

Crystal Reports Maximum Report Processing Jobs Limit



Applies to:

Crystal Reports 10.0 to Crystal Reports 2008 (12.0.x) when used in applicable versions of Visual Studio.NET. For more information, visit the [Business Objects homepage](#).

Summary

This article discusses the Crystal Reports maximum report processing jobs limit. Topics covered include reasons for the limit, possible issues due to the limit and possible solutions and work-around to the limit.

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Introduction

When a web application using the Crystal reports SDK for Visual Studio .NET processes a large print job or a large number of reports, the following error message may be produced:

"System.Exception: Load report failed. System.Runtime.InteropServices.COMException (0x80041016): The maximum report processing jobs limit configured by your system administrator has been reached."

Typically, this message is followed by the error "Load Report Failed".

This article discusses likely causes of the error and possible solutions.

Possible Causes

The error message appears because the web application has exceeded the Crystal Reports reporting engine default print job limit of 75. Or, in other words, a high reporting load has been placed on the reporting engine. There are a number of reasons why the report engine would suffer from high loads and each reason may have a distinct solution as documented below.

Coding Issues

Proper coding requires that any objects be managed and thus destroyed when they are no longer needed. This is true for any object that supports IDisposable interface.

Too Many Print Jobs Submitted to the Report Engine

Starting in version 10 of Crystal Reports, the reporting engine was optimized for greatest report throughput. There are specific registry keys that control this optimization. By default, the print job limit is set to 75 print jobs. When a load is placed on the application it can hit the 75 print job limit and cause the error. Note that a print job includes main reports, subreports, and in-session report objects (e.g.; drill down, paging, searching, and more.). Therefore a single report could exceed the 75 print job limit. Consider a report that returns 75 records, with a subreport placed in the detail section and thus running for each record. This report will need to run 75 subreports plus the main report, reaching 76 print jobs and the error will be thrown.

Too Many Report Requests from Users

While this is closely related to "Too many print jobs submitted to the report engine", there is a difference. If there are too many users requesting report processing from the report engine, this may result in the print engine attempting to process more print jobs than it is configured for. As an example, consider three users, each requesting a report with 25 subreports. This will require the report engine to process 78 print jobs;

$(25 \text{ subreports} * 3 \text{ users}) + (3 \text{ main reports})$

thus causing the engine to throw the print jobs limit error.

Limit of Hardware Reached

Low end server with limited CPU will reach the limit faster than higher end servers with multiple CPUs.

Wrong Software

Crystal Reports has limited processing capabilities. When designing a web based application that will be using the Crystal Reports SDK for Visual Studio .NET, consider the potential loads that will be placed on the reporting engine. If the loads will be high, more scalable solutions such as the Crystal Reports Report Application Server should be considered.

Solutions

A solution to the print jobs processing limit vary depending on the cause. On occasion, more than one possible solution may apply, or a combination of solutions will need to be implemented.

Code

Dispose un-needed objects

Ensure that you call `.Dispose` and `.Close` method when the report object is no longer need. Also, ensure that this is done not only with Crystal Reports, but `FileStream`, `Database Connections`, `datasets` or any other object that supports `IDisposable` interface.

Use sessions

1. Create a sub that sets the viewer's `ReportSource` property, displays a report in the viewer and add the following line of code.

```
[VB.NET]
Session.Add ("REPORT_KEY", report)
```

```
[C#]
Session.Add ("REPORT_KEY", report);
```

2. In the `Page_Load` event, add the following lines of code. These lines of code will grab the report object from the `Session` object and set the viewer's `ReportSource` property during a postback.

```
[VB.NET]
If IsPostBack Then
report = CType(Session.Item("REPORT_KEY"), Group)
CrystalReportViewer1.ReportSource = report
End If
```

```
[C#]
if (IsPostBack) {
    report = (Group)Session["REPORT_KEY"]
    CrystalReportViewer1.ReportSource = report;
}
```

Running the project now, and navigating the pages in the report will display each page in the viewer without losing the report source thus keeping the stack and memory clear and delay the -75 limit error. However, you still need to close and dispose of the report object eventually. This should be done on either close of the viewer browser window, or if the user navigates to another page.

Increase the 75 Print Job Limit

This may stop the error from occurring temporarily but as load increases, you will find the error will start to occur again or worse yet, the system may stop responding and a system reboot will be the only way to recover. For an application using the Crystal reports SDK, the registry key "InprocServer" sets the limit for the number of print jobs allowed to be processed by the report engine.

CAUTION: The following resolution involves editing the registry. Using the Registry Editor incorrectly can cause serious problems that may require you to reinstall the Microsoft Windows operating system. Use the Registry Editor at your own risk. It is strongly recommended that you make a backup copy of the registry files before you edit the registry. For information on how to edit the registry key, view the 'Changing Keys And Values' online Help topic in the Registry Editor (Regedit.exe).

Note: The default value of 75 is the predetermined value for best performance in tested environments. Changing this value may affect performance of the system.

To change the PrintJobLimit value, follow these steps:

- 1) Click Start > Run. The Run dialog box appears.
- 2) Type "regedit" in the Open field. Click OK. The Registry Editor appears.

Navigate to the appropriate registry key value as documented below.

Crystal Reports 10.0.x

HKEY_LOCAL_MACHINE\SOFTWARE\Crystal Decisions\10.0\Report Application Server\
InprocServer\PrintJobLimit

Crystal Reports 10.2 (Visual Studio .NET 2005 bundle)

HKEY_LOCAL_MACHINE\SOFTWARE\Crystal Decisions\10.2\Report Application Server\
InprocServer\PrintJobLimit

Crystal Reports Basic for Visual Studio 2008 (Visual Studio .NET 2008 bundle)

HKEY_LOCAL_MACHINE\SOFTWARE\Business Objects\10.5\report Application server\InProcServer\
PrintJobLimit\PrintJobLimit

Crystal Reports XI Release 1 (11.0.x)

HKEY_LOCAL_MACHINE\SOFTWARE\Business Objects\Suite 11.0\Report Application
Server\InprocServer\PrintJobLimit

Crystal Reports XI Release 2 (11.5.x)

HKEY_LOCAL_MACHINE\SOFTWARE\Business Objects\Suite 11.5\Report Application
Server\InprocServer\PrintJobLimit

Crystal Reports 2008 (12.x.x)

HKEY_LOCAL_MACHINE\SOFTWARE\Business Objects\Suite 12.0\Report Application
Server\InprocServer\PrintJobLimit

Setting the PrintJobLimit value to -1 removes all print job limits.

Hardware

Servers with more memory, dual or even quad CPUs are an option. Web farms may also be worth considering. For more details on web farms, see the Microsoft MSDN Visual Studio 2008 Developer Center; [“How Do I Use Crystal Reports in a Web Farm or Web Garden?”](#).

Also, see the SAP article [“Crystal Reports 10 for .NET Feature Overview”](#), page 10.

More Scalable Solution

Consider moving to a more scalable solution such as Crystal Reports Report Application Server, or Business Objects Enterprise. For details on which product may best fit your project requirements see the article [“Choosing the Right Business Objects SDK for Your Needs”](#).

Related Content

[“Crystal Reports XI Release 2 Component Licensing Explained”](#)

[“Improving Crystal Reports Performance in Visual Studio .NET Applications”](#)

[“Crystal Reports 2008 Component Engine Scalability”](#)

Note; [1218482 - Error: "Failed to Open Report" in .NET using 'ICachedReport' interface](#)

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