EERR=N Display only statements with no errors.
MIXED	1, 4	Indicates if mixed data was in effect when the program was precompiled: **N** No **Y** Yes Source: `SYSIBM.SYSPACKAGE.MIXED`	
MJCL	1, 2, 8	The number of columns being joined during a merge scan join. If the join method is not a merge scan or if DB2 is not at least Version 4, the value of this field is 0. Source: `PLAN_TABLE.MERGE_JOIN_COLS`	EMJCO
MTCL	1, 2, 8	For ACCESSTYPE I, I1, N, or MX, the number of index keys used in an index scan; otherwise 0 Source: `PLAN_TABLE.MATCHCOLS`	EMATC
MXOP	1, 2	Number indicating the sequence of steps in a multiple index operation Source: `PLAN_TABLE.MIXOPSEQ`	EMXOP
NACTIVE	1, 3	Number of active pages in the table space Source: `SYSIBM.SYSTABLESPACE.NACTIVE`	

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
NACTIVE (TSTP)	1, 3	Number of active pages in the partition Source: **SYSIBM.SYSTABSTATS.NACTIVE**	
NDX=	1, 8	Name of index. Displayed only if the source is nonblank Source: **PLAN_TABLE.ACCESSCREATOR** Source: **PLAN_TABLE.ACCESSNAME**	
NEARINDREF	1, 3	Number of rows that have been relocated near their original page Source: **SYSIBM.SYSTABLEPART.NEARINDREF**	
NEAROFFPOS	1, 3	Number of referred to rows near, but not at, optimal position as the result of an insert into a full page Source: **SYSIBM.SYSINDEXPART.NEAROFFPOS**	
NLEAF	1, 3	Number of active leaf pages in the index Source: **SYSIBM.SYSINDEXES.NLEAF**	
NLEAF (IXP)	1, 3	Number of active leaf pages in the index partition Source: **SYSIBM.SYSINDEXSTATS.NLEAF**	
NLEVELS (IXP)	1, 3	Number of active levels in the partition index tree Source: **SYSIBM.SYSINDEXSTATS.NLEVELS**	
NPAGES	1, 3	Total number of pages on which rows of the table appear Source: **SYSIBM.SYSTABLES.NPAGES**	
NPAGES (TSTP)	1, 3	Number of pages in the partition on which rows of the table appear Source: **SYSIBM.SYSTABSTATS.NPAGES**	
NTABLES	1, 3	Number of tables defined in the table space Source: **SYSIBM.SYSTABLESPACE.NTABLES**	
OBID (IX)	1, 3	Internal identifier of the set descriptor of the index fan Source: **SYSIBM.SYSINDEXES.OBID**	
OBID (TBL)	1, 3	Internal identifier of the table Source: **SYSIBM.SYSTABLES.OBID**	
OBID (TS)	1, 3	Internal identifier of the file descriptor for the table space Source: **SYSIBM.SYSTABLESPACE.OBID**	
OPERATIVE (Packages)	1, 4	Indicates whether the package can be allocated: **Y** Yes **N** No. An explicit BIND or REBIND is required first Source: **SYSIBM.SYSPACKAGE.OPERATIVE**	

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
OPERATIVE (Plans)	1, 4	Indicates whether the plan is operative: **Y** Yes **N** No. An explicit BIND or REBIND is required first Source: **SYSIBM.SYSPLAN.OPERATIVE**	
OWNER	1, 4	Authorization ID of the package owner Source: **SYSIBM.SYSPACKAGE.OWNER**	
P M	1, 2, 8	The kind of parallelism that is used at bind time (if any). At execution time, I/O and CPU parallelism can be converted to sequential processing. However, I/O parallelism cannot be converted to CPU parallelism and vice versa. **I** Query I/O parallelism **C** Query CPU parallelism **blank** No parallelism Source: **PLAN_TABLE.PARALLELISM_MODE**	EPMOD
P R=	1, 8	Page range Source: **SYSIBM.PLAN_TABLE.PAGE_RANGE**	EPRAN
PACKAGE	1, 4	Package ID Source: **SYSIBM.SYSPACKAGE.NAME**	
PAGESAVE (TSTP)	1, 3	Percentage of pages saved in the table space or partition as the result of using compression Source: **SYSIBM.SYSTABLEPART.PAGESAVE**	
PARNT	1, 3	Number of relationships in which the table is a dependent; 0 means the row describes a view or alias. Source: **SYSIBM.SYSTABLES.PARENTS**	
PARTITION (IXP)	1, 3	Partition number; 0 if index is not partitioned Source: **SYSIBM.SYSINDEXPART.PARTITION**	
PARTITION (TSTP)	1, 3	Partition number; 0 if table space is not partitioned. Source: **SYSIBM.SYSTABLEPART.PARTITION**	
PARTITIONS	1, 3	Number of parititions of the table space; 0 if the table space is not partitioned Source: **SYSIBM.SYSTABLESPACE.PARTITIONS**	
PCTFREE (IXP)	1, 3	Percentage of each subpage or nonleaf page that is left as free space Source: **SYSIBM.SYSINDEXPART.PCTFREE**	
PCTFREE (TSTP)	1, 3	Percentage of each page left as free space Source: **SYSIBM.SYSTABLEPART.PCTFREE**	

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
PCTROWCOMP (TBL)	1, 3	Percentage of rows compressed within the total number of active rows of the table Source: `SYSIBM.SYSTABLES.PCTROWCOMP`	
PCTROWCOMP (TSTP)	1, 3	Percentage of rows compressed within the total number of active rows of the partition Source: `SYSIBM.SYSTABSTATS.PCTROWCOMP`	
PCTPAGES (TSTP)	1, 3	Percentage of total active pages in the partition that contain rows of the table Source: `SYSIBM.SYSTABSTATS.PCTPAGES`	
PERCACT	1, 3	Percentage of space occupied by rows of data from active tables Source: `SYSIBM.SYSTABLEPART.PERCACTIVE`	
PERCDROP	1, 3	Percentage of space occupied by rows of dropped tables; 0 for segmented table spaces Source: `SYSIBM.SYSTABLEPART.PERCDROP`	
PF (Prefetch)	1, 2	Character indicating whether data pages were read in advance by PREFETCH: **S** pure sequential PREFETCH **L** PREFETCH through a page list **blank** unknown or no prefetch Source: `PLAN_TABLE.PREFETCH`	EPREF
PGSIZE (IX)	1, 3	Size of subpages in the index Source: `SYSIBM.SYSINDEXES.PGSIZE`	
PGSIZE (TS)	1, 3	Size, in kilobytes, of pages in the table spaces Source: `SYSIBM.SYSTABLESPACE.PGSIZE`	
PKSIZE	1, 4	Size, in bytes, of the base section of the package Source: `SYSIBM.SYSPACKAGE.PKSIZE`	
PLAN	1, 2, 3, 4, 5	Name of the application plan. The list is in alphabetical order. Source: `SYSIBM.SYSPLAN.NAME`	EPLN
PLAN FREED?	1, 4	Has plan been FREEd? **Y** Yes **N** No Source: `Derived`	
PLAN SIZE	1, 4	Size measured in bytes of the base section of the plan Source: `SYSIBM.SYSPLAN.PLSIZE`	

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
PLENTRIES	1, 4	Number of package list entries for the plan. This number displays as a negative number if there are rows for the plan but the plan was bound in a prior release after fall back. Source: `SYSIBM.SYSPLAN.PLENTRIES`	
PLN NO.	1, 2	Number identifying the step in which the query indicated in QBLOCKNO was processed Source: `PLAN_TABLE.PLANNO`	EPLNO
PQTY (IXP)	1, 3	Primary space allocation in units of 4K storage blocks; 0 if storage group is not used Source: `SYSIBM.SYSINDEXPART.PQTY`	
PQTY (TSTP)	1, 3	Primary space allocation in units of 4K storage blocks; 0 if a storage group is not used Source: `SYSIBM.SYSTABLEPART.PQTY`	
PRECOMPILE TIME	1, 3, 4, 5	Date and time the application program was precompiled Source: `SYSIBM.SYSPACKAGE.PCTIMESTAMP`	
PSID	1, 3	Internal identifier of the set descriptor for the table space page Source: `SYSIBM.SYSTABLESPACE.PSID`	
QBNO (Query Block Number)	1, 2	Number identifying the query or subquery for the row Source: `PLAN_TABLE.QBLOCKNO`	EQBNO
QUALIFIER (Packages)	1, 4	Implicit qualifier for the unqualified table, view, index, and alias names in the static SQL statements of the package Source: `SYSIBM.SYSPACKAGE.QUALIFIER`	
QUALIFIER (Plans)	1, 4	Implicit qualifier for the unqualified table, view, index, and alias names in the static SQL statements of the plan Source: `SYSIBM.SYSPLAN.QUALIFIER`	

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
QUERY TEXT	1, 4	For each SQL query block, identifies the type of SQL operation performed. For the outermost query, it identifies statement type Valid values include: **SELECT** Select operation **INSERT** Insert operation **UPDATE** Update operation **SELUPD** Select with FOR UPDATE OF operation **DELCUR** Delete WHERE CURRENT OF CURSOR operation **UPDCUR** Update WHERE CURRENT OF CURSOR operation **CORSUB** Correlated subquery operation **NCOSUB** Non-correlated subquery operation Source: `PLAN_TABLE.QBLOCK_TYPE`	
QUOTE	1, 4	SQL string delimiter for the SQL statements in the package: **N** Apostrophe **Y** Quotation mark Source: `SYSIBM.SYSPACKAGE.QUOTE`	
RBA1 (TBL)	1, 3	Log RBA when the table was created Source: `SYSIBM.SYSTABLES.RBA2`	
RBA2 (TBL)	1, 3	Log RBA when the table was last altered. If the table has not been altered, RBA1=RBA2. Source: `SYSIBM.SYSTABLES.RBA2`	
RECLEN	1, 3	Maximum length of any record in the table Source: `SYSIBM.SYSTABLES.RECLENGTH`	
RELEASE (Packages)	1, 4	Indicates when resources are released: **C** At commit **D** At deallocation Source: `SYSIBM.SYSPACKAGE.RELEASE`	
RELEASE (Plans)	1, 4	Indicates when resources are released: **C** At commit **D** At deallocation Source: `SYSIBM.SYSPLAN.RELEASE`	
REMOTE	1, 4	Indicates the source of the package: **C** Package was created by BIND COPY **N** Package was locally bound by a DBRM **Y** Package was bound from a remote location Source: `SYSIBM.SYSPACKAGE.REMOTE`	

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
REOPT(VAR)(Packages)	1, 4	Indicates the REOPT option when the package was bound or rebound. **Y** Determines access path at execution time for SQL statements with variable values **N** Determines access path at bind time Source: `SYSPACKAGE.REOPTVAR`	
REOPT(VAR)(Plans)	1, 4	Indicates the REOPT option when the package was bound or rebound. **Y** Determines access path at execution time for SQL statements with variable values **N** Determines access path at bind time Source: `SYSPLAN.REOPTVAR`	
SEGSIZE	1, 3	Number of pages in each segment of a segmented table space Source: `SYSIBM.SYSTABLESPACE.SEGSIZE`	
SERVER	1, 4	Location name specified with the CURRENTSERVER option when the plan was last bound; blank if none was specified Source: `SYSIBM.SYSPLAN.CURRENTSERVER`	
SPACE (IX)	1, 3	Number of kilobytes of DASD storage allocated to the index, as determined by the last execution of STOSPACE utility Source: `SYSIBM.SYSINDEXES.SPACE`	
SPACE (IXP)	1, 3	Number of kilobytes of DASD storage allocated to the partitioned index as determined by the last execution of the STOSPACE utility Source: `SYSIBM.SYSINDEXPART.SPACE`	
SPACE (TS)	1, 3	Number of kilobytes of DASD storage allocated to the table space as determined by the last execution of the STOSPACE utility Source: `SYSIBM.SYSTABLESPACE.SPACE`	
SPACE (TSTP)	1, 3	Number of kilobytes of DASD storage allocated to the partitioned table space as determined by the last execution of the STOSPACE utility Source: `SYSIBM.SYSTABLEPART.SPACE`	
SQL TEXT	5	SQL text of the statement Source: `SYSIBM.SYSSTMT.TEXT` Source: `SYSIBM.SYSPACKSTMT.STMT`	
SQLCODE/ SQLSTATE	9	Contains either the SQLCODE or the SQLSTATE depending on the value you have specified on the EXPLAIN/SQL Defaults Housekeeping panel (KTEPHOMI).	

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
SQLERR	1, 4	Indicates the SQLERROR option on the most recent BIND: **C** Option was CONTINUE **N** Option was NOPACKAGE Source: `SYSIBM.SYSPACKAGE.SQLERROR`	
SQLRULES	2	The SQLRULES option used when the Plan was bound Source: `SYSIBM.SYSPLAN.SQLRULES`	
SQTY (IXP)	1, 3	Secondary space allocation in units of 4K storage blocks; 0 if storage group is not used Source: `SYSIBM.SYSINDEXPART.SQTY`	
SQTY (TSTP)	1, 3	Secondary space allocation in units of 4K storage blocks; 0 if a storage group is not used Source: `SYSIBM.SYSTABLEPART.SQTY`	
SRC G (Sort Composite Table - Group by)	1, 2	Indicates whether a sort is performed due to a group by: **Y** Yes **N** No Source: `PLAN_TABLE.SORTC_GROUPBY`	ESRCG
SRC ID	1, 2, 8	Parallel group identifier for the parallel sort of the composite table; 0 if not applicable Source: `PLAN_TABLE.SORTC_PGROUP_ID`	ESCID
SRC J (Sort Composite Table - Join)	1, 2	Indicates whether a sort is performed on the composite table to remove duplicate rows due to join method 2 or 4: **Y** Yes **N** No Source: `PLAN_TABLE.SORTC_JOIN`	ESRCJ
SRC O (Sort Composite Table - Order by)	1, 2	Indicates whether a sort is performed due to order by or quantified predicate: **Y** Yes **N** No Source: `PLAN_TABLE.SORTC_ORDERBY`	ESRCO
SRC U (Sort Composite Table - Unique)	1, 2	Indicates whether a sort is performed on the composite table to remove duplicate rows: **Y** Yes **N** No Source: `PLAN_TABLE.SORTC_UNIQ`	ESRCU

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
SRN G (Sort New Table - Group by)	1, 2	Indicates whether a sort is performed due to a group by clause: **Y** Yes **N** No Source: `PLAN_TABLE.SORTC_GROUPBY`	ESRNG
SRN ID	1, 2, 8	Parallel group identifier for the parallel sort of a new table; 0 if not applicable Source: `PLAN_TABLE.SORTN_PGROUP_ID`	ESNID
SRN J (Sort New Table - Join)	1, 2	Indicates whether a sort is performed on the new table if join method is 2 or 4: **Y** Yes **N** No Source: `PLAN_TABLE.SORTC_JOIN`	ESRNJ
SRN O (Sort New Table - Order by)	1, 2	Indicates whether a sort is performed on a new table due to an order by clause: **Y** Yes **N** No Source: `PLAN_TABLE.SORTC_ORDERBY`	ESRNO
SRN U (Sort New Table - Unique)	1, 2	Indicates whether a sort is performed on the new table to remove duplicate rows: **Y** Yes **N** No Source: `PLAN_TABLE.SORTC_UNIQ`	ESRNU
STATEMENT COST	1, 6, 8, 9	Statement cost. If the statement cost field is suffixed with an asterisk, it indicates that the statement cost may be in error as the result of a column being compared to a host variable or literal of a different type of length. You can filter for this condition using filter ETCMI. For an explanation of filter ETCMI, see the information provided under *cost field discrepancy identifier* earlier in this list of fields. Source: `Derived`	ETCST
STATEMENT TYPE	9	Statement type Source: `Derived`	

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
STATUS (TBL)	1, 3	Status of the table definition: **I** The table's definition is incomplete because it lacks a primary index **X** Table has a primary index **blank** Table has no primary key, or is a catalog table, or the row describes a view or alias Source: `SYSIBM.SYSTABLES.STATUS`	
STATUS (TS)	1, 3	Availability status of the table space: **A** Available **C** Incomplete because no partitioned index has been created **P** Check Pending **S** Check Pending with the scope less than the entire table space **T** Incomplete because no table has been created Source: `SYSIBM.SYSTABLESPACE.STATUS`	
STATSTS (IX)	1, 3	Date and time when the last invocation of RUNSTATS updated the statistics Source: `SYSIBM.SYSINDEXES.STATSTIME`	
STATSTS (IXP)	1, 3	Date and time when the last invocation of RUNSTATS updated the statistics Source: `SYSIBM.SYSINDEXPART.STATSTIME`	
STATSTS (TBL)	1, 3	Date and time when the last invocation of RUNSTATS updated the statistics Source: `SYSIBM.SYSTABLES.STATSTIME`	
STATSTS (TS)	1, 3	Date and time when the last invocation of RUNSTATS updated the statistics Source: `SYSIBM.SYSTABLESPACE.STATSTIME`	
STATSTS (TSTP)	1, 3	Date and time when the last invocation of RUNSTATS updated the statistics Source: `SYSIBM.SYSTABLEPART.STATSTIME`	
STATSTSP (IXP)	1, 3	Date and time when the last invocation of RUNSTATS updated the statistics Source: `SYSIBM.SYSINDEXSTATS.STATSTIME`	
STATSTSP (TSTP)	1, 3	Date and time when the last invocation of RUNSTATS updated the statistics Source: `SYSIBM.SYSTABLESTATS.STATSTIME`	
STMT COST	1, 6, 8, 9	Statement cost Source: `Derived`	ETCST
STMT NO	2, 9	Statement number Source: `SYSIBM.SYSSTMT.STMTNO` Source: `SYSIBM.SYSPACKSTMT.STMTNO`	EORNO EQYNO

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
STORNAME (IXP)	1, 3	Name of storage group or ICF catalog used for space allocation Source: **SYSIBM.SYSINDEXPART.STORNAME**	
STORNAME (TSTP)	1, 3	Name of storage group used for allocation; blank if STORTYPE = E Source: **SYSIBM.SYSTABLEPART.STORNAME**	
STORTYPE (IXP)	1, 3	Type of storage allocation: **E** Explicit and STORNAME names an ICF catalog **I** Implicit and STORNAME names a storage group Source: **SYSIBM.SYSINDEXPART.STORTYPE**	
STORTYPE (TSTP)	1, 3	Type of storage allocation: **E** Explicit (storage group is not used) **I** Implicit (storage group used) Source: **SYSIBM.SYSTABLEPART.STORTYPE**	
SUBPAG=	1, 3	Number of subpages in the index Source: **SYSIBM.SYSINDEXES.PGSIZE.**	
SYSENTRIES (Packages)	1, 4	Number of enabled or disabled entries for this package in SYSIBM.SYSPKSYSTEM Source: **SYSIBM.SYSPACKAGE.SYSENTRIES**	
SYSENTRIES (Plans)	1, 4	Number of connections (rows in SYSIBM.SYSPLSYSTEM) Source: **SYSIBM.SYSPLAN.SYSENTRIES**	
TABNO=	8	Position of the FROM clause table referred to for the row. Source: **SYSIBM.PLAN_TABLE.TABNO**	
TBCREATR	1, 3	For an alias, the authorization ID of the owner of the referred table or view; otherwise, blank Source: **SYSIBM.SYSTABLES.TBCREATOR**	
TBL	1, 3	Name of table Source: **SYSIBM.SYSTABLES.CREATOR** Source: **SYSIBM.SYSTABLES.NAME** Source: **PLAN_TABLE.CREATOR** Source: **PLAN_TABLE.TNAME**	ETBL
TBL=	1, 8	Name of table; displayed only if the source is nonblank Source: **PLAN_TABLE.CREATOR** Source: **PLAN_TABLE.TNAME**	

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
TBNAME	1, 3	For an alias, the name of the referred table or view; otherwise, blank Source: `SYSIBM.SYSTABLES.TBNAME`	
TS	1, 3	Name of table space Source: `SYSIBM.SYSTABLESPACE.DBNAME` Source: `SYSIBM.SYSTABLESPACE.NAME`	
TSTP	1, 3	Partitioned table space name Source: `SYSIBM.SYSTABLEPART.DBNAME` Source: `SYSIBM.SYSTABLEPART.TSNAME`	
TYPE	1, 3	Type of object: **A** Alias **T** Table **V** View Source: `SYSIBM.SYSTABLES.TYPE`	
UNIQUE	1, 3	Indicates whether the index is unique: **D** No (Duplicates are allowed) **U** Yes **P** Primary key (Unique) Source: `SYSIBM.SYSINDEXES.UNIQUERULE`	
VALID (Packages)	1, 4	Indicates whether the package is valid: **Y** Yes **N** No **A** A table has been altered but package is still valid **H** A table has been altered, but package is still valid if using DB2 Version 5.1 or greater Source: `SYSIBM.SYSPACKAGE.VALID`	
VALID (Plans)	1, 4	Indicates whether the plan is valid: **Y** Yes **N** No **A** Table or table space altered--no rebinding needed **H** A table has been altered, but plan is still valid if using DB2 Version 5.1 or greater Source: `SYSIBM.SYSPLAN.VALID`	

FIELD	ON FORMAT...	DESCRIPTION	FILTERS
VALIDATE (Packages)	1, 4	Indicates whether validity checking can be deferred until run time **B** All checking must be done at BIND **R** Validation is done at run time for tables that do not exist at BIND time Source: `SYSIBM.SYSPACKAGE.VALIDATE`	
VALIDATE (Plans)	1, 4	Indicates whether validity checking can be deferred until run time **B** all checking must be done at BIND **R** checking is differred if tables, views or privileges do not exist at BIND time. Source: `SYSIBM.SYSPLAN.VALIDATE`	
VALPROC	1, 3	Name of the validation procedure; blank if the row describes a view or alias, or a table without a validation procedure Source: `SYSIBM.SYSTABLES.VALPROC`	
VCATNAME (IXP)	1, 3	Name of ICF catalog used for space allocation Source: `SYSIBM.SYSINDEXPART.VCATNAME`	
VCATNAME (TSTP)	1, 3	Name of ICF catalog used for space allocation Source: `SYSIBM.SYSTABLEPART.VCATNAME`	
VERSION (DBRM or Packages)	1, 2, 4	Version identifier for the DBRM or package Source: `SYSIBM.SYSDBRM.VERSION` Source: `SYSIBM.SYSPACKAGE.VERSION`	
WO	1, 2, 4	Indicates when the access path was determined. Valid values include: **R** At run time **Blank** At bind time Source: `PLAN_TABLE.WHEN_OPTIMIZE`	

Commands

The following commands are available on this panel:

COMMAND	DESCRIPTION
EALL	Include EBIND, ECOST, EOBJ, EPATH, EPTBL, ERECM and ESTMT sections on the EXPLAIN Format 0 display.
EBIND	Include EBIND section on the EXPLAIN Format 0 display.
ECOST	Include ECOST section on the EXPLAIN Format 0 display.
EKEYS	Include index key information on the EXPLAIN Format 0 object information display.
EOBJ	Include EOBJ section on the EXPLAIN Format 0 display.
EPATH	Include EPATH section on the EXPLAIN Format 0 display.
EPTBL	Include EPTBL section on the EXPLAIN Format 0 display.
EPTB2	Include EPTB2 section on the EXPLAIN Format 0 display.

Commands (continued)

COMMAND	DESCRIPTION
ERECM	Include ERECM section on the EXPLAIN Format 0 display.
ESTMT	Include ESTMT section on the EXPLAIN Format 0 display.
EXODS	Output EXPLAIN Display to a user PDS. The command may take the form **EXODS member** where **member** specifies the name of the member to which the EXPLAIN Display is output. If a member name is specified and that member already exists, it will be replaced unless you specify the MOD option (see "Controlling the Destination of !DB/EXPLAIN Output") in the *!DB/EXPLAIN User's Guide*. If no member name is specified and if you have specified on Housekeeping panel KTEPHOOD that the Output Options panel is to be displayed when an EXPLAIN Display is output, then panel KTEPOUTP (Output Options) is displayed.
FIND	Find a specific character string on the display. Can be abbreviated as F. See "Format of the FIND command" later in this unit for expanded informaiion about the FIND command.
NOVERS	Do not display version.
OUT	Generate REXX program to update catalog statistics or create SQL statements to update catalog statistics depending on the value specified for **OUT statistics format** on the Housekeeping panel KTEPHOMI (EXPLAIN/SQL Defaults). The command may take the form **OUT member** where **member** specifies the name of the member to which statistics are output. If a member name is specified and that member already exists, it will be replaced unless you specify the MOD option (see "Controlling the Destination of !DB/EXPLAIN Output") in the *!DB/EXPLAIN User's Guide*. If no member name is specified and if you have specified on Housekeeping panel KTEPHOOD that the Output Options panel is to be displayed when statistics are output, then panel KTEPOUTP (Output Options) is displayed.
RESET	Reset all sections of the Format 0 display to "exclude".
RFIND	Reexeute the last FIND command. Can be abbreviated as RF.
VERS	Display version.

Format of the FIND command

The FIND command can be abbreviated as **F**. The format of the FIND command is as follows:

```
FIND string [FIRST|LAST|NEXT|PREV] [ASIS]
```

This table provides information about the parameters of the FIND command. All parameters are optional unless specifically declared as required.

Format of the FIND command (continued)

Parameter	Meaning

string (required)	One of:
	
	• A quoted or unquoted string that is to be found; can take the form:
	
	    dirt
	    'dirt road'
	    "dirt road"
	    "Mary's road"
	
	• * (asterisk)—meaning find an occurrence of the last value entered for *string*.

FIRST	Find the first occurrence of the string on the display. Ignore the case of any characters in the string when performing the FIND.
LAST	Find the last occurrence of the string on the display. Ignore the case of any characters in the string when performing the FIND.
PREV	Find the previous occurrence of the string on the display. Ignore the case of any characters in the string when performing the FIND.
NEXT	Find the next occurrence of the string (the default) on the display. Ignore the case of any characters in the string when performing the FIND.
ASIS	Can be included with any of the above parameters and indicates that the string is to be found as entered; that is, the case of the characters in the string should match the case of the characters in the 'found' string.

EXPLAIN Compare

Overview

This unit describes the EXPLAIN Compare panel.

Background about the EXPLAIN Compare panel

The EXPLAIN Compare panel (KTEPCMPR) performs either of the following actions:

- Compares the results from the latest EXPLAIN of a selected plan with results obtained from executing a BIND EXPLAIN(YES) on the plan. Housekeeping's BIND Compare panel (KTEPHOBC) controls how the compares are done.

- When invoked from the Explain History panel or as the result of compares of plans, packages, or DBRMs caused by issuing CEXPL on the Compare History panel, compares the two latest EXPLAINs. Housekeeping's Compare Options panel (KTEPHOCO) controls how the compares are done.

The EXPLAIN Compare panel (KTEPCMPR) shows all access path information.

The access path for a !DB/EXPLAIN EXPLAIN of a plan may differ from the access path obtained from a BIND EXPLAIN(YES) on the plan. The difference occurs because each works differently.

- When !DB/EXPLAIN performs an EXPLAIN, each host variable is replaced by a parameter marker. Parameter markers imply that the corresponding host variable will have the same data type and length as the associated column. In this way, the EXPLAIN returns the *optimal* access path for a statement.

- When a BIND EXPLAIN(YES) is performed, host variable type conversion may occur and be accounted for. Thus, the BIND EXPLAIN(YES) returns the *actual* access path for each statement.

You can view text describing the differences by entering the EDIFF command. The DIFF command resets the display.

Compare processing

The following summarizes the Compare processing that occurs

- If invoking Compare from plans, packages, or DBRMS (BIND COMPARE):

  - The EXPLAIN History is checked to verify that a latest EXPLAIN exists.

  - Libraries are validated.

  - If any condition exists that may affect the results of the pending BIND, the EXPLAIN Compare Warning panel display.

  - If no validation errors or warnings exist, the COMPARE Processing panel displays. This panel warns of possible delays resulting from executing a BIND statement.

  - A BIND EXPLAIN(YES) is performed. A dummy plan or package is created.

  - If the BIND is successful, the EXPLAIN Compare panel appears.

- If invoking Compare from EXPLAIN History:

  - Choose two EXPLAIN Histories with select **C**.
  - The EXPLAINs are compared.
  - The EXPLAIN Compare panel appears.

- If invoking Compare from Compare History as the result of the issuance of a CEXPL command, the current object is compared with the historical object and any differences in access path information are displayed on this EXPLAIN Compare panel.

Access

You can access this panel in three ways:

- Select an item to compare from the Plans, Packages, or DBRMs panels. A dummy plan is bound with EXPLAIN(YES) and the results are compared to the selected plan, package, or DBRM.

- Select two items to compare from the EXPLAIN History display. The differences between the two EXPLAINs are shown on the EXPLAIN Compare panel.

- Issue the command CEXPL from the Compare History panel. Differences in the EXPLAIN of the compared objects are displayed on this panel.

You are returned to the invoking panel when you exit EXPLAIN Compare.

Panels

The following illustration shows the EXPLAIN Compare panel.

```
  ----------------------- DB/EXPLAIN  DB2=D42B ------------------- LINE 1 OF 10
 Cmd ===>                                                   SCROLL ===> PAGE
                         C O M P A R E   E X P L A I N S
   Cmds: DO (Menu) GLOBAL (Menu)
 -------------------------------------------------------------------------------

  STMT QB  MX E J P AC I  MT MJ  P  ACCESS  JOIN  SRN SRC SRN SRC     P F W
   NO. NO. OP M T R CS X  CL CL  M  DG  ID  DG ID  ID  ID UJOGUJOG LCK F N O
 ----- --- -- - - - -- - -- -- - ------ ----- --- --- -------- --- - - -
 PACKAGE: DSNHYCRD     COLLID: DSNHYCRD         EXPLAINED: 1999/12/09  06:53:19
 VERSION: V500
 PACKAGE: DSNHYCRD     COLLID: DSNHYCRD         EXPLAINED: 1999/12/03  14:37:09
 VERSION: V500

   204   1  0 E 0      I N 2 0    0    0   NNNNNNNN IS
         TBL=SYSIBM.SYSTABLES           NDX=SYSIBM.DSNDTX01
                               STMT COST=           52.8
                               Query Type=SELECT
  204  1  0 E 0   0 M 2 0   0 0 0 0 0 0  NNNNNNNN IS
        TBL=SYSIBM.SYSTABLES            NDX=SYSIBM.DSNDTX01
                                        NDX=SYSIBM.DSNDTX01
                               STMT COST=           52.8
                               Query Type=SELECT
 1051  1  0 E 0   0 M 2 0   0 0 0 0 0 0  NNNNNNNN IS  L
        TBL=SYSIBM.SYSTABLES            NDX=SYSIBM.DSNDTX01
                                        NDX=SYSIBM.DSNVVX01
                               STMT COST=        1,419.5
                               Query Type=SELECT
```

Panels (continued)

The following illustration shows the EXPLAIN Compare Warning panel.

```
---------------------------- DB/EXPLAIN  DB2=D31A -------------------------
CMD ===>                                                  SCROLL ===> PAGE
                              W A R N I N G S


 Press END to ignore warnings and proceed with COMPARE processing.
 Press ENTER to terminate COMPARE processing.



 Warnings denoted with an X are in effect

          X        One or more DBRM libraries have been migrated.

          X        One or more DBRM libraries have been migrated and
          X        an HRECALL request has been issued.

          X        The timestamp associated with the DBRM in the
          X        catalog extract does not match the timestamp
          X        in the DB2 DBRM.

```

The following illustration shows the EXPLAN Compare Processing panel.

```
---------------------------- DB/EXPLAIN  DB2=D31A -------------------------
Cmd ===>



                        C O M P A R E   P R O C E S S I N G


  COMPARE processing involves the execution of a BIND statement for the
  selected Plan or Package. The time required for this process is dependent
  on the size of your DB2 system, the number of DB2 users, and overall
  system load.








 ENTER to process COMPARE request    END to abort COMPARE request
```

Fields

FIELDS	DESCRIPTION
ACC DEG	Number of parallel I/O streams activated by a query. Source: **PLAN_TABLE.ACCESS_DEGREE**
ACC PID	Identifier of the parallel group. Source: **PLAN_TABLE.ACCESS_PGROUP_ID**
ACCS (Access)	Method of accessing the new table: **I** By an index **I1** One-fetch index scan **N** Index scan when predicate contains IN keyword **R** table space scan **MX** By a multiple index scan on the index named in ACCESSNAME **MI** By an intersection of multiple indexes **MU** By a union of multiple indexes **blank** Not applicable to the current row Source: **PLAN_TABLE.ACCESSTYPE**
COLLECTION	Collection ID. Source: **PLAN_TABLE.COLLID**
CORR=	Correlation name of a table or view that is specified in the statement. If no correlation name is specified or if the DB2 subsystem is not at least Version 4, the field is blank. Source: **PLAN_TABLE.CORRELATION_NAME**
DBRM or PACKAGE NAME	DBRM or package name. Source: **PLAN_TABLE.PROGNAME**
EM (EXPLAIN METHOD)	Type of EXPLAIN performed: **W** Whatif **B** Bind Compare **E** EXPLAIN **P** PLAN_TABLE extract ***** Error occurred during the EXPLAIN Source: **Derived**
EXPLAIN DATE/TIME	EXPLAIN timestamp. Source: **PLAN_TABLE.TIMESTAMP**
EXPLAIN DIFFERENCES	Text describing the differences in the EXPLAINs. Source: **Derived**
FN (Function)	A character that indicates when an SQL column function was evaluated. **R** At data retrieval time **S** At sort time **blank** To be decided at run time Source: **PLAN_TABLE.COLUMN_FN_EVAL**

FIELDS	DESCRIPTION
INDEXNAME	For ACCESSTYPE I, I1, N, or MX, the name of the index; otherwise blank. Source: `PLAN_TABLE.ACCESSNAME`
IX (Index Only)	Indicates whether access to an index alone is enough to satisfy the query: **Y** Yes **N** No Source: `PLAN_TABLE.INDEXONLY`
J T=	Join type Source: `SYSIBM.PLAN_TABLE.JOIN_TYPE`
JOI DEG	The number of parallel I/O streams used to join tables. Source: `PLAN_TABLE.JOIN_DEGREE`
JOI PID	The identifier of the parallel group used to join tables. Source: `PLAN_TABLE.JOIN_PGROUP_ID`
LCK	Lock mode of the table space that contains the new table: **IS** Intent Share **IX** Intent Exclusive **S** Share **X** Exclusive **SIX** Share with intent exclusive **U** Update Source: `PLAN_TABLE.TSLOCKMODE`
ME (Method)	A number that indicates the join method used for the step described by the row: **0** First table accessed **1** Nested loop join **2** Merge scan join **3** Sorts **4** Hybrid join Source: `PLAN_TABLE.METHOD`
MJCL	The number of columns being joined during a merge scan join. If the join method is not a merge scan or if DB2 is not at least Version 4, the value of this field is 0. Source: `PLAN_TABLE.MERGE_JOIN_COLS`
MTCL	For ACCESSTYPE I, I1, N, or MX, the number of index keys used in an index scan; otherwise 0. Source: `PLAN_TABLE.MATCHCOLS`
MXOP	Number indicating the sequence of steps in a multiple index operation. Source: `PLAN_TABLE.MIXOPSEQ`

FIELDS	DESCRIPTION

(NAME heading)	Variable field that describes the type of data displayed in the column below it.
	
	    DBRM
	    PACKAGE
	
	Source: `PLAN_TABLE.PROGNAME`

P M	The kind of parallelism that is used at bind time (if any). At execution time, I/O and CPU parallelism can be converted to sequential processing. However, I/O parallelism cannot be converted to CPU parallelism and vice versa. **I** Query I/O parallelism **C** Query CPU parallelism **blank** No parallelism Source: `PLAN_TABLE.PARALLELISM_MODE`
P R=	Page range Source: `SYSIBM.PLAN_TABLE.PAGE_RANGE`
PF (PREFETCH)	Character that indicates whether data pages were read in advance by PREFETCH: **S** pure sequential PREFETCH **L** PREFETCH through a page list **blank** unknown or no PREFETCH Source: `PLAN_TABLE.PREFETCH`
PLAN NAME	Plan name. Source: `SYSIBM.SYSSTMT.PLNAME` Source: `SYSIBM.SYSPACKSTMT.NAME`
QBNO (Query Block Number)	Number that identifies the query or subquery for the row. Source: `PLAN_TABLE.QBLOCKNO`
QUERYNO	Number that identifies the statement being EXPLAINed. Source: `PLAN_TABLE.QUERYNO`

FIELDS	DESCRIPTION
QUERY TYPE	For each SQL query block, identifies the type of SQL operation performed. Valid values include: **SELECT** Select operation **INSERT** Insert operation **UPDATE** Update operation **DELETE** Delete operation **SELUPD** Select with FOR UPDATE OF operation **DELCUR** Delete WHERE CURRENT OF CURSOR operation **UPDCUR** Update WHERE CURRENT OF CURSOR operation **CORSUB** Correlated subquery operation **NCOSUB** Non-correlated subquery operation Source: `PLAN_TABLE.QBLOCK_TYPE`
SRC G **(Sorts - Group By, Composite Table)**	Indicates whether a GROUP BY clause results in a sort on the composite table: **Y** Yes **N** No Source: `PLAN_TABLE.SORTC_GROUPBY`
SRC ID	Parallel group identifier for the parallel sort of the composite table; 0 if not applicable Source: `PLAN_TABLE.SORTC_PGROUP_ID`
SRC J **(Sort - Join, Composite Table)**	Whether a sort is performed on the composite table if METHOD is 2 or 4. **Y** Yes **N** No Source: `PLAN_TABLE.SORTC_JOIN`
SRC O **(Sort - Order By, Composite Table)**	Whether an ORDER BY clause or a quantified predicate results in a sort on the composite table. **Y** Yes **N** No Source: `PLAN_TABLE.SORTC_ORDERBY`
SRC U **(Sort - Unique, Composite Table)**	Whether a sort is performed on the composite table to remove duplicate rows. **Y** Yes **N** No Source: `PLAN_TABLE.SORTC_UNIQ`

FIELDS	DESCRIPTION
SRN G **(Sorts - Group By, New Table)**	Whether a GROUP BY clause results in a sort on the new table. Source: `PLAN_TABLE.SORTN_GROUPBY`
SRN ID	Parallel group identifier for the parallel sort of a new table; 0 if not applicable Source: `PLAN_TABLE.SORTN_PGROUP_ID`
SRN J **(Sort - Join, New Table)**	Whether a sort is performed on the new table if METHOD is 2 or 4. **Y** Yes **N** No Source: `PLAN_TABLE.SORTN_JOIN`
SRN O (Sort - Order By, New Table)	Whether an ORDER BY clause results in a sort on the new table. Source: `PLAN_TABLE.SORTN_ORDERBY`
SRN U **(Sort - Unique, New Table)**	Whether a sort is performed on the new table to remove duplicate rows. **Y** Yes **N** No Source: `PLAN_TABLE.SORTN_UNIQ`
STMT COST	Statement cost Source: `Derived`
STMT NO.	Statement number. Source: `SYSIBM.SYSSTMT.STMTNO` Source: `SYSIBM.SYSPACKSTMT.STMTNO`
VERSION	Version identifier for the DBRM or package. Source: `PLAN_TABLE.VERSION`
WO	Indicates when the access path was determined. Valid values include: **R** At run time (execution) **Blank** At bind time Source: `PLAN_TABLE.WHEN_OPTIMIZE`

Commands

The following commands are available on the EXPLAIN Compare panel:

COMMAND	DESCRIPTION
EDIFF	Describes all the differences in access path between the two EXPLAINs.
DIFF	Reset the effect of the EDIFF command.

EXPLAIN History

Overview

This unit describes the EXPLAIN History panel.

Background about the EXPLAIN History panel

The EXPLAIN History panel lists the historical EXPLAINs for a specific DBRM or all the DBRMs in a plan or package. The EXPLAIN History retains only those EXPLAINs that were performed with !DB/EXPLAIN's EXPLAIN plan, DBRMs, or packages, or with a PLAN_TABLE Extract.

EXPLAIN history is retained until you ask for it to be deleted on the panel or on an extract PLAN_TABLE purge. You must have extract PLAN_TABLE purge (EPP) authority to delete history online.

Formats

This panel is available in two formats.

Format	Displayed Fields
Format 1	Name, Precompile Date/Time, EXPLAIN Date/Time, Cost
Format 2	Name, EXPLAIN Date/Time, Error, Type, DB2VRM, Cost

Access

The panel is invoked by using the **H** (EXPLAIN History) select or issuing the **LEHIST** command from the Plans, DBRMs, or Packages panels.

Panels

This panel shows format 1 of the EXPLAIN History panel.

```
----------------------- DB/EXPLAIN  DB2=D31A --------------------------------
CMD ===>                                                   SCROLL ===> PAGE
                         E X P L A I N   H I S T O R Y
  Cmds: DO  GLOBAL                                          Selects: ?
------------------------------------------------------------------------------
 S DBRM/    --------PRECOMPILE-------- ----------EXPLAIN---------      TOTAL
 L  PACKAGE DATE               TIME DATE                    TIME   STMT COST
 - -------- ------------------------- -------------------------   ------------
 _  DSDDB2UP 1999/02/23 04:42:08.610000 1999/12/15 08:54:02.590000        8.8
    VERSION:
 _  DSDDB2UP 1999/02/23 04:42:08.610000 1999/12/13 15:29:53.680000        8.8
    VERSION:
 _  DSDSQL01 1998/10/25 01:12:43.950000 1999/12/15 08:54:02.590000        0.3
    VERSION:
 _  DSDSQL01 1998/10/25 01:12:43.950000 1999/12/13 15:29:53.680000        0.3
    VERSION:
 ***************************** BOTTOM OF LIST ******************************
```

This panel shows format 2 of the EXPLAIN History panel.

```
----------------------- DB/EXPLAIN  DB2=D31A --------------------------------
CMD ===>                                                   SCROLL ===> PAGE
                         E X P L A I N   H I S T O R Y
  Cmds: DO (Menu) GLOBAL (Menu)                            Selects: ? (Menu)
------------------------------------------------------------------------------
 S  DBRM/    --------EXPLAIN-----------                               TOTAL
 L  PACKAGE DATE               TIME ERROR  TYPE   DB2VRM    STMT COST
 - -------- ------------------------- -----  -----  ------  ------------
 _  DSDDB2UP  1999/12/15 08:54:02.590000    Y    GEXPL    310          8.8
 _  DSDDB2UP  1999/12/13 15:29:53.680000    Y    EXPL     310          8.8
 _  DSDSQL01  1999/12/15 08:54:02.590000    N    GEXPL    310          0.3
 _  DSDSQL01  1999/12/13 15:29:53.680000    N    EXPL     310          0.3
 ***************************** BOTTOM OF LIST ******************************
```

Panels (continued)

The Delete selection displays the History Delete Confirmation panel, shown below. This selection deletes all historical EXPLAINs currently displayed.

```
   ---------------------------- DB/EXPLAIN  DB2=D31A --------------------------
 Cmd ===>


                             HISTORY DELETE CONFIRMATION


  You have requested to delete EXPLAIN History.  Once deleted, the EXPLAIN
  History can not be retrieved.

  Press ENTER to delete EXPLAIN History.  Press END to cancel the request.
```

Fields and Associated Sorts and Filters

The following table is an alphabetical listing of fields in all the EXPLAIN History panel formats.

FIELD	ON FORMAT	DESCRIPTION	SORTS/ FILTERS
DB2VRM	2	DB2 Version and Release under which the EXPLAIN occurred; if extracted the version and release of DB2 at the time of the extract. Source: `Derived`	HDVER
ERROR	2	Indicates that an error (SQL error, parser error, etc.) occurred during EXPLAIN processing. **Y** Yes **N** No Source: `Derived`	HERR
EXPLAIN DATE/TIME	1, 2	Date this DBRM or package was last EXPLAINed. Source: `PLAN_TABLE`	HEXDT
(NAME Heading) ● **DBRM** ● **PACKAGE**	1, 2	Variable field describing the type of data displayed in the column below it.	HNAME HDBRM
PRECOMPILE DATE/TIME	1	Date the DBRM or package was precompiled. Source: `SYSIBM.SYSDBRM.PRECOMPDATE‖PRECOMPTIME` Source: `SYSIBM.SYSPACKAGE.PCTIMESTAMP`	HPCDT
STMT COST	1, 2	Total statement cost. Source: `Derived`	HTCST
TYPE	2	Type of EXPLAIN. **EXPL** EXPLAIN **GEXPL** EXPLAIN and gather statistics **WHAT** Whatif Analysis **PTABL** PLAN_TABLE Source: `Derived`	HETYP
VERSION	1	Version identifier for the DBRM or Package. Source: `Derived`	HVER

Selects

SELECT	DESCRIPTION	TAKES YOU TO...
C	Compare two historical EXPLAINs.	EXPLAIN Compare (KTEPCMPR)
S	Display EXPLAIN.	EXPLAIN (KTEPEXPL)
Y	Delete historical EXPLAINs.	EXPLAIN History Delete Confirmation (KTEPHIDL)

Commands

COMMAND	DESCRIPTION	TAKES YOU TO...
DELETE	Delete historical EXPLAINs.	EXPLAIN History Delete Confirmation (KTEPHIDL)

Extract History

Overview

This unit describes the Extract History panel.

Background about the Extract History panel

The Extract History (KTEPXHST) panel lists historical extract information
for the three extract datasets: Statements, DB2 catalog, and PLAN_TABLE.

Access

To review the historical extracts, select option 4 from the Administration
Menu of !DB/EXPLAIN.

Panel

The following illustration shows the Extract History panel.

```
   ---------------------- DB/EXPLAIN  DB2=D31A  -------------------------------
  CMD ===>                                                  SCROLL ===> PAGE
                           E X T R A C T   H I S T O R Y
  CMDS: GLOBAL (MENU)                                       SELECTS: ? (MENU)
  ------------------- ------------------------------------------------------
      ----- EXTRACT ----- O S P T   #   CAT  OWNER PLAN/PKG  PLAN/PKG   PLAN/PKG
  SEL DATE          TIME  K R G Y  GNRS PTBL OWNER   OPER     MASK#1     MASK#2
  --- ------------------ - - - -  ---- ---------- -------- ---------- ----------
   _  1999/04/01 13:16:55 F C X R    0 SYSIBM
      1999/04/01 13:22:08            SYSIBM
                                          DESC: SUCCESSFUL TERMINATION

   _  1999/04/01 13:16:55 S C X R    0 SYSIBM
      1999/04/01 13:17:01            SYSIBM
                                          DESC: INITILIZATION

  ***************************** BOTTOM OF LIST ******************************
```

Fields

FIELD	DESCRIPTION
CAT OWNER	DB2 Catalog Owner.
DESCRIPTION	Short description of success/failure of Extract.
EXTRACT DATE/TIME	Date and time of Extract.
OK	Indicates if the Extract was successful: **Y** Yes **N** No
PG	Indicates action for the last Extract: **P** Purge **X** Extract
PKG MASK#1	Package or mask name for comparison. The value must be a valid package name unless "LIKE" is specified as the operator, then must be a valid DB2 mask.
PKG MASK#2	Package name for comparison.
PKG OPER	Package mask operator.
PLAN MASK#1	Plan or mask name for comparison. The value must be a valid plan name unless "LIKE" is specified as the operator, then must be a valid DB2 mask.
PLAN MASK#2	Plan name for comparison.
PLAN OPER	Plan mask operator.
PTBL OWNER	PLAN_TABLE Owner.
SR	Source of the Extract: **C** DB2 Catalog **S** SYSSTMT or SYSPACKSTMT **P** PLAN_TABLE
TIMESTAMP	Extract timestamp used for purge.
TY	Type of Extract: **I** Incremental **R** Replace **P** Partial
# GNRS	Number of Extract generations to keep.

Selects

SELECT	DESCRIPTION
J	Recreate the JCL used to generate this extract.

Extract Update

Overview

This unit describes the Extract Update panel.

Background about the Extract Update panel

The Extract Update panel (KTEPXUAB) appears if you have requested to update the plan table extract file while someone else is updating the extract file. Panel options allow you to retry or cancel the update.

!DB/EXPLAIN saves all the updates to the plan table extract when you issue the XUPDT command. If you choose to cancel the update or exit !DB/EXPLAIN after making unsaved updates to the file, you will lose all updates. These updates include records generated when doing EXPL, EXPLA, GEXPL, and Whatif.

Access

The Extract Update panel is displayed automatically by !DB/EXPLAIN when you try to update the plan table extract while it is currently being updated by another user.

Panel

The following illustration shows the Extract Update panel.

```
----------------------- DB/EXPLAIN  DB2=D31A --------------------------------
 Cmd ===>

                          E X T R A C T    U P D A T E


 The plan table extract file is currently not available for update.
 Press ENTER to try the update again.  Press END to cancel the update.

 The changes you have made to plan table information since the last XUPDT
 will be permanently lost if you choose to cancel the plan table updates.
 (All EXPLAIN results and Statistics not committed to the plan table
 extract dataset will be lost if you cancel the Extract Update.)




     ENTER to retry plan table update   END to cancel the plan table updates
```

Index Keys

Overview

This unit describes the Index Keys panel.

Background about the Index Keys panel

The Index Keys panel (KTEPCKEY) lists all key columns for indexes. Rows on the Index Keys panel are selectable. The Index Keys Selections panel (KTE3CKSE) allows you to display column statistics for the key columns.

Access

This panel can be accessed from the Whatif panel (KTEPWHIF) or the Estimator panel (KTEPESTM) using the **K** select.

Panels

The following illustration shows the Index Keys panel.

```
----------------------- DB/EXPLAIN  DB2=D31A ----------------- LINE 1 OF 4
CMD ===>                                                  SCROLL ===> CSR
                          I N D E X   K E Y S
  CMDS: DO (Menu) GLOBAL (Menu)                          SELECTS:? (Menu)
---------------------------------------------------------------------------

 IXNAME=DSNDCX01                  IXCREATOR=SYSIBM

SEL  COLUMN NAME            COLUMN NO        COLUMN SEQ        ORDERING
---  ------------------     ---------        ----------        --------
 _   TBCREATOR                  1                3                A
 _   TBNAME                     2                2                A
 _   NAME                       3                1                A
***************************** BOTTOM OF LIST ********************************
```

```
     INDEX KEY SELECTIONS

Select ===>
 S. Display Column Information
```

Fields

Filtering and sorting are not available for the Index Keys function.

FIELD	DESCRIPTION
COLUMN NAME	Name of the column of the key. Source: **SYSIBM.SYSKEYS.COLNAME**
COLUMN NO	Numeric position of the column in the table. Source: **SYSIBM.SYSKEYS.COLNO**
COLUMN SEQ	Numeric position of the column in the key. Source: **SYSIBM.SYSKEYS.COLSEQ**
IXCREATOR	Authorization ID of the owner of the index. Source: **SYSIBM.SYSKEYS.IXCREATOR**
IXNAME	Name of the index. Source: **SYSIBM.SYSKEYS.IXNAME**
ORDERING	Order of the column in the key: **A** Ascending **D** Descending Source: **SYSIBM.SYSKEYS.ORDERING**

Selects

SELECT	DESCRIPTION	TAKES YOU TO...
S	Display column information.	Table Columns (KTEPTCOL)

Libraries

Overview

This unit describes the Libraries panel.

Background about the Libraries panel

The Libraries panel (KTEPLIBR) lists all DBRM libraries defined to the DB2 system.

Formats

This panel is available in three formats.

Format	Displayed Fields
Format 1	All Libraries
Format 2	DBRM Libraries
Format 3	Package Libraries

Access

Libraries can be accessed from the Primary Menu or the Sessions Menu.

Panels

The following illustration shows format 1 of the Libraries panel—all libraries.

```
----------------------- DB/EXPLAIN  DB2=D31A ----------------LIBRARY 1 of 19
CMD ===>                                                   SCROLL ===> PAGE
                            L I B R A R I E S
  Cmds: DO (Menu) GLOBAL (Menu)                          Selects: ? (Menu)
-------------------------------------------------------------------------------
 S
 L DATASET NAME                              STATUS                  ALL
 - ---------------------------------------   ---------------------   -------
 _ PP.CDB.RDB2DASD.DEMOCNTL                  NOT CATALOGED              2
 _ TDDB.SCC.DBRM                            ON VOLUME OMON23           2
 _ TDDB.SD2.DBRM                            ON VOLUME OMON34           2
 _ TSDB08.DBT722.CNTL                       ON VOLUME OMON30           2
```

The following illustration shows format 2 of the Libraries panel—DBRM libraries.

```
----------------------- DB/EXPLAIN  DB2=D31A -----------------LIBRARY 1 of 193
CMD ===>                                                   SCROLL ===> PAGE
                            L I B R A R I E S
  Cmds: DO (Menu) GLOBAL (Menu)                          Selects: ? (Menu)
-------------------------------------------------------------------------------
 S
 L DATASET NAME                              STATUS                  DBRMS
 - ---------------------------------------   ---------------------   -------
 _ PP.CDB.RDB2DASD.DEMOCNTL                  NOT CATALOGED              1
 _ TDDB.SCC.DBRM                            ON VOLUME OMON23           1
 _ TDDB.SD2.DBRM                            ON VOLUME OMON34           1
 _ TSDB08.DBT722.CNTL                       ON VOLUME OMON30           1
```

The following illustration shows format 3 of the Libraries panel—package libraries.

```
----------------------- DB/EXPLAIN  DB2=D31A ---------------- LIBRARY 1 OF 19
CMD ===>                                                   SCROLL ===> PAGE

                            L I B R A R I E S
  Cmds: DO (Menu) GLOBAL (Menu)                          Selects: ? (Menu)
-------------------------------------------------------------------------------
 S
 L DATASET NAME                              STATUS                  PKGS
 - ---------------------------------------   ---------------------   -------
 _ PP.CDB.RDB2DASD.DEMOCNTL                  NOT CATALOGED              1
 _ PP.DB2.V23.DSNSAMP                                                   1
 _ PP.QMF.V240.DSQDBRM                                                  1
 _ TDDB.DBTOOLS.V103.D22A.CNTL                                          1
```

Panels (continued)

The following illustration shows the Library Delete Confirmation panel.

```
--------------------------- DB/EXPLAIN  DB2=D31A ---------------------------
Cmd ===>


                         LIBRARY DELETE CONFIRMATION


     Press ENTER to delete (or HDELETE) the data set.

     Press END to keep the data set.



     Library Name TDDB.SCC.DBRM

     Status       ON VOLUME OMON23
```

Fields and Associated Sorts and Filters

FIELD	ON PANEL...	DESCRIPTION	SORTS/ FILTERS
LERR (Library Error)	KTEPLIBR	Library Error values: **Y** Any error **N** None Source: `Derived`	LERR
LIBRARY NAME	KTEPLIBR	Name of either DBRM or package library. Source: `SYSIBM.SYSDBRM.PDSNAME` Source: `SYSIBM.SYSPACKAGE.PDSNAME`	LLIB
ALL	KTEPLIBR	Number of DBRM and package members in library. Source: `SYSIBM.SYSDBRM + SYSPACKAGE`	L#ALL
DBRMS	KTEPLIBR	Number of DBRM members in library. Source: `SYSIBM.SYSDBRM`	L#DBR
PKGS	KTEPLIBR	Number of package members in library. Source: `SYSIBM.SYSPACKAGE`	L#PKG
(NAME heading) ● **DBRM** ● **PACKAGE** ● **ALL**	KTEPLIBR	A variable field describing the type of data displayed in the column below it.	
(No. of MEMBERS HEADING) ● **DBRM** ● **PACKAGE** ● **ALL**	KTEPLIBR	This field is variable depending on what data will be displayed.	
STATUS	KTEPLIBR	Library Status values: Migrated Not Cataloged On Volume XXXXXX No Volumes in Catalog Not Verified (that is, the field is blank) Source: `Derived`	LSTAT

Selects

SELECT	DESCRIPTION	TAKES YOU TO...
D	Display all DBRMs in the selected library.	DBRMs (KTEPDBRM)
K	Display packages in the selected library.	Packages (KTEPKACK)
R	Issue an HRECALL for the requested selection.	Redisplay KTEPLIBR with updated status information
V	Verify the selected library.	Redisplay KTEPLIBR with updated status information
Y	Delete the selected library.	Delete confirmation (KTEPLIDL)

Commands

After execution of each command, the Library panel reappears with the desired data.

COMMAND	DESCRIPTION
LALL	List all DBRM and package members.
LDBR	List all DBRM members.
LPKG	List all package members.

Online Menu

Overview

This unit describes the !DB/EXPLAIN Online Menu.

Background about the Online Menu

The Online Menu (KTEPMEON) provides entry to !DB/EXPLAIN. You can find more information about !DB/EXPLAIN's Online Menu and its functions in the chapter "Accessing !DB/EXPLAIN Functions" in the *!DB/EXPLAIN User's Guide*.

Access

You access the !DB/EXPLAIN Online Menu from the !DB/Tools Product Selection Menu.

Panel

The following illustration show the Online Menu panel.

```
--------------------------- DB/EXPLAIN  DB2=D31A ----------------------------
Cmd ===>

                         O N L I N E   M E N U

 Extract ID       ===>                              Estae Flag ===> Y
 Create Batch JCL? ===> N    ( Y Yes  N No )

 Specify Additional Data Sets? ===> N ( Y Yes  N No )
 Specify Member Lists?        ===> N ( Y Yes  N No )

 Option ===> 1
   1 SQL Statements
     Data Set Name   :
     File Format     :
   2 BIND Commands
     Data Set Name   :
     Allocate DBRMLIB?:    ( Y Yes  N No  E Edit DBRMLIB concatenation )
   3 DBRM
     Data Set Name   :
     Owner/Qualifier :                    Plan:

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```

Fields

FIELD	DESCRIPTION
CREATE BATCH JCL?	Determines whether the Generate JCL panel will be displayed to permit you to create the JCL to run the requested function in batch. Y Create batch JCL N Do not create batch JCL
ESTAE FLAG	Field set to Y unless informed otherwise by Candle Support Services.
EXTRACT ID	1-8 character ID that specifies the extract. Candle Corp. recommends using the DB2 Subsystem ID (SSID) as the first characters of the extract ID to allow for easy tracking of extracts
FUNCTION	Numeric field that represents the function to invoke.
SPECIFY ADDITIONAL DATASETS?	Determines whether a panel is displayed to permit you to provide a list of datasets to be used by the selected function. Y Permit additional datasets to be entered N Do not permit additional datasets to be entered
SPECIFY MEMBER LISTS?	Determines whether a list of partitioned data set members will be displayed from which you can select members to be processed. Y Display list of partitioned data set members N Do not display list of partitioned data set members

Output Options

Overview

This unit describes the Output Options panel.

Background about the Output Options panel

The Output Options panel allows you to specify where to store items.

Access

The Output Options panel appears before the Process Member Menu whenever SQL output is written to the User PDS.

Panel

The following illustration shows the Output Options panel.

```
---------------------------- DB/EXPLAIN  DB2=D31A --------------------------
Cmd ===>


                        O U T P U T   O P T I O N S


  You have requested a function which will output data to a PDS member.
  Specify the PDS, member name, and whether to modify onto member or not.


  Library: TDDB.DE2.V235.TESTNG.USER

   Member: BIND

   Modify onto member: N




 ENTER to accept values      END to cancel request
```

Fields

Filtering and sorting are not available for the Index Keys function.

FIELD	DESCRIPTION
LIBRARY NAME	Name of a PDS library
MEMBER	Name of the member to which the output is written
MODIFY ONTO MEMBER	Specifies whether to add output to the end of a member if that member exists, or whether to replace the member if it exists. **Y** Add output to the end of a member if it exists **N** Replace the member if it exists

Package Connections

Overview

This unit describes the Package Connections panel.

Background about the Package Connections panel

The Package Connections panel (KTEPKCON) lists all environments in which a particular package can be executed. Its source is the DB2 table SYSPKSYSTEM that contains zero or more rows for every local package. Each row represents a possible connection to an environment in which a package could be executed.

Access

The Package Connections panel can only be invoked by selecting option **N** (Connections) from the Packages panel (see "Packages" on page 166). From Package Connections, the user can only return to the Packages panel.

Panel

The following illustration shows the Package Connections panel.

```
----------------------- DB/EXPLAIN  DB2=D31A ---------------------------------
CMD ===>                                                       SCROLL ===> PAGE

                     P A C K A G E   C O N N E C T I O N S

  Cmds: GLOBAL (Menu)
-------------------------------------------------------------------------------

                 SYSTEM         CONNECTION           ENABLE
                 --------     --------------------    ------
                 BATCH                                  Y
                 CICS                                   N
                 DB2CALL                                N
                 DLIBATCH                               N
                 IMSBMP                                 N
                 IMSMPP                                 N
                 REMOTE                                 N
```

Fields and Related Sorts and Filters

FIELD	DESCRIPTION	SORTS/ FILTERS
CONNECT	Connection name. Source: **SYSIBM.SYSPKSYSTEM.CNAME**	KCNN
ENABLE	Indicates whether the connections are enabled or disabled. **Y** Enabled **N** Disabled Source: **SYSIBM.SYSPKSYSTEM.ENABLE**	KENA
SYSTEM	Environment. **BATCH** TSO Batch **CICS** Customer Information Control System **DB2CALL** DB2 Call Attachment Facility **DLIBATCH** DLI Batch Support Facility **IMS** IMS region **IMSBMP** IMSBMP region **IMSMPP** IMSMPP and IFP region **REMOTE** Remote Application Server Source: **SYSIBM.SYSPKSYSTEM.SYSTEM**	KSYS

Packages

Overview

This unit describes the Packages panel.

Background about the Packages panel

The Packages panel (KTEPKACK) and its associated information panel lists the packages defined in the DB2 catalog.

Formats

You can display the panel in seven formats.

Format	Displayed Fields
Format 1	Package, Value, SYSPACKAGE Indicators, Statements, Selects, Deletes, Updates, Inserts, Exclusive Locks, Shared Locks, Dynamicrules
Format 2	Package, Creator, Owner, Qualifier, Collection, Contoken
Format 3	Package, Creator, Timestamp, Package Size, Average Size, Statements, System Entries
Format 4	Package, Precompile Timestamp, Library
Format 5	Package, Precompile Timestamp, EXPLAIN Timestamp, Total DB2 Cost
Format 6	Package, EXPLAIN Timestamp, Maximum Cost, Average Cost, Total Cost
Format 7	Package, Statements, Selects, Declared Cursors, Deletes, Updates, Inserts, Shared Locks, Exclusive Locks
Format 8	Package Name, Collection ID, Group Member, Creator, Bind Timestamp

Access

Packages can be accessed from the Primary or Sessions Menus, or from the Plans, Collections, Tables, or Libraries panels.

Panels

The following illustration shows format 1 of the Packages panel.

```
----------------------- DB/EXPLAIN  DB2=D42B -------------------- LINE1 OF 81
Cmd ===>                                                SCROLL ===> CSR
                            P A C K A G E S
   Cmds: DO (Menu) GLOBAL (Menu)                        Selects: ? (Menu)
-------------------------------------------------------------------------------
             VOVRIVDEQCCMDHRSDD                                        LCK LCK
SEL PACKAGE  LPDESAPXUOHXELMEGR STMTS  SELECTS DELETES UPDATES INSERTS XCL SHR
--- -------- ------------------ ------- ------- ------- ------- ------- --- ---
 _   DSNESM68 NYY SRBNNNANNBNN1     17       0       0       0       0   0   0
 _   DSNESM68 NYY RRBNNNANNBNN1     17       0       0       0       0   0   0
 _   DSNTEP2  NYY SRBNNNANNPNN1     31       0       0       0       0   0   0
 _   DSN8CC0  NYY SRBNNNANNCNN1      4       1       0       0       0   0   0
 _   DSN8CC1  NYY SRBNNNANNCNN1     26       7       1       1       1   0   0
 _   DSN8CC2  NYY SRBNNNANNCNN1     58      14       2       2       2   0   0
 _   DSN8HC3  NYY SRBNNNANNCNN1    113       2       2       3       3   0   0
 _   DSN8IC1  NYY SRBNNNANNCNN1     26       7       1       1       1   0   0
 _   DSN8IC2  NYY SRBNNNANNCNN1     58      14       2       2       2   0   0
 _   EMQM1100 NYYCSBBNNNNANNDNC1    98       0       0       0       0   0   0
 _   EMQP1010 NYYCSRCNNNNANN YN1    10       0       0       0       0   0   0
 _   KO2SABP  NYYCSRBNNNANNBNN1     21       0       0       0       1   0   0
 _   KO2SABP  NYYCSRBNNNANNBNN1     21       0       0       0       1   0   0
 _   KO2SABS  NYYCSRBNNNANNBNN1     21       0       0       0       1   0   0
 _   KO2SABS  NYYCSRBNNNANNBNN1     21       0       0       0       1   0   0
 _   KO2SACS  NYYCSRBNNNANNBNN1     21       0       0       0       1   0   0
 _   KO2SACS  NYYCSRBNNNANNBNN1     21       0       0       0       1   0   0
 _   KO2SADD  NYYCSRBNNNANNBNN1     21       0       0       0       1   0   0
 _   KO2SADD  NYYCSRBNNNANNBNN1     21       0       0       0       1   0   0
 _   KO2SADS  NYYCSRBNNNANNBNN1     22       0       0       0       1   0   0
 _   KO2SADS  NYYCSRBNNNANNBNN1     22       0       0       0       1   0   0
 _   KO2SAU1  NYYCSRBNNNANNBNN1     16       0       0       0       1   0   0
 _   KO2SAU1  NYYCSRBNNNANNBNN1     16       0       0       0       1   0   0
 _   KO2SAU2  NYYCSRBNNNANNBNN1     16       0       0       0       1   0   0
```

The following illustration shows format 2 of the Packages panel.

```
----------------------- DB/EXPLAIN  DB2=D31A ------------------- LINE15 OF 93
CMD ===>                                                SCROLL ===> PAGE

                            P A C K A G E S
   Cmds: DO (Menu) GLOBAL (Menu)                        Selects: ? (Menu)
-------------------------------------------------------------------------------

SEL PACKAGE  CREATOR   OWNER    QUALIFIER  COLLECTION         CONTOKEN
--- -------- -------   -------- ---------  ------------------ ----------------
 _   DSNQVAUD TDO209B  TDO209B  TDO209B    DSNQCATV           14A420A612CD0104
 _   DSNQVAUT TDO209B  TDO209B  TDO209B    DSNQCATV           14A420AA090A7A08
 _   DSNQVCAS TDO209B  TDO209B  TDO209B    DSNQCATV           14A420B306EB5B5C
```

Panels (continued)

The following illustration shows format 3 of the Packages panel.

```
----------------------- DB/EXPLAIN  DB2=D31A ------------------- LINE15 OF 93
CMD ===>                                                     SCROLL ===> PAGE

                            P A C K A G E S
  Cmds: DO (Menu) GLOBAL (Menu)                          Selects: ? (Menu)
-------------------------------------------------------------------------------
                   ---------- BIND ----------
SEL PACKAGE  CREATOR  DATE                  TIME PKSIZE AVSIZE   STMTS SYSENTRY
--- -------- -------- ---------------------- ------ ------ ------- --------
  _  DSNQVAUD TD0209B  0000/00/00 00:00:00.000000    376      0      96        0
  _  DSNQVAUT TD0209B  0000/00/00 00:00:00.000000   2104   3454     133        0
  _  DSNQVCAS TD0209B  0000/00/00 00:00:00.000000   1352   4390     146        0
```

The following illustration shows format 4 of the Packages panel.

```
----------------------- DB/EXPLAIN  DB2=D31A ------------------- LINE15 OF 93
CMD ===>                                                     SCROLL ===> PAGE

                            P A C K A G E S
  Cmds: DO (Menu) GLOBAL (Menu)                          Selects: ? (Menu)
-------------------------------------------------------------------------------
             --- PRECOMPILE ----
SEL PACKAGE  DATE          TIME LIBRARY
--- -------- ------------------ --------------------------------------------
  _  DSCSAMP4 1999/10/30 10:40:28 TSDB07.DBRMLIB.DATA
     VERSION:
  _  DSCSAMP4 1999/10/30 10:40:28 TSDB07.DBRMLIB.DATA
     VERSION:
  _  DSCSAMP4 1999/10/30 10:40:28 TSDB07.DBRMLIB.DATA
     VERSION:
```

The following illustration shows format 5 of the Packages panel.

```
----------------------- DB/EXPLAIN  DB2=D31A ------------------- LINE1 OF 144
CMD ===>                                                     SCROLL ===> PAGE

                            P A C K A G E S
  Cmds: DO (Menu) GLOBAL (Menu)                          Selects: ? (Menu)
-------------------------------------------------------------------------------
             --- PRECOMPILE ---- --------- EXPLAIN --------     TOTAL
SEL PACKAGE  DATE          TIME DATE               TIME     DB2 COST
--- -------- ------------------ ------------------------- ------------
  _  ALTSQLMU 1999/06/19 04:53:09 0000/00/00 00:00:00.000000       0.0
     VERSION:
  _  ALTSQLMU 1999/06/19 04:53:09 0000/00/00 00:00:00.000000       0.0
     VERSION:
  _  ALTSQLMU 1999/06/19 04:53:09 0000/00/00 00:00:00.000000       0.0
     VERSION:
```

Panels (continued)

The following illustration shows format 6 of the Packages panel.

```
----------------------- DB/EXPLAIN  DB2=D31A ------------------- LINE1 OF 144
CMD ===>                                                      SCROLL ===> PAGE


                              P A C K A G E S
   Cmds: DO (Menu) GLOBAL (Menu)                          Selects: ? (Menu)
  ---------------------------------------------------------------------------
              ----  EXPLAIN  ----  ----------  STATEMENT COSTS  ---------
  SEL  PACKAGE  DATE          TIME      MAXIMUM      AVERAGE        TOTAL
  ---  --------  -------------------  ------------ ------------ ------------
   _     ALTSQLMU  0000/00/00 00:00:00         0.0          0.0          0.0
   _     ALTSQLMU  0000/00/00 00:00:00         0.0          0.0          0.0
   _     ALTSQLMU  0000/00/00 00:00:00         0.0          0.0          0.0
```

The following illustration shows format 7 of the Packages panel.

```
----------------------- DB/EXPLAIN  DB2=D31A --------------------------------
CMD ===>                                                       SCROLL ===> CSR
                              P A C K A G E S
   Cmds: DO (Menu) GLOBAL (Menu)                          Selects: ? (Menu)
  ---------------------------------------------------------------------------
                            DECLARE                           LOCK    LOCK
  SEL PACKAGE  STMTS   SELECTS CURSORS DELETES UPDATES INSERTS SHR     XCL
  --- -------- ------- ------- ------- ------- ------- ------- ------- -------
   _   DSNESM68    17       0       0       0       0       0       0       0
   _   DSNESM68    17       0       0       0       0       0       0       0
   _   DSNQVALI     2       1       0       0       0       0       0       0
```

Panels (continued)

The following illustration shows format 8 of the Packages panel.

```
----------------------- DB/EXPLAIN  DB2=D31A ---------------- LINE 1 OF 1,098
CMD ===>                                                      SCROLL ===> PAGE
                                P A C K A G E S
  Cmds: DO (Menu) GLOBAL (Menu)                              Selects: ? (Menu)
-------------------------------------------------------------------------------


                                GROUP
SEL PACKAGE  COLLECTION         MEMBER   CREATOR  BIND TIMESTAMP
--- -------- ----------------- -------- -------- --------------------------
 _  ALECV23  TEST                        TSNY36A  1999/03/14 19:49:07.226133
 _  ALLIED   MLDEMO                       TSUK72   1999/04/20 07:53:03.768070
 _  ALTICCAT XDDB05                       TSNY36A  1999/07/11 20:33:41.613489
 _  ALTMPEX2 TSSC02                       TSSC02   1999/01/27 05:20:21.374542
 _  ALTMPEX2 XDDB05                       TSNY36A  1999/07/11 20:33:59.458299
 _  ALTMPEX3 CANDLE_TE_SYSIBM             TSL265   1999/07/25 13:24:03.174351
 _  ALTSQLJR CANDLE_TE_SYSIBM             TDDB18   1999/12/02 19:03:16.786129
 _  ALTSQLJR TSDB12                       TSNY36A  1999/05/11 16:39:27.933250
 _  ALTSQLJR XDDB05                       TSNY36A  1999/10/19 09:45:42.293260
 _  ALTSQLUM CANDLE_TE_SYSIBM             TSL265   1999/07/25 13:02:35.101652
 _  ASMDRV00 CANDLE_TE_SYSIBM             TSNY19   1999/09/23 08:42:38.227953
 _  ASMFUBR  BRIANT                       TDDB24   1999/10/21 09:55:42.564846
 _  ASMFUBR  KTEFUBAR                     TDDB24   1999/08/26 18:20:38.990936
 _  ASMFUBR  KTEFUBAS                     TDDB24   1999/08/26 18:18:07.553504
 _  ASMFUBR  KTEXBWMA                     TDDB24   1999/10/01 14:43:13.321912
```

Panels (continued)

The Package Information panel shows all package information. This panel is scrollable.

```
----------------------- DB/EXPLAIN  DB2=D42B -------------------- LINE1 OF 24
Cmd ===>                                                  SCROLL ===> CSR
                       P A C K A G E   I N F O R M A T I O N

   Cmds: GLOBAL (Menu)
-------------------------------------------------------------------------------

 PACKAGE : DSNESM68 COLLECTION: DSNESPRR          CONTOKEN: 14EDB8820C325F30
 CREATOR : RGRAPH   OWNER    : RGRAPH2  BOUND    : 1999/10/16 18:19:51.766655
 FREED?  : N        QUALIFIER : TDO214   CREATED   : 1999/10/16 17:51:35.329147
 PK SIZE :     1360 SYSENTRIES:    0   PRECOMPILE: 0001/01/01 00:00:00.000000
 AVG SIZE:        0 DEGREE    : 1        GROUP MEMBER;
 LIBRARY : TDKT.TE500ACM.DBRM
 VERSION : V500

 VALID: Y    OPERATIVE: Y    VALIDATE: R    RELEASE: C    EXPLAIN: N
 COMMA: N    ISOLATION: S    HOSTLANG: B    SQLERR : N    CHARSET: A
 QUOTE: N    DEFERPREP:      REMOTE  : N    DEC31  : N    MIXED  : N
             DYNAMICRULES:   DEFERPRE: C    KEEODYN: N    REOPT  : N


 ------------------------------ SQL COUNTS ----------------------------------
  STATEMENTS        =    17  DROP      =     0  REVOKE       =      0
  ALTER             =     0  EXECUTE   =     1  ROLLBACK     =      1
  CALL              =     0  EXPLAIN   =     0  SELECT       =      0
  CLOSE             =     1  FETCH     =     1  SET          =      0
  COMMIT            =     1  GRANT     =     0  SET CONNECT  =      0
  CONNECT           =     1  INSERT    =     0  SET DEGREE   =      0
  CREATE            =     0  LOCK SHR  =     0  SET HOST     =      0
  DECLARE CURSOR    =     1  LOCK XCL  =     0  SET PKGSET   =      0
  DECLARE STATEMENT =     0  OPEN      =     1  SET RULES    =      0
  DECLARE TABLE     =     1  PREPARE   =     5  SET SQLID    =      0
  DELETE            =     0  RELEASE   =     0  UPDATE       =      1
  DESCRIBE          =     4                     WHENEVER     =      0
 ***************************** BOTTOM OF LIST ********************************
```

Fields and Associated Sorts and Filters

The following table is an alphabetical listing of fields in all the Packages panel formats and the Packages Information panel. Format I indicates the information panel.

FIELD	ON FORMAT	DESCRIPTION	SORTS/ FILTERS
ALTER	I	Total number of ALTER statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#AL
AVERAGE STMT COST	6	Average statement cost. Source: `Derived`	KACST
AVSIZE	3, I	Average size measured in bytes of the package sections processed at BIND time. Source: `SYSIBM.SYSPACKAGE.AVGSIZE`	KAVS
BIND DATE/TIME (Bound)	3, 8, I	Timestamp indicating when the package was last bound. Source: `SYSIBM.SYSPACKAGE.BINDTIME`	KBDT
CALL	I	Number of CALL statements in the package Source: `SYSIBM.SYSPACKAGE.CALL`	K#CA
CH (Charset)	1, I	Indicates whether the system CCSID for SBCS data was 290 (Katakana) when the program was precompiled. **K** Yes **A** No Source: `SYSIBM.SYSPACKAGE.CHARSET`	KCHRS
CLOSE	I	Total number of CLOSE statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#CL
CO (Comma)	1, I	Indicates the decimal point representation for SQL statements in the package. **N** Period **Y** Comma Source: `SYSIBM.SYSPACKAGE.COMMA`	KCOMM
COLLECTION	2, 8, I	Name of the package collection. Source: `SYSIBM.SYSPACKAGE.COLLID`	KCOL
COMMIT	I	Total number of COMMIT statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#CM
CONNECT	I	Total number of CONNECT statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#CN

FIELD	ON FORMAT	DESCRIPTION	SORTS/ FILTERS
CONTOKEN	2, I	Consistency token for the package. Source: `SYSIBM.SYSPACKAGE.CONTOKEN`	KTOK
CREATE	I	Total number of CREATE statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#CR
CREATED	I	Timestamp indicated when the package was created. Source: `SYSIBM.SYSPACKAGE.TIMESTAMP`	KCRDT
CREATOR	2, 3, 8, I	Authorization ID of the package creator. Source: `SYSIBM.SYSPACKAGE.CREATOR`	KCR
DE (Dec31)	1	Indicates whether DEC31 was in effect when the package's program was precompiled. **N** No **Y** Yes Source: `SYSIBM.SYSPACKAGE.DEC31`	KDC31
DECLARE CURSOR	7, I	Total number of DECLARE CURSOR statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#DC
DECLARE STATEMENT	I	Total number of DECLARE STATEMENT statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#DM
DECLARE TABLE	I	Total number of DECLARE TABLE statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#DT
DEFERPREP	1, I	Indicates whether the package was bound with the DEFER(PREPARE) option. Valid values include: **Y** Yes **N** No **Blank** The option is inherited from the PLAN Source: `SYSPACKAGE.DEFERPREPARE`	KDEFP
DEGREE	I	DEGREE option used when the panel was bound. Source: `SYSIBM.SYSPACKAGE.DEGREE`	KDEGR

FIELD	ON FORMAT	DESCRIPTION	SORTS/ FILTERS
DG	1	DEGREE option used when the panel was bound. Its value may be: **1** Generated BIND/REBIND contains the DEGREE(1) clause—I/O parallelism disabled. **ANY** Generated BIND/REBIND contains the DEGREE(ANY) clause. I/O parallelism value set by DB2. **blank** Not specified; thus uses the default **1**, I/O parallelism disabled. Source: `SYSIBM.SYSPACKAGE.DEGREE`	KDEGR
DELETES	1, 7, I	Number of DELETE statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#DL
DESCRIBE	I	Total number of DESCRIBE statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#DS
DP (Deferpre)	1, I	Indicates the CURRENTDATA option when the package was bound or rebound: **A** Data currency required for all cursors. Inhibit blocking for all cursors. This value can only be generated by a non-DB2 application requestor. **B** Data currency is not required for ambiguous cursors. Allow blocking for ambiguous cursors. **C** Data currency is required for ambiguous cursors. Inhibit blocking for ambiguous cursors. **blank** Blocking protocol not recorded because the package was created before the CURRENTDATA option was available. Source: `SYSIBM.SYSPACKAGE.DEFERPREP`	KDFP
DR	1	The DYNAMICRULES option used when the package was bound. **B** Dynamic SQL statements are handled like static SQL statements at run time. **R** Dynamic SQL statements are handled like dynamic SQL statements at run time. **blank** DYNAMICRULES is not specified for the package or the DB2 subsystem is not at least V4. Source: `SYSIBM.SYSPACKAGE.DYNAMICRULES`	KDYNR
DROP	I	Total number of DROP statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#DR

FIELD	ON FORMAT	DESCRIPTION	SORTS/ FILTERS
DYNAMICRULES	1	The DYNAMICRULES option used when the package was bound. **B** Dynamic SQL statements are handled like static SQL statements at run time. **R** Dynamic SQL statements are handled like dynamic SQL statements at run time. **blank** DYNAMICRULES is not specified for the package or the DB2 subsystem is not at least V4. Source: `SYSIBM.SYSPACKAGE.DYNAMICRULES`	KDYNR
EX (EXPLAIN)	1, I	EXPLAIN at BIND? **Y** Yes **N** No Source: `SYSIBM.SYSPACKAGE.EXPLAIN`	KXPL
EXECUTE	I	Total number of EXECUTE statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#EC
EXPLAIN	I	Total number of EXPLAIN statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#EX
EXPLAIN DATE/TIME	4, 5	Date and time the package was EXPLAINed. Source: `PLAN_TABLE.TIMESTAMP`	KEXDT
FETCH	I	Total number of FETCH statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#FT
FREED?	I	Has package been FREEd? Source: `Derived`	KFRE
GRANT	I	Total number of GRANT statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#GR
GROUP MEMBER	8, I	The DB2 data sharing member name of the DB2 subsystem that performed the most recent BIND. Source: `SYSIBM.SYSPACKAGE.GROUP_MEMBER`	KGRP

FIELD	ON FORMAT	DESCRIPTION	SORTS/ FILTERS
HL (Hostlang)	1, I	Host language for the package DBRM: **B**　　Assembler **C**　　COBOL **D**　　C **F**　　FORTRAN **P**　　PL/I **2**　　VS COBOL II **3**　　OO-COBOL **4**　　C++ **blank**　for remotely bound packages Source: `SYSIBM.SYSPACKAGE.HOSTLANG`	KHLNG
INSERTS	1	Number of INSERT statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#IN
IS (Isolation)	1	Isolation Level: **R**　RR (Repeatable Read) **S**　CS (Cursor Stability) **T**　RS (Read Stability) **U**　UR (Uncommitted Read) Source: `SYSIBM.SYSPACKAGE.ISOLATION`	KISO
K#TS	Filter panel	Total number of DECLARE CURSOR and SELECT statements. Source: `SYSIBM.PACKSTMT`	K#TS
KEEPDYNAMIC	Filter panel	Indicates the KEEPDYNAMIC option when the package was bound or rebound. Valid values include: **Y**　　Keep dynamic SQL past commit or rollback **N**　　Destroy dynamic SQL at commit or rollback Source: `SYSPACKAGE.KEEPDYNAMIC`	KKEEP
LCK SHR	1, 7, I	Number of LOCKS (SHR) in the package. Source: `SYSIBM.SYSPACKSTMT`	K#LS
LCK XCL	1, 7, I	Number of LOCKS (XCL) in the package. Source: `SYSIBM.SYSPACKSTMT`	K#LX
LIBRARY	4	Name of the PDS in which the package's DBRM is a member or source of the package. Source: `SYSIBM.SYSPACKAGE.PDSNAME`	KLIB
MAXIMUM STMT COST	6	Maximum statement cost. Source: `Derived`	KMCST

FIELD	ON FORMAT	DESCRIPTION	SORTS/ FILTERS
MX (Mixed)	1, I	Indicates if mixed data was in effect when the package's program was precompiled. **N** No **Y** Yes Source: `SYSIBM.SYSPACKAGE.MIXED`	KMIXD
OP (Operative)	1, I	Indicates whether the package can be allocated. **Y** Yes **N** No. An explicit BIND or REBIND is required first. Source: `SYSIBM.SYSPACKAGE.OPERATIVE`	KOPR
OPEN	I	Total number of OPEN statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#OP
OWNER	2, I	Authorization ID of the package owner. Source: `SYSIBM.SYSPACKAGE.OWNER`	KOWN
PACKAGE	1, 2, 3, 4, 5, 6, 7, 8, I	Name of the package. Source: `SYSIBM.SYSPACKAGE.NAME`	KPACK
PKSIZE	3, I	Size of the base section of the package, in bytes. Source: `SYSIBM.SYSPACKAGE.PKSIZE`	KKSZ
PRECOMPILE DATE/TME	4, 5, I	Date and time the application program was precompiled. Source: `SYSIBM.SYSPACKAGE.PCTIMESTAMP`	KPCDT
PREPARE	I	Total number of PREPARE statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#PR
QU (Quote)	1	SQL string delimiter for the SQL statements in the package: **N** Apostrophe **Y** Quotation mark Source: `SYSIBM.SYSPACKAGE.QUOTE`	KQUOT
QUALIFIER	2, I	Implicit qualifier for the unqualified table, view, index, and alias names in the static SQL statements of the package. Source: `SYSIBM.SYSPACKAGE.QUALIFIER`	KQLF
RE (Release)	1, I	When resources are released: **C** At commit **D** At deallocation **blank** not specified; inherits from plan executing package. Source: `SYSIBM.SYSPACKAGE.RELEASE`	KRLS

FIELD	ON FORMAT	DESCRIPTION	SORTS/ FILTERS
RELEASE	I	Number of RELEASE SQL statements. Source: `SYSIBM.SYSSTMT`	K#RE
REOPT(VAR)	I	Indicates the REOPT option when the package was bound or rebound. Valid values include: **Y** Determines the access path at execution time for SQL statements with variable values **N** Determines the access path at bind time Source: `SYSPACKAGE.REOPTVAR`	KROPT
REVOKE	I	Total number of REVOKE statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#RV
RM (Remote)	1, I	Indicates the source of the package: **C** Package was created by BIND COPY **N** Package was locally bound from a DBRM **Y** Package was bound from a remote location Source: `SYSIBM.SYSPACKAGE.REMOTE`	KRMT
ROLLBACK	I	Total number of ROLLBACK statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#RL
SE (SQLERROR)	1, I	Indicates the SQLERROR option on the most recent subcommand that bound or rebound the package: **C** Option was CONTINUE **N** Option was NOPACKAGE Source: `SYSIBM.SYSPACKAGE.SQLERROR`	KSERR
SELECTS	1, 7, I	Number of SELECT statement in the package. Source: `SYSIBM.SYSPACKSTMT`	K#SE
SET	I	Total number of SET statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#ST
SET CONNECT	I	Number of SET CONNECTION SQL statements. Source: `SYSIBM.SYSPACKSTMT`	K#SC
SET DEGREE	I	Number of SET CURRENT DEGREE SQL statements. Source: `SYSIBM.SYSPACKSTMT`	K#SD
SET HOST	I	Number of SET host variable SQL statements. Source: `SYSIBM.SYSPACKSTMT`	K#SH
SET PKGSET	I	Number of SET PACKAGESET SQL statements. Source: `SYSIBM.SYSPACKSTMT`	K#SP

FIELD	ON FORMAT	DESCRIPTION	SORTS/ FILTERS
SET RULES	I	Number of SET CURRENT RULES statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#SR
SET SQLID	I	Number of SET CURRENT SQLID SQL statements. Source: `SYSIBM.SYSPACKSTMT`	K#SS
STMTS (Statements)	1, 3, I	Total number of statements in package. Source: `SYSIBM.SYSPACKSTMT`	K#TL
SYSENTRY	3, I	Number of enabled or disabled entries for this package in SYSIBM.SYSPKSYSTEM. Source: `SYSIBM.SYSPACKAGE.SYSENTRIES`	KSYEN
TOTAL STMT COST	4, 5	Total statement cost. Source: `Derived`	KPCDT
UPDATES	1, 7, I	Number of UPDATE statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#UP
VA (Validate)	1, I	Can validity checking be deferred until run time? **B** All checking must be done at BIND **R** Validation is done at run time for tables that do not exist at BIND time Source: `SYSIBM.SYSPACKAGE.VALIDATE`	KVLT
VD (Valid)	1, I	Indicates whether the package is valid. **Y** Yes **N** No **A** A table has been altered but package is still valid **H** A table has been altered but package is still valid if using DB2 Version 5.3 or greater Source: `SYSIBM.SYSPACKAGE.VALID`	KVLD
VERSION	4, I	Version identifier for the package. Source: `SYSIBM.SYSPACKAGE.VERSION`	KVER
VL (Verification)	1	Shows results of package verification. Possible values include: **N** DBRM has not been verified. **Y** DBRM was verified successfully **E** DBRM verification was unsuccessful **T** There is a timestamp mismatch Source: `Derived`	KVRF
WHENEVER	I	Total number of WHENEVER statements in the package. Source: `SYSIBM.SYSPACKSTMT`	K#WH

Selects

SELECT	DESCRIPTION	TAKES YOU TO...
@	Remote EXPLAIN and gather statistics.	EXPLAIN (KTEPEXPL)
#	Remote EXPLAIN but do not gather statistics.	EXPLAIN (KTEPEXPL)
B	Generate a BIND package statement for the selected package.	BIND Package (KTEPBIKA)
C	Compare the results of the latest !DB/EXPLAIN EXPLAIN for a selected package with the results of performing a BIND EXPLAIN (YES) on the package.	EXPLAIN Compare (KTEPCMPR)
E	EXPLAIN the package and gather statistics.	EXPLAIN (KTEPEXPL)
F	Generate a FREE package.	Output Options (KTEPOUTP)
G	Display cost details for the selected package.	Costs (KTEPCOST)
H	Display the EXPLAIN history for the selected package.	EXPLAIN History (KTEPHIST)
I	Display detailed package information including BIND options.	PACKAGE Information (KTEPKAIN)
J	Select 2 packages with **J** and compare package attributes.	Compare History (KTEPJHIS)
L	Display the output from the latest EXPLAIN of the package.	EXPLAIN (KTEPEXPL)
N	Display all connections for the selected package.	Package Connections (KTEPKCON)
P	Display all plans associated with the selected package.	Plans (KTEPPLAN)
Q	Display all collections associated with the selected package.	Collections (KTEPCLTN)
R	Generate a REBIND statement for the package.	BIND/REBIND panel (KTEPBIKA)
S	List all the SQL statements for the package.	Statements (KTEPSTMT)
T	Display tables for the selected package.	Tables (KTEPTABL)
U	EXPLAIN the package (do not gather statistics).	EXPLAIN (KTEPEXPL)
V	Verify the package.	Package Verification (KTEPPVER)
W	Perform Whatif analysis on the package.	Whatif (KTEPWHIF)
X	Display Exceptions that exist for each SQL statement in the selected Package.	Exceptions (KTEPXCPT)
8	EXPLAIN and display only DBRMs that have not been !DB/EXPLAINed—gather catalog statistics.	EXPLAIN (KTEPEXPL)
9	EXPLAIN and display only DBRMs that have not been !DB/EXPLAINed—do not gather catalog statistics.	EXPLAIN (KTEPEXPL)

Commands

COMMAND	DESCRIPTION	TAKES YOU TO...
BIND	Generate BIND statements for all active packages.	BIND Package (KTEPBIKG) or Output Options (KTEPOUTP)
BINDADD	BIND ACTION(ADD).	BIND Package (KTEPBIKG) or Output Options (KTEPOUTP)
BINDEXP	BIND EXPLAIN(YES).	BIND Package (KTEPBIKG) or Output Options (KTEPOUTP)
BINDREP	BIND ACTION(REPLACE).	BIND Package (KTEPBIKG) or Output Options (KTEPOUTP)
COMPARE	Perform a BIND COMPARE of each Package on the current display according to the options set on the Housekeeping Bind Compare Options Panel KTEPHOBC.	EXPLAIN Compare (KTEPCMPR)
COST	Show statement costs for all packages on the list.	Costs (KTEPCOST)
DROP	Generate FREE statements for all active packages.	Output Options (KTEPOUTP)
EXPL	EXPLAIN (without gathering statistics) all packages that have not been EXPLAINed since they were last bound. Also display latest EXPLAIN for previously EXPLAINed entities.	EXPLAIN (KTEPEXPL)
EXPLA	EXPLAIN (without gathering statistics) all packages.	EXPLAIN (KTEPEXPL)
EXPLAR	Remote EXPLAIN (without gathering statistics) all packages.	EXPLAIN (KTEPEXPL)
EXPLO	EXPLAIN and display only packages that have not been EXPLAINed since they were last bound. Do not gather catalog statistics.	EXPLAIN (KTEPEXPL)
EXPLOR	Remote EXPLAIN and display only packages that have not been EXPLAINed since they were last bound. Do not gather catalog statistics.	EXPLAIN (KTEPEXPL)
EXPLR	Remote EXPLAIN (without gathering statistics) all packages that have not been EXPLAINed since they were last bound. Also display latest EXPLAIN for previously EXPLAINed entities.	EXPLAIN (KTEPEXPL)
GEXPL	EXPLAIN all packages that have not been EXPLAINed since they were last bound and gather statistics. Also display latest EXPLAIN for previously EXPLAINed entities.	EXPLAIN (KTEPEXPL)
GEXPLA	EXPLAIN all packages and gather statistics.	EXPLAIN (KTEPEXPL)
GEXPLAR	Remote EXPLAIN all packages and gather statistics.	EXPLAIN (KTEPEXPL)
GEXPLO	EXPLAIN and display only packages that have not been EXPLAINed since they were last bound. Gather catalog statistics.	EXPLAIN (KTEPEXPL)

COMMAND	DESCRIPTION	TAKES YOU TO...
GEXPLOR	Remote EXPLAIN and display only packages that have not been EXPLAINed since they were last bound. Gather catalog statistics.	EXPLAIN (KTEPEXPL)
GEXPLR	Remote EXPLAIN all packages that have not been EXPLAINed since they were last bound and gather statistics. Also display latest EXPLAIN for previously EXPLAINed entities.	EXPLAIN (KTEPEXPL)
HIST	Display Package History.	
IMPACT	Compare each nonhistorical package with its most recent historical counterpart.	Compare History (KTEPJHIS)
INFO	Show Package Information.	Package Info (KTEPKAIN)
LEXPL	Display latest EXPLAIN.	EXPLAIN (KTEPEXPL)
LEHIST	Display latest EXPLAIN History.	EXPLAIN History (KTEPHIST)
NOHIST	Reset History.	EXPLAIN History (KTEPHIST)
REBIND	Generate REBIND statements.	BIND/REBIND (KTEPBIKA)
REBINDEX	REBIND EXPLAIN(YES).	Output Option (KTEPOUTP)
XCPT	Display Exceptions.	Exceptions (KTEPXCPT)

A note about compares

Typically, when you are on the Plans, Packages, or DBRMS panel, you can issue the IMPACT command (or the J select) to obtain compare history information. The IMPACT command or J select compares such things as precompile options, owners, or qualifiers.

CEXPL is issued from the Compare History panel and compares EXPLAINs.

Plan Connections

Overview

This unit describes the Plan Connections panel.

Background about the Plan Connections panel

The Plan Connections panel (KTEPPCON) lists all environments that a particular plan can access. Its source is the DB2 table SYSPLSYSTEM. This table contains zero or more rows for every local plan. Each row represents a possible connection to an environment in which a plan could be executed.

Access

Plan Connections can only be invoked by selecting option N (Connections) from the Plans panel (see "Plans" on page 187). From Plan Connections, you can only return to Plans.

Panel

The following illustration shows the Plan Connections panel. Initially, the list is sorted according to how you have specified it to be sorted in the Housekeeping Panel sorts.

```
----------------------- DB/EXPLAIN  DB2=D31A ---------------------------------
CMD ===>                                                      SCROLL ===> CSR

                        P L A N   C O N N E C T I O N S
  Cmds: DO (Menu) GLOBAL (Menu)                             Selects: ? (Menu)
------------------------------------------------------------------------------

                    SYSTEM          CONNECTION        ENABLE
                    --------        ----------        ------
                    BATCH                             N
                    CICS            CICS0001          Y
                    CICS            CICS0002          Y
                    CICS            CICS0003          Y
                    CICS            CICS0004          N
```

Fields and Associated Sorts and Filters

FIELD	DESCRIPTION	SORTS/ FILTERS
CONNECT	Connection name. Source: **SYSIBM.SYSPLSYSTEM.CNAME**	PCNN
ENABLE	Indicates whether the connections are enabled or disabled. **Y** Enabled **N** Disabled Source: **SYSIBM.SYSPLSYSTEM.ENABLE**	PENA
SYSTEM	Environment. **BATCH** TSO Batch. **CICS** Customer Information Control System **DB2CALL** DB2 Call Attachment Facility **DLIBATCH** DLI Batch Support Facility **IMS** IMS region **IMSBMP** IMSBMP region **IMSMPP** IMSMPP and IFP region Source: **SYSIBM.SYSPLSYSTEM.SYSTEM**	PSYS

Plan Package List

Overview

This unit describes the Plan Package List panel.

Background about the Plan Package List panel

The Plan Package List panel (KTEPPKPL) lists every local application plan bound with a package list. Its source is the DB2 table SYSPACKLIST. This table contains zero or more rows for every local application plan bound with a package list. Each row represents a unique entry in the plan's package list.

Access

Plan Package List is invoked from either Plans or Collections.

Panel

The following illustration shows the Plan Package List panel.

```
---------------------- DB/EXPLAIN DB2=D31A ----------------------------------
CMD ===>                                                      SCROLL ===> PAGE

                        P A C K A G E   L I S T

  Cmds: GLOBAL (Menu)
-----------------------------------------------------------------------------

  LOCATION         COLLECTION ID      PACKAGE   SEQNO TIMESTAMP
 ---------------- ------------------ -------- ------ -------------------------
                  *                  GULCOL1       1 1999/05/22 15:26:42.601909
                  *                  GULCOL2       2 1999/05/22 15:26:42.601909
                  *                  GULCOL3       3 1999/05/22 15:26:42.601909
```

Fields and Associated Sorts and Filters

FIELD	DESCRIPTION	SORTS/ FILTERS
COLLECTION ID	Collection name for the package. Source: **SYSIBM.SYSPACKLIST.COLLID**	PCOL
LOCATION	Location of the package: ***** Location to be determined at run time. **blank** Local **nonblank** Location name Source: **SYSIBM.SYSPACKLIST.LOCATION**	PLOC
PACKAGE	Name of the package. An asterisk (*) indicates an entire collection. Source: **SYSIBM.SYSPACKLIST.NAME**	PPKG
SEQNO	Sequence number of the entry in the package list. Source: **SYSIBM.SYSPACKLIST.SEQNO**	PSEQ
TIMESTAMP	Timestamp indicating when the row was created. Source: **SYSIBM.SYSPACKLIST.TIMESTAMP**	

Plans

Overview

This unit describes the Plans panel.

Background about the Plans panel

The Plans panel (KTEPPLAN) and its associated information panel list all plans defined in the DB2 catalog. The primary function of the panel is to do EXPLAINs and review the resultant EXPLAIN, BIND, and access path information of a plan.

In addition, a special bridge allows OMEGAMON II for DB2 users to review a selected plan's performance trace information and thread-related information in OMEGAMON II's Application Trace Facility (**A** select) and Accounting Reports (**P** select).

Note: You must know the name of the data set containing this history information to use this facility. You can change the name of the Accounting History data set by using the OMEGAMON II for DB2 **OPTIONS** command. For more information, see "Historical Reporter Options" in the *OMEGAMON II for DB2 Historical Reporting Guide.*

Formats

The Plans panel is available in five different formats to allow access to all information in the DB2 Catalog on a plan. Additional fields can be reviewed on the associated Information panel using the **I** select.

Format	Displayed Fields
Format 1	All
Format 2	Packages
Format 3	DBRMs
Format 4	BIND Information
Format 5	Access Path Information
Format 6	Group Member Information

Panels

The following illustration shows format 1 of the Plans panel. It includes all information contained in the other formats.

```
----------------------- DB/EXPLAIN   DB2=D31A --------------------------------
CMD ===>                                                     SCROLL ===> CSR
                                    P L A N S
   Cmds: DO (Menu) GLOBAL (Menu)                             Selects: ? (Menu)
------------------------------------------------------------------------------
                     ---------------------- ALL ------------------- LOCK LOCK
SEL PLAN       COUNT  STMTS SELECTS DCL CSR DELETES UPDATES INSERTS XCL  SHR
--- --------  ------- ------- ------- ------- ------- ------- ------- ---- ----
 _   #CDLABL1      1      2       1       0       0       0       0    0    0
 _   #101NSRT      1      3       0       0       1       0       1    0    0
 _   #101SAVE      1      5       0       1       0       0       0    0    0
```

The following illustration shows format 2 of the Plans panel containing packages information.

```
----------------------- DB/EXPLAIN   DB2=D31A --------------------------------
CMD ===>                                                     SCROLL ===> CSR
                                    P L A N S
   Cmds: DO (Menu) GLOBAL (Menu)                             Selects: ? (Menu)
------------------------------------------------------------------------------
                     -------------------- PACKAGES ---------------- LOCK LOCK
SEL PLAN       COUNT  STMTS SELECTS DCL CSR DELETES UPDATES INSERTS XCL  SHR
--- --------  ------- ------- ------- ------- ------- ------- ------- ---- ----
 _   #CDLABL1      0      0       0       0       0       0       0    0    0
 _   #101NSRT      0      0       0       0       0       0       0    0    0
 _   #101SAVE      0      0       0       0       0       0       0    0    0
```

The following illustration shows format 3 of the Plans panel containing DBRM information.

```
----------------------- DB/EXPLAIN   DB2=D31A --------------------------------
CMD ===>                                                     SCROLL ===> CSR
                                    P L A N S
   Cmds: DO (Menu) GLOBAL (Menu)                             Selects: ? (Menu)
------------------------------------------------------------------------------
                     ---------------------- DBRMS ----------------- LOCK LOCK
SEL PLAN       COUNT  STMTS SELECTS DCL CSR DELETES UPDATES INSERTS XCL  SHR
--- --------  ------- ------- ------- ------- ------- ------- ------- ---- ----
 _   #CDLABL1      1      2       1       0       0       0       0    0    0
 _   #101NSRT      1      3       0       0       1       0       1    0    0
 _   #101SAVE      1      5       0       1       0       0       0    0    0
```

Panels (continued)

The following illustration shows format 4 of the Plans panel containing
BIND information.

```
---------------------- DB/EXPLAIN  DB2=D31A --------------------------------
CMD ===>                                                   SCROLL ===> PAGE

                             P L A N S
   Cmds: DO (Menu) GLOBAL (Menu)                        Selects: ? (Menu)
----------------------------------------------------------------------------

SEL PLAN     CREATOR  BOUND BY QUALIFIER BIND DATE  BIND TIME SERVER
--- -------- -------- -------- --------- ---------- --------- ---------------
  _  KTE      TDDB16   TDDB16   TDDB16    1999/07/20 14:06:54
  _  KTEPLAN  TDDB19   TDDB19   TDDB16    1999/08/25 11:01:46
  _  QMF240   TDO209B  TDO209B  TDO209B   1999/03/23 14:03:19
```

The following illustration shows format 5 of the Plans panel containing
access path information.

```
---------------------- DB/EXPLAIN  DB2=D42B -------------------- LINE1 OF 82
Cmd ===>                                                   SCROLL ===> CSR
                             P L A N S
   Cmds: DO (Menu) GLOBAL (Menu)                        Selects: ? (Menu)
----------------------------------------------------------------------------
            VOVARIVDEDSDCDKR
SEL PLAN    LPDCESAPXIQGRDDO CACHESZ  PLSIZE  AVGSIZE PLENTRIES SYSENTRIES
--- -------- ---------------- ------- ------- ------- --------- ----------
  _  CANPLAN  NYYUCSBNNED1 NN   1024   12320   2338       0         0
  _  CANPLNX  NYYUCSBNNED1 NN   1024    3320   1500       0         0
  _  CHGPLAN  NYYUCSBNNED1 NN   1024    3320   1682       0         0
  _  CHGPLANX NYYUCSBNNED1 NN   1024    2944   1450       0         0
  _  DSDPLAN  NYYUCSBNNED1 NN   1024    4712   1704       0         0
  _  DSDPLANX NYYUCSBNNED1 NN   1024    3320   1500       0         0
  _  DSNEDCL  NYYUCSRNNED1 NN   1024    2232      0       0         0
  _  DSNESPCS NYYUCSRNNED1 NN   1024    2040      0       1         0
  _  DSNESPRR NYYUCRRNNED1 NN   1024    2040      0       1         0
  _  DSNHYCRD NYYUCSRNNED1 NN   1024    2432   2017       0         0
  _  DSNTEP2  NYYUCSRNNED1 NN   1024    2040      0       1         0
  _  DSNTEP31 NYYUCSRNNED1 NN   1024    2040      0       1         0
  _  DSNTIAD  NYYUCSRNNED1 NN   1024    2232      0       0         0
  _  DSNTIAUL NYYUCSRNNED1 NN   1024    2280      0       0         0
  _  DSNTIA31 NYYUCSRNNED1 NN   1024    2232      0       0         0
  _  DSNTIB31 NYYUCSRNNED1 NN   1024    2280      0       0         0
  _  DSN8BH31 NYYUCSRNNED1 NN   1024    2536   2424       0         0
  _  DSN8BP31 NYYUCSRNNED1 NN   1024    2536   2426       0         0
  _  DSN8CC0  NYYUCSRNNED1 NN   1024    2040      0       1         0
  _  DSN8CH0  NYYUCSRNNED1 NN   1024    2536   2426       0         0
  _  DSN8CP0  NYYUCSRNNED1 NN   1024    4928   2780       0         0
  _  DSN8CQ0  NYYUCSRNNED1 NN   1024    6088   2168       0         0
```

Panels (continued)

The following illustration shows format 6 of the Plans panel containing group member information.

```
------------------------ DB/EXPLAIN  DB2=D42B -------------------- LINE1 OF 48
Cmd ===>                                                      SCROLL ===> PAGE
                         P L A N   I N F O R M A T I O N

  Cmds: GLOBAL (Menu)
------------------------------------------------------------------------------

 PLAN NAME  : BOSTONN    CREATOR  : GDEMI    PLENTRIES :       0
 PLAN FREED? : N         QUALIFIER: KFORD    SYSENTRIES:       0
 AVERAGE SIZE:      0     BOUND BY : GDEMI2   DBRMS    :       1
 PLAN SIZE  :    3336    BIND DATE: 1999/11/26 PACKAGES :      0
 CACHE SIZE :    1024    BIND TIME: 04:49:28  GROUP MEMBER:
 DEGREE     : 1          SERVER   :


 VALIDATE  : B  ISOLATION: S   VALID   : Y   OPERATIVE : Y   ACQUIRE : U
 EXPLAIN   : N  DEFERPREP: N   SQLRULES: D   DISCONNECT: E   RELEASE : C
 EXPREDICATE: B  DYNAMICRULES:  KEEPDYN:     REOPT


 ------------------------ SQL COUNTS FOR ALL -----------------------------
  STATEMENTS        =    240  DROP      =      0  REVOKE     =       0
  ALTER             =      0  EXECUTE   =      1  ROLLBACK   =       2
  CALL              =      0  EXPLAIN   =      0  SELECT     =      22
  CLOSE             =     18  FETCH     =     17  SET        =       0
  COMMIT            =      0  GRANT     =      0  SET CONNECT =      0
  CONNECT           =      0  INSERT    =     12  SET DEGREE  =      0
  CREATE            =      0  LOCK SHR  =      5  SET HOST    =      0
  DECLARE CURSOR    =     17  LOCK XCL  =      0  SET PKGSET  =      0
  DECLARE STATEMENT =      0  OPEN      =     17  SET RULES   =      0
  DECLARE TABLE     =     46  PREPARE   =      2  SET SQLID   =      0
  DELETE            =      3  RELEASE   =      0  UPDATE      =     29
  DESCRIBE          =      0                      WHENEVER    =     42

 ------------------------ SQL COUNTS FOR DBRMS ---------------------------
  STATEMENTS        =    240  DROP      =      0  REVOKE     =       0
  ALTER             =      0  EXECUTE   =      1  ROLLBACK   =       2
  CLOSE             =     18  EXPLAIN   =      0  SELECT     =      22
  COMMIT            =      7  FETCH     =     17  SET        =       0
  CONNECT           =      0  GRANT     =      0  SET CONNECT =      0
  CREATE            =      0  INSERT    =     12  SET DEGREE  =      0
  DECLARE CURSOR    =     17  LOCK SHR  =      5  SET HOST    =      0
  DECLARE STATEMENT =      0  LOCK XCL  =      0  SET PKGSET  =      0
  DECLARE TABLE     =     46  OPEN      =     17  SET SQLID   =      0
  DELETE            =      3  PREPARE   =      2  UPDATE      =     29
  DESCRIBE          =      0  RELEASE   =      0  WHENEVER    =     42

 ------------------------ SQL COUNTS FOR PACKAGES ------------------------
  STATEMENTS        =      0  DROP      =      0  REVOKE     =       0
  ALTER             =      0  EXECUTE   =      0  ROLLBACK   =       0
  CLOSE             =      0  EXPLAIN   =      0  SELECT     =       0
  COMMIT            =      0  FETCH     =      0  SET        =       0
  CONNECT           =      0  GRANT     =      0  SET CONNECT =      0
  CREATE            =      0  INSERT    =      0  SET DEGREE  =      0
  DECLARE CURSOR    =      0  LOCK SHR  =      0  SET HOST    =      0
  DECLARE STATEMENT =      0  LOCK XCL  =      0  SET PKGSET  =      0
  DECLARE TABLE     =      0  OPEN      =      0  SET SQLID   =      0
  DELETE            =      0  PREPARE   =      0  UPDATE      =       0
  DESCRIBE          =      0  RELEASE   =      0  WHENEVER    =       0
 ***************************** BOTTOM OF LIST *******************************
```

Panels (continued)

The Plan Information panel lists a summary of Plan information and presents
BIND options currently in use for a specific plan. Statement totals are also
provided. This panel is scrollable.

```
---------------------- DB/EXPLAIN  DB2=D42B -------------------- LINE1 OF 48
Cmd ===>                                                   SCROLL ===> PAGE
                       P L A N   I N F O R M A T I O N

  Cmds: GLOBAL (Menu)
----------------------------------------------------------------------------

  PLAN NAME  : BOSTONN    CREATOR  : GDEMI     PLENTRIES :       0
  PLAN FREED? : N         QUALIFIER: KFORD     SYSENTRIES:       0
  AVERAGE SIZE:       0    BOUND BY : GDEMI2    DBRMS    :       1
  PLAN SIZE  :     3336    BIND DATE: 1999/11/26 PACKAGES :       0
  CACHE SIZE :     1024    BIND TIME: 04:49:28   GROUP MEMBER:
  DEGREE     : 1           SERVER   :

  VALIDATE   : B  ISOLATION: S   VALID   : Y   OPERATIVE : Y   ACQUIRE : U
  EXPLAIN    : N  DEFERPREP: N   SQLRULES: D   DISCONNECT: E   RELEASE : C
  EXPREDICATE: B  DYNAMICRULES:   KEEPDYN:      REOPT


-------------------------- SQL COUNTS FOR ALL -----------------------------
  STATEMENTS        =   240   DROP      =       0   REVOKE      =       0
  ALTER             =     0   EXECUTE   =       1   ROLLBACK    =       2
  CALL              =     0   EXPLAIN   =       0   SELECT      =      22
  CLOSE             =    18   FETCH     =      17   SET         =       0
  COMMIT            =     0   GRANT     =       0   SET CONNECT =       0
  CONNECT           =     0   INSERT    =      12   SET DEGREE  =       0
  CREATE            =     0   LOCK SHR  =       5   SET HOST    =       0
  DECLARE CURSOR    =    17   LOCK XCL  =       0   SET PKGSET  =       0
  DECLARE STATEMENT =     0   OPEN      =      17   SET RULES   =       0
  DECLARE TABLE     =    46   PREPARE   =       2   SET SQLID   =       0
  DELETE            =     3   RELEASE   =       0   UPDATE      =      29
  DESCRIBE          =     0                         WHENEVER    =      42


------------------------- SQL COUNTS FOR DBRMS ----------------------------
  STATEMENTS        =   240   DROP      =       0   REVOKE      =       0
  ALTER             =     0   EXECUTE   =       1   ROLLBACK    =       2
  CLOSE             =    18   EXPLAIN   =       0   SELECT      =      22
  COMMIT            =     7   FETCH     =      17   SET         =       0
  CONNECT           =     0   GRANT     =       0   SET CONNECT =       0
  CREATE            =     0   INSERT    =      12   SET DEGREE  =       0
  DECLARE CURSOR    =    17   LOCK SHR  =       5   SET HOST    =       0
  DECLARE STATEMENT =     0   LOCK XCL  =       0   SET PKGSET  =       0
  DECLARE TABLE     =    46   OPEN      =      17   SET SQLID   =       0
  DELETE            =     3   PREPARE   =       2   UPDATE      =      29
  DESCRIBE          =     0   RELEASE   =       0   WHENEVER    =      42


----------------------- SQL COUNTS FOR PACKAGES ---------------------------
  STATEMENTS        =     0   DROP      =       0   REVOKE      =       0
  ALTER             =     0   EXECUTE   =       0   ROLLBACK    =       0
  CLOSE             =     0   EXPLAIN   =       0   SELECT      =       0
  COMMIT            =     0   FETCH     =       0   SET         =       0
  CONNECT           =     0   GRANT     =       0   SET CONNECT =       0
  CREATE            =     0   INSERT    =       0   SET DEGREE  =       0
  DECLARE CURSOR    =     0   LOCK SHR  =       0   SET HOST    =       0
  DECLARE STATEMENT =     0   LOCK XCL  =       0   SET PKGSET  =       0
  DECLARE TABLE     =     0   OPEN      =       0   SET SQLID   =       0
  DELETE            =     0   PREPARE   =       0   UPDATE      =       0
  DESCRIBE          =     0   RELEASE   =       0   WHENEVER    =       0
****************************** BOTTOM OF LIST ******************************
```

Fields and Associated Sorts and Filters

The following table describes the fields, sorts, and filters on the Plans panel and its associated information panel. Format I designates the information panel.

FIELD	ON FORMAT...	DESCRIPTION	SORTS/ FILTERS
AC (Acquire)	5, I	When resources are acquired: **A** At allocation **U** Use Source: `SYSIBM.SYSPLAN.ACQUIRE`	PACQ
ALTER (All)	I	Total number of ALTER statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#AL
ALTER (DBRMs)	I	Total number of ALTER statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#AL
ALTER (Packages)	I	Total number of ALTER statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#AL
AVGSIZE (Average Size)	5, I	Average size measured in bytes of the plan section processed at BIND time. Source: `SYSIBM.SYSPLAN.AVGSIZE`	PAVS
BIND DATE	4, 6, I	Date on which the plan was last bound. Source: `SYSIBM.SYSPLAN.BINDDATE`	PBDT
BIND TIME	4, 6, I	Time the plan was last bound. Source: `SYSIBM.SYSPLAN.BINDTIME`	PBDT
BOUND BY	4, 6, I	Primary authorization ID of the binder of the plan. Source: `SYSIBM.SYSPLAN.BOUNDBY`	PBBY
CACHESZ (Cache Size)	5, I	Size measured in bytes of the cache to be acquired for the plan. Source: `SYSIBM.SYSPLAN.CACHESIZE`	PCHSZ
CALL (All)	I	Number of CALL statements in the plan Source: `SYSIBM.SYSPACKAGE.CALL`	P#CA
CALL (DBRMs)	I	Number of CALL statements for DBRMs in the plan Source: `SYSIBM.SYSPACKAGE.CALL`	PDCA
CALL (Packages)	I	Number of CALL statements for packages in the plan Source: `SYSIBM.SYSPACKAGE.CALL`	PKCA

FIELD	ON FORMAT...	DESCRIPTION	SORTS/ FILTERS
CD	5, I	Indicates the current data option when this plan was either bound or rebound. Source: `SYSIBM.SYSPLAN.EXPREDICATE` **B** Data currency not required for ambiguous cursors. Allow blocking on ambiguous cursors. **C** Data currency required for ambiguous cursors. Inhibit blocking for ambiguous cursors. **N** Blocking is inhibited for ambiguous cursors, but the plan was created before the CURRENTDATA option was available. **blank** The value was not extracted. Reextract the plan to obtain the value.	PEXPR
CLOSE (All)	I	Total number of CLOSE statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#CL
CLOSE (DBRMs)	I	Total number of CLOSE statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#CL
CLOSE (Packages)	I	Total number of CLOSE statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#CL
COMMIT (All)	I	Total number of COMMIT statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#CM
COMMIT (DBRMs)	I	Total number of COMMIT statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#CM
COMMIT (Packages)	I	Total number of COMMIT statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#CM
CONNECT (All)	I	Total number of CONNECT statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#CN
CONNECT (DBRMs)	I	Total number of CONNECT statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#CN
CONNECT (Packages)	I	Total number of CONNECT statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#CN

FIELD	ON FORMAT...	DESCRIPTION	SORTS/ FILTERS
COUNT (All)	1	Number of DBRMs and packages used as input for this plan. Source: `SYSIBM.SYSDBRM` Source: `SYSIBM.SYSPACKAGE`	P#DP
COUNT (DBRMs)	3	Number of DBRMs used as input for this plan. Source: `SYSIBM.SYSDBRM`	P#DB
COUNT (Packages)	2	Number of packages used as input for this plan. Source: `SYSIBM.SYSPACKAGE`	P#KA
CREATE (All)	I	Total number of CREATE statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#CR
CREATE (DBRMs)	I	Total number of CREATE statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#CR
CREATE (Packages)	I	Total number of CREATE statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#CR
CREATOR	4, I	Authorization ID of the owner of the application plan. Source: `SYSIBM.SYSPLAN.CREATOR`	PCR
DBRMs	I	Number of DBRMs bound into the plan. Source: `SYSIBM.SYSDBRM`	P#DB
DCL CSR (Declare Cursor)	1, 2, 3	Total number of DECLARE CURSOR statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#DC
DECLARE CURSOR (All)	I	Total number of DECLARE CURSOR statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#DC
DECLARE CURSOR (DBRMs)	I	Total number of DECLARE CURSOR statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#DC
DECLARE CURSOR (Packages)	I	Total number of DECLARE CURSOR statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#DC
DECLARE STATEMENT (All)	I	Total number of DECLARE STATEMENT statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#DM
DECLARE STATEMENT (DBRMs)	I	Total number of DECLARE STATEMENT statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#DM
DECLARE STATEMENT (Packages)	I	Total number of DECLARE STATEMENT statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#DM

FIELD	ON FORMAT...	DESCRIPTION	SORTS/ FILTERS
DECLARE TABLE (All)	I	Total number of DECLARE TABLE statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#DT
DECLARE TABLE (DBRMs)	I	Total number of DECLARE TABLE statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#DT
DECLARE TABLE (Packages)	I	Total number of DECLARE TABLE statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#DT
DEGREE	I	The DEGREE option used when the plan was bound. Source: `SYSIBM.SYSPLAN.DEGREE`	PDEGR
DELETES (All)	1, I	Total number of DELETE statements. Source: `SYSIBM.SYSSTMT` Source: `SYSIBM.SYSPACKSTMT`	P#DL
DELETES (DBRMs)	3, I	Total number of DELETE statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#DL
DELETES (Packages)	2, I	Total number of DELETE statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#DL
DESCRIBE (All)	I	Total number of DESCRIBE statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#DS
DESCRIBE (DBRMs)	I	Total number of DESCRIBE statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#DS
DESCRIBE (Packages)	I	Total number of DESCRIBE statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#DS
DG	5	DEGREE option used when the panel was bound. Its value may be: **1** I/O parallelism is disabled. **A** Any. I/O parallelism value is set by underlying DB2 subsystem. **blank** The default **1**, I/O parallelism is disabled, is used. Source: `SYSIBM.SYSPACKAGE.DEGREE`	PDEGR

FIELD	ON FORMAT...	DESCRIPTION	SORTS/ FILTERS
DI	5	DISCONNECT option used when the plan was bound. Its value may be: **E** Explicit—Disconnect must be explicitly specified. **A** Disconnect is automatic. **C** Disconnect is conditional. **blank** The default, **E**, is used. Source: `SYSIBM.SYSPLAN.DISCONNECT`	PDISC
DISCONNECT	I	DISCONNECT option used when the Plan was bound. Source: `SYSIBM.SYSPLAN.DISCONNECT`	PDISC
DP (Deferpre)	1, I	Determines whether preparation is to be deferred. **Y** Preparation is deferred. **N** Preparation is not deferred. Source: `SYSIBM.SYSPLANS.DEFERPREP`	PDFP
DR	5	The DYNAMICRULES option used when the plan was bound. **B** Dynamic SQL statements are handled like static SQL statements at run time. **blank** Dynamic SQL statements are handled like dynamic SQL statements at run time or the DB2 subsystem is not at least V4. Source: `SYSIBM.SYSPLAN.DYNAMICRULES`	PDYNR
DROP (All)	I	Total number of DROP statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#DR
DROP (DBRMs)	I	Total number of DROP statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#DR
DROP (Packages)	I	Total number of DROP statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#DR
DYNAMICRULES	I	The DYNAMICRULES option used when the plan was bound. **B** Dynamic SQL statements are handled like static SQL statements at run time. **blank** Dynamic SQL statements are handled like dynamic SQL statements at run time or the DB2 subsystem is not at least V4. Source: `SYSIBM.SYSPLAN.DYNAMICRULES`	PDYNR
EXECUTE (All)	I	Total number of EXECUTE statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#EC

FIELD	ON FORMAT...	DESCRIPTION	SORTS/ FILTERS
EXECUTE (DBRMs)	I	Total number of EXECUTE statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#EC
EXECUTE (Packages)	I	Total number of EXECUTE statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#EC
EX (EXPLAIN)	5, I	EXPLAIN at BIND? **Y** Yes **N** No Source: `SYSIBM.SYSPLANS.EXPLAN`	PXPL
EXPLAIN (All)	I	Total number of EXPLAIN statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#EX
EXPLAIN (DBRMs)	I	Total number of EXPLAIN statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#EX
EXPLAIN (Packages)	I	Total number of EXPLAIN statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#EX
EXPREDICATE	I	Indicates the CURRENTDATA option when the Plan was bound or rebound. **B** Data currency is not required for ambiguous cursors. Allow blocking for ambiguous cursors. **C** Data currency is required for ambiguous cursors. Inhibit blocking for ambiguous cursors. **N** Blocking is inhibited for ambiguous cursors but the Plan was created before the CURRENTDATA option was available. Source: `SYSIBM.SYSPLAN.EXPREDICATE`	PEXPR
FETCH (All)	I	Total number of FETCH statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#FT
FETCH (DBRMs)	I	Total number of FETCH statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#FT
FETCH (Packages)	I	Total number of FETCH statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#FT
FREED?	I	Has plan been FREEd? **Y** Yes **N** No Source: `Derived`	PFRE

FIELD	ON FORMAT...	DESCRIPTION	SORTS/ FILTERS
GRANT (All)	I	Total number of GRANT statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#GR
GRANT (DBRMs)	I	Total number of GRANT statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#GR
GRANT (Packages)	I	Total number of GRANT statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#GR
GROUP MEMBER	6, I	The DB2 data sharing member name of the DB2 subsystem that performed the most recent BIND. Source: `SYSIBM.SYSPLAN.GROUP_MEMBER`	PGRP
INSERTS (All)	1, I	Total number of INSERT statements. Source: `SYSIBM.SYSSTMT` Source: `SYSIBM.SYSPACKSTMT`	P#IN
INSERTS (DBRMs)	3, I	Total number of INSERT statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#IN
INSERTS (Packages)	2, I	Total number of INSERT statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#IN
IS (Isolation)	5, I	Isolation Level: **R** RR (Repeatable Read). **S** CS (Cursor Stability). **T** RS (Read Stability). **U** UR (Uncommitted Read). Source: `SYSIBM.SYSPLAN.ISOLATION`	PISO
KD (KEEPDYNAMIC)	2, I	Indicates the KEEPDYNAMIC option when the plan was bound or or rebound. Source: `SYSPLAN.KEEPDYNAMIC`	PKEEP
LOCK SHR (All)	1, I	Total number of LOCK SHR statements. Source: `SYSIBM.SYSSTMT` Source: `SYSIBM.SYSPACKSTMT`	P#LS
LOCK SHR (DBRMs)	3, I	Total number of LOCK SHR statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#LS
LCK SHR (Packages)	2, I	Total number of LOCK SHR statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#LS
LOCK XCL (ALL)	1, I	Total number of LOCK XCL statements. Source: `SYSIBM.SYSSTMT` Source: `SYSIBM.SYSPACKSTMT`	P#LX

FIELD	ON FORMAT...	DESCRIPTION	SORTS/ FILTERS
LOCK XCL (DBRMs)	3, I	Total number of LOCK XCL statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#LX
LOCK XCL (Packages)	2, I	Total number of LOCK XCL statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#LX
OPEN (All)	I	Total number of OPEN statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#OP
OPEN (DBRMs)	I	Total number of OPEN statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#OP
OPEN (Packages)	I	Total number of OPEN statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#OP
OP (Operative)	5, I	Indicates whether the plan is operative. **Y** Yes **N** No. An explicit BIND or REBIND is required first. Source: `SYSIBM.SYSPLAN.OPERATIVE`	POPR
P#TS	Filter panel	Total number of DECLARE CURSOR and SELECT statements in plans. Source: `SYSIBM.SYSSTMT`	P#TS
PD#TS	Filter panel	Total number of DECLARE CURSOR and SELECT statements in DBRMs. Source: `SYSIBM.SYSSTMT`	PD#TS
PK#TS	Filter panel	Total number of DECLARE CURSOR and SELECT statements in packages. Source: `SYSIBM.SYSSTMT`	PK#TS
PACKAGES	I	Number of packages bound into the plan. Source: `SYSIBM.SYSPACKAGE`	P#KA
PLAN	1, 2, 3, 4, 5, 6, I	Name of the application plan. The list is in alphabetic order. Source: `SYSIBM.SYSPLAN.NAME`	PLAN
PLAN FREED?	I	Has plan been FREEd? **Y** Yes **N** No Source: `Derived`	PFRE
PLENTRIES	5, I	Number of package list entries for the plan. This number will be a negative value if there are rows for the plan but the plan was bound in a prior release after fall back. Source: `SYSIBM.SYSPLAN.PLENTRIES`	PPLEN

FIELD	ON FORMAT...	DESCRIPTION	SORTS/ FILTERS
PLSIZE (Plan Size)	5, I	Size measured in bytes of the base section of the plan. Source: `SYSIBM.SYSPLAN.PLSIZE`	PPSZ
PREPARE (All)	I	Total number of PREPARE statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#PR
PREPARE (DBRMs)	I	Total number of PREPARE statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#PR
PREPARE (Packages)	I	Total number of PREPARE statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#PR
QUALIFIER	4, I	Implicit qualifier for the unqualified table, view, index, and alias names in the static SQL statements of the plan. Source: `SYSIBM.SYSPLAN.QUALIFIER`	PQLF
RE (Release)	5, I	When resources are released: **C** At commit **D** At deallocation Source: `SYSIBM.SYSPLAN.RELEASE`	PRLS
RELEASE (All)	I	Total number of RELEASE SQL statements in the Plan. Source: `SYSIBM.SYSSTMT`	P#RE
RELEASE (DBRMs)	I	Number of RELEASE SQL statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#RE
RELEASE (Packages)	I	Number of RELEASE SQL statements from Packages. Source: `SYSIBM.SYSSTMT`	PK#RE
REVOKE (All)	I	Total number of REVOKE statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#RV
REVOKE (DBRMs)	I	Total number of REVOKE statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#RV
REVOKE (Packages)	I	Total number of REVOKE statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#RV
RO(REOPTVAR)	I	Indicates the REOPT option when the plan was bound or rebound. Source: `SYSPLAN.REOPTVAR`	PROPT
ROLLBACK (All)	I	Total number of ROLLBACK statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#RL

FIELD	ON FORMAT...	DESCRIPTION	SORTS/ FILTERS
ROLLBACK (DBRMs)	I	Total number of ROLLBACK statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#RL
ROLLBACK (Packages)	I	Total number of ROLLBACK statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#RL
SELECTS (All)	1, I	Total number of SELECT statements. Source: `SYSIBM.SYSSTMT` Source: `SYSIBM.SYSPACKSTMT`	P#SE
SELECTS (DBRMs)	3, I	Total number of SELECT statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#SE
SELECTS (Packages)	2, I	Total number of SELECT statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#SE
SERVER	4, 6, I	Location name specified with the CURRENTSERVER option when the plan was last bound. Blank if none was specified. Source: `SYSIBM.SYSPLAN.CURRENTSERVER`	PSRV
SET (All)	I	Total number of SET statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#ST
SET (DBRMs)	I	Total number of SET statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#ST
SET (Packages)	I	Total number of SET statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#ST
SET CONNECT (All)	I	Number of SET CONNECTION SQL statements in the Plan. Source: `SYSIBM.SYSSTMT`	P#SC
SET CONNECT (DBRMs)	I	Number of SET CONNECTION SQL statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#SC
SET CONNECT (Packages)	I	The number of SET CONNECTION SQL statements from Packages. Source: `SYSIBM.SYSSTMT`	PK#SC
SET DEGREE (All)	I	Total number of SET CURRENT DEGREE statements in the Plan. Source: `SYSIBM.SYSSTMT`	P#SD
SET DEGREE (DBRMs)	I	Number of SET CURRENT DEGREE statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#SD

FIELD	ON FORMAT...	DESCRIPTION	SORTS/ FILTERS
SET DEGREE (Packages)	I	The number of SET CURRENT DEGREE statements from Packages. Source: `SYSIBM.SYSSTMT`	PK#SD
SET HOST (All)	I	Total number of SET host variable SQL statements in the Plan. Source: `SYSIBM.SYSSTMT`	P#SH
SET HOST (DBRMs)	I	Number of SET host variable SQL statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#SH
SET HOST (Packages)	I	The number of SET host variable SQL statements from Packages. Source: `SYSIBM.SYSSTMT`	PK#SH
SET PKGSET (All)	I	Total number of SET CURRENT PACKAGESET SQL statements in the Plan. Source: `SYSIBM.SYSSTMT`	P#SP
SET PKGSET (DBRMs)	I	Number of SET CURRENT PACKAGESET SQL statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#SP
SET PKGSET (Packages)	I	The number of SET CURRENT PACKAGESET SQL statements from Packages. Source: `SYSIBM.SYSSTMT`	PK#SP
SET RULES (All)	I	Number of SET CURRENT RULES statements in the plan Source: `SYSIBM.SYSSTMT`, or Source: `SYSIBM.SYSPACKSTMT`	P#SR
SET RULES (DBRMs)	I	Number of SET CURRENT RULES statements for DBRMs in the plan Source: `SYSIBM.SYSSTMT`, or Source: `SYSIBM.SYSPACKSTMT`	PD#SR
SET RULES (Packages)	I	Number of SET CURRENT RULES statements for packages in the plan Source: `SYSIBM.SYSSTMT`, or Source: `SYSIBM.SYSPACKSTMT`	PK#SR
SET SQLID (All)	I	Total number of SET CURRENT SQLID SQL statements in the Plan. Source: `SYSIBM.SYSSTMT`	P#SS
SET SQLID (DBRMs)	I	Number of SET CURRENT SQLID SQL statements From DBRMs. Source: `SYSIBM.SYSSTMT`	PD#SS
SET SQLID (Packages)	I	The number of SET CURRENT SQLID SQL statements from Packages. Source: `SYSIBM.SYSSTMT`	PK#SS

FIELD	ON FORMAT...	DESCRIPTION	SORTS/ FILTERS
SQ	5	SQLRULES option used when the plan was bound. Its value may be: **D** Use DB2 SQL rules. **S** Use standard SQL rules. **blank** The default, **D** is used. Source: `SYSIBM.SYSPLAN.SQLRULES`	PSQLR
SQLRULES	I	SQLRULES option used when the Plan was bound. Source: `SYSIBM.SYSPLAN.SQLRULES`	PSQLR
STMTS (All)	1, I	Total number of statements. Source: `SYSIBM.SYSSTMT` Source: `SYSIBM.SYSPACKSTMT`	P#TL
STMTS (DBRMs)	3, I	Total number of statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#TL
STMTS (Packages)	2, I	Total number of statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#TL
SYSENTRIES	5, I	Total number of connections (rows in SYSIBM.SYSPLSYSTEM). Source: `SYSIBM.SYSPLAN.SYSENTRIES`	PSYEN
UPDATES (All)	1, I	Total number of UPDATE statements. Source: `SYSIBM.SYSSTMT` Source: `SYSIBM.SYSPACKSTMT`	P#UP
UPDATES (DBRMs)	3, I	Total number of UPDATE statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#UP
UPDATES (Packages)	2, I	Total number of UPDATE statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#UP
VA (Validate)	5, I	Can validity checking be deferred until run time? **B** All checking must be done at BIND **R** Checking is deferred if tables, views or privileges do not exist at BIND time Source: `SYSIBM.SYSPLAN.VALIDATE`	PVLT

FIELD	ON FORMAT...	DESCRIPTION	SORTS/ FILTERS
VD (Valid)	5, I	Indicates whether the plan is valid. **Y** Yes **N** No **A** Table or table space altered; no rebinding needed **H** Table has been altered, but plan is still valid if using DB2 Version 5.1 or greater Source: `SYSIBM.SYSPLAN.VALID`	PVLD
VL (Verification)	5, I	Results of plan verification. Possible values include: **N** The Plan was not verified. **Y** The Plan was verified successfully. **E** Plan verification was unsuccessful. Source: `Derived`	PVRF
WHENEVER (All)	I	Total number of WHENEVER statements. Source: `SYSIBM.SYSSTMT + SYSIBM.SYSPACKSTMT`	P#WH
WHENEVER (DBRMs)	I	Total number of WHENEVER statements from DBRMs. Source: `SYSIBM.SYSSTMT`	PD#WH
WHENEVER (Packages)	I	Total number of WHENEVER statements from packages. Source: `SYSIBM.SYSPACKSTMT`	PK#WH

Selects

SELECT	DESCRIPTION	TAKES YOU TO...
@	Remote EXPLAIN and gather statistics.	EXPLAIN (KTEPEXPL)
#	Remote EXPLAIN but do not gather statistics.	EXPLAIN (KTEPEXPL)
A	Display OMEGAMON II for DB2 Application Trace Facility. ***Note:*** You must know the name of the data set containing this history information to use this facility. For more information, see "Historical Reporter Options" in the *OMEGAMON II for DB2 Historical Reporting Guide.*	OMEGAMON II for DB2 ATF
B	Generate a BIND statement for the selected plan.	BIND Plan (KTEPBIPL)
C	Compare the results of the latest !DB/EXPLAIN EXPLAIN for a selected plan with the results of performing a BIND EXPLAIN (YES).	EXPLAIN Compare (KTEPCMPR)
D	List all DBRMs for the selected plan.	DBRMs (KTEPDBRM)

SELECT	DESCRIPTION	TAKES YOU TO...
E	EXPLAIN a plan and gather statistics.	EXPLAIN (KTEPEXPL)
F	Generate FREE plan.	Output Options (KTEPOUTP)
G	Display Cost details for the selected plan.	Cost (KTEPCOST)
H	Display the EXPLAIN history for the selected plan.	EXPLAIN History (KTEPHIST)
I	Display detailed plan information including BIND options.	Plan Information (KTEPPLIN)
J	Select 2 plans with J and compare plan attributes.	Compare History (KTEPJHIS)
K	Display the packages associated with a selected plan.	Packages (KTEPKACK)
L	Display the EXPLAIN output from the latest EXPLAIN of a selected plan.	EXPLAIN (KTEPEXPL)
M	Display the selected plan's package list.	Package List (KTEPPLPK)
N	Display all connections for the selected plan.	Plan Connections (KTEPPCON)
P	Display OMEGAMON II for DB2 Accounting Reports. *Note:* You must know the name of the data set containing this history information to use this facility. You can change the name of the data set by using the OMEGAMON II for DB2 **OPTIONS** command. For more information, see "Historical Reporter Options" in the *OMEGAMON II for DB2 Historical Reporting Guide*.	OMEGAMON II for DB2 Accounting Reports
Q	Display all collections associated with the selected plan.	Collections (KTEPCLTN)
R	Generate a REBIND statement for the selected plan.	BIND/REBIND panel (KTEPBIPL)
S	List all the SQL statements for each DBRM and package in the plan.	Statements (KTEPSTMT)
T	Display tables for all DB2 tables, views, or aliases referenced by any SQL INSERT, SELECT, UPDATE, DELETE, LOCK, or DECLARE CURSOR statement in any DBRM or package.	Tables (KTEPTABL)
U	EXPLAIN a plan (do not gather statistics).	EXPLAIN (KTEPEXPL)
V	Verify the plan.	Plan Verification (KTEPPVER)
W	Perform Whatif analysis on the selected plan.	Whatif (KTEPWHIF)
X	Display Exceptions that exist for each SQL statement in the selected Plan.	Exceptions (KTEPXCPT)
Z	Generate the BIND conversion statements required to convert the DBRM to a Package and include the Package in the Plan.	Exceptions (KTEPXCPT)
8	Explain and display only DBRMs that have not been EXPLAINed—gather catalog statistics.	EXPLAIN (KTEPEXPL)
9	Explain and display only DBRMs that have not been EXPLAINed—do not gather catalog statistics.	EXPLAIN (KTEPEXPL)

Commands

COMMAND	DESCRIPTION	TAKES YOU TO...
BIND	Generate BIND statements for all active plans.	BIND Plan (KTEPBIPL)
BINDADD	BIND ACTION(ADD).	BIND Plan (KTEPBIPL)
BINDCNV	Generate the BIND commands needed to convert all the DBRMs bound into the Plan to Packages and include the Packages in the Plan.	BIND Plan (KTEPBIPL)
BINDEXP	BIND EXPLAIN(YES).	BIND Plan (KTEPBIPL)
BINDREP	BIND ACTION(REPLACE).	BIND Plan (KTEPBIPL)
COMPARE	Perform a BIND COMPARE of each Plan on the current display according to the options set on the Bind Compare Options Housekeeping Panel KTEPHOBC.	EXPLAIN Compare (KTEPCMPR)
COST	Display statement costs.	Costs (KTEPCOST)
DROP	Generate FREE statements.	Output Options (KTEPOUTP)
EXPL	EXPLAIN all items that have not been EXPLAINed since they were last bound.	EXPLAIN (KTEPEXPL)
EXPLA	EXPLAIN all regardless of BIND time and do not gather statistics. Also display latest EXPLAIN for previously EXPLAINed plans.	EXPLAIN (KTEPEXPL)
EXPLAR	Remote EXPLAIN all items regardless of BIND time, and do not gather statistics.	EXPLAIN (KTEPEXPL)
EXPLO	EXPLAIN and display only Plans that have not been EXPLAINed since they were last bound. Do not gather catalog statistics.	EXPLAIN (KTEPEXPL)
EXPLOR	Remote EXPLAIN and display only Plans that have not been EXPLAINed since they were last bound. Do not gather catalog statistics.	EXPLAIN (KTEPEXPL)
EXPLR	Remote EXPLAIN all items that have not been EXPLAINED since they were last bound. Also display latest EXPLAIN for previously EXPLAINed plans.	EXPLAIN (KTEPEXPL)
GEXPL	EXPLAIN all items on the list that have not been EXPLAINed since they were last bound and gather statistics. Also display latest EXPLAIN for previously EXPLAINed plans.	EXPLAIN (KTEPEXPL)
GEXPLA	EXPLAIN all items on the list and gather statistics regardless of BIND time.	EXPLAIN (KTEPEXPL)
GEXPLAR	Remote EXPLAIN all items on the list and gather statistics regardless of BIND time.	EXPLAIN (KTEPEXPL)
GEXPLO	EXPLAIN and display only packages that have not been EXPLAINed since they were last bound. Gather catalog statistics.	EXPLAIN (KTEPEXPL)
GEXPLOR	Remote EXPLAIN and display only packages that have not been EXPLAINed since they were last bound. Gather catalog statistics.	EXPLAIN (KTEPEXPL)

COMMAND	DESCRIPTION	TAKES YOU TO...
GEXPLR	Remote EXPLAIN all items on the list that have not been EXPLAINed since they were last bound and gather statistics. Also display latest EXPLAIN for previously EXPLAINed plans.	EXPLAIN (KTEPEXPL)
HIST	Display Plan History.	
IMPACT	Compare each nonhistorical plan with its most recent historical counterpart.	Compare History (KTEPJHIS)
INFO	Display Plan Information.	Plan Information (I)
LEXPL	Display latest EXPLAIN.	EXPLAIN (KTEPEXPL)
LEHIST	Display latest EXPLAIN History.	EXPLAIN History (KTEPHIST)
NOHIST	Reset History.	EXPLAIN History (KTEPHIST)
REBIND	Generate REBIND statements.	BIND/REBIND (KTEPBIPL)
REBINDEX	On a REBIND, forces EXPLAIN(YES).	Output Options (KTEPOUTP)
XCPT	Display Exceptions.	Exceptions (KTEPXCPT)

A note about compares

In V235, another layer of information has been added to your compare processing. Typically, when you are on the Plans, Packages, or DBRMS panel, you can issue the IMPACT command (or the J select) to obtain compare history information. The IMPACT command or J select compares such things as precompile options, owners, or qualifiers.

CEXPL is issued from the Compare History panel and compares EXPLAINs.

Primary Menu

Overview

This unit describes the !DB/EXPLAIN Primary Menu.

Background about the Primary Menu

The Primary Menu (KTEPMENU) provides entry to !DB/EXPLAIN. You can find more information about !DB/EXPLAIN's Primary Menu and its functions in the chapter "Accessing !DB/EXPLAIN Functions" in the *!DB/EXPLAIN User's Guide*.

Access

You access the !DB/EXPLAIN Primary Menu from the !DB/Tools Product Selection Menu or when entering the product from TSO by means of a CLIST.

Panel

The following illustration shows the Primary Menu panel.

```
----------------------------- DB/EXPLAIN  DB2=DB31    ----------------------
Cmd ===>

                       P R I M A R Y   M E N U

Option ===>

           1 Plans               Extract ID        ===> DB31____
           2 DBRMs
           3 Packages            Display Masks?    ===> N
           4 Collections         Masking in effect? ===> N
           5 Tables
           6 Libraries
           7 Costs
           8 Exceptions

           9 JCL Generation
          10 Dynamic SQL
          11 Administration Menu

                               Version: 500  Maint. Level: 9503  PSP: 0
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```

Fields

FIELD	DESCRIPTION
DISPLAY MASKS?	Indicates whether or not the Selection Masking panel (KTEPHOMK) will be displayed. **Y**　　　Yes **N**　　　No
EXTRACT ID	1-8 character ID that specifies the extract. Candle Corp. recommends using the DB2 Subsystem ID (SSID) as the first characters of the extract ID to allow for easy tracking of extracts
FUNCTION	This numeric field represents which function or command to invoke: **1**　　　Plans (KTEPPLAN) **2**　　　DBRMs (KTEPDBRM) **3**　　　Packages (KTEPKACK) **4**　　　Collections (KTEPCLTN) **5**　　　Tables (KTEPTABL) **6**　　　Libraries (KTEPLIBR) **7**　　　DB2 Costs (KTEPCOST) **8**　　　Exceptions (KTEPXCPT) **9**　　　JCL Generation (KTEPJCLE) **10**　　　Dynamic SQL (SFXPSQLI) **11**　　　Administration Menu (KTEPADMN)
MASKING IN EFFECT?	Indicates whether or not there are masks specified on the Selection Masking panel (KTEPHOMK). **Y**　　　Yes **N**　　　No

Sessions Menu

Overview

This unit describes the Sessions Menu.

Background about the Sessions Menu

The Sessions Menu (KTEPSWCH) shows a list of available !DB/EXPLAIN functions. The functions are the same as those on the !DB/EXPLAIN Primary Menu; however, by using the Sessions Menu you can have several !DB/EXPLAIN functions active at the same time and move between them.

The session you are currently in is denoted by a "C" on the line next to it; other active sessions are denoted by an "A". You can find out more about the Sessions Menu in the unit "Access from the Sessions Menu" in the *!DB/EXPLAIN User's Guide*.

Access

The Sessions Menu is accessed by entering "/" on the command line of most panels.

Panel

The following illustration shows the Sessions Menu panel.

```
            SESSIONS
 Select ===> 7
   1. //  A  Main Session
   2. /P      Plans
   3. /D      DBRMs
   4. /K      Packages
   5. /Q      Collections
   6. /T  C  Tables
   7. /L      Libraries
   8. /C      Costs
   9. /X      Exceptions
```

Statements

Overview

This unit describes the Statements panel.

Background about the Statements panel

The Statements panel (KTEPSTMT) lists SQL statements.

Formats

This panel is available in three formats:

Format	Displayed fields
Format 1	First line of SQL text
Format 2	Expanded SQL text for all statements
Format 3	Expanded SQL text for EXPLAINable statements only

Access

You can access this panel through the DBRMs, Packages, Plans, or Tables panels, or through macros, execs, and CLISTs such as KTEXPL (ISPF edit) and KTEQMF (QMF Bridge). See "Accessing and Exiting !DB/EXPLAIN" in the *!DB/EXPLAIN User's Guide* for more information.

Panels

The following illustration shows the Statements panel.

```
---------------------- DB/EXPLAIN  DB2=D42B -------------------- LINE 1 OF 13
Cmd ===>                                                     SCROLL ===> CSR

                          S T A T E M E N T S
   Cmds: DO (Menu) GLOBAL (Menu)                          Selects: ? (Menu)
-----------------------------------------------------------------------------

     STMT  S I C
SEL   NO   T S H  SQL TEXT
---- ----- - - -  -----------------------------------------------------------
    PACKAGE=DSNHYCRD  COLLID=DSNHYCRD         CONTOKEN=155403E6085555E10
    PRECOMPILE=1999/02/13 07:38:37.843832
 -   1051      N DECLARE CURSOR1 CURSOR FOR
 -   1056      N DECLARE CURSOR2 CURSOR FOR
 -    204      N SELECT TYPE , COLCOUNT
 -    277      N OPEN CURSOR1
 -    278      N FETCH CURSOR1
 -    360      N FETCH CURSOR1
 -    375      N CLOSE CURSOR1
 -    420      N OPEN CURSOR2
 -    421      N FETCH CURSOR2
 -    637      N FETCH CURSOR2
 -    652      N CLOSE CURSOR2
****************************** BOTTOM OF LIST ********************
```

If the extract has discarded a statement or statements from the associated
DBRM, the Statements panel displays the message: **Extract Discarded
Statements**.

You can enter various selects on the Statements panel. Entering R causes
!DB/EXPLAIN to display this Recommendations panel.

```
------------------------ DB/EXPLAIN DB2=D31A ---------------------------------
CMD ===>                                                    SCROLL ===> PAGE

                          R E C O M M E N D A T I O N S
  Cmds: GLOBAL (Menu)
-------------------------------------------------------------------------------
 PLAN=DBT925E   DBRM=DSDDB2UP  CONTOKEN=1470006C10B79FB4
 PRECOMPILE=1999/02/23 11:42:08.610000
 VERSION=

 STATEMENT NUMBER    373

   RECOMMENDATION O00002
      Tablespace SYSDBASE has a LOCKSIZE of ANY.  Lock escalation may
      occur.  If concurrency is of utmost importance for applications
      referencing this tablespace then LOCKSIZE(PAGE) may be a better
      choice.

      When LOCKSIZE ANY is specified, the number of locks that any
      program can hold within a table space is limited by the value
      specified for LOCKS PER TABLE(SPACE) when DB2 was installed.
      When the number of page locks reaches the limit, a tablepace
      lock is acquired and all of the page locks are released.  When
      LOCKSIZE PAGE is specified, lock escalation will not occur.
```

Panels (continued)

On the Statements panel, if you select a statement with the **H** select, !DB/EXPLAIN displays the Host Variables panel.

If you select a statement with the **Z** select and the statement contains host variables, !DB/EXPLAIN displays the Host Variables panel. If there are no host variables in the statement you selected, the Host Variables panel is not displayed.

You can enter values for the host variables before executing the statement. If you accessed the Host Variables panel using the H select, the panel lists all of the host variables referenced by the SQL statement you selected. If you accessed the Host Variables panel using the Z select, the panel lists only those host variables needed to execute the statement you selected.

You can save the host variable values, types, and lengths permanently or temporarily depending on your specification in the Save Values Permanently? field on the Host Variables panel.

```
----------------------------- DB/EXPLAIN  DB2=DB31    --------- LINE 1 OF 36
Cmd ===>                                              Scroll ===> PAGE
                         H O S T   V A R I A B L E S
Cmds: DO (Menu)  GLOBAL (Menu)
-------------------------------------------------------------------- CAPS ON
 Enter values for host variables as you would in a dynamic SQL statement.

 Save values permanently? ===> Y ( Y Yes  N No )
                               ( Will be saved in USER.PDS(HOSTS) )

 Statement Number 458 of DBRM DSDDB2UP

 HOST VARIABLE NAME / VALUE        DATA TYPE        LENGTH        SCALE
 -------------------------------   ---------------- ------------ ------------
 TMP#EXTS                          SMALLINT            2
 _____
 TMPASSGN                          INTEGER             4
 _____
 TMPDBNAM                          CHARACTER           8
 _____
 TMPDSTYP                          CHARACTER           1
 _____
 TMPPART#                          SMALLINT            2
 _____
```

Panels (continued)

After you have executed a statement, you can use the **Y** select to show the Statement Execution Summary panel.

```
----------------------- DB/EXPLAIN DB2=D31A --------------------------------
CMD ===>                                                    SCROLL ===> CSR

                         STATEMENT EXECUTION SUMMARY
  Cmds: GLOBAL (Menu)
-------------------------------------------------------------------------------
DB2 SUBSYSTEM    - D31A              COST          -           6.3 TIMERONS
DEFAULT CREATOR  - SYSIBM            ELAPSED TIME  -          0.75 SECS
SET CURRENT SQLID -                  CPU TIME      -          0.10 SECS
CURRENT DEGREE   - ANY               SERVICE UNITS -      2,842.00
SQLERRD(3)       -          0        ROWS RETURNED -             1
  (ROWS UPDATED)

SELECT NAME , CREATOR , TYPE , DBNAME , TSNAME , DBID , OBID , COLCOUNT ,
EDPROC , VALPROC , CARD , NPAGES , PCTPAGES , PARENTS , CHILDREN ,
KEYCOLUMNS , RECLENGTH , STATUS , KEYOBID , CHECKFLAG , CHECKRID , AUDITING ,
CREATEDBY , LOCATION , TBCRATOR , TBNAME , CREATEDTS , ALTEREDTS ,
DATACAPTURE , RBA1 , RBA2 FROM SYSIBM.SYSTABLES WHERE CRATOR = 'SYSIBM' AND
NAME = 'SYSTABLES'
```

Fields

FIELD	ON PANEL...	DESCRIPTION	FILTERS
C H	KTEPSTMT	A value that identifies whether a user has changed the SQL text of a statement. **Y** User has changed the SQL statement text **N** The text of the statement is the original text. **A** New SQL statement added by the user. The SORNO filter filters on the statement number. If the value of the C H field is either Y or N, then the statement number is that number appearing on the panel. If the value of the C H field is A, then the statement number used is the statement number of the original statement (that is, the true source statement). Source: `derived`	SCHA SORNO
CURRENT DEGREE	KTEPSTSU	DEGREE at the time the SQL statement was executed. Source: `Derived` on overrides Source: `SYSIBM.SYSPLAN.DEGREE` Source: `SYSIBM.SYSPACKAGE.DEGREE`	
DATA TYPE	KTEPHSVU	Host variable data type. If the SQL statement is typed in by the user and the host variable is not found in the host variable table, the data type will initially be blank. Source: `SYSIBM.SYSSTMT.TEXT` Source: `SYSIBM.SYSPACKSTMT.STMT` Source: `A DBRM` Source: `User-entered`	HTYPE
DBRM/PACKAGE/ PLAN/TABLE NAME	KTEPSTMT	DBRM, package, plan, or table name This field may be blank if the Statements panel was not accessed through the !DB/EXPLAIN menus. Source: `SYSIBM.SYSDBRM.NAME` Source: `SYSIBM.SYSPACKAGE.NAME` Source: `SYSIBM.SYSPLAN.NAME` Source: `SYSIBM.SYSTABLE.NAME`	SDBRM
HOST VARIABLE NAME	KTEPHSVU	Host variable name. Source: `SYSIBM.SYSSTMT.TEXT` Source: `SYSIBM.SYSPACKSTMT.STMT` Source: `Incoming SQL text` Source: `A DBRM`	HOST

FIELD	ON PANEL...	DESCRIPTION	FILTERS
HOST VARIABLE VALUE	KTEPHSVU	Value of host variable. Enter values as you would in a dynamic SQL statement. If no value is specified, the default value for the data type is used. If the data type of the host variable is known, this field will be long enough to hold the longest value for that data type or the longest special register applicable to the data type of the host variable. If the data type is not known, the length of this field is controlled by the Max Length for Host Var field on the SQL Defaults Housekeeping panel. The maximum input length is 256 characters. Source: `User-entered`	
IS (Isolation Level)	KTEPSTMT	Isolation level of the statement **R** RR (Repeatable Read) **S** CS (Cursor Stability) **T** RS (Read Stability) **U** UR (Uncommitted Read) Source: `SYSIBM.SYSPACKSTMT.ISOLATION`, or Source: `SYSIBM.SYSSTMT.ISOLATION`	SISO
LENGTH	KTEPHSVU	Length of host variable. If the SQL statement is typed in by the user and the host variable is not found in the host variable table, then the length will default to the value specified in the Max Length for Host Var field of the SQL Defaults Housekeeping panel. Source: `SYSIBM.SYSSTMT.TEXT` Source: `SYSIBM.SYSPACKSTMT.STMT` Source: `A DBRM`	HLENG
(NAME heading) ● **DBRM** ● **PLAN** ● **PACKAGE** ● **TABLE**	KTEPSTMT	A variable field describing the type of data displayed in the column below it.	
(Plan Information)	KTEPSTMT	This field consists of Plan Name, Plan Owner, and Bound by. This field may be blank if the Statements panel was not accessed through the !DB/EXPLAIN menus. Source: `SYSIBM.SYSPLAN.NAME` Source: `SYSIBM.SYSPLAN.CREATOR` Source: `SYSIBM.SYSPLAN.BOUNDBY`	

FIELD	ON PANEL...	DESCRIPTION	FILTERS
PRECOMPILE DATE	KTEPSTMT	Date the DBRM or Package was precompiled. This field may be blank if the Statements panel was not accessed through the !DB/EXPLAIN menus. Source: `SYSIBM.SYSDBRM.PRECOMPDATE ||` `PRECOMPTIME` Source: `SYSIBM.SYSPACKAGE.PCTIMESTAMP`	
RECOMMENDATION TEXT	KTEPRECM	Recommendations. Source: `Derived`	
SAVE VALUES PERMANENTLY?	KTEPHSVU	Determines whether host variable values are saved **Y** Save the host variable values permanently. They are then available to !DB/EXPLAIN until you request them to be deleted. **N** Do not permanently save any host variable values. In nonextracted mode (using KTEXPL or KTEON): • The host variable table is scanned for a match on the variable name only. The attributes and value for the first host variable matching the name are used. • The host variable attributes (data type, length, or scale) can be entered or changed. If attributes are changed, the host variable table is rescanned to find a value matching the new attributes.	
SCALE	KTEPHSVU	Scale of host variable. If the SQL statement is typed in by the user and the host variable is not found in the host variable table, then the scale is blank. The scale will also be blank if it is not applicable for the data type. Source: `SYSIBM.SYSSTMT.TEXT` Source: `SYSIBM.SYSPACKSTMT.STMT` Source: `A DBRM`	HSCAL

FIELD	ON PANEL...	DESCRIPTION	FILTERS
SQL TEXT	KTEPSTMT	Full SQL statement text expanded. Valid values include: ***Note:*** Filter SEXPL can take the following values when used with SQL TEXT: **SEXPL=Y** The SQL statement is EXPLAINable. **SEXPL=N** The SQL statement is not EXPLAINable. **SEXPL=W** WHERE CURRENT OF clause is present. Filter STEXT takes the form STEXT=*statement text*. For example: • STEXT=CURSOR WITH HOLD displays all statements with a cursor with hold clause • STEXT=UNION displays all statements with a UNION clause Source: `SYSIBM.SYSSTMT.TEXT` Source: `SYSIBM.SYSPACKSTMT.STMT`	SSTTY SCURS SEXPL STEXT
ST(STATUS)	KTEHSTMT	The bind status of the statement. Valid values include: **C** Compiled statement was bound successfully **P** Parsed statement did not bind successfully; VALIDATE RUN was used **I** Statement will be interpreted at execution time **E** Explain statement **D** Distributed statement that uses system-directed access **R** Reoptimized compiled statement; the statement bound successfully, but the access path will re-optimize at executiion time using input variable values **X** Reoptimized parsed statement; the statement bind failed and VALIDATE RUN was used **Blank** DB2 version is not at least Version 5 or greater Source: `SYSPACKSTMT.STATUS` or `SYSSTMT.STATUS`	SSTAT
STMTNO	KTEPSTMT	Statement number of SQL statement causing the exception. Source: `SYSIBM.SYSSTMT.STMTNO` Source: `SYSIBM.SYSPACKSTMT.STMTNO`	SSTNO

FIELD	ON PANEL...	DESCRIPTION	FILTERS
VERSION	KTEPSTMT	Version identifier for the DBRM or package. This field may be blank if the product panel was not accessed through the Primary Menu. Source: `SYSIBM.SYSDBRM.VERSION` Source: `SYSIBM.SYSPACKSTMT.VERSION`	

Selects

SELECT	DESCRIPTION	TAKES YOU TO...
@	Remote EXPLAIN and gather statistics.	EXPLAIN (KTEPEXPL)
#	Remote EXPLAIN but do not gather statistics.	EXPLAIN (KTEPEXPL)
C	Reset SHOW and SHOWE.	
E	EXPLAIN and gather statistics.	EXPLAIN (KTEPEXPL)
H	Show host variables.	Host Variables (KTEPHSVU)
L	Show latest EXPLAIN.	EXPLAIN (KTEPEXPL)
O	Output to a dataset.	Output Options (KTEPOUTP)
R	Display recommendations.	Recommendations (KTEPSTRC)
S	Show statements.	
U	EXPLAIN but do not gather statistics.	EXPLAIN (KTEPEXPL)
V	Statement execution.	Execution Results (SFXPSQLX)
W	Perform Whatif analysis on the selected statement.	Whatif (KTEPWHIF)
X	Display Exceptions	Exceptions (KTEPXCPT)
Y	Display Statement Execution Summary.	Statement Execution Summary (KTEPSTSU)
Z	Execute the statement.	Execution Results (SFXPSQLX) or Host Variables (KTEPHSVU) if there are host variables available.
2	Permit an ISPF edit against the SQL statement.	Blank

Commands

COMMAND	DESCRIPTION	TAKES YOU TO...
CAPS ON	(From Host Variables Panel) Translate entered input data to upper case.	
CAPS OFF	(From Host Variables Panel) Do not translate entered input data to upper case.	
DELETE	(From Host Variables Panel) Delete all saved host variable values and attributes.	
EXPLA	EXPLAIN all statements.	EXPLAIN (KTEPEXPL)
EXPLAR	Remote EXPLAIN all statements.	EXPLAIN (KTEPEXPL)
FIND	Find a specific character string on the display. Can be abbreviated as F. See "Format of the FIND command" later in this unit for information about the format of the FIND command.	
GEXPLA	EXPLAIN all statements and gather statistics.	EXPLAIN (KTEPEXPL)
GEXPLAR	Remote EXPLAIN all statements and gather statistics.	EXPLAIN (KTEPEXPL)
LEXPL	Display latest EXPLAIN	EXPLAIN (KTEPEXPL)
LOCATE	Locate a specific character string or a specific character string for a specific object type in one of the fields on the display. Can be abbreviated as L or LOC. See "Format of the LOCATE command" later in this unit for information about the format of the LOCATE command.	
NOVERS	Do not display version	EXPLAIN (KTEPEXPL)
OUT	Output statements	EXPLAIN (KTEPEXPL)
RESET	(From Statements Panel) Reset SHOW and SHOWE.	
RESET	(From Host Variables Panel) Reset host variable values and attributes.	
RESETALL	(From Host Variables Panel when in non-extracted mode) Reset host variable values and attributes.	
RFIND	Reexeute the last FIND command. Can be abbreviated as RF.	
RLOCATE	Reexeute the last LOCATE command. Can be abbreviated as RL or RLOC.	
SHOW	Expand all SQL statements.	
SHOWE	Expand all EXPLAINable SQL statements.	
VERS	Display version	
XCPT	Display exceptions.	Exceptions (KTEPXCPT)

Format of the FIND command

The FIND command can be abbreviated as **F**. The format of the FIND command is as follows:

> **FIND** *string* **[FIRST|LAST|NEXT|PREV] [ASIS]**

This table provides information about the parameters of the FIND command. All parameters are optional unless specifically declared as required.

Parameter	Meaning

string (required)	One of:
	
	• A quoted or unquoted string that is to be found; can take the form:
	
	    dirt
	    'dirt road'
	    "dirt road"
	    "Mary's road"
	
	• * (asterisk)—meaning find an occurrence of the last value entered for *string*

FIRST	Find the first occurrence of the string on the display. Ignore the case of any characters in the string when performing the FIND.
LAST	Find the last occurrence of the string on the display. Ignore the case of any characters in the string when performing the FIND.
PREV	Find the previous occurrence of the string on the display. Ignore the case of any characters in the string when performing the FIND.
NEXT	Find the next occurrence of the string (the default) on the display. Ignore the case of any characters in the string when performing the FIND.

Format of the FIND command (continued)

Parameter	Meaning
ASIS	Can be included with any of the above parameters and indicates that the string is to be found as entered; that is, the case of the characters in the string should match the case of the characters in the 'found' string.

Format of the LOCATE command

The LOCATE command can be abbreviated as **L** or **LOC**. The format of the LOCATE command is as follows:

> **LOCATE** *field_name* **operator** *string* **[ASIS]**

This table provides information about the parameters of the LOCATE command. All parameters are optional unless specifically declared as required.

Parameter	Meaning
field_name (required)	One of the following values: • STMTNO—Locate the string in the Statement Number field • ST—Locate the string in the STATUS field • IS—Locate the string in the Isolation Level field • CH—Locate the string in the Statement Changed Indicator field • TEXT—Locate the string in the SQL Text field

Parameter	Meaning
operator (required)	The following can be used with any field listed above under *field_name*: = (equals) These operators can only be used with the STMTNO field: > (greater than) < (less than) >= (greater than or equal to) <= (less than or equal to) <> (not equal to) ¬= (not equal to)
value (required)	A quoted or unquoted value that is to be found; can take the form: dirt 'dirt road' "dirt road" "Mary's road" If the field in which a value is to be located is numeric, the format of *value* on the LOCATE command *must* match the format of the display field. Can take the form: 999 9,999 or 9.999
ASIS	Can be included when *field_name*=TEXT and indicates that the string is to be found as entered; that is, the case of the characters in the string should match the case of the characters in the 'found' string.

Table Columns

Overview

This unit describes the Table Columns panel.

Background about the Table Columns panel

The Table Columns panel (KTEPTCOL) allows you to view and update table column information. Two formats are available. Highlighted values on the panel may be updated. The values for HIGHKEY, HIGH2KEY, LOWKEY, and LOW2KEY can be entered in character or hexadecimal format if the column is of character or graphic type. Rows on panel KTEPTCOL are selectable. When a row is selected, the Column Distribution Statistics panel is displayed.

When you EXPLAIN an entity and save the results, the amount of statistics gathered are based on the value you have specified for the Amount of Statistics to Gather field on Housekeeping's EXPLAIN Defaults panel. If you want to see table column statistics, you must specify a value of 2 or greater for this field.

When you perform a what-if analysis on an entity, the statistics that were gathered at the time the entity was EXPLAINed are used in generating the Whatif and ancillary (Table Columns/Index Keys) displays.   If you need to override the value specified in the Amount of Statistics to Gather field, issue a GSTATS command to reacquire statistics from the catalog and refresh the What-if display, and then proceed with the what-if analysis.

Formats

The panel KTEPTCOL is available in two formats:

Format	Displayed fields
Format 1	Partitioned data is not displayed.
Format 2	Partitioned data is displayed.

Access

Table Columns is invoked whenever a user selects:

- A table using **C** on the Whatif panel KTEPWHIF
- A table using **C** on the Estimator panel KTEPESTM
- A key column using **S** on the Index Keys panel KTEPCKEY.

Panels

The following illustration shows format 1 of the Table Columns panel.

```
----------------------- DB/EXPLAIN  DB2=D31A ------------------ LINE 1 OF 267
CMD ===>                                               SCROLL ===> PAGE
                          T A B L E   C O L U M N S

  Cmds: DO (Menu) GLOBAL (Menu)                           Selects: ? (Menu)
                                     The fields marked with * can be updated.
-------------------------------------------------------------------------------
TABLE=SYSIBM.SYSTABLES

_ COLUMN NAME   = ALTEREDTS            NULLS   = N    COLNO  = 33
    COLTYPE    = TIMESTMP             UPDATES = N    KEYSEQ = 0
    FOREIGNKEY =                      DEFAULT = Y    LENGTH = 10
   *COLCARD    = -1                   FLDPROC = N    SCALE  = 0
_ HIGH2KEY    NULL = N *VALUE =
_ LOW2KEY     NULL = N *VALUE =
    STATS TIMESTAMP= 1999/05/19 01:45:40.150000

_ COLUMN NAME   = AUDITING            NULLS   = N    COLNO  = 27
    COLTYPE    = CHAR                 UPDATES = N    KEYSEQ = 0
   *COLCARD    = -1                   FLDPROC = N    SCALE  = 0
_ HIGH2KEY    NULL = N *VALUE =
_ LOW2KEY     NULL = N *VALUE =
    STATS TIMESTAMP= 1999/05/19 01:45:40.150000
    .
    .
    .
***************************** BOTTOM OF LIST ********************************
```

Panels (continued)

The following illustration shows format 2 of the Table Columns panel.

```
----------------------- DB/EXPLAIN   DB2=D31A ------------------ LINE 1 OF 618
CMD ===>                                                       SCROLL ===> CSR
                           T A B L E   C O L U M N S

  Cmds: DO (Menu) GLOBAL (Menu)                          Selects: ? (Menu)
                                    The fields marked with * can be updated.
-------------------------------------------------------------------------------
TABLE=TDDB36A.KTETT11E

 _ COLUMN NAME  = LOC_ID              NULLS   = N    COLNO  = 2
     COLTYPE    = CHAR                UPDATES = N    KEYSEQ = 0
    *FOREIGNKEY = S                   DEFAULT = Y    LENGTH = 6
    *COLCARD    = 0                   FLDPROC = N    SCALE  = 0
 _  HIGH2KEY   NULL = N *VALUE =
 _  LOW2KEY    NULL = N *VALUE =
     STATS TIMESTAMP= 1999/08/23 08:56:24.130000

     PARTITION  1
        COLCARD   = 0                STATS TIMESTAMP= 1999/08/19 09:17:25.657188
 _   HIGHKEY   NULL = N  VALUE =
 _   HIGH2KEY  NULL = N  VALUE =
 _   LOWKEY    NULL = N  VALUE =
 _   LOW2KEY   NULL = N  VALUE =

     PARTITION  2
        COLCARD   = 0                STATS TIMESTAMP= 1999/08/19 09:17:25.657188
 _   HIGHKEY   NULL = N  VALUE =
 _   HIGH2KEY  NULL = N  VALUE =
 _   LOWKEY    NULL = N  VALUE =
 _   LOW2KEY   NULL = N  VALUE =
     .
     .
     .
     PARTITION 10
     .
     .
     .
 _ COLUMN NAME  = ORDER_DE            NULLS   = N    COLNO  = 7
     COLTYPE    = VARCHAR             UPDATES = Y    KEYSEQ = 0
    *FOREIGNKEY = S                   DEFAULT = Y    LENGTH = 40
    *COLCARD    = 0                   FLDPROC = N    SCALE  = 0
 _  HIGH2KEY   NULL = N *VALUE =
 _  LOW2KEY    NULL = N *VALUE =
     STATS TIMESTAMP= 1999/08/23 08:56:24.130000

     PARTITION  1
        COLCARD   = 0                STATS TIMESTAMP= 1999/08/19 09:17:25.657188
 _   HIGHKEY   NULL = N  VALUE =
 _   HIGH2KEY  NULL = N  VALUE =
 _   LOWKEY    NULL = N  VALUE =
 _   LOW2KEY   NULL = N  VALUE =

     PARTITION  2
        COLCARD   = 0                STATS TIMESTAMP= 1999/08/19 09:17:25.657188
 _   HIGHKEY   NULL = N  VALUE =
 _   HIGH2KEY  NULL = N  VALUE =
 _   LOWKEY    NULL = N  VALUE =
 _   LOW2KEY   NULL = N  VALUE =
     .
     .
     .
```

Panels (continued)

This is the continuation of format 2.

```
     PARTITION 10
     .
     .
     .
_ COLUMN NAME   = ORDER_INCREASE_PCT     NULLS  = N    COLNO  = 8
     COLTYPE   = FLOAT                   UPDATES = Y    KEYSEQ = 0
    *COLCARD   = 0                       FLDPROC = N    SCALE  = 0
_  HIGH2KEY   NULL = N *VALUE =
_  LOW2KEY    NULL = N *VALUE =
     STATS TIMESTAMP= 1999/08/23 08:56:24.130000

     PARTITION  1
        COLCARD   = 0              STATS TIMESTAMP= 1999/08/19 09:17:25.657188
_     HIGHKEY   NULL = N  VALUE =
_     HIGH2KEY  NULL = N  VALUE =
_     LOWKEY    NULL = N  VALUE =
_     LOW2KEY   NULL = N  VALUE =

     PARTITION  2
        COLCARD   = 0              STATS TIMESTAMP= 1999/08/19 09:17:25.657188
_     HIGHKEY   NULL = N  VALUE =
_     HIGH2KEY  NULL = N  VALUE =
_     LOWKEY    NULL = N  VALUE =
_     LOW2KEY   NULL = N  VALUE =

_ COLUMN NAME   = ORDER_QUANTITY         NULLS  = N    COLNO  = 6
     COLTYPE   = DECIMAL                 UPDATES = Y    KEYSEQ = 0
    *COLCARD   = 0                       FLDPROC = N    SCALE  = 2
_  HIGH2KEY   NULL = N *VALUE =
_  LOW2KEY    NULL = N *VALUE =
     STATS TIMESTAMP= 1999/08/23 08:56:24.130000

     PARTITION  1
        COLCARD   = 0              STATS TIMESTAMP= 1999/08/19 09:17:25.657188
_     HIGHKEY   NULL = N  VALUE =
_     HIGH2KEY  NULL = N  VALUE =
_     LOWKEY    NULL = N  VALUE =
_     LOW2KEY   NULL = N  VALUE =
     .
     .
     .
```

Fields

You can update the fields indicated by an asterisk (*).

FIELD	DESCRIPTION	NOTES
COLCARD (non-partition) *	Estimated number of distinct values in the column	Source: `SYSIBM.SYSCOLUMNS.COLCARD`
COLCARD (partition)	Column cardinality for the partition.	Source: `SYSIBM.SYSCOLSTATS.COLCARD`
COLNO	Numeric position of the column in the table	Source: `SYSIBM.SYSCOLUMNS.COLNO`
COLTYPE	Column type as specified in the definition of the column.	Source: `SYSIBM.SYSCOLUMNS.COLTYPE`
DEFAULT	Whether the column has a default value. Y The column has a default value. N The column does not have a default value.	Source: `SYSIBM.SYSCOLUMNS.DEFAULT`
FLDPROC	Indicates whether column has a field procedure.	Source: `SYSIBM.SYSCOLUMNS.FLDPROC`
FOREIGNKEY *	Applies to character columns only and indicates the subtype of the data. Data type may be bit data, single byte character string data, or mixed data.	This field can be updated if the column is character-type. Source: `SYSIBM.SYSCOLUMNS.FOREIGNKEY`
HIGHKEY NULL (partition) *	Null indicator for the highest value of the column within the partition. The value in the field may be: Y The column can contain nulls and the HIGHKEY value is null. N The column cannot contain nulls or the column can contain nulls but the HIGHKEY value is not null. If the value in the field is Y, the HIGHKEY VALUE is ignored.	This field is updateable if the column can contain nulls. Source: Derived from `SYSIBM.SYSCOLSTATS.HIGHKEY`
HIGHKEY VALUE (partition) *	Highest value of the column within the partition.	Source: `SYSIBM.SYSCOLSTATS.HIGHKEY`

FIELD	DESCRIPTION	NOTES
HIGH2KEY NULL (non-partition) *	Null indicator for the second highest value of the column. The value in the field may be: **Y** The column can contain nulls and the HIGH2KEY value is null. **N** The column cannot contain nulls or the column can contain nulls but the HIGH2KEY value is not null. If the value in the field is `Y`, the HIGH2KEY VALUE is ignored.	This field is updateable if the column can contain nulls. Source: Derived from `SYSIBM.SYSCOLUMNS.HIGH2KEY`
HIGH2KEY NULL (partition) *	Null indicator for the second highest value of the column within the partition. The value in the field may be: **Y** The column can contain nulls and the HIGH2KEY value is null. **N** The column cannot contain nulls or the column can contain nulls but the HIGH2KEY value is not null. If the value in the field is `Y`, the HIGH2KEY VALUE is ignored.	This field is updateable if the column can contain nulls. Source: Derived from `SYSIBM.SYSCOLSTATS.HIGH2KEY`
HIGH2KEY VALUE (non-partition) *	Second highest value of the column.	This field is updateable. Source: `SYSIBM.SYSCOLUMNS.HIGH2KEY`
HIGH2KEY VALUE (partition) *	Second highest value of the column within the partition.	Source: `SYSIBM.SYSCOLSTATS.HIGH2KEY`
KEYSEQ	Numeric position of the column in the table's primary key.	Source: `SYSIBM.SYSCOLUMNS.KEYSEQ`
LENGTH	The length attribute of the column or, for a decimal column, its precision.	Source: `SYSIBM.SYSCOLUMNS.LENGTH`

FIELD	DESCRIPTION	NOTES
LOWKEY NULL (partition) *	Null indicator for the lowest value of the column within the partition. The value in the field may be: **Y** The column can contain nulls and the LOWKEY value is null. **N** The column cannot contain nulls or the column can contain nulls but the LOWKEY value is not null. If the value in the field is **Y**, the LOWKEY VALUE is ignored.	This field is updateable if the column can contain nulls. Source: Derived from `SYSIBM.SYSCOLSTATS.LOWKEY`
LOWKEY VALUE (partition) *	Second lowest value of the column within the partition.	Source: `SYSIBM.SYSCOLSTATS.LOWKEY`
LOW2KEY NULL (non-partition) *	Null indicator for the second lowest value of the column. The value in the field may be: **Y** The column can contain nulls and the LOW2KEY value is null. **N** The column cannot contain nulls or the column can contain nulls but the LOW2KEY value is not null. If the value in the field is **Y**, the LOW2KEY VALUE is ignored.	This field is updateable if the column can contain nulls. Source: Derived from `SYSIBM.SYSCOLUMNS.LOW2KEY`
LOW2KEY NULL (partition) *	Null indicator for the second lowest value of the column within the partition. The value in the field may be: **Y** The column can contain nulls and the LOW2KEY value is null. **N** The column cannot contain nulls or the column can contain nulls but the LOW2KEY value is not null. If the value in the field is **Y**, the LOW2KEY VALUE is ignored.	This field is updateable if the column can contain nulls. Source: Derived from `SYSIBM.SYSCOLSTATS.LOW2KEY`
LOW2KEY VALUE (non-partition) *	Second lowest value of the column.	This field is updateable. Source: `SYSIBM.SYSCOLUMNS.LOW2KEY`
LOW2KEY VALUE (partition) *	Second lowest value of the column within the partition.	Source: `SYSIBM.SYSCOLSTATS.LOW2KEY`

FIELD	DESCRIPTION	NOTES
NULLS	Whether the column can contain a null value. Y The column can contain null values. N The column cannot contain null values.	Source: `SYSIBM.SYSCOLUMNS.NULLS`
PART	Partition number.	Source: `SYSIBM.SYSCOLSTATS.PARTITION`
SCALE	Scale of the column.	Source: `SYSIBM.SYSCOLUMNS.SCALE`
STATS TIMESTAMP	Statistics timestamp.	This field is set to the CURRENT TIMESTAMP for functions that update the catalog or output statistics. Source: `SYSIBM.SYSCOLSTATS.STATSTIME` (partition) Source: `SYSIBM.SYSCOLUMNS.STATSTIME` (nonpartition)
TABLE=	Name of the table to which the listed columns belong.	
UPDATES	Whether the column can be updated. Y The column can be updated N The column cannot be updated.	Source: `SYSIBM.SYSCOLUMNS.UPDATES`

Selects

SELECT	DESCRIPTION	TAKES YOU TO...
C	Display Column Distribution Statistics for the table column in character format. The `C` select is only available for the HIGH*KEY and LOW*KEY fields and the column contains either character or graphic data.	
S	Display Column Distribution Statistics	Column Distribution Statistics (KTEPCDIS)
X	Display Column Distribution Statistics for the table column in hexadecimal format. The `X` select is only available for the HIGH*KEY and LOW*KEY fields and the column contains either character or graphic data.	

Commands

COMMAND	DESCRIPTION
CHANGE	Change all of the specified values to the new value. Can be abbreviated as C or CHA. See "Format of the CHANGE command" later in this unit for expanded information about the CHANGE command.
CHAR	Display all lines in character format. This command only applies to character or graphic data columns.
FIND	Find a specific character string on the display. Can be abbreviated as F. See "Format of the FIND command" later in this unit for expanded information about the FIND command.
HEX	Display all lines in hexadecimal format. This command only applies to character or graphic data columns.
LOCATE	Locate a specific value, or a specific value for a specific object type, in one of the fields on the display; or find data changed by the last command (for example, RESET, CHANGE, UNIFORM) you issued or data you have modified. Can be abbreviated as L or LOC. See "Format of the LOCATE command" later in this unit for expanded information about the LOCATE command.
NEWSET	Establish a new column statistics set.
NEWSETALL	Establish a new statistics set for column statistics and column distribution statistics.
NOSTAT	Set column statistics to RUNSTATS, not to run value. RUNSTATS can be 0, blank, or -1.
NOSTATALL	Set column statistics and column distribution statistics to RUNSTATS, not to run value. RUNSTATS can be 0, blank, or -1.
RESET	Reset column statistics values to the last statistics set. *Note:* A statistics set is established when you enter the Table Columns panel and when you explicitly enter the NEWSET* command.
RFIND	Reexeute the last FIND command. Can be abbreviated RF.
RLOCATE	Reexeute the last LOCATE command. Can be abbreviated RL or RLOC.
RESETALL	Reset column statistics and column distribution statistics to the last statistics set. *Note:* A statistics set is established when you enter the Table Columns panel and when you explicitly enter the NEWSET* command.
UNIFORM	Set partitioned statistics to uniform distribution. For example, if the value for CARD for tables is 90000 and there are 10 partitions, then set each table partition CARD field to 9000.

Format of the CHANGE command

The CHANGE command can be abbreviated as CHA or C. It operates only on the COLCARD field. The format for this command is:

   CHANGE COLCARD operator *value* **[%]**

This table provides information about the parameters of the CHANGE command. All parameters are optional unless specifically declared as required.

Parameter	Meaning

operator (required)	One of the following can be used in the operator field:
	
	    = (equals)
	    + (plus)
	    - (minus)

value (required)	Value to set for all column COLCARDs. Partition COLCARDS are not changed.
%	The % (percent) sign can be used with the + (plus) and - (minus) operators to indicate that the value represents a percentage by which the changed field is to be incremented or decremented.

Format of the FIND command

The FIND command can be abbreviated as **F**. The format of the FIND command is as follows:

```
FIND string [FIRST|LAST|NEXT|PREV] [ASIS]
```

This table provides information about the parameters of the FIND command. All parameters are optional unless specifically declared as required.

Parameter	Meaning

string (required)	One of:
	
	● A quoted or unquoted string that is to be found; can take the form:
	
	    dirt
	    'dirt road'
	    "dirt road"
	    "Mary's road"
	
	● * (asterisk)—meaning find an occurrence of the last value entered for *string*.

FIRST	Find the first occurrence of the string on the display. Ignore the case of any characters in the string when performing the FIND.
LAST	Find the last occurrence of the string on the display. Ignore the case of any characters in the string when performing the FIND.
PREV	Find the previous occurrence of the string on the display. Ignore the case of any characters in the string when performing the FIND.
NEXT	Find the next occurrence of the string (the default) on the display. Ignore the case of any characters in the string when performing the FIND.
ASIS	Can be included with any of the above parameters and indicates that the string is to be found as entered; that is, the case of the characters in the string should match the case of the characters in the 'found' string.

Format of the LOCATE command

The LOCATE command can be abbreviated as **L** or **LOC**. The format of the LOCATE command is as follows:

```
LOCATE  [field_type] field_name operator value [ASIS]
```

or

```
LOCATE CHANGED
```

or

```
LOCATE MODIFIED
```

CHANGED can be abbreviated as CHA. MODIFIED can be abbreviated as MOD.

This table provides information about the parameters of the LOCATE command. All parameters are optional unless specifically declared as required.

Parameter	Meaning
field_type	Can be CO or CP. *field type* is optional. If specified, it designates the type of field in which !DB/EXPLAIN is to find the designated value.
field_name (required)	Name of the field in which the specified value is to be located

Format of the LOCATE command (continued)

Parameter	Meaning
operator	One of the following can be used in the operator field: = (equals) > (greater than) < (less than) >= (greater than or equal to) <= (less than or equal to) <> (equal to) ¬= (not equal to)
value (required)	A quoted or unquoted value that is to be found; can take the form: dirt 'dirt road' "dirt road" "Mary's road" If the field in which a value is to be located is numeric, the format of *value* on the LOCATE command *must* match the format of the display field. Can take the form: 999 9,999 or 9.999 1999/09/01 (will not match a value entered as 09/01/1999)
ASIS	Can be included with any of the above parameters and indicates that the string is to be found as entered; that is, the case of the characters in the string should match the case of the characters in the 'found' string.
CHANGED	Locates a value changed as the result of the last-issued command, for example, a CALC or UNIFORM command
MODIFIED	Locates a value changed by a user modification or a CHANGE command since the last statistics were gathered

Valid field types for the LOCATE command

Refer to the table for the fields that can be affected by the LOCATE command. A more complete list showing alternate field names (where applicable) for the field names in the table can be found in the online help for the Table Columns panel.

Field Type	Field Name
CO	COLCARD COLNO COLTYPE DEFAULT FLDPROC FOREIGNKEY HIGH2KEY KEYSEQ LENGTH LOW2KEY NAME NULLS SCALE STATSTS
CP	COLCARD HIGHKEY HIGH2KEY LOWKEY LOW2KEY STATSTS

Tables

Overview

This unit describes the Tables panel.

Background about the Tables panel

The Tables panel (KTEPTABL) lists all DB2 tables, views, or aliases referenced by any INSERT, SELECT, UPDATE, DELETE, LOCK, or DECLARE CURSOR SQL statement in any DBRM or package.

Access

Tables can be accessed from the Primary Menu, or the Sessions, Plans, Packages, or DBRMs panels.

Panel

The Tables panel appears below. If you specified that alias processing was to take place during your extract, the table names appearing on this panel are the actual table names. If you specified that alias processing was not to occur during your extract, the table's alias, if the alias was coded in the SQL statement, rather than the actual table name, will appear on this panel.

```
----------------------- DB/EXPLAIN  DB2=D31A  -------------------------------
CMD ===>                                                     SCROLL ===> PAGE
                                T A B L E S
  Cmds: GLOBAL (Menu)
-------------------------------------------------------------------------------
    CREATOR/NAME
SEL  SELECTS    DELETES     INSERTS    UPDATES  LOCK XCLS LOCK SHRS  TOTAL STMTS
--- --------- --------- --------- --------- --------- ---------- -------------
  _  AA14C00.  HOLIDAYS              LOCATION=
           1         0         0         0         0        00             0
  _  SYSIBM.  SYSINDEXPART          LOCATION=
           1         0         0         0         0        00             0
  _  SYSIBM.  SYSTABLEPART          LOCATION=
           1         0         0         0         0        00             0
  _  TSDB07.  VPHONE                LOCATION=
           1         0         0         0         0        00             0
     * TOTALS *
           4         0         0         0         0        00             0
```

Fields and Associated Sorts and Filters

FIELD	DESCRIPTION	SORTS/ FILTERS
CREATOR	Authorization ID of the owner of the table, view, or alias. Source: `SYSIBM.SYSTABLES.CREATOR`	TCR
DELETES	Number of DELETEs that reference this table. Source: **Derived**	T#DL
INSERTS	Number of INSERTs that reference this table. Source: **Derived**	T#IN
LOCATION	Location name of the object. Source: `SYSIBM.SYSTABLES.LOCATION`	TLOC
LOCK SHRS	Number of LOCKs shared on this table. Source: **Derived**	T#LS
LOCK XCLS	Number of LOCKs XCL on this table. Source: **Derived**	T#LX
NAME	Name of the table, view, or alias. Source: `SYSIBM.SYSTABLES.NAME`	TTBL
SELECTS	Number of SELECTs that reference this table. Source: **Derived**	T#SE
TOTAL STMT	Total number of statements that reference this table. Source: **Derived**	T#TL
UPDATES	Number of UPDATEs that reference this table. Source: **Derived**	T#UP

Selects

SELECT	DESCRIPTION	TAKES YOU TO...
D	Display all DBRMs referencing the selected table.	DBRMs (KTEPDBRM)
K	Displays all packages referencing the selected table.	Packages (KTEPKACK)
P	Display all plans referencing the selected table.	Plans (KTEPPLAN)
S	List all statements that access the selected table.	Statements (KTEPSTMT)
X	Display exceptions for all statements that reference a given table.	Exceptions (KTEPXCPT)

Commands

COMMAND	DESCRIPTION	TAKES YOU TO...
XCPT	Display exceptions.	Exceptions (KTEPXCPT)

Verification

Overview

This unit describes the Verification panel.

Background about the Verification panel

If you enter the verification function from the Plans panel, !DB/EXPLAIN finds the DBRMs used by the Plan, determines the library in which each DBRM resides and whether or not that library is available on DASD, and checks for a timestamp mismatch.

If you enter the Verification function from a Packages or DBRMs panel, !DB/EXPLAIN determines the library in which each DBRM resides and whether or not that library is available on DASD, and checks for a timestamp mismatch.

Access

Verification can be accessed from the Plans, DBRMs, or Packages panel by selecting the Verify (V) option. After verification, you are returned to the panel from which you initiated the Verify function.

Panel

The following illustration shows the Verification panel.

```
----------------------- DB/EXPLAIN(V235)  DB2=D31A --------------------------
CMD ===>                                                    SCROLL ===> PAGE
                             V E R I F I C A T I O N
  Cmds: DO (Menu) GLOBAL (Menu)                            Selects: ? (Menu)
------------------------------------------------------------------------------
 DBRM/     --- PRECOMPILE ---
  PACKAGE   DATE           TIME   LIBRARY NAME
 --------  ------------------    --------------------------------------------
 AS07HDG   1999/02/03 11:55:59   TDDB.DE2.V230.TEST.DBRMLIB
                                 STATUS: ON VOLUME  OMON34
```

Fields

FIELD	DESCRIPTION
COLLID/PLAN NAME	Name of the package collection or plan
	Source: **SYSIBM.SYSPACKAGE.COLLID**
	Source: **SYSIBM.SYSPLAN.NAME**
DBRM/PACKAGE/ PLAN NAME	DBRM or package name
	Source: **SYSIBM.SYSDBRM.NAME**
	Source: **SYSIBM.SYSPACKAGE.NAME**
LIBRARY NAME	Name of the DBRM or package library.
	Source: **SYSIBM.SYSDBRM.PDSNAME or SYSPACKAGE.PDSNAME**
LOCATION	Location name of the package.
	Source: **SYSIBM.SYSPACKAGE.LOCATION**
(NAME heading) • **DBRM** • **PACKAGE** • **PLAN**	A variable field describing the type of data displayed in the column below it.
	Source: **SYSIBM.SYSDBRM.NAME**
	Source: **SYSIBM.SYSPACKAGE.NAME**
	Source: **SYSIBM.SYSPLAN.NAME**
PRECOMPILE DATE/TIME	Date and time the DBRM or package was precompiled.
	Source: **SYSIBM.SYSDBRM.PRECOMPDATE || PRECOMPTIME**
	Source: **SYSIBM.SYSPACKAGE.PCTIMESTAMP**
STATUS	Library Status values:
	Migrated Not Cataloged On Volume XXXXXX. No Volumes in Catalog Not Verified Open Error (Not Auth)
	Source: **Derived**
VERSION	Version of the DBRM or package.
	Source: **SYSIBM.SYSDBRM.VERSION**
	Source: **SYSIBM.SYSPACKAGE.VERSION**

Commands

COMMAND	DESCRIPTION	TAKES YOU TO...
DISPLAY	Display all statements in a DBRM or package.	Statements (KTEPSTMT)

Whatif

Overview

This unit describes the Whatif panel.

Background about the Whatif panel

The Whatif panel (KTEPWHIF) provides statistical information about tables and indexes used by an SQL statement. Use the Whatif panel to temporarily or permanently modify the DB2 catalog and observe the effect on DB2 access path selection. Fields that can be updated are marked with an asterisk.

Procedure for update when using a shadow catalog

If you are using a shadow catalog, but you want the actual DB2 catalog updated either temporarily or permanently as a result of using the Whatif function, review this information.

If the value you have specified in the Catalog Prefix field on the !DB/Tools DB2-Specific Information panel is not the catalog prefix of the actual catalog tables (that is, it is the qualifier of the shadow catalog tables instead), then specify the following to have the actual DB2 catalog tables updated:

- On the Miscellaneous Defaults Housekeeping Panel, specify **Y** in the Use Real Catalog Prefix field.

- On the !DB/Tools DB2-Specific Information panel, specify the qualifier of the actual catalog tables in the Real Catalog Prefix field.

Formats

This panel is available in two formats.

Format	Displayed fields
Format 1	Data related to access path.
Format 2	Data in SYSTABLESPACE, SYSTABLES, SYSINDEXES, SYSTABLEPART, SYSINDEXPART, SYSTABSTATS, and SYSINDEXSTATS

Access

This panel is accessed by selecting the Whatif (W) option from Plans, DBRMs, Packages, or Statements.

Panels

The following illustration shows format 1 of the Whatif panel—access path information.

```
----------------------- DB/EXPLAIN  DB2=D31A ------------------ LINE 1 OF 12
CMD ===>                                                  SCROLL ===> PAGE
                          W H A T I F   A N A L Y S I S
 Cmds: DO (Menu) GLOBAL (Menu)                           Selects: ? (Menu)
                                     The fields marked with * can be updated.
-------------------------------------------------------------------------------
 TS= DSNDB06.SYSCOPY                      CREATOR= SYSIBM
  *NACTIVE= 9

_ TBL= SYSIBM.SYSCOPY                  LOCATION=
   *NPAGES= 9                          *PCTROWCOMP = 0
   *CARD  = 300


   ----------------------- USED INDEXES --------------------------------
_ IX= SYSIBM.DSNUCH01
    *FULLKEY = -1             *NLEVELS= -1          *CLUSTRATIO= 0
    *FIRSTKEY= -1             *NLEAF  = -1

***************************** BOTTOM OF LIST ********************************
```

Panels (continued)

This is format 2 of the Whatif panel—all information.

```
----------------------- DB/EXPLAIN  DB2=D31A ------------------ LINE 1 OF 30
CMD ===>                                                    SCROLL ===> PAGE
                          W H A T I F   A N A L Y S I S
  Cmds: DO (Menu) GLOBAL (Menu)                            Selects: ? (Menu)
                                    The fields marked with * can be updated.
-----------------------------------------------------------------------------
 TS= DSNDB06.SYSCOPY      PARTITIONS= 0  LOCKRULE = A
  *NACTIVE= 9             OBID= 7        CLOSERULE= N  CREATOR = SYSIBM
   NTABLES= 1             DBID= 6        IMPLICIT = N  CREATEBY= SYSIBM
   SPACE  = 0             PSID= 16       STATUS   = A  BPOOL= BP0
   PGSIZE = 4             SEGSIZE= 0     ERASERULE= N  DSETPASS=
   LOCKMAX= 0             STATSTS= 0000/00/00 00:00:00.000000

 _ TBL= SYSIBM.SYSCOPY               LOCATION=
    RECLEN= 1904          TBCREATR=                       TYPE  = T
   *CARD  = 300           TBNAME  =                       STATUS=
   *NPAGES= 9             CREATEBY= SYSIBM                 CKFLAG=
    PCTPAGES  = 100       VALPROC  =                       AUDIT =
    KEYOBID   = 0         EDPROC  =                        CHILD = 0
    OBID      = 46        CKRID   =                        PARENT= 0
    COLCOUNT  = 16        RBA1    = 000000000000           DATAC =
    KEYCOLUMNS= 0         RBA2    = 000000000000
   *PCTROWCOMP= 0         CREATETS= 1998/04/01 00:00:00.000000
    CLUSTERTYPE=          ALTERTS = 1998/04/01 00:00:00.000000
    CHECKS= 0             STATSTS = 0000/00/00 00:00:00.000000

    ----------------------- USED INDEXES -------------------------------
 _  IX= SYSIBM.DSNUCH01                       CREATEBY  = SYSIBM
   *FULLKEY = -1          *NLEVELS= -1        *CLUSTRATIO= 0
   *FIRSTKEY= -1          *NLEAF  = -1         CLUSTERED = N
    SPACE   = 0           COLCOUNT = 3         CLUSTERING= Y
    PGSIZE  = 4096        ERASERULE= N         BPOOL    = BP0
    OBID    = 91          CLOSERULE= N         DSETPASS =
    ISOBID  = 114         UNIQUE   = D         INDEXSPACE= DSNUCH01
    INDEXTYPE =           STATSTS  = 0000/00/00 00:00:00.000000

 ***************************** BOTTOM OF LIST ****************************
```

Panels (continued)

You can control the amount of data retrieved from the DB2 catalog with the GSTATS (Gather Statistics) command. When this command is invoked, the Statistics Gathering panel appears. You can use this panel to modify the location of the server. The server defaults to "local."

```
------------------------ DB/EXPLAIN(V235)  DB2=DB2  ------------- LINE 1 OF 20
 Cmd ===>

                      S T A T I S T I C S    G A T H E R I N G


 Enter the server from which you wish to retrieve catalog statistics.
 If no value is entered the current server will be set to local.

  Server: TS
  Amount of data to gather:

     1. - SYSTABLESPACE, SYSTABLES, SYSINDEXES
     2. - Data specified in 1 plus
          SYSCOLUMNS, SYSCOLSTATS, SYSCOLDIST, SYSCOLDISTSTATS
     3. - Data specified in 2 plus
          SYSKEYS
     4. - Data specified in 2 plus
          SYSTABLEPART, SYSTABSTATS, SYSINDEXPART, SYSINDEXSTATS
     5. - Data specified in 3 plus
          SYSTABLEPART, SYSTABSTATS, SYSINDEXPART, SYSINDEXSTATS

 ENTER to process request    END to abort request
```

After the UPDT command is invoked and if you are running DB2 Version 2.3 or later, the Statistics Update panel appears and allows you to enter the location of the server. The default is "local."

```
                     STATISTICS UPDATE


     Please enter the following information:

             SERVER ===>
```

Panels (continued)

When the WIF command is invoked, the Statistics for Whatif panel displays to allow you to specify the location of the server and to make statistics permanent if you are using DB2 Version 2.3 or greater.

```
                      STATISTICS for WHATIF


   You have requested Whatif Analysis.
   Please specify Server:


                     SERVER ===>


   MAKE STATISTICS PERMANENT? ===> n   ( Y YES  N NO )
```

Fields

You can update fields that are marked with an asterisk (*).

FIELD	ON FORMAT...	DESCRIPTION
ALTERTS (TBL)	2	Time when the latest ALTER TABLE statement was applied. Source: `SYSIBM.SYSTABLES.ALTEREDTS`
AMOUNT OF DATA TO GATHER	KTEPSSSG	Type of data to retrieve from catalog: 1. SYSTABLESPACE, SYSTABLES, SYSINDEXES 2. SYSTABLESPACE, SYSTABLES, SYSINDEXES, SYSCOLUMNS, SYSCOLSTATS, SYSCOLDIST, and SYSCOLDISTSTATS 3. SYSTABLESPACE, SYSTABLES, SYSINDEXES, SYSCOLUMNS, SYSCOLSTATS, SYSCOLDIST, SYSCOLDISTSTATS, and SYSKEYS 4. SYSTABLESPACE, SYSTABLES, SYSINDEXES, SYSCOLUMNS, SYSCOLSTATS, SYSCOLDIST, SYSCOLDISTSTATS, SYSTABLEPART, SYSTABSTATS, SYSINDEXPART, and SYSINDEXSTATS 5. SYSTABLESPACE, SYSTABLES, SYSINDEXES, SYSCOLUMNS, SYSCOLSTATS, SYSCOLDIST, SYSCOLDISTSTATS, SYSKEYS, SYSTABLEPART, SYSTABSTATS, SYSINDEXPART, and SYSINDEXSTATS
AUDIT (TBL)	2	Value of the audit option: **A** AUDIT All **C** AUDIT CHANGE **blank** AUDIT NONE, or the row describes a view or alias Source: `SYSIBM.SYSTABLES.AUDITING`
BPOOL (IX)	2	Name of the buffer pool used for the index. Source: `SYSIBM.SYSINDEXES.BPOOL`
BPOOL (TS)	2	Name of the buffer pool used for the table space. Source: `SYSIBM.SYSTABLESPACE.BPOOL`
CARD (IXP)	2	Number of rows referred to by the index or partition. Source: `SYSIBM.SYSINDEXPART.CARD`
CARD (TBL) *	1, 2	Number of rows in the table. You can update this field. Source: `SYSIBM.SYSTABLES.CARD`
CARD (TSTP)	2	Number of rows in table space or partition. Source: `SYSIBM.SYSTABLEPART.CARD`
CARDP (TSTP) *	2	Number of rows in table space partition. You can update this field Source: `SYSIBM.SYSTABSTATS.CARD`

FIELD	ON FORMAT...	DESCRIPTION
CHECKFLAG (TSTP)	2	**C** The table space partition is in CHECK PENDING mode and there are rows that can violate referential constraints. **blank** The table contains no rows that violate referential constraints, or the table space is not partitioned. Source: `SYSIBM.SYSTABLEPART.CHECKFLAG`
CHECKS (TBL)	2	Number of check constraints defined on a table. The value in this field is 0 if there are no constraints, or if the row describes a view or alias. Source: `SYSIBM.SYSTABLES.CHECKS`
CHILD (TBL)	2	Number of relationships in which the table is a parent; 0 means the row describes a view or alias. Source: `SYSIBM.SYSTABLES.CHILDREN`
CKFLAG (TBL)	2	**C** There are rows in the table that can violate referential constraints. **blank** The table contains no rows that violate referential constraints, or the row describes a view or alias. Source: `SYSIBM.SYSTABLES.CHECKFLAG`
CKRID (TBL)	2	**RID** RID of the first row of the table that can violate referential constraints. **blank** Table is not in a check pending state. Source: `SYSIBM.SYSTABLES.CHECKRID`
CKRID (TSTP)	2	**RID** RID of the first row of the table that can violate referential constraints. **blank** Table or partition is not in a check pending state or the table space is not partitioned. Source: `SYSIBM.SYSTABLEPART.CHECKRID`
CLOSERULE (IX)	2	Whether the datasets are candidates for being closed when the limit on the number of open datasets is reached. **Y** Yes **N** No Source: `SYSIBM.SYSINDEXES.CLOSERULE`
CLOSERULE (TS)	2	Whether the datasets are candidates for being closed when the limit on the number of open datasets is reached. **Y** Yes **N** No Source: `SYSIBM.SYSTABLESPACE.CLOSERULE`

FIELD	ON FORMAT...	DESCRIPTION
CLUSTERED (IX)	2	Whether the table is actually clustered by the index: **Y** Yes: More than 95% of the rows are in clustering order. **N** No: 95% or fewer of the rows are in clustering order; or statistics were not gathered. Source: `SYSIBM.SYSINDEXES.CLUSTERED`
CLUSTERING (IX)	2	Whether CLUSTER was specified when the index was created: **Y** Yes **N** No Source: `SYSIBM.SYSINDEXES.CLUSTERING`
CLUSTERTYPE (TBL)	2	Whether the table can be dropped (that is, whether the table is defined with RESTRICT ON DROP). **blank** The table can be dropped **Y** The table cannot be dropped and any table space or database containing this table also cannot be dropped. Source: `SYSIBM.SYSTABLES.CLUSTERTYPE`
CLUSTRATIO (IX) *	1, 2	Percentage of rows that are in clustering order. You can update this field. Source: `SYSIBM.SYSINDEXES.CLUSTERRATIO`
CLUSTRATIO (IXP) *	2	Percentage of rows in the index partition that are in clustering order. You can update this field. Source: `SYSIBM.SYSINDEXESTATS.CLUSTERRATIO`
COLCOUNT (TBL)	2	Number of columns in the table or view. Source: `SYSIBM.SYSTABLES.COLCOUNT`
COLCOUNT (IX)	2	Number of columns in the key. Source: `SYSIBM.SYSINDEXES.COLCOUNT`
COMPRESS (TSTP)	2	For a table space partition or nonpartitioned table space, indicates whether the COMPRESS attribute is YES. Values may be: **Y** Compression is defined. **blank** Compression is not defined. Source: `SYSIBM.SYSTABLEPART.COMPRESS`
CREATEBY (IX)	2	Primary authorization ID of the user who created the index. Source: `SYSIBM.SYSINDEXES.CREATEDBY`

FIELD	ON FORMAT...	DESCRIPTION
CREATEBY (TBL)	2	Primary authorization ID of the user who created the table, view, or alias. Source: **SYSIBM.SYSTABLES.CREATEDBY**
CREATEBY (TS)	2	Primary authorization ID of the user who created the table space. Source: **SYSIBM.SYSTABLESPACE.CREATEDBY**
CREATETS (TBL)	2	Time when the CREATE statement was executed for the table, view, or alias. Source: **SYSIBM.SYSTABLES.CREATEDTS**
CREATOR (TS)	1, 2	Authorization ID of the owner of the table space. Source: **SYSIBM.SYSTABLESPACE.CREATOR**
DATAC (TBL)	2	Indicates the value of the DATACAPTURE option for a table. **Y** Data capture is defined for the table. **blank** Data capture is not defined. Source: **SYSIBM.SYSTABLES.DATACAPTURE**
DBID (TS)	2	Internal identifier of the database which contains the table space. Source: **SYSIBM.SYSTABLESPACE.DBID**
DSETPASS (IX)	2	The password for the datasets of the index. Source: **SYSIBM.SYSINDEXES.DSETPASS**
DSETPASS (TS)	2	The password for the datasets of the table space. Source: **SYSIBM.SYSTABLESPACE.DSETPASS**
EDPROC (TBL)	2	Name of the edit procedure. Source: **SYSIBM.SYSTABLES.EDPROC**
ERASERULE (IX)	2	Whether the datasets are to be erased when dropped. Not applicable to partitioned indexes. **Y** Yes **N** No Source: **SYSIBM.SYSINDEXES.ERASERULE**
ERASERULE (TS)	2	Whether the datasets are to be erased when dropped. Not applicable for partitioned table spaces. **Y** Erase **N** No Erase Source: **SYSIBM.SYSTABLESPACE.ERASERULE**
FARINDREF (TSTP)	2	Number of rows that have been relocated far from their original page. Source: **SYSIBM.SYSTABLEPART.FARINDREF**

FIELD	ON FORMAT...	DESCRIPTION
FAROFFPOS (IXP)	2	Number of referred to rows far from optimal position as the result of an insert into a full page. Source: **SYSIBM.SYSINDEXPART.FAROFFPOS**
FIRSTKEY (IX) *	1, 2	Number of distinct values of the first key column. You can update this field. Source: **SYSIBM.SYSINDEXES.FIRSTKEYCARD**
FIRSTKEY (IXP) *	2	Number of distinct values of the first key column in the index partition. You can update this field. Source: **SYSIBM.SYSINDEXSTATS.FIRSTKEYCARD**
FREEPAGE (IXP)	2	Number of pages loaded before a page is left as free space. Source: **SYSIBM.SYSINDEXPART.FREEPAGE**
FREEPAGE (TSTP)	2	Number of pages loaded before a page is left as free space. Source: **SYSIBM.SYSTABLEPART.FREEPAGE**
FULLKEY (IX) *	1, 2	Number of distinct values of the key column. You can update this field. Source: **SYSIBM.SYSINDEXES.FULLKEYCARD**
FULLKEY (IXP) *	2	Number of distinct values of the key column in the index partition. You can update this field. Source: **SYSIBM.SYSINDEXSTATS.FULLKEYCARD**
GBPCACHE (IXP)	2	The group buffer pool cache option for the index or index space. **A** Both changed and unchanged pages are cached in the group buffer pool **blank** Only changed pages are cached in the group buffer pool, or the DB2 subsystem is not at least Version 4. Source: **SYSIBM.SYSINDEXPART.GBPCACHE**
GBPCACHE (TSTP)	2	The group buffer pool cache option for the table or table space. **A** Both changed and unchanged pages are cached in the group buffer pool **blank** Only changed pages are cached in the group buffer pool, or the DB2 subsystem is not at least Version 4. Source: **SYSIBM.SYSTABLEPART.GBPCACHE**
IMPLICIT (TS)	2	Whether the table space was created implicitly. **Y** Yes **N** No Source: **SYSIBM.SYSTABLESPACE.IMPLICIT**

FIELD	ON FORMAT...	DESCRIPTION
INDEXSPACE (IX)	2	Name of the index space. Source: `SYSIBM.SYSINDEXES.INDEXSPACE`
INDEXTYPE (IX)	2	The type of the index **blank** Index is type 1 **2** Index is type 2 Source: `SYSIBM.SYSINDEXES.INDEXTYPE`
ISOBID (IX)	2	Internal identifier of the index page set descriptor. Source: `SYSIBM.SYSINDEXES.ISOBID`
IX	1, 2	Index name. Source: `SYSIBM.SYSINDEXES.CREATOR` `SYSIBM.SYSINDEXES.NAME`
IXCREATOR (TSTP)	2	Authorization ID of the owner of the partitioned index. Source: `SYSIBM.SYSTABLEPART.IXCREATOR`
IXNAME (TSTP)	2	Name of the partitioned index. Source: `SYSIBM.SYSTABLEPART.IXNAME`
IXP	2	Index name. Source: `SYSIBM.SYSINDEXPART.CREATOR` Source: `SYSIBM.SYSINDEXPART.IXNAME`
KEYCOLUMNS (TBL)	2	Number of columns in the table's primary key. Source: `SYSIBM.SYSTABLES.KEYCOLUMNS`
KEYCNT (IXP)	2	Total number of rows in the partition. Source: `SYSIBM.SYSINDEXSTATS.KEYCOUNT`
KEYOBID (TBL)	2	Internal DB2 identifier of the index that enforces uniqueness of the table's primary key. Source: `SYSIBM.SYSTABLES.KEYOBID`
LEAFDIST (IXP)	2	100 times the average number of pages between successive leaf pages of the index. Source: `SYSIBM.SYSINDEXPART.LEAFDIST`
LOCATION (TBL)	1, 2	Location name of the table for an alias defined on a remote object or blank for local. Source: `SYSIBM.SYSTABLES.LOCATION`
LOCKMAX (TS)	2	Maximum number of locks per user to acquire for the table or table space before escalating to the next locking level. Source: `SYSIBM.SYSTABLESPACE.LOCKMAX`

FIELD	ON FORMAT...	DESCRIPTION
LOCKRULE (TS)	2	Lock size of the table space. **A** Any **P** Page **S** Table space **T** Table Source: `SYSIBM.SYSTABLESPACE.LOCKRULE`
MAKE STATISTICS PERMANENT?	KTE3SSWH	Indicator to permanently update the catalog. **Y** Yes **N** No
NACTIVE (TS) *	1, 2	Number of active pages in the table space. You can update this field. Source: `SYSIBM.SYSTABLESPACE.NACTIVE`
NACTIVE (TSTP) *	2	Number of active pages in the table space partition. You can update this field. Source: `SYSIBM.SYSTABSTATS.NACTIVE`
NEARINDREF (TS)	2	Number of rows that have been relocated near their original page. Source: `SYSIBM.SYSTABLEPART.NEARINDREF`
NEAROFFPOS (IXP)	2	Number of referred to rows near, but not at optimal position, because of an insert into a full page. Source: `SYSIBM.SYSINDEXPART.NEAROFFPOS`
NLEAF (IX) *	1, 2	Number of active leaf pages in the index. You can update this field. Source: `SYSIBM.SYSINDEXES.NLEAF`
NLEAF (IXP) *	2	Number of active leaf pages in the index partition. You can update this field. Source: `SYSIBM.SYSINDEXSTATS.NLEAF`
NLEVELS (IX) *	1, 2	Number of levels in the partition index tree. Source: `SYSIBM.SYSINDEXES.NLEVELS`
NLEVELS (IXP) *	2	Number of levels in the partition index tree. You can update this field. Source: `SYSIBM.SYSINDEXSTATS.NLEVELS`
NPAGES (TBL) *	1, 2	Total number of pages on which rows of the table appear. You can update this field. Source: `SYSIBM.SYSTABLES.NPAGES`
NPAGES (TSTP) *	2	Total number of pages in the table space partition on which rows of the table appear. You can update this field. Source: `SYSIBM.SYSTABSTATS.NPAGES`
NTABLES (TS)	2	Number of tables defined in the table space. Source: `SYSIBM.SYSTABLESPACE.NTABLES`

FIELD	ON FORMAT...	DESCRIPTION
OBID (IX)	2	Internal identifier of the index fan set descriptor. Source: `SYSIBM.SYSINDEXES.OBID`
OBID (TS)	2	Internal identifier of the table space file descriptor. Source: `SYSIBM.SYSTABLESPACE.OBID`
OBID (TBL)	2	Internal identifier of the table. Source: `SYSIBM.SYSTABLES.OBID`
PAGESAVE (TSTP)	2	The percentage of pages saved in a table space or partition as a result of using data compression. Source: `SYSIBM.SYSTABLEPART.OBID`
PARNT (TBL)	2	Number of relationships in which the table is a dependent. 0 means the row describes a view or alias. Source: `SYSIBM.SYSTABLES.PARENTS`
PARTITION (IXP)	2	Partition number; 0 if the index is not partitioned. Source: `SYSIBM.SYSINDEXPART.PARTITION`
PARTITION (TSTP)	2	Partition number; 0 if the table space is not partitioned. Source: `SYSIBM.SYSTABLEPART.PARTITION`
PARTITIONS (TS)	2	Number of partitions of the table space; 0 if the table space is not partitioned. Source: `SYSIBM.SYSTABLESPACE.PARTITIONS`
PCTFREE (IXP)	2	Percentage of each subpage or nonleaf page that is left as free space. Source: `SYSIBM.SYSINDEXPART.PCTFREE`
PCTFREE (TSTP)	2	Percentage of each page left as free space. Source: `SYSIBM.SYSTABLEPART.PCTFREE`
PCTPAGES (TBL)	2	Percentage of active table space pages that contain rows of the table. Source: `SYSIBM.SYSTABLES.PCTPAGES`
PCTPAGES (TSTP)	2	Percentage of active table space pages that contain rows of the table. Source: `SYSIBM.SYSTABSTATS.PCTPAGES`
PCTROWCOMP (TBL) *	2	Percentage of rows compressed within the total number of active rows in the table. You can update this field. Source: `SYSIBM.SYSTABLES.PCTROWCOMP`
PCTROWCOMP (TSTP) *	2	Percentage of rows compressed within the total number of active rows in the partition. You can update this field. Source: `SYSIBM.SYSTABSTATS.PCTROWCOMP`
PERCACT (TSTP)	2	Percentage of space occupied by rows of data from active tables. Source: `SYSIBM.SYSTABLEPART.PERCACTIVE`

FIELD	ON FORMAT...	DESCRIPTION
PERCDROP (TSTP)	2	Percentage of space occupied by rows of dropped tables; 0 for segmented table spaces. Source: **SYSIBM.SYSTABLEPART.PERCDROP**
PGSIZE (IX)	2	Size of subpages in the index. Source: **SYSIBM.SYSINDEXES.PGSIZE**
PGSIZE (TS)	2	Size of pages in the table spaces in kilobytes. Source: **SYSIBM.SYSTABLESPACE.PGSIZE**
PQTY (IXP)	2	Primary space allocation in units 4K storage blocks; 0 if storage group is not used. Source: **SYSIBM.SYSINDEXPART.PQTY**
PQTY (TSTP)	2	Primary space allocation in units of 4K storage blocks; 0 if a storage group is not used. Source: **SYSIBM.SYSTABLEPART.PQTY**
PSID (TS)	2	Internal identifier of the table space page set descriptor. Source: **SYSIBM.SYSTABLESPACE.PSID**
RBA1 (TBL)	2	The log RBA when the table was created. Source: **SYSIBM.SYSTABLES.RBA1**
RBA2 (TBL)	2	The log RBA when the table was altered. If RBA1=RBA2, the table has not been altered. Source: **SYSIBM.SYSTABLES.RBA2**
RECLEN (TBL)	1, 2	The maximum length of any record in the table. Source: **SYSIBM.SYSTABLES.RECLENGTH**
SEGSIZE (TS)	2	Number of pages in each segment of a segmented table space. Source: **SYSIBM.SYSTABLESPACE.SEGSIZE**
SERVER	KTEPSSSG, KTE3SSSU, KTE3SSWH	Location name. Only installations running DB2 Version 2.3 or greater will be able to designate a server.
SPACE (IX)	2	Number of kilobytes of DASD storage allocated to the index, as determined by the last execution of STOSPACE utility. Source: **SYSIBM.SYSINDEXES.SPACE**
SPACE (IXP)	2	Number of kilobytes of DASD storage allocated to the index partition as determined by the last execution of STOSPACE utility. Source: **SYSIBM.SYSINDEXPART.SPACE**
SPACE (TS)	2	Number of kilobytes of DASD storage allocated to the table space as determined by the last execution of the STOSPACE utility. Source: **SYSIBM.SYSTABLESPACE.SPACE**

FIELD	ON FORMAT...	DESCRIPTION
SPACE (TSTP)	2	Number of kilobytes of DASD storage allocated to the table space partition as determined by the last execution of STOSPACE utility. Source: `SYSIBM.SYSTABLEPART.SPACE`
SQTY (IXP)	2	Secondary space allocation in units of 4K storage blocks; 0 if a storage group is not used. Source: `SYSIBM.SYSINDEXPART.SQTY`
SQTY (TSTP)	2	Secondary space allocation in units of 4K storage blocks; 0 if a storage group is not used. Source: `SYSIBM.SYSTABLEPART.SQTY`
STATSTS (IX)	2	This field will be set to CURRENT TIMESTAMP for funtions that update the catalog or output statistics. Source: `SYSIBM.SYSINDEXES.STATSTIME`
STATSTS (IXP)	2	This field will be set to CURRENT TIMESTAMP for functions that update the catalog or output statistics. Source: `SYSIBM.SYSINDEXPART.STATSTIME`
STATSTS (TBL)	2	This field will be set to CURRENT TIMESTAMP for funtions that update the catalog or output statistics. Source: `SYSIBM.SYSTABLES.STATSTIME`
STATSTS (TS)	2	This field will be set to CURRENT TIMESTAMP for functions that update the catalog or output statistics. Source: `SYSIBM.SYSTABLESPACE.STATSTIME`
STATSTS (TSTP)	2	This field will be set to CURRENT TIMESTAMP for functions that update the catalog or output statistics. Source: `SYSIBM.SYSTABLEPART.STATSTIME`
STATSTSP (IXP)	2	This field will be set to CURRENT TIMESTAMP for functions that update the catalog or output statistics. Source: `SYSIBM.SYSINDEXSTATS.STATSTIME`
STATSTSP (TSTP)	2	This field will be set to CURRENT TIMESTAMP for functions that update the catalog or output statistics. Source: `SYSIBM.SYSTABSTATS.STATSTIME`
STATUS (TBL)	2	Status of the table definition: **I** The table's definition is incomplete because it lacks a primary index. **X** Table has a primary index. **blank** Table has no primary key, or is a catalog table, or the row describes a view or alias. Source: `SYSIBM.SYSTABLES.STATUS`

FIELD	ON FORMAT...	DESCRIPTION
STATUS (TS)	2	Availability status of the table space: **A** Available **C** Incomplete because no partitioned index has been created **P** Check Pending **S** Check Pending with the scope less than the entire table space **T** Incomplete because no table has been created Source: **SYSIBM.SYSTABLESPACE.STATUS**
STORNAME (IXP)	2	Name of storage group or ICF catalog used for space allocation. Source: **SYSIBM.SYSINDEXPART.STORNAME**
STORNAME (TSTP)	2	Name of storage group used for allocation. Blank if STORTYPE = E. Source: **SYSIBM.SYSTABLEPART.STORNAME**
STORTYPE (IXP)	2	Type of storage allocation: **E** Explicit and STORNAME names an ICF catalog **I** Implicit and STORNAME names a storage group Source: **SYSIBM.SYSINDEXPART.STORTYPE**
STORTYPE (TSTP)	2	Type of storage allocation: **E** Explicit (storage group is not used) **I** Implicit (storage group used) Source: **SYSIBM.SYSTABLEPART.STORTYPE**
TBCREATR (TBL)	2	For an alias, the authorization ID of the owner of the referred table or view; blank otherwise. Source: **SYSIBM.SYSTABLES.TBCREATOR**
TBL	1, 2	Name of table. Source: **SYSIBM.SYSTABLES.CREATOR** **SYSIBM.SYSTABLES.NAME**
TBNAME (TBL)	2	For an alias, the name of the referred table or view; blank otherwise Source: **SYSIBM.SYSTABLES.TBNAME**
TS	1, 2	Name of table space. Source: **SYSIBM.SYSTABLESPACE.DBNAME** **SYSIBM.SYSTABLESPACE.NAME**
TSTP	2	Partitioned table space name. Source: **SYSIBM.SYSTABLEPART.DBNAME** Source: **SYSIBM.SYSTABLEPART.TSNAME**

FIELD	ON FORMAT...	DESCRIPTION
TYPE (TBL)	2	Type of object. **A** Alias **T** Table **V** View Source: **SYSIBM.SYSTABLES.TYPE**
UNIQUE (IX)	2	Whether the index is unique: **D** No (Duplicates are allowed) **U** Yes **P** Primary key (Unique) Source: **SYSIBM.SYSINDEXES.UNIQUERULE**
VALPROC (TBL)	2	Name of the validation procedure; blank if the row describes a view or alias or a table without a validation procedure. Source: **SYSIBM.SYSTABLES.VALPROC**
VCATNAME (IXP)	2	Name of ICF catalog used for space allocation. Source: **SYSIBM.SYSINDEXPART.VCATNAME**
VCATNAME (TSTP)	3	Name of ICF catalog used for space allocation. Source: **SYSIBM.SYSTABLEPART.VCATNAME**

Selects

SELECT	DESCRIPTION	TAKES YOU TO...
C	Display/Update Table columns.	Table Columns (KTEPTCOL)
D	Drop the selected index. Available for IX= rows.	
K	Display Index Keys.	Index Keys (KTEPCKEY)
N	Creates a new index having the DEFER option, unless you specifically indicate that you do not want it created with the DEFER option. When you exit from the Whatif panel, you will be given an opportunity to drop any indexes created using the N select. Available for TBL= rows and assists you in testing the effect of adding new indexes to tables.	

Commands

COMMAND	DESCRIPTION	TAKES YOU TO...
CHANGE	Change all of the specified values to the new value. Can be abbreviated as C or CHA. See "Format of the Change command" following this table for expanded information about the CHANGE command.	
ESTIM	Access the Estimator function. The Estimator function allows you to modify catalog fields and see the effect the modifications have on related catalog fields.	Estimator (KTEPESTM)
FIND	Find a specific character string on the display. Can be abbreviated as F. See "Format of the FIND command" following this table for expanded information about the FIND command.	
GSTATS	Gather statistics from the Catalog and refresh the Whatif display. *Note:* If you wish to use Whatif to display columns, you must also specify a value of at least 2 in the Amount of Statistics to Gather field. If you wish to use Whatif to display keys, you must also specify a value of at least 3 in the Amount of Statistics to Gather field.	Statistics Gathering (KTEPSSSG)

Commands (continued)

COMMAND	DESCRIPTION	TAKES YOU TO...
LOCATE	Locate a specific value, or a specific value for a specific object type, in one of the fields on the display; or find data changed by the last command (for example, CALC or UNIFORM) you issued or data you have modified. Can be abbreviated as L or LOC. See "Format of the LOCATE command" following this table for expanded information about the LOCATE command.	
NDXS	Display all used and unused indexes.	
NEWSET	Establish a new statistics set. NEWSET does not affect column or column distribution statistics.	
NEWSETALL	Establish a new statistics set, including column and column distribution statistics.	
NONDXS	Reset used indexes.	
NOSTAT	Set statistics to RUNSTATS, not to run value. RUNSTATS can be 0, blank, or -1. NOSTAT does not affect column or column distribution statistics.	
NOSTATALL	Set statistics, including column and column distribution statistics, to RUNSTATS, not to run value. RUNSTATS can be 0, blank, or -1.	
OUT	Create a REXX EXEC to update catalog statistics, or create SQL statements to update catalog statistics, depending upon the value specified for "OUT statistics format" on housekeeping panel Miscellaneous Defaults (KTEPHOMI).	Output Options (KTEPOUTP)
RESET	Reset statistics values to the last statistics set. RESET does not affect column or column distribution statistics. **Note:** A statistics set is established when you enter the Whatif panel and when you explicitly enter the NEWSET* command.	
RESETALL	Reset statistics, including column and column distribution statistics, to the last statistics set. **Note:** A statistics set is established when you enter the Whatif panel and when you explicitly enter the NEWSET* command.	

Commands (continued)

COMMAND	DESCRIPTION	TAKES YOU TO...
RFIND	Reexeute the last FIND command. Can be abbreviated as RF.	
RLOCATE	Reexeute the last LOCATE command. Can be abbreviated as RL or RLOC.	
UNIFORM	Set partitioned statistics to uniform distribution. For example, if the value for CARD for tables is 90000 and there are 10 partitions, then set each table partition CARD field to 9000.	
UPDT	Update the local catalog with new statistics.	
UPDTL	Update the local catalog with new statistics.	
UPDTR	Update the remote catalog with new statistics.	
WIF	Temporarily update the local catalog and EXPLAIN with new statistics with the option to make changes permanent.	EXPLAIN (KTEPEXPL)
WIFL	Temporarily update the local catalog and EXPLAIN with new statistics.	EXPLAIN (KTEPEXPL)
WIFR	Temporarily update the remote catalog and EXPLAIN with new statistics.	EXPLAIN (KTEPEXPL)
WIFU	Permanently update the local catalog and EXPLAIN with new statistics.	EXPLAIN (KTEPEXPL)
WIFUL	Permanently update the local catalog and EXPLAIN with new statistics.	EXPLAIN (KTEPEXPL)
WIFUR	Permanently update the remote catalog and EXPLAIN with new statistics.	EXPLAIN (KTEPEXPL)

Format of the Change command

The format for this command is

`CHANGE [field_type]` *field_name* `operator` *value* `[%]`

This table provides information about the parameters of the CHANGE command. All parameters are optional unless specifically declared as required.

Parameter	Meaning
field_type	Can be TS, TSTP, TBL, IX, or IXP. *field_type* is optional. If it is omitted, all fields having the specified field name are changed. If it is included, only those fields of the type specified and having the specified field name are changed.
field_name (required)	Name of the field to be changed
operator (required)	One of the following can be used in the operator field: = (equals) + (plus) - (minus)
value (required)	Value to which the specified fields are set
%	The % (percent) sign can be used with the + (plus) and - (minus) operators to indicate that the value represents a percentage by which the changed field is to be incremented or decremented.

Valid field types for the CHANGE command

Refer to the table for the fields than can be affected by the Change command. A more complete list showing alternate field names (where applicable) for the field names in this table can be found in the online help for this panel.

Field Type	Field Name
TS	NACTIVE
TSTP	CARD NACTIVE NPAGES PCTPAGES PCTROWCOMP PCTFREE FREEPAGE
TBL	RECLEN CARD NPAGES PCTPAGES PCTROWCOMP
IX	FULLKEY FIRSTKEY KEYSIZE INDEXTYPE NLEVELS NLEAF UNIQUE CLUSTER ROWS
IXP	FULLKEY FIRSTKEY KEYCNT NLEVELS NLEAF CLUSTER FREEPAGE PCTFREE

Format of the FIND command

The FIND command can be abbreviated as **F**. The format of the FIND command is as follows:

> FIND *string* [FIRST|LAST|NEXT|PREV] [ASIS]

This table provides information about the parameters of the FIND command. All parameters are optional unless specifically declared as required.

Parameter	Meaning

string (required)	One of:
	
	 • A quoted or unquoted string that is to be found; can take the form:
	
	     dirt
	     'dirt road'
	     "dirt road"
	     "Mary's road"
	
	 • * (asterisk)—meaning find an occurrence of the last value entered for *string*.

FIRST	Find the first occurrence of the string on the display. Ignore the case of any characters in the string when performing the FIND.
LAST	Find the last occurrence of the string on the display. Ignore the case of any characters in the string when performing the FIND.
PREV	Find the previous occurrence of the string on the display. Ignore the case of any characters in the string when performing the FIND.
NEXT	Find the next occurrence of the string (the default) on the display. Ignore the case of any characters in the string when performing the FIND.

Format of the FIND command (continued)

Parameter	Meaning
ASIS	Can be included with any of the above parameters and indicates that the string IS to be found as entered; that is, the case of the characters in the string should match the case of the characters in the 'found' string.

Format of the LOCATE command

The LOCATE command can be abbreviated as **L** or **LOC**. The format of the LOCATE command is as follows:

> **LOCATE [***field_type***] *field_name* operator *value* [ASIS]**

or

> **LOCATE CHANGED**

or

> **LOCATE MODIFIED**

CHANGED can be abbreviated as CHA. MODIFIED can be abbreviated as MOD.

This table provides information about the parameters of the LOCATE command. All parameters are optional unless specifically declared as required.

Parameter	Meaning
field_type	Valid field types for the LOCATE command are TS, TSTP, TBL, IX, and IXP. This optional parameter specifies the type of field in which !DB/EXPLAIN is to find the designated value.
field_name (required)	Name of the field in which the specified value is to be located

Format of the LOCATE command (continued)

Parameter	Meaning
operator (required)	One of the following can be used in the operator field: = (equals) > (greater than) < (less than) >= (greater than or equal to) <= (less than or equal to) <> (not equal to) ¬= (not equal to)
value (required)	A quoted or unquoted value that is to be found; can take the form: dirt 'dirt road' "dirt road" "Mary's road" If the field in which a value is to be located is numeric, the format of *value* on the LOCATE command *must* match the format of the display field. Can take the form: 999 9,999 or 9.999 1999/09/01 (will not match a value entered as 09/01/1999)
ASIS	Can be included with any of the above parameters and indicates that a character string IS to be found a/s entered; that is, the case of the characters in the string should match the case of the characters in the 'found' string. (ASIS is only valid for character data.)
CHANGED	Locates a value changed as the result of the last-issued command, for example, a CALC or UNIFORM command.
MODIFIED	Locates a value changed by a user modification or a CHANGE command since the last statistics were gathered

Valid field types for the LOCATE command

Refer to the table for the fields than can be affected by the LOCATE command. A more complete list showing alternate field names (where applicable) for the field names in this table can be found in the online help for this panel.

Field Type	Field Name
TS	BPOOL
	CLOSERULE
	CREATEBY
	CREATOR
	DBID
	DBNAME
	DSETPASS
	ERASERULE
	IMPLICIT
	LOCKMAX
	LOCKRULE
	NACTIVE
	NAME
	NTABLES
	OBID
	PARTITIONS
	PGSIZE
	PSID
	SEGSIZE
	SPACE
	STATSTS
	STATUS

Valid field types for the LOCATE command (continued)

Field Type	Field Name
TSTP	CARD CARDP CHECKFLAG CKRID COMPRESS DBNAME FARINDREF FREEPAGE GBPCACHE IXCREATOR IXNAME NACTIVE NEARINDREF NPAGES PAGESAVE PARTITION PCTFREE PCTPAGES PCTROWCOMP PERCACT PERCDROP PQTY SPACE SQTY STATSTS STATSTSP STORNAME STORTYPE TSNAME VCATNAME
TBL	ALTERTS AUDIT CARD CHECKS CHILD CKFLAG CKRID CLUSTERTYPE COLCOUNT CREATEBY CREATETS CREATOR DATAC EDPROC KEYCOLUMNS KEYOBID LOCATION NAME NPAGES OBID PARENT PCTPAGES PCTROWCOMP RBA1 RBA2 RECLEN STATSTS STATUS TBCREATR TBNAME TYPE VALPROC

Valid field types for the LOCATE command (continued)

Field Type	Field Name
IX	BPOOL CLOSERULE CLUSTER CLUSTERED CLUSTERING COLCOUNT CREATEBY CREATOR DSETPASS ERASERULE FIRSTKEY FULLKEY INDEXSPACE INDEXTYPE ISOBID KEYSIZE NAME NLEAF NLEVELS OBID PGSIZE ROWS SPACE STATSTS UNIQUE
IXP	CARD CLUSTER FAROFFPOS FIRSTKEY FREEPAGE FULLKEY GBPCACHE IXCREATOR IXNAME KEYCNT LEAFDIST NEAROFFPOS NLEAF NLEVELS PARTITION PCTFREE PQTY SPACE SQTY STATSTS STATSTSP STORNAME STORTYPE VCATNAME

Housekeeping and Customization Panels

Chapter 2.
Housekeeping and Customization

Introduction

!DB/EXPLAIN simplifies housekeeping and customization tasks. All housekeeping options are accessed from the Housekeeping panel. There are no commands, selects, or filters on the !DB/EXPLAIN housekeeping and customization panels. However, you can change data field values by typing over existing ones.

Chapter Contents

BIND Compare Options

Overview

This unit describes the BIND Compare Options panel.

Background about the BIND Compare Options panel

Fields on the BIND Compare Options panel were previously on the Compare Options panel (KTEPHOCO). The BIND Compare Options panel (KTEPHOBC) allows you to override BIND Compare Options in the profile dataset during the current !DB/EXPLAIN session. You can specify that changes are permanent or are for the current session only.

Access

You can access the BIND Compare Options panel from the Housekeeping panel.

Panel

The following illustration shows the BIND Compare Options panel.

```
---------------------------- DB/EXPLAIN  DB2=D31A --------------------------
 Cmd ===>
                   B I N D   C O M P A R E    O P T I O N S

PERMANENT? ===>    ( Y Yes  N No )
Compare statement numbers?                  ===> Y  (Y Yes  N No)
Compare DBRM names?                         ===>    (Y Yes  N No)
Display BIND Compare Confirmation Panel?    ===>    (Y Yes  N No)
BIND Option for Compare                     ===>    (A Add  R Replace)
Suffix to use for Plan BIND Compare         ===>
Collection to use for Package BIND Compare  ===>
Bind Compare all Packages included in Plan?===>     (Y Yes  N No)
Execute BIND Compare Generate Option?       ===>    (N No Y Yes C Cmd S Sel)
Generate BIND/REBIND for different paths?   ===>    (N No B BINDs R REBINDs L List)
Generate BIND/REBIND for same paths?        ===>    (N No B BINDs R REBINDs L List)
USER PDS member to save differences in      ===>
USER PDS member to save sames in            ===>
USER PDS member to save errors in           ===>
Modify onto USER PDS members?               ===>    (Y Yes  N No)
Execute BIND/REBIND for different paths?    ===>    (Y Yes  N No)
Execute BIND/REBIND for same paths?         ===>    (Y Yes  N No)
Generate Plan or Package Binds for DBRMs?   ===>    (P Plan K Package)

ENTER to process   END to cancel
```

Fields

FIELD	DESCRIPTION
BIND OPTIONS FOR COMPARE	Indicates whether to compare Plan/Package with BIND ADD or BIND REPLACE **A** Add **R** Replace
BIND COMPARE ALL PACKAGES INCLUDED IN PLAN?	Indicates whether to BIND Compare each Package that is bound into a Plan when a BIND Compare Command or Select is issued. **Y** Yes **N** No
COLLECTION TO USE FOR PACKAGE BIND COMPARE	Collection to be used to create a dummy package for package BIND compare.
COMPARE DBRM NAMES	Indicates whether to compare DBRM names. **Y** Yes **N** No
COMPARE STATEMENT NUMBERS	Indicates whether to compare statement numbers. **Y** Yes **N** No
DISPLAY BIND COMPARE CONFIRMATION PANEL?	Whether to display confirmation panel for BIND compare. **Y** Yes **N** No
EXECUTE BIND COMPARE GENERATE OPTION?	Indicates when to execute the BIND command generation option of the BIND Compare command. You can cause BIND/REBIND commands to be generated for entities (Plans/Packages/DBRMs) that are BIND Compared: ● When an entity's access path has changed ● When an entity's access path has not changed You use the options on this panel to control the execution of Bind Compare command generation. Valid values for this field are: **N** BIND/REBIND commands are not generated when a BIND Compare command or select is executed. **C** BIND/REBIND commands are to be generated only when a BIND Compare command is executed. **S** BIND/REBIND commands are to be generated only when a BIND Compare select is executed.
EXECUTE BIND/REBIND FOR DIFFERENT PATHS?	Indicates whether to execute BIND or REBIND commands generated for entities whose access paths have changed or whether to generate a list of the packages or plans for which commands would have been generated. This option is applicable to batch processing only. Valid values for this field are: **N** Do not execute commands. **Y** Execute commands.

FIELD	DESCRIPTION
EXECUTE BIND/REBIND FOR SAME PATHS?	Indicates whether to execute BIND or REBIND commands generated for entities whose access paths have not changed or whether to generate a list of the packages or plans for which commands would have been generated. This option is applicable to batch processing only. Valid values are: **N** Execute commands. **Y** Do not execute commands.
GENERATE BIND/REBIND FOR DIFFERENT PATHS?	Indicates whether to generate BIND or REBIND commands when the entities being BIND Compared have different access paths. The generated BIND or REBIND commands are stored in the User PDS having the member name you have specified in the field USER PDS MEMBER TO SAVE DIFFERENCES IN. The BIND/REBIND commands will be generated according to how the entity is currently bound unless you have specified that the Plan/Package BIND Overrides should be used when generating BINDS for BIND Compare. See "Plan BIND Overrides" on page 341 and "Package BIND Overrides" on page 328 for information on Plan and Package Bind Overrides respectively. Valid values for this field are: **N** No commands are to be generated. **B** BIND commands are to be generated. **R** REBIND commands are to be generated. **L** Do not generate commands. Instead generate a list of packages or plans for which commands would have been generated.
GENERATE BIND/REBIND FOR SAME PATHS?	Indicates whether to generate BIND or REBIND commands when the entities being BIND Compared have no access path differences. The generated BIND or REBIND commands are stored in the User PDS having the member name you have specified in the field USER PDS MEMBER TO SAVE DIFFERENCES IN. The BIND/REBIND commands will be generated according to how the entity is currently bound unless you have specified that the Plan/Package BIND Overrides should be used when generating BINDS for BIND Compare. See "Plan BIND Overrides" on page 341 and "Package BIND Overrides" on page 328 for information on Plan BIND Overrides and Package BIND Overrides respectively. Valid values for this field are: **N** No commands are to be generated. **B** BIND commands are to be generated. **R** REBIND commands are to be generated. **L** Do not generate commands. Instead generate a list of packages or plans for which commands would have been generated.
GENERATE PLAN OR PACKAGE BINDS FOR DBRMS?	If you have specified Yes to the generate options on this panel, determines whether the BIND or REBIND commands generated when comparing DBRMs will be plan BINDs or package BINDs. Valid values for this field are: **P** Generate plan BINDs. **K** Generate package BINDs.
MODIFY ONTO USER PDS MEMBERS?	Determines whether output created by BIND/REBIND is appended to output already in an existing PDS member or whether the output overwrites the existing output. Valid values for this field are: **Y** Append the output to the information in the member. **N** Overwrite the information in the existing member with this output.

FIELD	DESCRIPTION
PERMANENT?	Indicates if changes are permanent (Y) or are for the current session of !DB/EXPLAIN only (N).
SUFFIX TO USE FOR PLAN BIND COMPARE	Character to append to the userid when forming a dummy plan for Plan BIND compare.
USER PDS MEMBER TO SAVE DIFFERENCES IN	Names the User PDS member in which to save the commands generated for entities whose access paths have changed. The member name field will accept the variable **&USER** to indicate that the member name should be the TSO User ID. The member Name may also be specified as **&USER‖S** to indicate that the member name is the TSO User ID concatenated with the character **S**. The concatenation character must be the same as that specified on the EXPLAIN/SQL Defaults panel KTEPHOMI.
USER PDS MEMBER TO SAVE SAMES IN	Names the User PDS member in which to save the commands generated for entities whose access paths have not changed. The member name field will accept the variable **&USER** to indicate that the member name should be the TSO User ID. The member Name may also be specified as **&USER‖S** to indicate that the member name is the TSO User ID concatenated with the character **S**. The concatenation character must be the same as that specified on the EXPLAIN/SQL Defaults panel KTEPHOMI.
USER PDS MEMBER TO SAVE ERRORS IN	Names the User PDS member in which to save the commands generated for entities for which an error was encountered during the BIND process. (An example is the case where the BIND Compare fails due to missing dependent objects of the Plan or Package being BIND Compared.) The member name you enter in this field can be the variable **&USER** to indicate that the member name should be the TSO User ID. The member name can also be specified as **&USER‖S** to indicate that the member name is the TSO User ID concatenated with the character **S**. The concatenation character must be the same as that specified on the EXPLAIN/SQL Defaults panel KTEPHOMI. ***Note:*** Commands are saved in this member only if the value of the fields EXECUTE BIND/REBIND FOR SAME or DIFFERENT PATHS is **B** or **R**.

Build Tuning Parameters

Overview

This unit describes the Build Tuning Parameters panel.

Background about the Build Tuning Parameters panel

The Build Tuning Parameters panel (KTEPHOVC) allows you to describe the parameters of the data about to be processed. Underestimating these parameters can result in elongated processing time. Overestimating these parameters can result in acquiring more storage space than necessary.

Access

You can access the Build Tuning Parameters panel from the Housekeeping panel.

Panel

The following information shows the Build Tuning Parameters panel.

```
----------------------- DB/EXPLAIN  DB2=D31A ------------------ LINE 1 OF 946
                   B U I L D   T U N I N G   P A R A M E T E R S

PERMANENT? ===> N  ( Y Yes  N No )

Enter estimated number of the following:
Plans        ===> 50          Connections per Plan    ===> 0
Packages     ===> 100         Connections per Package ===> 0
Unique DBRMs ===> 500         DBRMs per Plan          ===> 2
Tables       ===> 100         Packages per Plan       ===> 4
Collections  ===> 25          Packages Lists per Plan ===> 2
Explainable Statements per DBRM / package            ===> 10
Tables referenced by an Explainable Statement        ===> 1

Estimate Adjustor                                    ===> 0
When to consider two DBRMs to be the same DBRM       ===> 2      (0/1/2)

Specify which of following should be used in determining when two packages are
the same:  Collid  Y   Contoken  Y   Version  N   PDSNAME  N

Use package BIND or CREATE timestamp in determining relative ages > B

ENTER to process    END to cancel
```

Fields

FIELD	DESCRIPTION
ESTIMATE ADJUSTER	Value to divide estimates by.
NUMBER OF COLLECTIONS	Estimated total number of collections.
NUMBER OF CONNECTIONS PER PACKAGE	Estimated average number of connections per package.
NUMBER OF CONNECTIONS PER PLAN	Estimated average number of connections per plan.
NUMBER OF DBRMS PER PLAN	Estimated average number of DBRMs per plan.
NUMBER OF EXPLAINABLE STATEMENTS PER DBRM/PACKAGE	Estimated average number of (SELECTS + DELETES + UPDATES + INSERTS + DECLARE CURSORs) per DBRM/package.
NUMBER OF PACKAGES	Estimated total number of packages.
NUMBER OF PACKAGES PER PLAN	Estimated average number of packages per plan.
NUMBER OF PLANS	Estimated total number of plans.
NUMBER OF TABLES	Estimated total number of tables referenced.
NUMBER OF TABLES REFERENCED BY AN EXPLAINABLE STATEMENT	Estimated average number of tables referenced by an explainable statement.
NUMBER OF UNIQUE DBRMS	Estimated total number of unique DBRMs.

FIELD	DESCRIPTION
SPECIFY WHICH OF THE FOLLOWING TO USE TO DETERMINE WHEN TWO PACKAGES ARE THE SAME	Specifies which of the following parameters should be used to determine when two packages are the same. If you change any of these options after you have performed a BUILD, you must perform a REFRESH in order to make your new options effective. • COLLID • CONTOKEN • Version • PDSNAME Valid values for each of these parameters can be: **Y** Yes **N** No
USE PACKAGE BIND OR CREATE TIMESTAMP IN DETERMINING RELATIVE AGES	Specifies whether the BIND or CREATE timestamp should be used to determine the relative ages of packages. **B** Use BIND timestamp **C** Use CREATE timestamp

WHEN TO CONSIDER TWO DBRMS TO BE THE SAME DBRM	Specifies when to consider two DBRMs to be the same DBRM.
	
	0 All DBRMs are unique.
	1 DBRMs are the same if they have the same name, contoken, version, and pdsname.
	2 DBRMs are the same if they have the same name, contoken, and version. **Note:** This is the default value.
	
	Note: If you specify a value of **1** or **2**, *and you are performing one of the following types operations with the DBRMs*, the DBRM displays will be inaccurate.
	
	• Editing DBRMs
	  – precompile DBRM **X** then bind plan **X** including DBRM **X**.
	  – Edit DBRM **X** changing the name of the table owners, then bind plan **Y** including DBRM **X**.
	  – **Note:** From a DB2 standpoint, the DBRM name is the same, the contoken is the same, and the pdsname can possibly be the same, but the DBRMs are **NOT** the same.
	• Using levels and/or versioning at precompile time and not ensuring that the DBRM is unchanged at each level/version.
	  – Precompile DBRM **X** at level **AAAA** version **BBBB** and bind plan **X** including DBRM **X**.
	  – Modify program **X**'s SQL calls, precompile DBRM **X** at level **AAAA** version **BBBB**, and bind plan **Y** including DBRM **X**.
	  – **Note:** From a DB2 standpoint, the DBRM name is the same, the contoken name is the same, the version name is the same, and the pdsname is the same, but the DBRMs are **NOT** the same.

Compare Options

Overview

This unit describes the Compare Options panel.

Background about the Compare Options panel

The Compare Options panel (KTEPHOCO) has been split in two in Version 235s with most fields moved to the BIND Compare Options panel (KTEPHOBC). The Compare Options panel allows you to override compare options in the profile dataset for use during the current !DB/EXPLAIN session to compare EXPLAINs. You can specify whether the changes are permanent or are for the current session only.

Access

You can access the Compare Options panel from the Housekeeping panel.

Panel

The following illustration shows the Compare Options panel.

```
---------------------------- DB/EXPLAIN  DB2=D31A -------------------------
Cmd ===>

                         C O M P A R E    O P T I O N S


PERMANENT? ===>    ( Y Yes  N No  U User)


Compare statement numbers?                     ===> Y  (Y Yes  N No)
Compare DBRM names?                            ===> Y  (Y Yes  N No)





ENTER to process    END to cancel
```

Fields

FIELD	DESCRIPTION
COMPARE DBRM NAMES	Indicates whether to compare DBRM names. **Y** Yes **N** No
COMPARE STATEMENT NUMBERS	Indicates whether to compare statement numbers. **Y** Yes **N** No

Data Formats

Overview

This unit describes the Data Formats panel.

Background about the Data Formats panel

The Data Formats panel (KTEPHOMF) allows you to control the format of several data fields used throughout !DB/EXPLAIN. You can specify whether the changes you make are effective permanently or only for the current session of !DB/EXPLAIN.

Access

You can access the Data Formats panel from the Housekeeping panel.

Panel

This is the Data Formats panel.

```
---------------------------- DB/EXPLAIN  DB2=D31A  -------------------------
Cmd ===>
                        D A T A    F O R M A T S

PERMANENT? ===>    ( Y Yes  N No )

     TIME ===> 1  1 HH:MM:SS 2 HH.MM.SS
     DATE ===> 4  1 YYYY/MM/DD    2 YYYY-MM-DD    3 MM/DD/YYYY    4 MM-DD-YYYY
                  5 DD.MM.YYYY    6 DD.MM.YYYY    7 YY/MM/DD      8 YY-MM-DD
                  9 MM/DD/YY     10 MM-DD-YY     11 DD.MM.YY     12 DD/MM/YY

TIMESTAMP ===> 4  1 YYYY/MM/DD HH:MM:SS.TTTTTT 2 YYYY-MM-DD HH:MM:SS.TTTTTT
                  3 MM/DD/YYYY HH:MM:SS.TTTTTT 4 MM-DD-YYYY HH:MM:SS.TTTTTT
                  5 DD.MM.YYYY HH:MM:SS.TTTTTT 6 DD/MM/YYYY HH:MM:SS.TTTTTT
                  7 YYYY/MM/DD HH:MM:SS 8 YYYY-MM-DD HH:MM:SS
                  9 MM/DD/YYYY HH:MM:SS 10 MM-DD-YYYY HH:MM:SS
                 11 DD.MM.YYYY HH:MM:SS 12 DD/MM/YYYY HH:MM:SS

    COUNT ===> 3  1 9999999     2 9.999.999        3 9,999,999
   COSTS1 ===> 3  1 9999999     2 9.999.999,99     3 9,999,999.99
   COSTS2 ===> 2  1 /1000    2 ASIS   3 /100   4 /10000   5 /100000   6 /4096

ENTER to process   END to cancel
```

Fields

DATA FIELD	DESCRIPTION
COSTS1	Format for displaying costs.
COSTS2	Scaling for displaying cost.
COUNT	Format for displaying numeric data.
DATE	Format for displaying dates.
PERMANENT	Indicates whether to update the profile dataset with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily).
TIME	Format for displaying time.
TIMESTAMP	Format for displaying timestamps.

!DB/EXPLAIN Configuration Information

Overview

This unit describes the !DB/EXPLAIN Configuration Information panel.

Background about the !DB/EXPLAIN Configuration Information panel

The !DB/EXPLAIN Configuration Information panel (KTEHOAD) allows you to specify the plan names, data set names, and output characteristics of !DB/EXPLAIN as configured for the current Extract ID. This information is not shared across multiple Extract IDs. Each Extract ID has its own member stored in the profile data set. You can enter new values by typing over the existing ones. The new values are written to the profile data set that is specified on the Housekeeping panels.

Access

You can access the !DB/EXPLAIN Configuration Information panel from the Housekeeping panel.

Panel

```
----------------------------- DB/EXPLAIN  DB2=D42B --------------------------
Cmd ===>


                        !DB/EXPLAIN CONFIGURATION INFORMATION
PERMANENT? === Y  ( Y Yes   N No 0

PLAN Names:
   Primary   RG301R     Extract    RG301X     For SQL Execution     RG301Q

Extract Data Sets:  CATALOG     RGRAH.V301.SYSCAT
                    PLANS       RGRAH2.V301.PLANTABL
                    STATEMENTS  RGRAH2.V301.SYSSTMT
Product Data Sets:  System PDS  RGRAH2.TE301.EXP.SYSTEM
                    User PDS    RGRAH2.TE301.EXP.USER
                    Log PDS     RGRAH2.TE301.EXP.LOG

Extract Sort Parameters:
```

Fields

DATA FIELD	DESCRIPTION
CATALOG	Name of the CATALOG extract data set.
EXTRACT	Name of plan used for running the extract.
EXTRACT SORT PARAMETERS	Sort parameters needed by the sort product used at your site (for example, DFSORT parameters). Separate multiple parameters with commas.
	The extract will pass these parameters to the sort product. Refer to your sort product's documentation for valid parameters.
FOR SQL EXECUTION	Name of plan used for SQL execution.
LOG PDS	Name of the product log PDS.
PLANS	Name of the PLANS extract data set.
PRIMARY	Name of plan used for running !DB/EXPLAIN.
STATEMENTS	Name of the STATEMENTS extract data set.
SYSTEM PDS	Name of the product system PDS.
USER PDS	Name of the product user PDS.

!DB/Tools DB2 Configuration Information

Overview

This unit describes the !DB/Tools DB2 Configuration Information panel.

Background about the !DB/Tools DB2 Configuration Information panel

The !DB/Tools DB2 Configuration Information panel (KTBPHODB) displays the !DB/Tools information for the extract ID. The extract ID is the basic unit of configuration for !DB/EXPLAIN. With Candle's new Extract technology, several extracts can be stored in the same dataset. An extract ID identifies a particular extract or set of extracts performed on a DB2 subsystem. You may define an extract ID to identify all data extracted from a DB2 subsystem, or a particular range or set of data extracted from a DB2 subsystem.

You can enter new values by typing over the existing ones. The new values are written to the profile dataset that is specified on the Housekeeping panels.

Note: DBRMs which were precompiled using a pre-DB2 V1R3 (1.3) precompiler *may* contain statements which !DB/EXPLAIN incorrectly interprets. EXPLAINs of such statements can result in -417 or -418 SQLCODES or an inaccurately reported access path.

See "EXPLAIN/SQL Defaults" on page 310 for information on the options you have for avoiding -417 and -418s.

Access

You can access the !DB/Tools DB2 Configuration Information panel by selecting option 1 from the Housekeeping panel.

Panel

The following illustration shows the !DB/Tools DB2 Configuration Information panel.

```
-------------------------------- DB/Tools --------------------------------
Cmd ===>

                    DB/Tools DB2 Configuration Information

  1 Extract ID           ===> D42B          2 MVS ID             ===> SYSG
  3 Extract Description  ===> DB2 V4.2 Subsystem
  4 DB2 Subsystem ID     ===> D42B          5 DB2 Version        ===> 420
  6 DB2 Location Name    ===> DB31          7 DSNTIAUL Plan Name ===> DSNtAU42
  8 Real Catalog Prefix  ===> SYSIBM        9 DSNTIAD  Plan Name ===> DSNTIA42
 10 Catalog Prefix       ===> SYSIBM       11 DSNZPARM Member Name ===> D42BPARM
 12 DB/Tools Database    ===> KTCDBD       14 DB/Tools Qualifier ===> CDB
 13 Collection Id Prefix ===> RG301

 15 DB2 DSNLOAD Data Set          ===> PP.DB2.V420.S26.SDSNLOAD
 16 DB2 DSNEXIT Data Set          ===> PP.DB2.V420.S26.SDSNEXIT
 17 DB2 RUNLIB  Data Set          ===> PP.DB2.V420.S26.RUNLIB.LOAD
 18 Data Set Containing DSNHDECP ===> PP.DB2.V420.S26.SDSNLOAD
 19 Data Set Containing DSN1COPY ===> PP.DB2.V420.S26.SDSNLOAD
 20 Data Set Containing DSNTIAUL ===> PP.DB2.V420.S26.RUNLIB.LOAD
 21 Data Set Containing DSNTIAD  ===> PP.DB2.V420.S26.RUNLIB.LOAD
 22 Data Set Containing DSNZPARM ===> PP.DB2.V420.S26.SDSNEXIT
```

Fields

DATA FIELD	DESCRIPTION
CATALOG PREFIX	DB2 catalog prefix.
DB/Tools Database	Name of the database that contains the DB/Tools objects.
COLLECTION ID PREFIX	Prefix for constructing called ID for packages.
	!DB/EXPLAIN concatenates the CATALOG PREFIX and the COLLECTION ID PREFIX to equal the COLLECTION.
dataset CONTAINING DSN1COPY	Name of the dataset which contains DSN1COPY.
dataset CONTAINING DSNHDECP	Name of the dataset which contains DSNHDECP.
dataset CONTAINING DSNTIAUL	Name of the dataset which contains DSNTIAUL.
dataset CONTAINING DSNTIAD	Name of the dataset which contains DSNTIAD.

DATA FIELD	DESCRIPTION
dataset CONTAINING DSNZPARM	Name of the dataset which contains the DSNZPARM LOAD module.
!DB/Tools DATABASE	Name of the DB2 database which contains the !DB/Tools objects.
DB2 DSNEXIT dataset	Name of the dataset which contains DSNEXIT.
DB2 DSNLOAD dataset	Name of the dataset which contains DSNLOAD. The !DB/Tools assume that the DB2 LOADLIB (DSNLOAD) is in your system LINKLIST. See the *!DB/Tools Installation and Customization Guide* chapter entitled "Before You Begin" for additional information.
DB2 LOCATION NAME	Location name of the local DB2 subsystem. Used for DB2 V2.3 or higher.
DB2 RUNLIB dataset	Name of the DB2 RUNLIB dataset.
DB2 SUBSYSTEM ID	ID of the current DB2 subsystem.
DB2 VERSION	DB2 Version for the current DB2 subsystem.
DSNTIAUL PLAN NAME	Name of the DSNTIAUL plan.
DSNTIAD PLAN NAME	Name of the DSNTIAD plan.
DSNZPARM MEMBER NAME	Name of member which contains DSNZPARMs.
EXTRACT ID	Extract ID is the basic unit of configuration for !DB/EXPLAIN. This eight character field identifies a particular extract or set of extracts on a DB2 subsystem. There may be many extract IDs per DB2 subsystem.
EXTRACT DESCRIPTION	This optional field contains a description of the extract. You can enter any text of up to 45 characters into this field.
MVS ID	ID of the current MVS system. This ID is for local documentation only.
REAL CATALOG PREFIX	The prefix of the actual DB2 catalog tables if the prefix specified for Catalog Prefix is for a shadow catalog.

!DB/Tools Global Configuration Information

Overview

This unit describes the !DB/Tools Global Configuration Information panel.

Background about the !DB/Tools Global Configuration Information panel

The !DB/Tools Global Configuration Information panel (KTBPHOGL) displays the global !DB/Tools information for the current MVS system. You can enter new values by typing over the existing ones. The new values are written to the profile dataset that is specified on the Housekeeping panels.

Access

You can access the !DB/Tools Global Configuration Information panel by selecting option 0 from the Housekeeping panel.

Panel

The following illustration shows the !DB/Tools Global Configuration Information panel.

```
  -------------------------------- DB/Tools --------------------------------
Cmd ===>


                   DB/Tools Global Configuration Information


PERMANENT?                ===> Y              ( Y Yes  N No )


VIO Symbolic Name         ===> VIO
Temp Disk Symbolic Name ===> SYSDA
Max BLKSIZE for VIO       ===> 6160
SYSOUT Hold Class         ===> X
Enable Edit Recovery?     ===> N              ( Y Yes  N No )
RETURN = EXIT?            ===> N              ( Y Return exits
                                                N Return goes to Primary Menu )
```

The following illustration shows the !DB/Tools Global Data Set Information panel.

```
 ------------------------------- DB/Tools --------------------------------
Cmd ===>

                    DB/Tools Global Data Set Information

CAUTION:  These are the names of your production DB/Tools data sets.
          Please be careful when changing them.

CLIST  Data Set ===> RGRAH2.TE301.CLISTFB
CNTL   Data Set ===> RGRAH2.TE301.CNTL
LOAD   Data Set ===> RGRAH2.TE301.LOAD
DBRM   Data Set ===> TDKT.TE301REL.DBRM
MSGS   Data Set ===> RGRAH2.TE301.MSGS
PANELS Data Set ===> RGRAH2.TE301.PANELS
TABLES Data Set ===> RGRAH2.TE201.CNTL
SKELS  Data Set ===> RGRAH2.TE301.SKELS
UTIL   Data Set ===>
```

Fields

Descriptions for fields found on the preceding panels are listed below.

DATA FIELD	DESCRIPTION
CLIST LIBRARY	Name of the library containing the product CLISTs.
CNTL dataset	Name of the library containing the product JCL.
DBRM LIBRARY	Name of the library containing the DBRMs required to BIND the product plans.
LOAD LIBRARY	Name of the library containing the !DB/Tools LOAD modules.
MAX BLKSIZE FOR VIO	Maximum block size to use when allocating VIO datasets. Specify 0 to use the system-determined block size.
MSGS dataset	Name of the dataset containing the product messages.
PANELS dataset	Name of the dataset containing the product panels.
SKELS dataset	Name of the dataset containing the product skeletons. This field is not used by !DB/EXPLAIN.
SYSOUT HOLD CLASS	Your installation's hold class. If not specified, class X is assumed.
TABLES dataset	Name of the dataset containing the product command and data tables.
TEMP DISK SYMBOLIC NAME	Symbolic name for temporary disk files; specific to a given MVS system.
UTIL dataset	Contains the product utility profiles.
VIO SYMBOLIC NAME	Symbolic name for virtual I/O. It is specific for the current MVS system.

!DB/Tools Global Information—DB2 Subsystem Name Table

Overview

This unit describes the !DB/Tools Global Information—DB2 Subsystem Name Table panel.

Background about the !DB/Tools Global Information—DB2 Subsystem Name Table panel

The !DB/Tools Global Information—DB2 Subsystem Name Table panel (KTCPDBDS) displays all of the Extract IDs defined on the MVS system. You may select an Extract ID by entering a character next to the Extract ID you want. !DB/EXPLAIN runs on the Extract ID you select.

Access

You can access the !DB/Tools Global Information—DB2 Subsystem Name Table panel by selecting DB2 IDS from the Administration Menu (KTEPADMN).

Panel

The following illustration shows the !DB/Tools Global Information —DB2 Subsystem Name Table panel.

```
------------------ !DB/Tools Profile Information -- Global ------------------
Cmd ===>


                        DB2 Subsystem Name Table

These are the DB2 subsystem names or extract ids for which !DB/Tools are
configured, with their corresponding DB2 subsystem ids and MVS system
ids.  To select an extract id simply type a character in the selection column
and press Enter.

     Extract    DB2
SEL      ID    SSID  MVS ID   Description
---  --------  ----  --------  ---------------------------------------
     D22A      D22A  CACOWLAG Production DB2 Extract
     D22ATST1  D22A  CACOWLAG Stress DB2 Extract
     D22ATST2  D22A  CACOWLAG
     D23A      D23A  CACOWLAG
     D23ATST1  D23A  CACOWLAG  Test DB2 Extract
     D23ATST2  D23A  CACOWLAG
     D23B      D23B  CACOWLAG
```

Fields

DATA FIELD	DESCRIPTION
DB2 SSID	The DB2 subsystem IDs for each Extract ID. Each SSID may have many Extract IDs associated with it.
DESCRIPTION	Optional field into which you an enter a description or purpose of a particular extract.
EXTRACT ID	Names of the Extract IDs configured on the MVS system. Each Extract ID identifies a particular Extract or set of Extracts performed on a DB2 subsystem.
MVS ID	The MVS ID for each DB2 SSID.

!DB/Tools Profile Dataset List

Overview

This unit describes the !DB/Tools Profile Dataset List panel.

Background about the !DB/Tools Profile Dataset List panel

The !DB/Tools Profile Dataset List panel (KTCPPRF0) displays the user and auxiliary profile datasets that will be in effect the next time you enter !DB/EXPLAIN. You can enter new values by typing over the existing ones and pressing Enter. If you specify that user and auxiliary profile datasets are not to be used, !DB/EXPLAIN uses the default profile datasets specified in the KTCSETUP JCL.

Access

You may access the !DB/Tools Profile Dataset List panel by running the KTCPRFST CLIST.

Panel

This is the !DB/Tools Profile Dataset List panel.

```
----------- !DB/Tools Profile Information -- Profile Data Set List ------------
Cmd ===>


                        !DB/TOOLS PROFILE DATA SET LIST

These data sets are used, in conjunction with your System profile data set,
to determine the exact configuration for !DB/Tools products.  The data sets
in this list are optional, but use of a User profile data set is very highly
recommended.  If you make use of an Auxiliary profile data set, use of a User
profile data set is again very highly recommended.  You must either specify
a data set name for each of these, or mark the field indicating that you do
not want a data set to be used for this purpose.

Profile
data set      Use this
type:         data set?      Data Set name:
========      =========      ==========================================

User            Y            TDTD00.E500.XXXX.PROFILE

Auxiliary       N
```

Fields

DATA FIELD	DESCRIPTION
DATASET NAME	The names of the user and auxiliary profile datasets that you want to be in effect the next time you access !DB/EXPLAIN. These datasets take effect only if you specify **Y** in the "Use this dataset?" field. Otherwise, !DB/EXPLAIN uses the default profile datasets for your user ID. The defaults usually are set up by the installer or the !DB/Tools administrator at your site.
PROFILE DATASET TYPE	Identifies the User and Auxiliary profile dataset rows.
USE THIS DATAsET?	Specifies whether you want to use the dataset named at the right as the user or auxiliary dataset. If you specify **Y**, the profile dataset takes effect the next time you enter !DB/EXPLAIN. If you specify **N**, !DB/EXPLAIN uses the default profile datasets for your user ID.

Exception Options

Overview

This unit describes the Exception Options panel.

Background about the Exception Options panel

The Exception Options panel (KTEPHOXO) allows you to control the amount of exception information that will be produced when you access the Exceptions panel. You can specify whether you want the Exception Options panel to be displayed before every access of the Exceptions panel so that you can alter the amount of exception information !DB/EXPLAIN produces. You can also specify whether or not the changes are to be made permanent or to be in effect for the current session only.

Access

You can access the Exception Options panel from the Housekeeping Menu panel (KTEPHOUS).

Panel

The following illustration shows the Exception Options panel.

```
----------------------------- DB/EXPLAIN  DB2=D31A  --------------------------
Cmd ===>

                       E X C E P T I O N    O P T I O N S

PERMANENT? ===>    ( Y Yes  N No )


                                    ------ Accessing Exceptions from: -------

                                                        Plans / Packages
                                    Primary    Statements   DBRMs / Tables
                                     Menu        Panel       Panel
                                    -------    ----------   ----------------
Display EXCEPTION OPTIONS Panel?
Process XCPT Type Exceptions?
Process BIND Type Exceptions?
Process OBJECT Type Exceptions?
Process SQL Type Exceptions?
Process SQL ERROR Type Exceptions?



ENTER to process   END to cancel
```

Fields

FIELD	DESCRIPTION
DISPLAY EXCEPTION OPTIONS PANEL?	Determines whether to display the Exception Options panel prior to producing exceptions. The values you can enter vary with the panel from which you are producing exceptions. From the Primary Menu, the valid values are: **Y** Display the Exception Options panel. **N** Do not display the Exception Options panel. From the Statements, DBRMs, Plans, Packages, or Tables panels, the valid values are: **Y** Display the Exception Options panel. **N** Do not display the Exception Options panel. **S** Display the Exception Options panel only after a Select. **C** Display the Exception Options panel only after a Command.
PERMANENT	Indicates whether to update the profile data set with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily).
PROCESS BIND TYPE EXCEPTIONS?	Indicates whether to process BIND exceptions. The values you can enter vary with the panel from which you are producing exceptions. From the Primary Menu, the valid values are: **Y** Process BIND exceptions. **N** Do not process BIND exceptions. From the Statements, DBRMs, Plans, Packages, or Tables panels, the valid values are: **Y** Process BIND exceptions. **N** Do not process BIND exceptions. **S** Process BIND exceptions only after a Select. **C** Process BIND exceptions only after a Command.

FIELD	DESCRIPTION
PROCESS OBJECT TYPE EXCEPTIONS?	Indicates whether to process object type exceptions. The values you can enter vary with the panel from which you are producing exceptions. From the Primary Menu, the valid values are: **Y** Process object type exceptions. **N** Do not process object type exceptions. From the Statements, DBRMs, Plans, Packages, or Tables panels, the valid values are: **Y** Process object type exceptions. **N** Do not process object type exceptions. **S** Process object type exceptions only after a Select. **C** Process object type exceptions only after a Command.
PROCESS SQL TYPE EXCEPTIONS?	Indicates whether to process SQL type exceptions. The values you can enter vary with the panel from which you are producing exceptions. From the Primary Menu, the valid values are: **Y** Process SQL type exceptions. **N** Do not process SQL type exceptions. From the Statements, DBRMs, Plans, Packages, or Tables panels, the valid values are: **Y** Process SQL type exceptions. **N** Do not process SQL type exceptions. **S** Process SQL type exceptions only after a Select. **C** Process SQL type exceptions only after a Command.
PROCESS SQL ERROR TYPE EXCEPTIONS?	Indicates whether to process SQL error type exceptions. The values you can enter vary with the panel from which you are producing exceptions. From the Primary Menu, the valid values are: **Y** Process SQL error type exceptions. **N** Do not process SQL error type exceptions. From the Statements, DBRMs, Plans, Packages, or Tables panels, the valid values are: **Y** Process SQL error type exceptions. **N** Do not process SQL error type exceptions. **S** Process SQL error type exceptions only after a Select. **C** Process SQL error type exceptions only after a Command.

FIELD	DESCRIPTION
PROCESS XCPT TYPE EXCEPTIONS?	Indicates whether to process XCPT exceptions. The values you can enter vary with the panel from which you are producing exceptions. From the Primary Menu, the valid values are: **Y** Process XCPT exceptions. **N** Do not process XCPT exceptions. From the Statements, DBRMs, Plans, Packages, or Tables panels, the valid values are: **Y** Process XCPT exceptions. **N** Do not process XCPT exceptions. **S** Process XCPT exceptions only after a Select. **C** Process XCPT exceptions only after a Command.

EXPLAIN Defaults

Overview

This unit describes the EXPLAIN Defaults panel.

Background about the EXPLAIN Defaults panel

The EXPLAIN Defaults panel KTEPHOEX allows you to override the profile data set during the current !DB/EXPLAIN session. You can specify whether you want the changes to be permanent or for the current session of !DB/EXPLAIN only.

Panel

The following illustration shows the EXPLAIN Defaults panel.

```
---------------------------- DB/EXPLAIN  DB2=D31A --------------------------
Cmd ===>

                     E X P L A I N    D E F A U L T S

PERMANENT? ===>    ( Y Yes  N No )
Save Explain results?          ===> A  (Y Yes  N No  A Save EXPLAIN and Stats)
Save Whatif results?           ===> N  (Y Yes  N No)
Save EXPLAIN if Owner changed?  ===> Y  (Y Yes  N No)
Read EXPLAIN if Owner changed?  ===> Y  (Y Yes  N No)
Amount of statistics to gather  ===> 2  (1 - 5)
Retain statistics for reuse?   ===> Y  (Y Yes  N No)
Alter SQL to avoid -417 / -418? ===> N  (Y Yes  N No)
Alter SQL to avoid -117?       ===> O  (Y Yes  N No  O Only for KTEXPL)
Retain Explain display?        ===> N  (Y Yes  N No)
JOIN of catalog tables for stats===> N  (Y Yes  N No)
Research views and aliases?    ===> Y  (Y Yes  N No)
Merge Single statement EXPLAINs?===> N  (Y Yes  N No)
Require all DBRMs for a plan?   ===> N  (Y Yes  N No)
Require all packages for a plan?===> N  (Y Yes  N No)
Show all plan table rows?      ===> N  (Y Yes  N No)
Interleave packages in report?  ===> N  (Y Yes  N No)

ENTER to process   END to cancel
```

Fields

FIELD	DESCRIPTION
AMOUNT OF STATISTICS TO GATHER	Type of data to retrieve from catalog: 1. SYSTABLESPACE, SYSTABLES, SYSINDEXES 2. SYSTABLESPACE, SYSTABLES, SYSINDEXES, SYSCOLUMNS, SYSCOLSTATS, SYSCOLDIST, and SYSCOLDISTSTATS 3. SYSTABLESPACE, SYSTABLES, SYSINDEXES, SYSCOLUMNS, SYSCOLSTATS, SYSCOLDIST, SYSCOLDISTSTATS, and SYSKEYS 4. SYSTABLESPACE, SYSTABLES, SYSINDEXES, SYSCOLUMNS, SYSCOLSTATS, SYSCOLDIST, SYSCOLDISTSTATS, SYSTABLEPART, SYSTABSTATS, SYSINDEXPART, and SYSINDEXSTATS 5. SYSTABLESPACE, SYSTABLES, SYSINDEXES, SYSCOLUMNS, SYSCOLSTATS, SYSCOLDIST, SYSCOLDISTSTATS, SYSKEYS, SYSTABLEPART, SYSTABSTATS, SYSINDEXPART, and SYSINDEXSTATS
ALTER SQL TO AVOID -117	Indicates whether the !DB/EXPLAIN parser modifies SQL statements to avoid -117 errors on PREPAREs. An indication that the statement was altered to avoid a -117 will appear in the EXPLAIN results on panel KTEPEXPL. Valid values are: **O** The parser should modify only non-extracted SQL statements. **Y** The parser should modify all SQL statements. **N** No statements should be modified.

ALTER SQL TO AVOID -417/-418?	Indicates whether the !DB/EXPLAIN parser modifies SQL statements to avoide -417 and -418 errors on PREPAREs.
	
	Notes:
	
	• Not all -417 and -418 errors can be avoided
	• The Issue SQL Calls in Parser Exit field has an effect on avoiding -417/-418 errors. If you receive a -417 or -418 after having specified Y in the Alter SQL to Avoid -417/-418 field, do one of the following:
	  – If you have specified N in the Issue SQL Calls in Parser Exit field, specify Y and re-EXPLAIN the statement
	  – If you have specified Y in the Issue SQL Calls in Parser Exit field, specify A and re-EXPLAIN the statement
	  – If you have specified A in the Issue SQL Calls in Parser Exit field, check the version of DB2 the DBRM was precompiled with. If the DB2 version used for precompile was prior to V130 (1.3), re-precompile, if possible. If the DB2 version used for precompile was V130 (1.3) or later, call Candle Customer Support.
	
	Y Yes, modify the SQL statements. The reported access path on an EXPLAIN for a modified statement may be inaccurate. The KTEPEXPL panel warns of the modifications and potential inaccuracies.
	N No, do not modify the SQL statements

DISPLAY PARTIAL PLAN EXPLAIN?	Determines whether to display a Plan EXPLAIN when not all of the Packages or DBRMs constituting the Plan have been EXPLAINed. **Y** Display partial Plan EXPLAIN **N** Do not display partial Plan EXPLAIN

FIELD	DESCRIPTION
FORCE XUPDT WHEN EXPLAINING?	Determines whether XUPDT should be forced when explaining multiple entities (that is, should the specification for EXP_XUPDT_AFTER be overridden). N Do not override specification for EXP_XUPDT_AFTER Y Override the specification
INTERLEAVE PACKAGES IN REPORT?	When displaying a plan EXPLAIN report (generated by an EXPL* or GEXPL* command), indicates whether the EXPLAIN results for packages included in a plan should be placed after the EXPLAIN results of each plan in which the package is bound or whether all package EXPLAIN results should be placed at the bottom of the report. Y Display EXPLAIN results for package immediately after the EXPLAIN results for the plan in which the package is bound. This option can cause a package's EXPLAIN to appear multiple times in the EXPLAIN report. N Place all package EXPLAIN results at the bottom of the EXPLAIN report. This is the most efficient setting.
JOIN OF CATALOG TABLES FOR STATS	Indicates whether catalog tables should be joined when retrieving catalog statistics. (Some DB2 installations will obtain a better access path when joining the catalog tables.) Y Join catalog tables N Do not join catalog tables
MERGE SINGLE STATEMENT EXPLAINS?	Indicates whether to merge the EXPLAIN results of a single statement EXPLAIN with the cost and EXPLAIN results. Y Yes N No
PERMANENT	Indicates whether to update the profile data set with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily).
READ EXPLAIN IF OWNER CHANGED	Indicates whether to read EXPLAIN results from the PLAN_TABLE extract if the owner at EXPLAIN time is different from the qualifier with which the entity was bound. Y Yes N No
REQUIRE ALL DBRMS FOR A PLAN?	Indicates whether all DBRMs included in a plan must be EXPLAINed before cost and EXPLAIN results are displayed. Y EXPLAIN all DBRMs before display. N It is not necessary to EXPLAIN all DBRMs before display.
REQUIRE ALL PACKAGES FOR A PLAN?	Indicates whether all PACKAGES included in a plan must be EXPLAINed before cost and EXPLAIN results are displayed. Y EXPLAIN all PACKAGES before display. N It is not necessary to EXPLAIN all DBRMs before display.
RESEARCH VIEWS AND ALIASES?	Indicates whether to query SYSTABLES to resolve views and aliases for creating EXPLAIN recommendations. Y Research views and aliases by querying SYSTABLES N Do not research views and aliases by querying SYSTABLES. This can cause some recommendations to be erroneously displayed.

FIELD	DESCRIPTION
RETAIN EXPLAIN DISPLAY?	Indicates whether to retain catalog the results of an EXPLAIN for subsequent display or printing. **Y** Retain EXPLAIN results for display/print. **N** Do not retain EXPLAIN results for display/print.
RETAIN STATISTICS FOR REUSE?	Indicates whether to retain catalog statistics read from the DB2 catalog during an EXPLAIN and make them available for reuse. **Y** Read catalog statistics for a table/index once for an EXPLAIN command and retain the information in storage for reuse. **N** Free catalog statistics storage at each commit point.
SAVE EXPLAIN IF OWNER CHANGED	Indicates whether to save EXPLAIN results if the owner was changed and is now different from the qualifier with which the entity was bound. **Y** Yes **N** No
SAVE EXPLAIN RESULTS?	Indicates whether to save EXPLAIN results: **Y** Yes **N** No **A** Save EXPLAIN and Statistics
SAVE WHATIF RESULTS?	Indicates whether to save Whatif results: **Y** Yes **N** No
SHOW ALL PLAN_TABLE ROWS?	Indicates whether, when one PLAN_TABLE row of a statements passes EXPLAIN filtering, all PLAN_TABLE rows should be displayed in the EPTBL or EPTBL2 section of the EXPLAIN display. **Y** Show all PLAN_TABLE rows if one passes filtering. **N** Show only those PLAN_TABLE rows that pass filtering.

EXPLAIN Display Tuning Parameters

Overview

This unit describes the EXPLAIN Display Tuning Parameters panel.

Background about the EXPLAIN Display Tuning Parameters panel

The EXPLAIN Display Tuning Parameters panel permits you to:

- Use the Generate? column to control the amount of storage required to generate EXPLAIN displays by specifying which EXPLAIN display lines are generated. Only the display lines that are generated can be displayed.

  If you decide to view display lines that were not generated for the EXPLAIN display, you can enter Housekeeping and indicate on this EXPLAIN Display Tuning Parameters panel (KTEPHOVD) which lines should be generated. You then reexecute EXPLAIN or, to save resources, execute a Latest EXPLAIN.

- Use the Format0 Display? column to specify whether information of a given type is included on your Format 0 EXPLAIN display.

- Use the Order column to specify the order in which information appears on your Format 0 display.

For expanded information on customizing the EXPLAIN display, see "Controlling the Format of the EXPLAIN Display" in the *!DB/EXPLAIN User's Guide*.

Panel

The following illustration shows the EXPLAIN Display Tuning Parameters panel.

```
  ---------------------------- DB/EXPLAIN  DB2=D31A --------------------------
Cmd ===>

      E X P L A I N   D I S P L A Y   T U N I N G   P A R A M E T E R S

PERMANENT? ===>   ( Y Yes  N No )

                                 Format0
                      Generate?  Display?   Order
EBIND information         Y         N         1
ERECM (Bind Specific)                         3
ECOST information         Y         N         2

EOBJ  information         Y         N         5
EKEYS information         Y         N         6
EPATH information         Y         N         3
EPTBL information         Y         N
EPTB2 information         Y         N         2
ERECM information         Y         N         4
ESTMT information         Y         N         1


ENTER to process   END to cancel
```

Fields

The fields on the panel apply to the parameters listed down the left side of the panel. The top chart shows the type of information each parameter represents. The second chart lists the fields and their possible values.

Parameter	Generates:
EBIND	Plan bind or package bind information
ECOST	Cost information
EKEYS	Index key information
EOBJ	Detailed object information
EPATH	Access path summary information in textual form
ERECM	Recommendations. This parameter appears twice on the panel, the first time related to BIND statements, the second time related to statements in general. Additional information on limiting the specification of ERECM appears below.
ESTMT	Statement text and SQL error text (if !DB/EXPLAIN encounters an SQL error when preparing the statement to be EXPLAINed)
EPTBL and EPTB2	PLAN_TABLE information in a one-line or two-line format, respectively.

FIELD	DESCRIPTION
FORMAT0 DISPLAY?	Determines whether information about this entity will appear on your Format 0 display. Y Display information about this entity on Format 0. N Do not display information about this entity on Format 0.
GENERATE?	Determines whether EXPLAIN display lines are generated for this entity. Y Generate display lines for EXPLAIN or latest EXPLAIN. N Do not generate display lines for EXPLAIN or latest EXPLAIN. If display lines for a given entity are not generated, corresponding information will not be available on panel KTEPEXPL.
ORDER	Determines the order in which information about a given entity will appear in your Format 0 display. There are two sections of the Format 0 display. Each is ordered separately. For expanded information on using the ORDER field, see "Controlling the Format of the EXPLAIN Display" on page 303.

EXPLAIN/SQL Defaults

Overview

This unit describes the EXPLAIN/SQL Defaults panel.

Background about the EXPLAIN/SQL Defaults panel

The EXPLAIN/SQL Defaults panel KTEPHOMI allows you to override the profile dataset during the current !DB/EXPLAIN session. You can specify whether you want the changes to be permanent or for the current session of !DB/EXPLAIN only.

Panel

The following illustration shows the EXPLAIN/SQL Defaults panel.

```
--------------------------- DB/EXPLAIN  DB2=D31A ---------------------------
Cmd ===>

                     E X P L A I N  /  S Q L    D E F A U L T S

PERMANENT? ===>    ( Y Yes  N No )

Type of SQL to issue           ===> S  (S Static  D Dynamic)
Prepare stmts to obtain cost?  ===> Y  (Y Yes  N No)
Display SQLCODE or SQLSTATE?   ===> C  (C SQLCODE  S SQLSTATE)
Disconnect from DB2?           ===> N  (Y Yes  N No)
Concatenation Character        ===> |
Not Sign Character             ===> ¬
Convert Quotes?                ===> Y  (Y Yes  N No)
Issue SQL calls in parser exit? ===> N  (Y Yes  N No  A Always)



ENTER to process   END to cancel

```

Fields

FIELD	DESCRIPTION
CONCAT-ENATION CHARACTER	The character to use for the concatenation symbol in SQL statements (typically the vertical bar). This character is also used for library specifications.
CONVERT QUOTES	Indicates whether to convert SQL string delimiters from quotes to apostrophes when DECPSDL=DECPDFLT (SQL string delimiter = DEFAULT) **Y** Yes (Convert all " to ') **N** No (Internal check)
DISCONNECT FROM DB2?	Indicates whether !DB/EXPLAIN should disconnect from DB2 between functions. Valid values are: **Y** Disconnect from DB2. **N** Do not disconnect from DB2.
DISPLAY SQLCODE or SQLSTATE	Determines which of these values is displayed: **C** SQLCODE is displayed. **S** SQLSTATE is displayed.
ISSUE SQL CALLS IN PARSER EXIT	Indicates whether to issue SQL calls in the parser exit. The default value is No. Specify Yes if you are using synonyms or if you are not using colons in front of host variables. **Y** Yes. Considerable overhead is added. Queries SYSSYNONYMS for every unqualified table in a statement and SYSCOLUMNS for every column in a statement. **N** No (The default). May not be able to correctly parse all statements. **A** Always. Queries SYSSYNONYMS for every unqualified table. Queries SYSCOLUMNS for every word that may be a column.
NOT SIGN CHARACTER	The character to use for the not sign symbol in SQL statements.
PERMANENT	Indicates whether to update the profile dataset with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily).
PREPARE STMTS TO OBTAIN COST	Indicates whether to prepare SQL statements to obtain cost. **Y** Show cost **N** Cost field will be zero; this saves resources
TYPE OF SQL TO ISSUE	Identifies the type of SQL to execute: **S** Static **D** Dynamic

Extract Processing Defaults

Overview

This unit describes the Extract Processing Defaults panel.

Background about the Extract Processing Defaults panel

The Extract Processing Defaults panel KTEPHOEP allows you to override the profile dataset during the current !DB/EXPLAIN session. You can specify whether you want the changes to be permanent or for the current session of !DB/EXPLAIN only.

Panel

The following illustration shows the Extract Processing Defaults panel.

```
---------------------------- DB/EXPLAIN  DB2=D31A -------------------------
Cmd ===>

              E X T R A C T   P R O C E S S I N G   D E F A U L T S

PERMANENT? ===>    ( Y Yes  N No )

Display Build status panels?    ===> Y (Y Yes  N No  O Online Only)
Generations of catalog history  ===> 1      (0=all)
Generations of Explain history  ===> 10     (0=all)
Plan Table variance   Plan Pre  ===> 60   Post 0     Pkg Pre  10     Post 5
Plan Table variance fuzzy match ===> Y  (Y Yes  N No)
Plan Table associate new ones?  ===> N  (Y Yes  N No)
Max number of XUPDT VSAM errors ===> 10
Update profile dataset?         ===> Y  (Y Yes  N No)


ENTER to process   END to cancel
```

Fields

FIELD	DESCRIPTION
DISPLAY BUILD STATUS PANELS	Indicates whether to display build status panels during product initialization. **Y** Yes **N** No
GENERATIONS OF CATALOG HISTORY	Indicates the number of generations of catalog history to display. **0** All *n* *n* generations
GENERATIONS OF EXPLAIN HISTORY	Indicates the number of generations of EXPLAIN history to retrieve from the PLAN_TABLE extract dataset for the EXPLAIN History display. **0** All historical versions of EXPLAIN history are retrieved. If 1 is specified, only the most recent EXPLAIN history is retrieved. (In effect, this means that no history is retrieved, since this is the latest EXPLAIN.) *n* *n* generations If a value other than 0 is specified, all of the available historical information may not be retrieved. Candle Corp. recommends you specify 0 for this parameter.
MAX NUMBER OF XUPDT VSAM ERRORS	Specifies the maximum number of VSAM errors permitted on XUPDT before termination.
PERMANENT	Indicates whether to update the profile dataset with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily).
PKG POST	This value is added to the Package Bind Timestamp to establish the youngest PLAN_TABLE TIMESTAMP to be associated with a package. **Valid values** 0 - 1440
PKG PRE	This value is subtracted from the Package Bind Timestamp to establish the oldest PLAN_TABLE TIMESTAMP to be associated with a package. **Valid values** 0 - 1440
PLAN POST	This value is added to the Plan Bind Timestamp to establish the youngest PLAN_TABLE TIMESTAMP to be associated with a plan. **Valid values** 0 - 1440
PLAN PRE	This value is subtracted from the Plan Bind Timestamp to establish the oldest PLAN_TABLE TIMESTAMP to be associated with a plan. **Valid values** 0 - 1440

FIELD	DESCRIPTION
PLAN TABLE ASSOCIATE NEW ONES?	Determines whether Plan Table extract records should be associated with catalog extract records having older timestamps. Y Associate Plan Table extract records with catalog extract records having older timestamps. N Do not associate Plan Table extract records with catalog extract records having older timestamps. No is recommended since specifying Yes can create incorrect access path information.
PLAN TABLE VARIANCE	The number of minutes to specify as the potential variance in the timestamps recorded for the bind and the PLAN_TABLE. For example, when a plan or package is bound with EXPLAIN(YES), the timestamps recorded in the PLAN_TABLE are earlier than the bind timestamp recorded in SYSPACKAGE or SYSPLAN. This value specifies the typical variance (in minutes) that the bind timestamps are permitted to be earlier than the PLAN_TABLE timestamp. In your environment, if plans and packages typically take a maximum of 15 minutes to bind, specify the variance as 15 minutes.
UPDATE PROFILE DATASET?	Determines whether the profile dataset should be updated with build information. Specifying Yes allows subsequent builds to "learn" from the current build. Y Yes, update profile dataset N No, do not update profile dataset

Housekeeping

Overview

This unit describes the Housekeeping panel.

Background about the Housekeeping panel

The Housekeeping panel (KTEPHOUS) provides access to system and product options. You can change your default masks, output options, SQL creator ID, data field formats, panel formats, panel sorts and filters, library search order, and other information.

You also can change Global !DB/Tools information for the MVS subsystem, DB2 subsystem information for the !DB/Tools products on the DB2 subsystem, and !DB/EXPLAIN configuration information. For security reasons, all changes made in Housekeeping are written to the profile dataset that corresponds with the current user ID.

Access

You can access the Housekeeping Menu panel in the following ways:

- Select the Housekeeping Option on the !DB/EXPLAIN Administration Menu.

- Type and enter the command **HOUSE** or **HOUSE?** on the Command line of any !DB/EXPLAIN panel.

You can access any individual Housekeeping panel directly in the following ways:

- Type and enter the command **HOUSE***n* on the Command line of any !DB/EXPLAIN panel.   *n* is the number of a given panel on the Housekeeping Menu panel. For example, entering **HOUSE2** accesses the !DB/EXPLAIN Configuration panel.

- Type and enter the command **HOUSE***mmm* on the Command line of any !DB/EXPLAIN panel. *mmm* is a mnemonic identifier that represents a specific Housekeeping panel. For example, the command **HOUSE MAS** accesses the Selection Masking panel. A list of the mnemonic codes for the Housekeeping panels follows.

Access (continued)

The following illustration shows the Houskeeping Menud the mnemonic abbreviation for each housekeeping option.

Housekeeping Panel	Mnemonic Identifier	Mnemonic Abbreviation
0 - Global Information	GLOBAL	GLO
1 - DB2 Subsystem Information	DB2	DB2
2 - !DB/EXPLAIN Configuration	PRODUCT	PRO
3 - Library Search Order	LIBRARY	LIB
4 - Selection Masking	MASKING	MAS
5 - SET Defaults	SET	SET
6 - Output Options	OUTPUT	OUT
7 - Miscellaneous Defaults	MISCELLANEOUS	MIS
8 - Explain / SQL Defaults	DEFAULTS	DEF
9 - Explain Defaults	EXPLAIN	EXP
10 - SQL Defaults	SQL	SQL
11 - Compare Options	COMPARE	COM
12 - Extract Processing Defaults	EXTRACT	EXT
13 - Tuning Parameters	TUNING	TUN
14 - Build Tuning Parameters	BUILDTUNING	BUI
15 - Explain Display Tuning Parameters	XTUNING	XTU
16 - Data Formats	DATAFORMATS	DAT
17 - Panel Formats	FORMATS	FOR
18 - Panel Sorts	SORTS	SOR
19 - Panel Filters	FILTERS	FIL
20 - SQL Parameters for KTEXPL	KTEXPL	KTE
21 - Exception Options	XCPTOPTIONS	XCP
22 - Plan BIND Overides	PLANBIND	PLA
23 - Package BIND Overrides	PACKAGEBIND	PAC
24 - BIND Compare Options	BINDCOMPARE	BIN
25 - Recommendations	RECOMMENDATIONS	REC

Panel

The following illustration shows the Housekeeping panel.

```
   ---------------------------- DB/EXPLAIN  DB2=D42B ------------------------
Cmd ===>
                       !DB/EXPLAIN HOUSEKEEPING MENU
Option ===>
     0 - Global Data Set Information     14 - Extract Processing Defaults
     1 - Global Configuration Information 15 - Tuning Parameters
     2 - Global Print Options            16 - Build Tuning Parameters
     3 - DB2 Subsystem Information        17 - Explain Display Tuning Parameters
     4 - DB/EXPLAIN Configuration         18 - Data Formats
     5 - Library Search Order             19 - Panel Formats
     6 - Selection Masking                20 - Panel Sorts
     7 - SET Defaults                     21 - Panel Filters
     8 - Output Options                   22 - SQL Parameters for KTEXPL
     9 - Miscellaneous Defaults           23 - Exception Options
    10 - Explain / SQL Defaults           24 - Plan BIND Overrides
    11 - Explain Defaults                 25 - Package BIND Overrides
    12 - SQL Defaults                     26 - BIND Compare Options
    13 - Compare Options                  27 - Recommendations

 Press ENTER to process.  Press END to cancel.


```

Fields

DATA FIELD	DESCRIPTION
OPTION	Numeric field that represents the function to be invoked: **0** Global Information - (KTCPAD0) Common panel used throughout !DB/Tools **1** DB2 Subsystem Information (KTCPAD1) Common panel used throughout !DB/Tools **2** !DB/EXPLAIN Configuration (KTEPHOAD) contains !DB/EXPLAIN product information **3** Library Search Order (KTEPHOLS) **4** Selection Masking (KTEPHOMK) **5** SET Defaults (KTEPHOSE) **6** Output Options (KTEPHOOD) **7** Miscellaneous Defaults (KTEPHOMJ) **8** EXPLAIN / SQL Defaults (KTEPHOMI) **9** EXPLAIN Defaults (KTEPHOEX) **10** SQL Defaults (KTEPHODS) **11** Compare Options (KTEPHOCO) **12** Extract Processing Defaults (KTEPHOEP) **13** Tuning Parameters (KTEPHOVB) **14** Build Tuning Parameters (KTEPHOVC) **15** EXPLAIN Display Tuning Parameters (KTEPHOVD) **16** Data Formats (KTEPHOMF) **17** Panel Formats (KTEPHOPF) **18** Panel Sorts (KTEPHOPS) **19** Panel Filters (KTEPHODF) **20** SQL Parameters for KTEXPL (KTEPHOSQ) **21** Exception Options (KTEPHOXO) **22** Plan BIND Overrides (KTEPHOBP) **23** Package BIND Overrides (KTEPHOBK) **24** BIND Compare Options (KTEPHOBC) **25** Recommendations Menu (KTEPRECM)
PROFILE dataset LIST	**USER** Current user profile dataset, if applicable. **AUXILIARY** Current auxiliary profile dataset, if applicable. If there are multiple auxiliary profile datasets in the concatenation, the lowest level auxiliary profile is displayed here. **SYSTEM** Current system profile dataset. If only the SYSTEM dataset is displayed in the Profile Data Set List, then all permanent changes made in the Housekeeping panels are written to this dataset. If a USER and a SYSTEM dataset are displayed, then all permanent changes are written to the USER dataset. If a USER, an AUXILIARY, and a SYSTEM dataset are displayed, then all permanent changes are made to the USER dataset.

Library Search Order

Overview

This unit describes the Library Search Order panel.

Background about the Library Search Order panel

The Library Search Order panel (KTEPHOLS) allows you to specify the order in which DBRM and package libraries will be searched for BIND, REBIND, Compare, and Validate functions. The libraries you indicate here will be searched in order from one through five.

Two variables are provided by the product: **&DBRM** (DBRM or package name) and **&SSID** (DB2 subsystem name). The SUBSTR function and concatenation operator (‖) are available to form meaningful library names. For example:

```
"T"||SUBSTR(1,4,&DBRM) = TXXXX
or
'T'||SUBSTR(1,4,&DBRM) = TXXXX
```

Where XXXX refers to the first 4 characters of the DBRM or package name.

You can specify whether you want these changes to be permanent or temporary. Temporary changes remain in effect for the current session of !DB/EXPLAIN only.

Access

You can access the Library Search Order panel from the Housekeeping panel.

Panel

This is the Library Search Order panel.

```
---------------------------- DB/EXPLAIN  DB2=D31A  --------------------------
Cmd ===>
                    L I B R A R Y    S E A R C H    O R D E R

  PERMANENT?   ===>    ( Y Yes  N No )

  SEARCH ORDER ===> O  ( Search library specified in DB2 catalog.
                        O=Only  N=Never  F=First  L=Last)

HIGH LEVEL QUALIFIER#1 ===> "DB2"||SUBSTR(1,4,&DBRM)
 MID LEVEL QUALIFIER#1 ===> "TEST"
 LOW LEVEL QUALIFIER#1 ===> "DBRMLIB"
HIGH LEVEL QUALIFIER#2 ===> "DB2"||SUBSTR(1,4,&DBRM)
 MID LEVEL QUALIFIER#2 ===> "SEMIPROD"
 LOW LEVEL QUALIFIER#2 ===> "DBRMLIB"
HIGH LEVEL QUALIFIER#3 ===> "DB2"||SUBSTR(1,4,&DBRM)
 MID LEVEL QUALIFIER#3 ===> "PROD"
 LOW LEVEL QUALIFIER#3 ===> "DBRMLIB"
HIGH LEVEL QUALIFIER#4 ===> "DB2"||SUBSTR(1,4,&DBRM)
 MID LEVEL QUALIFIER#4 ===> "BACKUP"
 LOW LEVEL QUALIFIER#4 ===> "DBRMLIB"

ENTER to process    END to cancel
```

Fields

DATA FIELD	DESCRIPTION
PERMANENT	Indicates whether to update the profile data set with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily).
SEARCH ORDER	Indicates library search order for PDS: **F** First--Search DB2LIB first, and then search specified libraries **L** Last--Search DB2LIB last, after searching specified libraries **O** Only--Search DB2LIB only; do not search specified libraries **N** Do Not Search--Do not search DB2LIB; search only specified libraries

HIGH LEVEL QUALIFIER#1	High-Level Qualifier for the data set which will be searched first. For example,
	
	T‖SUBSTR(1,4,&DBRM) = TXXXX
	
	        Where XXXX refers to the first 4 characters of the DBRM or package name.
	
	        Where ‖ is concatenation operator.

MID LEVEL QUALIFIER#1	Mid-Level Qualifier for the data set which will be searched first.
LOW LEVEL QUALIFIER#1	Low-Level Qualifier for the data set which will be searched first.
HIGH LEVEL QUALIFIER#2	High-Level Qualifier for the data set which will be searched second.
MID LEVEL QUALIFIER#2	Mid-Level Qualifier for the data set which will be searched second.
LOW LEVEL QUALIFIER#2	Low-Level Qualifier for the data set which will be searched second.
HIGH LEVEL QUALIFIER#3	High-Level Qualifier for the data set which will be searched third.
MID LEVEL QUALIFIER#3	Mid-Level Qualifier for the data set which will be searched third.
LOW LEVEL QUALIFIER#3	Low-Level Qualifier for the data set which will be searched third.
HIGH LEVEL QUALIFIER#4	High-Level Qualifier for the data set which will be searched fourth.
MID LEVEL QUALIFIER#4	Mid-Level Qualifier for the data set which will be searched fourth.
LOW LEVEL QUALIFIER#4	Low-Level Qualifier for the data set which will be searched fourth.

Miscellaneous Defaults

Overview

This unit describes the Miscellaneous Defaults panel.

Background about the Miscellaneous Defaults panel

The Miscellaneous Defaults panel KTEPHOMJ allows you to override the profile dataset during the current !DB/EXPLAIN session. You can specify whether you want the changes to be permanent or for the current session of !DB/EXPLAIN only.

Panel

The following illustration shows the Miscellaneous Defaults panel.

```
  ----------------------------- DB/EXPLAIN  DB2=D31A --------------------------
Cmd ===>

                   M I S C E L L A N E O U S   D E F A U L T S

PERMANENT? ===> N  ( Y Yes  N No )
Character to use for BOX sides   ===> |   BOX corners ===> =  BOX tops ===> -
Blank line after statement?      ===> E  (Y Yes  N No  E After Expanded)
OUT statistics format            ===> Y  (Y SQL UPDATE Statements  N REXX Exec)
Generate Update if no statistic? ===> N  (Y Yes  N No)
Use Real Catalog Tables for UPDT ===> Y  (Y Yes  N No)
Consider packages same when      ===> 1  (1 / 2)
Package Collection Selection     ===> O  (O One  A All)
Set Exception RC for XCPT?        ===> N  (Y Yes  N No)
Set Exception RC for Explain?     ===> N  (Y Yes  N No)
Set Exception RC for Recommend?  ===> N  (Y Yes  N No)
Warning message for no EPX auth? ===> Y  (Y Yes  N No)
Suppress info messages in batch? ===> N  (Y Yes  N No)
Use Dataspace?                   ===> Y  (Y Yes  N No)
Batch Error Return Code          ===> 12     (0 - 32000)
Maintain Key ratio in Estimator  ===> N  (Y Yes  N No)
Log Batch BIND, REBIND and FREE? ===> N  (Y Yes  N No)
ENTER to process   END to cancel
```

Fields

FIELD	DESCRIPTION
BATCH WARNING RETURN CODE	The return code to set whenever !DB/EXPLAIN encounters a *no data* condition during a batch execution (such as, for example, when filtering is so restrictive as to eliminate any plans or packages from consideration. The default value is 4.
BLANK LINE AFTER STATEMENTS?	Indicates whether a blank line should be displayed after a statement on the Statements panel (KTEPSTMT) Valid values are: **Y** Display a blank line after each statement. **E** Display a blank line after each expanded statement. **N** Do not display any blank lines.

CHARACTER TO USE FOR BOX CORNERS	Allows you to define the character to be used for box corners when generating boxes for display (for example, when displaying EXPLAIN results. These values are used as panel attributes. Any value *except* the following can be used:
	
	`x'01'  x'02'  x'03'  x'04'`
	`x'05'  x'06'  x'07'`
	`x'D0' (right curly brace)`
	`x'4A' (cent sign)`
	`x'7C' (at sign)`

CHARACTER TO USE FOR BOX SIDES	Allows you to define the character to be used for box vertical sides when generating boxes for display (for example, when displaying EXPLAIN results. These values are used as panel attributes. Any value *except* the following can be used:
	
	`x'01'  x'02'  x'03'  x'04'`
	`x'05'  x'06'  x'07'`
	`x'D0' (right curly brace)`
	`x'4A' (cent sign)`
	`x'7C' (at sign)`

CHARACTER TO USE FOR BOX TOPS	Allows you to define the character to be used for box horizontal tops (and bottoms) when generating boxes for display (for example, when displaying EXPLAIN results. These values are used as panel attributes. Any value *except* the following can be used:
	
	`x'01'  x'02'  x'03'  x'04'`
	`x'05'  x'06'  x'07'`
	`x'D0' (right curly brace)`
	`x'4A' (cent sign)`
	`x'7C' (at sign)`

CONSIDER PACKAGES SAME WHEN	Allows you to define when packages should be considered the same for purposes of package collection selection. Valid values are: **1** Consider packages the same only when they have the same NAME, CONTOKEN, VERSION, and PDSNAME. **2** Consider packages the same only when they have the same NAME, CONTOKEN, and VERSION.

FIELD	DESCRIPTION
GENERATE UPDATE IF NO STATISTICS?	When executing an OUT command, allows you to specify whether !DB/EXPLAIN should generate an update for columns without statistics. Valid values are: **Y**　　　　　　Generate update. **N**　　　　　　Do not generate update.
LOG BATCH BIND, REBIND, AND FREE?	Determines whether to log BIND, REBIND, and FREE functions issued during a batch run to the log PDS. Valid values are: **Y**　　　　　　Update log PDS when one of these functions occurs **N**　　　　　　Do not update log PDS when one of these functions occurs
MAINTAIN KEY RATIO IN ESTIMATOR?	When issuing a CALC command, determines whether to maintain the ratio of the FIRSTKEYCARD on the Estimator panel to the FULLKEYCARD. Valid values are: **Y**　　　　　　Maintain ratios. **N**　　　　　　Do not maintain ratios.
OUT STATISTICS FORMAT	Indicates whether a REXX exec or SQL statements are generated when you output statistics from Whatif (KTEPWHIF) or Estimator (KTEPESTM).
PACKAGE COLLECTION SELECTION	Determines the set of data that will be displayed when option `Q` (Collection Selection) is entered on panel KTEPKACK. Valid values are: **O**　　　　　　Display only the collection the package resides in. **A**　　　　　　Display all the collections that like packages reside in. Like packages are defined to be packages which you consider to be the same by so defining them via the option `Consider packages same when`.
PERMANENT	Indicates whether to update the profile dataset with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily).
SET EXCEPTION RC FOR EXPLAIN	Indicates whether to set the batch return code for an exception if it is tripped while performing an EXPLAIN or latest EXPLAIN. **Y**　　　　　　Set return code **N**　　　　　　Do not set return code
SET EXCEPTION RC FOR RECOMMEND	Indicates whether to set the batch return code for an exception if it is tripped while processing a recommendation selection. **Y**　　　　　　Set return code **N**　　　　　　Do not set return code
SET EXCEPTION RC FOR XCPT	Indicates whether to set the batch return code for an exception if it is tripped while performing an XCPT function. **Y**　　　　　　Set return code **N**　　　　　　Do not set return code
SUPPRESS INFO MESSAGES IN BATCH?	Indicates whether to suppress the output of informational messages during a batch run. **Y**　　　　　　Suppress informational messages. **N**　　　　　　Do not suppress informational messages.

FIELD	DESCRIPTION
USE DATASPACE?	Determines whether a dataspace should be used to house items such as SQL statements, EXPLAIN results, catalog statistics, and catalog extract data. Y Yes, use a dataspace. (This parameter is only effective if you are running on a level of MVS that supports dataspaces, and parameters are set to allow their creation and use.) N No, do not use a dataspace. Rather, use storage within the user's address space.
USE REAL CATALOG TABLES FOR UPDT	Indicates whether to execute Whatif, UPDT, and OUT commands against the actual DB2 catalog tables. Y Use real catalog tables. N Do not use real catalog tables.
WARNING MESSAGE FOR NO EPX AUTH?	Determines whether to issue a warning message when the user does not have EPX authority (that is, authority to update the Plan_Table extract dataset) and an XUPDT command has been explicitly or. implicitly issued. Y Yes, issue a warning message. N No, do not issue a warning.

Output Options Defaults

Overview

This unit describes the Output Options Defaults panel.

Background about the Output Options Defaults panel

The Output Options Defaults panel (KTEPHOOD) allows you to specify the circumstances under which the Output Options panel appears. For example, the Output Options panel could be displayed each time a BIND, REBIND, or DROP is issued (EXODS field); the JCL? command is issued (JCL); SQL is output (OUT field); or statistics are output from the Whatif or Estimator panels (STATS field). You also can change the default member names that receive the output.

You can specify whether you want the changes made on this panel to be permanent or for the current session of !DB/EXPLAIN only.

Access

You can access the Output Options Defaults panel from the Housekeeping panel.

Panel

The following illustration shows the Output Options Defaults panel.

```
---------------------------- DB/EXPLAIN  DB2=D42B  -------------------------
Cmd ===>

             O U T P U T   O P T I O N S   D E F A U L T S

  PERMANENT? ===> N  ( Y Yes  N No )

                        DISPLAY        MEMBER       MOD ONTO
                        PANEL?          NAME        MEMBERS?
                        -------       --------      ----------
           BIND           Y          BIND             N
           DROP           Y          FREE             N
           EXPLAIN        Y          EXPLAIN          N
           JCL            Y          JCL              N
           OUT            Y          SQL              N
           REBIND         Y          REBIND           N
           STATS          Y          STATS            N

           BIND COMPARE              COMPARE
           HOST VARIABLES            HOSTS

ENTER to process   END to cancel
```

Fields

FIELD	DESCRIPTION
DISPLAY PANEL?	Indicates whether to display the Output Options panel (KTEPOUTP) when the user executes the relevant command. **Y** Yes **N** No
MEMBER NAME	The default member name for each function that can cause an output to occur. The member name can also be specified as &USER‖x where &USER represents the TSO userid and *x* represents a letter which is used as a suffix. For example, &USER‖S indicates that the member name is to be the TSO userid suffixed with the character **S**. The concatenation character, in this case ‖, must be the same character as you have specified on the Explain/SQL Defaults Panel as the concatenation character. You can also append a variable &CNT to the member name. In this case, the member name must be four characters or less. For information about using &CNT, see the unit "Controlling the Destination of !DB/EXPLAIN Output" in the *!DB/EXPLAIN User's Guide*
MOD ONTO MEMBERS?	For each function that can cause output, indicates whether to replace the selected member with the current output, or to append the output to the end of the member if the member exists. **Y** Add the command results to the end of an existing member. **N** Replace the specified existing member. For additional information on the use of MOD, see the unit "Controlling the Destination of !DB/EXPLAIN Output" in the *!DB/EXPLAIN User's Guide*.
PERMANENT	Indicates whether to update the profile dataset with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily). **Y** Make the changes permanent. **N** Make the changes for this session only.

Package BIND Overrides

Overview

This unit describes the Package BIND Overrides panel.

Background about the Package BIND Overrides panel

The Package BIND Overrides panel (KTEPHOBK) allows you to make global changes to BIND parameters for more than one Package. It allows you to override attributes of an existing Package when generating a BIND or REBIND command. Fields for which no override options are shown on the panel cannot be overridden.

Access

The Package BIND Overrides panel is accessed first from the Housekeeping Panel KTEPHOUS. Filling in the Display Override Panel fields on this panel determine when this panel will be subsequently displayed. From Package BIND Overrides, you can only go to the Process Member panel (KTEPOUOP).

Panel

The following illustration shows the Package BIND Overrides panel.

```
----------------------------- DB/EXPLAIN  DB2=D42B  -------------------------
Cmd ===>

                    P A C K A G E   B I N D   O V E R R I D E S

PERMANENT? ===> N  (Y Yes  N No)

Use Overrides for          Command? Y   Select? N   Convert? O   Compare? N
Display Override Panel for  Command? Y   Select? N   Convert? N   Compare? N
Use Library Search Order for Command? Y  Select? P   Convert? P   Compare? P

Location     :                  Action     :    ( R Replace  A Add )
Collection   :                  Flag       :    ( I / W / E / C )
Owner        :                  Isolation  :    ( R RR  T RS  S CS  U UR  )
Qualifier    :                  Release    :    ( C Commit  D Deallocate )
Remote ENABLE : Y ( Y Yes  N No ) Validate  :    ( R Run  B Bind )
BIND COPY    :   ( Y Yes  N No ) Explain    :    ( Y Yes  N No )
Deferprep    :   ( Y Yes  N No ) Sqlerror   :    ( N Nopackage  C Continue )
Keepdynamic  :   ( Y Yes  N No ) Degree     :    ( 1 / ANY )
Reopt(VARS)  :   ( Y Yes  N No ) Currentdata :   ( Y Yes  N No )
Collection                      Dynamicrules:   ( B / R / blank )
Specification for Convert:  &DBRM

Press ENTER to process.  Press END to cancel.
```

Fields

FIELD	DESCRIPTION
ACTION	If non-blank, this value is the value to generate in the ACTION() clause. The non-blank value can be: **A** Generate ACTION(ADD). **R** Generate ACTION(REPLACE).
BIND COPY	Indicates whether to BIND the entity from the DBRM member or copy it from another package. **Y** Copy the entity from another package. Include the COPY() and COPYVER() clauses on the generated BIND command. **N or blank** BIND the entity from the DBRM member. Include the LIBRARY() and MEMBER() clauses on the generated BIND command.
COLLECTION	Collection name where package is to reside.
COLLECTION SPECIFICATION	Specification for the collection to be used when converting a DBRM to a package. Values can be specified as: **A literal string with no variables and with or without delimiters. Delimiters can be single or double quotes.** Use the literal provided as the collection ID (for example, `coll`, `'coll'`, or `"coll"`). **The variable `&DBRM.`** Use the DBRM name as the collection ID. **The variable `&PLAN.`** Use the Plan name as the collection ID. **The variable `&OWNER.`** Use the Owner as the collection ID. **The variable `&CREATOR.`** Use the Creator as the collection ID. **The variable `&QUALIFIER.`** Use the Qualifier as the collection ID. **The variable `&USER.`** Use the TSO User ID as the collection ID. **A literal string with variables or substringed variables. The literal must be enclosed in delimiters.** Use the generated string as the collection ID. For example, `'T'||SUBSTR(1,4&DBRM)` would result in TABCD if the DBRM name were ABCDEFGH. `"T"||SUBSTR(1,4&OWNER)` would result in TMITY if the Owner name were MITYMITE. The concatenation characters must be those specified on the EXPLAIN/SQL Defaults panel KTEPHOMI.

FIELD	DESCRIPTION
CURRENTDATA (Current Data)	If non-blank, indicates whether data currency is required for ambiguous cursors. **Y**　Generate CURRENTDATA(YES); data currency is required. **N**　Generate CURENTDATA(NO); data currency is not required.
DEGREE	Determines whether I/O parallelism is enabled when generating the DEGREE() clause. **1**　　　I/O parallelism is disabled **Any**　　I/O parallelism is set to the value set by DB2. **Blank**　The default, **1** is used
DEFERPREP	Indicates whether the PREPARE for a statement referring to a remote object is deferred until the first EXECUTE, OPEN, or DESCRIBE of the statement. Valid values include: **Y**　Yes Defer **N**　No Defer
DISPLAY OVERRIDE PANEL FOR COMMAND?	Determines whether to display this panel when executing a BIND, BINDREP, BINDADD, BINDEXP, REBIND, or REBINDEX command **Y**　Display this panel for BIND and REBIND commands. **N**　Do not display this panel for BIND and REBIND commands.
DISPLAY OVERRIDE PANEL FOR COMPARE?	Determines whether to display this panel when executing a C (BIND COMPARE) Select or the COMPARE command. Valid values for this field are: **Y**　Display this panel for BIND Compare functions. **N**　Do not display this panel for BIND Compare functions.
DISPLAY OVERRIDE PANEL FOR CONVERT?	Determines whether to display this panel when executing a Z (Bind Convert) Select or a BINDCNV command. Valid values are: **Y**　Display this panel for the Z Select and BINDCNV command. **N**　Do not display this panel for the Z Select and the BINDCNV command.
DISPLAY OVERRIDE PANEL FOR SELECT?	Determines whether to display this panel when executing a B (BIND) or R (REBIND) Select. Valid values are: **Y**　Display this panel for B or R Selects. **N**　Do not display this panel for B or R Selects.
DYNAMICRULES	Indicates whether run time or bind time rules will apply to a dynamic SQL statement at run time. If this field is non-blank, it specifies the value to be generated in the DYNAMICRULES() clause: **R**　Generate DYNAMICRULES(RUN). **B**　Generate DYNAMICRULES(BIND)
EXPLAIN	Determines whether to perform an EXPLAIN. If non-blank, this value is the value to generate in the EXPLAIN() clause. The non-blank value can be: **Y**　Generate EXPLAIN(YES); perform an EXPLAIN. **N**　Generate EXPLAIN(NO); do not EXPLAIN.

FIELD	DESCRIPTION
FLAG	Indicates what levels of messages to display: **I** Informational, Warning, Error, and Completion messages **W** Warning, Error, and Completion messages **E** Error and Completion messages **C** Completion messages only
ISOLATION	Isolation level to be generated in the ISOLATION () clause: **R** RR Repeatable Read **S** CS Cursor Stability **T** RS Read Stability **U** UR Uncommitted Read **blank** Not specified and therefore at the level specified for the plan executing the package.
KEEPDYNAMIC	Indicates if prepared dynamic SQL should be purged at the end of a unit of work. Valid values include: **Y** Keep dynamic SQL past commit or rollback **N** Destroy dynamic SQL at commit or rollback
LOCATION	Location where Package is to be bound.
OWNER	Authorization ID of the Package owner.
QUALIFIER	Implicit qualifier for the unqualified table, view, index, and alias names in the static SQL statements of the package.
RELEASE	Indicates when resources are released: **C** At commit **D** At deallocation
REMOTE ENABLE	This value indicates whether to generate ENABLE/DISABLE lists for BIND Package commands that are not for the local DB2 subsystem. If no value is specified, the ENABLE/DISABLE list will be generated for remote packages. **Y or blank** Generate ENABLE/DISABLE lists for remote Packages. **N** Do not generate ENABLE/DISABLE lists for remote Packages.
REOPT(VARS)	Indicates whether the access path is re-determined at execution time using input variables. Valid values include: **Y** Determine access path at execution time for SQL statements with variable values **N** Determine access path at bind time
SQLERROR	Indicates the SQLERROR option on the most recent subcommand that bound or rebound the package: **C** Option was CONTINUE **N** Option was NOPACKAGE

FIELD	DESCRIPTION
USE LIBRARY SEARCH ORDER FOR COMMAND	Determines whether to use the Library Search Order specified on panel KTEPHOLS for BIND/REBIND commands. **Y** Use the library search order specified on KTEPHOLS for BIND and REBIND commands. **N** Do not use the library search order specified on KTEPHOLS for BIND and REBIND commands.
USE LIBRARY SEARCH ORDER FOR COMPARE?	Use the library search order specified on KTEPHOLS for BIND COMPARE functions. Valid values for this field are: **Y** Use the library search order specified on KTEPHOLS for BIND Compare functions. **N** Do not use the library search order specified on KTEPHOLS for BIND Compare functions. **P** Use the library search order specified on KTEPHOLS for BIND Compare functions unless panel KTEPBIKA was displayed. If panel KTEPBIKA was displayed, use the library on that panel as the "DB2 Library."
USE LIBRARY SEARCH ORDER FOR CONVERT?	Determines whether to use the Library Search Order specified on panel KTEPHOLS for BIND Convert functions. Valid values are: **Y** Use the library search order specified on KTEPHOLS for BIND Convert functions. **N** Do not use the library search order specified on KTEPHOLS for BIND Convert functions. **P** Use the library search order specified on KTEPHOLS for BIND Convert functions unless panel KTEPBIKA was displayed. If panel KTEPBIKA was displayed, use the library on that panel as the "DB2 Library."
USE LIBRARY SEARCH ORDER FOR SELECT?	Determines whether to use the Library Search Order specified on the panel KTEPHOLS when executing a B (BIND) or R (REBIND) Select. Valid values are: **Y** Use the library search order specified on KTEPHOLS for BIND/REBIND Select functions. **N** Do not use the library search order specified on KTEPHOLS for BIND/REBIND Select functions. **P** Use the library search order specified on KTEPHOLS for BIND/REBIND Select functions unless panel KTEPBIKA was displayed. If panel KTEPBIKA was displayed, use the library on that panel as the "DB2 Library."
USE OVERRIDES FOR COMMAND?	Determines whether to use the overrides on this panel when executing a BIND, BINDREP, BINDADD, BINDEXP, REBIND, or REBINDEX command If the command issued was BINDREP or BINDADD, the value in the `ACTION` field on this panel is ignored. If the command issued was BINDEXP or REBINDEX, the value in the `EXPLAIN` field on this panel is ignored. Valid values for the USE OVERRIDES FOR COMMAND? field are: **Y** Use the overrides on this panel for BIND and REBIND commands. **N** Do not use the overrides on this panel for BIND and REBIND commands.

FIELD	DESCRIPTION
USE OVERRIDES FOR COMPARE?	Determines whether to use the overrides on this panel when generating a B (BIND) or R (REBIND) command for the BIND Command Generation option of the C (BIND COMPARE) Select or the COMPARE command. Valid values for this field are: **Y** Use the overrides on this panel to generate BIND/REBIND commands. **N** Do not use the overrides on this panel to generate BIND/REBIND commands.
USE OVERRIDES FOR CONVERT?	Determines whether to use the overrides on this panel when executing a Z (Bind Convert) Select or a BINDCNV command. Valid values are: **Y** Use the overrides on this panel for the Z Select and BINDCNV command. **N** Do not use the overrides on this panel for the Z Select and the BINDCNV command. **O** Only the value in the field `GEN PKLIST` on this panel should be used for the Z Select and the BINDCNV command.
USE OVERRIDES FOR SELECT?	Determines whether to use the overrides on this panel when executing a B (BIND) or R (REBIND) Select. Valid values are: **Y** Use the overrides on this panel for B or R Selects. **N** Do not use the overrides on this panel for B or R Selects.
VALIDATE	Indicates when to handle OBJECT NOT FOUND and NOT AUTHORIZED errors that occur at bind time. **R** At RUN time **B** At BIND time

Panel Filters

Overview

This unit describes the Panel Filters panel.

Background about the Panel Filters panel

The Panel Filters panel (KTEPHODF) allows you to control the default type of Boolean logic used for filtering within !DB/EXPLAIN. You can specify whether you want the changes you make here to be permanent or temporary. Temporary changes take effect for the current session of !DB/EXPLAIN only.

Access

You can access the Panel Filters panel from the Housekeeping panel.

Panel

The following illustration shows the Panel Filters panel.

```
--------------------------- DB/EXPLAIN  DB2=D31A ------------------- -------
Cmd ===>


                          P A N E L    F I L T E R S


   PERMANENT? ===>    ( Y Yes  N No )


                                   FILTER
                                    TYPE   (  A AND  R OR  O OFF )
                                   ------
                 COLLECTIONS          O
                 COSTS                O
                 DBRMS                O
                 EXPLAIN              O
                 EXPLAIN HISTORY      O
                 LIBRARIES            O
                 PACKAGES             O
                 PLANS                O
                 STATEMENTS           O
                 TABLES               O

   ENTER to process   END to cancel
```

Fields

FIELD	DESCRIPTION
PERMANENT	Indicates whether to update the profile dataset with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily).
FILTER TYPE	Indicates the type of Boolean logic to use for filtering for each panel listed. **A** And **R** Or **O** Off

Panel Formats

Overview

This unit describes the Panel Formats panel.

Background about the Panel Formats panel

Many !DB/EXPLAIN panels require several formats in order to display all required data. The Panel Formats panel (KTEPHOPF) allows you to specify the default panel format for each !DB/EXPLAIN panel that has multiple formats.

You can specify whether you want the changes you make here to be permanent or for the current session of !DB/EXPLAIN only.

Access

You can access the Panel Formats panel from the Housekeeping panel.

Panel

The following illustration shows the Panel Formats panel.

```
    ---------------------------- DB/EXPLAIN  DB2=D31A --------------------------
 Cmd ===>
                          P A N E L   F O R M A T S

   PERMANENT? ===>   ( Y Yes  N No )
                                   FORMAT #     INITIAL CMD
                                   --------     -----------
        COLUMN DISTRIBUTION           1
        COLLECTIONS                   1
        COMPARE EXPLAIN               1
        COSTS                         1             1
        DBRMS                         1             1
        ESTIMATOR                     1             1
        EXPLAIN                       1
        HISTORY                       1
        LIBRARIES                     1
        PACKAGES                      1
        PLAN                          1
        STATEMENTS                    1             1
        TABLE COLUMNS                 1
        VERIFICATION                  1
        WHATIF                        1             1
 ENTER to process    END to cancel
```

Fields

FIELD	DESCRIPTION
FORMAT #	Indicates the default format you want to use when !DB/EXPLAIN displays the corresponding function. (An exception is that if you specify 0 for the Estimator format, the format !DB/EXPLAIN displays will be that inherited from the calling Whatif panel.) For all functions, format #1 is the default initially (see the Format menu for each panel for valid values).
INITIAL CMD	Default command when initially entering panel. This command is issued automatically when you access the panel. This field is valid only for the Cost, DBRMs, Estimator, Statements, and Whatif panels. ● Possible values for the Cost panel: **1** CPLN - Display plans **2** CPKG - Display packages **3** CDBR - Display DBRMs – If entering from Main menu, then CPLN is the default command – If entering from DBRMs, then only CDBR command is allowed – If entering from Packages, then only CPKG command is allowed ● Possible values for the DBRMs panel: **1** DUPS - Display DBRMs **2** NODUPS - Display DBRMs – DUPS is the default command ● Possible values for the Statements panel: **1** VERS - Display version **2** NOVERS - Do not display version ● Possible values for the Whatif panel: **1** NONDXS - Basic display **2** NDXS - Full display ● Possible values for the Estimator panel: **0** The current command (either NDXS or NONDXS) active in the calling Whatif function will be the initial command for the Estimator function. **1** NONDXS - Basic display **2** NDXS - Full display
PERMANENT INDICATOR	Indicates whether to update the profile dataset with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily).

> ***Note:*** The toggle switch that you used in !DB/EXPLAIN Version 230 and below to define the format of the EXPLAIN Format 0 display has been eliminated. You now define the format of the EXPLAIN Format 0 display using the EXPLAIN Display Tuning Parameters Format0 column.

Panel Sorts

Overview

This unit describes the Panel Sorts panel.

Background about the Panel Sorts panel

The Panel Sorts panel (KTEPHOPS) allows you to specify the default sort sequence for the data displayed on each !DB/EXPLAIN panel. This feature is required because !DB/EXPLAIN provides extensive sorting of data on each panel.

You can specify whether you want the changes you make to be permanent or for the current session of !DB/EXPLAIN only.

Access

You can access the Panel Sorts panel from the Housekeeping panel.

Panel

The following illustration shows the Panel Sorts panel.

```
    ---------------------------- DB/EXPLAIN  DB2=D31A --------------------------
  Cmd ===>


                        P A N E L    S O R T S

    PERMANENT? ===>    ( Y Yes  N No )

                                  SORT            SORT
                                  COMMAND         TYPE (A Asc or D Desc)
                                  -------         ----
            COLLECTIONS           QCOL            A
            COSTS                 CNAME           A
            DBRMS                 DBRM            A
            EXPLAIN HISTORY       HNAME           A
            DBRMS                 DBRM            A
            HOST VARIABLES        HOST            A
            LIBRARIES             LLIB            A
            PACKAGES              KPACK           A
            PLANS                 PLAN            A
            PACKAGE LISTS         PLOC            A
            PLAN CONNECTIONS      PSYS            A
            PACKAGE CONNECTIONS   KSYS            A
            TABLES                TTBL            A


  ENTER to process   END to cancel
```

Fields

DATA FIELD	DESCRIPTION
PERMANENT	Indicates whether to update the profile dataset with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily).
SORT COMMAND	Valid sort field for corresponding function (see the Sort Menu for each function for all valid fields).
SORT TYPE	Sort sequence indicator: **A** Ascending **D** Descending

Plan BIND Overrides

Overview

This unit describes the Plan BIND Overrides panel.

Background about the Plan BIND Overrides panel

The Plan BIND Overrides panel (KTEPHOBP) allows you to make global changes to BIND parameters for more than one plan.

Access

The Plan BIND Overrides panel appears if more than one plan has been selected to be bound on the Plans panel. It is first displayed when selected from the Housekeeping Panel KTEPHOUS. Subsequent displays appear according to the value entered on the fields Display Override Panel. From Plan BIND Overrides, the user can only go to the Process Member panel (KTEPOUOP).

Panel

The following illustration shows the Plan BIND Overrides panel.

```
   ---------------------------- DB/EXPLAIN  DB2=D42B  -------------------------
Cmd ===>
                   P L A N   B I N D   O V E R R I D E S

PERMANENT? ===> N  ( Y Yes  N No )
Use Overrides for          Command? Y   Select? N   Convert? O   Compare? N
Display Override Panel for  Command? Y   Select? N   Convert? N   Compare? N
Use Library Search Order for Command? Y   Select? Y   Convert? Y   Compare? Y

Owner        :                     Action    :  ( R Replace  A Add )
Qualifier    :                     Retain    :  ( Y Yes   N No )
                                   Flag      :  ( I / W / E / C )
Cache Size   :                     Isolation :  ( R RR  R RS  S CS  U UR )
Current Server:                    Acquire   :  ( U Use  A Allocate)
Current Data :    ( Yes   N No )   Release   :  ( C Commit  D Deallocate )
SQLRULES     :    ( D DB2  S STD )  Validate :  ( R Run  B Bind )
Keepdynamic  :    ( Y Yes  N No )  Explain   :  ( Y Yes   N No )
REOPT(VARS)  :    ( Y Yes  N No )  Deferprep :  ( Y Yes   N No )
Dynamicrules :    ( B / blank )    Degree    :  ( 1 / ANY )
Gen PKLIST   :    ( N No  Y Yes    Disconnect:  ( E Explicit  A Automatic
                  C Convert Only )              C Conditional )
Collection Specification:

Press ENTER to process.  Press END to cancel.
```

Fields

FIELD	DESCRIPTION
ACQUIRE	Indicates when resources are obtained: **A** At allocation **U** Use (when used)
ACTION	If non-blank, this value is the value to generate in the ACTION() clause. The non-blank value can be: **A** Generate ACTION(ADD). **R** Generate ACTION(REPLACE).
CACHE SIZE	Size measured in bytes of the cache to be acquired for the plan.
COLLECTION SPECIFICATION	Specification of the collection to be used when `GEN PKLIST` is `Y` Values can be specified as: **A literal string with no variables and with or without delimiters. Delimiters can be single or double quotes.** Use the literal provided as the collection ID (for example, `coll`, `'coll'`, or `"coll"`). **The variable `&PACKAGE.`** Use the Package name as the collection ID. **The variable `&PLAN.`** Use the Plan name as the collection ID. **The variable `&OWNER.`** Use the Owner as the collection ID. **The variable `&CREATOR.`** Use the Creator as the collection ID. **The variable `&QUALIFIER.`** Use the Qualifier as the collection ID. **The variable `&USER.`** Use the TSO User ID as the collection ID. **A literal string with variables or substringed variables. The literal must be enclosed in delimiters.** Use the generated string as the collection ID. For example, `'T'||SUBSTR(1,4&PACKAGE)` would result in TABCD if the Package name were ABCDEFGH. `"T"||SUBSTR(1,4&OWNER)` would result in TMITY if the Owner name were MITYMITE. The concatenation characters must be those specified on the EXPLAIN/SQL Defaults panel KTEPHOMI.
CURRENTDATA	Indicates the CURRENTDATA option when the Plan was bound or rebound **Y** Data currency is required for ambiguous cursors. **N** Data currency is not required for ambiguous cursors.

FIELD	DESCRIPTION
CURRENTSERVER	Location name specified with the CURRENTSERVER option when the plan was last bound. Blank if none was specified.
DEFERPREP	If non-blank, the value for the DEFER() or NODEFER() clause will be set to PREPARE. **Y** Generate DEFER(PREPARE). **A** Generate NODEFER(PREPARE).
DEGREE	Determines whether I/O parallelism is enabled: **1** I/O parallelism is disabled. **Any** I/O parallelism is set to the value set by DB2. **Blank** The default, **1** is used.
DISCONNECT	The DISCONNECT option used when the plan was bound. Its value can be: **E** Explicit—Disconnect must be explicitly specified. **A** Disconnect is automatic. **C** Disconnect is conditional. **blank** The default, **E** is used.
DISPLAY OVERRIDE PANEL FOR COMMAND?	Determines whether to display this panel when executing a BIND, BINDREP, BINDADD, BINDEXP, REBIND, or REBINDEX command **Y** Display this panel for BIND and REBIND commands. **N** Do not display this panel for BIND and REBIND commands.
DISPLAY OVERRIDE PANEL FOR COMPARE?	Determines whether to display this panel when executing a C (BIND COMPARE) Select or the COMPARE command. Valid values for this field are: **Y** Display this panel for BIND Compare functions. **N** Do not display this panel for BIND Compare functions.
DISPLAY OVERRIDE PANEL FOR CONVERT?	Determines whether to display this panel when executing a Z (Bind Convert) Select or a BINDCNV command. Valid values are: **Y** Display this panel for the Z Select and BINDCNV command. **N** Do not display this panel for the Z Select and the BINDCNV command.
DISPLAY OVERRIDE PANEL FOR SELECT?	Determines whether to display this panel when executing a B (BIND) or R (REBIND) Select. Valid values are: **Y** Display this panel for B or R Selects. **N** Do not display this panel for B or R Selects.
DYNAMICRULES	Indicates whether run time or bind time rules will apply to a dynamic SQL statement at run time. If this field is non-blank, it specifies the value to be generated in the DYNAMICRULES() clause: **R** Generate DYNAMICRULES(RUN). **B** Generate DYNAMICRULES(BIND)
EXPLAIN	Determines whether to perform an EXPLAIN. If non-blank, this is the value to generate in the EXPLAIN() clause. **Y** Generate EXPLAIN(YES); perform an EXPLAIN. **N** Generat EXPLAIN(NO); do not perform an EXPLAIN.

FIELD	DESCRIPTION
FLAG	Indicates what levels of messages to display: **I** Informational, Warning, Error, and Completion messages **W** Warning, Error, and Completion messages **E** Error and Completion messages **C** Completion messages only
GEN PKLIST	Determines whether a PKLIST(`collid.*`) should be generated. Valid values are: **N** Retain the original PKLIST for BIND/REBIND functions. **Y** Indicates that a PKLIST(`collid.*`) should be generated rather than individually including each package. The `collid` would be the value specified for the **Collection Specification for Convert** on the Package Bind Overrides (KTEPHOBK) panel if the command issued was Bind Convert (BINDCNV). If the command issued was not BINDCNV, the `collid` would be the value specified for **Collection Specification** on this panel (KTEPHOBP). **C** Indicates, for Bind Convert (BINDCNV) commands only, that a PKLIST(`collid.*`) should be generated rather than individually including each package. The `collid` would be the value specified for the **Collection Specification for Convert** on the Package Bind Overrides (KTEPHOBK) panel.
ISOLATION	Isolation level to be generated in the ISOLATION() clause: **R** RR (Repeatable Read) **S** CS (Cursor Stability) **T** RS (Read Stability) **U** UR (Uncommitted Read)
KEEPDYNAMIC	Indicates if prepared dynamic SQL should be purged at the end of a unit of work. Valid values include: **Y** Keep dynamic SQL past commit or rollback **N** Destroy dynamic SQL at commit or rollback
OWNER	Authorization ID of the Plan owner.
QUALIFIER	Implicit qualifier for the unqualified table, view, index, and alias names in the static SQL statements of the plan.
RELEASE	Indicates when resources are released: **C** At commit **D** At deallocation
REMOTE ENABLE	This value indicates whether to generate ENABLE/DISABLE lists for BIND Plan commands that are not for the local system. **Y or blank** Generate ENABLE/DISABLE lists for remote Plans. **N** Do not generate ENABLE/DISABLE lists for remote Plans.
REOPT(VARS)	Indicates whether the access path is re-determined at execution time using input variables. Valid values include: **Y** Determines access path at execution time for SQL statements with variable values **N** Determines access path at bind time

FIELD	DESCRIPTION
RETAIN	Retain authority list granted to plan? **Y** Yes **N** No
SQLRULES	The SQLRULES option used when the Plan was bound. Its value can be: **D** Use DB2 SQL rules. **S** Use standard SQL rules. **blank** The default, `D` is used.
USE LIBRARY SEARCH ORDER FOR COMMAND	Determines whether to use the Library Search Order specified on panel KTEPHOLS for BIND/REBIND commands. **Y** Use the library search order specified on KTEPHOLS for BIND and REBIND commands. **N** Do not use the library search order specified on KTEPHOLS for BIND and REBIND commands.
USE LIBRARY SEARCH ORDER FOR COMPARE?	Determines whether to use the Library Search Order specified on panel KTEPHOLS for BIND Compare functions. Valid values for this field are: **Y** Use the library search order specified on KTEPHOLS for BIND Compare functions. **N** Do not use the library search order specified on KTEPHOLS for BIND Compare functions.
USE LIBRARY SEARCH ORDER FOR CONVERT?	Determines whether to use the Library Search Order specified on panel KTEPHOLS for BIND Convert functions. Valid values are: **Y** Use the library search order specified on KTEPHOLS for BIND Convert functions. **N** Do not use the library search order specified on KTEPHOLS for BIND Convert functions.
USE LIBRARY SEARCH ORDER FOR SELECT?	Determines whether to use the Library Search Order specified on the panel KTEPHOLS when executing a B (BIND) or R (REBIND) Select. Valid values are: **Y** Use the library search order specified on KTEPHOLS for BIND/REBIND Select functions. **N** Do not use the library search order specified on KTEPHOLS for BIND/REBIND Select functions.
USE OVERRIDES FOR COMMAND?	Determines whether to use the overrides on this panel when executing a BIND, BINDREP, BINDADD, BINDEXP, REBIND, or REBINDEX command If the command issued was BINDREP or BINDADD, the value in the `ACTION` field on this panel is ignored. If the command issued was BINDEXP or REBINDEX, the value in the `EXPLAIN` field on this panel is ignored. Valid values for the USE OVERRIDES FOR COMMAND? field are: **Y** Use the overrides on this panel for BIND and REBIND commands. **N** Do not use the overrides on this panel for BIND and REBIND commands.

FIELD	DESCRIPTION
USE OVERRIDES FOR COMPARE?	Determines whether to use the overrides on this panel when generating a B (BIND) or R (REBIND) command for the BIND Command Generation option of the C (BIND COMPARE) Select or the COMPARE command. Valid values for this field are: **Y** Use the overrides on this panel to generate BIND/REBIND commands. **N** Do not use the overrides on this panel to generate BIND/REBIND commands.
USE OVERRIDES FOR CONVERT?	Determines whether to use the overrides on this panel when executing a Z (Bind Convert) Select or a BINDCNV command. Valid values are: **Y** Use the overrides on this panel for the Z Select and BINDCNV command. **N** Do not use the overrides on this panel for the Z Select and the BINDCNV command. **O** Only the value in the field `GEN PKLIST` on this panel should be used for the Z Select and the BINDCNV command.
USE OVERRIDES FOR SELECT?	Determines whether to use the overrides on this panel when executing a B (BIND) or R (REBIND) Select. Valid values are: **Y** Use the overrides on this panel for B or R Selects. **N** Do not use the overrides on this panel for B or R Selects.
VALIDATE	Indicates when to handle OBJECT NOT FOUND and NOT AUTHORIZED errors that occur at bind time. **R** Validate at RUN time **B** Validate at BIND time

Recommendations Menu

Overview

This unit describes the Recommendations Menu.

Background about the Recommendations Menu

The Recommendations Menu (KTEPRECM) permits you to select which of the recommendations selection panels you want to use.

Access

You can access the Recommendations Menu from the Housekeeping panel.

Panel

This is the Recommendations Menu panel.

```
    --------------------------- DB/EXPLAIN  DB2=D31A  --------------------------

                        !DB/EXPLAIN RECOMMENDATIONS MENU

 Option ===>
    0 - Recommendations Display Options
    1 - Bind      Recommendations  B00001 - B00009
    2 - Object    Recommendations  O00000 - O00012
    3 - Object    Recommendations  O00013 - O00025
    4 - Object    Recommendations  O00026 - O00036
    5 - Statement Recommendations  S00000 - S00009
    6 - Statement Recommendations  S00010 - S00019
    7 - Statement Recommendations  S00020 - S00027
    8 - Statement Recommendations  S00028 - S00042   Reserved for future release
    9 - Statement Recommendations  S00043 - S00053
    A - Exception Recommendations  X00001 - X00012


 ENTER to process   END to cancel
```

Fields

FIELD	DESCRIPTION
OPTION	Permits you to select a value from 0-9 and A. The selection takes you to the associated Recommendations panel.

Recommendations Panel 0

Overview

This unit describes Recommendations Panel 0.

Background about Recommendations Panel 0

Recommendations Panel 0 (KTEPHOR0) allows you to specify whether to
display BIND type, object type, SQL statement type, and exception type
recommendations, as well as when to display partitioned recommendations.

Access

You can access Recommendations Panel 0 from the Housekeeping panel.

Panel

The following illustration shows Recommendations panel 0.

```
---------------------------- DB/EXPLAIN  DB2=D31A --------------------------
Cmd ===>
                  R E C O M M E N D A T I O N S   P A N E L   0

PERMANENT? ===> N  ( Y Yes  N No )


Display BIND type Recommendations              ===> Y   (Y Yes  N No)
Display Object type Recommendations            ===> Y   (Y Yes  N No)
Display SQL Statement type Recommendations  ===> Y   (Y Yes  N No)
Display Exception type Recommendations         ===> Y   (Y Yes  N No)

When to display partitioned Recommendations ===> O   (O One  A Aggregate)


ENTER to process   END to cancel   NEXT for next panel
```

Fields

FIELD	DESCRIPTION
DISPLAY BIND TYPE RECOMMENDATIONS	Indicates whether to display BIND type recommendations (recommendations beginning with **B**). **Y** Display applicable BIND type recommendations. **N** Do not display BIND type recommendations.
DISPLAY EXCEPTION TYPE RECOMMENDATIONS	Indicates whether to display EXCEPTION type recommendations (recommendations beginning with **X**). **Y** Display applicable EXCEPTION type recommendations. **N** Do not display EXCEPTION type recommendations.
DISPLAY OBJECT TYPE RECOMMENDATIONS	Indicates whether to display OBJECT type recommendations (recommendations beginning with **0**). **Y** Display applicable OBJECT type recommendations. **N** Do not display OBJECT type recommendations.
DISPLAY SQL STATEMENT TYPE RECOMMENDATIONS	Indicates whether to display SQL statement type recommendations (recommendations beginning with **S**). **Y** Display applicable SQL statement type recommendations. **N** Do not display SQL statement type recommendations.
PERMANENT	Indicates whether to update the profile dataset with these changes permanently or update for current !DB/EXPLAIN session only. **Y** Make these changes permanent. **N** Do not make these changes permanent.
WHEN TO DISPLAY PARTITIONED RECOMMENDATIONS	Indicates when to display recommendations that are based on a field whose source is SYSINDEXPART or SYSTABLEPART. **O** Display the recommendation when any single partition of the entity meets or exceeds he threshold specified in Housekeeping. **A** Display the recommendation only when the aggregate field meets or exceeds the threshold specified in Housekeeping. For example, if **A** were specified, recommendation O0000007 would be displayed only if the sum of FAROFFPOS for all partitions divided by the number of partitions meets or exceeds the specified value.

Recommendations Panel 1

Overview

This unit describes Recommendations Panel 1

Background about Recommendations Panel 1

Recommendations Panel 1 (KTEPHOR1) displays BIND type recommendations and allows you to control the amount of text you see for each recommendation listed, whether to treat the recommendation as an exception, and the return code to set if the recommendation is tripped during a batch session. The recommendations listed here appear:

- On the EXPLAIN panel in format 1 and format 7

- On the Statements panel when you select a statement using the R select

- On the Exceptions panel when you specify **Y** for the recommendation in the XCPT column of the Recommendations panel

You can specify one of four levels of recommendation text: none, terse, verbose, and more than verbose. You also can specify the threshold value for recommendations which appear only when a threshold is met or exceeded.

Access

You can access Recommendations Panel 1 from the Housekeeping panel.

Panel

The following illustration shows Recommendations panel 1.

```
---------------------------- DB/EXPLAIN  DB2=D31A --------------------------
Cmd ===>
                   R E C O M M E N D A T I O N S   P A N E L   1

PERMANENT? ===> N  ( Y Yes  N No )
                                                      Level XCPT  RC
                                                      ----- ---- -----
B00001 -ISOLATION(RR)                                   V    Y     0
B00002 -ACQUIRE(ALLOCATE) RELEASE(DEALLOCATE)           V    Y     0
B00003 -ACQUIRE(USE) RELEASE(DEALLOCATE)                V    Y     0
B00004 -VALIDATE(RUN)                                   V    Y     0
B00005 -Enable/Disable list entries >=         20       V    Y     0
B00006 -Cachesize >= 1280                               V    Y     0
B00007 -Plan / Package  Invalid or Inoperative          V    Y     0
B00008 -# DBRMs bound into Plan >=          50           V    Y     0
B00009 -Plan Size >=    10 times EDMPOOL size            V    Y     0


ENTER to process   END to cancel   NEXT for next panel  PREV for previous panel
```

Fields

FIELD	DESCRIPTION
BATCH RC	Indicates the return code to set if the recommendation is tripped while in a batch session. The fields SET EXCEPTION RC FOR XCPT?, SET EXCEPTION RC FOR EXPLAIN?, AND SET EXCEPTION RC FOR RECOMMEND? on the Miscellaneous Defaults panel KTEPHOMJ determine the cases in which the batch return code is actually set.
LEVEL	Indicates the level of text for each recommendation. **N** None **T** Terse **V** Verbose **M** More than verbose Threshold fields and values appear to the right of the recommendation level for those recommendations which have thresholds.
PERMANENT	Indicates whether to update the profile dataset with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily). **Y** Make the changes permanent. **N** Do not make the changes permanent.
XCPT	Indicates whether to treat this recommendation is an exception. **Y** Treat this recommendation as an exception. **N** Do not treat this recommendation as an exception.

Recommendations Panel 2

Overview

This unit describes Recommendations Panel 2.

Background about Recommendations Panel 2

Recommendations Panel 2 (KTEPHOR2) displays object type recommendations and allows you to control the amount of text you see for each recommendation listed, whether to treat the recommendation as an exception, and the return code to set if the recommendation is tripped during a batch session. The recommendations listed here appear:

- On the EXPLAIN panel in format 1 and format 7

- On the Statements panel when you select a statement using the R select

- On the Exceptions panel when you specify **Y** for the recommendation in the XCPT column of the Recommendations panel

You can specify one of four levels of recommendation text: none, terse, verbose and more than verbose. You also can specify the threshold value for recommendations which appear only when a threshold is met or exceeded.

Access

You can access the Recommendations Panel 2 from the Housekeeping panel.

Panel

The following illustration shows Recommendations panel 2.

```
---------------------------- DB/EXPLAIN  DB2=D31A --------------------------
Cmd ===>
                  R E C O M M E N D A T I O N S    P A N E L    2

PERMANENT? ===> N  ( Y Yes  N No )
                                                         Level XCPT  RC
                                                         ----- ----  -----
000000 -Runstats not run (tablespace / table)              V    Y      0
000001 -Runstats not run (index)                           V    Y      0
000002 -LOCKSIZE ANY                                       V    Y      0
000003 -LOCKSIZE TABLESPACE / TABLE                        V    Y      0
000004 -LOCKSIZE ANY / PAGE for read only                  V    Y      0
000005 -Varying length columns in index key                V    Y      0
000006 -Varying length columns not at row end              V    Y      0
000007 -FAROFFPOS / CARD % >=  10                           V    Y      0
000008 -FAROFFPOS >=       200                              V    Y      0
000009 -PERCDROP >=  10                                     V    Y      0
000010 -(NEARINDREF+FARINDEF)/CARD % >=  10                 V    Y      0
000011 -LEAFDIST >=        200                              V    Y      0
000012 -NLEVELS >=     4                                    V    Y      0

ENTER to process   END to cancel   NEXT for next panel  PREV for previous panel
```

Fields

FIELD	DESCRIPTION
BATCH RC	Indicates the return code to set if the recommendation is tripped while in a batch session. The fields SET EXCEPTION RC FOR XCPT?, SET EXCEPTION RC FOR EXPLAIN?, AND SET EXCEPTION RC FOR RECOMMEND? on the Miscellaneous Defaults panel KTEPHOMJ determine the cases in which the batch return code is actually set.
LEVEL	Indicates the level of text for each recommendation. N None T Terse V Verbose M More than verbose Threshold fields and values appear to the right of the recommendation level for those recommendations which have thresholds.
PERMANENT	Indicates whether to update the profile dataset with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily). Y Make the changes permanent. N Do not make the changes permanent.
XCPT	Indicates whether this recommendation is an exception. Y Treat this recommendation as an exception. N Do not treat this recommendation as an exception.

Recommendations Panel 3

Overview

This unit describes Recommendations Panel 3.

Background about Recommendations Panel 3

Recommendations Panel 3 (KTEPHOR3) displays object type recommendations and allows you to control the amount of text you see for each recommendation listed, whether to treat the recommendation as an exception, and the return code to set if the recommendation is tripped during a batch session. The recommendations listed here appear:

- On the EXPLAIN panel in format 1 and format 7

- On the Statements panel when you select a statement using the R select

- On the Exceptions panel when you specify **Y** for the recommendation in the XCPT column of the Recommendations panel

You can specify one of four levels of recommendation text: none, terse, verbose and more than verbose. You also can specify the threshold value for recommendations which appear only when a threshold is met or exceeded.

Access

You can access Recommendations Panel 3 from the Housekeeping panel.

Panel

The following illustration shows Recommendations panel 3.

```
---------------------------- DB/EXPLAIN  DB2=D31A  -------------------------
Cmd ===>
                  R E C O M M E N D A T I O N S   P A N E L   3

PERMANENT? ===> N  ( Y Yes  N No )
                                                     Level XCPT  RC
                                                     ----- ----  -----
000013 -# Columns in Index >=  5                       V     Y      0
000014 -Length of Columns in Index >=  30              V     Y      0
000015 -Subpages for index on R/O Table:   1 to  1     V     Y      0
000016 -Subpages for index on non R/O Table:  2 to  4  V     Y      0
000017 -# pages in R/O table before index              V     Y      0
          NPAGES >=          15
000018 -# pages in non R/O table before index          V     Y      0
          NPAGES >=          30
000019 -# indexes on Read-Only table >=     5          V     Y      0
000020 -# indexes on Non-Read-Only table >=    3       V     Y      0
000021 -No clustering index defined                    V     Y      0
000022 -No index used when indexes exist (SELECTs)     V     Y      0
000023 -% distinct values for indexed column <  30     V     Y      0
000024 -% of unique values for index <  30             V     Y      0
000025 -Unique Index not defined as UNIQUE             V     Y      0
ENTER to process   END to cancel   NEXT for next panel  PREV for previous panel
```

Fields

FIELD	DESCRIPTION
BATCH RC	Indicates the return code to set if the recommendation is tripped while in a batch session. The fields SET EXCEPTION RC FOR XCPT?, SET EXCEPTION RC FOR EXPLAIN?, AND SET EXCEPTION RC FOR RECOMMEND? on the Miscellaneous Defaults panel KTEPHOMJ determine the cases in which the batch return code is actually set.
LEVEL	Indicates the level of text for each recommendation. **N** None **T** Terse **V** Verbose **M** More than verbose Threshold fields and values appear to the right of the recommendation level for those recommendations which have thresholds.
PERMANENT	Indicates whether to update the profile dataset with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily). **Y** Make the changes permanent. **N** Do not make the changes permanent.
XCPT	Indicates whether this recommendation is an exception. **Y** Treat this recommendation as an exception. **N** Do not treat this recommendation as an exception.

Recommendations Panel 4

Overview

This unit describes Recommendations Panel 4.

Background about Recommendations Panel 4

Recommendations Panel 4 (KTEPHOR4) displays object type recommendations and allows you to control the amount of text you see for each recommendation listed, whether to treat the recommendation as an exception, and the return code to set if the recommendation is tripped during a batch session. The recommendations listed here appear:

- On the EXPLAIN panel in format 1 and format 7

- On the Statements panel when you select a statement using the R select

- On the Exceptions panel when you specify **Y** for the recommendation in the XCPT column of the Recommendations panel

You can specify one of four levels of recommendation text: none, terse, verbose, and more than verbose. You also can specify the threshold value for recommendations which appear only when a threshold is met or exceeded.

Access

You may access Recommendations Panel 4 from the Housekeeping panel.

Panel

The following illustration shows Recommendations panel 4.

```
---------------------------- DB/EXPLAIN  DB2=D31A -------------------------
Cmd ===>
                    R E C O M M E N D A T I O N S    P A N E L    4

PERMANENT? ===> N  ( Y Yes  N No )
                                                       Level XCPT  RC
                                                       ----- ----  -----
000026 -FREEPAGE <> 0  or PCTFREE <> 0 on R/O Index      V    Y     0
000027 -FREEPAGE <> 0  or PCTFREE <> 0 on R/O Table      V    Y     0
000028 -# Pages in non-partitioned tspace >=      5000   V    Y     0
000029 -# Pages in partition >=       5000              V    Y     0
000030 -# Columns in table >=  50                       V    Y     0
000031 -RECLENGTH of table >=  1000                     V    Y     0
000032 -Wasted space in table page % >=  15             V    Y     0
000033 -(100-PAGESAVE) >=  25                           V    Y     0
000034 -Table (100-PCTROWCOMP) >=  25                   V    Y     0
000035 -Tablespace (100-PCTROWCOMP) >=  25              V    Y     0
000036 -No index used when indexes exist (Non-SELECTs)  V    Y     0

ENTER to process   END to cancel   NEXT for next panel  PREV for previous panel
```

Fields

FIELD	DESCRIPTION
BATCH RC	Indicates the return code to set if the recommendation is tripped while in a batch session. The fields SET EXCEPTION RC FOR XCPT?, SET EXCEPTION RC FOR EXPLAIN?, AND SET EXCEPTION RC FOR RECOMMEND? on the Miscellaneous Defaults panel KTEPHOMJ determine the cases in which the batch return code is actually set.
LEVEL	Indicates the level of text for each recommendation. **N** None **T** Terse **V** Verbose **M** More than verbose Threshold fields and values appear to the right of the recommendation level for those recommendations which have thresholds.
PERMANENT	Indicates whether to update the profile dataset with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily). **Y** Make the changes permanent. **N** Do not make the changes permanent.
XCPT	Indicates whether this recommendation is an exception. **Y** Treat this recommendation as an exception. **N** Do not treat this recommendation as an exception.

Recommendations Panel 5

Overview

This unit describes Recommendations Panel 5.

Background about Recommendations Panel 5

Recommendations Panel 5 (KTEPHOR5) displays SQL statement type recommendations and allows you to control the amount of text you see for each recommendation listed, whether to treat the recommendation as an exception, and the return code to set if the recommendation is tripped during a batch session. The recommendations listed here appear:

- On the EXPLAIN panel in format 1 and format 7
- On the Statements panel when you select a statement using the R select
- On the Exceptions panel when you specify **Y** for the recommendation in the XCPT column of the Recommendations panel

You can specify one of four levels of recommendation text: none, terse, verbose, and more than verbose. You also may specify the threshold value for recommendations which appear only when a threshold is met or exceeded.

Access

You may access Recommendations Panel 5 from the Housekeeping panel.

Panel

The following illustrations show Recommendations panel 5.

```
---------------------------- DB/EXPLAIN  DB2=D31A  -------------------------
Cmd ===>
                   R E C O M M E N D A T I O N S    P A N E L   5

PERMANENT? ===> N  ( Y Yes  N No )
                                                       Level XCPT  RC
                                                       ----- ----  -----
S00000 -Tablespace Scan  NPAGES > =        1000          V     Y     0
S00001 -Mass Delete (nonseg ts) Rows >=         100      V     Y     0
S00002 -Segsize for Sequential Prefetch                  V     Y     0
S00003 -View Materialization                             V     Y     0
S00004 -OPTIMIZE FOR n ROWS may be ignored               V     Y     0
S00005 -Referential Constraints                          V     Y     0
S00006 -Host var - column mismatch (char)                V     Y     0
S00007 -Host var - column mismatch (numeric / data type) V     Y     0
S00008 -SELECT *                                         V     Y     0
S00009 -Sort for uniqueness                              V     Y     0



ENTER to process   END to cancel   NEXT for next panel  PREV for previous panel
```

Fields

FIELD	DESCRIPTION
BATCH RC	Indicates the return code to set if the recommendation is tripped while in a batch session. The fields SET EXCEPTION RC FOR XCPT?, SET EXCEPTION RC FOR EXPLAIN?, AND SET EXCEPTION RC FOR RECOMMEND? on the Miscellaneous Defaults panel KTEPHOMJ determine the cases in which the batch return code is actually set.
LEVEL	Indicates the level of text for each recommendation. **N** None **T** Terse **V** Verbose **M** More than verbose Threshold fields and values appear to the right of the recommendation level for those recommendations which have thresholds.
PERMANENT	Indicates whether to update the profile dataset with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily). **Y** Make the changes permanent. **N** Do not make the changes permanent.
XCPT	Indicates whether this recommendation is an exception. **Y** Treat this recommendation as an exception. **N** Do not treat this recommendation as an exception.

Recommendations Panel 6

Overview

This unit describes Recommendations Panel 6.

Background about Recommendations Panel 6

Recommendations Panel 6 (KTEPHOR6) displays SQL statement type recommendations and allows you to control the amount of text you see for each recommendation listed, whether to treat the recommendation as an exception, and the return code to set if the recommendation is tripped during a batch session. The recommendations listed here appear:

- On the EXPLAIN panel in format 1 and format 7

- On the Statements panel when you select a statement using the R select

- On the Exceptions panel when you specify **Y** for the recommendation in the XCPT column of the Recommendations panel

You can specify one of four levels of recommendation text: none, terse, verbose, and more than verbose. You also may specify the threshold value for recommendations which appear only when a threshold is met or exceeded.

Access

You may access Recommendations Panel 6 from the Housekeeping panel.

Panel

The following illustration shows Recommendations panel 6.

```
---------------------------- DB/EXPLAIN  DB2=D31A --------------------------
Cmd ===>
                R E C O M M E N D A T I O N S    P A N E L   6

PERMANENT? ===> N  ( Y Yes  N No )
                                                    Level XCPT  RC
                                                    ----- ---- -----
S00010 -Nested Loop inner table, tspace scan          V    Y    0
        NPAGES >=         100
S00011 -Nested Loop join composite table sort         V    Y    0
S00012 -Merge Scan join inner table sort              V    Y    0
        Rows >=         500
S00013 -Merge Scan join outer table sort              V    Y    0
        Rows >=         500
S00014 -Sort for ordering   Rows >=         500       V    Y    0
S00015 -Multiple index access  Rows >=        1000    V    Y    0
S00016 -COLUMN IN (subquery)                          V    Y    0
S00017 -COLUMN NOT IN (subquery)                      V    Y    0
S00018 -COLUMN = ALL (subquery)  (or ¬= ALL)          V    Y    0
S00019 -COLUMN = ANY (subquery)  (or ¬= ANY)          V    Y    0

ENTER to process   END to cancel   NEXT for next panel  PREV for previous panel
```

Fields

FIELD	DESCRIPTION
BATCH RC	Indicates the return code to set if the recommendation is tripped while in a batch session. The fields SET EXCEPTION RC FOR XCPT?, SET EXCEPTION RC FOR EXPLAIN?, AND SET EXCEPTION RC FOR RECOMMEND? on the Miscellaneous Defaults panel KTEPHOMJ determine the cases in which the batch return code is actually set.
LEVEL	Indicates the level of text for each recommendation. **N**　　　None **T**　　　Terse **V**　　　Verbose **M**　　　More than verbose Threshold fields and values appear to the right of the recommendation level for those recommendations which have thresholds.
PERMANENT	Indicates whether to update the profile dataset with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily). **Y**　　　Make the changes permanent. **N**　　　Do not make the changes permanent.
XCPT	Indicates whether this recommendation is an exception. **Y**　　　Treat this recommendation as an exception. **N**　　　Do not treat this recommendation as an exception.

Recommendations Panel 7

Overview

This unit describes Recommendations Panel 7.

Background about Recommendations Panel 7

Recommendations Panel 7 (KTEPHOR7) displays SQL statement type recommendations and allows you to control the amount of text you see for each recommendation listed, whether to treat the recommendation as an exception, and the return code to set if the recommendation is tripped during a batch session. The recommendations listed here appear:

- On the EXPLAIN panel in format 1 and format 7
- On the Statements panel when you select a statement using the R select
- On the Exceptions panel when you specify **Y** for the recommendation in the XCPT column of the Recommendations panel

You can specify one of three levels of recommendation text: none, terse, verbose, and more than verbose. You also may specify the threshold value for recommendations which appear only when a threshold is met or exceeded.

Access

You may access Recommendations Panel 7 from the Housekeeping panel.

Panel

The following illustration shows Recommendations panel 7.

```
---------------------------- DB/EXPLAIN  DB2=D31A -------------------------
Cmd ===>
                   R E C O M M E N D A T I O N S    P A N E L   7

PERMANENT? ===> N  ( Y Yes  N No )
                                                        Level XCPT  RC
                                                        ----- ----  -----
S00020 -COLUMN LIKE '%char'      (or '_char')             V     Y     0
S00021 -COLUMN NOT LIKE 'char'                            V     Y     0
S00022 -COLUMN NOT IN (list)                              V     Y     0
S00023 -COLUMN IS NOT NULL                               V     Y     0
S00024 -COLUMN NOT BETWEEN val1 and val2                 V     Y     0
S00025 -COLUMN ¬= value                                  V     Y     0
S00026 -COLUMN LIKE host variable                        V     Y     0
S00027 -COLUMN = expression                              V     Y     0



 ENTER to process   END to cancel   NEXT for next panel  PREV for previous panel
```

Fields

FIELD	DESCRIPTION
BATCH RC	Indicates the return code to set if the recommendation is tripped while in a batch session. The fields SET EXCEPTION RC FOR XCPT?, SET EXCEPTION RC FOR EXPLAIN?, AND SET EXCEPTION RC FOR RECOMMEND? on the Miscellaneous Defaults panel KTEPHOMJ determine the cases in which the batch return code is actually set.
LEVEL	Indicates the level of text for each recommendation. **N** None **T** Terse **V** Verbose **M** More than verbose Threshold fields and values appear to the right of the recommendation level for those recommendations which have thresholds.
PERMANENT	Indicates whether to update the profile dataset with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily). **Y** Make the changes permanent. **N** Do not make the changes permanent.
XCPT	Indicates whether this recommendation is an exception. **Y** Treat this recommendation as an exception. **N** Do not treat this recommendation as an exception.

Recommendations Panel 8

Overview

This unit describes Recommendations Panel 8.

Background about Recommendations Panel 8

Recommendations Panel 8 (KTEPHOR8) displays SQL statement type recommendations and allows you to control the amount of text you see for each recommendation listed, whether to treat the recommendation as an exception, and the return code to set if the recommendation is tripped during a batch session. The recommendations listed here appear:

- On the EXPLAIN panel in format 1 and format 7
- On the Statements panel when you select a statement using the R select
- On the Exceptions panel when you specify **Y** for the recommendation in the XCPT column of the Recommendations panel

You can specify one of three levels of recommendation text: none, terse, verbose, and more than verbose. You also may specify the threshold value for recommendations which appear only when a threshold is met or exceeded.

Access

You may access Recommendations Panel 8 from the Housekeeping panel.

Panel

The following illustration shows Recommendations panel 8.

```
-------------------------- DB/EXPLAIN  DB2=D31A --------------------------
Cmd ===>
                    R E C O M M E N D A T I O N S    P A N E L    8

PERMANENT? ===> N  ( Y Yes  N No )
                                                        Level XCPT  RC
                                                        ----- ---- -----
S00043 -CREATE SQL statement                              V    Y     0
S00044 -DROP   SQL statement                              V    Y     0
S00045 -ALTER  SQL statement                              V    Y     0
S00046 -GRANT  SQL statement                              V    Y     0
S00047 -REVOKE SQL statement                              V    Y     0
S00048 -LOCK   SQL statement                              V    Y     0
S00049 -COST >=       5000                                V    Y     0
S00050 -Nonmatching Index Scan NLEAF >=         500       V    Y     0
S00051 -DISCONNECT(AUTO) for CURSOR with HOLD             V    Y     0
S00052 -Statement Isolation Less Restructive              V    Y     0
S00053 -Statement Isolation More Restructive              V    Y     0


ENTER to process   END to cancel   NEXT for next panel  PREV for previous panel
```

Fields

FIELD	DESCRIPTION
BATCH RC	Indicates the return code to set if the recommendation is tripped while in a batch session. The fields SET EXCEPTION RC FOR XCPT?, SET EXCEPTION RC FOR EXPLAIN?, AND SET EXCEPTION RC FOR RECOMMEND? on the Miscellaneous Defaults panel KTEPHOMJ determine the cases in which the batch return code is actually set.
LEVEL	Indicates the level of text for each recommendation. **N** None **T** Terse **V** Verbose **M** More than verbose Threshold fields and values appear to the right of the recommendation level for those recommendations which have thresholds.
PERMANENT	Indicates whether to update the profile dataset with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily). **Y** Make the changes permanent. **N** Do not make the changes permanent.
XCPT	Indicates whether this recommendation is an exception. **Y** Treat this recommendation as an exception. **N** Do not treat this recommendation as an exception.

Recommendations Panel 9

Overview

This unit describes Recommendations Panel 9.

Background about Recommendations Panel 9

The Recommendations Panel 9 (KTEPHOXC) displays exception type recommendations and allows you to control the amount of text you see for each recommendation listed, whether to treat the recommendation as an exception, and the return code to set if the recommendation is tripped during a batch session. The recommendations listed here appear:

- On the EXPLAIN panel in format 1 and format 7

- On the Statements panel when you select a statement using the R select

- On the Exceptions panel when you specify **Y** for the recommendation in the XCPT column of the Recommendations panel

You may specify one of three levels of recommendation text: none, terse, verbose, and more than verbose. You also may specify the threshold value for recommendations which appear only when a threshold is met or exceeded.

Access

You can access Recommendations Panel 9 from the Housekeeping panel. (Recommendations Panel 9 was formerly the Set Exceptions Housekeeping Panel).

Panel

The following illustration shows Recommendations panel 9.

```
------------------------- DB/EXPLAIN DB2=D31A -------------------------
Cmd ===>

                R E C O M M E N D A T I O N S   P A N E L   9

PERMANENT? ===> N  ( Y Yes  N No )


                                                  Level XCPT   RC
                                                  ----- ----  -----
X00001 SQL Error                                    T     Y      0
X00002 Hybrid Join                                  T     Y      0
X00003 List Prefetch                                T     Y      0
X00004 Multiple Index Intersection                  T     Y      0
X00005 Multiple Index Union                         T     Y      0
X00006 Multiple Index Scan                          T     Y      0
X00007 Merge Scan Join                              T     Y      0
X00008 Nested Loop Join                             T     Y      0
X00009 Sequential Prefetch                          T     Y      0
X00010 Sort for Group By                            T     Y      0
X00011 Sort for Join                                T     Y      0
X00012 IX / X Locks                                 T     Y      0

ENTER to process   END to cancel   PREV for previous panel
```

Fields

FIELD	DESCRIPTION
BATCH RC	Indicates the return code to set if the recommendation is tripped while in a batch session. The fields SET EXCEPTION RC FOR XCPT?, SET EXCEPTION RC FOR EXPLAIN?, AND SET EXCEPTION RC FOR RECOMMEND? on the Miscellaneous Defaults panel KTEPHOMJ determine the cases in which the batch return code is actually set.
LEVEL	Indicates the level of text for each recommendation. **N** None **T** Terse **V** Verbose **M** More than verbose Threshold fields and values appear to the right of the recommendation level for those recommendations which have thresholds.
PERMANENT	Indicates whether to update the profile dataset with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily). **Y** Make the changes permanent. **N** Do not make the changes permanent.

FIELD	DESCRIPTION
XCPT	Indicates whether this recommendation is an exception. **Y** Treat this recommendation as an exception. **N** Do not treat this recommendation as an exception.

Selection Masking

Overview

This unit describes the Selection Masking panel.

Background about the Selection Masking panel

The Selection Masking panel (KTEPHOMK) allows you to change the default masks. All the changes you make on this panel can be permanently saved in the profile dataset if you so specify and are authorized to do so. However, the changes you make will not take effect until you refresh !DB/EXPLAIN or rebuild your object list. If you have multiple open sessions, you must ensure that all sessions are closed prior to performing the refresh.

Access

You can access the Selection Masking panel from the Housekeeping panel.

Panel

The following illustrates the Selection Masking panel.

```
  Cmd ===>

                      S E L E C T I O N   M A S K I N G
  PERMANENT? ===> N  ( Y Yes  N No )                      Display Mask Panel? N
 And/Or         Operator Mask1                   Mask2                    Parens
   (     PLAN
 AND    BINDSTAMP
 AND    QUALIFIER
 AND    OWNER
 AND    CREATOR                                                               )
   (     PACKAGE
 AND    COLLECTION
 AND    VERSION


 AND    BINDSTAMP
 AND    QUALIFIER
 AND    OWNER
 AND    CREATOR                                                               )
   (     LOCATION
 AND    COLLECTION
 AND    PACKAGE                                                               )
  Mask out any packages not in the specified set of PLANs? Y    (Y/N)
   ENTER to process   END to cancel
```

Fields

FIELD	DESCRIPTION
AND/OR	Specifies if the conditions of the masking parameters as **AND** or **OR**. **Note:** The AND/OR field must be used in conjuction with the **PARENS** field. **AND** And **OR** Or
DISPLAY MASK PANEL?	Specifies whether the current Selection Masking panel is to be displayed when requested off the Primary Menu panel (KTEPMENU). **Y** Yes **N** No
MASK OUT ANY PACKAGES NOT IN THE SPECIFIED SET OF PLANS?	Specifies whether only packages that are bound into the set of plans specified are displayed. **Y** Package masks are applied to those packages which are further filtered by eliminating any packages not bound into the set of plans the user has specified. **N** The package masks are applied to all packages.
OPERATOR	Indicates mask operator: • LIKE • BETWEEN • = (Equal to) • > (Greater than) • >= (Greater than or Equal) • < (Less than) • <= (Less than or Equal) • > (Greater than)
PACKAGE BINDSTAMP MASK 1	Package Bind Timestamp or mask name for comparison. • The "LIKE" operator is not valid for **BINDSTAMP** fields. • Timestamp fields can be specified as **YYYYMMDDHHMMSS**. • Timestamp fields can also be specified as **NOW +/- NNNN** or **NOW**, where **NOW** represents the present time. • The timestamp default is **NOW-3** (Anything which has occurred in the last three days).
PACKAGE BINDSTAMP MASK 2	Package Bind Timestamp for comparison. • The "LIKE" operator is not valid for **BINDSTAMP** fields. • Timestamp fields can be specified as **YYYYMMDDHHMMSS**. • Timestamp fields can also be specified as **NOW +/- NNNN** or **NOW**, where **NOW** represents the present time. • The timestamp default is **NOW-3** (Anything which has occurred in the last three days).
PACKAGE COLLECTION MASK 1	Package Collection ID or mask name for comparison.
PACKAGE COLLECTION MASK 2	Package Collection ID for comparison.
PACKAGE CREATOR MASK 1	Package Creator or mask name for comparison.

FIELD	DESCRIPTION
PACKAGE CREATOR MASK 2	Package Creator for comparison.
PACKAGE MASK1	Package or mask name for comparison. The value must be a valid package name unless "LIKE" is specified as the operator; otherwise, the value must be a valid DB2 mask.
PACKAGE MASK2	Package name for comparison.
PACKAGE OWNER MASK 1	Package Owner or mask name for comparison.
PACKAGE OWNER MASK 2	Package Owner for comparison.
PACKAGE QUALIFIER MASK 1	Package Qualifier or mask name for comparison.
PACKAGE QUALIFIER MASK 2	Package Qualifier for comparison.
PACKAGE VERSION MASK 1	Package Version or mask name for comparison.
PACKAGE VERSION MASK 2	Package Version for comparison.
PACKLIST COLLECTION MASK 1	Packlist collection or mask name for comparison.
PACKLIST COLLECTION MASK 2	Packlist collection for comparison.
PACKLIST LOCATION MASK 1	Packlist location or mask name for comparison.
PACKLIST LOCATION MASK 2	Packlist location for comparison.
PACKLIST PACKAGE MASK 1	Packlist package or mask name for comparison.
PACKLIST PACKAGE MASK 2	Packlist package for comparison.
PARENS	Used in conjuction with the **AND/OR** field to set conditional masking.
PERMANENT	Specifies if changes are permanent. **Y** Yes **N** No

FIELD	DESCRIPTION
PLAN BINDSTAMP MASK 1	Plan Bind Timestamp or mask name for comparison. ● The "LIKE" operator is not valid for **BINDSTAMP** fields. ● Timestamp fields can be specified as **YYYYMMDDHHMMSS**. ● Timestamp fields can also be specified as **NOW +/- NNNN** or **NOW**, where **NOW** represents the present time. ● The timestamp default is **NOW-3** (Anything which has occurred in the last three days).
PLAN BINDSTAMP MASK 2	Plan Bind Timestamp for comparison. ● The "LIKE" operator is not valid for **BINDSTAMP** fields. ● Timestamp fields can be specified as **YYYYMMDDHHMMSS**. ● Timestamp fields can also be specified as **NOW +/- NNNN** or **NOW**, where **NOW** represents the present time. ● The timestamp default is **NOW-3** (Anything which has occurred in the last three days).
PLAN CREATOR MASK 1	Plan Creator or mask name for comparison.
PLAN CREATOR MASK 2	Plan Creator for comparison.
PLAN MASK1	Plan or mask name for comparison. The value must be a valid plan name unless "LIKE" is specified as the operator, otherwise the value must be a valid DB2 mask.
PLAN MASK2	Plan name for comparison.
PLAN OWNER MASK 1	Plan Owner ID or mask name for comparison.
PLAN OWNER MASK 2	Plan Owner ID for comparison.
PLAN QUALIFIER MASK 1	Plan Qualifier or mask name for comparison.
PLAN QUALIFIER MASK 2	Plan Qualifier for comparison.

Set Defaults

Overview

This unit describes the Set Defaults panel.

Background about the Set Defaults panel

The Set Defaults panel (KTEPHOSE) gives you the opportunity to resolve unqualified table names prior to EXPLAINing an SQL statement. The creator ID can be set to the plan owner, the current TSO user ID, or a user specified name. These changes can be permanent or temporary.

However, you can also set the creator ID from anywhere in !DB/EXPLAIN by entering the appropriate set global commands. These commands are summarized here although they are not part of the Set Defaults panel.

SET? Displays a panel of available Set commands.

SETC Prefixes unqualified table names with Creator ID specified in the Other field.

SETD Sets Current Degree

SETL Sets default remote location.

SETN Sets SET option to #N.

SETO Prefixes unqualified table names with the Plan owner.

SETP Sets the Plan Table owner.

Sets the Plan Table owner unless the creator option is set to #4 SQLID (SETS).

If SETP is specified *and SETS is not*, then a SET CURRENT SQLID command uses the value specified for SETP prior to EXPLAINing SQL statements.

If *both* SETP and SETS are specified, then a SET CURRENT SQLID command uses the value specified for SETS prior to EXPLAINing SQL statements.

Background about the Set Defaults panel (continued

SETU   Prefixes unqualified table names with TSO user ID.

SETS   Sets the SQLID ID to a specified value.

The format of the SETC and SETS is as follows:

   SET*X* AAAAAAAA

where *X* = C or S and AAAAAAAA is the user supplied name.

Access

You can access this panel by selecting option 6 from the Housekeeping panel.

Panel

This is the Set Defaults panel.

```
----------------------------- DB/EXPLAIN  DB2=D31A -------------------------
Cmd ===>

                         S E T   D E F A U L T S
PERMANENT? ===>    ( Y Yes  N No )

                                  extracted          non-extracted
                                  entity             entity
Creator Option                 > 1                 > 2
1. Use Qualifier / Owner (SETO)
2. Use TSO Userid (SETU)
3. Use this Creator id (SETC) >                   >
4. Authid for         (SETS) >                   >
   SET CURRENT SQLID


Plan Table Owner (SETP)        >                   >
Default Remote Location (SETL) >                   >
CURRENT DEGREE    (SETD)       >                   >

Do SETO if Qualifier Specified for KTEXPLD? ===> N   (Y / N)
KTEXPL owner for synonyms  ===>
Qualify synonyms with plan / package qualifier  ===> Y  (Y / N)

ENTER to process    END to cancel
```

Fields

In the table below, some fields are described as containing values for both extracted and non-extracted entities. Extracted entities are plans, packages, or DBRMs (or statements from one of these) that reside in the !DB/EXPLAIN extract datasets. You would have entered !DB/EXPLAIN via the CLISTs KTE, or KTC, or the batch job *DB2id*UTIL.

Non-extracted entities are QMF queries, SQL statements you have typed in, or DBRMs (PDS members). You would have entered !DB/EXPLAIN via the edit macros KTEXPL or KTEXPLB, the CLISTs KTEXPLA, KTEXPLBA, KTEXPLD or KTEON, or the batch jobs KTEBSQLS, KTEBDBRM, or KTEBDBR2.

FIELD	DESCRIPTION
CREATOR OPTION	Numeric field representing how to qualify unqualified tables in SQL statements. 1. Plan Owner 2. TSO User ID 3. Other - A name supplied by the user 4. SQLID - Authid for the SET CURRENT SQLID command This field contains values for both extracted and non-extracted entities.
DEFAULT REMOTE LOCATION	Indicates the default location to use for remote operations such as remote EXPLAINs. This field contains values for both extracted and non-extracted entities.
KTEXPL OWNER FOR SYNONYMS	Authid to use as owner of synonyms in KTEXPL. Specify blank to use the current SET value.
PLAN TABLE OWNER	Indicates the PLAN_TABLE owner. **Note:** `A SET CURRENT SQL ID` will be done for this ID if the CREATOR option is not equal to 4 and is doing a static SQL. This field contains values for both extracted and non-extracted entities.
PERMANENT INDICATOR	Indicates whether to update the profile dataset with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily).
QUALIFY SYNONYMS WITH PLAN/PACKAGE QUALIFIER	Determines whether synonyms in extracted statements are qualified by the addition of the plan or package qualifier. **Y** Resolve synonyms using the plan/package qualifier. **N** Resolve synonyms using the current SET value. This field contains values for both extracted and non-extracted entities.
SET CURRENT DEGREE	Value to which CURRENT DEGREE is to be set when EXPLAINing statements. The field value can be: **1** Current Degree is set to **1** **Any** Current Degree is set by underlying DB2 subsystem. **blank** Indicates the degree set at bind time should be used for extracted entities. For non-extracted entities, the field's value is set to **1.**. This field contains values for both extracted and non-extracted entities.

FIELD	DESCRIPTION
SETO (Set Owner)	Determines whether !DB/EXPLAIN should set the creator option to 1 when entering from CLIST KTEXPLD, batch job KTEBDBR2, or option 3 on panel KTEPMEON. Setting the creator option to 1 causes unqualified table names to be prefixed with the ID of the plan owner. This field contains values for both extracted and non-extracted entities.

SQL Defaults

Overview

This unit describes the SQL Defaults panel.

Background about the SQL Defaults panel

The SQL Defaults panel KTEPHODS allows you to override the profile dataset during the current !DB/EXPLAIN session. You can specify whether you want the changes to be permanent or for the current session of !DB/EXPLAIN only.

Panel

The following illustration shows the SQL Defaults panel.

```
---------------------------- DB/EXPLAIN  DB2=D31A --------------------------
Cmd ===>

                        S Q L    D E F A U L T S

PERMANENT? ===>    ( Y Yes  N No )

Decimal point option for KTEXPL ===>    (blank, period or comma)
SQL string delimiter for KTEXPL ===>    (apostrophe, quote, blank or Q)
Max Length for Host Var input   ===> 77
Commit executed SQL statements? ===> N  (Y Commit  N Rollback)
Work size for SQL results       ===> 1  (Megabytes)
Storage amount for KTEXPL stmts ===> 81920    (4096 - 4194304 bytes)
Bypass Statements display?      ===> N  (N No  E Yes,EXPLA   G Yes,GEXPLA)
Display KTEXPL source in header ===> Y  (N No  Y Yes)


ENTER to process   END to cancel
```

Fields

FIELD	DESCRIPTION
BYPASS STATEMENTS DISPLAY?	Determines whether to bypass display of the Statements panel KTEPSTMT. Valid values are: **N** Display the Statements panel. **E** Do not display the Statements panel. Issue the EXPLA command and display the EXPLAIN panel. **G** Do not display the Statements panel. Issue the GEXPLA command and display the EXPLAIN panel.
COMMIT EXECUTED SQL STATEMENTS	Indicates whether to commit or rollback after executing a SQL statement: **Y** Commit **N** Rollback
DECIMAL POINT OPTION FOR KTEXPL	Indicates what the decimal point will be in SQL statements you type in (using KTEXPL). **blank** Use the DB2 subsystem's default decimal point option **.** Use a period **,** Use a comma
DISPLAY KTEXPL SOURCE IN HEADER	Determines whether to display the KTEXPL source library in the header text of the Statements or EXPLAIN panel. Valid values are: **Y** Display the KTEXPL source library. **N** Do not display the KTEXPL source library.
MAX LENGTH FOR HOST VAR INPUT	This field is valid for non-extracted variables only. It indicates the amount of space to allow for host variable input, for example, KTEXPL or KTEQMF, on panel KTEPHSVU. Valid values range from 3 through 256.
PERMANENT	Indicates whether to update the profile dataset with these changes (permanently) or update for current !DB/EXPLAIN session only (temporarily).
SQL STRING DELIMITER FOR KTEXPL	The value used as the SQL string delimiter in SQL statements typed in using KTEXPL. Specify one of the following: **blank** If DEFAULT is specified for DECPSDL then the SQL string delimiter is assumed to be the apostrophe. **Q** If Q is specified for DECPSDL then the SQL string delimiter is assumed to be the quote. **'** If the SQL string delimiter is an apostrophe. **"** If the SQL string delimiter is a quote.
STORAGE AMOUNT FOR KTEXPL	The amount of storage to be obtained for SQL statements entered via KTEXPL. The amount must be at least as large as the longest SQL statement in the input file.
WORK SIZE FOR SQL RESULTS	The amount of virtual storage reserved to execute statement processing. Specify from 1 to 9 megabytes of storage. Default is 1MB.

SQL Formats for KTEXPL

Overview

This unit describes the SQL Formats for KTEXPL panel.

Background about the SQL Formats for KTEXPL panel

The SQL Formats for KTEXPL panel (KTEPHOSQ) allows you to set up the defaults for parsing SQL text through the edit macro KTEXPL, the CLIST KTEXPLA, or the batch job KTEBSQLS. There are seven predefined formats and six undefined formats. You can change any of the formats.

Access

You can access the SQL Formats for KTEXPL panel from the Housekeeping panel.

Panel

The following illustration shows the SQL Formats for KTEXPL panel.

```
 ---------------------------- DB/EXPLAIN DB2=D31A ---------------------------
 Cmd ===>

                S Q L   F O R M A T S   F O R   K T E X P L

 PERMANENT? ===>    ( Y Yes  N No )                         Format ===>
                                    Host  Comment                 Dash
      Format of the           Cont. Var.  Beg End     SQL     All  in   Lang
      Input File      LHS RHS  Col  Flag Col Del Del  Delimiter SQL Host? Type
      --------------- --- --- ----- ---- --- --- ---  --------- --- ----- ----
 A - ASSEMBLER         1  71   72    :   1   *   NA   NA        N    N
 B - C                 1  72   0     :   0   /*  */   ;         N    N    D
 C - COBOL             8  72   0     :   7   *   NA   END-EXEC  N    Y
 F - FORTRAN           7  72   6     :   1   *   NA   NA        N    N
 P - PLI               2  72   0     :   0   /*  */   ;         N    N
 Q - QMF               1  79   0     &   0   --  NA   ;         Y    N
 S - SPUFI             1  71   0     :   0   --  NA   ;         Y    N
 T - UNDEFINED         0   0   0         0
 U - UNDEFINED         0   0   0         0
 V - UNDEFINED         0   0   0         0
 W - UNDEFINED         0   0   0         0
 X - UNDEFINED         0   0   0         0

 ENTER to process   END to cancel
```

Fields

FIELD	DESCRIPTION
ALL SQL	Indicates if there is program text between SQL statements: **Y** Yes **N** No
COMMENT BEG DEL	Delimiter that signifies the beginning of a comment.
COMMENT COLUMN	If the language specifies a comment with a delimiter in a specific column, this is the column in which the delimiter appears.
COMMENT END DEL	Delimiter that signifies the end of a comment (if applicable).
CONT. COLUMN	If the language uses a flag in a specific column to signify the continuation of a statement, this is the column where the continuation flag appears.
DASH IN HOST	Indicates if host variables can contain embedded dashes. **Y** Yes **N** No
FORMAT	Indicates which SQL format to use. **Note:** If an SQL format is invalid or unavailable, an error message is displayed and the KTEPHOSQ panel is redisplayed.

FORMAT OF THE INPUT FILE	Provides the name of the input file format. The text in this field is modifiable. You can change any of the formats and define undefined formats to suit your needs. Formats that remain undefined are not usable.
	
	A Assembler source code
	B C source code
	C COBOL source code
	F FORTRAN source code
	P PLI source code
	Q QMF queries
	S SPUFI queries
	T - X Undefined (user defined)
	
	Note: Certain of these fields have specific formats associated with them. These are:
	
	● **SAS**
	    A SAS-type format is used.
	
	● **FORTRAN**
	    A FORTRAN format is used.
	
	● **HPS**
	    An HPS format is used.
	
	● **EZTRIEVE**
	    An EasyTrieve format is used.

HOST VARIABLE FLAG	One-character flag that indicates a host variable follows. Valid values are: ● : ● &

FIELD	DESCRIPTION
LANG TYPE	Indicates whether an asterisk can be used as the indirect unary operator, as, for example, in the C Language format. Valid values are: **D** — Asterisk can be used as a unary operator for indirection in the incoming text file **Any other value** — Asterisk can not be used as a unary operator for indirection in the incoming text file
LHS	Indicates the leftmost column of SQL text.
PERMANENT	Indicates whether changes are permanent or temporary. **Y** — Yes (permanent) **N** — No (temporary)
RHS	Indicates the rightmost column of SQL text.
SQL DELIMITER	Delimiter that indicates the end of an SQL statement. Valid values are any non-blank strings.

Tuning Parameters

Overview

This unit describes the VSAM Tuning Parameters panel.

Background about the VSAM Tuning Parameters panel

The VSAM Tuning Parameters panel (KTEPHOVB) allows you to specify the number of data and index buffers used to process the extract dataset when using !DB/EXPLAIN. These values are not used when running the !DB/EXPLAIN Extract.

Access

You can access the VSAM Tuning Parameters panel from the Housekeeping panel.

Panel

The following illustration shows the VSAM Tuning Parameters panel.

```
----------------------------- DB/EXPLAIN  DB2=D31A  --------------------------
Cmd ===>
                       T U N I N G   P A R A M E T E R S

  PERMANENT? ===>    ( Y Yes  N No )
  Catalog extract dataset data buffers      ===> 91
  Catalog extract dataset index buffers     ===> 10
  Statements extract dataset data  buffers ===> 5
  Statements extract dataset index buffers ===> 2
  Plan_table extract dataset data  buffers ===> 5
  Plan_table extract dataset index buffers ===> 2
  Plan_table extract dataset data  buffers ===> 10    (for output)
  Plan_table extract dataset index buffers ===> 10    (for output)
  Enqueue on extract datasets              ===> Y
  Deallocate Statements extract dataset after each use?        ===> N
  Deallocate Plan_table extract dataset after each use?        ===> N
  Number of DBRMs to process before freeing intermediate storage  ===> 5
  Number of statements to process before freeing interm. storage  ===> 100
  Issue XUPDT command after freeing intermediate storage?      ===> Y
  Issue WTOR if encounter contention on XUPDT in batch  ?      ===> Y
  Number of DBRMs to process before freeing inter. storage (XCPT) ===> 500
  Keep Plan_table extract dataset open for update?             ===> N

 ENTER to process   END to cancel
```

Fields

FIELD	DESCRIPTION
CATALOG EXTRACT dataset BUFFERS	Number of data buffers to use when reading the catalog extract dataset.
CATALOG EXTRACT dataset INDEX BUFFERS	Number of index buffers to use when reading the catalog extract dataset.
DEALLOCATE PLAN_TABLE EXTRACT DATASET AFTER EACH USE?	Indicates whether to close and deallocate the plan table extract dataset after each request.
DEALLOCATE STATEMENTS EXTRACT DATASET AFTER EACH USE?	Indicates whether to close and deallocate the statements extract dataset after each request.
ENQUEUE ON EXTRACT DATASETS	Specifies whether or not to enqueue on extract DATASETS. **Y** Yes **N** No
ISSUE XUPDT COMMAND AFTER FREEING INTERMEDIATE STORAGE	Specifies whether or not to issue an XUPDT command after freeing intermediate storage. **Y** Yes **N** No
ISSUE WTOR IF ENCOUNTER CONTENTION ON XUPDT IN BATCH?	Determines whether or not to issue WTOR prior to cancelling extract update when contention is encountered on batch XUPDT. **Y** Yes **N** No
KEEP PLAN_TABLE EXTRACT DATASET OPEN FOR UPDATE?	Specifies whether or not to keep the Plan Table Dataset open for update. **Y** Yes **N** No **F** Once the dataset is opened for update, it is to remain open for the duration of the function.
NUMBER OF DBRMS TO PROCESS BEFORE FREEING INTERMEDIATE STORAGE	Number of DBRMs to process when performing an EXPLAIN or latest EXPLAIN before freeing intermediate storage. Value ranges from 0 to 32000.

FIELD	DESCRIPTION
NUMBER OF DBRMS TO PROCESS BEFORE FREEING INTERMEDIATE STORAGE (XCPT)	Number of DBRMs to process when performing an EXPLAIN or latest EXPLAIN before freeing intermediate storage during exception processing. Value ranges from 0 to 32000.
NUMBER OF STATEMENTS TO PROCESS BEFORE FREEING INTERMEDIATE STORAGE	Number of statements to process when performing an EXPLAIN or latest EXPLAIN before freeing intermediate storage. Value ranges from 0 to 32000.
PERMANENT?	Indicates if changes are permanent (Y) or for the current session of !DB/EXPLAIN only (N).
PLAN_TABLE EXTRACT DATASET DATA BUFFERS	Number of data buffers to use when reading the plan table extract dataset.
PLAN_TABLE EXTRACT DATASET DATA BUFFERS (FOR OUTPUT)	Number of data buffers to use when writing to the plan table extract dataset.
PLAN_TABLE EXTRACT DATASET INDEX BUFFERS	Number of data buffers to use when reading the plan table extract dataset.
PLAN_TABLE EXTRACT DATASET INDEX BUFFERS (FOR OUTPUT)	Number of data buffers to use when writing to the plan table extract dataset.
STATEMENTS EXTRACT DATASET DATA BUFFERS	Number of data buffers to use when reading the statements extract dataset.
STATEMENTS EXTRACT DATASET INDEX BUFFERS	Number of data buffers to use when reading the statements extract dataset.

Appendixes

Appendix A.
Commands Available from Object List Panels

	Collection	Compare Formats	Compare History	Column Dist Stats	Costs	DBRMs	Estimator	Exceptions	EXPLAIN	EXPLAIN Compare	EXPLAIN History	Host Variables	Libraries	Package Connections	Packages	Plan Connections	Plan Pkglist	Plan Verification	Plans	Primary Menu	Statements	Table Columns	Tables	Verification	Whatif
ACTLOG	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
ADMIN	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
ASORT	√				√	√						√	√	√	√	√	√		√				√		
BIND						√									√				√						
BINDADD						√									√				√						
BINDCNV						√													√						
BINDEXP						√									√				√						
BINDREP						√									√				√						
CALC							√																		
CAN	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
CAPS OFF												√													
CAPS ON												√													
CDBR					√																				
CEXPL			√																						
CHANGE							√																√		√
CHANGES	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
CHAR				√																			√		
COMPARE						√									√				√						
COST						√		√							√				√						
CPKG						√																			
CPLN						√																			
DEBUG	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
DEBUGOFF	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
DEBUGON	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
DELETE				√							√	√													
DIFF							√																		
DISPLAY																								√	

Commands available from object list panels (continued)

	Collection	Compare Formats	Compare History	Column Dist Stats	Costs	DBRMs	Estimator	Exceptions	EXPLAIN	EXPLAIN Compare	EXPLAIN History	Host Variables	Libraries	Package Connections	Packages	Plan Connections	Plan Pkglist	Plan Verification	Plans	Primary Menu	Statements	Table Columns	Tables	Verification	Whatif
DO			√	√	√	√	√	√	√	√	√		√		√			√	√		√	√	√		√
DOP	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
DOS	√				√	√					√	√	√	√	√	√	√		√				√		
DROP															√				√						
DSORT	√				√	√					√	√	√	√	√	√	√		√				√		
DUPS						√																			
EALL									√																
EBIND									√																
ECOST									√																
EDIFF							√																		
EKEYS									√																
EOBJ									√																
EPATH									√																
EPTBL									√																
EPTB2									√																
ERECM									√																
ESTIM																									√
ESTMT									√																
EXODS									√																
EXPL						√									√				√						
EXPLA						√									√				√			√			
EXPLAR						√									√				√			√			
EXPLO						√									√				√						
EXPLOR						√									√				√						
EXPLR						√									√				√						
FILTA	√				√	√			√		√		√		√				√		√		√		
FILTO	√				√	√			√		√		√		√				√		√		√		
FILTR	√				√	√			√		√		√		√				√		√		√		
FILT?	√				√	√			√		√		√		√				√		√		√		
FIND							√		√												√	√			√
FORMATn		√		√	√	√	√		√		√		√		√			√	√		√	√			√
FORMAT?		√		√	√	√	√		√		√		√		√			√	√		√	√			√
FREE	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
GEXPL						√									√				√						
GEXPLA						√									√				√		√				

Commands available from object list panels (continued)

	Collection	Compare Formats	Compare History	Column Dist Stats	Costs	DBRMs	Estimator	Exceptions	EXPLAIN	EXPLAIN Compare	EXPLAIN History	Host Variables	Libraries	Package Connections	Packages	Plan Connections	Plan Pkglist	Plan Verification	Plans	Primary Menu	Statements	Table Columns	Tables	Verification	Whatif
GEXPLAR						√									√				√		√				
GEXPLO						√									√				√						
GEXPLOR						√									√				√						
GEXPLR						√									√				√						
GLOBAL	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
GSTATS						√																			√
HEADERn	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
HEX				√																		√			
HIST						√									√				√						
HOUSE	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
HOUSEn	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
IMPACT						√									√				√						
INFO						√									√				√						
JCL	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
LALL													√												
LDBR													√												
LEHIST						√									√				√						
LEXPL						√	√								√				√		√				
LOCATE							√															√	√		√
LPKG													√												
MAINT	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
MAINT?	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
MSGHELP	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
NDXS						√																			√
NEWSET				√		√																√			√
NEWSETALL						√																√			√
NODUPS						√																			
NOFILT	√				√	√			√		√		√		√				√		√		√		
NOHIST						√									√				√						
NONDXS							√																		√
NOSTAT							√															√			√
NOSTATALL							√															√			√
NOVERS									√												√				

Commands available from object list panels (continued)

	Collection	Compare Formats	Compare History	Column Dist Stats	Costs	DBRMs	Estimator	Exceptions	EXPLAIN	EXPLAIN Compare	EXPLAIN History	Host Variables	Libraries	Package Connections	Packages	Plan Connections	Plan Pkglist	Plan Verification	Plans	Primary Menu	Statements	Table Columns	Tables	Verification	Whatif
OUT							√		√												√				√
PDEBUGON	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
PDEBUGOFF	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
PRNT	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
PROFOUT	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
PROFOUTE	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
PROFVAR	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
REBIND															√				√						
REBINDEX															√				√						
REFRESH																				√					
RESET				√			√		√			√									√	√			√
RESETALL							√					√									√				√
RFIND							√	√													√	√			√
RLOCATE							√														√	√			√
SETC	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
SETD	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
SETL	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
SETn	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
SETO	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
SETP	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
SETS	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
SETU	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
SET?	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
SHOW																					√				
SHOWE																					√				
SNAPALL	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
SNAPALLS	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
SNAPDS	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
SNAPEX	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
SORT	√				√	√						√	√	√	√	√	√		√				√		
SORT?	√				√	√						√	√	√	√	√	√		√				√		
SQL	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√

Commands available from object list panels (continued)

	Collection	Compare Formats	Compare History	Column Dist Stats	Costs	DBRMs	Estimator	Exceptions	EXPLAIN	EXPLAIN Compare	EXPLAIN History	Host Variables	Libraries	Package Connections	Packages	Plan Connections	Plan Pkglist	Plan Verification	Plans	Primary Menu	Statements	Table Columns	Tables	Verification	Whatif
STMTS								√																	
TIPS	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
TRACEALL	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
TRACED	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
TRACEG	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
TRACEL	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
TRACEOFF	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
UBROWSE	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
UEDIT	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
UNIFORM							√															√			√
UPDT							√																		√
UPDTL							√																		√
UPDTR							√																		√
VERS									√												√				
WIF																									√
WIFL																									√
WIFR																									√
WIFU																									√
WIFUL																									√
WIFUR																									√
XCPT						√									√				√			√		√	
XERR								√																	
XUPDT	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√

COMMAND	DESCRIPTION
ACTLOG	Access the activity log.
ADMIN	Display the Administration Menu panel.
ASORT	Sort in ascending sequence.
BIND	Generate bind statements. Can take the form **BIND** *member*, where *member* specifies a member name in your user PDS. Can also take the MOD option (see p. "Controlling the Destination of !DB/EXPLAIN Output" in the *!DB/EXPLAIN User's Guide*). This member name is used to override the name specified on the Housekeeping Output Options Defaults panel.
BINDADD	BIND ACTION(YES). Can take the form **BINDADD** *member*, where *member* specifies a member name in your user PDS. Can also take the MOD option (see p. "Controlling the Destination of !DB/EXPLAIN Output" in the *!DB/EXPLAIN User's Guide*). This member name is used to override the name specified on the Housekeeping Output Options Defaults panel.
BINDCNV	For DBRMs and Plans, convert DBRMs for the displayed object list to Packages and generate the commands required to BIND the relevant Plans. Can take the form **BINDCNV** *member*, where *member* specifies a member name in your user PDS. Can also take the MOD option (see p. "Controlling the Destination of !DB/EXPLAIN Output" in the *!DB/EXPLAIN User's Guide*). This member name is used to override the name specified on the Housekeeping Output Options Defaults panel.

COMMAND	DESCRIPTION
BINDEXP	BIND EXPLAIN(YES). Can take the form **BINDEXP** *member*, where *member* specifies a member name in your user PDS. Can also take the MOD option (see p. "Controlling the Destination of !DB/EXPLAIN Output" in the *!DB/EXPLAIN User's Guide*). This member name is used to override the name specified on the Housekeeping Output Options Defaults panel.
BINDREP	BIND ACTION(REPLACE). Can take the form **BINDREP** *member*, where *member* specifies a member name in your user PDS. Can also take the MOD option (see p. "Controlling the Destination of !DB/EXPLAIN Output" in the *!DB/EXPLAIN User's Guide*). This member name is used to override the name specified on the Housekeeping Output Options Defaults panel.
CALC	Calculate statistics.
CAN	Cancel all selects.
CAPS OFF	Set mode of any data entry fields to accept mixed-case input
CAPS ON	Set mode of any data entry fields to fold all data entered to upper case
CDBR	Display DBRM costs.
CEXPL	Compare EXPLAIN data. For batch restrictions on the use of CEXPL, see "Compare History" on page 45.

COMMAND	DESCRIPTION
CHANGE	Change all of the values for the specified field to the specified value.
CHANGES	Display !DB/EXPLAIN product changes.
CHAR	Display all lines of character or graphic data in character format.
COMPARE	Perform bind compare of each DBRM, plan, or package in the current display according to the options set on the Bind Compare Options Housekeeping Panel.
COST	Display statement costs.
CPKG	Display package costs.
CPLN	Display plan costs.
DEBUG	Display only parser and DB2 errors to ensure minimal impact
DEBUGOFF	Turn the Automated Trace Facility off or turn DEBUG off.
DEBUGON	Turn the Automated Trace Facility on.
DELETE	Delete all lines (Column Distribution or Table Columns function).
DELETE	Delete historical EXPLAINs (EXPLAIN Function).
DELETE	Delete all saved host variable values and attributes (Host Variables Function).
DIFF	Reset EDIFF.
DISPLAY	Display statements from DBRM.

Dictionary of !DB/EXPLAIN commands (continued)

COMMAND	DESCRIPTION
DO	Access menu of available commands.
DOP	Access Print Options.
DOS	Access menu of available sorts.
DROP	Generate FREE statements for each item on the list.
DSORT	Sort in descending sequence.
DUPS	Display all DBRMs.
EALL	Display all sections of the EXPLAIN display.
EBIND	Display plan bind or package bind information on the EXPLAIN display.
ECOST	Display cost information on the EXPLAIN display.
EDIFF	Display all the differences in access path between the two EXPLAINs in plain English.
EKEYS	Include index key information with the EOBJ section of the EXPLAIN Format 0 display.
EOBJ	Display detailed object information on the EXPLAIN display.

COMMAND	DESCRIPTION
EPATH	Display access path summary information in textual form on the EXPLAIN display.
EPTBL	Display plan table information on the EXPLAIN display in a one-line format.
EPTB2	Display plan table information on the EXPLAIN display in a two-line format.
ERECM	Display recommendations information on the EXPLAIN display.
ESTIM	Access the Estimator function.
ESTMT	Display statement text and SQL error text (for any SQL errors encountered) on the EXPLAIN display.
EXODS	Write EXPLAIN output to a dataset. Can take the form **EXODS** *member*, where *member* specifies a member name in your user PDS. Can also take the MOD option (see p. "Controlling the Destination of !DB/EXPLAIN Output" in the *!DB/EXPLAIN User's Guide*). This member name is used to override the name specified on the Housekeeping Output Options Defaults panel.

COMMAND	DESCRIPTION
EXPL	EXPLAIN all items that have not been EXPLAINed since they were last bound and display latest EXPLAIN for previously EXPLAINed entities.
EXPLA	EXPLAIN all items regardless of bind time.
EXPLAR	Remote EXPLAIN all items regardless of bind time.
EXPLO	EXPLAIN and display all items that have not been EXPLAINed since they were last bound. Do not gather catalog statistics.
EXPLOR	Remote EXPLAIN and display all items that have not been EXPLAINed since they were last bound. Do not gather catalog statistics.
EXPLR	Remote EXPLAIN all items that have not been EXPLAINed since they were last bound and display latest EXPLAIN for previously EXPLAINED entities.
FILTA	Filter display using AND logic.
FILTO	Turn off filtering for the current display.
FILTR	Filter display using OR logic.
FILT?	Display the Filter panel.
FIND	Find a specific character string on the display.
FORMATn	Display the current list using Format #n (where n = the format number).
FORMAT?	Access menu of available formats.

COMMAND	DESCRIPTION
FREE	Generate FREE statements for all items on the list. Can also take the MOD option (see p. "Controlling the Destination of !DB/EXPLAIN Output" in the *!DB/EXPLAIN User's Guide*).
GEXPL	EXPLAIN all items on the list that have not been EXPLAINed since they were last bound, gather statistics, and display latest EXPLAIN for previously EXPLAINed entities.
GEXPLA	EXPLAIN all and gather statistics regardless of bind time.
GEXPLAR	Remote EXPLAIN all and gather statistics regardless of bind time.
GEXPLO	EXPLAIN and display all items that have not been EXPLAINed since they were last bound. Gather catalog statistics.
GEXPLOR	Remote EXPLAIN and display all items that have not been EXPLAINed since they were last bound. Gather catalog statistics.
GEXPLR	Remote EXPLAIN all items that have not been EXPLAINed since they were last bound and gather statistics.

COMMAND	DESCRIPTION
GLOBAL	Display the first page of the global command menu.
GLOMORE	Display the second page of the global command menu.
GSTATS	Gather statistics from the catalog and refresh the appropriate display.
HEADERn	n may be a value from 1 through 6. When used with the PRNT command, HEADER prints the text you specify on each page of the printed output. For example,

```
HEADER1=INVENTORY REPORT
HEADER2=The Manufacturing Company
```

places two lines of header output on your printout.

COMMAND	DESCRIPTION
HEX	Display all lines of character or graphic data in hexadecimal format.
HIST	Display PLAN/PACKAGE/DBRM History.
HOUSE	Display the Housekeeping Menu.
HOUSEmmm	Display the Housekeeping panel represented by the mnemonic mmm. A list of mnemonics is found in the online Help for the Housekeeping Menu and in "Housekeeping" on page 315.
HOUSEn	Access Housekeeping panel #n where n is the panel's number on the Housekeeping Menu.

COMMAND	DESCRIPTION
IMPACT	Compare each nonhistorical item with its most recent historical counterpart.
INFO	Display the Information panel for a selected DBRM, plan, or package.
JCL	Display the JCL panel associated with the function you want to perform. If !DB/EXPLAIN is unable to determine what function you want, it displays the JCL Generation panel.
JCL?	Display the JCL Generation panel to start the JCL generate function.
KTEMODEL	(Previously MODEL.) Used on the secondary panels used when creating batch JCL to copy sample SYSIN statements into your batch job.
KTESYSIS	Used on the secondary panels used when creating batch JCL to browse sample SYSIN statements.
LALL	Display all DBRM and package members in Library.
LDBR	Display all DBRM members in Library.
LEHIST	Display Latest EXPLAIN History.
LEXPL	Display Latest EXPLAIN.
LOCATE	Reposition the list starting with a specific object.
LPKG	Display all package members in Library.
MAINT	Display the maintenance level of the current !DB/EXPLAIN system

COMMAND	DESCRIPTION
MAINT?	Display the maintenance level of all installed !DB/Tools.
MSGHELP	Display extended Help for the message whose Message Identifier is entered.
NDXS	Display all Indexes.
NEWSET	Establish a new statistics set.
NEWSETALL	Establish a new statistics set (including column distribution statistics.
NODUPS	Reset DUPS.
NOFILT	Reset all filters.
NOHIST	Reset History.
NONDXS	Reset NDXS.
NOSTAT	Set statistics to RUNSTATS, not run value.
NOSTATALL	Set statistics, including column distribution statistics, to RUNSTATS, not run value.
NOVERS	Reset VERS.
OUT	Generate REXX program to update catalog statistics. Can take the form `OUT` *member*, where *member* specifies a member name in your user PDS. Can also take the MOD option (see p. "Controlling the Destination of !DB/EXPLAIN Output" in the *!DB/EXPLAIN User's Guide*). This member name is used to override the name specified on the Housekeeping Output Options Defaults panel.
OUT	(On Statements panel.) Output SQL statements.

COMMAND	DESCRIPTION
PDEBUGOFF	Turn parser debugging off.
PDEBUGON	Turn parser debugging on.
PRNT	Print the current active object list.
PROFOUT	Write current setting of user profile variables to user PDS in internal format.
PROFOUTE	Write current setting of user profile variables to user PDS in external format usable as input to KTECNTL to override current profile variable settings.
PROFVAR	Display profile variable description
REBIND	Generate REBIND statements. Can take the form **REBIND** *member*, where *member* specifies a member name in your user PDS. Can also take the MOD option (see p. "Controlling the Destination of !DB/EXPLAIN Output" in the *!DB/EXPLAIN User's Guide*). This member name is used to override the name specified on the Housekeeping Output Options Defaults panel.
REBINDEX	REBIND EXPLAIN(YES). Can take the form **REBINDEX** *member*, where *member* specifies a member name in your user PDS. Can also take the MOD option (see p. "Controlling the Destination of !DB/EXPLAIN Output" in the *!DB/EXPLAIN User's Guide*). This member name is used to override the name specified on the Housekeeping Output Options Defaults panel.
REFRESH	Rebuild all data in memory that !DB/EXPLAIN uses. Use this command to pull more recent data from the extract.

COMMAND	DESCRIPTION
RESET	(On EXPLAIN display.) Reset the EXPLAIN display parameters to include no sections. This prepares your session so you can add back the sections of the display you want to include.
RESET	(On Host Variables display.) Reset host variable values and attributes.
RESET	(On Table Columns, Estimator, and Whatif display.) Reset statistics to the values established by the last statistics set.
RESETALL	(On Estimator, Table Columns, and Whatif display.) Reset statistics, including column distribution statistics, to the values established by the last statistics set.
RESETALL	(On Host Variables display.) Reset host variable values and attributeswhen in nonextracted mode.
RFIND	Reexecute the last FIND command.
RLOCATE	Reexecute the last LOCATE command.
SETC	Prefix unqualified tables with Creator ID. Specified in the "other" slot on set panel.
SETD	SET CURRENT DEGREE. Allows I/O parallelism to be disabled or enabled. Effective for DB2 Version 3 and later.
SETL	Set default remote location.
SETn	Set SET option to #n
SETO	Prefix unqualified tables with Plan Owner.

COMMAND	DESCRIPTION
SETP	Set Plan Table owner unless the creator option on the Set Defaults panel (KTEPHOSE) is set to #4 SQLID (SETS).
SETS	Set SQLID to a specifed value.
SETU	Prefix unqualified tables with TSO Userid.
SET?	Display a panel of available Set commands.
SHOW	Expand all statements.
SHOWE	Expand all EXPLAINable statements.
SNAPALL	Write all problem program information plus SNAPEX plus SNAPDS to KTESNAP.
SNAPALLS	Write all system control information plus SNAPALL to KTESNAP.
SNAPDS	Write the content of EXPLAIN data spaces and EXPLAIN control blocks (if any data spaces) to KTESNAP.
SNAPEX	Write EXPLAIN control blocks to KTESNAP.
SORT	Reorder the current object list. Same as ASORT.
SORT?	Access menu of available sorts.

COMMAND	DESCRIPTION
SQL	Display a panel so that you can enter and execute SQL statements.
STMTS	Display the SQL statements that triggered the exceptions.
TIPS	Display tips.
TRACEALL	Trace getmains and freemains, data space functions, and list functions.
TRACED	Trace data space functions.
TRACEG	Trace getmains and freemains.
TRACEL	Trace list functions.
TRACEOFF	Turn tracing off.
UBROWSE	Browse specified user PDS members.
UEDIT	Edit specified user PDS members.
UNIFORM	Set partitioned statistics to a uniform distribution.
UPDT	Update catalog with new statistics for specified server (local).
UPDTL	Update catalog with new statistics (local).
UPDTR	Update catalog with new statistics (remote).
VERS	Show version.
WIF	EXPLAIN with no statistics (local).

COMMAND	DESCRIPTION
WIFL	EXPLAIN with no statistics (local).
WIFR	EXPLAIN with new statistics and temporarily update the remote catalog with option to make statistics permanent.
WIFU	EXPLAIN with statistics and update local catalog.
WIFUL	EXPLAIN with statistics and update local catalog.
WIFUR	EXPLAIN with new statistics and permanently update the remote catalog with option to make statistics permanent.
XCPT	Display exceptions.
XERR	Display statements with SQL Error Exceptions.
XUPDT	Update Extract VSAM PLAN_TABLE dataset with all changes made online. This is *only* for PLAN_TABLE data.

Appendix C.
Selects Available from Object List Panels

	Collections	Column Dist Stats	Costs	DBRMS	Estimator	Exceptions	EXPLAIN History	Extract History	Index Keys	Libraries	Packages	Plans	Statements	Table Columns	Tables	Whatif
?	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
@				√							√	√	√			
#				√							√	√	√			
A												√				
B				√							√	√				
C		√		√	√		√				√	√	√	√		√
D		√	√		√					√		√			√	√
E				√							√	√	√			
F											√	√				
G				√		√					√	√				
H				√							√	√	√			
I		√		√							√	√				
J				√				√			√	√				
K	√		√		√					√		√			√	√
L				√		√					√	√	√			
M	√											√				
N					√						√	√				√
O													√			
P	√		√	√							√	√			√	
Q											√	√				
R		√								√	√	√	√	√		
S				√		√	√		√		√	√	√	√	√	
T				√							√	√				
U				√							√	√	√			

Selects available from object list panels (continued)

	Collections	Column Dist Stats	Costs	DBRMS	Estimator	Exceptions	EXPLAIN History	Extract History	Index Keys	Libraries	Packages	Plans	Statements	Table Columns	Tables	Whatif
V				√						√	√	√	√			
W				√							√	√	√			
X		√		√							√	√	√	√	√	
Y							√		√				√			
Z				√							√	√				
2													√			
8				√							√	√				
9				√							√	√				

Appendix D.
Dictionary of Selects

Select	Definition
---	----------------------------
?	**All object list panels:** Display list of selects available on this panel.
---	----------------------------
@	**DBRMs:** Remote EXPLAIN and gather statistics.
	Packages: Remote EXPLAIN and gather statistics.
	Plans: Remote EXPLAIN and gather statistics.
	Statements: Remote EXPLAIN and gather statistics.
---	----------------------------
#	**DBRMs:** Remote EXPLAIN and do not gather statistics.
	Packages: Remote EXPLAIN and do not gather statistics.
	Plans: Remote EXPLAIN and do not gather statistics.
	Statements: Remote EXPLAIN and do not gather statistics.
---	----------------------------
A	**Plans:** Display OMEGAMON II for DB2 Application Trace Facility.
---	----------------------------

Dictionary of selects (continued)

Select	Definition
---	-----------------------------
B	**DBRMs:** Generate a bind package statement for the selected DBRM.
	Packages: Generate a bind package statement for the selected package.
	Plans: Generate a bind plan statement for the selected plan.
---	-----------------------------
C	**Column Distribution Statistics:** Display VALUE in character format. This selection is only available for character or graphic data.
	DBRMs: Compare the results of the latest EXPLAIN with the results of a BIND EXPLAIN(YES).
	Estimator: Display and update table columns.
	EXPLAIN History: Compare two historical EXPLAINs.
	Packages: Compare the results of the latest EXPLAIN for the selected package with the results of a BIND EXPLAIN(YES) on that package.
	Plans: Compare the results of the latest EXPLAIN with the results of a BIND EXPLAIN(YES) on that plan.
	Statements: Reset SHOW and SHOWE.
	Table Columns: Display column distribution statistics in hexadecimal format. (Available only for the HIGH*KEY and LOW*KEY fields for columns that contain character or graphic data.)
	Whatif: Display and update table columns.
---	-----------------------------

Dictionary of selects (continued)

Select	Definition
---	------------------------------
D	**Column Distribution Statistics:** Delete the current row unless this function was entered from Whatif. If entered from Whatif, you can delete only PART=0 rows.
	Costs: Display DBRMs panel.
	Estimator: Drop selected index.
	Libraries: Display all DBRMs in the selected library.
	Plans: Display all DBRMs for the selected plan.
	Tables: Display all DBRMs referencing the selected table.
	Whatif: Drop selected index.
---	------------------------------
E	**DBRMs:** EXPLAIN statements and gather statistics.
	Packages: EXPLAIN package and gather statistics.
	Plans: EXPLAIN plan and gather statistics.
	Statements: EXPLAIN statement and gather statistics.
---	------------------------------
F	**Packages:** Generate a FREE PACKAGE.
	Plans: Generate a FREE PLAN.
---	------------------------------

Dictionary of selects (continued)

Select	Definition
---	-----------------------------
G	**DBRMs:** Display cost details for the selected DBRM.
	Exceptions: Display cost for the exceptions for all access path types.
	Packages: Display cost details for the selected package.
	Plans: Display cost details for the selected plan.
---	-----------------------------
H	**DBRMs:** Display EXPLAIN history for the selected DBRM.
	Packages: Display EXPLAIN history for the selected package.
	Plans: Display EXPLAIN history for the selected plan.
	Statements: Show host variables.
---	-----------------------------
I	**Colunn Distribution Statistics:** Insert a row following the current row unless this function was entered from Whatif. If entered from Whatif, you can insert only PART=0 rows.
	DBRMs: Display detailed DBRM information.
	Packages: Display detailed package information including BIND options.
	Plans: Display detailed plan information including BIND options.
---	-----------------------------

Dictionary of selects (continued)

Select	Definition
---	------------------------------
J	**DBRMs:** Compare DBRM attributes for the two selected DBRMs.
	Extract History: Recreate the JCL used to generate the selected extract.
	Packages: Compare package attributes for the two selected packages.
	Plans: Compare plan attributes for the two selected plans.
---	------------------------------
K	**Collections:** Display all packages associated with the selected collection.
	Costs: Display Packages panel.
	Estimator: Display index keys.
	Libraries: Display packages in the selected library.
	Plans: Display packages associated with the selected plan.
	Tables: Display all packages referencing the selected table.
	Whatif: Display index keys.
---	------------------------------

Dictionary of selects (continued)

Select	Definition
---	-----------------------------
L	**DBRMs:** Display the output of the latest EXPLAIN for the selected DBRM.
	Exceptions Display the latest EXPLAIN for the exception.
	Packages: Display the output of the latest EXPLAIN for the selected package.
	Plans: Display the output of the latest EXPLAIN for the selected plan.
	Statements: Show latest EXPLAIN.
---	-----------------------------
M	**Collections:** Display all package lists associated with the selected collection.
	Plans: Display the selected plan's collection list.
---	-----------------------------
N	**Estimator:** Create new index.
	Packages: Display all connections for the selected package.
	Plans: Display all connections for the selected plan.
	Whatif: Create new index.
---	-----------------------------
O	**Statements:** Output to a dataset.
---	-----------------------------

Dictionary of selects (continued)

Select	Definition
---	-----------------------------
P	**Collections:** Display all plans associated with the selected collection.
	Costs: Display Plans panel.
	DBRMs: Display all plans associated with the selected DBRM.
	Packages: Display all plans associated with the selected package.
	Plans: Display OMEGAMON II for DB2 Accounting Reports.
	Tables: Display all plans referencing the selected table.
---	-----------------------------
Q	**Packages:** Display all collections associated with the selected package.
	Plans: Display all collections associated with the selected plan.
---	-----------------------------
R	**Column Distribution Statistics:** Repeat the current row.
	Libraries: Issue HRECALL for the requested selection.
	Packages: Generate a REBIND statement for the package.
	Plans: Generate a REBIND statement for the plan.
	Statements: Display recommendations.
---	-----------------------------

Dictionary of selects (continued)

Select	Definition
---	-----------------------------
S	**DBRMs:** Display the SQL statements for the selected DBRM.
	Exceptions: Display statements.
	EXPLAIN History: Display EXPLAIN.
	Index Keys: Display column information.
	Packages: Display the SQL statements for the selected package.
	Plans: Display the SQL statements for each DBRM and package in the plan.
	Statements: Show statements.
	Table Columns: Display column distribution statistics.
	Tables: Display all statements that access the selected table.
---	-----------------------------
T	**DBRMs:** Display tables for all DB2 tables, views, or aliases referenced by any SQL INSERT, SELECT, UPDATE, DELETE, LOCK, or DECLARE CURSOR statement in any DBRM or package.
	Packages: Display tables for all DB2 tables, views, or aliases referenced by any SQL INSERT, SELECT, UPDATE, DELETE, LOCK, or DECLARE CURSOR statement in any DBRM or package.
	Plans: Display tables for all DB2 tables, views, or aliases referenced by any SQL INSERT, SELECT, UPDATE, DELETE, LOCK, or DECLARE CURSOR statement in any DBRM or package.
---	-----------------------------

Dictionary of selects (continued)

Select	Definition
---	-----------------------------
U	**DBRMs:** EXPLAIN and do not gather statistics.
	Plans: EXPLAIN the plan and do not gather statistics.
	Packages: EXPLAIN the package and do not gather statistics.
	Statements: EXPLAIN the statement and do not gather statistics.
---	-----------------------------
V	**DBRMs**: Verify the DBRM.
	Libraries: Verify the selected library.
	Packages: Verify the package.
	Plans: Verify the Plan.
	Statements: Execute the statement.
---	-----------------------------
W	**DBRMs:** Perform what-if analysis on the selected DBRM.
	Packages: Perform what-if analysis on the selected package.
	Plans: Perform what-if analysis on the selected plan.
	Statements: Perform what-if analysis on the selected statement.
---	-----------------------------

Dictionary of selects (continued)

Select	Definition
---	-----------------------------
X	**Column Distribution Statistics:** Display VALUE in hexadecimal format. This selection is only available for character or graphic data.
	DBRMs: Display exceptions that exist for each SQL statement in the selected DBRM.
	Packages: Display exceptions that exist for each SQL statement in the selected package.
	Plans: Display exceptions that exist for each SQL statement in the selected plan.
	Statements: Display exceptions.
	Table Columns: Display column distribution statistics in hexadecimal format. (Available only for the HIGH*KEY and LOW*KEY fields for columns that contain character or graphic data.)
	Tables: Display exceptions for all statements that reference the selected table.
---	-----------------------------
Y	**EXPLAIN History:** Delete historical EXPLAINs.
	Libraries: Delete the selected library.
	Statements: Display SQL summary.
---	-----------------------------
Z	**DBRMs:** Generate BIND conversion statements to convert the DBRM to a package.
	Plans: Generate BIND conversion statements to convert the DBRM to a package and include the package in the plan.
	Statements: Execute the statement.
---	-----------------------------

Dictionary of selects (continued)

Select	Definition
---	-----------------------------
2	**Statements:** Permit ISPF edit against statement.
---	-----------------------------
8	**DBRMs:** EXPLAIN and display only DBRMs that have not been previously EXPLAINed. Gather catalog statistics. **Packages:** EXPLAIN and display only DBRMs that have not been previously EXPLAINed. Gather catalog statistics. **Plans:** EXPLAIN and display only DBRMs that have not been previously EXPLAINed. Gather catalog statistics.
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9	**DBRMs:** EXPLAIN and display only DBRMs that have not been previously EXPLAINed. Do not gather catalog statistics. **Packages:** EXPLAIN and display only DBRMs that have not been previously EXPLAINed. Do not gather catalog statistics. **Plans:** EXPLAIN and display only DBRMs that have not been previously EXPLAINed. Do not gather catalog statistics.

Appendix E.
!DB/EXPLAIN Sorts and Filters

Introduction

This appendix provides charts that identify the sorts and filters available from specific object list panels. In each chart:

- Column 1 contains the sort or filter keyword

- Column 2 contains the field name of the field that is acted on by the sort or filter. If column 2 is blank, it indicates that the sort or filter is acting on a composite value rather than on a specific field value.

- Column 3 contains the definition of the field whose name is contained in column 2.

Collections

Collections sorts

Sort	Field	Sort by ...
QCOL	COLLECTION	Collection name
QLOC	LOCATION	Location, collection name

Collections filters

Filter	Field	Filter on ...
QCOL	COLLECTION	Collection name
QLOC	LOCATION	Location

Costs

Costs sorts

Sort	Field	Sort by ...
C#ADG	ADG	Number of access degrees > 1
C#HBJ	HBJ	Number of hybrid joins
C#JDG	JDG	Number of join degrees > 1
C#I1S	I1	Number of one-fetch index scans
C#LCK	LCK	Number of locks
C#LPF	LPF	Number of list prefetches
C#MIS	MIS	Number of matching index scans
C#MSJ	MSJ	Number of merge scan joins
C#MX		Number of multiple indexes
C#MXI	MI	Number of multiple index intersections
C#MXS	MX	Number of multiple index scans
C#MXU	MU	Number of multiple index unions
C#NLJ	NLJ	Number of nested loop joins
C#NMI	NMIS	Number of non-matching index scans
C#NS	N	Number of index scans for IN keyword
C#SPF	SPF	Number of sequential prefetches
C#SRG	SG	Number of sorts for group by
C#SRJ	SJ	Number of sorts for joins
C#SRO	SO	Number of sorts for order by
C#SRT	SRT	Number of sorts (no new table access)
C#SRU	SU	Number of sorts for unions

Costs sorts (continued)

Sort	Field	Sort by ...
C#TSS	TS	Number of table space scans
CACST	AVERAGE STMT COST	Average statement cost
CEXDT	EXPLAIN TIMESTAMP	EXPLAIN date/time, name
CMCST	MAXIMUM STMT COST	Maximum statement cost
CNAME	DBRM/PACKAGE/ PLAN	Name
CPCDT	PRECOMPILE TIMESTAMP	Precompile date/time, name
CTCST	TOTAL STMT COST	Total statement cost

Costs filters

Filter	Field	Filter on ...
C#ADG	ADG	Number of access degrees > 1
C#HBJ	HBJ	Number of hybrid joins
C#JDG	JDG	Number of join degrees > 1
C#I1S	I1	Number of one-fetch index scans
C#LCK	LCK	Number of locks
C#LPF	LPF	Number of list prefetches
C#MIS	MIS	Number of matching index scans
C#MSJ	MSJ	Number of merge scan joins
C#MXI	MI	Number of multiple index intersections
C#MXS	MX	Number of index scans on index
C#MXU	MU	Number of multiple index unions
C#NLJ	NLJ	Number of nested loop joins
C#NMI	NMIS	Number of non-matching index scans
C#NS	N	Number of index scans for IN keyword
C#SPF	SPF	Number of sequential prefetches

Costs filters (continued)

Sort	Field	Sort by ...
C#SRG	SG	Number of group by sorts
C#SRJ	SJ	Number of join sorts
C#SRO	SO	Number order by sorts
C#SRT	SRT	Total number sorts
C#SRU	SU	Number of unique sorts
C#TSS	TS	Number of table space scans
CACST	AVERAGE STMT COST	Average statement cost
CEXDT	EXPLAIN TIMESTAMP	EXPLAIN date/time
CMCST	MAXIMUM STMT COST	Maximum statement cost
CNAME	DBRM/PACKAGE/ PLAN	DBRM or Package name
CPCDT	PRECOMPILE TIMESTAMP	Precompile date/time
CTCST	TOTAL STMT COST	Total statement cost
CVER	VERSION	Version identifier

DBRMs

DBRMs sorts

Sort	Field	Sort by ...
D#DC	DECLARE CURSOR	Number of declare cursors
D#DL	DELETES	Number of deletes
D#IN	INSERTS	Number of inserts
D#LS	LCK SHR	Number of locks shared
D#LX	LCK XCL	Number of locks excluded
D#PL	PLAN HEADING	Number of plans using
D#SE	SELECTS	Number of selects
D#TL	STMTS	Number of total statements
D#TS		Total number of selects + declare cursors
D#UP	UPDATES	Number of updates
DACST	AVG STMT COST	Average statement cost
DBRM	DBRM	DBRM name
DMCST	MAX STMT COST	Maximum statement cost
DPCDT	PRECOMPILE DATE/TIME	Precompile date/time, name
DPLN	PLAN HEADING	Plan name, DBRM name
DTCST	TOTAL STMT COST	Total statement cost

DBRMs filters

Filter	Field	Filter on ...
D#AL	ALTER	Total number of alters
D#CA	CALL	Total number of CALL statements
D#CL	CLOSE	Total number of closes
D#CM	COMMIT	Total number of commits
D#CN	CONNECT	Total number of connects
D#CR	CREATE	Total number of creates
D#DC	DECLARE CURSOR	Total number of declare cursors
D#DL	DELETES	Total number of deletes
D#DM	DECLARE STATEMENT	Total number of declare statements
D#DS	DESCRIBE	Total number of describes
D#DT	DECLARE TABLE	Total number of declare tables

DBRMs filters (continued)

Filter	Field	Filter on ...
D#DR	DROP	Total number of drops
D#SR	SET RULES	Total number of SET CURRENT RULES statements
D#EC	EXECUTE	Total number of executes
D#EX	EXPLAIN	Total number of EXPLAINS
D#FT	FETCH	Total number of fetches
D#GR	GRANT	Total number of grants
D#IN	INSERTS	Total number of inserts
D#LS	LCK SHR	Total number of locks shared
D#LX	LCK XCL	Total number of locks excluded
D#OP	OPEN	Total number of opens
D#PL	PLAN HEADING	Number of plans with DBRM as a member
D#PR	PREPARE	Total number of prepares
D#RE	RELEASE	Total number of releases
D#RL	ROLLBACK	Total number of rollbacks
D#RV	REVOKE	Total number of revokes
D#SC	SET CONNECT	Total number of set connections
D#SD	SET DEGREE	Total number of set degrees
D#SE	SELECTS	Total number of selects
D#SH	SET HOST	Total number of set host variables
D#SP	SET PKGSET	Total number of set package sets
D#SS	SET SQLID	Total number of set SQL IDs
D#ST	SET	Total number of sets
D#TL	STMTS	Total number of statements in DBRM
D#TS		Total number of selects
D#UP	UPDATES	Total number of updates
D#WH	WHENEVER	Total number of whenevers
DACST	AVG STMT COST	Average statement cost

DBRMs filters (continued)

Sort	Field	Sort by ...
DBRM	DBRM	DBRM name
DCHRS	CH	Whether or not CCS ID for SBCS data = 290
DCOMM	CO	Decimal point representation
DDC31	DE	Whether or not DEC31 was in effect
DEXDT	EXPLAIN DATE/TIME	EXPLAIN date and time
DHLNG	HL	Host language used
DLIB	LIBRARY	DBRM library
DMCST	MAX STMT COST	Maximum statement cost
DMISS	STMTS	Whether or not the extract discarded any statements
DMIXD	MX	Whether or not mixed data is in effect
DPCDT	PRECOMPILE DATE/TIME	Precompile date/time
DPLN	PLAN HEADING	Plan name
DQUOT	QU	SQL string delimiter
DTCST	TOTAL STMT COST	Total statement cost
DVER	VERSION	DBRM version identifier
DVRF	VL	Whether or not DBRMs have been verified

Explain

Explain filters

Filter	Field	Filter on ...
EACCS	ACCS	Access type
EACCS	ACCESS INFO	Access type
EADG	ACC DEG	Access degree
EAID	ACC PID	Access parallel group ID
ECHA	(Changed statements identifier)	Has statement text been modified by the user?
ECOL	COLLECTION	Collection ID
ECOL	COLLECTION ID	Collection ID
ECOLF	FN	Column function evaluation
ECORR	CORR=	Plan table correlation name
EDBRM	DBRM/PACKAGE/ NAME	Program name
EERR	ME	Error occurred
EEXME	E M	EXPLAIN method
EGRP	GROUP MEMBER	Group member name
EICR	CREATEBY	Access creator
EIX	INDEX NAME	Access name
EJDG	JOI DEG	Join degree
EJID	JOI PID	Join parallel group ID
EJTYP	J T =	Join type
ELCKM	LCK	Table space lock mode
EMATC	MTCL	Match columns
EMETH	ME	Method
EMJCO	MJ CL	Plan table merge join
EMXOP	MXOP	MIX operation sequence
ENDXO	IX	Index only
EORNO	STMT NO.	Actual original statement number
EPLN	PLAN	Application plan name
EPLNO	PLN NO.	Plan number

Explain filters (continued)

Filter	Field	Filter on ...
EPMOD	P M	Plan table parallelism mode
EPRAN	P R =	Page range
EPREF	PF	Prefetch
EQBNO	QBNO	Query block number
EQYNO	STMT NO.	Query number
ESCID	SRC ID	Plan table sortc parallel group ID
ESNID	SRN ID	Plan table sortn parallel group ID
ESRCG	SRTC G	Sort C group
ESRCJ	SRTC J	Sort C join
ESRCO	SRTC O	Sort C order
ESRCU	SRTC U	Sort C unique
ESRNG	SRTN G	Sort N group
ESRNJ	SRTN J	Sort N join
ESRNO	SRTN O	Sort N order
ESRNU	SRTN U	Sort N unique
ETBL	TBL	Table name
ETBNO	(FROM clause table identifier)	Table number
ETCMI	(Statement cost discrepancy identifier)	Statement costs
ETCR	CREATEBY	Creator
ETCST	STATEMENT COST	Total statement cost

Explain History

Explain History filters

Filter	Field	Filter on ...
HDVER	VERSION	Version identifier of DBRM or package
HERR	ERROR	Type of error occurring during EXPLAIN
HETYP	TYPE	EXPLAIN type
HEXDT	EXPLAIN DATE/TIME	EXPLAIN timestamp
HNAME, HDBRM	NAME	DBRM or package name
HPCDT	PRECOMPILE DATE/TIME	Precompile timestamp
HTCST	STMT COST	Total statement cost
HVER	VERSION	Version of DBRM or package

EXPLAIN History sorts

Sort	Field	Sort on ...
HDBRM	NAME	DBRM or package name (in the same EXPLAIN timestamp order as NAME)
HEXDT	EXPLAIN DATE/TIME	EXPLAIN timestamp
HNAME	NAME	DBRM or package name (in the opposite EXPLAIN timestamp order to NAME)
HPCDT	PRECOMPILE TIMESTAMP	Precompile timestamp
HTCST	STMT COST	Total statement cost

Host Variables

Host Variable filters

Filter	Field	Filter on ...
HLENG	LENGTH	Length of host variable
HOST	HOST VARIABLE NAME	Name of host variable
HSCAL	SCALE	Sale of host variable
HTYPE	DATA TYPE	Data Type of host variable

Libraries

Libraries sorts

Sort	Field	Sort by ...
L#ALL	ALL	Number of DBRM and package members
L#DBR	DBRM	Number of DBRM members
L#PKG	PKG	Number of package members
LLIB	LIBRARY NAME	Library name
LSTAT	STATUS	Status, library name

Libraries filters

Filter	Field	Filter on ...
L#ALL	ALL	Number of DBRM and package members in library
L#DBR	DBRM	Number of DBRM members in library
L#PKG	PKG	Number of package members in library
LERR	LERR	Error status
LLIB	LIBRARY NAME	Library name
LSTAT	STATUS	Library status

Packages

Packages sorts

Sort	Field	Sort by ...
K#DC	DECLARE CURSOR	Number of declare cursors
K#DL	DELETES	Number of deletes
K#IN	INSERTS	Number of inserts
K#LS	LCK SHR	Number of locks shared
K#LX	LCK XCL	Number of locks excluded
K#SE	SELECTS	Number of selects
K#TL	STMTS	Number of total statements
K#TS		Number of selects + declare statements
K#UP	UPDATES	Number of updates
KACST	AVERAGE STMT COST	Average statement cost
KAVS	AVSIZE	Average size
KBDT	BIND DATE/TIME	Bind date/time, package
KCOL	COLLECTION	Collection ID, package
KCR	CREATOR	Package creator, package
KCRDT	CREATED	Created date/time, package
KGRP	GROUP MEMBER	The DB2 data sharing member name of the DB2 subsystem that performed the most recent BIND.
KKSZ	PKSIZE	Package size
KMCST	MAXIMUM STMT COST	Maximum statement cost
KOWN	OWNER	Owner, package
KPACK	PACKAGE	Package name
KPCDT	PRECOMPILE DATE/TIME	Precompile date/time, package
KQLF	QUALIFIER	Qualifier, package
KTCST	TOTAL STMT COST	Total statement cost

Packages filters

Filter	Field	Filter on ...
K#AL	ALTER	Total number of alters
K#CA	CALL	Total number of CALL statements
K#CL	CLOSE	Total number of closes
K#CM	COMMIT	Total number of commits
K#CN	CONNECT	Total number of connects
K#CR	CREATE	Total number of creates
K#DC	DECLARE CURSOR	Total number of declare cursors
K#DL	DELETES	Total number of deletes
K#DM	DECLARE STATEMENTS	Total number of declare statements
K#DR	DROP	Total number of drops
K#DS	DESCRIBE	Total number of describes
K#DT	DECLARE TABLE	Total number of declare tables
K#EC	EXECUTE	Total number of executes
K#EX	EX	Total number of EXPLAINS
K#FT	FETCH	Total number of fetches
K#GR	GRANT	Total number of grants
K#IN	INSERTS	Total number of inserts
K#LS	LCK SHR	Total number of locks shared
K#LX	LCK XCL	Total number of locks excluded
K#OP	OPEN	Total number of opens
K#PR	PREPARE	Total number of prepares
K#RE	RELEASE	Total number of releases
K#RL	ROLLBACK	Total number of rollbacks
K#RV	REVOKE	Total number of revokes
K#SC	SET CONNECT	Total number of set connections
K#SD	SET DEGREE	Total number of set degrees
K#SE	SELECTS	Total number of selects
K#SH	SET HOST	Total number of set host variables
K#SP	SET PKGSET	Total number of set package sets

Packages filters (continued)

Filter	Field	Filter on ...
K#SR	SET RULES	Total number of SET CURRENT RULES SQL statements
K#SS	SET SQLID	Total number of set SQL IDs
K#ST	SET	Total number of sets
K#TL	STMTS	Total number of statements
K#TS		Total number of selects
K#UP	UPDATES	Total number of updates
K#WH	WHENEVER	Total number of whenevers
KASCT	AVERAGE STMT COST	Average statement cost
KAVS	AVSIZE	Average size
KBDT	BIND DATE/TIME	Bind date/time
KCOL	COLLECTION	Collection
KCOMM	CO	Whether or not a comma is used for decimal in SQL
KCR	CREATOR	Creator
KCRDT	CREATED	Created by date/time
KDC31	DE	Whether or not DC31 was in effect at precompile
KDEGR	DG	Degree option
KDEGR	DEGREE	Degree option
KDFP	DP	Current data option
KDYNR	DYNAMICRULES	DYNAMICRULES option used when the package was bound
KEXDT	EXPLAIN DATE/TIME	EXPLAIN date/time
KFRE	FREED?	Whether or not package has been freed
KGRP	GROUP MEMBER	The DB2 data sharing member name of the DB2 subsystem that performed the most recent BIND.
KHLNG	HL	Host language
KISO	IS	Isolation level
KKSZ	PKSIZE	Package size
KLIB	LIBRARY	Library
KMCST	MAXIMUM STMT COST	Maximum statement cost
KMIXD	MX	Whether or not mixed data was present at precompile

Packages filters (continued)

Filter	Field	Filter on ...
KOPR	OP	Whether or not package can be allocated
KOWN	OWNER	Owner
KPACK	PACKAGE	Package name
KPCDT	PRECOMPILE DATE/TIME	Precompile date/time
KQLF	Qualifier	Implicit qualifier
KQUOT	QU	SQL string delimiter
KRLS	RE	Value used for release
KRMT	RM	Source of the package
KSERR	SE	SQL error option
KSYEN	SYSENTRY	System entries
KTCST	TOTAL STMT COST	Total statement cost
KTOK	CONTOKEN	Consistency token
KVER	VERSION	Version
KVLD	VD	Whether or not package is valid
KVRF	VL	Whether or not package has been verified
KVLT	VA	Whether or not validity checking can be deferred
KXPL	EX	Whether or not to EXPLAIN at bind

Package Connections

Package Connections sorts

Sort	Field	Sort by ...
KCNN	CONNECT	Connection, system name
KENA	ENABLE	Enabled indicator, system name
KSYS	SYSTEM	System name

Plans

Plans sorts

Sort	Field	Sort by ...
P#DB	COUNT	Number of DBRMs in plan
D#DB	DBRMs	Number of DBRMs in plan
P#DC	DCL CSR	Number of declare cursors
P#DC	DECLARE CURSOR	Number of declare cursors
P#DL	DELETES	Number of deletes
P#DP	COUNT	Number of DBRMs/packages in plan
P#IN	INSERTS	Number of inserts
P#KA	PACKAGES	Number of packages in plan
P#LS	LOCK SHR	Number of locks shared
P#LX	LOCK XCL	Number of locks excluded
P#SE	SELECTS	Number of selects
P#TL	STMTS	Number of total statements
P#TS		Number of selects + declare cursors
P#UP	UPDATES	Number of updates
PAVS	AVG SIZE	Average size
PBBY	BOUND BY	Bound by, plan number
PBDT	BIND DATE	Bind date/time, plan name
PCHSZ	CACHESZ	Cache size
PCR	CREATOR	Creator, plan name
PGRP	GROUP MEMBER	The DB2 data sharing member name of the DB2 subsystem that performed the most recent BIND.
PLAN	PLAN	Plan name
PPSZ	PLSIZE	Base size, plan name
PQLF	QUALIFIER	Qualifier, plan name

Plans filters

Filter	Field	Filter on ...
P#AL	ALTER	Total number of alters
P#CA	CALL	Total number of CALL statements
P#CL	CLOSE	Total number of closes
P#CM	COMMIT	Total number of commits
P#CN	CONNECT	Total number of connects
P#CR	CREATE	Total number of creates
P#DB	COUNT	Number of DBRMs
P#DB	DBRMs	Number of DBRMs
P#DC	DCL CSR	Total number of declare cursors
P#DC	DECLARE CURSOR	Total number of declare cursors
P#DL	DELETES	Total number of deletes
P#DM	DECLARE STATEMENT	Total number of declare statements
P#DP	COUNT	Number of DBRMs and packages
P#DR	DROP	Total number of drops
P#DS	DESCRIBE	Total number of describes
P#DT	DECLARE TABLE	Total number of declare tables
P#EC	EXECUTE	Total number of executes
P#EX	EXPLAIN	Total number of EXPLAINS
P#FT	FETCH	Total number of fetches
P#GR	GRANT	Total number of grants
P#IN	INSERTS	Total number of inserts
P#KA	PACKAGES	Number of packages
P#LS	LOCK SHR	Total number of locks shared
P#LX	LOCK XCL	Total number of locks excluded
P#OP	OPEN	Total number of opens
P#PR	PREPARE	Total number of prepares
P#RE	RELEASE	Total number of releases
P#RL	ROLLBACK	Total number of rollbacks
P#RV	REVOKE	Total number of revokes

Plans filters (continued)

Filter	Field	Filter on ...
P#SC	SET CONNECT	Total number oF set connections
P#SD	SET DEGREE	Total number of set degrees
P#SE	SELECTS	Total number of selects
P#SH	SET HOST	Total number of set host variables
P#SP	SET PKGSET	Total number of set package sets
P#SR	SET RULES	Total number of SET CURRENT RULES SQL statements
P#SS	SET SQLID	Total number of set SQL IDs
P#ST	SET	Total number of sets
P#TL	STMTS	Total number of statements
P#TS		Total number of selects
P#UP	UPDATES	Total number of updates
P#WH	WHENEVER	Total number of whenevers
PACQ	AC	When resources are acquired
PAVS	AVGSIZE	Average size of plan selection processed at bind time
PBBY	BOUND BY	Bound by ID
PBDT	BIND DATE	Bind time
PBDT	BIND TIME	Bind time
PCHSZ	CACHESZ	Cache size in bytes
PCR	CREATOR	Creator ID
PD#AL	ALTER	Total number of alters
PD#CA	CALL	Total number of CALL statements in the DBRMs included in the plan
PD#CL	CLOSE	Total number of closes
PD#CM	COMMIT	Total number of commits
PD#CN	CONNECT	Total number of connects
PD#CR	CREATE	Creates
PD#DC	DECLARE CURSOR	Total number of declare cursors

Plans filters (continued)

Filter	Field	Filter on ...
PD#DL	DELETES	Total number of deletes
PD#DM	DECLARE STATEMENT	Total number of declare statements
PD#DR	DROP	Total number of drops
PD#DS	DESCRIBE	Total number of describes
PD#DT	DECLARE TABLE	Total number of declare tables
PD#EC	EXECUTE	Total number of executes
PD#EX	EXPLAIN	Total number of EXPLAINS
PD#FT	FETCH	Total number of fetches
PD#GR	GRANT	Total number of grants
PD#IN	INSERTS	Total number of inserts
PD#LS	LOCK SHR	Total number of locks shared
PD#LX	LOCK XCL	Total number of locks excluded
PD#OP	OPEN	Total number of opens
PD#PR	PREPARE	Total number of prepares
PD#RE	RELEASE	Total number of releases
PD#RL	ROLLBACK	Total number of rollbacks
PD#RV	REVOKE	Total number of revokes
PD#SC	SET CONNECT	Total number of set connections
PD#SD	SET DEGREE	Total number of set degrees
PD#SE	SELECTS	Total number of selects
PD#SH	SET HOST	Total number of set host variables
PD#SP	SET PKGSET	Total number of set package sets
PD#SR	SET RULES	Total number of SET CURRENT RULES SQL statements in the DBRMs included in the plan
PD#SS	SET SQLID	Total number of set SQL IDs
PD#ST	SET	Total number of sets

Plans filters (continued)

Filter	Field	Filter on ...
PD#TL	STMTS	Total number of statements from DBRMs
PD#TS		Total number of statements
PD#UP	UPDATES	Total number of updates
PD#WH	WHENEVER	Total number of whenevers
PDEGR	DG	Degree
PDEGR	DEGREE	Degree
PDFP	DP	Whether or not plan bound with preparation deferred
PDISC	DI	Whether or not disconnect option used when plan bound
PDISC	DISCONNECT	Whether or not disconnect option used when plan bound
PDYNR	DYNAMICRULES	DYNAMICRULES option used when the plan was bound
PEXPR	CD	Data currency requirement
PEXPR	EXPREDICATE	Data currency requirement
PFRE	PLAN FREED?	Whether or not plan was freed
PGRP	GROUP MEMBER	The DB2 data sharing member name of the DB2 subsystem that performed the most recent BIND.
PISO	IS	Isolation level
PK#AL	ALTER	Total number of alters
PK#CA	CALL	Total number of CALL statements in the packages included in the plan
PK#CL	CLOSE	Total number of closes
PK#CM	COMMIT	Total number of commits
PK#CN	CONNECT	Total number of connects
PK#CR	CREATE	Total number of creates

Plans filters (continued)

Filter	Field	Filter on ...
PK#DC	DECLARE CURSORS	Total number of declare cursors
PK#DL	DELETES	Total number of deletes
PK#DM	DECLARE STATEMENT	Total number of declare statements
PK#DR	DROP	Total number of drops
PK#DS	DESCRIBE	Total number of describes
PK#DT	DECLARE TABLE	Total number of declare tables
PK#EC	EXECUTE	Total number of executes
PK#EX	EXPLAIN	Total number of EXPLAINS
PK#FT	FETCH	Total number of fetches
PK#GR	GRANT	Total number of grants
PK#IN	INSERTS	Total number of inserts
PK#LS	LCK SHR	Total number of locks shared
PK#LX	LOCK XCL	Total number of lock excluded
PK#OP	OPEN	Total number of opens
PK#PR	PREPARE	Total number of prepares
PK#RE	RELEASE	Total number of releases
PK#RL	ROLLBACK	Total number of rollbacks
PK#RV	REVOKE	Total number of revokes
PK#SC	SET CONNECT	Total number of set connections
PK#SD	SET DEGREE	Total number of set degrees
PK#SE	SELECTS	Total number of selects
PK#SH	SET HOST	Total number of set host vars
PK#SP	SET PKG SET	Total number of set package sets
PK#SR	SET RULES	Total number of SET CURRENT RULES statements in the packages included in the plan
PK#SS	SET SQLID	Total number of set sqlids
PK#ST	SET	Total number of sets

Plan Connections

Plan Connections sorts

Sort	Field	Sort by ...
PK#TL	STMTS	Total statements from packages
PK#TS		Total number of selects
PK#UP	UPDATES	Total number of updates
PK#WH	WHENEVER	Total number of whenevers
PLAN	PLAN	Plan name
POPR	OP	Whether or not plan is operative
PPLEN	PLENTRIES	Number of package list entries
PPSZ	PL SIZE	Plan size in bytes
PQLF	QUALIFIER	Qualifier
PRLS	RE	When resources are released
PSQLR	SQ	Plan SQL rules option
PSRV	SERVER	Server
PSYEN	SYSENTRIES	Number of connections
PVLD	VD	Whether or not plan is valid
PVLT	VA	Whether or not validity is deferred until run time
PVRF	VL	Whether or not plan has been verified
PXPL	EX	Whether or not to EXPLAIN at bind
PENA	ENABLE	Enabled indicator
PCNN	CONNECT	Connection, system name
PSYS	SYSTEM	System name

Plan Package List

Plan Package List sorts

Sort	Field	Sort by ...
PCOL	COLLECTION ID	Location name
PLOC	LOCATION	Location name
PPKG	PACKAGE	Package ID, location name
PSEQ	SEQNO	Sequence number, package ID

Statements

Statements filters

Filter	Field	Filter on ...
SCHA	CH	Has the statement text been modified by the user?
SCURS	SQL TEXT	Statement cursor name
SDBRM	DBRM/PACKAGE/ PLAN/TABLE NAME	DBRM, package or PDS member name
SEXPL	SQL TEXT	Whether or not the statement is EXPLAINable
SISO	ISOLATION	Isolation level of the statement
SORNO	C H	Original statement number
STEXT	SQL TEXT	Text contained in statement
SSTNO	STMTNO	Statement number
SSTTY	SQL TEXT	Statement type

Tables

Tables sorts

Sort	Field	Sort by ...
T#DL	DELETES	Number of deletes
T#IN	INSERTS	Number of inserts
T#LS	LOCK SHRS	Number of shared locks
T#LX	LOCK XCLS	Number of excluded locks
T#SE	SELECTS	Number of selects
T#TL	TOTAL STMT	Number of total statements
T#UP	UPDATES	Number of updates
TCR	CREATOR	Table creator, table name
TLOC	LOCATION	Table location, table name
TTBL	NAME	Table name

Tables filters

Filter	Field	Filter on ...
T#DL	DELETES	Total number of deletes
T#IN	INSERTS	Total number of inserts
T#LS	LOCK SHRS	Total number of locks shared
T#LX	LOCK XCLS	Total number of locks excluded
T#SE	SELECTS	Total number of selects
T#TL	TOTAL STMT	Total number of statements
T#UP	UPDATES	Total number of updates
TCR	CREATOR	Table creator ID
TLOC	LOCATION	Table location
TTBL	NAME	Table name

Introduction

Candle Corporation offers a comprehensive maintenance and support plan to ensure you realize the greatest value possible from your Candle software investments. We have more than 200 technicians worldwide, committed to providing you with prompt resolutions to your support requests.

Customer Support hours of operation are from 5:30 A.M. to 5:00 P.M., Pacific Time. In the event of an after-hours or weekend emergency, Candle's computerized call management system ensures that a technician will return your call within one hour. For customers located outside of North America, after-hours and weekend support is provided by Candle Customer Support locations in the United States.

Electronic Support

Candle provides information and support services using

- Candle's home page at **www.candle.com**. You can use the Candle Web site to

    – open problem records
    – access maintenance information
    – order products or maintenance
    – access IBM compatibility information
    – download fix packs for distributed products
    – read news and alerts
    – scan a list of scheduled Candle education classes

- Candle Electronic Customer Support (CECS), an electronic customer support facility. You can access this facility through the IBM Global Network. You can use CECS to

    – open problem records
    – search our database for solutions to known problems
    – look for answers to commonly asked questions
    – read news and alerts
    – scan a list of scheduled Candle education classes

Both CECS and the Candle Web site are available 24 hours a day, 7 days per week.

Telephone Support

Our support network consists of product specialists who work with you to solve your problem.

Candle uses an online problem management system to log and track all support requests. Your request is immediately routed to the appropriate technical resource.

When you call to report a problem, please have the following information:

- your Candle personal ID (PID) number

- the release level of the Candle product

- the release level of IBM or other vendor software

- identifying information and dates of recently applied maintenance to your Candle product or IBM product

- a detailed description of the problem (including the error message) and the events preceding the problem

- a description of any unusual events that occurred before the problem

Customer Support Phone Numbers

	Telephone	Fax
North America	(800) 328-1811	
	(310) 535-3636	(310) 727-4204
Europe		
Belgium/Luxembourg	+32 (0) 3 270 95 60	+32 (0) 3 270 95 41
France	+33 (0) 1 53 61 60 60	+33 (0) 1 53 61 06 16
Germany/Switzerland/ Austria	+49 (0) 89 54 554 333	+49 (0) 89 54 554 170
Italy - Freephone	800 780992	
Netherlands	+31 (0) 30 600 35 50	+31 (0) 30 600 35 10
Scandinavia	+46 (0)8 444 5940	+46 (0)8 623 1855
U.K.	+44 (0)161 437 5224	+44 (0)161 437 5225
(Southern Europe, Middle East and South Africa Agents call U.K.)		
Asia Pacific - English Hub		+61 2 9954 1818
Australia	+61 2 8912 9898	
Hong Kong	800 908 457	
India	+61 2 8912 9898	
Indonesia	0018 03061 2061	
Malaysia	1800 803 459	
New Zealand	0800 449 596	
Philippines	1800 1612 0096	
Singapore	800 616 2075	
Thailand	0018 00612 1045	
Asia Pacific - Japanese Hub	+81 3 3595 7150	+81 3 3595 7110
Asia Pacific - Korean Hub	+82 2 552 8744	+82 2 552 8746
Asia Pacific - Mandarin Hub	+88 62 2739 3223	+88 62 2378 5993
Asia Pacific e-mail address: ap_support@candle.com		

When your local support office is unavailable, you can contact Candle's North America support center. If USADirect® service is available in your country, use the 800 telephone number. If USADirect service is not available, ask your international operator for assistance in calling Candle's local (310) number.

Incident Documentation

You may be asked to send incident documentation to the Candle Customer Support Center. On the outside of all packages you send, please write the incident number given to you by the Customer Support representative.

Send tapes containing the incident information to the following address, unless directed otherwise by your Customer Support representative:

```
Candle Customer Support
Candle Support Center, Incident number
201 North Douglas Street
El Segundo, CA 90245
```

Send all other relevant documentation, such as diskettes or paper documentation, to the address provided by your Customer Support representative.

Ensuring Your Satisfaction with Customer Support

Candle Customer Support is committed to achieving high customer satisfaction ratings in all areas. These include

- connecting you to a support representative promptly
- providing you with the appropriate fixes
- answering support questions
- filling your shipping orders
- supplying documentation

If you have a concern that has not been resolved to your satisfaction, you can open a complaint ticket. All tickets are logged and tracked to ensure responsiveness and closure. Using the ticket information, a manager will contact you promptly to resolve your problem.

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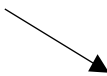
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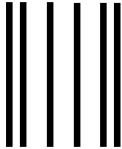☐ YES   Phone number: _____   Best time to call: _____
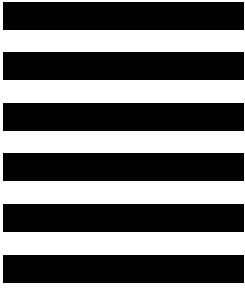
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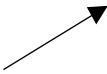
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