

Crystal Reports and Crystal Enterprise

Troubleshooting a looping database log on

Overview

A common issue when viewing reports over the web is a persistent database log on prompt or what is commonly referred to as a “looping log on”. This document will explain the various causes of this issue and methods for resolving it for Crystal Enterprise (CE). The target audience for this document is network administrators, web server administrators and database administrators.

The information in this document applies to Crystal Reports and Crystal Enterprise versions 9 and 10.

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Introduction

This technical brief is a compilation of Knowledge Base articles and other documentation that are related to a persistent database logon or what is commonly referred to as “looping log on” behavior.

Looping log on behavior is caused by not having the correct permissions/rights on the server that is running Crystal Reports or Crystal Enterprise. It presents itself when trying to view a report over the web by prompting the user for a persistent database log on. The report will not display regardless of the username/password provided in the database log on prompt.

Does the report run in Crystal Reports?

Before moving ahead to any of the troubleshooting steps outlined, you must first ensure that the report can be previewed properly in the Crystal Reports Designer on the web server computer. Even though the report may be working properly on the client workstation on which it was originally designed, you need to make sure that the report is functional and error free in the Crystal Report Designer on the web server running the Crystal Reports or Crystal Enterprise web components.

To verify that a report is working error free, follow the steps outlined below:

1. On the web server that is running Crystal Reports or Crystal Enterprise (specifically the server running the Page and Job server services), open the report in the designer. (If you are not using the System account to run services, you should log on as the account you use to run the Crystal Reports or Crystal Enterprise services.) On the **File** menu, make certain that **Save Data with Report** is clear. Having this option enabled can mislead you into thinking the report is connecting to the database when it is not.
2. On the **Database** menu, click **Verify Database**. It should return the message: “The database is up to date”. If it gives any other message or an error, then those issues must be corrected in the designer and the report resaved with any changes before proceeding. For assistance in troubleshooting database connectivity errors in the designer, please review [CR_Dbconn_Troubleshooting.pdf](#).
3. If you make any changes to the report, click **Database > Verify Database**. Repeat steps 2 and 3 until “The database is up to date” is received. This message indicates that the report is able to communicate with the database successfully.
4. On the **Report** menu, refresh the report by clicking **Refresh Report Data** or by clicking the **Refresh** icon on the toolbar. The report must display correct data from the database without errors. Verify that the data returned is accurate.
5. Save the report.

Have the required NTFS rights been applied?

Having the correct NTFS rights on your Crystal Reports or Crystal Enterprise server will resolve or prevent the majority of issues related to viewing reports online. Correctly setting NTFS rights in your environment ensures that the proper users are granted access to various folders and resources when viewing reports over the web. There are two important user accounts that are involved when setting NTFS rights:

- **IUSR_servername** - This is the default anonymous user account for Microsoft Internet Information Server (IIS) where “servername” is the name of the computer on which IIS is installed.
- **System** – This is the account used by the operating system to access various resources.

The following whitepaper explains in detail the folders to which the above two users must be granted access. To find the whitepaper go to <http://support.businessobjects.com/search> and search for one of the following files depending on which version of CE you are using

- ce9_ntfsrights.pdf
- ce10_ntfsrights.pdf

Are the Windows NT or 2000 services configured correctly?

Running these Windows NT or 2000 services under an account that is a member of the Administrators group should not pose a security issue. This is due to the fact that it is a background application that uses the Administrator account. A user cannot impersonate a service. Therefore, you cannot inadvertently grant another user administrative rights.

The Crystal Reports or Crystal Enterprise services must have the appropriate level of access to various resources and folders on the servers running Crystal Reports or Crystal Enterprise as well as the database server. Through experience it has been determined that running these services as a Domain Administrator account will allow them to access the components necessary to successfully connect to data sources.

To configure these NT services to run as a Domain Administrator, complete the following steps:

1. In a Windows 2000 environment, click **Start > Settings > Control Panel > Administrative Tools > Services**.

In a Windows NT 4 environment, click **Start > Settings > Control Panel > Services**.

2. Right-click the service you wish to configure:

In a Windows 2000 environment, click **Properties**.

In a Windows NT 4 environment, click the **Startup** button.

3. In a Windows 2000 environment, on the **Log On** tab select **This account**. Select the user account by clicking the **Browse** button and choosing the domain and user name, or type a valid domain user account with the appropriate network permissions in the form of “Domain\Username”.

In a Windows 4 environment, select **Log On As This account**. Select the user account by clicking the ellipse [...] button and choosing the domain

and user name, or type a valid domain user account with the appropriate network permissions in the form of "Domain\Username".

4. Type the password for the account in both the **Password** and **Confirm password** fields.

In a Windows 2000 environment, click **Apply** and then click **OK**.

In a Windows NT 4 environment, click **OK**.

5. In a Windows 2000 environment, with the service highlighted click **Restart**.

In a Windows NT 4 environment, with the service highlighted click **Stop**. Click **Yes** to confirm. When the service has stopped, click **Start**.

- For Crystal Enterprise, configure the Crystal Page Server, Crystal Web Component Server, and the Crystal Report Job Server services.

Are you connecting natively or through ODBC?

Many report designers use a native database connection because they believe it is a faster connection to the database versus that of an ODBC connection. Technically this is true because the connection does not have to go through the ODBC layer to access the database. However, the reason an ODBC connection is recommended is because it is a multi-threaded connection to the database, and not all native drivers are multi-threaded. Requests made using ODBC to the database will not be queued or marshaled. Therefore ensuring a connection is made without having to wait for initial requests to be fulfilled by the database.

If you are connecting to a datasource with ODBC, the use of an ODBC System DSN is recommended. Do not use a User DSN in conjunction with or as a stand-alone connection. Using a User DSN will only authenticate the user who created the DSN. Therefore, the Crystal Page and Job Server service will not be able to use the User DSN created. This can result in a looping logon.

For steps to create a DSN go to <http://support.businessobjects.com/search> and search for knowledge base article c2010760.

Are the Environment variables configured correctly?

Environment variables are used by the operating system to govern and manage system files for particular users. Generally, Crystal Decisions products are most affected by the Environment variables, TMP and TEMP. Both are for the use of temporary files created by many applications, including Crystal Reports and Crystal Enterprise.

Incorrect or missing Environment variables can cause numerous problems. Windows NT and 2000 services cannot use the User Environment variables that are created by default. Therefore, it is recommended that System Environment variables be created for use by Windows NT and 2000 services, if they do not already exist.

Please refer to Knowledge Base article [C2006120](#) for instructions on creating or editing Environment variables.

Are there sufficient DSN Registry Permissions?

Insufficient permissions to access the DSN Registry can cause a looping logon. This is because specific users may not have the required rights to access a DSN in the Registry.

CAUTION	<p>Using the Registry Editor can cause serious problems that may require reinstalling the operating system. Crystal Decisions is not responsible for any problems resulting from using the Windows Registry Editor. Use the Registry Editor at your own risk. It is recommended that you back up the registry prior to making changes and that a Network Administrator perform any changes to the registry.</p> <p>For more information, please consult the Help topic in the Registry Editor, operating system documentation, contact Microsoft Corporation directly, or visit the Microsoft web site at http://www.microsoft.com/.</p>
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To determine if your system has the correct DNS Registry permissions, examine the Registry on the computer running Crystal Reports or Crystal Enterprise.

1. Click **Start > Run**, type “Regedt32” and click **OK**. This opens the Registry Editor.
2. Expand the registry subkey:
HKEY_LOCAL_MACHINE\SOFTWARE\ODBC\ODBC.INI
3. Highlight the registry subkey that is equal to the name of the DSN for which you wish to check the permissions.
4. Click **Security > Permissions**. A window will open displaying the users and groups that have access to the registry subkey. Generally you will want to grant the Everyone group **Full Control** or **Special Access**. However, you can grant access to specific user groups, such as the **Crystal NT Users** user group.
5. Click **Add** or **Edit** as necessary to assign the appropriate permissions and then click **OK**.
6. Close the Registry Editor and restart the computer to ensure that the registry changes take affect.

Is Operating System Impersonation configured correctly?

Miscellaneous Issues

Is the report connecting to a Microsoft Access database residing on another server?

Using a mapped drive letter to access a Microsoft Access database (.mdb) can cause a looping logon. For further information on mapped drives, please see knowledge base article c2011877 on our knowledge base site:

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

You should use a UNC path ([\\server\share](#)) to the shared folder to access the (.mdb) file. You must also make certain that the Page and Job Server service is using a Domain Administrator account and has sufficient rights to the folder. Please refer to the section [“Are the Windows NT or 2000 services configured correctly?”](#) to verify the configuration of the service(s).

Is the database client installed on the server?

The database client software must be installed on the web server to be able to access the database.

An effective database client will place registry entries in HKEY_LOCAL_MACHINE for all users to be able to access it, regardless of whether or not a user is currently logged on.

Some database client software products only place registry entries in HKEY_CURRENT_USER. In this case, the required service cannot use the database client software to communicate with the database. To workaround this situation, you can run the required service as a foreground application. This allows it to utilize the database client.

Are there enough database access licenses?

The database must have enough client access licenses to service requests. If all database access licenses are currently in use, the database will not respond as expected.

Are the database connections being closed?

You must also make sure that the database connections are closed in a timely manner. If a database connection is not closed quickly, the database may not service another request until the connection has been closed. To ensure the Page Server closes the database connections, set the **Minutes Before an Idle Job is Closed** to a value lower than the default value of 20 minutes. This is set in the Page Server properties.

- In a Crystal Enterprise 9 environment, to edit the Crystal Page Server properties:
 1. Go to Start > Program Files > Crystal Enterprise 9 > Crystal Management Console.
 2. Log on as a member of the Administrators group.
 3. Click **Manage Servers** and then click **Crystal Page Server**.
 4. On the **Properties** tab, edit the value of **Minutes Before an Idle Job is Closed** to the lower value, and then click **Apply** to save the change and restart the service.

- In a CE 10 environment, to edit the Crystal Page Server properties:
 1. Go to **Start > Program Files > Crystal Enterprise > Crystal Management Console (Admin)**.
 2. Log on as a member of the Administrators group.

3. Click **Manage Servers** and then click **Crystal Page Server**.
4. On the **Properties** tab, edit the value of **Minutes Before an Idle Job is Closed** to the lower value, and then click **Apply** to save the change and restart the service.

Finding More Information

For further information on administering a Crystal Reports or Crystal Enterprise environment, please refer to the documentation that is included in the root and \Doc or \Docs directories of the product CD.