

**DB2
EXPLAIN Tables**

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EXPLAIN_ARGUMENT Table		
Column Name	Data Type	Description
EXPLAIN_REQUESTER	VARCHAR(128)	Authorization ID of initiator of this Explain request.
EXPLAIN_TIME	TIMESTAMP	Time of initiation for Explain request.
SOURCE_NAME	VARCHAR(128)	Name of the package running when the dynamic statement was explained or name of the source file when static SQL was explained.
SOURCE_SCHEMA	VARCHAR(128)	Schema, or qualifier, of source of Explain request.
EXPLAIN_LEVEL	CHAR(1)	Level of Explain information for which this row is relevant.
STMTNO	INTEGER	Statement number within package to which this explain information is related.
SECTNO	INTEGER	Section number within package to which this explain information is related.
OPERATOR_ID	INTEGER	No Unique ID for this operator within this query.
ARGUMENT_TYPE	CHAR(8)	No The type of argument for this operator.
ARGUMENT_VALUE	VARCHAR(1024)	The value of the argument for this operator. NULL if the value is in LONG_ARGUMENT_VALUE.
LONG_ARGUMENT_VALUE	CLOB(1M)	The value of the argument for this operator, when the text will not fit in.
ARGUMENT_VALUE.	NULL	If the value is in ARGUMENT_VALUE.

EXPLAIN_INSTANCE Table		
Column Name	Data Type	Description
EXPLAIN_REQUESTER	VARCHAR(128)	Authorization ID of initiator of this Explain request.
EXPLAIN_TIME	TIMESTAMP	Time of initiation for Explain request.
SOURCE_NAME	VARCHAR(128)	Name of the package running when the dynamic statement was explained or name of the source file when the static SQL was explained.
SOURCE_SCHEMA	VARCHAR(128)	Schema, or qualifier, of source of Explain request.
EXPLAIN_OPTION	CHAR(1)	Indicates what Explain information was requested for this request.



EXPLAIN_INSTANCE Table		
Column Name	Data Type	Description
QUERYOPT	INTEGER	Indicates the query optimization class used by the SQL Compiler at the time of the Explain invocation. The value indicates what level of query optimization was performed by the SQL.
ISOLATION	CHAR(2)	Indicates what type of isolation was used when compiling the SQL statements.
BUFFPAGE	INTEGER	Contains the value of the BUFFPAGE database configuration setting at the time of the Explain invocation.
AVG_APPLS	INTEGER N	Contains the value of the AVG_APPLS configuration parameter at the time of the Explain invocation.
SORTHEAP	INTEGER	Contains the value of the SORTHEAP database configuration setting at the time of the Explain invocation.
LOCKLIST	INTEGER	Contains the value of the LOCKLIST database configuration setting at the time of the Explain invocation.
MAXLOCKS	SMALLINT	Contains the value of the MAXLOCKS database configuration setting at the time of the Explain invocation.
LOCKS_AVAIL	INTEGER	Contains the number of locks assumed to be available by the optimizer for each user. It is derived from LOCKLIST and MAXLOCKS.
CPU_SPEED	DOUBLE	Contains the value of the CPUSPEED database manager configuration setting at the time of the Explain invocation.
REMARKS	VARCHAR(254)	User-provided comment.
DBHEAP	INTEGER	Contains the value of the DBHEAP database configuration setting at the time of Explain invocation.
COMM_SPEED	DOUBLE	Contains the value of the COMM_BANDWIDTH database configuration setting at the time of Explain invocation.
PARALLELISM	CHAR(2)	Parallelism values.
DATAJOINER	CHAR(1)	If federated systems are used.

EXPLAIN_OBJECT Table		
Column Name	Data Type	Description
EXPLAIN_REQUESTER	VARCHAR(128)	Authorization ID of initiator of this Explain request.
EXPLAIN_TIME	TIMESTAMP	Time of initiation for Explain request.
SOURCE_NAME	VARCHAR(128)	Name of the package running when the dynamic statement was explained or name of the source file when the static SQL was explained.
SOURCE_SCHEMA	VARCHAR(128)	Schema, or qualifier, of source of Explain request.
EXPLAIN_LEVEL	CHAR(1)	Level of Explain information for which this row is relevant.
STMTNO	INTEGER	Statement number within package to which this explain information is related.
SECTNO	INTEGER	Section number within package to which this explain information is related.
OBJECT_SCHEMA	VARCHAR(128)	Schema to which this object belongs.
OBJECT_NAME	VARCHAR(128)	Name of the object.
OBJECT_TYPE	CHAR(2)	Descriptive label for the type of object.
CREATE_TIME	TIMESTAMP	Time of object's creation; null if a table function.
STATISTICS_TIME	TIMESTAMP	Last time of update to statistics for this object; null if statistics do not exist for this object.
COLUMN_COUNT	SMALLINT	Number of columns in this object.
ROW_COUNT	INTEGER	Estimated number of rows in this object.
WIDTH	INTEGER	The average width of the object in bytes. Set to -1 for an index.
PAGES	INTEGER	Estimated number of pages that the object occupies in the buffer pool. Set to -1 for a table function.
DISTINCT	CHAR(1)	Indicates if the rows in the object are distinct (i.e. no duplicates)
TABLESPACE_NAME	VARCHAR(128)	Name of the table space in which this object is stored; set to null if no table space is involved.
OVERHEAD	DOUBLE	Total estimated overhead, in milliseconds, for a single random I/O to the specified table space. Includes controller overhead, disk seek, and latency times. Set to -1 if no table space is involved.



EXPLAIN_OBJECT Table		
Column Name	Data Type	Description
TRANSFER_RATE	DOUBLE	Estimated time to read a data page, in milliseconds, from the specified table space.
PREFETCHSIZE	INTEGER	Number of data pages to be read when prefetch is performed.
EXTENTSIZE	INTEGER	Size of extent, in data pages. This many pages are written to one container in the table space before switching to the next container.
CLUSTER	DOUBLE	Degree of data clustering with the index. If >= 1, this is the CLUSTERRATIO. If >= 0 and < 1, this is the CLUSTERFACTOR. Set to -1 for a table, table function, or if this statistic is not available.
NLEAF	INTEGER	Number of leaf pages this index object's values occupy. Set to -1 for a table, table function, or if this statistic is not available.
NLEVELS	INTEGER	Number of index levels in this index object's tree. Set to -1 for a table, table function, or if this statistic is not available.
FULLKEYCARD	BIGINT	Number of distinct full key values contained in this index object. Set to -1 for a table, table function, or if this statistic is not available.
OVERFLOW	INTEGER	Total number of overflow records in the table. Set to -1 for an index, table function, or if this statistic is not available.
FIRSTKEYCARD	BIGINT	Number of distinct first key values. Set to -1 for a table, table function or if this statistic is not available.
FIRST2KEYCARD	BIGINT	Number of distinct first key values using the first {2,3,4} columns of the index.
FIRST3KEYCARD	BIGINT	Number of distinct first key values using the first {2,3,4} columns of the index.
FIRST4KEYCARD	BIGINT	Number of distinct first key values using the first {2,3,4} columns of the index.
SEQUENTIAL_PAGES	INTEGER	Number of leaf pages located on disk in index key order with few or no large gaps between them.
DENSITY	INTEGER	Ratio of SEQUENTIAL_PAGES to number of pages in the range of pages occupied by the index, expressed as a percentage (integer between 0 and 100).

EXPLAIN_OPERATOR Table		
Column Name	Data Type	Description
EXPLAIN_REQUESTER	VARCHAR(128)	Authorization ID of initiator of this Explain request.
EXPLAIN_TIME	TIMESTAMP	Time of initiation for Explain request.
SOURCE_NAME	VARCHAR(128)	Name of the package running when the dynamic statement was explained or name of the source file when the static SQL was explained.
SOURCE_SCHEMA	VARCHAR(128)	Schema, or qualifier, of source of Explain request.
EXPLAIN_LEVEL	CHAR(1)	Level of Explain information for which this row is relevant.
STMTNO	INTEGER	Statement number within package to which this Explain information is related.
SECTNO	INTEGER	Section number within package to which this Explain information is related.
OPERATOR_ID	INTEGER	Unique ID for this operator within this query.
OPERATOR_TYPE	CHAR(6)	Descriptive label for the type of operator.
TOTAL_COST	DOUBLE	Estimated cumulative total cost (in timerons) of executing the chosen access plan up to and including this operator.
IO_COST	DOUBLE	Estimated cumulative I/O cost (in data page I/Os) of executing the chosen access plan up to and including this operator.
CPU_COST	DOUBLE	Estimated cumulative CPU cost (in instructions) of executing the chosen access plan up to and including this operator.
FIRST_ROW_COST	DOUBLE	Estimated cumulative cost (in timerons) of fetching the first row for the access plan up to and including this operator. This value includes any initial overhead required.
RE_TOTAL_COST	DOUBLE	Estimated cumulative cost (in timerons) of fetching the next row for the chosen access plan up to and including this operator.
RE_IO_COST	DOUBLE	Estimated cumulative I/O cost (in data page I/Os) of fetching the next row for the chosen access plan up to and including this operator.



EXPLAIN_OPERATOR Table		
Column Name	Data Type	Description
RE_CPU_COST	DOUBLE	Estimated cumulative CPU cost (in instructions) of fetching the next row for the chosen access plan up to and including this operator.
COMM_COST	DOUBLE	Estimated cumulative communication cost (in TCP/IP frames) of executing the chosen access plan up to and including this operator.
FIRST_COMM_COST	DOUBLE	Estimated cumulative communications cost (in TCP/IP frames) of fetching the first row for the chosen access plan up to and including this operator. This value includes any initial overhead required.
BUFFERS	DOUBLE	Estimated buffer requirements for this operator and its inputs.
REMOTE_TOTAL_COST	DOUBLE	Estimated cumulative total cost (in timerons) of performing operation(s) on remote database(s).
REMOTE_COMM_COST	DOUBLE	Estimated cumulative communication cost of executing the chosen remote access plan up to and including this operator.

EXPLAIN_PREDICATE Table		
Column Name	Data Type	Description
SECTNO	INTEGER	Section number within package to which this explain information is related.
OPERATOR_ID	INTEGER	Unique ID for this operator within this query.
PREDICATE_ID	INTEGER	Unique ID for this predicate for the specified operator.
HOW_APPLIED	CHAR(5)	How predicate is being used by the specified operator.
WHEN_EVALUATED	CHAR(3)	Indicates when the subquery used in this predicate is evaluated.
RELOP_TYPE	CHAR(2)	The type of relational operator used in this predicate.
SUBQUERY	CHAR(1)	Whether or not a data stream from a subquery is required for this predicate. There may be multiple subquery streams required.
FILTER_FACTOR	DOUBLE	The estimated fraction of rows that will be qualified by this predicate.
PREDICATE_TEXT	CLOB(1M)	The text of the predicate as recreated from the internal representation of the SQL statement.

EXPLAIN_PREDICATE Table		
Column Name	Data Type	Description
EXPLAIN_REQUESTER	VARCHAR(128)	Authorization ID of initiator of this Explain request.
EXPLAIN_TIME	TIMESTAMP	Time of initiation for Explain request.
SOURCE_NAME	VARCHAR(128)	Name of the package running when the dynamic statement was explained or name of the source file when the static SQL was explained.
SOURCE_SCHEMA	VARCHAR(128)	Schema, or qualifier, of source of Explain request.
EXPLAIN_LEVEL	CHAR(1)	Level of Explain information for which this row is relevant.
STMTNO	INTEGER	Statement number within package to which this explain information is related.

EXPLAIN_STATEMENT Table		
Column Name	Data Type	Description
EXPLAIN_REQUESTER	VARCHAR(128)	Authorization ID of initiator of this Explain request.
EXPLAIN_TIME	TIMESTAMP	Time of initiation for Explain request.
SOURCE_NAME	VARCHAR(128)	Name of the package running when the dynamic statement was explained or name of the source file when the static SQL was explained.
SOURCE_SCHEMA	VARCHAR(128)	Schema, or qualifier, of source of Explain request.
EXPLAIN_LEVEL	CHAR(1)	Level of Explain information for which this row is relevant.
STMTNO	INTEGER	Statement number within package to which this explain information is related. Set to 1 for dynamic Explain SQL statements. For static SQL statements, this value is the same as the value used for the SYSCAT.STATEMENTS catalog view.



EXPLAIN_STATEMENT Table		
Column Name	Data Type	Description
SECTNO	INTEGER	Section number within package that contains this SQL statement. For dynamic Explain SQL statements, this is the section number used to hold the section for this statement at runtime. For static SQL statements, this value is the same as the value used for the SYSCAT.STATEMENTS catalog view.
QUERYNO	INTEGER	Numeric identifier for explained SQL statement. For dynamic SQL statements (excluding the EXPLAIN SQL statement) issued through CLP or CLI, the default value is a sequentially incremented value. Otherwise, the default value is the value of STMTNO for static SQL statements and 1 for dynamic SQL statements.
QUERYTAG	CHAR(20)	Identifier tag for each explained SQL statement.
STATEMENT_TYPE	CHAR(2)	Descriptive label for type of query being explained.
UPDATABLE	CHAR(1)	Indicates if this statement is considered updatable. This is particularly relevant to SELECT statements which may be determined to be potentially updatable.
DELETABLE	CHAR(1)	Indicates if this statement is considered deletable. This is particularly relevant to SELECT statements which may be determined to be potentially deletable.
TOTAL_COST	DOUBLE	Estimated total cost (in timerons) of executing the chosen access plan for this statement; set to 0 (zero) if EXPLAIN_LEVEL is 0 (original text) since no access plan has been chosen at this time.
STATEMENT_TEXT	CLOB(1M)	Text or portion of the text of the SQL statement being explained.
SNAPSHOT	BLOB(10M)	Snapshot of internal representation for this SQL statement at the Explain_Level shown. This column is intended for use with DB2 Visual Explain.
QUERY_DEGREE	INTEGER	Indicates the degree of intra-partition parallelism at the time of Explain invocation.

EXPLAIN_STREAM Table		
Column Name	Data Type	Description
EXPLAIN_REQUESTER	VARCHAR(128)	Authorization ID of initiator of this Explain request.
EXPLAIN_TIME	TIMESTAMP N	Time of initiation for Explain request.
SOURCE_NAME	VARCHAR(128)	Name of the package running when the dynamic statement was explained or name of the source file when the static SQL was explained.
SOURCE_SCHEMA	VARCHAR(128)	Schema, or qualifier, of source of Explain request.
EXPLAIN_LEVEL	CHAR(1)	Level of Explain information for which this row is relevant.
STMTNO	INTEGER	Statement number within package to which this Explain information is related.
SECTNO	INTEGER	Section number within package to which this Explain information is related.
STREAM_ID	INTEGER	Unique ID for this data stream within the specified operator.
SOURCE_TYPE	CHAR(1)	Indicates the source of this data stream:
SOURCE_ID	SMALLINT	Unique ID for the operator within this query that is the source of this data stream.
TARGET_ID	SMALLINT	Unique ID for the operator within this query that is the target of this data stream.
OBJECT_SCHEMA	VARCHAR(128)	Schema to which the affected data object belongs.
OBJECT_NAME	VARCHAR(128)	Name of the object that is the subject of data stream.
STREAM_COUNT	DOUBLE	Estimated cardinality of data stream.
COLUMN_COUNT	SMALLINT	Number of columns in data stream.
PREDICATE_ID	INTEGER	If this stream is part of a subquery for a predicate, the predicate ID will be reflected here, otherwise the column is set to -1.
COLUMN_NAMES	CLOB(1M)	This column contains the names and ordering information of the columns involved in this stream.
PMID	SMALLINT	Partitioning map ID.
SINGLE_NODE	CHAR(5)	Indicates if this data stream is on a single or multiple partitions:
PARTITION_COLUMNS	CLOB(64K)	List of columns this data stream is partitioned on.



ADVISE_INDEX Table		
Column Name	Data Type	Description
EXPLAIN_REQUESTER	VARCHAR(128)	Authorization ID of initiator of this Explain request.
EXPLAIN_TIME	TIMESTAMP	Time of initiation for Explain request.
SOURCE_NAME	VARCHAR(128)	Name of the package running when the dynamic statement was explained or name of the source file when static SQL was explained.
SOURCE_SCHEMA	VARCHAR(128)	Schema, or qualifier, of source of Explain request.
EXPLAIN_LEVEL	CHAR(1)	Level of Explain information for which this row is relevant.
STMTNO	INTEGER	Statement number within package to which this explain information is related.
SECTNO	INTEGER	Section number within package to which this explain information is related.
QUERYNO	INTEGER	Numeric identifier for explained SQL statement.
QUERYTAG	CHAR(20)	Identifier tag for each explained SQL statement.
NAME	VARCHAR(128)	Name of the index.
CREATOR	VARCHAR(128)	Qualifier of the index name.
TBNAME	VARCHAR(128)	Name of the table or nickname on which the index is defined.
TBCREATOR	VARCHAR(128)	Qualifier of the table name.
COLNAMES	CLOB(64K) N	List of column names.
UNIQUERULE	CHAR(1)	Unique rule: a Y indicates that a Unique Rule is in effect.
COLCOUNT	SMALLINT	Number of columns in the key plus the number of include columns if any.
IID	SMALLINT	Internal index ID.
NLEAF	INTEGER	Number of leaf pages; -1 if statistics are not gathered.
NLEVELS	SMALLINT	Number of index levels; -1 if statistics are not gathered.
FULLKEYCARD	BIGINT	Number of distinct full key values; -1 if statistics are not gathered.
FIRSTKEYCARD	BIGINT	Number of distinct first key values; -1 if statistics are not gathered.
CLUSTERRATIO	SMALLINT	Degree of data clustering with the index; -1 if statistics are not gathered or if detailed index statistics are gathered. In this situation, CLUSTERFACTOR will be used instead.

ADVISE_INDEX Table		
Column Name	Data Type	Description
CLUSTERFACTOR	DOUBLE	Finer measurement of degree of clustering.
USERDEFINED	SMALLINT	Defined by the user.
SYSTEM_REQUIRED	SMALLINT	Index required for primary key.
CREATE_TIME	TIMESTAMP	Time when the index was created.
STATS_TIME	TIMESTAMP	Last time when any change was made to recorded statistics for this index. Null if no statistics available.
PAGE_FETCH_PAIRS	VARCHAR(254)	A list of pairs of integers, represented in character form. Each pair represents the number of pages in a hypothetical buffer, and the number of page fetches required to scan the table with this index using that hypothetical buffer. IT will be a zero-length string if no data available.
REMARKS	VARCHAR(254)	User-supplied comment, or null.
DEFINER	VARCHAR(128)	User who created the index.
CONVERTED	CHAR(1)	Reserved for future use.
SEQUENTIAL_PAGES	INTEGER	Number of leaf pages located on disk in index key order with few or no large gaps between them. It will be -1 if no statistics are available.
DENSITY	INTEGER	Ratio of SEQUENTIAL_PAGES to number of pages in the range of pages occupied by the index, expressed as a percent. The percent being an integer between 0 and 100, -1 if no statistics are available.
FIRST2KEYCARD	BIGINT	Number of distinct keys using the first two columns of the index. It will be -1 if no statistics or inapplicable.
FIRST3KEYCARD	BIGINT	Number of distinct keys using the first three columns of the index. It will be -1 if no statistics or inapplicable.
FIRST4KEYCARD	BIGINT	Number of distinct keys using the first four columns of the index. It will be -1 if no statistics or inapplicable.
PCTFREE	SMALLINT	Percentage of each index leaf page to be reserved during initial building of the index.

ADVISE_INDEX Table		
Column Name	Data Type	Description
UNIQUE_COLCOUNT	SMALLINT	The number of columns required for a unique key. Always <=COLCOUNT. < COLCOUNT only if there a include columns. -It will be -1 if index has no unique key. Duplicates are not permitted.
MINPCTUSED	SMALLINT	If not zero, then online index defragmentation is enabled, and the value is the threshold of minimum used space before merging pages.
REVERSE_SCANS	CHAR(1)	Y = Index supports reverse scans N = Index does not support reverse scans.
USE_INDEX	CHAR(1)	Y = index recommended or evaluated N = index not to be recommended
CREATION_TEXT	CLOB(1M)	The SQL statement used to create the index.
PACKED_DESC	BLOB(20M)	Internal description of the table.

ADVISE_WORKLOAD Table		
Column Name	Data Type	Description
WORKLOAD_NAME	CHAR(128)	Name of the collection of SQL statements (workload) that this statements belongs to.
STATEMENT_NO	INTEGER	Statement number within the workload to which this explain information is related.
STATEMENT_TEXT	CLOB(1M)	Content of the SQL statement.
STATEMENT_TAG	VARCHAR(256)	Identifier tag for each explained SQL statement.
FREQUENCY	INTEGER N	The number of times this statement appears within the workload.
IMPORTANCE	DOUBLE	Importance of the statement.
COST_BEFORE	DOUBLE	The cost (in timerons) of the query if the recommended indexes are not created.
COST_AFTER	DOUBLE	The cost (in timerons) of the query if the recommended indexes are created.

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Empire State Building
FAX: 212-967-3498

MAIL
350 Fifth Avenue, New York, NY 10118