INTERNATIONAL STANDARD ISO/IEC 9075-4:2003
TECHNICAL CORRIGENDUM 1

Published 2005-11-15

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION
INTERNATIONAL ELECTROTECHNICAL COMMISSION • МЕЖДУНАРОДНАЯ ЭЛЕКТРОТЕХНИЧЕСКАЯ КОМИССИЯ • COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

Information technology — Database languages — SQL —

Part 4:
Persistent Stored Modules (SQL/PSM)

TECHNICAL CORRIGENDUM 1

Technologies de l'information — Langages de base de données — SQL —
Partie 4: Modules stockés persistants (SQL/PSM)

RECTIFICATIF TECHNIQUE 1

Technical Corrigendum 1 to ISO/IEC 9075-4:2003 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 32, *Data management and interchange*.

Statement of purpose for rationale

A statement indicating the rationale for each change to ISO/IEC 9075-4:2003 is included. This is to inform the users of ISO/IEC 9075-4:2003 why it was judged necessary to change the original wording. In many cases, the reason is editorial or to clarify the wording; in some cases, it is to correct an error or an omission in the original wording.

Notes on numbering

Where this Technical Corrigendum introduces new Syntax, Access, General, and Conformance Rules, the new rules have been numbered as follows:

> Rules inserted between, for example, Rules 7) and 8) are numbered 7.1), 7.2), etc. [or 7)a.1), 7)a.2), etc.]. Those inserted before Rule 1) are numbered 0.1), 0.2, etc.

Where this Technical Corrigendum introduces new subclauses, the new subclauses have been numbered as follows:

> Subclauses inserted between, for example, 4.3.2 and 4.3.3 are numbered 4.3.2a, 4.3.2b, etc. Those inserted before, for example, 4.3.1 are numbered 4.3.0, 4.3.0a, etc.

ICS 35.060 **Ref. No. ISO/IEC 9075-4:2003/Cor.1:2005(E)**

Published in Switzerland

Contents

Page

Information technology — Database languages — SQL —

Part 4:
Persistent Stored Modules (SQL/PSM)

TECHNICAL CORRIGENDUM 1

Foreword

1. *Rationale: Remove incorrect reference to obsolete part.*

   In the 7th paragraph, delete the 5th bullet.

4 Concepts

4.8 Cursors

4.8.1 General description of cursors

1. *Rationale: Clarify the specifications concerning dynamic result sets.*

   Replace the 1st paragraph with:

   Insert this paragraph For every <declare cursor> in a <compound statement>, a cursor is effectively created each time the <compound statement> is executed and destroyed when that execution completes.

   NOTE 0.1 — Destroying an open with-result cursor does not simultaneously destroy that cursor's result set.

4.13 Dynamic SQL concepts

1. *Rationale: Clarification of the method of identification of dynamic objects.*

   Insert the following new Subclause:

4.13 Dynamic SQL concepts

This Subclause modifies Subclause 4.24, "Dynamic SQL concepts", in ISO/IEC 9075-2.

4.13.1 Dynamic SQL statements and descriptor areas

Replace the 8th paragraph A cursor declared by either a <declare cursor> or a <dynamic declare cursor> has a <cursor name>. A <dynamic declare cursor> is immediately contained in a <module contents>. A <declare cursor> is immediately contained either in the <module contents> of an <SQL-client module definition> or the <local cursor declaration list> of a <compound statement>. The scope of a <cursor name> is the innermost <SQL-client module definition> or <compound statement> that contains it.

5 Lexical elements

5.2 Names and identifiers

1. *Rationale: Provide replacement Syntax Rule for <cursor name> in Part 2.*

   Insert the following Syntax Rule:

   6) Replace Syntax Rule 7) Let CN be a <cursor name>. At least one of the following shall be true:

      a) CN is contained, without an intervening <SQL schema statement> in an <SQL-client module definition> whose <module contents> contain a <declare cursor> or <dynamic declare cursor> whose <cursor name> is CN.

      b) CN is contained, without an intervening <SQL schema statement>, in a <compound statement> whose <local cursor declaration list> contains a <declare cursor> whose <cursor name> is CN.

6 Scalar expressions

6.1 <value specification> and <target specification>

1. *Rationale: Add SQL variable to what a <target specification> and <simple target specification> can specify.*

   Insert the following General Rules:

   1) Replace GR 3) A <target specification> specifies a target that is a host parameter, an output SQL parameter, a column of a new transition variable, an element of a target whose declared type is an array type, a parameter used in a dynamically prepared statement, a host variable, or an SQL variable, according to whether the <target specification> is a <host parameter specification>, an <SQL parameter reference>, a <column reference>, a <target array element specification>, a <dynamic parameter specification>, an <embedded variable specification>, or an <SQL variable reference>, respectively.

2) Replace GR 13) A <simple target specification> specifies a target that is a host parameter, an output SQL parameter, a column of a new transition variable, a host variable, or an SQL variable, according to whether the <simple target specific ation> is a <host parameter specification>, an <SQL parameter reference>, a <column reference>, an <embedded variable name>, or an <SQL variable reference>, respectively.

NOTE 2.1 — A <simple target specification> can never be assigned the null value.

9 Schema definition and manipulation

9.2a <table definition>

1. *Rationale: Prohibit <SQL variable reference>s in DDL.*

Insert the following new Subclause:

9.2a <table definition>

This Subclause modifies Subclause 11.3, "<table definition>", in ISO/IEC 9075-2.

Function

Define a persistent base table, a created local temporary table, or a global temporary table.

Format

No additional Format items.

Syntax Rules

1) Replace SR 0.1) The <table content source> shall not contain a <host parameter specification>, an <SQL parameter reference>, a <dynamic parameter specification>, an <embedded variable specification>, or an <SQL variable reference>.

Access Rules

No additional Access Rules.

General Rules

No additional General Rules.

Conformance Rules

No additional Conformance Rules.

9.2b <column definition>

1. *Rationale: Prohibit <SQL variable reference>s in DDL.*

   Insert the following new Subclause:

9.2b <column definition>

This Subclause modifies Subclause 11.4, "<column definition>", in ISO/IEC 9075-2.

Function

Define a column of a base table.

Format

```
No additional Format items.
```


Syntax Rules

1) Replace SR 0.1) The <column definition> shall not contain a <host parameter specification>, an <SQL parameter reference>, a <dynamic parameter specification>, an <embedded variable specification>, or an <SQL variable reference>.

Access Rules

No additional Access Rules.

General Rules

No additional General Rules.

Conformance Rules

No additional Conformance Rules.

9.3 <default clause>

1. *Rationale: Correct override of General Rules.*

   Replace the General Rules with:

General Rules

No additional General Rules.

9.24 <check constraint definition>

1. *Rationale: Add <SQL variable reference> to what a <check constraint definition> cannot contain.*

   Insert the following Subclause:

9.24 <check constraint definition>

Function

Specify a condition for the SQL-data.

Format

No additional Format items.

Syntax Rules

1) Replace SR 1) The <search condition> shall not contain a <host parameter specification>, an <SQL parameter reference>, a <dynamic parameter specification>, an <embedded variable specification>, or an <SQL variable reference>.

Access Rules

No additional Access Rules.

General Rules

No additional General Rules.

Conformance Rules

No additional Conformance Rules.

9.25 <view definition>

1. *Rationale: Add <SQL variable reference> to what a <view definition> cannot contain.*

   Insert the following Subclause:

9.25 <view definition>

Function

Specify a condition for the SQL-data.

Format

```
No additional Format items.
```


Syntax Rules

1) Replace SR 3) The <view definition> shall not contain a <host parameter specification>, an <SQL parameter reference>, a <dynamic parameter specification>, an <embedded variable specification>, or an <SQL variable reference>.

Access Rules

No additional Access Rules.

General Rules

No additional General Rules.

Conformance Rules

No additional Conformance Rules.

10 Access control

10.3 <revoke statement>

1. *Rationale: Adjust references to rules which have moved in Part 2.*

   Delete Syntax Rules 1), 2), 3), 4), 5), and 6).

2. *Rationale: Adjust references to rules which have moved in Part 2.*

   Insert the following General Rules:

   0.1) Insert after GR 0.15) e) EXECUTE privilege on every SQL-server module that includes one or more SQL-invoked routines that are among the subject routines of a <routine invocation> that is generally contained in the <query expression> of *V*.

   0.2) Insert after GR 0.17) e) EXECUTE privilege on every SQL-server modules that includes one or more SQL-invoked routines that are among the subject routines of a <routine invocation> that is generally contained in any <search condition> of *TC*.

   0.3) Insert after GR 0.18) e) EXECUTE privilege on every SQL-server module that includes one or more SQL-invoked routines that are among the subject routines of a <routine invocation> that is generally contained in any <search condition> of *AX*.

   0.4) Insert after GR 0.20) e) EXECUTE privilege on every SQL-server module that includes one or more SQL-invoked routines that are among the subject routines of a <routine invocation> that is generally contained in any <search condition> of *DC*.

   0.5) Insert after GR 0.29) a) EXECUTE privilege on every SQL-server module that includes one or more SQL-invoked routines that are among the subject routines of a <routine invocation> that is contained in the <routine body> of *RD*.

   0.6) Insert after GR 0.32) Let *SSM* be any SQL-server module descriptor of an SQL-server module included in *S1*. *SSM* is said to be *abandoned* if the revoke destruction action would result in *A1* no longer having in its applicable privileges any of the following:

      a) EXECUTE privilege on every schema-level routine that is among the subject routines of a <routine invocation> that is contained in the <routine body> of any SQL-invoked routine included in *SSM*.

      b) EXECUTE privilege on every SQL-server module that includes one or more SQL-invoked routines that are among the subject routines of a <routine invocation> that is contained in the <SQL routine body> of any SQL-invoked routine included in *SSM*.

      c) SELECT privilege on at least one column of each table identified by a <table reference> contained in a <query expression> simply contained in a <cursor specification>, an <insert statement>, or a <merge statement> contained in the <routine body> of any SQL-invoked routine with a security characteristic of DEFINER included in *SSM*.

      d) SELECT privilege on at least one column of each table identified by a <table reference> contained in a <table expression> or <select list> immediately contained in a <select statement: