



Creating a System DSN for Crystal Reports to Access a Sentinel Server Database

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PREAMBLES

Copyright

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Trademarks

All trademarks are hereby acknowledged.

Technical Prerequisites

This Configuration Guide assumes that the installer is familiar with the basic operation of the following:

- □ Microsoft[®] Windows[®] desktop operating systems (Windows 98/ME/NT/2000/2003/XP)
- □ Microsoft Windows[®] Servers (Windows NT/2000/2003/XP)
- □ SQL database structures
- □ Crystal Reports report-generating application
- □ Ethernet topology, TCP/IP protocols
- Ethernet routers, switches and hubs

Trademark Recognition

Windows[®] is a trademark of Microsoft Corporation.

Components Used

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration.



INTRODUCTION

Unlike many other access control products that are closed systems using proprietary interfaces, Ringdale's Sentinel Server employs an open-system architecture that allows the Sentinel SQL database to interface to open-system report writing applications such as Crystal Reports. This open-system approach provides the flexibility to generate tailor-made reports in-house using commercially-available resources, as opposed to proprietary, expensive and often hard to find resources.

Section (A) of this document describes how to configure a PC with Crystal Reports software installed to interface to the SQL Server that is hosting the Ringdale Sentinel server software. This connection will then enable data from the Sentinel database to be copied to Crystal Reports and subsequently used to generate company-specific reports.

Section (B) of this document describes how to configure Crystal Reports to interface with the Sentinel database.

DSN DEFINITION

The following is a direct quote from the Microsoft website:

"A Data Source Name (DSN) is the logical name that is used by Open Database Connectivity (ODBC) to refer to the drive and other information that is required to access data. The name is used by Internet Information Services for a connection to an ODBC data source, such as a Microsoft SQL Server database. When you use an ODBC DSN entry to store the connection string values externally, you simplify the information that is needed in the connection string. This makes changes to the data source completely transparent to the code itself".

Simply stated, DSN is a feature within the Windows operating systems that allows the contents of a database on one PC or Server (Sentinel Server in this example) to be shared with an application on another PC (Crystal Reports for example).



(A) CREATING A SYSTEM DSN FOR CRYSTAL REPORTS

This guide documents the procedure necessary to configure System DSN on the user PC to be able to communicate with the Sentinel SQL Server database.

Assumptions

It is assumed that the SQL server is on an Ethernet network, is accessible to the user PC and has been configured to allow the two devices to communicate and share SQL data.

The Configuration Steps - System DSN

The layout of some of the screen-shots (dialog boxes) may vary slightly between different versions of the Microsoft Windows operating systems, but the concept is the same. The panels used in this guide are identical between Windows 2000 and Windows XP.

- 1. Go to the PC's Control Panel. In Windows 2000, click *Start*, go to *Settings*, *Control Panel*.
- 2. Double click on *Administrative Tools*.
- 3. Double click on *Data Sources (ODBC)*.and the **ODBC Data Source Administrator** dialog box will open.



4. Select the **System DSN** tab.



5. Click the *Add...* button on the right

📢 ODBC Data Source Administrator 🛛 🔹 🗙			
User DSN System DSI	N File DSN Drivers Tracing Conne	ection Pooling About	
System Data Sources:			
Name	Driver	Add	
LocalServer PALog Sentinel	SQL Server Microsoft Access Driver (*.mdt SQL Server	b) Remove	
Xtreme Sample Datab	ase 11.5 Microsoft Access Driver (*.mdl	o) Configure	
An ODBC System data source stores information about how to connect to the indicated data provider. A System data source is visible to all users on this machine, including NT services.			
	OK Cancel A	spply Help	

6. The **Create New Data Source** dialog box will be displayed.

Create New Data Source		×
	Select a driver for which you want to set up a data : Name Microsoft FoxPro VFP Driver (*.dbf) Microsoft ODBC for Oracle Microsoft Paradox Driver (*.db) Microsoft Paradox-Treiber (*.db) Microsoft Paradox-Treiber (*.db) Microsoft Text Driver (*.txt; *.csv) Microsoft Text-Treiber (*.txt; *.csv) Microsoft Visual FoxPro Driver Microsoft Visual FoxPro-Treiber SQL Server	source. 6. 2. 4. 4. 4. 4. 6. 6. 2. •
	< Back Finish C	Cancel

- 7. In the **Name** (driver) selection box, scroll down until you find the driver named **SQL Server**.
- 8. Select **SQL Server** by clicking on it, and click *Finish*.
- 9. The **Create New Data Source** dialog box will close and the **Create a New Data Source to SQL Server** dialog box will appear.



10. Within the **Create a New Data Source to SQL Server** dialog box there are two text boxes and a drop down list

Create a New Data Source to SQL Server 🛛 🔀		
Create a New Data Sour	This wizard will help you create an ODBC data source that you can use to connect to SQL Server. What name do you want to use to refer to the data source? Name: SentinelSQLServer How do you want to describe the data source?	
	Description: DSN to SQL for Sentinel	
	Which SQL Server do you want to connect to?	
	Server: ServerUSA01	
	Finish Next > Cancel Help	

- 11. The first text box is the **Name** you would like to call the System DSN. The name can be anything you want but give it a logical name that corresponds with what the connection is <u>to</u> or the connection is <u>for</u>, such as **SentinelSQLServer**.
- 12. The second text box is a **Description** of the System DSN you are creating.
- 13. The drop down **Server** is a list of all SQL Servers that are available on the connected network, select the pertinent Server where Sentinel in installed, ServerUSA01 in this example.
- 14. Select the name of the server that is holding the database to which you want to be connected (*Sentinel access control* in this example).
- 15. Click *Next* and the next Create a New Data Source to SQL Server dialog box will appear.



16. This dialog box is used to select how the SQL Server should verify the authenticity of the login ID.

Create a New Data Source to SQL Server		
Selact a drived tor me of db ase I of db ase I h croat Access I h croat Ac	How should SQL Server verify the authenticity of the login ID? With Windows NT authentication using the network login ID. With SQL Server authentication using a login ID and password entered by the user. To change the network library used to communicate with SQL Server, click Client Configuration. Client Configuration Client Configuration Connect to SQL Server to obtain default settings for the additional configuration options. Login ID: bsmith Password: ************************************	
	< Back Next > Cancel Help	

17. There are two radio buttons, one is for **Windows NT authentication using the network** login ID and the other is **With SQL Server authentication using a login ID and** password entered by the user.

You will need to consult with your Network Administrator to find out which one is appropriate to your server. In this example we have used the second one, **SQL Server authentication**.

- 18. For the **Login ID** and **Password** fields use the username and password supplied to you from your Network Administrator that will allow you to log into SQL Server, then click **Next**.
- 19. On the next panel check the box that says **Change the default database to:**

Create a New Data Source to SQL Server 🛛 🗙		
Select a diver to me off dBase T off dBase T soft Excel T	 Change the default database to: Sentinel_Test Attach database filename: 	
Microsoft ODB	 Create temporary stored procedures for prepared SQL statements and drop the stored procedures: Only when you disconnect. When you disconnect and as appropriate while you are connected. Use ANSI quoted identifiers. 	
Use ANSI nulls, paddings and warnings.		
	Use the failover SQL Server if the primary SQL Server is not available.	
	< <u>B</u> ack <u>N</u> ext > Cancel Help	

20. From the drop down box that is now enabled select the database that has the information you need. In this example it is **Sentinel_Test.** Click *Next*.



21. On the next panel review the options and select any that are applicable. In this example there are no changes and the defaults were used. Click *Finish*.

Create a New Data Source to SQL 9	Server X
Select a divier vor resolt Access out dB ase out dB	e the language of SQL Server system messages to: h ong encryption for data n translation for character data gional settings when outputting currency, numbers, dates and ong running queries to the log file: NNT\TEMP\QUERY.LOG Long query time (milliseconds): 30000 DBC driver statistics to the log file: NNT\TEMP\STATS.LOG Browse
	< <u>B</u> ack Finish Cancel Help

22. The **ODBC Microsoft SQL Server Setup** dialog will appear. It displaysall the information that you entered in the previous screens and three buttons. Click the **Test Data Source...** button to make sure that the connection you just set up is active. Click **OK** to close the screen.

ODBC Microsoft SQL Server Setup	×
A new ODBC data source will be created with the following configuration:	
Microsoft SQL Server ODBC Driver Version 03.85.1064	<u> </u>
Data Source Name: ServerUSA01 Data Source Description: DSN to SQL for Sentinel Server: NTUSA0030 Database: Sentinel_Test Language: (Default) Translate Character Data: Yes Log Long Running Queries: No Log Driver Statistics: No Use Integrated Security: No Use Integrated Security: No Use Regional Settings: No Prepared Statements Option: Drop temporary procedures on disconnect Use Failover Server: No Use ANSI Quoted Identifiers: Yes Use ANSI Null, Paddings and Warnings: Yes Data Encryption: No	1
OKOKOKOK	el



23. If the test was successful the dialog box will appear with the message TESTS COMPLETED SUCCESSFULLY. Any errors will be flagged and you will need to go back a few steps to verify the settings and fix any applicable errors. Click **OK**.

sQ	L Server ODBC Data Source Test	×
Г	Test Results	
	Microsoft SQL Server ODBC Driver Version 03.85.1064	<u> </u>
	Running connectivity tests	
	Attempting connection Connection established Verifying option settings Disconnecting from server	
	TESTS COMPLETED SUCCESSFULLY!	
	1	
	ОК	

24. This will bring you back to the screen with the **System DSN** tab and the new **Data Source Name** that you have just configured should show in the list of **System Data Sources**

💞 ODBC Data Source Administrator 🛛 🔹 👔 🔀			
User DSN System DSN File D	SN Drivers Tracing Connection	Pooling About	
<u>S</u> ystem Data Sources:			
Name	Driver	A <u>d</u> d	
Notal Structure LocalServer SQL Server PALog Microsoft Access Driver (*.mdb) Sentinel SQL Server SentinelSQLServer SQL Server Xtreme Sample Database 11.5 Microsoft Access Driver (*.mdb)			
•			
An ODBC System data source stores information about how to connect to the indicated data provider. A System data source is visible to all users on this machine, including NT services.			
0	Cancel Apply	Help	

You have now successfully configured a DSN to allow Crystal Reports to interface to the Sentinel database. Click **OK** to close the dialog box and exit to the PC's Control Panel.



(B) CREATING A NEW REPORT IN CRYSTAL REPORTS

Assumptions

This section assumes that the target PC already has Crystal Reports installed and that the Sentinel Server has been configured to enable the target PC to access the SQL database.

The Configuration Steps

 From Crystal Reports, click the *New Report* button in the upper left hand part of the screen, underneath the **File** menu item, or use the **File** menu to go to *New* then to *Standard Report*.

🔊 Standard Report Creation Wizard	×
Data Choose the data you want to report on.	
Available Data Sources:	Selected Tables:
< Back N	ext > Finish Cancel Help

 The Standard Report Creation Wizard dialog box appears. Click the *Plus* (+) icon next to the folder that says Create New Connection to display a full list of the available connection types.



Scroll through the list of Available Data Sources until you find the folder icon named ODBC (RDO). Select ODBC (RDO) and click the plus (+) icon to select this data source. Click Next and the ODBC (RDO) dialog box will appear.

🔊 Standard Report Creation Wizard	×
Data Choose the data you want to report on.	
Available Data Sources: Available Data Sources: Create New Connection Access/Excel (DAO) ADO.NET (XML) Cababase Files Cababase Files Ca	Selected Tables:
< Back Next >	Finish Cancel Help

4. From the **ODBS (RDO)** dialog box find the System DSN connection that you would like to use with this report (**SentinelSQLServer** in this example) and click **Next**.

Choose a data source f button	rom the list or open a file dsn from the browse
Select Data Source:	ē
Data Source Name:	dBASE Files dBase Files - Word Excel Files FoxPro Files - Word LocalServer MS Access Database PALog Sentinel Sentinel SentinelSQLServer Visual FoxPro Database
Find File DSN:	0
File DSN:	
Enter Connection String:	0
Connection String:	



5. At the next **ODBC (RDO)** screen, fill in the username and password that you need for the database connection, or select the *Trusted Connection* box if the username and password are not needed. The username and password will be the same as used to setup the System DSN connection. Click *Finish* to exit the dialog.

BC (RDD) Connection Information Provide necessary infor	Amation to log on to the chosen data source
<u>S</u> erver:	Sentinel
<u>U</u> ser ID:	bsmith
Password:	******
<u>D</u> atabase:	Sentinel_Test
Irusted Connection:	
(Deels)	Const Const
K Back Next	> Finish Lancei Help

6. Once the connection has been made, all the tables available in the database will be available to add to the report via the **Standard Report Creation Wizard**.

🔊 Standard Report Creation Wizard	×
Data Choose the data you want to report on.	•
Available Data Sources: ODBC (RDO) Make New Connection Sentinel Sentinel Sentinel Sentinel CardDetails CardDetails Email FPLPrints FPLPrints FPLPrints	
< <u>Back</u> <u>N</u> ext > Finish Cancel Help	



7. Select the tables you would like to use for creating the new report and click on > to move them to the right had panel.

🔊 Standard Report Creation Wizard		×
Data Choose the data you want to report on.		
Available Data Sources: MST_FP_Reade MST_FP_Users MST_GroupDevi MST_GroupMem MST_GroupMem MST_Groups MST_Groups MST_ImageStore Schedule Schedule Schedule UpdateVersion UpdateVersion Users Users Stored Procedures	Selected Tables:	
< <u>B</u> ack <u>N</u>	ext > Finish Cancel Help	

8. Clicking *Next* will bring up the **Link** section of the dialog box.



9. From the **Link** dialog box (unless you would like to change how the tables are linked together), click *Next* to move to the **Fields** section.

			1		
MST AC Log		Users		<u>A</u> uto-Arrang	ge
DateTime1	~ U	lserID	⊢ A	uto-Link	
UserID	-/ s	ecurityLevel		By Name	
	U	IserLogon		⊂ Ву <u>К</u> еу	
FlagID	P	assword IsorEirstNamo		Link	1
		isernirsuvanie IserMiddleMemos			
				O <u>r</u> der Links	
				<u>C</u> lear Link	s
				<u>D</u> elete Lin	k
		•	1	Link <u>O</u> ptions	s
				Index Legen	id

10. From the **Fields** dialog box you can select from the available selections which fields you want displayed in the report. Select (click on) a specific field and then click the > button to move the field to the right hand panel.

🔊 Standard Report Creation Wizard		×
Fields Choose the information to display on the	report.	
Available Fields:	Fields to Display: MST_AC_Log.DateTime1 MST_AC_Log.UserID Users.UserFirstName Users.UserLastName	3
< <u>B</u> ack	Next > Finish Cancel He	lp



11. Click **Next** to bring up the **Grouping** section. From here you can select how the report is to be grouped. Select the field to group and click the > button to move to the right hand panel.

🔊 Standard Report Creation Wizard				×
Grouping (Optional) Group the information on the	; report.			
Available Fields:		roup By: ፪ Users.UserLastNa Users.UserFirs	me - A atName - A	>
Browse Data <u>Find Field</u>	ir	n ascending order.		•
< <u>B</u> ack	<u>N</u> ext >	Finish	Cancel	Help

When you have completed the Grouping selections click *Finish* to view the report.



(C) CONNECTING A CRYSTAL REPORT TO SYSTEM DSN.

Assumptions

This section assumes that you have completed the following tasks:

- a) Installed Crystal Reports on the target PC.
- b) Configured the target PC with a System DSN
- c) Configured the Sentinel Server to enable the PC to share the database
- d) Generated a new report template in Crystal Reports

Connection

1) Open the relevant report in Crystal Reports (**Sentinel_2** in this example). A screen will either show right away or as soon as the **Refresh** button is pressed.

DDBC (RDD) Data Source Selection Choose a data source fro button	om the list or open a file dsn from the browse
Select Data Source	۲
<u>D</u> ata Source Name:	dBASE Files dBase Files - Word Excel Files FoxPro Files - Word LocalServer MS Access Database PALog Sentinel 2 Sentinel SQLServer Visual FoxPro Database
<u>F</u> ind File DSN:	0
File DSN:	
Enter Connection String:	0
Connection String;	
< <u>B</u> ack. <u>N</u> ext >	- Finish Cancel Help

2) Select the connection to be used with this report and click *Finish*. The report is now connected to the selected **System DSN**.



TECHNICAL SUPPORT

Ringdale Technical Support Overview

Ringdale Technical Support services help to ensure that Ringdale products and pertinent networks operate efficiently and benefit from the most up-to-date system and application software. Ringdale offers a flexible suite of support services designed to meet individual business needs and assists in effectively installing and maintaining products and networks to maintain high-quality network performance.

Telephone Technical Support for Ringdale Access Control Systems is available for the Ringdale subject matter items covered in this installation guide and is provided free-of-charge for the duration of the original warranty period.

Technical Support from Ringdale is also available for all of the prerequisites listed at the beginning of this manual. The current terms, conditions and rates for Technical Support are available on request. The minimum Technical Support time is two hours.

Ringdale Inc.

(8:00 a.m. to 5:00 p.m. CST, Monday to Friday) Phone: 512-288-9080 Fax: 512-288-7210 Toll-free: 888-288-9080 support@ringdale.com

Ringdale (UK) Ltd

(0900 to 1700 GMT, Monday to Friday) Phone: +44 (0) 1444 871349 Fax: +44 (0) 1444 870228 support@ringdale.com

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Phone: +49 (0) 621 7186-0 Fax: +49 (0) 621 7186-20 support@ringdale.com

Before you call Technical Support

Please have the following information ready

- ✓ Product Model type.
- ✓ Serial number of the unit.
- ✓ Pertinent network Information.
- ✓ If relevant, IP addresses of any hardware, Server and Default Gateway.
- ✓ What options are installed, if any?
- \checkmark The symptoms of the problem.
- History of the Problem;
 - * Did the device work for a period of time or fail immediately after installation?
 - * Was any PC option changed (hardware / software) prior to the problem occurring?

Where to address any comments about this manual

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