![Altair logo]

Altair® Monarch Server™ v2023.1
AUTOMATOR PROJECT EDITOR
CONNECTION STRINGS GUIDE

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INTRODUCTION

A connection string is a string version of the properties of a database or data file and the means of connecting to it. It also enables you to easily store connection information within the application.

Writing a connection string depends on the provider or driver that will be used. For example, the address of the server or path of the data source file is needed for the provider to know where it will connect to.

| NOTE	❑	As it is a string, no data types are used. Therefore, it has to be correctly coded and adhere to formatting rules to be properly read by drivers.
	❑	When connecting to a data provider using Windows Authentication, you can use separate service accounts for additional application isolation.
	❑	The ActiveX controls and driver's bitness must match the application.

However, using a native connection string builder wizard in web applications is impossible, and thus, connection strings are written without any prompts. Fortunately, Project Editor contains its own connection string builder wizard to help users in specifying common connection types.

The usage of database connection strings in Monarch Server Project Editor is described in detail below.

USING PROJECT EDITOR CONNECTION STRING WIZARD

PROJECT EDITOR CONNECTION WIZARD HOW-TO

The Project Editor Connection String Wizard is used on Project Editor inputs for database input type and on exports for OLE DB output.

Connection Type Wizard   ✖

Please specify Provider Type:

Choose type...   ⌄

Ok   Cancel   Test Connection
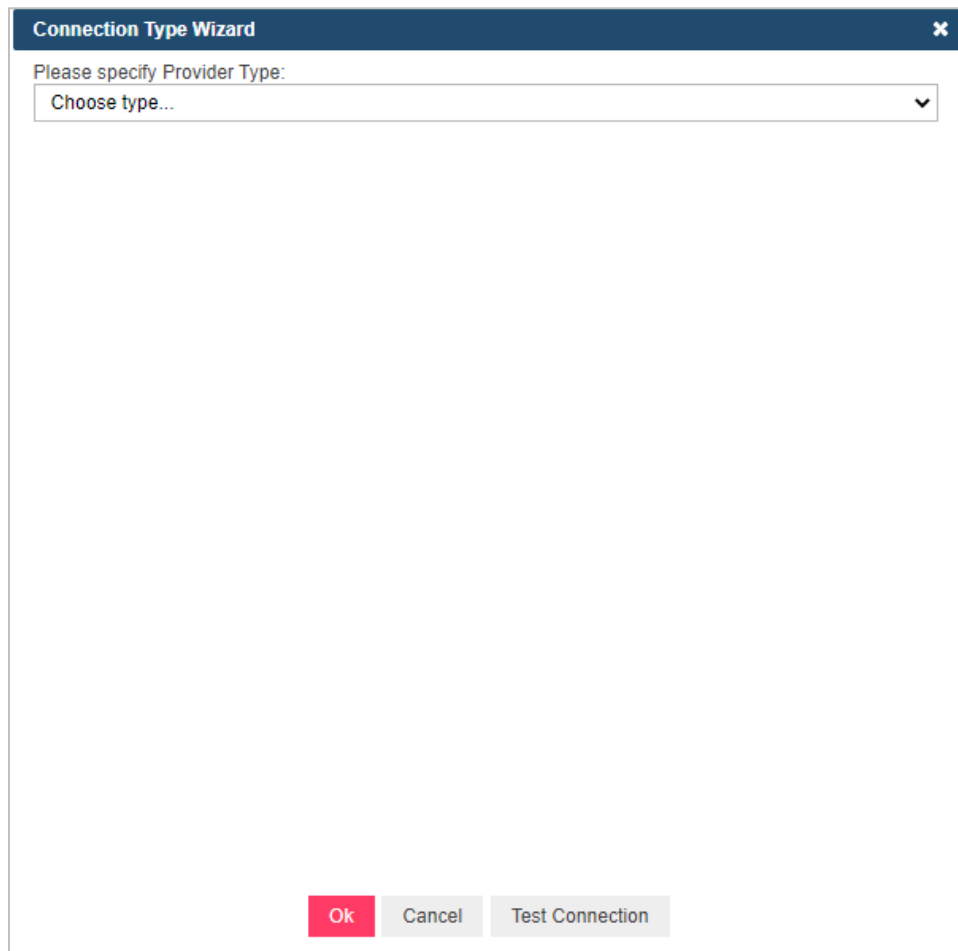
The Project Editor Connection String Wizard contains a set of common connection string providers:

❑ OLE DB for Native MS SQL Provider

❑ ODBC Provider

❑ OLE DB Provider

If you specified a connection string previously, the Wizard tries to calculate the provider type, and options are filled automatically from the connection string.

The properties of the Project Editor Connection String Wizard are the same as those of the native OLE DB Wizard. These properties are specified by category, as shown below.
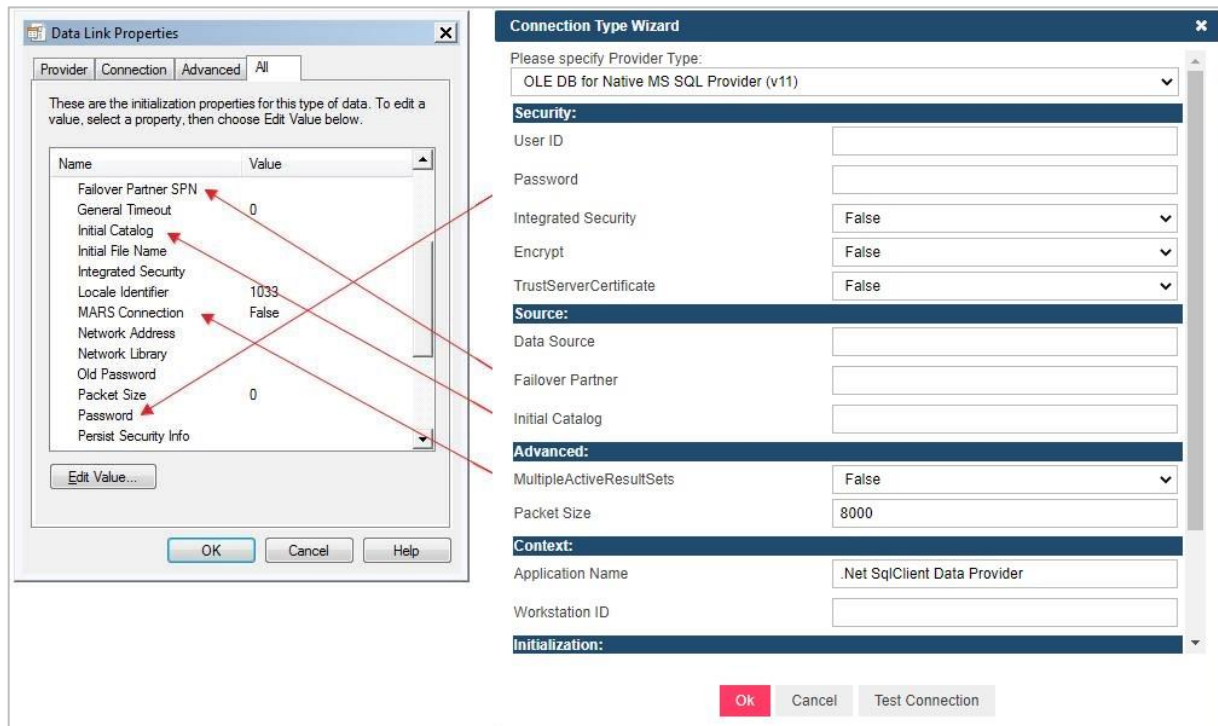
OLE DB FOR NATIVE MS SQL PROVIDER

The OLE DB for Native MS SQL Provider exposes OLE DB interface to gain data access on machines running MS SQL Server.

The SQLNCLI10 provider contains the following properties:

❑ Security

- **User ID**: The user ID to be used when connecting to a data source.

- **Password**: The password for the SQL Server account.

- **Integrated Security**: A Boolean value that indicates whether a user ID and a password are specified in the connection (when false) or whether the current Windows account credentials are used for authentication (when true).

- **Encrypt**: A Boolean value that indicates whether the SQL Server uses SSL encryption for all data sent between the client and the server if the server has a certificate installed.

- **TrustServerCertificate**: A value that indicates whether the channel is encrypted while bypassing walking the certificate chain to validate trust.

❑ Source

- **Data Source**: The name or network address of the instance of the SQL Server to connect to.

- **Failover Partner**: The name or address of the partner server to connect to if the primary server is down.

- **Initial Catalog**: The name of the database associated with the connection.
  - Advanced
    - **MultipleActiveResultSets**: When true, an application can maintain multiple active result sets (MARS). When false, an application must process or cancel all result sets from one batch before it can execute any other batch on that connection.
    - **Packet Size**: The size in bytes of the network packets used to communicate with an instance of the SQL Server.
  - Context
    - **Application Name**: The name of the application associated with the connection string.
    - **Workstation ID**: The name of the workstation connecting to the SQL Server.
  - Initialization
    - **Connect Timeout**: The length of time (in seconds) for waiting for a connection to the server before terminating the attempt and generating an error.
    - **Current Language**: The SQL Server Language record name.
  - Replication
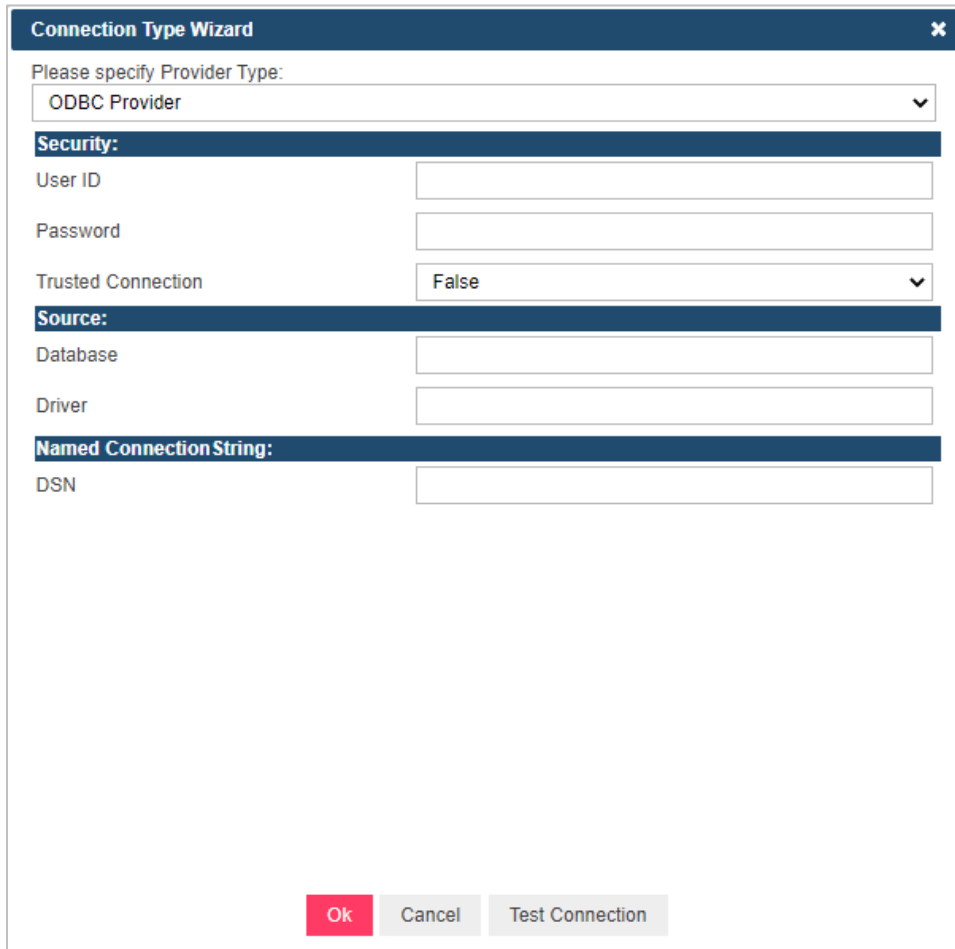   - **Replication**: A Boolean value that indicates whether replication is supported using the connection.

ODBC PROVIDER

The ODBC Provider is used to connect to data sources with ODBC driver support.
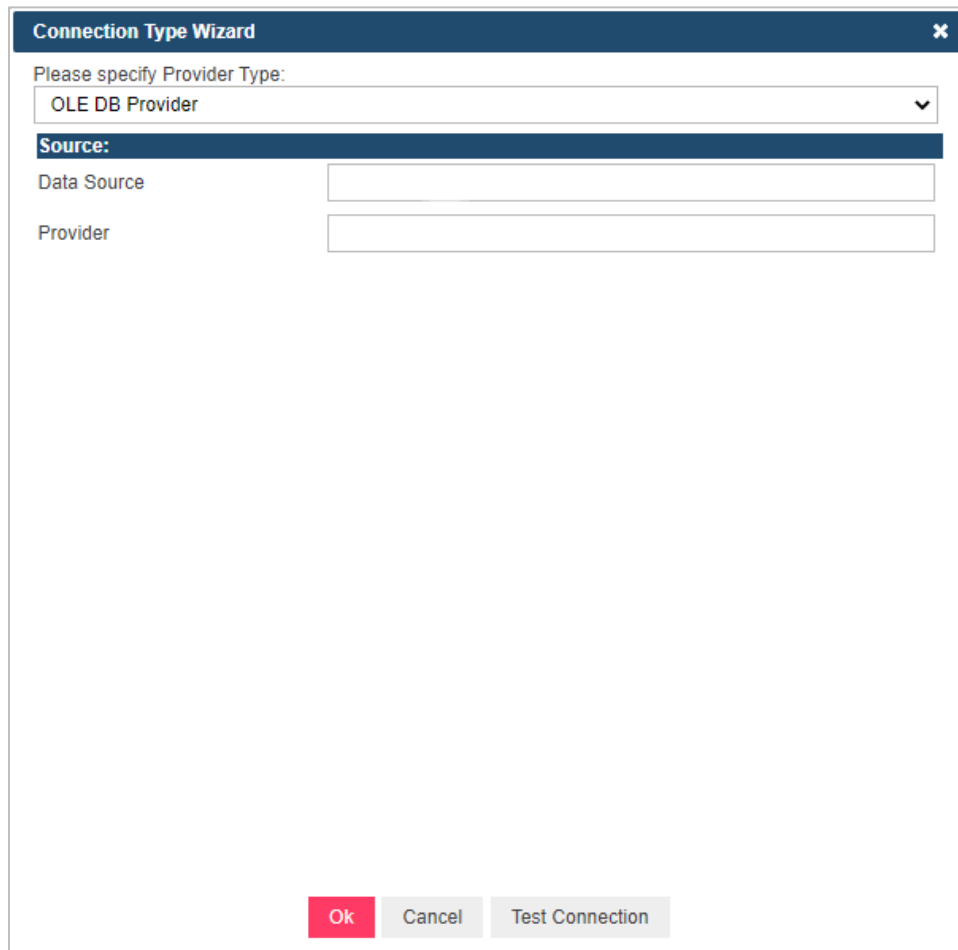
This provider contains the following properties:

❑ Security

- **User ID**: The user ID to be used when connecting to a data source.
- **Password**: The password for the data source.
- **Trusted Connection**: A Boolean value that indicates whether a user ID and a password are specified in the connection (when false) or whether the current Windows account credentials are used for authentication (when true).

❑ Source

- **Driver**: The name of the ODBC driver associated with the connection.

❑ Named Connection String

- **DSN**: The data source name (DSN) associated with the connection.

OLE DB PROVIDER

This provider is a general OLE DB provider. Unfortunately, OLE DB connection string properties depend on the provider. Thus, the only common properties are Data Source and Provider name. All other properties need to be specified manually in the data source string.
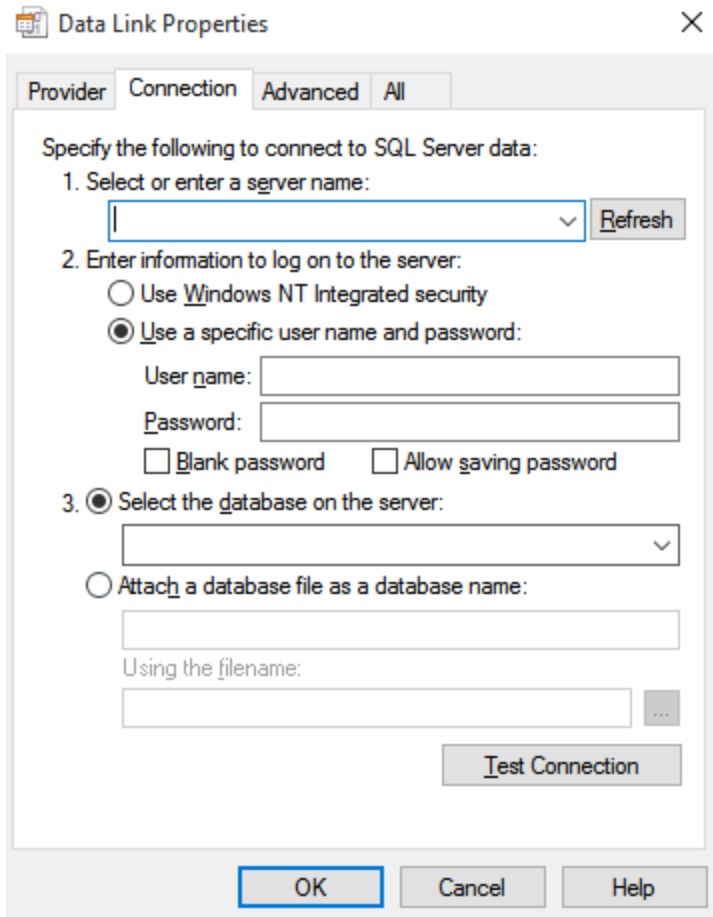

STORING DATABASE CONNECTIONS IN FILES

UDL Files

Files with the .UDL extension contain information about the OLE DB connection to a database. To create a UDL file, you need to create an empty .TXT file and then save it with .UDL as the extension. Double-clicking on the newly created UDL file allows you to setup a database connection.
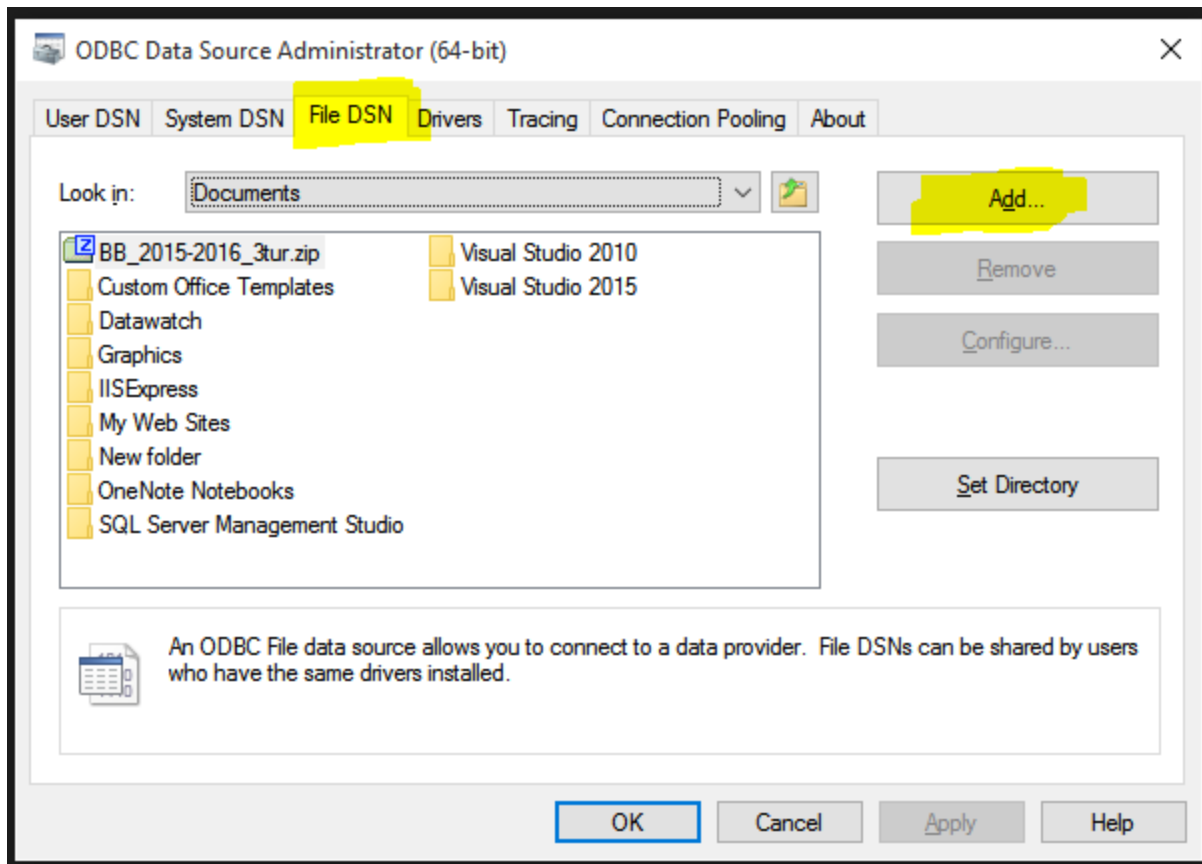
Below is an example of a UDL file.

```
[oledb]
; Everything after this line is an OLE DB initstring
Provider=SQLOLEDB.1;Password=P@s$wrd;Persist Security Info=True;User ID=sa;Initial
Catalog=dev_Employ1;Data Source=SQLSERVER123
```

DSN Files

Files with the `.DSN` extension contain information about the ODBC connection to a database. To create a DSN file, open the ODBC Data Sources tool, click on the **File DSN** tab, and then click **Add**.

Below is an example of a DSN file.

```
[ODBC]
DRIVER=SQL Server Native Client 11.0
UID=sa
PWD=P@s$wrd
DATABASE=dev_Employ1
WSID=SQLSERVER123
APP=Microsoft® Windows® Operating System
SERVER=SQLSERVER123
```

EXAMPLES OF CONNECTION STRINGS

OLE DB SQL server connections:

```
Provider=SQLNCLI10; Data Source= .\\sqlexpress;Initial Catalog=
NORTHWIND;User ID=admin;Password=pass12345
```

```
Provider=SQLNCLI11; Data Source= .\\sqlexpress;Initial Catalog= NORTHWIND;
Integrated Security="SSPI"
```

OLE DB MDB, XLS, XLSX connections:

```
Provider=Microsoft.Jet.OLEDB.4.0;Data Source=D: \Export.xls;Extended
Properties="Excel 8.0;HDR=YES";
```

```
Provider=Microsoft.ACE.OLEDB.12.0;Data Source=D:\ Export.xlsx;Extended
Properties="Excel 8.0;HDR=YES";
```

```
Provider=Microsoft.ACE.OLEDB.12.0;Data Source=C:\sample.mdb
```

OLE DB Oracle connections:

```
Provider=OraOLEDB.Oracle;Data Source= serverName; User
ID=admin;Password=pass12345; OSAuthent=0;PLSQLRSet=1;
```

```
Provider=MSDAORA;Data Source=serverName;User ID= admin; Password= pass12345;
```

ODBC connections:

```
ODBC;DSN=MsSqlSample2;UID=es11;
```

```
ODBC;DSN=MsSqlSample1;UID=es11;DATABASE=NORTHWIND;
```

UDL file connections:

```
File Name=C:\Path\To\myFile.udl;
```

DSN file connections:

```
FILEDSN=c:\myDsnFile.dsn;Uid=myUsername;Pwd=;
```

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