

SAP Crystal Solutions
SAP Crystal Reports and SAP Crystal Server

Step by Step guide: Connecting to Microsoft SQL Server

With SAP Crystal Reports 2016





CONNECTING TO MICROSOFT SQL SERVER

As one of the most popular database servers used in all types of organizations, Microsoft SQL Server finds itself as a required data source for many types of SAP Crystal Reports projects. Reporting from a SQL Server database is fairly straightforward, once you have determined which of two supported methods you choose for a SQL Server connection:

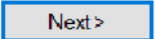
OLE DB: An abbreviation for Object Linking and Embedding Database, OLE DB was defined by Microsoft as a more efficient approach than ODBC, potentially permitting a broader set of connection types (for example, to multi-dimensional “cube” databases). As long as compatible versions of OLE DB drivers are installed on the client computer (this is often accomplished automatically by installation of SQL Crystal Reports or another database/client application), SAP Crystal Reports will connect directly to SQL Server with no other intervention required. A report may be run on multiple computers (including a computer running SAP Crystal Server) without the need to perform any special configuration in advance.

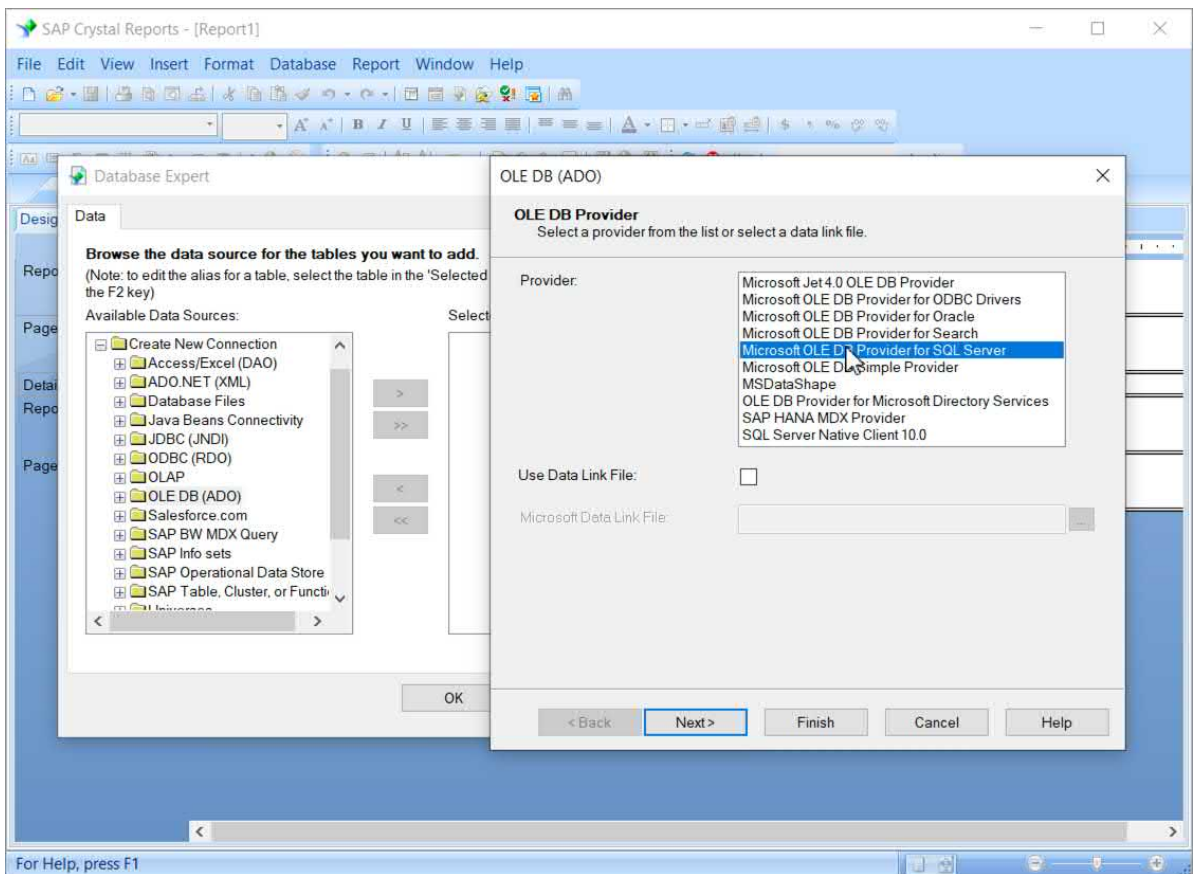
ODBC: An abbreviation for Open Database Connectivity, this Microsoft-defined standard permits many data sources to connect to many client applications, regardless of vendor or purpose. As long as a data source and client application provide ODBC drivers, they can connect to each other. This method requires that an identically-named ODBC Data Source Name (DSN) reside on each computer that the Crystal Report will run on (including a computer running SAP Crystal Server).

When initially creating a new report with SAP Crystal Reports, you will choose either the OLE DB or ODBC methods from the Database Expert (either when using the Blank Report option or a Report Wizard).

CONNECTING VIA OLE DB

Connecting to SQL Server via OLEDB is a straightforward process, no matter what type of report you need to create.

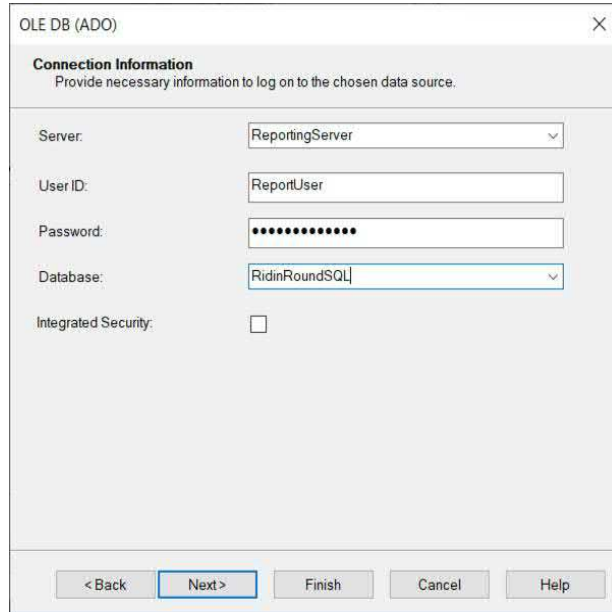
1. Within the Create New Connection portion of the Database Expert, expand the OLE DB (ADO) category. The OLE DB (ADO) dialog box will open.
2. Select the Microsoft OLE DB Provide for SQL Server entry in the provider list. You may find other SQL Server options as well, depending on what other applications are installed on your computer. You may choose these if your database administrator indicates they are more appropriate to your environment. Click .



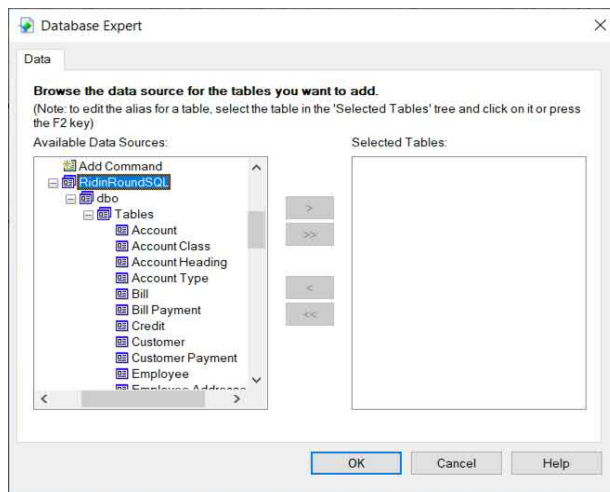
3. Type in the name or IP address of your SQL Server database server (check with a database administrator if you're unsure of this).
4. Your administrator may also provide you with a preferred method of authentication.
 - a. If you are asked to supply your standard Windows credentials, click Integrated Security.
 - b. If you have a specific SQL Server user ID and password, type them into the appropriate fields.



5. Once you have supplied valid security credentials, type in the name of the database on the SQL Server that you wish to report from. Note that you may be able to click the drop-down arrow on the Database field and choose the database from a list of databases on the server. Click **Finish**.



6. The server you connected to will now appear in the Database Expert within the OLE DB (ADO) category. If necessary, click the plus sign to expand it. The chosen database will also appear. Again, click the plus sign to expand. And, within the database name, you may see one or more "owners" of the database (such as dbo). Expand the desired owner and click the plus sign to expand tables, views, stored procedures, and so forth.



You may now add and join database objects to report from. The Connect to a Data Source guide on the [SAP Crystal Guides page](#) discusses adding and joining database items in more detail.



CONNECTING VIA ODBC

Contrary to reporting via OLE DB, ODBC requires a defined ODBC Data Source Name before you can connect to SQL Server. This Data Source Name may already exist on your computer (perhaps another application on the computer created it). If not, you must create it prior to creating your first Crystal Report.

Creating an ODBC Data Source

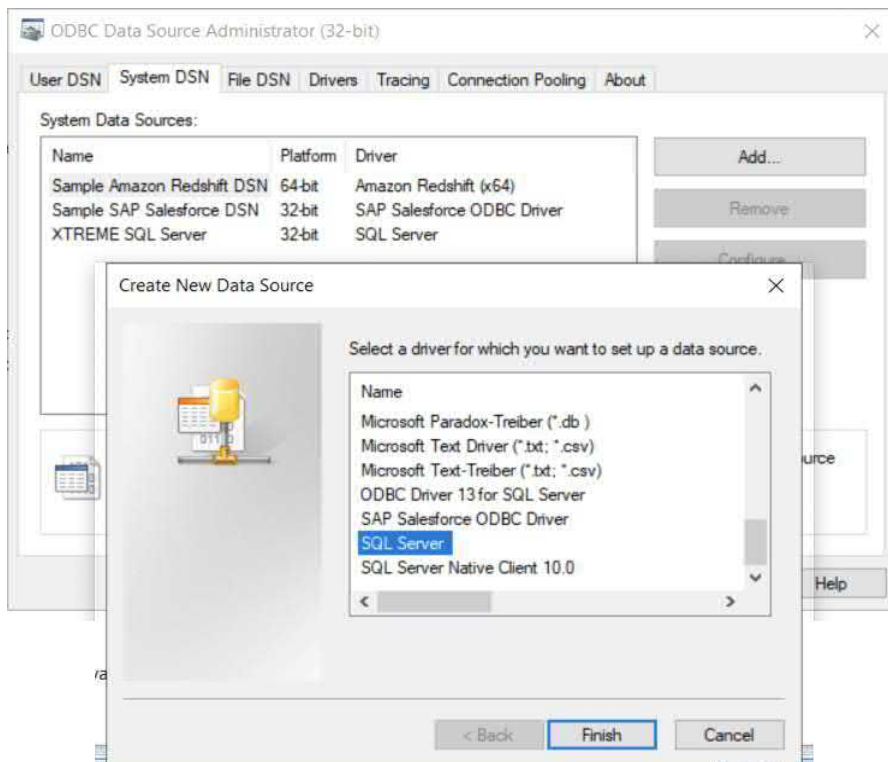
The ODBC Data Source Administrator is used to create ODBC Data Source Names. Depending on the version of Windows you are using, you may find it within Administrative Tools in Control Panel. Or, you may simply search for ODBC. No matter which method you choose, make sure you start the 32-bit version of the ODBC application.

IMPORTANT: While you're probably running SAP Crystal Reports on a 64-bit version of Windows with 64-bit ODBC capabilities, remember that SAP Crystal Reports is still a 32-bit application and will only recognize database connections created with the 32-bit ODBC Data Source Administrator.

1. Select either the User DSN or System DSN tab:
 - a. User DSN will create a Data Source Name only visible to your Windows account.
 - b. System DSN will create a Data Source Name visible to any user on your computer.

Click . The Create New Data Source dialog box will appear.

2. Select the SQL Server driver. You may find other SQL Server options as well, depending on what other applications are installed on your computer. You may choose these if your database administrator indicates they are more appropriate to your environment.

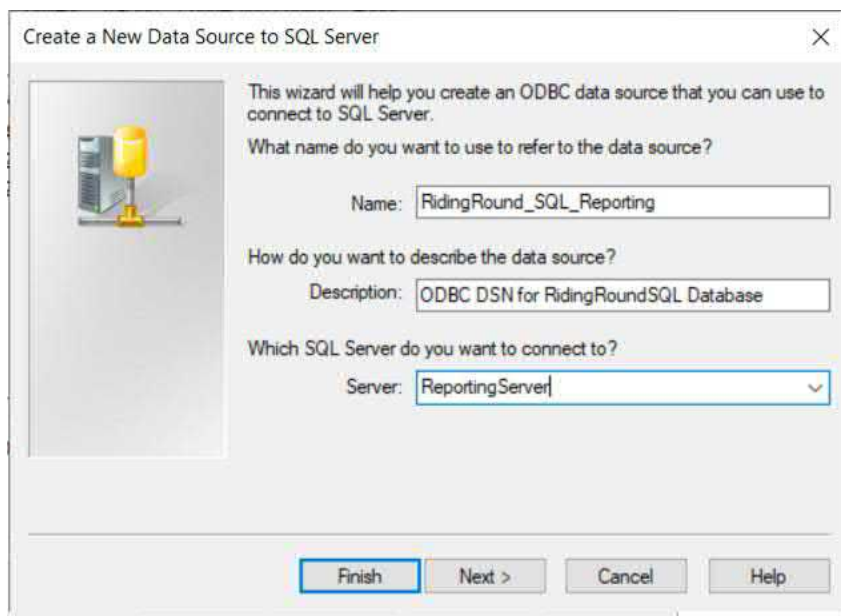


3. Click **Finish**. The Create a New Data Source to SQL Server dialog box will appear.

4. Select a name for your new ODBC Data Source. Optionally, you may add a free-form description for the data source.

NOTE: If you plan on using Crystal Reports based on this ODBC Data Source on other computers (perhaps you will publish to SAP Crystal Server), ensure that an identically-named ODBC Data Source exists on those computers as well.

5. Type in the name or IP address of your SQL Server database server (check with a database administrator if you're unsure of this). Click **Next >**.



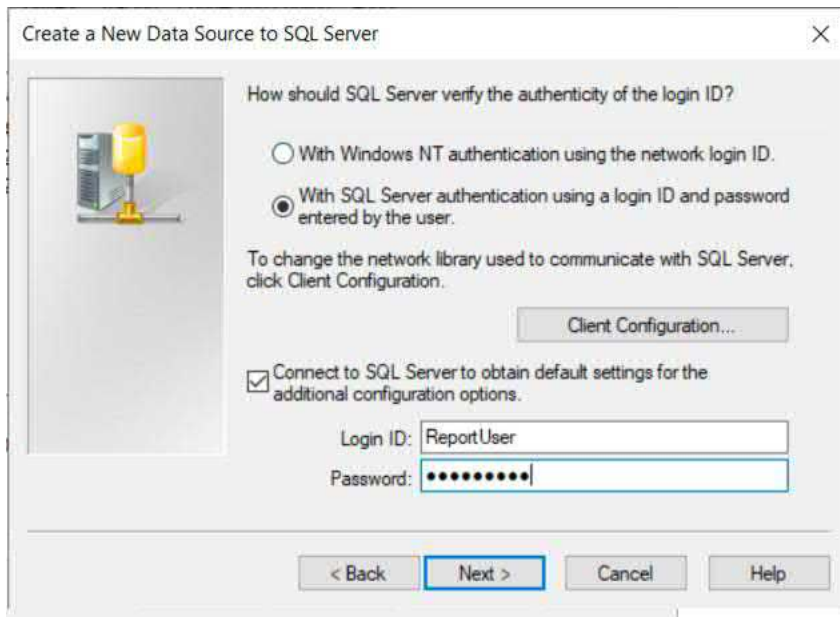
6. Your administrator may provide you with a preferred method of authentication.

a. If you are asked to supply your standard Windows credentials, click With Windows NT authentication...

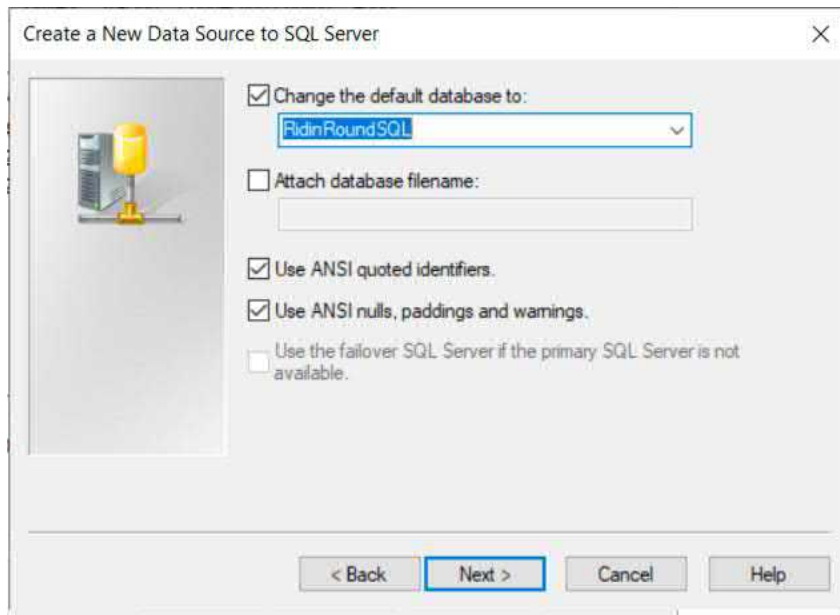
b. If you have a specific SQL Server user ID and password, click With SQL Server authentication... and type the credentials into the Login ID and Password fields that will appear.

Click **Next >**.



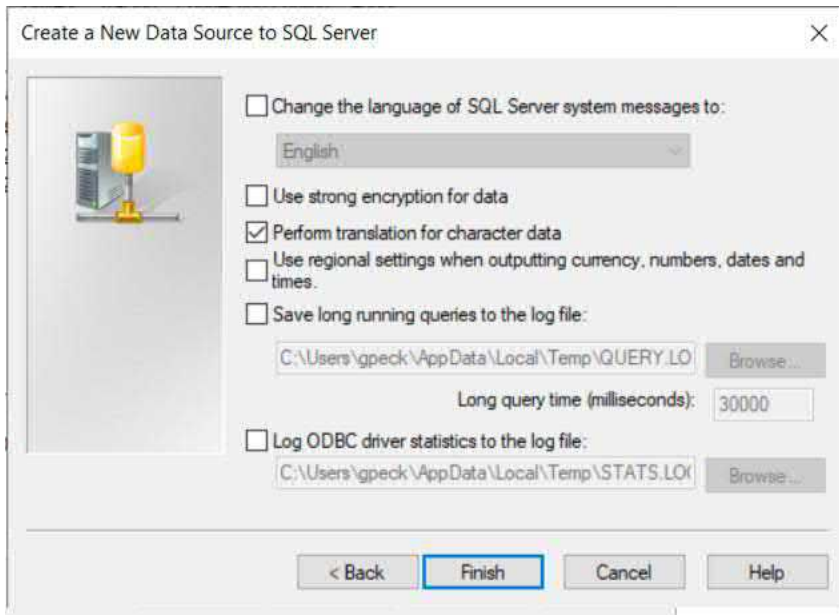


7. Check Change the default database to and type in the name of the database you wish to report from. Note that you may be able to click the drop-down arrow and choose the database from a list of databases on the server. Click **Next >**.

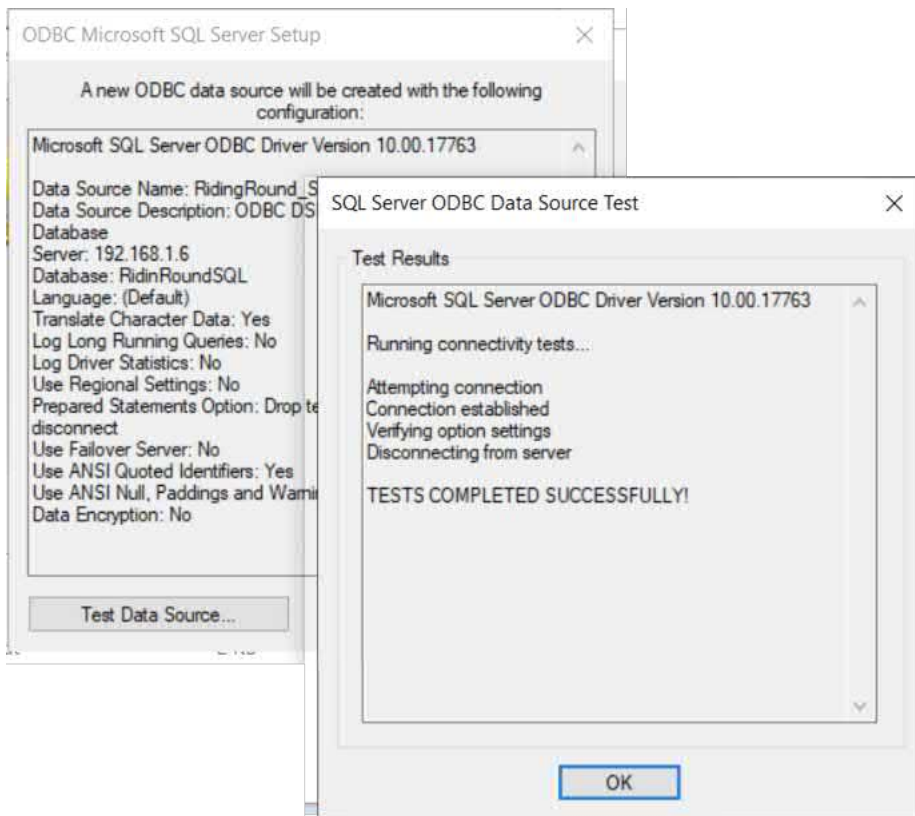


8. Generally, you may leave options on the final screen at their default values. Click **Finish**.





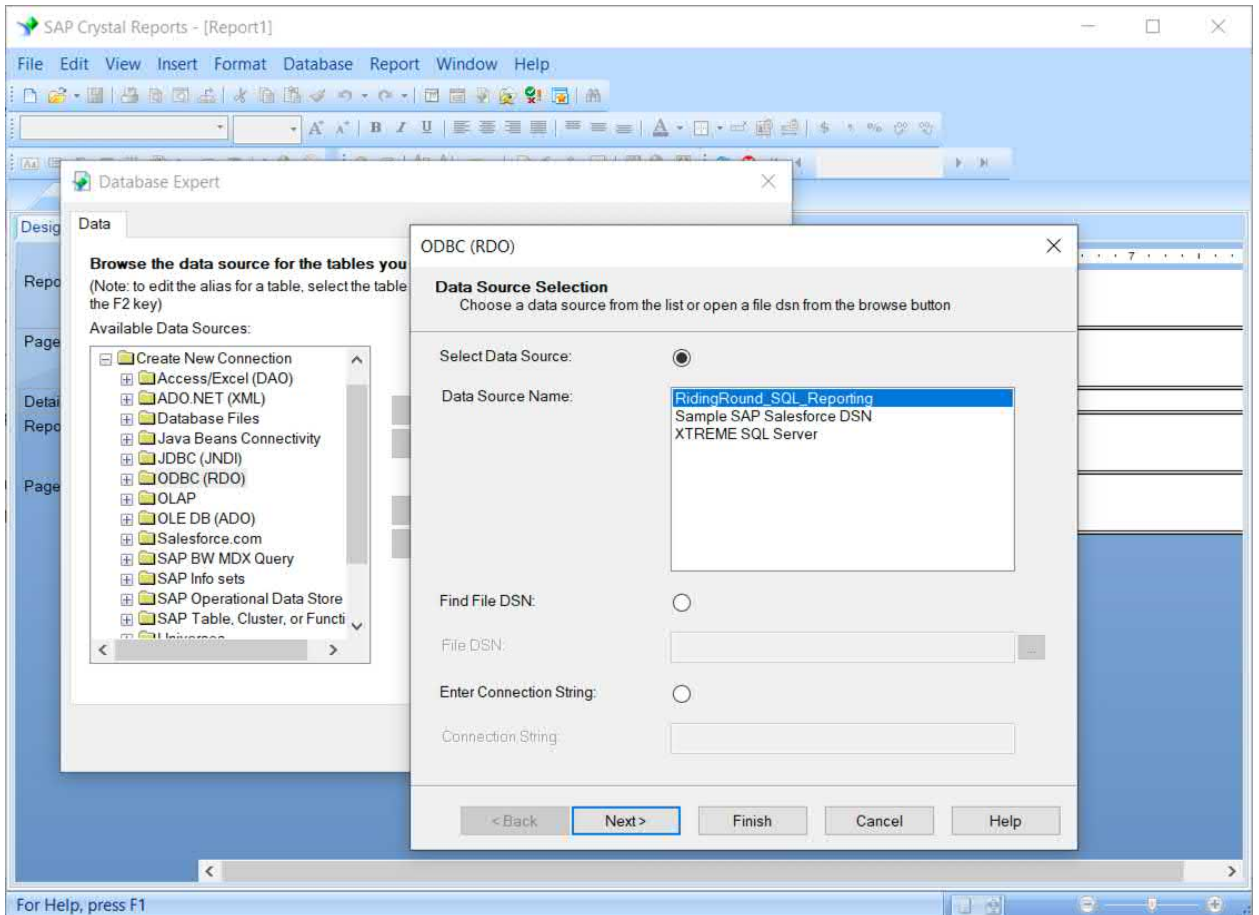
9. A summary dialog box will appear. If everything appears to be as you specified, you may simply click **OK** to save the new Data Source Name. Optionally, you may click **Test Data Source...** to test connectivity to the new ODBC Data Source Name.



Once you have finished creating any necessary ODBC Data Source Names, start SAP Crystal Reports and create a new report (using the Blank Report option or a Report Wizard).

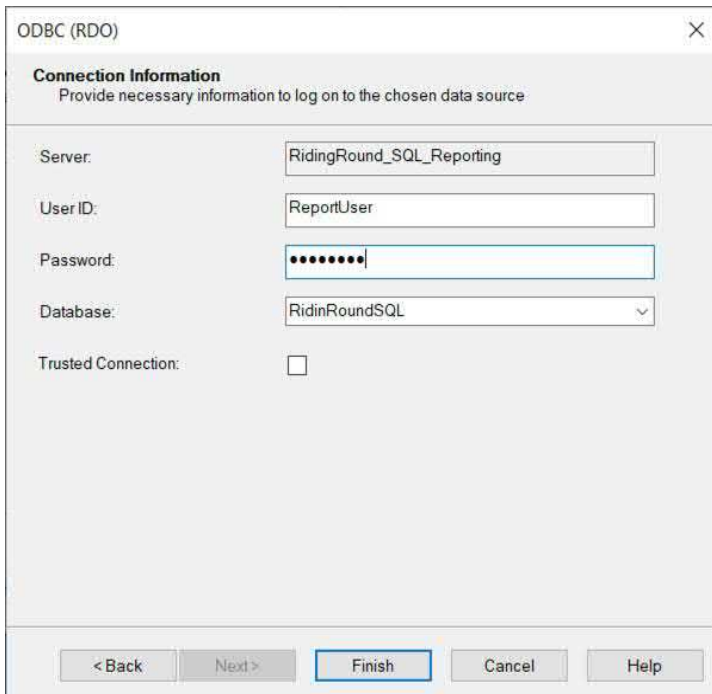
1. Within the Create New Connection portion of the Database Expert, expand the ODBC (RDO) category. The ODBC (RDO) dialog box will open.

2. Select the desired ODBC Data Source (if you created an ODBC Data Source Name previously, it will appear here). Click **Next >**.

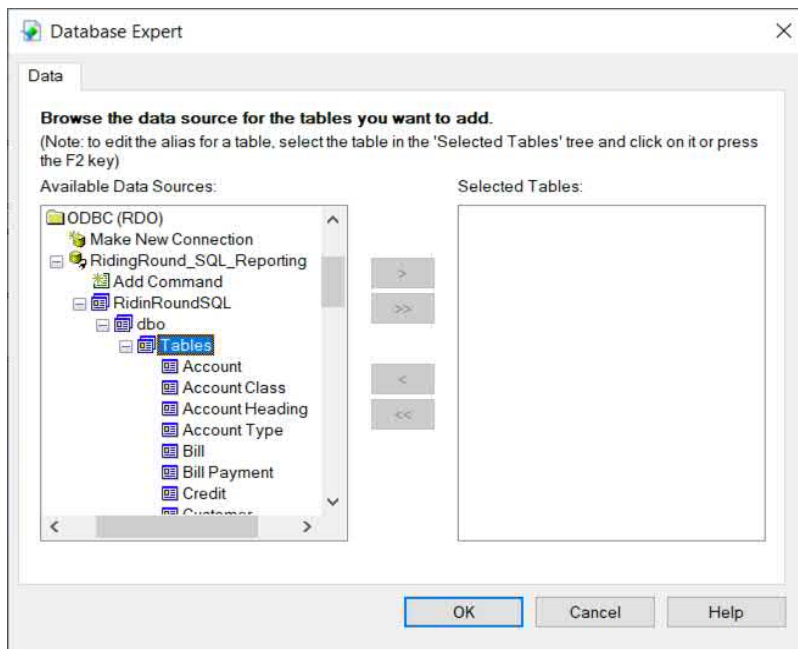


3. If prompted for SQL Server credentials, supply them and click **Finish**.





4. The server you connected to will now appear in the Database Expert within the ODBC (RDO) category. If necessary, click the plus sign to expand it. The database referenced by ODBC will also appear. Again, click the plus sign to expand. And, within the database name, you may see one or more “owners” of the database (such as dbo). Expand the desired owner and click the plus sign to expand tables, views, stored procedures, and so forth.



You may now add and join database objects to report from. The Connect to a Data Source guide on the [SAP Crystal Guides page](#) discusses adding and joining database items in more detail.



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