

# Welcome to ER/Studio Data Architect 19.1

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Thank you for using IDERA ER/Studio Data Architect, previously known as ER/Studio, the award-winning data modeling application for logical, and physical database design and construction. ER/Studio Data Architect's (ER/Studio DA) powerful, multi-level design environment addresses the everyday needs of database administrators, developers, and data architects who build and maintain large, complex database applications.

ER/Studio DA's progressive interface and processes have been logically organized to effectively address the *ease-of-use* issues that have plagued data modeling tools for the past decade. The application facilitates your ability to create, understand, and manage the mission-critical database designs within an enterprise. It offers strong logical design capabilities, bidirectional synchronization of logical and physical designs, automatic database construction, accurate reverse engineering of databases, and powerful HTML-based documentation and reporting facilities. Before you use ER/Studio, please read the information below.

See the most recent documentation at the IDERA Web site, <https://www.idera.com/support/productdocuments>

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### WHAT'S NEW IN VERSION 19.1

#### Adds support for multiple Oracle 12c and later features

ER/Studio Data Architect 19.1 includes support for the following features in Oracle 12c and later:

- **External tables.** External tables allow Oracle to query data stored outside of the database in flat files. Use the Table Editor option to designate an external table and gain access to the External Table Properties dialog for further definition of the table. For more information about this feature, see [Defining Table Storage: Oracle 12c and Later Storage Options](#).
- **Saving varchar size units as BYTE or CHAR for physical models.** For more information about this feature, see [Defining Model Options for the Selected Model](#) and [Generating a Physical Data Model](#).
- **Subpartitioning by RANGE.** Range partitioning distributes data based on a given range, as in time intervals and allows you to easily add new data while purging older data. For more information about this feature, see [Subpartition Editor](#).
- **Identity columns.** Identity columns allow you to auto-increment values each time you add a row. You can set only those columns having a Data Type of Number as identity columns, and you may have only one Identity column per table. For more information about this feature, see [Creating and Editing Columns: Datatype tab](#).

#### Adds support for multiple Oracle 11g and later features

ER/Studio Data Architect 19.1 includes support for the following features in Oracle 11g and later:

- **Interval partitioning.** Interval partitioning automatically partitions a database at specified intervals when new data added to the table exceeds all of the specified range partitions to avoid insert failures. Use the Partition tab of the Table Editor to set what interval is in use. For more information on this feature, see [Partitioning a Table: Table Partition Options for Oracle](#).
- **Reference partitioning.** Reference partitioning allows you to partition two tables that are related based on an existing parent-child relationship. You can manage partition keys and types on the Partition tab of the Table Editor. For more information on this feature, see [Partitioning a Table: Table Partition Options for Oracle](#).

### WHAT'S NEW IN VERSION 19.0.1

#### Supports additional features for SQL Server Temporal Tables

ER/Studio Data Architect 19.0.1 includes additional support for SQL Server Temporal Tables, allowing users to designate in-memory tables and have Data Architect check whether the columns are suitable as not all datatypes are supported for in-memory. For more information about this feature, see [Microsoft SQL Server Table Storage Options](#).

#### Allows users to switch between open files

This release includes the addition of the **Switch Windows** button in the **Diagram** ribbon. This button allows the user to switch and view each of the different open files.

#### Adds the Universal Mappings button to the Repository ribbon

The new **Universal Mappings** button on the **Repository** ribbon allows users to create links between objects across models, which are visible in the Where Used tab of Objects and in Team Server Core.

#### Adds the Diagram Properties button to the Model ribbon

The new **Diagram Properties** button on the **Model** ribbon allows users to easily set properties for the diagram file.

#### Adds quotation marks to the Field Names when generating the database JSON

New options allow users to select how the plain JSON output is generated from MongoDB-specific content. For more information about this feature, see [MongoDB JSON Generation](#).

## WHAT'S NEW IN VERSION 19.0

### Supports Azure Active Directory Password authentication method

This version of ER/Studio Data Architect supports **Azure Active Directory – Password** as an authentication method in Azure SQL Database available in the following scenarios:

- **Reverse engineering** objects from Azure SQL Database with a direct connection. In the **Authentication** field of the Reverse Engineering Wizard, select the **Azure Active Directory – Password** option. For more information about this feature, see [Reverse Engineering an Existing Database](#).
- **Forward engineering** to Azure SQL Database using a direct connection. In the **Authentication** field of the DDL Generation Wizard, select the **Azure Active Directory – Password** option. For more information about this feature, see [Generating a Script File or Database](#).
- **Compare/Merge** with a live database for Azure SQL Database using a direct connection. In the **Authentication** field of the Compare and Merge Utility, select the **Azure Active Directory – Password** option. For more information about this feature, see [Using the Compare and Merge Utility](#).

### Allows users to log in to Team Server when logging into Repository

The separate Repository and Team Server login menu buttons and dialog boxes now are combined, allowing users to optionally connect to Repository and Team Server at the same time. The single **Log In** button opens a dialog box that includes areas for both components. For more information about this feature, see [Logging In and Out of the Repository and ER/Studio TS](#).

### Supports the 'relates to' relationship between Business Terms and Objects

ER/Studio Data Architect now allows association between business terms in Team Server and objects in Data Architect by using the **relates to** relationship. Objects that support this capability include Entity, Table, Attribute Column, and Domain. For more information about this feature, see the What's New topic [Supports the 'relates to' relationship between Business Terms and Objects](#).

### Supports the 'where' clause for SQL Server and Azure SQL DB filtered index

ER/Studio Data Architect now supports the **where** clause for SQL Server 2008+ and Azure SQL DB filtered index. For more information about this feature, see [Microsoft Access, Azure SQL DB, and SQL Server Index Options](#).

### Supports the 'Columnstore' index for SQL Server

ER/Studio Data Architect now supports the **Columnstore** index for SQL Server 2012+. For more information about this feature, see [Microsoft Access, Azure SQL DB, and SQL Server Index Options](#).

### Supports Spatial Indexes for SQL Server and Azure SQL DB

The new Spatial tab in the ER/Studio Data Architect Index Editor allows users to configure geo-spatial indexes for SQL Server 2012+ and Azure SQL DB platforms. For more information about this feature, see [Spatial tab](#).

### Allows users to define table and index compression for SQL Server

This version of ER/Studio Data Architect allows users to define table and index compression for SQL Server and Azure SQL DB platforms. The **Compression** option allows you to choose from row or page compression types when using compression and the **On Partitions** options lets you specify which partitions are affected. For more information about these features, see [Microsoft SQL Server Table Storage Options](#) and [Microsoft SQL Server Index Storage Options](#).

### Allows users to model temporal tables in SQL Server

The ability for users to model temporal tables for SQL Server 2016 and later is now included in ER/Studio Data Architect. The **System Versioning Properties** feature allows you to select between anonymous or a named History Table when using temporal tables. For more information about this feature, see [Microsoft SQL Server Table Storage Options](#).

### Supports extended properties for SQL Server Tables and Columns

The new Extended Properties tab exists for SQL Server Tables and Columns to manage a list of extended properties. You can add, edit, and delete property values and descriptions. For more information about this feature, see [Extended Properties tab Table options](#) and [Extended Properties tab Column options](#).

### Supports SQL Server 2019

ER/Studio Data Architect now supports SQL Server 2019 database platform. For more information about supported databases, see [Supported Database Platforms](#).

### Supports MySQL 8.0

ER/Studio Data Architect now supports MySQL 8.0 database platform. For more information about supported databases, see [Supported Database Platforms](#).

#### **Allows users to generate MongoDB model output as plain JSON**

Users now can use the **Output as plain JSON** checkbox to remove all MongoDB-specific constructs when generating a database for a MongoDB model. This option removes MongoDB constructs such as ObjectId() and instead a generic JSON is generated. For more information about this feature, see [MongoDB JSON Generation](#).

#### **Supports Azure Synapse Analytics**

ER/Studio Data Architect now supports Azure Synapse Analytics. For more information about supported databases, see [Supported Database Platforms](#).

#### **Supports Inheritance Relationships for PostgreSQL**

This release of ER/Studio Data Architect add support for Inheritance Relationships for PostgreSQL. The **Inherits** checkbox in the Properties tab is enabled only for Identifying Relationships. When this option is checked, all other properties on the Properties tab are unavailable (greyed out). For information about creating a new inheritance relationship, see [Creating a New Inheritance Relationship](#).

#### **Allows TLS between Data Architect and Repository**

This version of ER/Studio Data Architect allows you to use TLS between Data Architect and Repository. For more information about this feature, see [How to Specify Repository Ports](#).

#### **Supports WITH CTE for SQL Server 2005+, Azure SQL DB, and Azure Synapse Analytics**

ER/Studio now supports the **WITH** common table expression on Views for SQL Server 2005 and later, Azure SQL DB, and Azure Synapse Analytics. You can use a CTE clause in a CREATE VIEW statement as part of its defining SELECT statement. Note that you can apply multiple CTEs to a view and that CTEs can be recursive. For more information about this feature, see [Creating and Editing Database View With \(CTE\) tab](#).

## RELEASE NOTES

### IMPORTANT RELEASE ADVISORY

**To ensure compatibility with ER/Studio Repository synchronization, this version of ER/Studio Data Architect requires ER/Studio Repository (Team Server) version 19.1 or later for all Repository operations.**

ER/Studio Portal is no longer supported by ER/Studio Data Architect. Most functionality formerly provided by ER/Studio Portal is now provided by ER/Studio Team Server. Users that formerly used the **Repository** tab to browse the portal can use a Web browser instead.

#### **License Enforcement**

When working with the Repository, all users must use the same license type. ER/Studio now enforces this by marking the Repository as an Enterprise Team Edition Repository when a user with an Enterprise Team Edition license logs in. Subsequent log in attempts by users with a non-Team Edition license will not be allowed

### IMPORTANT INSTALLATION NOTES

- To install ER/Studio Data Architect on Windows 10, 8.1, 8, or 7, you must have administrative privileges. Once you have installed ER/Studio DA, you can then log in as a standard or limited user and use the application without having administrative privileges.
- In order to run ER/Studio DA, you must provide valid licensing information.
- When you install ER/Studio DA, certain files and directories that were previously stored under the Program Files folder are now by default installed to system-specified application data directories.
- During installation, the following directories are created:
  - For **Datatype Mapping Editor** files, which is also the default location for user-generated Datatype Mapping files:
    - C:\ProgramData\IDERA\ERStudioDA\_XXXX\DatatypeMapping
  - For **Automation Handler** files, which is also the default location for sample macros:
    - C:\ProgramData\IDERA\ERStudioDA\_XXXX\Macros
  - For **sample model** files, for which a shortcut is generated in the ER/Studio DA program group:

- C:\ProgramData\IDERA\ERStudioDA\_XXXX\Sample Models
- When the application is run for the first time, the following directories are created by ER/Studio DA:
  - Directories used by the Repository client to transfer files to and from the Repository server:
    - C:\Users\    - C:\Users\
  - Default directory for **Report** files:
    - C:\Users\
  - Default directory for SQL scripts:
    - C:\Users\
  - Default directory for **Quicklaunch** files:
    - C:\Users\
  - Default **Save** location for new diagrams:
    - C:\ProgramData\IDERA\ERStudioDA\_XXXX\Sample Models

## BUG FIXES AND KNOWN ISSUES

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For the more recent list of known issues and bug fixes in this release, see [http://docwiki.embarcadero.com/ERStudioDA/191/en/Release\\_Notes](http://docwiki.embarcadero.com/ERStudioDA/191/en/Release_Notes).

## UPGRADE INSTRUCTIONS

### UPGRADING FROM ER/STUDIO PORTAL TO ER/STUDIO TEAM SERVER

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For detailed instructions on upgrading to Team Server, see [Install or Upgrade Team Server and Repository](#).

### UPGRADES FOR ER/STUDIO REPOSITORY USERS

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To use the repository with this release, you will need to be running ER/Studio Repository (Team Server) 19.0 or later.

### UPGRADES FOR VERSION OF ER/STUDIO REPOSITORY PRIOR TO 2016

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Repository is now installed as part of Team Server. To upgrade an earlier version of Repository, please see [About Team Server and Repository Upgrade](#).

## ADDITIONAL RESOURCES

### Licensing Your IDERA Product

All IDERA products include a 14-day trial period. To continue using the product without interruption, we recommend that you license it as soon as possible. For information on licensing your product, refer to the *Quick Start Guide*. If you have not yet purchased this product, contact [sales@idera.com](mailto:sales@idera.com).

### IDERA Product Support

The IDERA Web site is an excellent source for additional product information, including white papers, articles, discussion forums, and the IDERA Knowledge Base. Visit [www.idera.com/support](http://www.idera.com/support), or click any of the links below, to find:

- [Documentation](#)
- [Online Demos, Technical Articles, and White Papers](#)
- [IDERA Community](#)

### **IDERA Technical Support**

If you have a valid maintenance contract with IDERA, the Technical Support team is available to assist you with any problems you have with our applications. Our maintenance contract also entitles registered users of IDERA products to download free software upgrades during the active contract period. Evaluators receive free technical support for the term of their evaluation (14 days).

We encourage you to open technical support cases via the [Customer Support Center](#). For additional information about IDERA Technical Support, visit the [Support](#) section of our Web site.

### **IDERA on the Web**

To download evaluations of other IDERA products or to learn more about our company and our products visit us at [www.idera.com](http://www.idera.com).

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