

SAP Crystal Solutions
SAP Crystal Reports and SAP Crystal Server

Step by Step guide: Sharing a Crystal report With SAP Crystal Reports 2016





SHARING A CRYSTAL REPORT

SAP Crystal Reports is a rich, full-featured report and visualization design tool. But, what do you do if you want to just share your report with a report audience who doesn't need to design or modify the report? Providing a copy of the full Crystal Reports product to this audience is impractical for many reasons.

There are three broad approaches to sharing a report created with the full version of SAP Crystal Reports with a broader audience:

- **SAP Crystal Server:** SAP Crystal Server is a versatile, infinitely flexible web-based product for distributing and automating Crystal Reports documents (and other standard office document types, such as PDF files). Printing, e-mail distribution, and automatic scheduling of reports in every possible file format is fully supported.
- **Exporting to Various File Formats:** SAP Crystal Reports supports many file formats for exporting a report. Report output can then be consumed in many standard office applications, such as PDF document viewers, word processors, and spreadsheets. Files exported in a standard data format can also be imported into other analysis tools.
- **Sharing with the Crystal Reports Viewer:** The free-to-download Crystal Reports Viewer permits SAP Crystal Reports documents to be viewed in full "native" format. Full interactivity, such as drill down, group tree navigation, and text search is available.

Note: While electronic file formats are often the go-to method of data distribution, there are still plenty of scenarios that still call for printing pixel-perfect reports or visualizations on paper. SAP Crystal Reports, SAP Crystal Server, and the Crystal Reports Viewer all support printing to any standard printer configured on your computer.

THE DIFFERENT TYPES OF CRYSTAL REPORTS FILES

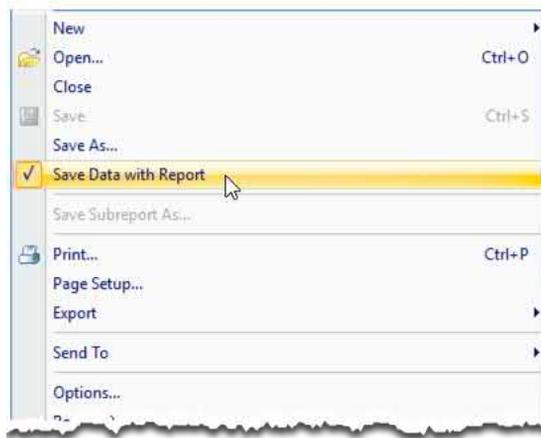
When you are considering sharing a report with others in your organization who don't have their own copy of SAP Crystal Reports, you'll need to consider what type of file to prepare. Or, you may wish to provide a Crystal Report "native" file to others, but only allow them to view (but not change) the file.

In particular, if you are planning on using the free Crystal Reports Viewer as a distribution method (discussed later in this white paper), you'll need to consider the proper file format to use.

1. Crystal Reports .RPT Format

SAP Crystal Reports traditional file format is the .RPT format. While it has changed slightly as various versions of Crystal Reports have been released, the core file format is largely the same as it has been for many years.

When you save an .RPT file from within Crystal Reports, one of two "sub types" will be saved. Determine which type with the File | Save Data With Report drop-down menu option:

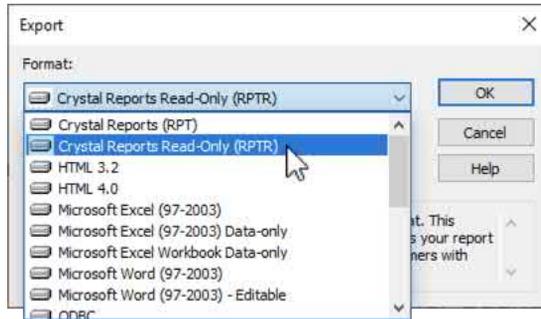


- .RPT files without saved data. If you uncheck the File menu's Save Data with Report option and then save an .RPT file, the file will only contain the "structure" of the report with no embedded data. While this results in a smaller .RPT file, it's not possible to view the report results as soon as it's opened. If you attempt to open an .RPT file without saved data in the Crystal Reports Viewer, you'll receive an error message. In the full version of Crystal Reports, you'll only be presented with a Design tab and will need to refresh the report (which connects to your data source) to view the report results.
- .RPT files with saved data. If you check the File menu's Save Data with Report option and then save an .RPT file, all underlying data as it currently exists (including all pages and all subreport data) are compressed and embedded in the .RPT file (you may be prompted to refresh subreport data before you save). Depending on how much data is encompassed, the .RPT file may be substantially larger in size. However, if you re-open the report in the full version of SAP Crystal Reports, it will immediately appear in a Preview tab without the need to refresh or connect to the underlying data source. If you open with the free Crystal Reports Viewer (discussed later in this white paper), the report will appear with data that's embedded in the .RPT file. The Crystal Reports Viewer permits full navigation, drill down, and searching of the report. However, the Crystal Reports Viewer will not permit refresh of the report with updated data.



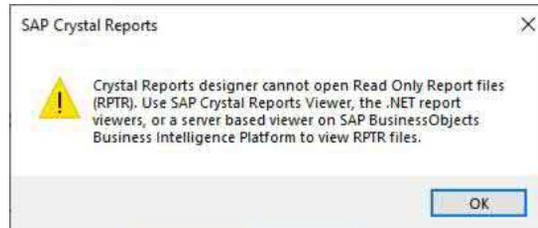
2. Crystal Reports .RPTR Format

Later versions of SAP Crystal Reports also permit a “read-only” .RPTR file to be saved. Rather than using the File | Save menu option, use File | Export from the drop-down menus to save in .RPTR format.



As with all files exported in SAP Crystal Reports, the current set of data included in the report will be embedded in the .RPTR file (discussion of save data in a report file appears previously in this white paper). Because data is embedded in the file, an .RPTR file can be opened in the free Crystal Reports Viewer (discussed later) for full viewer interactivity. As with an .RPT file with saved data, however, the Crystal Reports Viewer cannot refresh an .RPTR file to get updated data from the underlying data source.

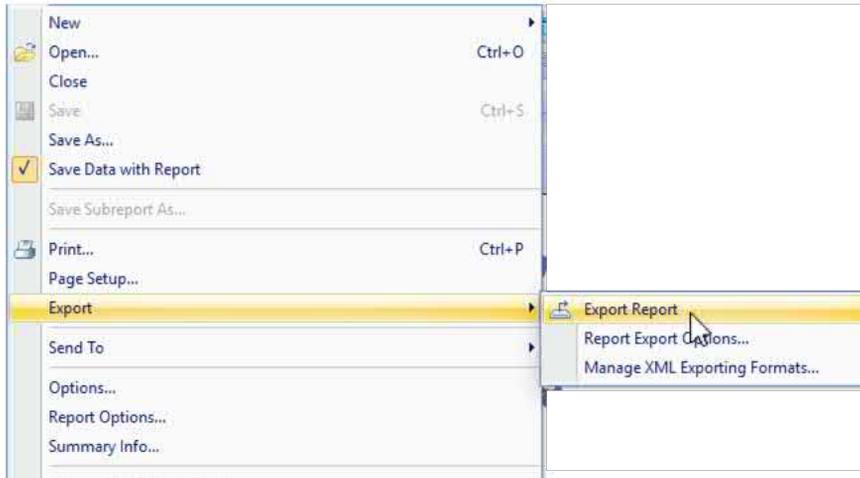
The benefit of an .RPTR file is that it is purely a “read-only” file – it may not be modified once exported. The Crystal Reports Viewer doesn’t permit any design changes to a report, so it will open the .RPTR file in read-only mode. And, if you attempt to open a read-only .RPTR file in the full version of SAP Crystal Reports, you’ll receive an error message.



Caution: Because SAP Crystal Reports will not open an .RPTR file, make sure you save the original modifiable .RPT file if you plan to export to .RPTR format. If you delete the original .RPT file, you will not be able to make any modifications to the .RPTR report in the future!

EXPORTING TO VARIOUS FILE FORMATS

Depending on the needs of your reporting audience, you may choose to export a Crystal Report to another file format for viewing. Accomplish this with options from the File | Export drop-down menu.



What is actually exported will be significant to your audience. Remember that the exported file will not necessarily include the entirety of the underlying Crystal Report. For example, if you have designed a report that initially presents just a single page containing a chart and some summary data, that's all that will appear in the exported file. If, however, you drill down on the chart from the Crystal Reports preview tab and use File | Export when the drill down tab is displayed, only the contents of that drill down tab will appear in the exported file. Because of these requirements, you may need to create several versions of the same report that present data in different initial views – one view, perhaps, for providing interactivity in the free Crystal Reports Viewer, and another view for export to a data-oriented file format, such as .CSV.

The format you choose to export to (and, associated options for that particular format) can vary widely. Use the format and options that best support the needs of your audience. For example, you may choose to export to a Microsoft Excel .XLS file. However, there are substantial differences between a "Microsoft Excel" and "Microsoft Excel (data only)" export format. The Excel format will preserve as much formatting and spacing as possible in the report view. While this may make the export more "visibly pleasing" when initially opened in Excel, the exported spreadsheet file may be virtually unusable from an analysis perspective (there will potentially be large blocks of white space, many variably-spaced rows and columns, and so forth). Exporting to an Excel "data only" format won't preserve formatting – the spreadsheet may not look particularly pleasing when opened. However, you'll find more consistent row and column sizes that make traditional Excel analysis more convenient.

Special considerations also come into play if you are exporting a Crystal Report as a data file (perhaps to regularly supply data to a third-party vendor or government agency). While SAP Crystal Reports can create highly formatted "pixel perfect" output, raw data exports often have precise layout and organization requirements that don't lend themselves to a free-form report design tool. With some experimentation, however, you can typically create the exact output organization required.



Consider the following suggestions:

- Suppress page headers and footers. Raw data files typically won't benefit from extra blank space or header text placed within raw data lines.
- Expand the width of the report canvas. Raw data files don't typically follow any kind of "8 ½ x 11 page size." You'll avoid truncating or wrapping data lines if the report canvas is wide enough to contain the entire width of an exported record.
- Consider creative use of report formulas. If you are exporting to a fixed or delimited file format, appending a specific number of spaces (perhaps with the Space() function) between fields may be helpful. Or, you may need to place specific field delimiters (comma, tab, and so forth) between fields. You may benefit from concatenated CHRW() functions (for example, CHRW(9) will return an ASCII tab character) within a formula.
- Font choice may be significant. Fixed space fonts often provide more consistency and reliability when exported to text-only file types. Consider formatting output fields in Courier 10-point type, rather than with proportionally space fonts, such as Arial or Times Roman.

Tip: One of the many benefits of the companion SAP Crystal Server product is the ability to process Crystal Reports exports automatically on a schedule (daily, weekly, monthly, and so forth). These exported files may be distributed in a variety of ways, including being written to an internal network location, attached to e-mail, or sent via FTP.

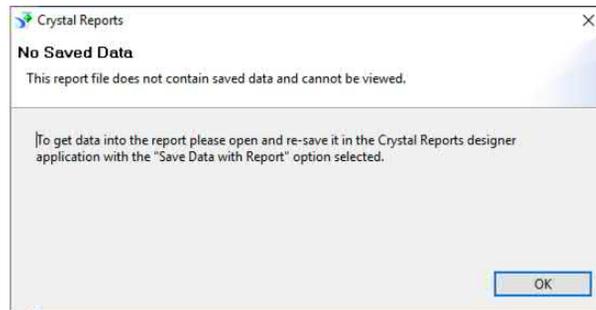


SHARING WITH CRYSTAL REPORTS VIEWER

While SAP Crystal Reports exports to a wide variety of file formats suitable for reading by a large number of other office products, don't forget that exported files don't feature the rich interactivity available in the native Crystal Reports preview tab. Drill down, group tree navigation, on-demand subreports, the parameter panel, and other interactive features that are part of Crystal Reports aren't retained when a report is exported to a static file. At the same time, providing everyone who wants to take advantage of that interactivity with a full copy of SAP Crystal Reports is not always practical (especially if the requirement is that the reports are only to be viewed and not modified).

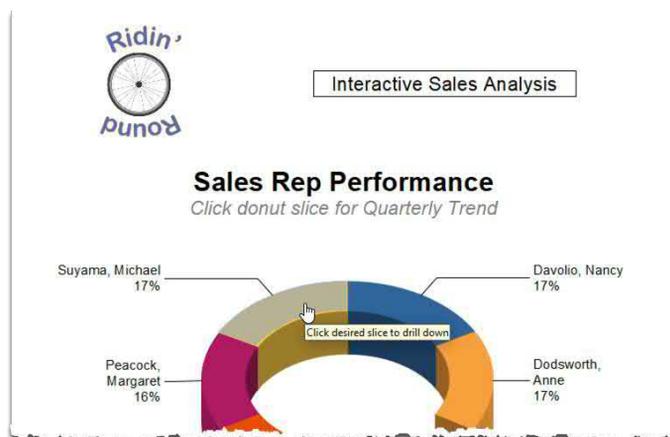
In addition to the SAP Crystal Server product (which provides full report interactivity from a web browser), SAP offers the free Crystal Reports Viewer. Downloadable from www.crystalreports.com, the Crystal Reports viewer will open an .RPT file with saved data, or a read-only .RPTR file (both are discussed previously in this white paper). As with the full version of Crystal Reports, the Crystal Report Viewer will display the initial report page similar to the initial preview tab. From there, full report interactivity is supported.

Note: If you provide an .RPT file to users of the Crystal Reports Viewer, it must contain saved data (as discussed earlier in the white paper). If an .RPT doesn't contain saved data, the viewer will display an error message when the report is opened.



The Crystal Reports Viewer provides several methods of interacting and "getting deeper into" a report's data and visualization.

- Drill Down: If the report contains a group structure (including group charts), the mouse cursor will change to a hyperlink cursor when you hover over a "drillable" chart element or group name or summary field. Click to drill down deeper on the highlighted item.



The initial report view will be replaced by a drill down view. Depending on report design, you may be able to drill deeper from the second view. And, depending on how many group levels are designed into the report, you may be able to drill deeper. Again, depending on report design, you may eventually reach the lowest “detail” level of the report.

No matter how many levels you drill, a “breadcrumb navigation” bar will appear at the top of the report view. Click any level in the navigation bar to navigate back up in the drill down hierarchy.



- The Group Tree: Several icons appear at the very left of the Crystal Report Viewer. Click the Group Tree icon  to display the report’s group hierarchy to the left of the report.



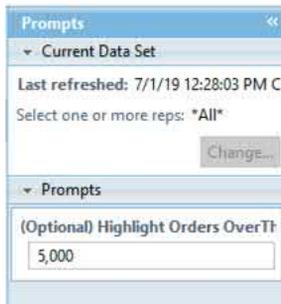
The name of the report will initially be highlighted, with the first level of report groups appearing underneath. Click any of the first-level groups to drill down to that level.

Expand any level of the group tree by clicking the desired arrow icon. You may continue to navigate deeper into the group tree by continuing to click lower-level arrow icons. Once you find the desired group level, just click it to drill down to that level. The report view will change to match the selected group level.

Within any report view, you may also drill down as described previously (the mouse cursor will change to a hyperlink cursor). No matter whether you navigate to a drill down level with the group tree, or by clicking within the report view, the breadcrumb navigation bar will appear at the top of the report. You may navigate back up the group hierarchy by clicking in the navigation bar. Or, you may navigate to any other group level from within the group tree.

- The Parameter Panel: If the report has been designed to use parameter fields (a prompt that permits the viewer to modify report values “on the fly” when viewing), you may change them by clicking the Parameter button  to the left of the report. This will display the parameter panel.



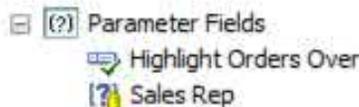


One or more parameter fields will appear where you may select or type different values to change report appearance or data. For example, if a report uses a parameter field to highlight individual orders (you will need to drill down to the detail level to make effective use of the parameter), the report will be reformatted to highlight orders that exceed the value you type into the parameter prompt.

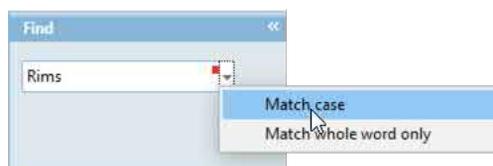


Some parameters may require a value to be supplied, while others will be optional – you may leave them blank, or remove any value you supplied previously and then press ENTER.

Note: Because the Crystal Reports Viewer does not support live database connections, parameters that affect record selection won't be visible. When designing a report in the full version of SAP Crystal Reports, note the icon to the left of parameter fields in the Field Explorer. Only those that exhibit the check mark icon can be provided values in the Crystal Reports Viewer.



• Find: With text-heavy report views (perhaps a large amount of textual data is appearing in a detail drill down view), you may wish to search for specific text values. Click the Find button at the left of the report. The find box will appear.



Type in a text string to search for. Optionally, you may click the small drop-down arrow to the right of the find box and choose whole word or case options. Press ENTER to search the report view for the supplied text string.

Note: The Crystal Reports Viewer supports a limited set of file export capabilities discussed earlier in this white paper under Exporting to Various File Formats. However, the full version of Crystal Reports is required for complete export functionality.



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