

Adabas Manager

Glossary

Version 7.7.3

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Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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Glossary

A

Adabas File	Each SQL base table - contained or not contained in a cluster - is represented by one Adabas file. An existing Adabas file is introduced to the catalog using CREATE TABLE DESCRIPTION/ CREATE CLUSTER DESCRIPTION statements.
Adabas Short Name	A shortname identifier specifies the Adabas short name of the corresponding field in the underlying Adabas file.

B

Base Table	A base table (and the data contained herein) is physically present and is not computed as in the case of viewed tables (views). A base table is defined by a CREATE TABLE/CREATE TABLE DESCRIPTION statement or a corresponding substatement in a CREATE CLUSTER/ CREATE CLUSTER DESCRIPTION statement. A base table which is not part of a cluster is the sole representation of one Adabas file.
Boolean Operator	An operator with predicates as its operands constitute a boolean expression. It can be: AND, OR, NOT.
Boolean Expression	An expression of predicates linked with boolean operators delivering boolean results.

C

Candidate Row	Any row within an intermediate result table which is to be considered for the next result table.
Candidate Group	A set of candidate rows which are grouped together during the processing of a GROUP BY clause.
Case Sensitive	Differences between lower case and upper case strings are significant.

Catalog	The catalog is a group of Adabas files which hold all data objects and their descriptions for the SQL environment. It also includes any meta programs. The DBA_SCHEMA and the INFORMATION_SCHEMA contain views extracting those data relevant for administration purposes.
Cluster	Refer to Table Cluster
Column	A column is the smallest unit of a table that can be selected and updated. Adabas SQL Server supports column types ORDINARY, SEQ-NO., and SIMULATED-LONG. The order in which columns are specified during the creation of a table is the order in which the columns will be displayed in a SELECT * request. Unless explicitly specified, this is also the order which Adabas SQL Server expects when rows are to be inserted.
Column Level	The level of a column describes its Adabas realization. Level 1 is a multiple-value field (MU field) not in a periodic group (PE group). Level 2 is an MU field in a PE group. Note that only those columns whose level is equal to the level of the table in which they are contained can be updated.
Compilation Unit	A source code file containing embedded SQL commands, which is submitted to the Adabas SQL Server compilation system.
Constraint	A constraint is a subobject of a base table which is defined to ensure the compliance of the actual data with the specified conditions. Adabas SQL Server supports the following types of constraints: NOT NULL, UNIQUE, PRIMARY KEY and FOREIGN KEY. Syntactically, a constraint referring to a simple column can be defined within a table column element. Constraints referring to more than one column have to be defined by a table constraint element. The name of a constraint is unique within the schema, and is generated automatically if not specified.
Cursor	The cursor concept was developed to enable 3GL languages (for example, COBOL) to process result tables. A cursor is essentially a pointer used to proceed through the rows of a result table.

D

Database	A database contains the implementation of the SQL schema concept. It consists of tables (Adabas files) which in turn consist of rows (Adabas records) and columns (Adabas fields).
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Database Identifier	Adabas SQL Server enables a string identifier to be associated with an Adabas database identifier for use within certain statements.
Data Control Language (DCL)	DCL is used for data security. It provides statements for granting and revoking privileges.
Data Definition Language (DDL)	DDL is used to create, alter and delete SQL data structures.
Data Manipulation Language (DML)	DML is used to perform manipulation of SQL data structures.
Declare Cursor-Open-Fetch Cycle	These three statements are interdependent. A DECLARE CURSOR statement defines a result table, an associated OPEN statement establishes the table, and successive FETCH statements retrieve rows from the table. This is the typical method of retrieving data.
Default Schema Identifier	The qualifier which is used as a prefix for an unqualified table or view name when attempting to resolve it.
Default Database	A table created using a CREATE TABLE statement is assigned an Adabas file number and an Adabas database ID. This is the default database for that table.
Derived Column	A column of a query's projection list (derived columns list) which is derived from one or more value sources.
Derived Column Label	Under certain circumstances, a derived column also has an associated derived column label which can be referenced, for example, from the ORDER BY clause.
Derived Column List	A list of derived columns in a query specification which define the result table format.
Descriptor Area	See SQLDA
Dynamic SQL	An SQL statement which is generated at runtime only. Host programs submit this statement in the form of a string.

E

Embedded Statement	An SQL statement which is embedded in the host program rather than being interactively submitted to Adabas SQL Server.
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H

Host Language The language in which the host or application program is written (C, COBOL, PL/I).

Host Variable A variable declared within the host program which is used to exchange data between the host program and Adabas SQL Server at runtime.

Host Variable Markers A marker which may be specified in dynamic statements where a value is to be inserted by Adabas SQL Server at runtime.

I

Indicator Variable A variable which denotes whether or not the associated host variable contains the NULL value. Alternatively, it denotes whether or not the associated host variable contents have been truncated by Adabas SQL Server.

Index An index is a subobject of a base table. It is used to improve performance of queries on columns. Adabas SQL Server supports the representation of Adabas indexes (descriptors, subdescriptors, super-descriptors, unique descriptors).

J

Joined Query A query specification with more than one table specified in the FROM clause.

M

Master Table A table cluster consists of one master table and one or more subtables. The relationship between master table and subtable is defined using a referenced key/foreign key relationship. The master table of a table cluster is the only table which contains no (clustering) referential constraint.

MU/Multiple-value Field A field that can have a maximum of 199 multiple values (occurrences) within an Adabas record. It is preceded by an one-byte count field indicating the number of occurrences. For further details refer to the current Adabas C documentation.

N

NULL value A special status of a field signifying that the value is unknown.

O

Outer Reference A column in a subquery which is derived from a table which is declared in another query specification. This query specification in turn contains, either directly or through several levels, the subquery in question.

P

PE/Periodic Group One of many fields that may repeat multiple times within an Adabas record and which is always preceded by an one-byte count field. For further details refer to the Adabas documentation.

Positioned UPDATE/DELETE A DELETE or UPDATE statement in which the row to be considered in the base table is identified by the position of the associated cursor.

PREPAREd Statement A statement which has been generated dynamically and submitted to the embedded static PREPARE statement for compilation.

Privileges A privilege is the authorization to perform predefined operations (INSERT, UPDATE, DELETE, SELECT). This authorization is given by an owner of a database object to a particular user.

Q

Query Expression A query expression is an expression involving one or more query specifications connected using the UNION operator. It is used exclusively in a DECLARE CURSOR statement.

Query Specification A query specification defines the resultant table specified in the projection list derived from the tables or views given in the table list, subject to the conditions imposed by the optional WHERE and/or HAVING clause and optionally grouped according to the GROUP BY clause.

R

Referential Constraint A referential constraint is a constraint of type FOREIGN KEY. Adabas SQL Server supports this constraint type only in order to build table clusters. Therefore, the columns used by such a constraint, the referencing columns, are physically identical with the referenced columns. As a consequence the only referential triggered actions supported are the cascaded DELETE and UPDATE operations.

Result Table A query specification produces a virtual table called a result table.

Rotated Field	If a MU field has a fixed number of occurrences, then this field can be rotated. Each occurrence is mapped to an SQL column.
Row	A row is the smallest unit of data that can be inserted into or deleted from a table. The order in which Adabas SQL Server returns rows is not necessarily consistent from query to query. If a specific order is desired, the ORDER BY clause must be used.
Runtime	Applications, after having been compiled, are executed at runtime. Runtime is the point where SQL statements are executed and data is returned.
Runtime Error	During execution of a previously precompiled SQL statement, certain conditions may occur which result in runtime errors.

S

Schema	A schema is a collection of data structures and objects defined by DDL statements and DCL statements.
Searched UPDATE/DELETE	An UPDATE or DELETE statement, which establishes its own result table by means of an integral WHERE clause (see also: Positioned UPDATE/DELETE).
Search Expression	A collection of predicates linked by boolean operators.
Search Term	A predicate.
SEQNO (Sequence Number)	SEQNO is an SQL column or a special register. For table level 0, SEQNO is used to retrieve or insert the Adabas ISN. For table level 1 and 2, SEQNO is used to retrieve or insert the Adabas occurrence numbers for MU/PE fields.
SQLCA	The SQL Communications Area is a host variable structure used to provide the programmer with comprehensive information about the success or failure of each SQL statement.
SQLDA	The SQLDA is a host variable structure defined by Adabas SQL Server and used to communicate information about a recently prepared dynamic statement. This SQL Descriptor Area provides the programmer with comprehensive information about each result column of a dynamic SELECT statement.
SQL Identifier	An identifier which, rather than refer to a variable in a host program, refers to an SQL entity pertinent to the program, for example, cursor identifier, statement identifier.

Static SQL	An SQL statement which is processed at compilation time and is fixed thereafter.
Subtable	Subtables are all tables in a table cluster other than the master table. Each subtable contains exactly one (clustering) referential constraint. From a physical point of view, subtables represent the multiple structures of Adabas, the MU fields and PE groups.

T

Table	A table is a subobject of a schema or a table cluster. It is the only structure for storing and accessing data. Adabas SQL Server supports the table types: base table and view.
Table Cluster	A table cluster is a subobject of a schema. It contains base tables which are interconnected by referential constraints. It is implemented by one Adabas file.
Table Level	A subtable referencing the master table is a level 1 table, whereas a subtable referencing another (level 1) subtable has level 2. All other base tables are level 0 tables.
Tablespace	A tablespace is a subobject of a schema. It contains the Adabas file attribute for a base table or a table cluster with the same name.
Transaction	A transaction is a unit of work which must be completed in its entirety or not at all. Termination of a transaction requires a COMMIT or ROLLBACK statement.
Tri-State Logic	A predicate may return any of the following results: TRUE, FALSE, UNKNOWN.

U

UNIQUE CONSTRAINT	A unique constraint is a constraint of type UNIQUE or PRIMARY KEY. It implies a UQ index on the column list for which it is defined (without SEQNO columns).
UNKNOWN Status	The result of a predicate may be UNKNOWN if an operand equates to the NULL value.
User	A user is established as a result of a CREATE USER statement. It defines a particular user identification which must be supplied to the system upon connection using the CONNECT statement. The subsequent session then runs under this user identification. The user identification is also used to establish ownership in regard to

schemas and associated database objects and in the evaluation of privileges.

V

Value Source

A value can result from several different origins: a constant, a host variable, a column, a function, an expression or a subquery.

View (Viewed Table)

Views are virtual tables not based upon their own, physically separate, distinguishable stored data. The view definition in terms of base tables is specified within the CREATE VIEW statement. Retrieval operations on a view are translated into equivalent operations on the underlying base table(s). Grouped views contain columns which are derived by using built-in functions such as SUM or MAX. Therefore, grouped views cannot be updated or joined with other tables.