

# Crystal Reports

## How to resolve join syntax errors in Crystal Reports 10

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### Overview

Read this document if join syntax error messages appear when you attempt to link tables in a report or preview a report in Crystal Reports 10. Although this document has been written for Crystal Reports 10, it may apply to later versions of Crystal Reports.

**CAUTION**

The list of the available types of SQL join syntax is provided as a tip. Business Objects Customer Support is not responsible for identifying or referencing the join syntax applicable to your database.

### Contents

<b>INTRODUCTION .....</b>	<b>2</b>
<b>JOIN SYNTAX ERROR MESSAGES .....</b>	<b>2</b>
<b>IDENTIFYING THE REQUIRED SQL JOIN SYNTAX .....</b>	<b>3</b>
<b>IDENTIFYING THE ODBC DATABASE DRIVER .....</b>	<b>3</b>
Steps to identify the ODBC database driver name.....	3
<b>MODIFYING THE REGISTRY KEY .....</b>	<b>5</b>
<i>Steps to add the join syntax of your database to the registry key .....</i>	<i>5</i>
Gather required information .....	6
Create a TXT file to update the registry key.....	6
Rename the TXT file and update the registry key.....	7
<b>CONTACTING BUSINESS OBJECTS FOR CUSTOMER SUPPORT .....</b>	<b>7</b>

## Introduction

The Microsoft ODBC standard for SQL join syntax is the *OJSyntax*.

For Crystal Reports 10 to interpret the expected join syntax for database drivers that do not use the Microsoft ODBC standard, the driver name must be referenced in a registry key. This document provides a list of databases, the correct join syntax for these databases and the registry key that needs to be modified.

To resolve join syntax error messages in Crystal Reports 10, update the registry key with the ODBC database driver information and its required SQL join syntax.

<b>NOTE</b>	The join syntax is used to link tables. For more information on table linking in Crystal Reports, refer to the technical brief <i>Scr_pclinking.pdf</i> at <a href="http://support.businessobjects.com/search/">http://support.businessobjects.com/search/</a> .
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The join syntax in Crystal Reports 9 and Crystal Reports 10 is defined differently than in version 8.5 and earlier.

### Join syntax for Crystal Reports 9 and earlier:

To resolve syntax error messages in earlier versions of Crystal Reports, visit <http://support.businessobjects.com/search/default.asp> and search for the following documents.

- Crystal Reports 9: *cr9\_left\_outer\_join.pdf*
- Crystal Reports 8.5: *cr85\_left\_outer\_join.pdf*

## Join Syntax Error Messages

The following are examples of error messages that may appear due to incorrect join syntax:

- “Unable to understand after declare”
- “Failed to Open Rowset”
- “Syntax Error”
- “Expected lexical element not found: <identifier>”
- “OJ syntax error”
- “Outer Join syntax error”
- “ODBC Error: Query contains an illegal outer-join request”
- “SQL Server error”
- “ODBC error: Syntax error”
- “Query contains an illegal outer join request”

- “Incorrect syntax near Left Outer Join”

Other error messages or similar error messages may appear.

## Identifying the Required SQL Join Syntax

Here is a list of database types, the correct SQL join syntax for each database and the corresponding registry key.

**Table A: Join Syntax**

Database Type	Join Syntax	Registry Key
DB2 5.x to 8.x	OpenIngres	DB2JoinBuilder
Centura SQLBase 6 & 7.x	PlusEqual	OracleJoinBuilder
Informix 7, 9, 2000	(Informix)	InformixJoinBuilder
Interbase 5.x	OpenIngres	DB2JoinBuilder
Oracle 7.x, 8.x & 9.x	PlusEqual	OracleJoinBuilder
Pervasive 2000	OJSyntax	SQLServerJoinBuilder
Progress 9.x	OpenIngres	DB2JoinBuilder
Progress 9.x with a PG driver, Pgpro14.dll	PlusEqual	OracleJoinBuilder
SQL Server 2000	OJSyntax	SQLServerJoinBuilder
Sybase Adaptive Server Anywhere 5.x to 8.x	SQL2OuterJoin	Lotus
Sybase (ASE) 11.x	StarEqual	SybaseJoinBuilder
Sybase (ASE) 12.x	OpenIngres	DB2JoinBuilder
Top Speed	StarEqual	SybaseJoinBuilder

If the database type is not specified on this list, contact the database vendor to verify the type of join syntax that the database uses. Once you find out this information, read through the remainder of the documentation.

## Identifying the ODBC Database Driver

To associate the correct join syntax to your database, you must equate the ODBC database driver to the join syntax that is expected by that driver when modifying the registry key.

The driver names of ODBC database drivers are listed in the ODBC Data Source Administrator of the Microsoft Windows operating system.

### Steps to identify the ODBC database driver name

These steps have been written for Windows XP. The steps may vary, depending on your version of Windows.

From the Windows **Start** button, click **Settings > Control Panel > Administrative Tools > ODBC Data Sources**.

1. In the ODBC Data Source Administrator dialog box, click the **Drivers** tab.
2. Find the name of the ODBC database driver.
3. Scroll to the right to identify the ODBC database driver DLL file name.

**Figure 1: Drivers in the ODBC Data Source Administrator**

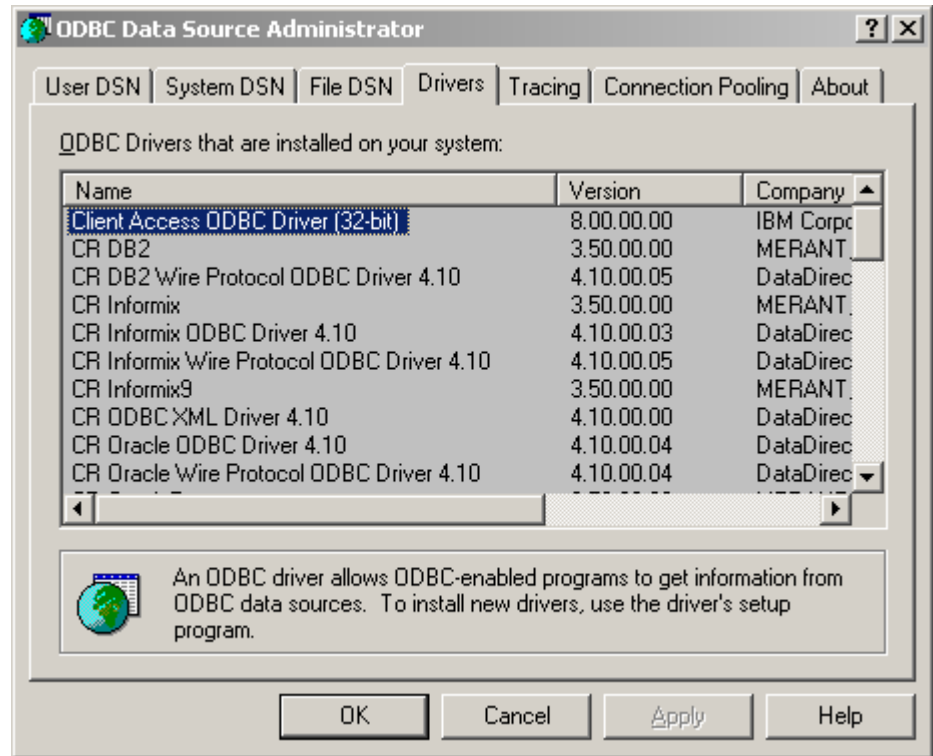
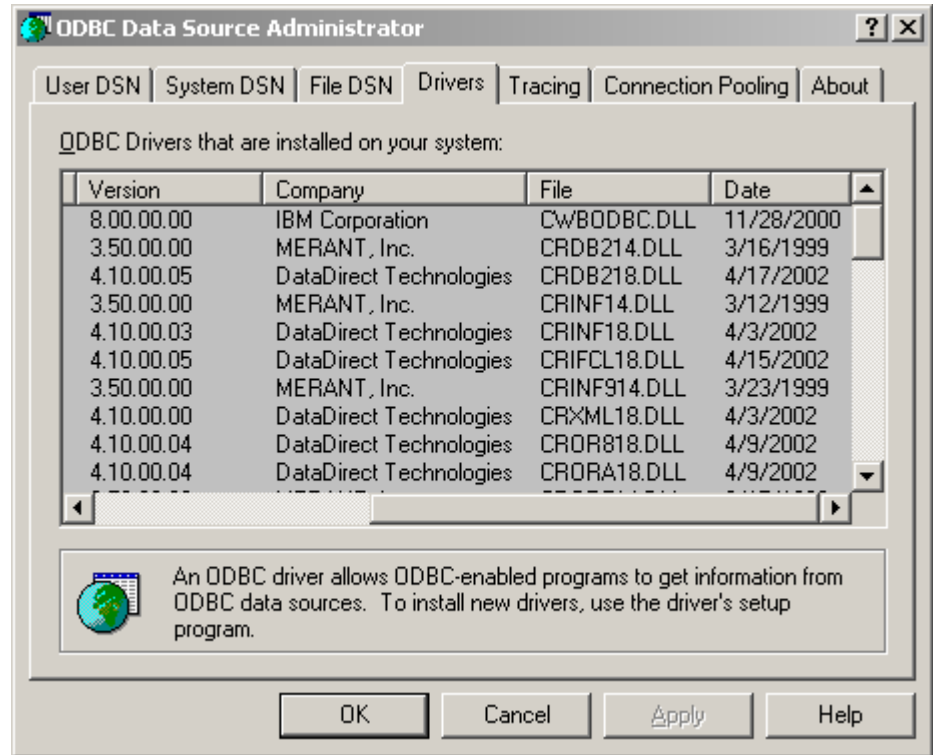


Figure 2: DLL file names in the ODBC Data Source Administrator



Upon completing the steps to identify the DLL file name of the ODBC database driver, record it for later use when modifying the registry key.

## Modifying the Registry Key

### CAUTION

The following resolution involves editing the registry. Using Registry Editor incorrectly can cause serious problems that may require you to reinstall the Windows operating system. Use Registry Editor at your own risk.

#### For Information on How to Edit the Registry Key

View the 'Changing Keys And Values' online Help topic in Registry Editor (Regedit.exe).

#### Recommendations:

- It is strongly advised that you make a backup copy of the registry files before you edit the registry.
- Do not copy and paste from this document as the punctuation marks may not paste in the correct format and may cause unexpected results.

## Steps to add the join syntax of your database to the registry key

Complete the following steps. If your database is not on the list above, you will need to find out what the expected join syntax is from your database vendor.

### Gather required information

1. Verify and retain the answers to the following questions for use in the steps to follow:
  - What is the registry key name for your database? (Refer to [Table A: Join Syntax](#) or contact the database software vendor.)
  - What is the operating system of the computer that is running Crystal Reports?
  - What is the join syntax for your database? (Refer to [Table A: Join Syntax](#) or contact the database software vendor.)
  - What is the ODBC database driver that you are using to connect to Crystal Reports? (Refer to the [Steps to Identify the ODBC Database Driver Name](#).)

### Create a TXT file to update the registry key

2. Create a new text file (TXT) named according to the registry key file name. Refer to the required information from step 1.

Example:

If the registry key name is “SQLServerJoinBuilder” name the text file “SQLServerJoinBuilder.txt”.

3. Add the Registry Header that corresponds to the Windows operating system in use. Refer to the required information from step 1.

#### Examples:

- If the operating system is *Windows NT 4*, add the Registry Header:

```
REGEDIT4
```

- If the operating system is *Windows 2000, XP, or 2003*, add the Registry Header:

```
Windows Registry Editor Version 5.00
```

4. For Crystal Reports 10, add the HKEY string to the this registry key text file:

```
[HKEY_CURRENT_USER\Software\Crystal Decisions\10.0\Crystal Reports\Database\QueryBuilder\JoinBuilder]
```

5. Add the correct join syntax for your database. Refer to the required information from step 1.

#### Example:

```
OJSyntax
```

6. Assign the JoinBuilder key to equal the ODBC database driver that you are using to connect to Crystal Reports. Refer to the required information from step 1.

#### Example:

```
"SQLServerJoinBuilder"="sqlsrv32"
```

- Where “SQLServerJoinBuilder” is the JoinBuilder key to which the join syntax belongs
- Where “sqlsrv32” is the ODBC database driver file name without the “.dll” extension

7. Save this TXT file.

**Example of the TXT file for the registry key update:**

Windows Registry Editor Version 5.00

```
[HKEY_CURRENT_USER\Software\Crystal Decisions\10.0\Crystal Reports\Database\QueryBuilder\JoinBuilder]
```

```
"SQLServerJoinBuilder"="sqlsrv32"
```

This example is based on the following conditions:

- Windows 2000 operating system
- Crystal Reports 10 reporting tool
- SQL Server 2000 database
- Sqlsrv32.dll ODBC database driver

**Rename the TXT file and update the registry key**

8. Rename the TXT file by changing the file extension from “.txt” to “.reg”.

**Example:**

```
SQLServerJoinBuilder.reg
```

9. Double-click the REG file to enter the updated registry key setting.

<b>NOTE</b>	You may be required to restart the computer for the updated registry key setting to become effective.
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Upon completing these steps, the registry key will be updated to include the correct join syntax.

## Contacting Business Objects for Customer Support

We recommend that you refer to the product documentation and that you visit our Customer Support web site for more resources.

**Self-serve Support:**

<http://support.businessobjects.com/>

**Email Support:**

<http://support.businessobjects.com/support/answers.asp>

**Telephone Support:**

<http://www.businessobjects.com/contact/support.asp>

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