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Crystal Reports

How to use the DLL Search Expert (DSX) utility

Overview

The Overview section provides users with a general description of what the Technical Brief is about, who should read it, what products and versions it applies to and what the user can expect to accomplish by reading it.

Contents

Introduction

The DSX utility (DLL Search Expert) allows you to view which DLLs (Dynamic Link libraries) are being loaded by an application at runtime. This can be particularly useful when troubleshooting a application which works on a development machine, but returns an error or unexpected behavior on a client machine. DSX can assist in resolving what runtime differences exist between two machines (whether it may be a missing file, out of version file being loaded, etc…)

DSX comes in a 16-bit (dsx.exe) and 32-bit version (dsx32.exe). The 16-bit version will display every file loaded by the operating system – this is by nature of the 16-bit "task sharing" Windows environment. 32-bit DSX (dsx32.exe) will allow you to select a single running exe (process) in which you can view only those files loaded by that process. This makes viewing 32-bit applications easier than 16-bit since it is only necessary to compare those files used by the application.

NOTE	**DSX will only work on Win 9x machines. It will not work on Windows NT/2000/XP machines.**
	Refer to the Section **"DSX equivalent utilities for Windows NT"** for alternatives.

Although DSX is primarily used for listing DLLs, it will also list other files types such as .ocx and .drv files. A sample screenshot of a file listing is shown below:

DSX also includes a Compare operator that simplifies being able to compare file listing between two machines. General usage of the DSX utility with the Compare operator will be described below.

Creating File Listings using DSX

DSX is automatically installed with versions 5, 6, and 7 of Seagate Crystal Reports. The exe can be located in the same directory where Crystal has been installed (ie. C:\CRW).

To get an accurate listing of files used by your application on both a development and client machine, you need to run the DSX utility at a specific moment in time on both machines. On your development machine, run your application and then print your report to the preview window. With the preview window still appearing on your screen, run dsx.exe/dsx32.exe now (if you are using dsx32.exe, select your application from the process list).

If you are troubleshooting an error message, then run DSX once the error message is displayed.

A file listing will be generated similar to the screenshot above. The file listing will include:

- Filename

- Filesize (in bytes)

- Date/time Modified

- Version number (if available)

- Path to where the file is located

You may find it simpler viewing the files alphabetically by filename rather than the original order they appear. To sort the file listing alphabetically, go to the View | Alphabetical Order menu.

Save the file listing as a .lst file by going to the File | Save As menu.

Repeat this sequence on the client machine (the single dsx.exe/dsx32.exe file can simply be copied over to the client machine – no setup is required). You will now have to two .lst files that contain file listings for separate machines. The Compare operator can be used to automatically compare any differences between the two machines (which is described below).

NOTE	If you wish to print out the file listings (or send them to a user who does not have DSX), export the listing to a text file using the File	Save To Text menu. The File	Print menu in DSX usually fails to create a readable printout)

Comparing File Listings

The Compare operator will automatically check for any file differences between two lists. Specifically, the operator will flag any missing files, or identical files with different attributes (i.e. date modified, version number).

To use Compare, make sure you have two .lst files open in DSX. Use the List | Compare menu to display the Compare Modules Lists box (shown below):

The Compare Modules Lists box is divided in half with one of the .lst files assigned to the top pane, and the other .lst file assigned to the bottom pane. Note that the two .lst files opened in DSX are the default ones which will be automatically compared. If you need to use a different .lst file, click one of the Browse buttons to load another .lst file.

To perform the comparison, click the Compare button. The Compare Modules List box will appear similar to this:

Differences between the two files lists are flagged as follows:

- A filename in blue with an asterisk (*) beside it indicates that this file resides on both machines, however the version or size or date or directory path for this file is different on both machines.

- A filename in black indicates that this file only resides on that one machine

You can then save the comparison as a .cmp file. If you wish to print out the list, it's best to save the comparison as a text file and print the text file comparison from a text editor (Notepad). Although you'll lose the color formatting, you'll still obtain files listed with and without an asterisk.

DSX equivalent utilities for Windows NT

Although DSX cannot be run on Windows NT/2000/XP, there are other DSX equivalent utilities for the Windows NT platform. These include:

Modules: search for modules.zip at
http://support.crystaldecisions.com/downloads

Process Explorer for Windows NT/2000 (available at
http://www.sysinternals.com/)

Pspy or Spy (available with Microsoft Visual Basic 5 and 6)

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