



Altair[®] Monarch Server[™] v2023.0 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.

Data Link Properties	Connection Type Wizard	
ovider Connection Advanced Al	Please specify Provider Type: OLE DB for Native MS SQL Prov	ider (v11)
These are the initialization properties for this type of data. To edit a rake, select a property, then choose Edit Value below.	Security:	
	User ID	
Name Value 📥	Password	
Failover Partner SPN	Integrated Security	False
Initial Catalog Initial File Name	Encrypt	False
Integrated Security	TrustServerCertificate	False
MARS Connection False	Source:	
Network Address	Data Source	
Old Password	Failover Partner	
Password	Initial Catalog	
Persist Security Info	Advanced:	
Edit Value	MultipleActiveResultSets	False
	Packet Size	8000
OK Cancel Help	Context:	
	Application Name	Net SqlClient Data Provider
	Workstation ID	

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.

Connection Type Wizard		×
Please specify Provider Type: OLE DB for Native MS SQL Provider (v11)	~	^
Security:		
User ID		
Password		L
Integrated Security	False 🗸	L
Encrypt	False 🗸	
TrustServerCertificate	False 🗸	
Source:		
Data Source		
Failover Partner		L
Initial Catalog		L
Advanced:		
MultipleActiveResultSets	False 🗸	
Packet Size	8000	L
Context:		
Application Name	.Net SqlClient Data Provider	
Workstation ID		
Initialization:		+
Ok Cance	el Test 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.

Connection Type Wizard	×
Please specify Provider Type: ODBC Provider	~
Security:	
User ID	
Password	
Trusted Connection	False 🗸
Source:	
Database	
Driver	
Named Connection String:	
DSN	
Ok	Cancel Test 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.

Please specify Provider Ty	be:		
OLE DB Provider			~
Source:			
Data Source			
Provider			

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.

📰 Data Link Properties

Provider	Connection	Advanced	All		
Specify 1. Se	the following to lect or enter a s	o connect to s <u>e</u> rver name:	SQL Se	erver data:	
					✓ <u>R</u> efresh
2. Ent	ter information	to log on to t	ne serve	er:	
() Use <u>W</u> indov	ws NT Integr	ated sec	curity	
() <u>U</u> se a speci	fic user name	e and pa	assword:	
	User <u>n</u> ame:	:			
	Password:				
	🗌 <u>B</u> lank pa	assword		v <u>s</u> aving pa	ssword
3. 🔍	Select the dat	abase on the	server:		
3. 🔍	Select the <u>d</u> at	abase on the	server:		~
3.	Select the <u>d</u> at	abase on the	server:	se name:	~
3. •	Select the <u>d</u> at Attac <u>h</u> a datat	abase on the base file as a	server: databa	se name:	~
3.0	Select the dat	abase on the pase file as a	databa	se name:	~
3.	Select the dat Attach a datat Using the filer	abase on the pase file as a name:	databa	se name:	~
3. 🖲	Select the dat	abase on the pase file as a name:	databa	se name:	~
3.0	Select the dat Attach a datat Using the filer	abase on the base file as a name:	e server: databa:	se name: <u>T</u> est Co	~
3.	Select the <u>dat</u> Attac <u>h</u> a datat Using the <u>filer</u>	abase on the base file as a name:	databa:	se name: <u>T</u> est Co	v onnection
3. 🔘	Select the dat	abase on the base file as a name:	databa:	se name: <u>T</u> est Co	~

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

 \times

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**.

ODBC Data Source Administrator (64-bit)				
User DSN System DSN File DSN Drivers Tracing Connection Pooling About				
Look in: Documents	A <u>d</u> d			
BB_2015-2016_3tur.zip Visual Studio 2010 Custom Office Templates Visual Studio 2015	<u>R</u> emove			
Datawatch Graphics IISExpress My Web Sites	<u>C</u> onfigure			
OneNote Notebooks SQL Server Management Studio	<u>S</u> et Directory			
An ODBC File data source allows you to connect to a data provider. File DS who have the same drivers installed.	SNs can be shared by users			
OK Cancel	Apply Help			

Below is an example of a DSN file.



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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