

# Crystal Reports

## Troubleshooting Report Designer Component Application Issues

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### Overview

This document gives a step-by-step guide to run the Report Designer Component (RDC) SDK sample application on Crystal Reports 10, Crystal Reports XI, or Crystal Reports XI Release 2.

It also provides basic troubleshooting techniques for the RDC application, some important links to samples and articles relevant to RDC. This document is a good starting point for those new to the RDC.

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## Introduction

The Report Designer Component or RDC allows developers to integrate report editing and viewing into their application. RDC can be used to open, design, customize, and view reports both programmatically using RDC SDK and with the built in user interface.

This paper focuses on using RDC only within applications. RDC can be integrated with applications developed with Visual Basic, Visual C++, or classic ASP. This paper is primarily aimed at classic ASP or Visual Basic Developers.

We will first discuss how to get the RDC samples to work on the Crystal installation, and then we will discuss some troubleshooting techniques that are specific to customer's reports and application.

## Running the Sample RDC Application

The simplest way to integrate pre-designed reports into a web application using RDC is to use the RDC ASP samples available for Crystal Reports 10, Crystal Reports XI, and Crystal Reports XI Release 2. The sample application is supplied with sample reports to be viewed. With minimal changes to the sample, custom reports can be viewed instead of only the sample reports.

Here is a step-by-step guide to getting the sample RDC application to run on the Crystal Installation. It is assumed that the reader is familiar with basic functions of Internet Information Services (IIS) Manager such as restarting IIS service, mapping a virtual directory, and launching an ASP application.

### Open the RDC samples

Determine the exact version of Crystal Reports being used. Use RDC samples specific to the version of Crystal Reports. Here are the links to samples for different versions of Crystal Reports.

Crystal Reports 10:

<http://support.businessobjects.com/communityCS/FilesAndUpdates/aspxmps10.exe.asp>

Crystal Reports XI:

<http://support.businessobjects.com/communityCS/FilesAndUpdates/aspxmps11.exe.asp>

Crystal Reports XIR2:

<http://support.businessobjects.com/communityCS/FilesAndUpdates/aspxmps115.zip.asp>

Download and run the self-extracting executable. One of the following folders will be created:

- **asmps10** if using Crystal Reports 10 samples
- **asmps11** if using Crystal Reports XI samples
- **asmps115** if using Crystal Reports XIR2 samples.

This folder contains a collection of report viewing samples using the RDC SDK. The samples are organized into different folders within the root folder. **BeginHere** is the sample which shows simple report viewing with the ActiveX viewer.

Copy and paste the **BeginHere** folder to ...inetpub\wwwroot. Alternately, create a virtual directory in the IIS manager pointing to the **BeginHere** folder.

## Run the BeginHere sample

Locate **SimplePreviewReport.asp** in IIS Manager in the **BeginHere** application.

Right-click it. Click **Browse**. This starts a new browser. Run the **BeginHere** sample. Alternately, if browsing ASP is not enabled for the application in IIS, use a URL similar to following:

http://<server name, ip or localhost>/<BeginHere or directory structure on IIS>/SimplePreviewReport.asp

If successful, it will prompt to download an ActiveX appears in the information bar at the top of the browser page if one does not reside on the computer already.

After installing the ActiveX control, it displays the report in the ActiveX viewer in the browser window.

## Troubleshooting the BeginHere sample

If not successful, use the any or all of the following topics for basic troubleshooting.

## Browser issues

If using Firefox or another browser, try using Internet Explorer instead.

## Not prompted for ActiveX

If not prompted to install the ActiveX control, go to the IIS Manager. From that location, ensure the following virtual directory exists in IIS in the same site as **BeginHere**:

- **Crystalreportviewers10** for Crystal Reports 10
- **Crystalreportviewers11** for Crystal Reports XI
- **Crystalreportviewers115** for Crystal Reports XI Release 2.

Its local path should point to the respective directory in the Crystal Reports or BusinessObjects installation.

If IIS was installed on the server prior to installing Crystal Reports or BusinessObjects, then this directory should be already configured.

If the directory is missing, then create one using the exact same name as above. Link it with the directory of the same name in the Crystal Reports or Business Objects installation. Run the sample again.

## Using the Java viewer instead of ActiveX

Try using the Java viewer instead of ActiveX viewer.

Open **SimplePreviewReport.asp** on the server for editing. On the last line include file **JavaPluginViewer.asp** instead of **SmartViewerAcxtiveX.asp** to use Java Viewer to view the report. A JRE is required on the computer from the application is started.

If the Java viewer works correctly, check if the security settings have issues with installing ActiveX viewer.

## Verify the correct version of ActiveX

Change the code to again use ActiveX viewer. Run the sample directly on server and a client machine and see which one works.

If it fails only on a client computer, then there are chances that the security settings don't allow installing ActiveX control, it has become corrupted, or is running a different version.

Check if there is any ActiveX control listed in Tools > Internet Options > Settings > View Objects. Controls from Crystal Reports 8 or 9 may exist if an application was using an older version of Crystal previously on the client computer.

To ensure that the appropriate version of ActiveX control is being used, use the following URLs:

- <http://<servername, IP, or localhost>/Crystalreportviewers10/ActiveXControls/ActiveXViewer.cab> for **Crystal Reports 10**
- <http://<servername, IP, or localhost>/Crystalreportviewers11/ActiveXControls/ActiveXViewer.cab> for **Crystal Reports XI**
- <http://<server name, IP, or localhost>/Crystalreportviewers115/ActiveXControls/ActiveXViewer.cab> for **Crystal Reports XI Release 2**.

A prompt appears to save a ZIP file on the computer containing the ActiveX control.

Save and extract the ZIP file. It contains **crviewer.inf**. Right-click **crviewer.inf** > click **Install**.

The ActiveX control is installed on the computer. Attempt to start the application again.

**NOTE**

For more information on installing ActiveX control manually on client computers, refer to [Knowledge Base article c2017441](#).

At this point, the ActiveX control is installed properly on the computer and **BeginHere** works.

### Other possible reasons

If not, however, there may be other factors.

- Older registry components may still exist if the application has been upgraded from an earlier version.
- A side-by-side installation of two different versions of Crystal Reports can cause this behavior.
- The specific IIS configuration can be faulty.
- The Crystal Reports build version can also be lacking.

Use the methods below to determine the root cause of issue and how to resolve it.

## Use Filemon

Download and install the [Filemon utility](#) from the Microsoft TechNet site. Filemon monitors all the file related activities on the computer.

Run Filemon and the RDC asp sample concurrently.

Check the Filemon log for Crystal and RDC specific entries. The keywords for which to search are:

- Crystal
- craxdrt.dll
- access denied.

If any right access or permission issues are seen, then run the RDC as a COM+ application.

<b>NOTE</b>	Another utility that monitors registry can also be useful. It can be downloaded from: <a href="http://www.microsoft.com/technet/sysinternals/processesandthreads/regmon.msp">http://www.microsoft.com/technet/sysinternals/processesandthreads/regmon.msp</a>
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## Running the RDC as a COM+ application

CRAXDRT.dll installed in the BusinessObjects or Crystal installation is the RDC component. It runs with IUSER credentials on the system by default. Sometimes it lacks the necessary privileges to access different services offered by underlying operating system such as file access or database access. To overcome any such issues it is recommended to run RDC as a COM+ application. Run the COM+ application with administrative credentials on the system and ensure that RDC is getting all the required access.

A detailed description and guide demonstrating how to run RDC in a COM+ application can be found in [Knowledge Base article c2018861](#).

Permission issues can occur when setting database logon information for report in the code or when connecting to database to pull up new data in report as opposed to viewing report with saved data when it doesn't need to connect to the database. Running RDC in COM+ application will resolve any right access issues faced in such scenario.

## Running the RDC outside of IIS

If the application is still facing issues even when running RDC as COM+ it is recommended to run RDC outside the realm of IIS to rule out any issues within IIS causing the application to fail.

Copy and paste the code below to a file called **test.wsf**. Save it to the desktop. WSF stands for Windows Script File.

```
test.wsf
-----
-----
<job id='CSVCommandLineScheduler'>
<script language='VBScript'>

    Option Explicit

    Dim oApp
    Set oApp = CreateObject("CrystalRuntime.Application")

    Dim oRpt
    Set oRpt =
oApp.OpenReport("c:\SimplePreviewReport.rpt",1)

    Dim FileSystemObject
    Dim FolderPath
    Dim FolderObject

    Set FileSystemObject
CreateObject("Scripting.FileSystemObject")
    FolderPath = "c:\CrystalTest"

    Set FolderObject =
FileSystemObject.CreateFolder(CStr(FolderPath))

    Dim ExportOptions
    Set ExportOptions = oRpt.ExportOptions
    ExportOptions.FormatType = 29
    ExportOptions.DestinationType = 1
    ExportOptions.DiskFileName = FolderPath &
"\resultFile.xls"

    oRpt.Export False
```

```
</script>
```

```
</job>
```

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To run the code

1. Open the sample report saved directly under the C: directory. Alternately, change the line "set oRpt = oApp.OpenReport ("c:\SimplePreviewReport.rpt",1)" to contain the right report path.
2. Double-click **test.wsf**. Upon successful execution it will create a directory called **CrystalTest** in C: and save the exported report in **CrystalTest** as result **File.xls**. This will confirm that RDC is running properly.

<b>NOTE</b>	<p>The RDC prompts for report parameters and database logon only on the server side. Therefore, all such information must be specified programmatically.</p> <p>Running <b>wsf</b> reveals any errors because the prompts for required information will appear.</p> <p>If there are issues printing or exporting the report from the ActiveX viewer, this will reveal any issues related to prompts for setting export or print properties.</p> <p>It may be necessary to install latest service pack on the Crystal installation to resolve the issue.</p>
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If it is already known that the Crystal installation is not stable, or if one or more DLLs are missing or not registered, then it is recommended to reinstall Crystal Reports.

## Troubleshooting Issues Specific to a Customer's Application

Running the sample application ensures that RDC is working properly. If a custom application or reports are still not working, use the following troubleshooting methods:

### Use the correct version of the **rdcrptserver** ASP file

Make sure that the correct version of **rdcrptserver** ASP file in the application is used.

The correct versions are as follows:

- **rdcrptserver10.asp** for Crystal Reports 10
- **rdcrptserver11.asp** for Crystal Reports XI
- **rdcrptserver115.asp** for Crystal Reports XI Release 2.

Also, do not modify the following files while using them:

- AlwaysRequiredSteps.asp
- MoreRequiredSteps.asp
- Cleanup.asp
- JavaPluginViewer.asp
- SmartViewerActiveX.asp.

### Verify report parameters are provided correctly

Make sure that report parameter values for main report and all subreports are provided programmatically. Refer to sample “SimpleParameterField” for more information on how to set report parameters.

### View the report with saved data

If errors messages such as “Error reading records” are returned from **MoreRequiredSteps.asp**, then there are issues connecting to the database from RDC application.

Try viewing the report with saved data first. To save a report with data, open it in Crystal Reports, preview it. Click **File > Save data with report**. Save the report, and use it in application.

### Ensure the code contains the proper logon information

Make sure that the required database logon information for main report and all subreports is supplied in the code. Use the following link for a quick reference to common database connection properties that must be specified for different types of database connections:

[http://devlibrary.businessobjects.com/BusinessObjectsXIR2/en/en/RDC\\_SDK/rdc\\_com\\_dg\\_doc/doc/rdcsdk\\_com\\_doc/RDC\\_ObjectModel27.html#1729115](http://devlibrary.businessobjects.com/BusinessObjectsXIR2/en/en/RDC_SDK/rdc_com_dg_doc/doc/rdcsdk_com_doc/RDC_ObjectModel27.html#1729115)

Refer to samples **SimpleSetLogonInfo** and **SubreportLogonExample** for information on how to set database logon for report.

### Open the report in different applications

Preview and refresh the report in Crystal report Designer and make sure that it works.

If the report was designed in an older version of Crystal then try opening the report from latest version of Crystal available. Run and save the report from Crystal. Then use it in the RDC application.

It may be necessary to install the latest service pack on the Crystal installation. Information on latest service packs can be found at:

<http://support.businessobjects.com/downloads/default.asp>

Specifically use sample **SimpleExportIIS6IsolationMode** when running IIS6.

### Windows Server 2003 vs. Windows 200

Typically an RDC application faces more issues on Windows Server 2003 than it faces on Windows 2000. Also, it runs differently on IIS6 than on IIS5. Certain security setting such as machine's DEP settings can affect execution of RDC application.

## Conclusion

The basic troubleshooting techniques discussed above should help getting the RDC sample applications to run in most cases. Also, it is possible to modify the sample code in order to run custom reports. Refer to the **ReadMe** file in each sample for specific instructions.

This document should be sufficient for most of the issues although if further assistance is needed, please visit the Business Objects [Support site](#), forums, or contact the Business Objects Customer Assurance Team.

A note of caution is that RDC is a deprecated technology. It will not be supported with any Crystal product released after XI Release 2.

For upward compatibility consider Crystal Reports .NET SDK or Business Objects Enterprise .NET SDK which will be available in future product releases. Also consider using JRC and other Java SDKs.

## Finding More Information

### Crystal Reports XI Report Designer Component SDK Documentation

[http://www.techsupport.businessobjects.com/infocenter/dev/devlib/xi/en/en/RDC\\_SDK/default.htm](http://www.techsupport.businessobjects.com/infocenter/dev/devlib/xi/en/en/RDC_SDK/default.htm)

### Crystal Reports XI R2 Report Designer Component SDK Documentation

[http://devlibrary.businessobjects.com/BusinessObjectsXIR2/en/en/RDC\\_SDK/default.htm](http://devlibrary.businessobjects.com/BusinessObjectsXIR2/en/en/RDC_SDK/default.htm)

For more information and resources, refer to the product documentation and visit the support area of the web site at

<http://www.businessobjects.com/>