

Crystal Reports

How Printer Driver Options Affect a Report

Overview

This document discusses the different printer driver options that are available when designing a report and what effect each option has when distributing the report to a client computer.

Contents

INTRODUCTION	2
DEFAULT PRINTER MODE	2
<i>Common Issues When Distributing a Report with Default Printer Mode..</i>	<i>2</i>
Default Printer Driver on Client Computer does not Support the Same Paper Properties	2
Client Computer does not have a Default Printer Driver Installed.....	3
Default Printer Driver on the Client Computer does not Support Uniscribe	3
Different Versions of the same Default Printer Driver.....	3
Changing to a Non-Default Printer at Run Time.....	4
SPECIFIC PRINTER MODE	4
<i>Common Issues when Distributing a Report with Specific Printer Mode ..</i>	<i>5</i>
Specific Printer Driver is Missing on the Client Computer	5
Different Versions of the same Specific Printer Driver	5
NO PRINTER MODE	5
NO PRINTER INSTALLED	6
USER-DEFINED PRINTER SETTINGS	7
FINDING MORE INFORMATION	8

Introduction

A Crystal report relies on a printer driver for previewing, printing, and exporting. When a report is designed in the **Crystal Reports Designer**, the report can be created with three possible printer driver modes. The three modes are:

- Default Printer
- Specific Printer
- No Printer

The printer driver mode that the report uses, the user-defined printer options, and the computer configuration affect the report output.

NOTE

In this document, **Crystal Reports Designer** is defined as the Crystal Reports stand-alone designer, the Crystal Reports Designer Component (RDC) in the Visual Basic 6 IDE, or the Crystal Reports Designer in the Visual Studio .NET IDE.

Default Printer Mode

When a report is created in the **Crystal Reports Designer**, it uses the operating system's default printer driver with the default printer properties. For example, a paper size of **8.5 x 11** inches and a **Portrait** paper orientation.

When distributing this report to a client computer, the report uses that computer's default printer driver. As long as that printer driver supports the **8.5 x 11** inch paper size and orientation, it will print as expected.

Common Issues When Distributing a Report with Default Printer Mode

Default Printer Driver on Client Computer does not Support the Same Paper Properties

If the default printer driver on the client computer does not support the same paper size as the default printer driver on the computer that the report was designed in, the output appears different.

For example, if the default printer driver on the client computer is for a label printer, the default paper size is most likely be smaller than **8.5 x 11** inches and so the report will not print correctly.

Similarly, if a report is designed with a default printer driver, but with a **Landscape** paper orientation, and the report is distributed to a client computer that does not support **Landscape** paper orientation, the report will print in **Portrait** paper orientation.

Other changes that may be observed include overlapping text, different size fonts, and loss of margins.

Client Computer does not have a Default Printer Driver Installed

If the client computer that the report is distributed to does not have a default printer driver installed, the report uses its own internal printer driver to render the report. This results in a loss of the selected printer properties, such as **Landscape** paper orientation and the paper size. The report will display using a **Portrait** paper orientation and an **8.5 x 11** inch paper size.

NOTE	You do not have to have a physical printer connected to the computer to use its printer driver. You can just install the printer driver software.
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Default Printer Driver on the Client Computer does not Support Uniscribe

When printing to a printer using a version of Crystal Reports earlier than 9, Crystal Reports sends a character transfer to the printer. Crystal Reports 9 and newer uses the **Microsoft Unicode Script Processor** library (Usp10.dll), also known as **Uniscribe (Unicode)**, to print.

Crystal Reports 9 and newer requires printer drivers that support **Uniscribe**. Check with printer driver manufacturer to ensure that the client computer's printer driver supports **Uniscribe**.

NOTE	<p>Uniscribe is a collection of application programming interfaces (APIs) that enable a text layout client to format complex scripts.</p> <p>Uniscribe supports the complex rules found in scripts such as Cyrillic, Indian, and Thai. Uniscribe also handles scripts written from right to left, such as Arabic and Hebrew, and supports the mixing of scripts.</p>
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Different Versions of the same Default Printer Driver

It is possible that the client computer has the same default printer driver installed, but it is of a different version (usually an earlier version) than the printer driver that the report was designed with. Printer driver version differences may cause printing issues.

If the same printer driver is installed on the client computer, ensure that the version of the printer driver is the same or newer than that of the printer driver that the report was designed with.

Changing to a Non-Default Printer at Run Time

If a report is designed with a **Landscape** paper orientation, and its printer driver is changed programmatically to use a non-default printer driver, the **Landscape** paper orientation is lost and the report will print using the **Portrait** paper orientation. To resolve this, the paper orientation must be specified at run time.

The following example uses the **Report Designer Component** (RDC) to change the printer driver at run time:

```
Report.SelectPrinter "PSCRIPT5.DLL", "\\Server Name\P7-4080-QS4", "10.11.22.33"
```

To change the paper orientation to **Landscape** use the following code:

```
Report.PaperOrientation = crLandscape
```

To change the paper size use the following code:

```
Report.PaperSize = crPaper10X11
```

For a **Visual Studio .NET** application, use the following code:

```
crReportDocument.PrintOptions.PrinterName =  
"\\server\myprinter"  
  
crReportDocument.PrintOptions.PaperOrientation =  
CrystalDecisions.[Shared].PaperOrientation.Landscape  
  
crReportDocument.PrintOptions.PaperSize =  
CrystalDecisions.[Shared].PaperSize.Paper10x14
```

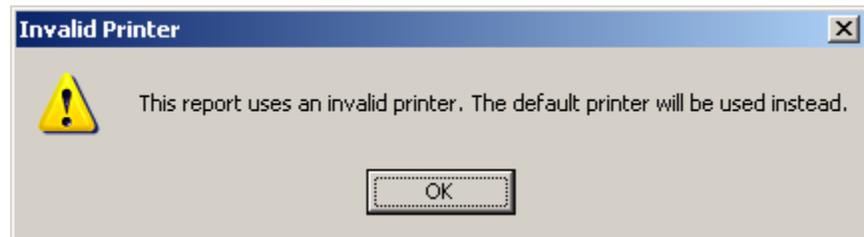
Specific Printer Mode

A report is set to a specific printer by selecting a **non-default** printer driver from the **File | Printer Setup** menu item from the **Crystal Reports Designer**. Once a specific **non-default** printer has been selected, that printer's information is saved with the report. When this report is distributed to a client computer, it looks for the specified printer.

Common Issues when Distributing a Report with Specific Printer Mode

Specific Printer Driver is Missing on the Client Computer

If the report cannot find the specific printer driver it was designed with, the report substitutes it with the client computer's default printer driver, if one exists. In doing so, all printer properties selected during design of the report are lost. These properties include paper size, margins, paper orientation, and others. When the specific printer driver is not found, the following warning message appears in the **Crystal Reports Designer**:



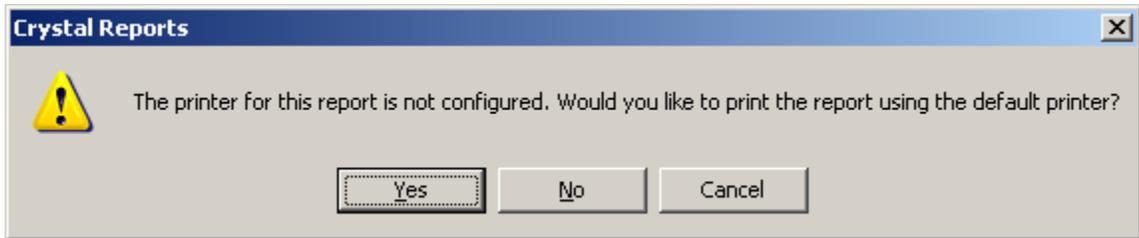
The **Crystal Reports Designer Component** and **Crystal Reports for Visual Studio .NET** automatically substitute the specific printer driver with the default printer driver and no warning message appears. This may cause unexpected printing issues such as loss of paper orientation, overlapping text, different size fonts, and loss of margins.

Different Versions of the same Specific Printer Driver

It is possible that the client computer has the same specific printer driver installed, but it is of a different version (usually an earlier version) than the printer driver that the report was designed with. Printer driver version differences may cause printing issues. If the same printer driver is installed on the client computer, ensure that the version of the printer driver is the same or newer than that of the printer driver that the report was designed with.

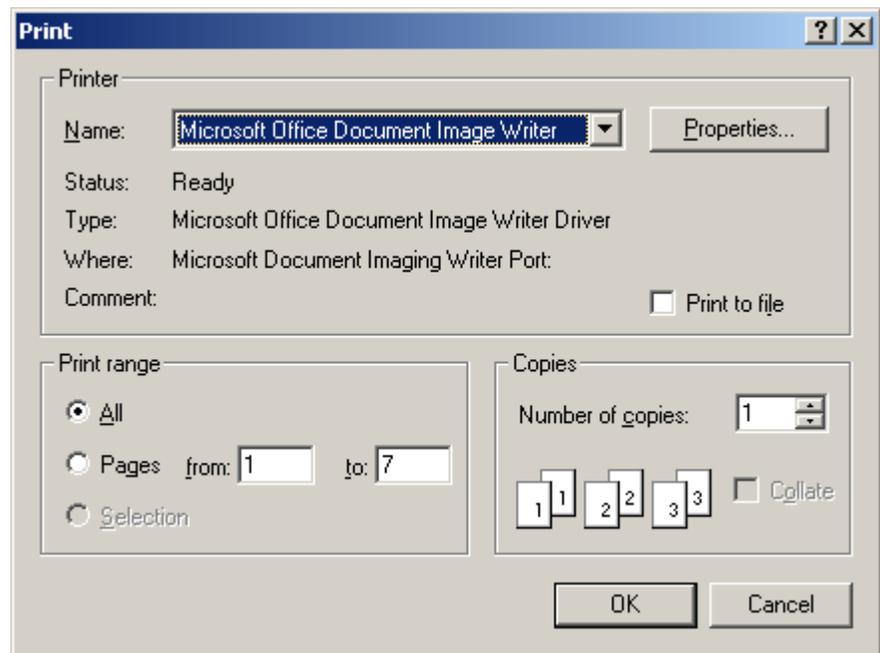
No Printer Mode

A report can be designed without a printer driver by selecting the **No Printer** check box from the **File | Printer Setup** menu in the **Crystal Reports Designer**. A report created in the **No Printer** mode does not print to any printer. When viewing the report in the **Crystal Reports Designer**, the following warning dialog box appears:



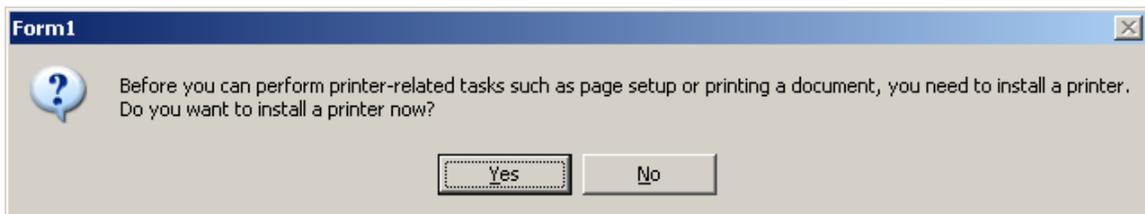
When viewing the same report using the **Crystal Reports Designer Component**, no warning dialog appears and no printing occurs on the printer.

When viewing the same report in a **Crystal Reports for Visual Studio .NET** Windows application, the following dialog box appears:



No Printer Installed

If there is no printer installed on the client machine, the following warning dialog box appears in both the **Crystal Reports Designer Component** and **Crystal Reports for Visual Studio .NET**:



User-Defined Printer Settings

It is possible to design a report in the **Crystal Reports Designer** specifying a custom paper size. Once this report is created, it looks and prints as expected on the computer it was designed on. When this same report is distributed to a client computer, the report may appear different.

The reason why a report created using a custom paper size prints differently once it is distributed is that the report's paper size ID (Form ID) is saved with the report file. It is the ID value that is saved and not the name of the paper size because the Crystal Reports print engine uses the operating system's **DEVMODE** structure to save the printer information with the report. This is by design, and affects all Crystal Reports development tools.

To pass a custom paper size ID to a report using the **Crystal Reports Designer Component**, use the following code:

```
rpt.PaperSize = 133
```

To pass a custom paper size ID to a report using **Visual Studio .NET**, use the following code:

```
rpt.PrintOptions.PaperSize = CType(133,  
CrystalDecisions.Shared.PaperSize)
```

Even if the custom paper size ID is passed to the report in code, the report may still print differently when distributed.

The **DEVMODE** structure contains the ID value of the paper size, not the name. Therefore, when the application is deployed to another computer, the custom paper size ID is not the same as it was on the development computer. This custom paper size ID may be a different number on every computer it is deployed to.

To resolve this issue, the application needs to determine the custom paper size ID based on the name of the **Form**, then pass that **Form ID** to Crystal Reports.

For more information on determining the **Form ID**, go to <http://support.microsoft.com> and search for q132239.

Finding More Information

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

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

For information on printing using a **Visual Studio .NET** web application, see:

http://support.businessobjects.com/communityCS/TechnicalPapers/cr_net_web_app_printing.pdf.asp

NOTE	<p>To highlight text in a PDF document for copying and pasting code, click the Text Select Tool toolbar button in Adobe Acrobat.</p>  <p>This procedure applies to Adobe Acrobat 4.0 and 5.0.</p>
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