



BSI Standards Publication

## Information technology database languages — SQL technical reports

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Part 8: Multi-dimensional arrays (SQL/MDA)

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**Information technology database  
languages — SQL technical reports —  
Part 8:  
Multi-dimensional arrays (SQL/MDA)**

*Langages de base de données IT — SQL rapport techniques —  
Partie 8: Tableaux multidimensionnels*



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## Introduction

This Technical Report describes the definition and use of multi-dimensional 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 Technical Report discusses the syntax and semantics of operations on the MD-array data type defined in [ISO/IEC 9075-15](#).

The organization of this Technical Report is as follows:

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

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## **Information technology database languages — SQL technical reports —**

Part 8:

### **Multi-dimensional arrays (SQL/MDA)**

#### **1 Scope**

This Technical Report describes the support in SQL for Multi-Dimensional Arrays (MDA) as defined in [ISO/IEC 9075-15](#).