

Crystal Reports 7.0

Configuring Lotus Domino to Run the Crystal Web Report Server

Overview

This document covers issues around configuring Lotus Domino to run the Crystal Web Report Server through a Common Gateway Interface (CGI) script.

Contents

LOTUS DOMINO AND COMMON GATEWAY INTERFACE	1
RUNNING THE CRYSTAL WEB REPORT SERVER WITH LOTUS DOMINO CGI	2
STARTING THE CRYSTAL WEB REPORT SERVER.....	5
EXECUTING THE CRWEB.EXE THROUGH THE URL LINE.....	5
ACKNOWLEDGEMENTS.....	6
CONTACTING CRYSTAL DECISIONS FOR TECHNICAL SUPPORT	6
HTTP://WWW.CRYSTALDECISIONS.COM/CONTACT/SUPPORT.ASP	6

Lotus Domino and Common Gateway Interface

The Lotus Domino Web server supports the Common Gateway Interface (CGI), which allows you to create external programs (CGI programs) that interface with your server. CGI provides a common groundwork so that any Web server can communicate with any CGI script. The CGI interface deals with interaction between the Web Server and the script. The client browser begins this interaction by navigating to a URL that includes the CGI script in its path, the CGI program is then executed.

With Netscape (Enterprise and Fastrack) and Microsoft (Internet Information Server) Web servers, the Crystal Web Report Server installs NSAPI or ISAPI libraries to deliver its reports over the Web. In the case of Lotus Domino, the Crystal Web Report Server relies on a CGI script to deliver the report.

Running the Crystal Web Report Server with Lotus Domino CGI

In order to run the Crystal Web Report Server on a Lotus Domino Web server implement the following steps:

1. Copy the CRWEB.EXE into the Lotus Domino cgi-bin directory. This allows Domino Web server to have access to the Crystal Reports Web Server program files through its CGI directory.
2. *Lotus Domino 4.x*

Once the Crweb.exe program has been copied into the cgi-bin directory you must then create a Virtual Directory in Lotus Domino to place your Crystal Reports. This is done in Lotus Domino by using the Domino Configuration database.

If you already have a Domino Configuration database, open it to make the entries listed in Step 3. If not, create DOMCFG.NSF (it **MUST** be named this) from the Domino Configuration template (domcfg.ntf) in the default data directory of your Domino server. An administrator may need to create the new database for you.

NOTE	This assumes that Crystal Reports has been installed in the default directories upon installation. If you installed Crystal Reports to different directories on installation you must use those directories here. Also, the space within the configuration file is limited so you may revert to the DOS naming convention of 8 characters to conserve space.
-------------	--

Lotus Domino R5

No Virtual Directory settings are required. The DOMCFG.NSF is not used.

3. This step will go through the mapping of URL's to the report. Please note that the procedure is different in the different versions of Lotus Domino. For more information on how to perform URL mappings in Domino, please see Domino's online help.

Lotus Domino 4.x

This step will go through the mapping of URL's to the report. Please note that the procedure is different in the different versions of Lotus Domino. For more information on how to perform URL mappings in Domino, please see Domino's online help.

There are two types of entries required in the Domino Configuration database necessary to run the Crystal Web Report Server. First, there are five Directory Mappings. These are created in the Domino Configuration Database with the Create-Mapping URL→Directory menu command:

	URL Path	Directory

1	/scrreports/*	c:\Progra~1\Seagat~1\Crysta~1\Reports*
2	/scrsamples/*	c:\Progra~1\Seagat~1\Crysta~1\sample*
4	/viewer/*	c:\Progra~1\Seagat~1\Viewers*
5	/reports	d:\notes\data\reports

- Entries 1 and 2 are optional.
- Entries 1 and 2 allow you to view Seagate's sample reports using URL syntax.
- Entry 3 is required, as this is the directory where all of the viewer clients are stored. When a browser requests a report, the Seagate Crystal Web Page Server (an additional executable) interprets the browser and automatically loads the appropriate viewer (Java, ActiveX, or HTML with Frames).
- Entry 5 is critical because it sets the current directory on the server whenever a request comes in for a report. The actual name of the directory (in this case "/reports" is whatever you set up under the Notes data directory.) It is activated via the URL redirection below.

In Directory Mappings, you can optionally specify the IP address to which the mapping applies. This is only necessary if you are running multiple Virtual Servers and wish to restrict reporting access to one of them. All of the Directory Mappings should also be set to **Read** access and not **Execute**. The comment field is optional but recommended for easy reference.

The second type of entry is a URL Redirection entry. It is created in the Domino Configuration Database with the Create – Redirection URL → URL menu command:

URL Path	Redirection URL
/webreports/*	/cgi-bin/crweb.exe/reports/*

Lotus Domino R5x

The mappings in Domino R5 are created differently. After you have created a DOMCFG.NSF, you will need to open the Domino Administrator. Under the "configuration" tab, open the server -> Current Server Documents view. Now select the "Web..." button. Create an URL Mapping Redirection. Setup the URL -> Directory mappings as listed in the table below.

NOTE	This can also be accomplished in the Domino Directory servers/servers view, using the Web action dropdown, rather than in the Admin client.
-------------	---

	URL Path	Directory
1	/scrreports/*	/cgi-bin/crweb.exe/reports/*
2	/scrsamples/*	c:\Program Files\Seagate Software\Crystal Reports\Sample*
3	/viewer/*	c:\Program Files\Seagate Software\Viewers*
4	/reports	d:\notes\data\reports

- Entries 1 and 2 are optional.
- Entries 1 and 2 allow you to view Seagate's sample reports using URL syntax.
- Entry 3 is required, as this is the directory where all of the viewer clients are stored. When a browser requests a report, the Seagate Crystal Web Page Server (an additional executable) interprets the browser and automatically loads the appropriate viewer (Java, ActiveX, or HTML with Frames).
- Entry 4 is critical because it sets the current directory on the server whenever a request comes in for a report. The actual name of the directory (in this case "/reports" is whatever you set up under the Notes data directory.) It is activated via the URL redirection below.

In Directory Mappings, you can optionally specify the IP address to which the mapping applies. This is only necessary if you are running multiple Virtual Servers and wish to restrict reporting access to one of them. All of the Directory Mappings should also be set to Read access and not Execute. The comment field is optional but recommended for easy reference.

The second type of entry is a URL Redirection entry. It is created in the Domino Configuration Database with the Create – Redirection URL→URL menu command:

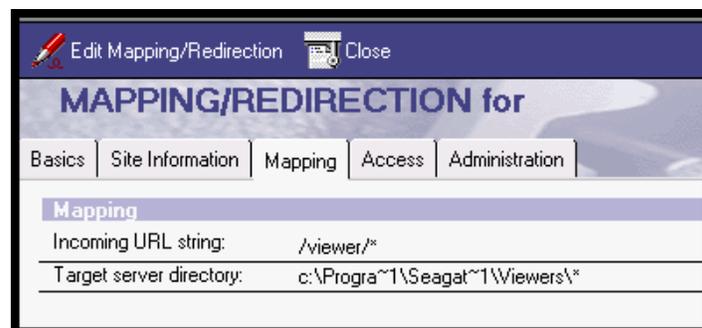


Figure 1
Directory mapping for the report viewers

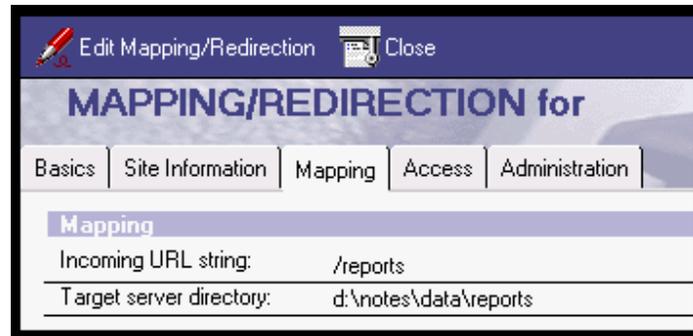


Figure 2
The directory mapping for the reports directory

The name of the path is what the browser will reference. This can be whatever you want it to be, and does not have to exist as an actual directory. In fact, it should not be the same as the actual directory in which the reports reside (in this case, “/reports/”). You must use this URL to activate the CGI program “crweb.exe” located in the default cgi-bin directory.

The unfortunate side effect of this on the Domino server is that links to reports stored in databases will not work, because the link contains path information relative to the Notes data directory. A workaround has not been discovered as of this writing. In the meantime, links to these reports will need to be coded in HTML (HTML views are a good possibility for this!).

Starting the Crystal Web Report Server

You must start Domino before starting the Crystal Web Page Server or Crystal Web Image Server. Therefore, they cannot be installed as services under Windows NT. The reason is that both of these programs require the Java Virtual Machine to be initialized, which is done during Domino’s startup.

To enable the Crystal Web Report Server, complete the following steps:

1. Start (or restart) the Domino Server and wait until all server services are started.
2. Start the Web Page and Image Servers from the Programs | Seagate Crystal Reports menu.

Executing the CRWEB.EXE Through the URL Line

Once these entries have been made into your Domino Configuration database you are now ready to execute the Crweb.exe through a cgi script via the URL line. Use the following method to do this:

<http://www.mycompany.com/webreports/report.rpt>

This URL request to the server will execute the crweb.exe file in the cgi-bin, which will allow a report to be returned to the client's browser. You could also reference it the “long way”, which can be useful for debugging or using alternate report directories, by specifying the CGI program in the URL:

<http://www.mycompany.com/cgi-bin/crweb.exe/reports/report.rpt>

Since we have set up the Viewer virtual directories and mapped them back to their directories on the drive you can call the report in either the ActiveX, Java or HTML viewers. For example:

<http://www.mycompany.com/webreports/report.rpt?init=java>

The Web Report Server will return by default the ActiveX viewer if the client is browsing to your reports with Internet Explorer and also will return the Java Viewer if the client is using a Netscape browser. It is only necessary to add the “init” command on the URL line if you would like to see the report in a specific viewer (note that ActiveX will generally not work in Netscape)

Please note that the regular Crystal Web Report Server parameters apply in the same manner as they would by using an NSAPI or ISAPI application (Netscape or Microsoft’s web servers). For example if you were passing in a value to a parameter from the URL line it would look like this:

<http://www.mycompany.com/webreports/report.rpt?init=actx&prompt0=Value>

For a complete listing of the Web Report Server parameters that you can pass from the URL line please consult the Seagate Crystal Reports Developer’s Help under the heading “Web Report Server Parameters”.

Acknowledgements

Thank you to Rob Novak, president of Strategic Net Applications, for contributing content to this white paper. <http://www.snapps.com>.

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>