

Crystal Enterprise 8.5

The Crystal Page Server and on-demand reporting

Overview

This document explains how the Crystal Page Server (Pageserver.exe) service interacts within the Crystal Enterprise framework. It also covers common Crystal Page Server issues with some databases and with the Crystal Cache Server.

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Introduction

The Crystal Page Server service is a core component of the Crystal Enterprise (CE) framework and is essential to dynamic (on-demand) reporting. This functionality was previously only part of the Crystal Reports product line and was not available in the Seagate Info product. With the CE product, both managed and unmanaged reports can be run on-demand. Managed reports are reports that have been added to the CE environment, while unmanaged reports are reports that have been placed on a web server and not in the CE environment.

Managed Reports

Managed reports are reports that have been added to the environment either by saving them to an Enterprise folder through the Crystal Reports Designer, or by publishing them through the Crystal Publishing Wizard, or through the Crystal Management Console. When managed reports are run on-demand the request that is passed to the server is:

<http://myserver/directory/viewrpt.cwr?id=447>

The ID is the object ID from the Crystal APS system database.

Unmanaged Reports

Unmanaged reports are Crystal Reports that are saved directly to the web server and do not take advantage of the Crystal Enterprise features.

For example, a report called Test.rpt is created and saved into the wwwroot folder on a web server running Microsoft Internet Information Server (IIS). The file has not been added to the CE environment so it is unmanaged. The report can be run by calling the report in a URL:

<http://localhost/test.rpt>

The report will use a guest license from the Crystal APS.

How it works

A mapping set on the web server passes report requests with an extension of .CWR to the Crystal Web Connector. There are actually no .CWR files on the web server. The Web Component Server (WCS) will then load the plug-in needed for report viewing. The same extension is set up for .RPT files.

The WCS will then make the call to the Crystal APS to authenticate the user and ask it where it can find a Crystal Cache Server (Cacheserver.exe). Once the user has been authenticated, the WCS will then call the Crystal Cache Server to see if it can satisfy the cache request. If the page that is being requested can be found in the cache then it will be returned to the WCS and delivered back to the client.

If the page cannot be found in the cache, the WCS will contact the Crystal Page Server to run the report.

The Crystal Page Server will load the print engine, connect to the database and run the report. Once the report has been run it will generate the pages for the viewer and will place a copy of the page into cache and return the page to the WCS.

Database Connectivity Problems

Reports may fail due to issues with database connectivity. The following steps will help you to resolve connectivity issues when running on-demand reports.

1. Log on to the Crystal Page Server computer as the account used to run the Crystal Page Server service.
2. Open the report in the Crystal Reports Designer and preview the report to verify that the report can be run. If the report can be previewed successfully from within Crystal Reports, then the Crystal Page Server service may have a problem.
3. Close the designer and stop the Crystal Page Server service. Run the Crystal Page Server as a foreground process by completing the following:
4. Click Start > Run, type the following and then click 'OK':

```
"<drive>:\<path to>\pageserver.exe" -console -name ServerName.pageserver -ns APSName -restart
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NOTE	By default the <drive> and <path to> the Pageserver.exe is: "C:\Program Files\Seagate Software\WCS\pageserver.exe"
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NOTE	The -console setting should only be used for troubleshooting purposes. It is not intended for long-term use in a CE environment. Issues that arise as a result of routinely running the CE components as processes will not be escalated as CE components are designed to run as services. When troubleshooting is complete, the process, which operates within a Command Prompt window, must be shut down properly. To do so, type QUIT at the cursor in the window and press the Enter key. The component should then be restarted as a service.
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What the above steps show

- Opening and previewing the report in the designer on the Crystal Page Server, verifies that the database client is configured correctly on the Crystal Page Server. However, if the report is using ODBC it may still fail when viewed on-demand. This is because Crystal Reports can use either a User DSN or a System DSN, but services can only use System DSNs. Make certain that the appropriate System DSN exists on the Crystal Page Server and that there is no duplicate User DSN. If there is, it should be deleted.

- Permissions are a common reason why the Crystal Page Server cannot connect to the database. Pressing the Ctrl + Alt + Delete buttons will display a Windows dialog indicating the user account that is logged on to the computer at that time. If the report can be previewed in the designer using the account, this will confirm that the account used to run the Crystal Page Server does not have any permission issues when opening the report and connecting to the database.
- Some database clients will set up under HKEY_CURRENT_USER in the system registry. Unfortunately, the information in this key is only available to users logged on to the system and not services. Services will not be able to read any setting stored under this key.
- The most common problem with running reports on-demand is that the Crystal Page Server cannot talk to the database. Generally, repeatedly receiving a database logon dialog is a symptom of this issue.

For more information on database connectivity in CE and Crystal Reports, search for the technical briefs CE85_Looping_Logon.pdf and CR_ODBC_Architecture.pdf at:

<http://support.crystaldecisions.com/docs>

Common Crystal Page Server issues with different databases

The following is a sampling of the most common database connectivity issues encountered when running reports on-demand. For many more tips for database connectivity over the web, please consult our online Knowledge Base at:

<http://support.crystaldecisions.com/kbase>

Microsoft SQL Server

A repeating database logon dialog is received when connecting to Microsoft SQL Server using Integrated Security. Make sure that the Crystal Page Server service is running under a user account that has access to the database.

Oracle

When connecting to Oracle, eventually all of the database licenses are used up because the Crystal Page Server does not take advantage of connection pooling which Oracle is set to by default. When the Crystal print engine sends the SQL Disconnect, Oracle keeps the connection alive to be pooled.

Different versions of the Oracle client will create system registry keys pointing to different directories. The Crystal Page Server will look for the Oracle client files where the ORACLE_HOME registry value is pointing when using a native connection. If the Crystal Page Server still cannot connect to the Oracle database via a native connection, examine the ORACLE_HOME setting in the following registry subkey:

HKEY_LOCAL_MACHINE\SOFTWARE\Oracle

ORACLE_HOME should be equal to the location of the Oracle\Bin directory. For example, C:\Oracle\Ora81

Microsoft Access

If a report uses an Access database, which is stored on a different computer than the Crystal Page Server, the database path in the report MUST use UNC. This is because mapped drives are user dependant and are not available to services.

Lotus

Running on-demand reports connecting to a Lotus database can result in either the viewer loading but not responding or a repeated (or looping) logon prompt.

When the viewer loads but stops responding it may be caused by the database driver presenting a logon dialog on the web server computer, which the client cannot see. If this is the case, the driver used may not be suitable for use with web-based applications. Other database connection methods such as ADO may also fail if the driver generates its own logon prompt.

Sometimes a report against a Lotus database will not accept the logon when reports are run via a URL. This is because Lotus requires a unique syntax for the user name. To determine the correct syntax, open the report in the designer and click Database > Set Location. The syntax of the user name appearing at the bottom of the dialog is what should be used. It follows the format of Username/Registered Owner as defined in the Registered Owner field in the Notes.ini file on the web server.

Informix

Certain versions of the Informix database client only modify the Path statement under the User Environment Variables by appending the Informix\Bin directory to the Path. When this occurs, the Informix\Bin folder will only be searched if a user is logged on to the computer. The services will not search for it, as it is not in the System Environment Path variable.

To resolve this issue, add the Informix\Bin folder to the Path variable in the System Environment Variables.

Contacting Crystal Decisions for Technical Support

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

Self-serve Support:

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

Email Support:

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

Telephone Support:

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