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Information technology — Guidance for the use of database language SQL —

Part 8: Multidimensional arrays

*Technologies de l'information — Recommandations pour l'utilisation
du langage de base de données SQL —*

Partie 8: Matrices multidimensionnelles



Reference number
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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier; Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
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Foreword

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This document is intended to be used in conjunction with the following editions of the parts of the ISO/IEC 9075 series:

- ISO/IEC 9075-1, sixth edition or later,
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- ISO/IEC 9075-9, fifth edition or later,
- ISO/IEC 9075-10, fifth edition or later,
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Introduction

This document describes the definition and use of multidimensional arrays in SQL. Multidimensional arrays represent a core underlying structure of manifold science and engineering data. It is generally recognized today, therefore, that arrays have an essential role in Big Data and should become an integral part of the overall data type orchestration in information systems. This document discusses the syntax and semantics of operations on the MD-array data type defined in [ISO/IEC 9075-15](#).

The organization of this document is as follows:

- 1) [Clause 1, “Scope”](#), specifies the scope of this document.
- 2) [Clause 2, “Normative references”](#), identifies standards that are referenced by this document.
- 3) [Clause 3, “Terms and definitions”](#), defines the terms and definitions used in this document.
- 4) [Clause 4, “Multidimensional arrays \(MDA\) concepts”](#), introduces the concept of Multidimensional Arrays.
- 5) [Clause 5, “SQL/MDA data model”](#), introduces the data model.
- 6) [Clause 6, “SQL/MDA operations”](#), covers the supported operations on MD-arrays.
- 7) [Clause 7, “Remote sensing example”](#), illustrates the supported functionality through realistic examples.

Information technology — Guidance for the use of database language SQL —

Part 8:

Multidimensional arrays

1 Scope

This document describes the definition and use of multidimensional arrays in SQL. Multidimensional arrays represent a core underlying structure of manifold science and engineering data. It is generally recognized today, therefore, that arrays have an essential role in Big Data and should become an integral part of the overall data type orchestration in information systems. This document discusses the syntax and semantics of operations on the MD-array data type defined in [ISO/IEC 9075-15](#).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 9075-1, *Information technology — Database languages — SQL — Part 1: Framework (SQL/Framework)*

ISO/IEC 9075-2, *Information technology — Database languages — SQL — Part 2: Foundation (SQL/Foundation)*

ISO/IEC 9075-15, *Information technology — Database languages — SQL — Part 15: Multidimensional Arrays (SQL/MDA)*